N.S. Vol. XX.

THE TRANSACTIONS

AND

Journal of Proceedings

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History and Antiquarian Society

FOUNDED NOVEMBER, 1862.

SESSION 1907-1908.

PRINTED AT THE STANDARD OFFICE, DUMFRIES, AND
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The Note by Lady Johnson-Ferguson on Ancient Tombstone referred to on Page 211 has been accidentally omitted, but will appear in next volume.—ED.

EDITORIAL NOTE.

The contributors of the papers are responsible for the statements and views expressed therein, and publication is not to be held as expressing the concurrence of the Society or the Editor.

The Editor desires to acknowledge his indebtedness to the "Dumfries and Galloway Standard," "Dumfries and Galloway Courier and Herald," and "Kirkcudbrightshire Advertiser," for reports of several meetings and discussions.

TRANSACTIONS AND PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1907-8.

4th October, 1907.

ANNUAL MEETING.

Chairman—Professor SCOTT-ELLIOT.

The Secretary and Treasurer submitted their Annual Reports, which were approved of. An Abstract of the Accounts appears in this issue. The Annual Report of the Photographic Section was submitted by the Secretary, Mr W. A. MacKinnel, and approved of.

On the nomination of the Council the Office-bearers were elected for the session. (See p. 3, vol. xix.)

1st November, 1907.

Chairmen—Professor SCOTT-ELLIOT, President, and Mr R. SERVICE, Hon. Vice-President (during the delivery of the former's address).

PRESIDENTIAL ADDRESS.

NOTES ON WINTER BOTANY. By the President, Professor G. F. SCOTT-ELLIOT, M.A., F.R.G.S., &c.

A wood in spring or summer is as different from itself in winter as a man-of-war at a royal review to the same ship cleared

for action in time of battle. The whole process by which leaves, useless twigs, and all sorts of herbaceous material is broken up and overcome before the next spring's vigorous growth begins, is of extraordinary interest. The formation of cork and the leaf fall are well known, but the destruction of all those many herbaceous stems that last but for one season is not so well understood. Perhaps the most remarkable point about them is the way in which they survive, often until well on in winter time, just indeed so long as the dead, dry, withered, and yet elastic, stalk can be of use in disseminating the fruits and seeds. When the last spore is shed the destruction of the stalk soon follows.

Herbaceous stems consist generally of a ring of woody or collenchymatous mechanical tissue, often raised into ribs or flanges. Outside this there are, successively, first soft parenchyma, and then the tough, more or less thickened epidermis. So soon as the last seeds are definitely formed and separated from the wall of the ovary, the drying of the stalk begins (probably the water is no longer assisted in ascending the stem by the demands of the ripening seeds). Then, as the cells in the upper part of the stalk gradually die, less and less water ascends until they become like those of dried herbarium specimens which may last 100 years or more if kept thoroughly dry and free from certain insects.

But the lower part of the stalk just above the ground is kept generally more or less moist by surrounding vegetation: in Umbelliferæ also the part just above the node is kept fresh and humid by the remains of the vagina; similar sheathing leaf bases or stipules have the same effect in other plants.

It is at these spots that the first fungus attack usually begins. They remind one of the decay of an ordinary paling stob, which usually sets in at the neck. That part of the stob which is in air may be quite sound* and also the basal end planted in the earth, but just at or near the surface of the ground, where the conditions frequently change from moist to dry, fungus attacks are favoured and the stob rots through.

* The gates of Constantinople destroyed by the Turks in 1453 when eleven centuries old of Cypress (C. sempervirens) in air and the wood of Juniperus oxycedrus, buried in the earth in Malta, were quite sound after respectively 1100 years and 400 years.—*Boulger "Wood," 1902.*

The herbaceous stems are attacked in these moist and sheltered places by such fungi as Heterosphaeria patella, Melanomma, etc. The stalk eventually rots and is easily broken at the base by wind or accidents of sorts. Having been felled, the hollow centre is a neat and cosy refuge for insects and animals, and the whole stalk is soon attacked by a variety of fungi. A favourite position for Sphaerias is the soft tissue outside the mechanical cylinder, and by their agency the epidermis is soon broken away.

As regards the breaking up of leaves, a vast number of fungi attack dead rotting leaves when lying on the soil, but a very large part of the work must be done by animals. A curious fungus is Typhula Grevillei, whose minute club-like fructifications may be found between the leaves and not upright. In such a position the spores must be distributed by worms, insects, or other animals which probably devour the fungus or the leaf substance, and so distribute the spores.

But the most interesting facts are those connected with the rotting of tree stumps and the decay of fallen branches and twigs. The first point that one notices is the indestructible character of the cork sheet in which the woody parts are enclosed. It is not at all unusual to find cylindrical tubes of almost unbroken cork with the whole of the wood inside reduced to powder. This is the more remarkable, as the Discomycete fungi, for instance, show extraordinary powers of adapting themselves to the most inappropriate foods. Species exist which grow on charcoal, leather, modelling clay, plaster, and fir tree resin. Yet, though 133 species at least grow on wood, those occurring on "bark" are very few, and even of these most, like Lachnella calycina, really live on the phlœm and cambium, and only burst through the cork from the inside.

Perhaps more remarkable is the resistant power of the sawn surface of the stump. This may remain discoloured and more or less hard for years after the tree is felled. It is apparently saturated with resin, and has a very scanty and difficult flora in which blue Algae (Chroococcus, Glaeocapsa, etc.) are common. Underneath this surface the wood may be entirely honeycombed or crumbling, powdery, and almost destroyed. But if hypnums or other mosses, liverworts, or lichens cover such a surface, it is soon decayed.

Both insects and the mycelia of the larger fungi generally make their attack between the bark and wood. There are the cambium of living cells, as well as soft phlœm and the youngest wood. Having burrowed through and devoured all this material, the most usual proceeding is for the fungus to penetrate by the medullary rays (also full of starch, vegetable fat, and oil) so as to reach towards the pith.*

Quite frequently the whole wood then becomes a mass of thin papery sheets reminding one of the leaves of a book and exceedingly thin. A favourite place for Discomycetes is the smooth, still hard, surface of the wood covered over by the loose shell of bark, and where worms, wood lice, centipedes, slugs, small shells, insect larvæ, etc., find shelter. The shining white translucent Lachnella Hyalina often occurs in this position. Here also Myxomycete fungi are to be found. The plasmodia may be often noticed, and very often the fructifications, though these are perhaps more usual where the bark has come off.

On the other hand, many Sphæriaceae grow and feed beneath the bark, but, when mature, their little rounded black shoulders burst up through the bark and the minute opening is exposed to the air. Others, such as Nectria, Hypoxylon fuscum, and many others, combine to form a circular or lens shaped mass (stroma), which breaks up through the bark and so attains the air and light; in these the small pores may be observed, and are obviously excellently adapted to the purpose of spore dissemination.

It is as regards the dissemination of the spores of all these four groups (Agaricineae, Discomycetes, Sphæriaceae, and Myxomycetes), that one finds oneself face to face with difficult but most interesting problems.

How is it that, e.g., Arcyria Punicea occurs on dead wood in Britain, France, Germany, Poland, Italy, the Cape, Java and Borneo, New Zealand, the United States, the West Indies, Guiana, and Brazil?† Probably that form was differentiated at the very origin of the species of trees, and has accompanied trees in all their migrations all over the world. More remarkable,

* cf. *Lindroth* Naturw. Zeits. f. Land u. Forst. Band II., 1904 (Polyporus nigricans) *Biffen*, Journ. Linn. Soc., April, 1899.

† *Lister*, Mycetozoa.

perhaps, is the specialisation shown by some of the Ascomycetes.

We find that on Vaccinium, for instance, there are 2 sp. of Phacidium and one of Crumenula. On beechmast there grow —Hymenoscypha 1 sp., Helotium 1 sp., and Lachnella 2 sp.; whilst upon Castanea cups a Lachnella has been found. These forms have not, so far as I know, been discovered elsewhere, except just upon those particular substances.

On the other hand, others occur on widely different plants, on the wood of many different trees or on all sorts of herbaceous stems. There are also cases in which these saprophytic minute fungi attack closely related plants such as Poplar and Willow. All this resembles very closely what we find in the flowering plants, and is most easily explained by the simple supposition that the ancestors of any given Discomycete have, during the whole course of the evolution of, for example, Castanea, continued to live on Castanea, dividing from their relations on beechmast and acorn, at the time those trees were differentiated.

The spores are in some cases certainly distributed by insects. Take, e.g., Typhula Grevillei between dead leaves lying flat upon one another. Surely no explanation is possible except that insects or animals, probably worms, devour the fungus and deposit the spores in their casts. Nor, I think, can we help the belief that insects must generally introduce the spores of Discomycetes under the bark of a dead twig. The exposed ring of infectible tissue is not only very narrow but in most cases it is vertical, and the chance falling of a spore exactly at the right spot seems exceedingly unlikely.

On the other hand, an insect which touches a Typhula in the dead leaves, or which is leaving beechmast or dead logs, will very probably proceed to visit other dead leaves, beechmast or dead twigs. The probability of infection is obviously enormously greater than that of purely chance infection by wind. Insects undoubtedly do visit both large and small fungi, although observation of insect visits on very minute Lachnellas, etc., is an exceedingly difficult matter.

I do not mean to imply that the wind is not utilised. Indeed, special arrangements for darting out or ejaculating spores are by no means unusual, as in the Puffball, Peziza, Barya, Ascobolus, etc. Falk has also explained how, in the common agarics, the spores dropping from the under surface of the hat are caught up

by draughts due to differences of temperature and may be distributed to a distance of a metre from it. The higher temperature found in fungi which are fully ripe and on the point of decay might, as he suggests, assist in producing those draughts.

But this writer would surely agree that the insect that laid its eggs in that agaricus and its daughter larvæ later on could not avoid carrying off spores when they left the fungus! Those spores would surely be rubbed off amongst dead leaves or inside the bark, and have a very favourable chance of germination.

Then, again, pollen grains are for the most part insect carried, and when we find an identical ornamentation consisting of tiny microscopical spines on pollen grains, on spores of Tilletia, etc., parasitic on anthers, and on Myxomycete spores (which are often bright red or yellow), is it not most reasonable to conclude that insects are the most important agents in their distribution?

It is quite likely that birds, rabbits, and squirrels carry spores from one plantation to another. Mr W. R. Stewart, of Glasgow, told me that he had often seen birds attacking the larger fungi, and both he and Mr M'Cutcheon have observed squirrels eating fungi.

Whether spores can survive being swallowed by animals, and especially worms and insects, is a difficult question. Mr Massee thinks that the Mucors and Mould fungi are swallowed by animals, e.g., rabbits, and pass through their intestines without injury.* The spores of Ascomycetes and Basidiomycetes are said by Falk (l.c.) to be destroyed by digestion in animals. These two opinions are scarcely reconcilable, for the Ascospores are much better protected than those of Mucor.

Spores even of these minute fungi are both long lived and resistant. Mr Lister found that spores of a Reticularia, which had been dried three years before, germinated in four hours when placed in suitable media. Even the fungi themselves are sometimes capable of resisting both heat and, what is still more remarkable, drowning. Polyporus Betulinus, etc., dried at a temperature of 37 degs. C., revived afterwards when placed in moist air.† A Discomycete fungus (Humaria oo-cardii) has been

* Massee Annals of Botany, Vol. XVI., 1902, p. 57

† Gatin Guzewska Comptes Rendus, 12 Dec., 1904.

discovered growing quite happily at a depth of eight metres below the surface of the water.*

So a squirrel nesting in a tree infected by Polyporus Betulinus might produce infection on any one of the trees that it visits during a very long time, and the spore might sleep three or four years in a crevice of bark until it got the chance of germination.

The air, of course, is, as we know, full of fungus spores. Such minute dust particles as they are must be carried enormous distances. Klebahn found thousands of rust spores deposited on plates (12 cm. in diameter) placed in the open air, and Saito† has carried out similar experiments.

But, on the whole, I think that insects and other small animals have the chief part in this work of conveying those minute destroyers of dead wood and breakers up of vegetable matter to their appointed place for functioning.

The number of smaller fungi recorded for this district is very small.

The following minute agents of decay have been found by myself in Kirkcudbrightshire:—

†361 Peziza (Humaria) humosa. On refuse, by-path to river between Hardlawbank Bridge and Lincluden, December 22nd, 1898.

360 Ascobolus viridis. Same place and date.

1322 Hymenoscypha scutula. Dead herbaceous stems, Dalry, October, 1907.

1325 H. fructigena. Rose twigs, Dalry, October, 1907.

1328 H. coronata. Herbaceous stems, Dalry, October, 1907.

1332 H. clavata. Wet herbaceous stems, Newton, October, 1907.

1345 H. petiolorum. Exact colour of dead oak leaf, small wood near Cluden Mills, October, 1907.

364 Lachnella calycina. Larch disease, Newton (very common), December, 1898.

1326 Phyllachora junci. On rushes, Bogue, Dalry, October, 1907.

* Lindau, Botan. Centralblatt Band 96, p. 41.

† The numbers refer to my herbarium (Cryptogamous).

1353 L. nidulus? On Spiræa stems, Cluden Mills, October, 1907.
1333 Lachnea scutellata. Islesteps, October, 1907.
1321 Tapesia cæsia. On dead oak leaves, Newton, October, 1907.
1344 Solenia anomala. Cluden Mills, on wood, October, 1907.
1331 Calloria leucostigma. Newton, October, 1907.
1347 C. luteorubella. On wood, Newton, October, 1907.
1337 Phacidium coronatum. Oak leaves, Dalry, October, 1907.
1342 Helotium herbarum. On nettle stalks, Cluden Mills, October, 1907.
1343 Helotium claroflavus. On beechmast, Cluden Mills, October, 1907.
1349 Mollisia cinerea. On wood, October, 1907.
362 Fenestrella princeps. On hawthorn twigs, above Lincluden, December, 1898.
1323 Melanomma pulvispyrius. Newton, Heracleum stalks, October, 1907.
1327 Ceratosphæria rhenana. On rose twigs, Dalry, October, 1907.
1340 Gibberella pulicaris. Barberry twigs, Newton, October, 1907.
1341 Nectria ditissima. On wood, Newton, October, 1907.
1350 Hypoxylum fuscum. Cluden Mills.
1351 Phoma complanata. Herbaceous stalks, Cluden Mills, October, 1907.
1326 Phyllachora (late Dothidea) junci. On rushes, Dalry, October, 1907.
1320 Comatricha obtusata. Newton, on dead branches, October, 1907.
1330 and 1335 Trichia varia. Holywood and Islesteps, on Xylaria and wood, October, 1907.
1334 Arcyria punicea. From Dr Martin, Newbridge, October, 1907.
1336 Stemonitis fusca. Islesteps, on old stump, October, 1907.
1348 Physarum nutans. Dalry, October, 1907.
1339 Typhula Grevillei. Between sodden leaves, Newton, October, 1907.

Miss A. Lorraine Smith, a distinguished Dumfriesshire

botanist and an excellent authority on fungi, has found the following in Dumfriesshire:

Haplographium pinetum. On dead fir leaves. Remarkable for the dark brown and rather stout stem and a head like Penicillium. (New to Britain.)

Periconia pycnospora
Acremoniella pallida } All unusual forms on vegetable rubbish.
Gorytrichum cæsium

Gibberella cyanogena. Cabbage stalks.

Leptosphaeria acuta. Nettle stems.

Ticothecium pygmaeum. On the apothacium of a Lecanora.

Sporodina grandis, with zygospores on Agarics.

Ascophanus equinus. On dung.

Steganosporium pyriforme. On sycamore branches.

Rhytisma acerinum. On sycamore leaves.

Urocystis Anemones. On buttercup.

Melampsoridium betulinum. On birch.

Phragmidium violaceum. On Rubus.

Phragmidium subcorticatum. On Roca canina.

Puccinia graminis.

Puccinia Poarum.

Cystopus candidus. On Shepherd's Purse.

Erysiphe Martis. On dead flies.

Leptosphæria vagabunda and its attendant;

Coniothyrium vagabundus, a new disease of gooseberries, has been observed at Annan and Worcester. It strips the bushes of leaves.

15th November, 1907.

Chairman—Dr MARTIN, Vice-President.

THE UNDEVELOPED RESOURCES OF OUR MARINE FISHERIES.

By Mr WILSON H. ARMISTEAD.

Although the salmon does not come entirely under the heading of Marine Fisheries, no study of its life and habits is complete without considering its existence in salt water, and before passing on to questions which are entirely marine, I should like to say a few words about this most important fish. The decrease of

salmon in our rivers has been the subject of much discussion for many years, and though every now and again there comes a season which is so much better than the preceding ones, that we are inclined to hope things are improving, invariably there succeeds a series of seasons which destroy all hope of a permanent improvement.

So great is the value of the salmon in our rivers that one would think it should be a matter for national consideration, and from time to time the Government has made very definite attempts to improve matters, and the Fishery Boards for England, Scotland, and Ireland have this question very much at heart. But I wish to show how, under existing conditions, Governments and Fishery Boards are alike powerless to prevent things going from bad to worse. I am fully satisfied, after carefully studying the matter from every available point of view, that the great difficulty in the way of real advance is the existence on all rivers of such widely different interests, all centreing in this much valued but most unfortunate fish.

CONFLICTING INTERESTS.

Though I wish to deal with the subject solely from a national point of view it will be necessary to consider some of these conflicting interests, and for our present purpose we may divide them into two classes—(1) Sporting interest; (2) Commercial interest. Now it has been the custom hitherto to discover by means of elaborate calculations which of these two interests is the most valuable to the country, and, having decided that point, to advocate the fostering of that particular interest with little regard for the other. Again, another method has been adopted which is, perhaps, even worse than the preceding one; the fostering of both interests by means of concessions to each, which have served to embitter the feelings of both parties. If only they could be persuaded that their interests are identical and in no way conflicting, a very real advantage would have been gained in the right direction. As things stand, the feeling of the fishermen towards the river proprietors is very bitter, and I know from personal observation that the feeling of the river proprietors is equally bitter against the fishermen. It is the old story of a house divided against itself, and the inevitable result. The fishermen claim that the salmon are worthless till they have been

for some time in the sea, and that they, as fishermen, have a moral right to the fish in the sea. The proprietors claim that, but for their rivers, which contain the spawning grounds of the salmon, and which are for two years the nursery of the young fish before ever they go to sea at all, there would be no salmon for the fishermen to catch. Further, they point out that they are at considerable expense in various ways, but chiefly in providing watchers to protect the spawning fish—and that, considering all this, it is very hard lines that men who have done absolutely nothing for the welfare of the salmon should have the first and best chance of capturing them. Each of these arguments appears to their supporters unanswerable, and each party regards the other as defrauding it of its just rights. This is no exaggeration of the case. Feeling runs very high, and in the fight to obtain each its share the poor unfortunate salmon goes to the wall. As my interests are centred entirely in the welfare of the salmon, perhaps I may claim to take an impartial view of the matter, and I have a very severe indictment to bring against both parties.

Sportsmen Fighting Against Each Other.

First, I will deal with the sporting interest. Here I find the camp again divided against itself. The interests on a salmon river are so various and of such different degree, owing to the large number of proprietors and their position on the river, that an adjustment of the rights of each seems to be impossible. When once a salmon is out of the sea and safely into fresh water, he belongs legally to the owner of the land through which the river runs. His value undergoes a change, for now he is not regarded solely as a marketable product at so much a pound, but as a sporting asset to any estate on which he may be found. He is angled for with rod and line, and the value of any stretch of salmon river is enhanced by the number of salmon which can be taken from it in ways which are according to the accepted idea of sport. Here we have scores, sometimes hundreds, of proprietors on the same river, each with an inducement to take as many salmon as he can from his particular stretch, and in many cases the feeling between upper and lower proprietors is as bitter as their feeling against the fisherman and his nets. There is more reason for this than might appear on the surface. The most valuable parts of a river from the salmon's point of view are

the upper reaches and small tributaries, for here are the chief spawning grounds, and it is the proprietor of these waters who gets the least benefit from the salmon, because they arrive there last. Often they do not reach the head waters until the close time, so that the proprietor whose stretch of water is of the most value to the river as a whole, gets absolutely no benefit from the salmon fishing. What does he do? If he is fond of fishing he turns his attention to trout, and sees that his water is well stocked with these, and the result is that the spawning beds are overcrowded with fish. Early trout eggs are rooted up by salmon, and their eggs are in turn rooted up by the late trout. It is a fearful state of affairs, which can only result in disaster to the river as a whole, and the irony of it is that the unfortunate fisherman gets the blame when salmon get scarcer. It is all very well to say that the fisherman does nothing for the benefit of the salmon, which, by the way, is not altogether the case, as will be shown later, but it must also be borne in mind that neither is he guilty of wasteful mismanagement.

How Angling is Harmful.

Another point which I should like to emphasise strongly is that angling for salmon with rod and line is the most harmful manner of catching the fish in a river, and where fly fishing only is allowed this applies equally to trout, because it is the young and lusty fish which are caught by such lures, and these are precisely the fish which should be allowed to remain as breeders. Think what it must mean to any river to have the cream of its stock taken every year, and the old and infirm left to spawn. If you examine the fish on the spawning beds, you will find a very large majority of old fish, particularly males, which ought, for the benefit of the river, to have been taken out long ago. This is one of the services the fishermen render a river—the nets catch their fair percentage of old fish which are past being of value as breeders. There are several important reasons why old fish should not be allowed to become too numerous in any river:—(1) As breeders they are inferior, producing fewer eggs for their weight, and eggs of an inferior quality, which produce weakly alevins. (2) Old fish spawn later than those in the prime of life, and very frequently root up eggs already deposited in order to lay their own. (3) Old males are quarrelsome brutes, and by

reason of their abnormally developed lower jaw are dangerous to younger fish, and the wounds they inflict become covered with fungus (Saprolegnia ferax), which will eventually kill the fish if it does not immediately return to salt water. (4) Saprolegnia, being contagious, is a very dangerous disease to have set going amongst a crowd of spawning fish. (5) Even where the old males do not start it by wounding others, they are very liable to it themselves, and so become a source of danger. From what has been said, it will be seen how desirable it is that the breeding stock should be young and healthy. A method of removing old and undesirable fish will be discussed presently.

The Upper Proprietors' Grievance.

As an illustration of the difficulty in fairly distributing the advantages of the presence of salmon in a river, I may mention a case in point. On a certain river there was a pretty lively state of affairs between the conservators, the proprietors, and the fishermen. Again and again adjustments had been tried and bye-laws altered, but the unfortunate conservators were at their wits end, and did not know what to do, for each move brought a storm of abuse from one or other of the factions, and while the uproar was at its height a letter was received from one of the upper proprietors which threatened to make matters worse. This gentleman stated that over 70 per cent. of the salmon in the river spawned in his waters, but they did not arrive there till after the close season had set in, and he asked for a week's rod fishing to be allowed him in consideration of the protection he and his keepers afforded the salmon while on the spawning beds. The request was refused, and nothing more was heard of the matter till spawning time. Then the conservators heard that Mr So-and-so had been blowing up the salmon on the spawning beds with dynamite in order that he might turn his piece of river into a well-stocked trout water. Naturally, there was a row, and though the conservators were able to prevent him repeating the outrage, considerable mischief had already been done, and they were not able to prevent him erecting a trout hatchery and turning down many thousands of trout. This, of course, meant destruction to quantities of salmon eggs on the spawning beds.

THE FISHERMEN'S CASE.

The fishermen on the coast are well aware of what goes on up the rivers. They know what the proprietors think of them, and they know what they think of each other. They are men who have to earn money for a living, and they have wives and families to maintain. They fish in the sea, which is free to all, and they find salmon there. Salmon are of considerable value, consequently the fishermen lay out what money they can afford in boats and nets, and, having sunk their capital, they must make it as productive as possible. The law, from their point of view, harasses them considerably, but in the main they abide by it, and, if they were the only people taking toll of the salmon, the crop in the rivers would be in a very different state from what it is at present. As has been pointed out, they do not take only the cream of the breeding fish, but they catch their fair percentage of fish which are no longer of any use to the river owing to their age. Where I find fault with them chiefly is their conniving at legal practices. The majority of the fishermen are law-abiding, but they will not interfere with the minority who break the law. In this they make a great mistake, for they allow their trade to become a byeword for poaching, and as a class they are distrusted. This prejudice against their integrity will take a long time to overcome, and it is a pity that a number of worthy men should be dubbed rascals for the sake of the few who really are so. Again, they have an idea (for which, it must be confessed, there is some ground) that the river proprietors would like to do away with all salmon netting, consequently they do not trust strangers with information, and it is very difficult even for their friends to get at the truth. Their grievances are many, because they are misunderstood, but no one with a knowledge of what goes on up the rivers can justly accuse the fishermen of being the cause of the present scarcity of salmon. The case for both parties at present stands thus—conflicting interests, jealousy, distrust, and ignorance as to cause and effect. To suggest a remedy may seem a bold thing, but there is a way out of the difficulty, and I am inclined to think it is the only one. Mutual interest or co-operation would place things on a very different footing, and the result would not be a thing of the distant future, but each year would show a steady advance till a very great improvement would be arrived at.

A Proposed Remedy.

As an outline of the plan, I would suggest the following:—A salmon river from source to estuary, with all its tributaries, should be taken as a complete whole. All the interests should be ascertained, including a fixed number of fishermen's claims in the estuary. These interests, or holdings, should be valued, and a small tax made on the valuation. The funds thus derived could be utilised for the proper farming of the river so as to make it produce its utmost. One or more hatcheries could be built, and by means of stations erected at suitable points, every salmon entering the river could be counted, and a complete control over the fish exercised. Every fish past its prime could be marketed, and suitable breeders selected for the filling of the hatcheries with eggs. The cost of working the scheme when ascertained could be raised by making a charge of so much per lb. weight for every fish caught, and in this way the take of fish would reduce or abolish entirely the original tax on the holdings. By means of effective co-operation, the welfare of the river as a whole would be the desire of each one holding an interest. As a rough outline of what I am convinced is a thoroughly practical idea, this may serve for the foundation of a scheme to be perfected by an abler head than mine. If there are difficulties to be overcome, as indeed there are sure to be, at least tackling them will not be so hopeless a matter as the present state of affairs. In connection with the above, the following paragraph, which I came across in a recent publication, may be of interest:—"Some years ago 5000 young salmon were released from the Clackamas Hatchery, Oregon, after having been carefully marked by the removal of part of the dorsal fin with a razor. No fewer than 450 of these fish were secured in the second, third, and fourth years following their release, which means that for every thousand young salmon released two thousand pounds of adult fish were caught for market a few years later. The cost of producing and turning out the young salmon worked out at about four shillings a thousand." In concluding this subject, I may say that it is my opinion that the only way to get a salmon river to yield its utmost is by co-operation and scientific farming of the water.

Oysters.

Passing now to a very different creature, and one which is

entirely marine, I should like to say a few words concerning the oyster. This shell fish is, and has been, a considerable source of revenue to many districts, but unfortunately there are many places where they were once plentiful and now do not exist. This is not always due to man's meddlesomeness, and in many cases the cause of their disappearance is a complete mystery. I knew a very fine bed away up the West Highlands, north of Strome Ferry, some years ago, which existed in a sheltered bay about two fathoms down in beautifully clear water—they were very little molested, and to all appearance had been established there for generations. One fine day the building of a shooting lodge was commenced fully a mile away on the shore, and before it was completed the oysters had died out. No one knew why, but as the building and destruction of the bed happened at the same time, the natives concluded they had something to do with each other. At anyrate, no other explanation was ever forthcoming, but it must be admitted that other beds have disappeared with even less apparent cause. The partial failure of the oyster crop round our coasts, excepting in the few places where they are cultivated, has led to a supply of foreign shell fish, often of very inferior quality, finding its way into the English and Scottish markets, and the buyers have become so accustomed to this regular supply that they will not trouble their heads about intermittent consignments from our own coasts. As the result of enquiry, I find that the buyers require—(1) Regular supplies; (2) Even sizes; (3) Oysters not more than five years old. It appears that an oyster is at its best at four years of age, and where they are under cultivation they are despatched when they have attained it.

Solway Possibilities.

Perhaps it is not very well known that there are considerable oyster beds in the Solway lying untouched. In Wigtown Bay there is a large bed seldom, if ever, fished, and off St. Bees Head they are lying many feet thick on the bottom, but I was told they were not marketable. One consignment of 400 dozen sent to Manchester did not make enough to pay the railway carriage. From time to time I have examined these oysters. They are huge fellows, well nourished, but the bulk of them are ancient and tough. Their shells are overgrown and heavy,

and consequently they won't sell. But there was one important and interesting thing I noticed about them—they had young oysters no bigger than the half of a threepenny bit sticking to them. It was curious that all I could procure were either very old or very young; but here, at least, were the essential facts which proved that oysters thrive in these waters. It is interesting to note that, even where oysters are under cultivation, it is often impossible to get them to spawn, and "seed" has to be procured from more favoured places, but here was the seed too. One of the great difficulties in this part of the world which has to be overcome in oyster cultivation is the destruction worked by hard frost. No certain success can be relied on if an oyster bed is allowed to dry each ebb. Consequently, we find that there are no oysters in the Solway which can be gathered by hand at low tide with the exception of a few small and insignificant beds which are only accessible on very rare occasions; such as, for instance, when there is a strong east wind and an unusually low ebb. After a heavy south-westerly gale, I have seen the western shore of Heston Island strewn with oyster shells, but I have never been able to locate the bed from which they come. It cannot be very far away, nor can it be very deep, or a rough sea would not disturb it. There is no great difficulty about farming oysters under water, provided the depth is not more than a fathom or two, and in a sheltered estuary a depth of a few inches would be sufficient to prevent even a severe frost damaging the shellfish, for the rise and fall of the tide would prevent any thickness of ice being formed.

Difficulties and How to Meet Them.

With regard to the beds already mentioned, the way to make them productive would be to dredge up the old oysters from a part of the bottom and collect the seed which is adhering to them, and this should be planted again on the space cleared. By planting a given area each year an annual crop could be relied on, and, once the whole bed had been treated in this way, the labour of farming the oysters would be much reduced. Owing to the fact that the natural conditions required for successful oyster culture are not thoroughly understood, it is much safer to tackle an existing bed than to make fresh ones. There are many places where oyster farming has been tried under con-

ditions which seemed all that could be desired, but without satisfactory results, so that the presence of a natural bed is really the only thoroughly reliable indication of the suitability of any given piece of sea bottom. Two winters ago a smack from Garlieston started dredging on a bed which lies close to that town, and, after great difficulty in finding a market, an outlet was at last found for them at the price of two shillings a hundred. Even at this ridiculously low figure the men were able to make good wages, but owing to the irregular size and great age of most of the oysters procured, the market did not hold, and after a few months the demand ceased altogether. Here we have a valuable fishery absolutely wasted owing to want of proper management. The same thing applies to the large beds lying between St. Bees Head and the Isle of Man. Some of the Whitehaven fishermen told me they believed these beds were fully twenty feet deep, and I saw large quantities which they had brought up in their trawls while fishing for flat fish. One great difficulty in the way of improvement is the fact that any man or body of men who undertook the work would have no security from outsiders, who might come in and reap the benefit of their labours. There are a number of people who are fully alive to the value of these beds if taken in hand, but they are naturally not willing to move in the matter without some guarantee that their interest would be protected. As things stand at present, the beds, if put in working order, might be cleared in a few weeks by a fleet of dredgers, which would gather the harvest, and for the sake of present gain would destroy all prospect for the future. The Inspector of Fisheries for Ireland reported some years ago that on one part of the Irish coast one bed of oysters gave employment to 2000 fishermen, but so recklessly were they fished that the freight, which once reached £1000 per week, had fallen to £300 per annum. The French people have been very active in the development of their oyster fisheries, and I find in an old report by Dr Henry Lawson the following interesting note. Referring to the success of systematic cultivation he says:—"The most convincing evidence of all is that afforded by the Isle of Ré. Five years since the shores of this island were barren and uncultivated; now they give employment to 3000 men, and the crop of oysters produced in 1861 was valued at £320,000 sterling." The oyster farms

on the island of Ré are, however, much more valuable and productive now than at the time Dr Lawson wrote of them. It is impossible, in so short a time, to discuss the most approved methods of oyster farming, but perhaps enough has been said to show that it would be worth while considering the matter, and before leaving the subject I may mention that a conclusive answer to those who have thought in the past that our waters were too cold for any successful work in this direction, is the fact that the Norwegians are successfully cultivating oysters on their coast, and sending large quantities of "seed" to this country.

Lobsters.

In conclusion, I should like to say something about the lobster fisheries on our coasts. The value of this crustacean to a large population of fishermen all round Great Britain and Ireland is considerable, and, like many other branches of the fishing industry, it has been falling off of late years owing to mismanagement. From Heston to the Burrow Head, wherever the shore is rocky, lobsters are to be found, and here, too, they seem to be very much scarcer than they used to be. This is hardly to be wondered at when we consider the methods which have been adopted, and are adopted at the present time, I believe, on the Scottish shore. There appears to be no close season whatever, and a large number of the lobsters caught are actually carrying their eggs, almost ready for hatching. This waste is bound to tell in time on the quantity of lobsters, and, indeed, it would seem that the time when they will be comparatively rare is not far off. The hatching of lobster eggs is not a difficult matter, and the spawn taken from underneath the female lobster, where it will be found for some weeks prior to hatching off, can be easily dealt with if it is carefully removed from the parent and placed in a suitable tank. On some parts of the coast lobster smacks used to have wells in them, to which the fresh sea water had access, and it frequently happened that a batch of eggs attached to a captured lobster would hatch off and the young would be found in large quantities in the water. From this occurrence the idea of floating receptacles for the spawn was originated—in America, I believe—and these were anchored over the lobster ground, and all spawn removed from the captured lobsters and placed in them.

Though this was a very rough and ready way, it proved of considerable use, for the young lobsters, immediately after hatching out, found their way through the perforated bottom of the tanks into the sea. A single lobster may have anything from 5000 to 100,000 eggs, so that it will be seen that the destruction of these is a grievous waste. Many attempts have been made to rear young lobsters, but with only partial success, for by nature they are cannibals, and the loss from this cause when they are kept in confinement is enormous. Some years ago I had the opportunity of seeing the then most approved method of hatching young lobsters. The eggs were placed in glass jars, and a current of sea water was made to flow through them from underneath by means of a glass tube reaching to the bottom of each jar. When I saw them, the young lobsters had all hatched out, and they looked like a swarm of small yellow ants. These youngsters were to be liberated in a few days, and it was surprising to see what a small space was required for the hatching of many millions of eggs. Since then I saw in an American fishery report that a method has been devised for rearing young lobsters up to a stage when they are easily dealt with. The idea is an ingenious one. By means of a small engine and pump a rotary current is kept up, which keeps the tiny crustacea in a continual swirl, so that they have no time for fighting and eating each other, and in spite of this somewhat drastic treatment they seem to thrive.

A NATIONAL DANGER.

Great strides have been made in the past forty years in the development of inland fisheries owing to the benefit which is derived by individuals undertaking this work. With marine fisheries the case is different. Any attempt to cultivate the fish in the sea is a matter not for individuals but for the community, which it will ultimately benefit. Much valuable work has and is still being done by the various Fishery Boards, but the apathy on the part of those to be benefited is very discouraging. The fishermen are not altogether to blame for this, for they have little time to devote to anything but the catching of fish, and while year after year improved appliances are helping to secure the harvest of the sea, little is being done to ensure its continuance. When a fishing ground is played out a move is made to

fresh quarters, and so year after year the smacks have to go further afield. This is particularly the case with the sole fishing industry. It is not long since the papers were full of accounts of a splendid sole fishing ground which had been discovered in the Bay of Biscay. It was thought a wonderful thing that the enterprise of fishermen and owners of trawlers should be so great that they would go as far afield, but now we hear little of the Biscay fishing ground, and, instead, it is the coast of Morocco! Huge steam trawlers, fitted with every modern appliance, including an ice-plant capable of producing two tons of ice daily, are raking the bottom of the sea off the coast of Africa to supply the British markets with soles. Where will they go next? How long will it be before all the available fishing grounds will have been spoiled? When this does occur people will wake up to the necessity of doing something. The supply of sea fish poured into this country daily is greater than it has ever been, and consequently it is cheaper, but it would be a great mistake to suppose that because this is the case fish in the sea are more plentiful than ever. It simply means that the fishing industry, instead of being carried on by sailing boats using antiquated appliances, is now in the hands of men who have scientifically perfected their methods of capture so that the harvest can be reaped as clean on the sea bottom as can a field of oats on land. Only it is all harvest, there is no seed time, and the inevitable result must be disaster to an industry which is of vast national importance. We are within measurable distance of a scarcity of marine fish. This, of course, means high prices, and thousands of people will be deprived of one of their most valuable forms of food. So long as the present state of prosperity continues, people will not listen. When the result of blind activity and enterprise is the impoverishment of our fisheries, there will be a host of voices raised in condemnation. The old question of "Why was not something done in time?" will have to be answered, and the inevitable judgment formed by those who suffer will be "culpable negligence." It is little good looking round to see who is responsible. The matter is not one for private enterprise, neither are the Fishery Boards to blame, for they would gladly do more, but they cannot. Again and again their voices have been raised in warning, but who will take heed? The Government cannot justly be blamed,

for if they were to interfere at the present time with the fishing industry such a turmoil would be raised that it might even lead to a change of government. Immense sums of money are invested in the fleet of magnificent trawlers which scour the seas for thousands of miles to provide fish for the million, and this financial interest is so wide that it would be as difficult to control by legislation as the drink traffic. It seems, then, that we must just wait until a national calamity arrives, which will demonstrate beyond all doubt what a blind policy has been pursued for years by those who take fish from the sea.

Cup and Ring Markings in West Kilbride.
By Mr John Corrie.

During a recent holiday spent at Ardrossan I had an opportunity of examining for the second time some remarkably fine cup and ring markings which are to be found in the parish of West Kilbride. The best defined markings occur upon an outcrop of old red sandstone rock on the lands of Hopeton. Other markings, similar in character, but less clearly cut, were to be met with upon the "Diamond Craig," near Fairlie. Many of the markings take the form of cups, some solitary and some in groups. A number of the cups are surrounded by rings, and some have a gutter or grove running up from them. (Typical examples of the different forms were shown on sheets, which Mr Corrie exhibited to the meeting. One showed a cup surrounded by two concentric rings with a groove running out from the inner ring.) Close to the outcrop of rock at Hopeton there is the outline of a stone circle, and near the same spot a stone hammer and an arrow point of flint were found some years ago. The significance of these curious sculpturings I do not propose to touch upon. Valuable notes upon the subject will be found in the published transactions of the Society, and Professor Simpson's work is probably upon the shelves of the library. I have only to add that I have found no traces of these markings in my own district. Possibly their absence may be explained by the intractable nature of our Glencairn whinstone.

"The Clochmabon." By the Rev. R. Neill Rae, Lochmaben.

This ancient landmark forms the centre of a story which carries us back into the unknown past. The documents at our disposal tell us of the many events which took place around the old "Stone of Mabon." But they do not help us to understand the name it bears, still less can they tell us why, when, and by whom it was erected here. In the "New Statistical Account," Dumfriesshire (published in 1845), pp. 267-7, we read that "Not many years ago there stood in the parish of Gretna, on the farm of Old Gretna, a circle, oval in form, of whitish stones, placed upright, and enclosing half-an-acre of ground. In the process of agricultural improvement these stones had been removed, not long before, with the exception of the largest one." This is the Clochmabon, and, along with its fellows, must have been brought from a distance of 10-12 miles. The labour entailed may be judged from the fact that it is a granitic boulder; according to Dr Neilson, 6 feet or so in height and 9 or 10 in circumference; another account (Graham's "Lochmaben," Five Hundred Years Ago) makes it 8 ft. by 21 ft.; whilst yet a third says "It measures 118 cubic feet and is computed to weigh 20 tons." It stands a few yards above high-water mark, close to the junction of the Sark and Kirtle with the Esk. But the one fact, which must be closely grasped if we would understand the importance of the Clochmabon from the earliest times, is the circumstance that it marks the northern end of the one great ford across the Solway. What that meant in early times may be judged from the fact that, even within recent years, before the Scotch and English Customs Duties were united, the district was inhabited by several daring bands of smugglers, who doubtless found the ford convenient for the conveyance, "duty free," of Scotch whisky to their customers on the other side.

The stone is frequently mentioned in the records of the Western Marches. The warden courts for the Western Marches were held here; when prisoners were brought for ransom or exchange, offences against the Border laws were tried, and, according to custom, a sort of market was held during the period of the meeting; and arms were strictly forbidden within the circle.

In Asloan's Manuscripts (1448) we read that the battle of Sark was called by contemporaries the battell of Lochmaben Stane. In Pitcairn's Criminal Trials (vol. 1, part 1, p. 398), it is told how on 11th May, 1557, Roger Kirkpatrick of Closeburn, William Kirkpatrick of Kirkmichael, and Thomas Kirkpatrick of Friars' Carse, got remission from the Queen for abiding from the army ordered to assemble at Lochmabenstane on Feb. 6, "to meet the warden before sunrise, to pass fordwart with him to the day of Trew, for meiting of the wardane of Ingland."

On the 11th June, 1464, in the reign of James Third, commissioners met here to adjust the terms and conditions of a truce; as they did also on 6 Nov., 1398 (Foedera of that date, Bain's Caledonia IV., p. 512), at Clockmaban Stane to carry out the agreement which had been made between the Duke of Rothesay and Lancaster as to the exchange of prisoners.

Dr George Neilson, in his "Annals of the Solway" (p. 15), shows that in the documents of an earlier period it is the ford "apud Sulewath" which is mentioned. From him I quote, reversing his arrangement of dates: "A petition was presented to Edward II. by a person desirous to farm the toll between Soulwad and Arthuret (Bain's Cal., III., 51)." In accounts of the campaign of Edward I. in the 1300 it is mentioned as the ford at Sulwath, "transitus apud Sulwath" (Liber Quotidianus Garderobac, 129). The March Laws (Acta Parl. Scot. I., 416) refer to the driving of cattle across the Esk as an incident of the trial in certain cases of disputed ownership. In legal proceedings of date 1292 there is descriptive mention as the peculiar West March place of justice "of a certain place called Sulwat at the Marches of the realms."

The Statute of Marches (Acta Parl. Scot. I., 414, Sulwat) in A.D. 1249 enacts that the proper tribunal for the trial of offences against the Border Laws was "at Sulwath." And Reginald, King of the Isles, was to be met at Sulewad in A.D. 1218 (Bain's Cal. I., 696).

All the documents quoted are those of an English-speaking race, but prior to A.D. 1218 we have no references, the reason being that it was a period of great unrest, when the national headship was utterly unsettled. From pre-Roman times till about A.D. 870-890 the population belonged to the Brythonic race of Celts,

and spoke, not Gaelic, but what is now known as Welsh. Now we find in the Ulster Annals that from A.D. 870 onwards the citadel of Alcluith was repeatedly assailed and taken by the Northmen until in A.D. 890 the British warriors determined to join their kindred on the Clywdd or Cluden in North Wales. They were forced to fight at Rouchal or Rockle or Rotchell now Rockhall on the hills above Lochmaben, where Constantine, the last Guledig or King of Strathclyde, was killed. One of the articles of the treaty made on the following day was that the Anglic tongue was to be the language of the district.

The Kingdom of Strathclyde was divided into several provinces, one of which, comprising the present Dumfriesshire, was known as "the district of Mabon." The old name passed away with the old tongue, and now survives in Lochmaben, the loch district of Mabon, and the Lochmabenstone, or, as it ought to be, the Clochmabon or Stone of Mabon. But what is Mabon?

The Welsh Dictionary tells us that Mab means a baby, whilst Mabon is a young man, a warrior, a mighty man, or hero. Thus we are left with the Loch of Mabon and the Cloch of Mabon, separated from one another by many miles. The question to be settled seems to me to be, was the Mabon spoken of here "an individual" or was it "the district?" I think the latter to be the more probable, although at first I was inclined to agree with Sir H. Maxwell in his theory (Dumfries and Galloway, pp. 132-135). He says:—"We may assume that there was at least one warrior of the name . . . towards the close of the 6th or beginning of the 7th century." He quotes Taliessin, poem 18, where the invasion of Strathclyde and the battle of Owen, the son of Urien, are described as follows:—

"A battle, when Owen defends the cattle of his country,
Will meet Mabon from another country,
A battle at the ford of Alclud."

"A battle on this side of Llachar,
The trembling camp saw Mabon.
A shield in hand, on the fair portion of Reidol
Against the kine of Reged they engaged,
If they had wings they would have flown,
Against Mabon without corpses they would not go.
Meeting, they descend and commence a battle.
The country of Mabon is pierced with destructive slaughter."

Now we have here a foray by Mabon on the territory of Alclud, and an attack in return on the country of Mabon by the kine or people of Reged from Dumbarton up to Lochlomond-side. It certainly seems as if Reged and Mabon were not the leaders but the opposing warrior tribes, called from their different districts. Line 43 carries on the story:—

"About the ford of the boundary, about the alders his battle-places,
When was caused the battle of the King, Sovereign, Prince,
Very wild will the kine be before Mabon."

Here we seem to have "the ford of the boundary" on the Esk as often used in later days.

The pursuit carried so far, and, perhaps, Mabon killed as he "kept the ford" for his flying followers and the stone and circle was erected in his honour.

The idea is a pretty one, but I submit that the Clochmabon was there long before and known by that name, and that his sorrowing tribes-men buried their hero there, as in a hallowed shrine, just as our heroes are laid to rest in Westminister. At anyrate the period from A.D. 800 to A.D. 890 was too short and too disturbed to allow of the name becoming so identified with Clochmabon and Lochmabon as to hold on while all else was changed. Dr Skene ("Celtic Scotland") suggests, if he does not state authoritatively, that Mabon was the ager publicus of the Romans stationed at the wall, and was so called because the time-expired legionaries were settled there and the young men drafted in to supply their places. If so, the Cloch marked the passage into Mabon, as the Cloch at Gourock marks the passage from the deep sea into the Clyde. And the piety of an early age erected the circle and stone as a sanctuary where men might offer up their vows or return their thanksgivings as they left their homes in Mabon, for life as soldiers at the wall, or came to settle down after their labours at the legion. Perhaps the warriors of the Brythons were confronted by the stone and circle when they forced their way across the ford for the first time, and when they saw its size, exclaimed "Clochmabon, the stone of the mighty!" It may be, as suggested by Dr Neilson, that it was dedicated to Maponus, a heathen deity equated with Apollo, who was worshipped in Cumberland and Northumberland during Roman times. But we must remember that these circles are not con-

fined to Cymric districts, but are found also at Mull and Arran, at Callernish near Stornoway, and at Stennis in Orkney. As to their period we know nothing, but one peculiarity is that those I have examined have all been of granitic stone. And I may mention as a suggestive fact that in examining an interesting private collection of antiquities at Kirkwall my attention was directed to a piece of granite taken from the hole left by the fall of one of the Stones of Stennis. This piece of granite bore clearly the marks of polishing as if it had been used as a polishing stone upon the upright stones.

Gold Mines and Gold Mining. By Professor J. W. Gregory, D.Sc., P.R.S., F.R.S.E., F.G.S., M.I.M.M., etc., Glasgow University.

In this lecture, which was illustrated by a number of lantern slides, Professor Gregory gave a full description of the geology, etc., of gold-bearing strata in Australia, etc., together with the characteristics of the same; how the mines were operated; and the processes employed.

20th December, 1907.

Chairman—The President.

The Woodcock. By Mr Hugh Steuart-Gladstone, M.A., F.Z.S., Etc.

The following paper being a précis of the notes on woodcock I have from time to time made in my notebooks, I should perhaps first draw your attention to a frequent error as regards the distinguishing Latin name this bird bears. Linæus spells Rusticola r-u-s-t-i-c-o-l-a; deriving this cognomen from "Rus" and "incola," that is an inhabitant of the country. Mr H. T. Wharton, in the Ibis, 1879, p. 453, writes of this mistake, and modern authorities agree in writing R-u-s-t-i-c-u-l-a. The word "rusticula" by Pliny is translated "a little heathcock:" and in Cicero "rusticulus" means "a little country-man." As such —a little fellow-countryman of Dumfriesshire—I propose that we should consider the woodcock to-night.

The woodcock is found in Eastern Russia and Siberia, up to 60 degrees N. latitude, in Western Russia to 65 degrees N. latitude, and in Norway and Sweden up to the Arctic Circle. The highlands of Southern Europe, the Caucasus, Himalayas, Japan, and Eastern Siberia know it as a nesting bird, and in winter it visits China, Burma and India and the countries of the Mediterranean. Though never recorded from Iceland or South Greenland, occasional stragglers have reached North America.

It has been stated that nine-tenths of the total number of woodcock killed annually in Great Britain are probably migrants from Northern and Western Europe.

Migration takes place by night, the birds flying preferably upwind, and, it is believed, at a great height and speed. They travel singly or in pairs, but, of course, in large companies. Migratory birds of less nocturnal habits than the woodcock have been timed when performing this seasonal movement; and as the grey crow has been computed to travel at the rate of one hundred miles an hour, the suggestion does not seem unreasonable that the woodcock should get up a pace of one hundred and fifty miles an hour when migrating similarly. The observations by Herr Gätke concerning migratory woodcock alighting on Heligoland are interesting. He states that they are more numerous in the autumn migration, particularly after a stiff north-eastern breeze. On October 28th, 1823, upwards of 1100 were killed; and one old gunner, Hans Prohl, killed 99 with a gun made from an old Dutch infantry musket. As many as four at one shot have been killed there, but that, of course, was not at flying birds. The local Heligoland gunners are much attracted by the arrival of these birds, and use weighted nets for their capture. These nets are from 36 to 72 feet long, about 24 feet high, and of a 2½-inch mesh. An old custom prevailed that the "eerst snaap" was handed over to the Governor of the island, who paid a dollar to the sportsman who had been lucky enough to obtain the first 'cock. The killing of so many as 1100 woodcock in one day would seem almost incredible, but we must remember that migratory birds pitch on the island of Helligoland in actual masses. Thus, we read in Rudolph Rosenstock's translation (p. 58) of Herr Gätke's work, that no less than 1500 larks were caught in the space of but

three hours on the misty night of November 6th, 1868. But to return nearer home. Woodcock usually alight on our eastern shores before dawn, and if they have suffered a more than severe buffetting, may be found tamely taking advantage of any hiding-place the shore may present, and have even been found squatting below an overturned boat. But all being well, they arrive plump and in sleek condition, little the worse for their journey, to rest but a few hours before again winging their way west. Their immigration to our islands takes place more or less regularly in October and November, and folklore as regards the date of their arrival varies locally. The first full moon in October is supposed by some to be the time to keep a good look out. An old saying, "When Daniel gets out of the lion's den, the 'cock will come in here again," refers to the reading in church of the lesson from Daniel, ch. vi., which under the old lectionary rules of the Church of England was read earlier than it is now, and coincided somewhat aptly with the usual appearance of our autumn visitors. In years gone by our forefathers kept a very much more keen look out than we do now for the first woodcock that came to our eastern shores. Coverts were not in those days artificially stocked with hand-reared pheasants, but could without jeopardising the "total" now demanded by our present "covert-shoot" be beaten time and again, so long as there was a chance of flushing the long-billed visitor. To illustrate the keenness with which these birds were awaited we need only tell the story of a parson preaching one Sunday in an East Yorkshire village some hundred years ago. When in the middle of his sermon an excited figure was seen to enter the church, who, approaching the pulpit, said—"Passon, 'cock is coomed," upon which the parson speedily concluded the service, and he and his congregation lost no time in going down to the beach to take toll from among the newly-arrived 'cock. It is believed that the numbers of these our visiting migrants are greatly decreasing. The continental practice of shooting birds when they are "tamed by love" is extended to these birds also; and our flow of migrants consequently suffers. It is, therefore, satisfactory to be able to record that the woodcock as a nesting bird in the British Isles is consistently increasing. This undoubted increase in the number of woodcock which nest within our British Isles is difficult to account for.

The interest now taken in ornithology is greater than it has been hitherto, and it is certain that many cases which formerly would have escaped attention are now duly recorded. Of late years a marked tendency for the more northerly-breeding ducks to come further south to nest has been noticed, and the cause for this change of habit is as inexplicable as the increasing numbers of woodcock that now annually remain with us to nest. Experiments have been, and are being, tried on the Duke of Northumberland's estates at Alnwick, by marking young nestling woodcock to see how far these young birds are migratory; but the result of these experiments have as yet led to no definite conclusion. That some woodcock nest and remain throughout the year within the British Isles is certain, and it is possible that the great migratory flow of these birds, on which sportsmen mainly depend for their sport, may in the course of ages be rendered trivial by the increased numbers of British-bred birds. Willughby as long ago as 1678, in his "Ornithology," p. 290, states "some stragglers by some accident left behind when their fellows depart remain also in England all summer and breed here." He also states "this bird is infamous for its simplicity or folly, so that a woodcock is proverbially used for a simple, foolish person." On estates where twenty years ago the finding of a nest with eggs was regarded as a curiosity, it is now common to find a nest in every covert which affords sufficient quietude and undergrowth. We read in 1905 of a keeper in Ireland, whilst searching for pheasants' nests, finding more woodcock nests than those of pheasants. In 1903 we found a woodcock's nest in Dumfriesshire which, besides containing the four rightful eggs, contained one of a pheasant; and this intrusion was probably the cause of the nest's desertion. The nest is but a mere depression in the ground, usually at the base of some tree, and scantily lined with dead leaves. As the old bird sits on her nest she affords one of the most striking examples of Nature's protective colouration. Her mottled back harmonises perfectly with her surroundings of dead fern and leaves, and some observers say she is only to be detected by her large round eye. Others again assert that recognising that "her eyes betray her secret" she keeps them closed; but on this point, surely, it is hard to lay a hard and fast rule. I have noticed, however, that the woodcock I have seen on their nests in every case partially

THE WOODCOCK ON THE NEST.

THE NEST AND EGGS OF WOODCOCK.


NATURAL HISTORY

hid their long bills below the leaves or bracken. The eggs, four in number, are not so pyriform as would be expected, and are of a buffish cream colour, about 1.7 by 1.35 inches in measurement, blotched and spotted mostly at the larger end with reddish brown, with faint undermarkings of lilac-grey. Clutches of pure white eggs have been found, but are extremely rare. Four such eggs were found in Kincardineshire in May of this year: so late a date as May may shew that previous clutches had been destroyed; that this was the third or fourth laying, and so were colourless owing to the exhausted condition of the bird that had laid them. The eggs are usually laid in April or even March, and require upwards of three weeks to hatch. Two broods may occasionally be reared in one season. The nestlings are able to run within twenty-four hours of their being hatched. They are covered with velvety down of a rufous shade, with a broad band of chestnut-brown down their back, and on the top of their head, and with chestnut patches on their throat. In the months of April, May, and June the male woodcock may be seen at dusk or at early dawn, flying in the open backwards and forwards between two coverts. At this season of the year one might almost think that he was some different bird. He looks more like an owl, his flight is slow and laboured, and from time to time he utters a croak or a dissyllabic cry resembling the word "chissick." Evening after evening the woodcock will keep as it were to his aerial pathways, which are called "cock roads," while this style of flighting is termed "roading." Often these "cock roads" will be down some ride or glade in a wood; but as often alongside the covert itself. It is to be regretted that on the continent (as we have stated) so-called sportsmen (?) still profit by this peculiarity of "roading," by lying in wait for and shooting these birds at a season when one might justly expect they should be left unmolested. Sometimes one may see two or three birds met together in the air, tilting at one another and enjoying a sort of playful warfare: very different to the pugnacious contests they have been seen to fight on the ground during the mating season. The female woodcock is a devoted mother, sitting so close on her eggs as often to allow her back to be touched with the hand. She will fly anxiously round and round any person approaching her young; and has more than once been seen to carry them away. How she accom-

plishes this has been a matter of much comment; but the latest authorities would seem to agree that she carries them in her feet. By this habit the difficulty of feeding her young is overcome, for she nightly carries her brood to the feeding-grounds, returning with them again to her quiet nesting-site at dawn. It must be a relief when the young one can fly and visit the feeding-grounds without assistance. In their first plumage they are darker than their parents, and the outer web of the outside primaries of the wings are as it were serrated with brown coloured notches. When adult these notches disappear, leaving the outer webs of a uniform whitish colour. This difference in colouration of the outer primaries was long thought to denote the two sexes, but dissection has proved that this is not the case; and there are at present no means of distinguishing the male from the female woodcock by the plumage. As a general rule the larger and heavier birds may be reckoned as females, but from experiment we have found heavy males to equal light females in weight, though these were exceptions: the weight test cannot therefore be implicitly relied on. The variation in size is often very great, but there is but one species of woodcock; and the species is subject to extraordinary dissimilarities, both as regards plumage and weight. Pure white examples of woodcock have been met with, and partial albinoism is not uncommon. Several years ago a table published in "The Field" gave the average weight of a male as 9 to 10 ozs., and of a female 12 to 14 ozs. Taking ten birds of either sex in the winter of 1902, we found the males averaged 11 ozs. 10 drs., and the females 12 ozs. 5 drs. The heaviest on record is mentioned by Yarrell; it weighed 27 ozs., and was shot in 1801. Another of 24 ozs. was recorded about the same time, and some authorities are of opinion that these birds belong to a larger and different species now extinct. The names "double," "muff," or "muffled" cock still exist, but no further evidence is forthcoming, and now-a-days such abnormally heavy birds are not met with. The weight of the birds, of course, is greatly influenced by the abundance or lack of food; and it is the search for this that causes a constant migration of these birds within our islands. How often has some covert been noticed on Monday apparently full of 'cock, which when beaten on Tuesday contained none! The birds which had been noticed found the ground unsuitable

for the production of their sustenance, and have therefore moved on. For many years it was popularly supposed that woodcock lived by suction, and Byron wrote:—

> "For man is a carnivorous production,
> And must have meals, at least one meal a day;
> He cannot live like woodcock upon suction."

This erstwhile belief is erroneous. The woodcock's food consists mainly of worms, or failing these small mollusca. It feeds usually during the night, repairing to its sheltered covert, often a mile or more from its feeding grounds, at earliest dawn. The tip of the woodcock's bill is one mass of nerves, and is therefore sensitive in the highest degree. By burying it into the soft ground, often right up to the nostrils, the woodcock is able to detect the movement of any worm that may be concealed in the oozy mud below. The tip of the upper mandible being broad and raised and longer than the lower, enables the bird to seize his prey with satisfactory certainty by very slightly opening the further end of his bill and without withdrawing it from the ground. The "borings" made by the woodcock while so feeding are often noticed, and are always near water. This latter is imperative so that the bird may be able to keep his bill free from mud. A woodcock kept in captivity, and given fresh sods and bread and milk in which to probe, was noticed to constantly make use of a dish of water placed in his aviary, so as to keep his bill clean. This year there has been considerable discussion in the press as regards the position of the woodcock's ear. To Mr Whymper is due the discovery that the aperture is below the level of and in front of the eye. Woodcock have been seen to perch on trees, and also when on migration on the rigging of ships. They have also been recorded as alighting on water, from which after a few moments' rest they rose again, apparently with ease. From a "gourmet's" point of view this bird shares with the partridge the highest place in his estimation. Willughby, writing in 1678, quotes the couplet:—

> "If the partridge had the woodcock's thigh,
> 'Twould be the best bird that ever did fly."

In 1903 Alexander Innes Shand, the cookery expert, waxes almost poetical when writing of "The wedding of the truffle with the woodcock." The best woodcock shooting in

our British Isles is probably obtained at Ashford, Lord Ardilaun's seat, on the shores of Lough Corrib, Co. Galway, Ireland. Over 100 couple in the day have been killed there in 1891, 1895, 1904. In 1895, when H.R.H. the Prince of Wales with six other guns were shooting, 181 'cock were got, which was 30 less than the "record bag" established in 1904. As we have already said, the woodcock is a "chancey" bird to get—he is here to-day yet gone to-morrow; but the Emerald Isle always gets more than its share of these visitors as compared with the rest of Great Britain. Lord Claremont, shooting in Co. Cavan a century ago, killed to his own gun (a flintlock) in one day 102 woodcock, for a wager of 300 guineas. The west coast of Scotland at times holds plenty of 'cock, and Norfolk is probably the best county for 'cock in England. At Melton Constable (in that county) fifty couples have been killed in one day. As regards Europe, I am told that in Albania a sportsman might reasonably expect to get fifty couple in a day to his own gun if (and on that if rests the whole question) he were lucky enough to be out when the 'cock were in.

The "Irish Times," publishing a few notes on "Woodcock," apropos of the Prince of Wales' shoot at Ashford in 1905, said:—"Owing to its erratic flight, the woodcock is regarded as being one of the most difficult birds to kill on the wing, and rarely does the sportsman succeed in bringing down more than two at a time." To get a right and left at 'cock is a sufficiently rare occurrence; and it is probable that two at a shot flying has not been got more than five or six times. Sir Francis Chantrey (the sculptor), shooting at Holkham in 1829, had the luck to shoot two woodcock with one shot, and Mr Coke (his host) thought the affair so wonderful that he arranged all the guns and beaters in line and ordered them to take off their caps as Chantrey marched past. At Holkham, at the south end of the long library, now stands a sculpture of these two woodcock by Chantrey's own hand. Numerous epigrams have been written on this event, and one of the neatest runs:—

"Two woodcock fall at his one shot,
The joyous Chantrey smiled to see;
Then pitying their untimely lot,
He gave them immortality."

In the "Field" of January 16th, 1905, Mr Gilbert I. White wrote from East Devon to say that a few days previously he had killed two woodcock at one shot, and the editor of the "Field" in his remarks says:—"Since Chantrey's feat in 1829 the feat probably has not often been repeated." Mr L. M. de Visme Shaw, in the Fur and Feather Series, "Snipe and Woodcock," states, as far as he knows, the only other occurrence of this feat since Chantrey's performance is "that of Colonel Sands, who killed his two 'cock with one shot on November 4th, 1853;" and it is quite possible that these are the only three occasions when two woodcock flying have been killed with one shot. The woodcock is always supposed to be a difficult bird to shoot, and certainly in a thick plantation the way he zig-zags behind the tree trunks is almost snipe-like. It has been suggested that his powers of vision by day are not good, and that this tortuous flight is due to his not seeing any obstacle till he is close to it, when he suddenly sheers off, and so continues on his way. In the open, his flight is very different and he flies far more directly. But, as in the case of all other game-birds, the reason why he is so often missed, probably lies in the fact that not enough allowance is made for his speed; for, though he may rise sluggishly, he is a very fast flyer when fairly on the wing. The long shots one sees fired at woodcock are to be regretted. Some sportsmen would seem to consider that a woodcock is never out of range, and that one stray pellet may bring it down at anything up to a hundred yards; and because the bird happens to be somewhat of a rarity, have no feelings at all about wounding it. A woodcock is as hard and wiry as any bird of its size, and it deserves as much fair play in the field as we should give to any other sporting bird. A hundred or more years ago, when the science of trapping and snaring was at is height, the woodcock came in for his fair share of attention; and we read in Shakespeare, Henry VI., part 3, act 1, scene 4, "So strives the woodcock with the gin." The method here referred to was first to ascertain where woodcock were feeding, then round this feeding ground to build a small hedge or turf wall, with several gaps in it. In these gaps were set snares, and the woodcock running round the wall till he found an entrance to his dining-room, paid the penalty. This mode of capture has not so very many years ago fallen out of usage, and it would be interesting to

know if it is still made use of in any of the more remote parts of Great Britain. Another method employed by our forefathers was to place nets between trees across the open glades or rides in a wood, down which the woodcock would pass in their crepuscular flight. In George Owen's "Description of Pembrokeshire," written in 1602, we read there was marvellous "plentie" of woodcock in that country from Michaelmas to Christmas: where they were taken "in cock shoote tyme (as yt ys tearmed) which is the twylight," when "yt ys no strange thinge to take a hundred or six score "in one wood in 'XXiiij or houres." He speaks of a wood having thirteen "cock-shots," and further on states these birds "are not our countryeman borne;" so that then as now the British sportsman depended greatly for his sport on the influx of the foreigner. Woodcock can and do run very swiftly along the ground, their mode of progression being in quick little "bursts," like that of plovers. I know of a wire-netting rabbit-proof fence, where on more than one occasion a woodcock running precipitately forward, has got his bill and head through the meshes of the netting, and has thus been caught. In July, 1905, I found a woodcock caught firmly round the neck in a snare set for rabbits, in which case it is difficult to conjecture why it could not make good its escape from so large a noose. Lighthouses (particularly on a misty night) prove no less a death-trap to these birds, than to so many other of our migrants; and one often finds the bodies of woodcock lying dead below telegraph wires against which they have flown and been killed. Perhaps the most curious and least known trait of the woodcock is its supposed capacity for surgically treating its wounds. Professor Victor Fatio, in a lecture delivered to the Geneva Physiological Society on April 19th, 1888, gave five instances where he had shot woodcock which had applied plasters, made of feathers and blood, to wounds in the back and breast, and had in similar fashion in three other cases made ligatures of feathers round broken legs. From a colonial paper I quote the account of a similar operation, performed by the North American woodcock (Scolopax Philohela Minor), a first cousin of the woodcock we meet with in our British Isles. The account runs:—"One day, while sitting quietly by a brook, a woodcock fluttered out into the open, and made his way to a spot on a bank of light, sticky mud and clay. The bird was

acting strangely in broad daylight, and our author could see him plainly. At first he took soft clay in his bill from the edge of the water, and seemed to be smearing it on one leg near the knee. Then he fluttered away on one foot for a short distance, and seemed to be pulling tiny roots and fibres of grass, which he worked into the clay that he had already smeared on the leg. Again he took more clay and plastered it over the fibres, putting on more and more till the enlargement could be plainly seen, thus working away for fully fifteen minutes. Then he stood perfectly still for a full hour under an overhanging sod, his only motion being an occasional rubbing and smoothing of the clay bandage with his bill, until it hardened enough to suit him, and then he disappeared in the thick woods. The woodcock had a broken leg, and had deliberately put it into a clay cast to hold the broken bones in place until they should knit together again. This at all events was our author's full belief, confirmed by the opinion of many gunners who had frequently shot birds whose legs had at some time been broken and had healed again perfectly straight, and he was fully confirmed a long time afterwards as to the truthfulness of his opinion. A friend shot a woodcock, which, on being brought in by the dog, was found to have a lump of hard clay on one of its legs. He chipped the clay off with his pen-knife and found a broken bone, which was then almost healed and as straight as ever." Personally, I have never seen a woodcock with clay adhering to its leg, but the above account is interesting, and Professor Fatio is an authority whose statements deserve attention. There is something very touching in the thought of an unhappy little bird acting as his own surgeon, and if this story has the effect of restraining those who are in the habit of trying "marvellously long shots" at woodcock, and by so doing often cruelly wounding them, it will have served some purpose.

We have already commented on the increasing tendency the woodcock shows to nest in the British Isles, and certainly during the past spring (1907) the number of woodcock nesting throughout Dumfriesshire has been more than ever. The following observations of what we noticed at Capenoch this year may perhaps be interesting. In the months of April, May, and June, the birds apparently kept as their headquarters the coverts where they were hatched. But in the months of July and August, as

the woods became more dense and the powers of flight of the nestlings more ambitious, they were to be found in the stretches of bracken contiguous to the woods where they were hatched. At this season of the year, the old birds being in moult and the young ones not fully feathered, they offered a very easy victim for the sportsmen who came across them. By September they were well able to look after themselves, and had developed that deceptive tortuous art of flying which so often proves their salvation. In October we saw no woodcock, and it was not until the second week of November that we began to see them again. These birds would be migrants coming in from the east, and the majority will stay with us more or less (all depending on the weather) till February, in which month there seem to be more woodcock at Capenoch than at any other time in the year. By the end of March most of them have gone eastward again, but annually leaving a greater number to nest in our coverts. It seems a great pity that under our existing legislation the shooting of woodcock in February should be permissible, and a clause in the "Wild Birds Protection Act," extending the close time for woodcock to March 2nd instead of February 2nd (as at present) is to be hoped for. There are some who claim that a further extension should be granted by extending the close time to September 30th instead of only to July 31st, but before acquiescing in this desire we should like to ascertain to what extent home-bred birds stay at home after October 1st.

DISCUSSION ON THE PAPER.

Mr J. Bryce Duncan of Newlands proposed a cordial vote of thanks to Mr Gladstone for his interesting and valuable communication, and this was seconded by Mr Matthews.

Mr Robert Service, in supporting the motion, said as yet even among the best informed sportsmen and still better informed naturalists the migrations of the woodcock were extremely obscure. The dates had not been tabulated in anything like precise order. It seemed extremely mysterious how some morning woods would hold any number of woodcocks where the previous day not one was to be found. It was often said that certain moonlight nights favoured these long journeys; but he fancied that had not been clearly established yet. He had on certain very rare occasions seen the woodcock coming in long

after daylight had become full in the earliest weeks of November. And these were invariably flying at a great height and at a tremendous pace. But when migration took place in windy weather they flew low down, and would be seen flying along the hedgerows, evidently seeking for cover on which to alight. At such times they could be picked up in very unexpected places, in gardens, fields, and merse, away altogether from their usual haunts. Another vexed question in connection with the woodcock's history was that now it bred in this district annually in very large numbers. Many thought this was a new thing; but it had taken place ever since he remembered. In his earliest days of bird-nesting and bird watching he had always found many woodcock nests in suitable places. What was a suitable place was not well defined. He had often thought that young plantations, from fifteen to eighteen years of age, were their favourite places. When the woods had attained a certain height the woodcocks left them entirely. Not long ago he had the pleasure of handling an egg of a woodcock that was taken close to the foot of Criffel so long ago as 1828, so that even at that time they had been known to breed here. But no doubt, as Mr Gladstone had pointed out, the woodcocks were extending their range, and probably were breeding here in greater numbers than used to be the case a number of years ago. Many of the northern ducks, particularly those coming from the great north-eastern territory, extending westwards, had been found here in greater numbers, and no doubt they were extending their range because of some obscure climatic or other change. The curious habits of the woodcock in the evening had been explained in a very interesting manner indeed by Mr Gladstone. It was a fascinating sight to see the woodcocks take these long, mysterious evening flights. But one year these roading lines might be very numerously occupied, and another season the birds were somewhere else; not a woodcock might be seen there. What that depended upon was another obscure point. Mr Gladstone referred to the almost unique habit that the woodcocks had of carrying their young when danger threatened. He had only seen that on one occasion, and it was about thirty years ago. About the same period Wolff, the celebrated painter of animal subjects, painted a curious picture showing the old bird holding the young in its feet, just as a falcon or sparrow hawk or any

other bird of prey carried its victim. Now, so far as he saw that was altogether wrong. They did not hang down dependent upon their feet in any way. They were tucked up under the abdomen and held under the thighs. It was one of the most interesting traits in bird life that he had seen.

The President (Professor Scott-Elliot) congratulated Mr Gladstone on his most valuable paper. He added that he should like to know a little more about that curious question of the woodcock curing its own wound. He confessed that since he began to study nature he had seen so many wonderful and almost incredible things happen around him that he was prepared to believe it; he would only like more proof.

ADDITIONAL NOTES BY AUTHOR.

Since I delivered this lecture I have come across one or two interesting local records concerning the woodcock which it may not be out of place to add. As regards the excessive rarity of killing two woodcocks with one shot, to which I have referred above, I was surprised to find two occurrences recorded in the columns of the Dumfries "Courier." In the issue of October 26th, 1852, we read:—"Mr John M'Quie, gamekeeper to Wellwood Maxwell, Esq. of Munches, while afield on Wednesday last (20th Oct.) brought down at one dexterous shot a brace of woodcock.". . . . And on 25th November, 1851:—"On Tuesday last (18th November) Mr Garlies C. Maitland, Kells Manse, when shooting on the Kenmure estate flushed a brace of woodcock which he brought down with one shot. An unfortunate blackbird which had flown within range at the time also fell a victim to the same discharge." Which feat eclipses that of Chantrey's already quoted.

The pious wish expressed above for the extension of the close-time for woodcock has been realised.

I am informed by Lord Henry Scott that 52 woodcocks and other game were shot by six guns at Langholm on 15th December, 1908. A record bag for Dumfriesshire.

The usual complement of eggs laid is four, but Mr S. Copland writes me from Canonbie that in 1908 he found five in one nest.

The only local records of partial albinism in this species I have come across, are two woodcocks each of which had six

white feathers in each wing, shot by the gamekeeper to C. G. S. Menteath of Closeburn in 1824.

The ornithologists of our Society have been so good in giving me all the assistance in their power as regards my forthcoming Book on the "Birds of Dumfriesshire," that I should like to take this opportunity of thanking them collectively, and at the same time add how gladly I shall acknowledge any further communications they may be able to favour me with on the subject. The Book, it is hoped, will be published in October, 1909.

SOME ANCIENT CHAPELS OF KNAPDALE. By Mr W. A. MACKINNEL.

The fervent missionary enterprise of the early Keltic Church is still borne witness to by the large number of ancient ecclesiastical ruins scattered all over the West Highlands and Islands. Hardly an island, even the smallest and most remote, many of which are now tenantless, save for the sea-birds, but has its ruined chapel, and probably half obliterated burial ground. St. Kilda, far out on the western sea, the solitary and now deserted North Rona in the far north, the desolate Sula Sgeir, the lonely Shiants, and the Flannens—blessed islands of old Gaelic legend—not to mention the more important and less remote islands, all have their chapel ruins, more or less rude certainly, but not the less interesting.

The absence of "modern improvements," and, what is less satisfactory, the gradual depopulation of the Highlands, have combined to preserve to us many of these memorials of the past intact, save for the ravages of time and weather, and this to a greater degree in the islands than on the mainland.

Argyllshire is naturally the western county richest in ancient eccleciastical remains, and of its districts Knapdale contains at least four, the chapels at Cove on Loch Caolisport, Kilmory on the Sound of Jura, Keills at the end of the long peninsula which separates Loch Sween from the Sound; and the most interesting one of all, the tiny chapel of St. Carmaig on Eilean Mor, lying a few miles S.S.W. of the mouth of Loch Sween.

In the Statistical Account of the Parish of South Knapdale, 1797, it is stated:—"Monuments of primitive Christianity are

numerous in Argyllshire, but nowhere more frequent than in Knapdale. Of these the chapels of Cove and Islandmore seem to bear marks of greatest antiquity."

Of the chapel at Cove there is now very little remaining, and all window and door details have disappeared. Adjoining it there is, however, a curious little cave chapel with stone altar, a scratched cross, and a small font scooped out in the floor, and it is possible that in this we have the first church founded by St. Columba in Scotland.

Whether Columba's mission to Scotland was purely a religious one, or was connected with the disastrous defeat of the Scots of Dalriada by the Picts two years before, he at all events went first to the seat of the Daldriadic King, which at that period seems to have been on the west coast of Knapdale. As Skene remarks in his chapter on "The Monastic Church in Iona":—"The curious cave chapel at Cove on Loch Caolisport, which tradition says was Columba's first church in Scotland, before he sailed to Iona, is probably connected with his residence with King Conall."

That the ruins of the built chapel date from Columba's time is, of course, quite improbable. The first monastic buildings on Iona were of wood, and it was not until the ninth century that they were replaced by stone structures, so it is most unlikely that, with the exception of such rude uncemented stone buildings as the remains on the Isle of Saints (one of the Garvelloch Isles) and on North Rona, the early outlying Keltic churches were constructed of stone. Stone chapels would, however, likely replace the decaying wooden ones on the same sites, so it is probable that the present ruined Knapdale chapels mark the sites of still earlier erections. From the character of what little detail they possess these existing chapels probably date from the twelfth century.

Of the three remaining chapels at Kilmory, Keills, and on Eilean Mor, that on Eilean Mor is unique, and is in much better preservation than the others. Owing to its great strength of construction, the most interesting portion of it has not been materially injured by the storms that during the eight centuries which have elapsed since its erection have swept over its site on the lonely little island in the Sound of Jura.

Though, in the course of several small boat cruises in the

Sound of Jura, I had passed within a few miles of Eilean Mor, it was not until this year (1907), when I undertook a cruise to the Sound with Eilean Mor as a definite objective, that I succeeded in realising a long-standing desire to land on the island and examine the curious little chapel.

On a fine July forenoon a fellow-member of this society and I reached the western end of the Crinan Canal in a little motor and sailing cruiser, and moored in the basin at Crinan. Crinan to the ordinary tourist is merely the end of the canal, and is associated chiefly with speculations as to whether luggage has been properly transhipped, but to the antiquary it is specially interesting as the centre of a district full of early historical associations. Within a mile or two is the ancient capital of the Dalriadic Kingdom—"Dun Add"—and hardly a mile can be travelled in any direction without coming on a stone circle, fort, or cairn.

In the afternoon, with the ebb tide in our favour for the long run down the sound, we passed through the sea loch into Loch Crinan, and hoisted canvas to a pleasant off shore breeze. Passing the pretty Crinan Bay and Harbour, we rounded the bluff Ardnoe Point and entered the Sound of Jura.

The Sound of Jura, may, I think, lay claim to being not only the largest but the grandest in respect of scenery of the sounds of the West Highlands. It is also the least advertised and tourist overrun, and is to-day one of the most solitary stretches of water in the Hebrides. As the West Highland steamers, on both their outward and inward passages, pass through the sound in the middle of the night, a steamer is but an occasional sight on its wide expanse.

Our intention being to anchor over night in the little bay in Eilean Mor, we were in no hurry to reach the island much before sunset, and, though the breeze did not do more at times than give us steerage way, we had no desire to shorten the pleasure of the run down the sound by resorting to the engine. Through the long hot, afternoon we drew slowly southward, along the coast of the long and narrow peninsula, on the other side of which lies Loch Sween. Probably no part of Knapdale, which, as a district owes its name to the striking ruggedness of its surface, shows such a wonderful diversity of scenery as this. For some distance south of Crinan the coast to the Sound of

Jura is steep and rocky, with fantastically outlined hills rising to a considerable height, separated by deep and narrow glens, with here and there a picturesque white sheiling on the hillside. South of Carsaig Bay, which runs inland to within half-a-mile of Tayvallich on Loch Sween, the hills gradually become lower, till the peninsula ends in the long, low, and very narrow promontary of bare rock—Rudha na Cille.

About six o'clock in the evening we sighted the low irregular outline of Eilean Mor lying dim in the haze to the southward.

We were now close to Keills Bay, into which we turned to pay a visit to the chapel of Keills, which stands a quarter of a mile or so away, on the shore of Loch na Kille.

Landing on the rocky shore, a short walk over the intervening hillocks brought us to the ruins.

Keills chapel, which at a short distance away might easily be mistaken for a ruined sheiling, is a rude oblong building, externally 42 feet long and 21 feet wide. The walls and gables, though cracked here and there, are practically entire; the side walls being about 12 feet high, and the gables fairly steep in pitch.

There are four windows, one in the north and two in the south wall, all flat topped, and one, which is circle-headed, in the middle of the east elevation. The doorway is in the north wall, and, as is common in these small Keltic churches, the west wall is entirely blank.

The floor of the chapel is covered with carved slabs, all comparatively modern, and surrounding the building is a small burial ground.

The chapel at Keills is usually considered to have been dedicated to St. Carmaig, and in the New Statistical Account it is stated that "the whole district of Knapdale formed originally one parish called Cil mhic O'Charmaig, the burying ground of the son of O'Carmaig. This O'Carmaig is said to have been an Irish saint, who founded the first church in Knapdale.

T. S. Muir, however, in his book, "Ecclesiological Notes on some of the Islands of Scotland," considers it to have been more probably dictated to St. Columba.

A few paces away from the chapel stands on the hillside what is evidently a very ancient cross. I quote from T. S.

Muir's sketch, "The Ferryhouse," the following description of it:—

"This cross, though not a showy specimen, is interesting from being in its form a singular variety of the few departures from the ordinary conventional type, which is a narrow pillar terminating in a solid girdle or disk into or through which, as it were, the arms of the cross are stuck. It is a simple Latin cross with the re-entering angles of the intersections rudely notched into semi-circles. The pillar stands in the middle of a slightly raised causeway of circular form, and measures 7 feet 4 inches in height. Overspreading its eastern face is a series of curious sculptures, the greater part in high relief. In the uppermost or vertical limb of the cross is St. Michael, winged, and trampling on the 'Apostate Angel' in the disguise in which he talked over Mother Eve. Under this, and occupying the intersection, is a central boss charged, or seeded, as it would be termed in heraldic speech, with three minute pellets—betokening, very probably, the Trinity in Unity. On each side of the boss is a serpent; under each serpent is a dog; and under the dogs, and filling the uppermost portion of the shaft, is a priest or some other ecclesiastic, whose ears the dogs are worrying, while at the same time their chaps are being torn by the serpents. In the division next below the priest is a kind of reticulated work in moderate relief; under that are two animals resembling leopards, face to face; and, finally, a quantity of scrollings of purely ornamental character."

Curiously the west face of the cross is entirely plain.

Returning to the shore at Keills Bay, we found that the breeze had completely died away, leaving the sound a wide glassy expanse of water shimmering in the evening light. Away to the south-west the striking conical outlines of the three great Paps of Jura, so poetically named the "Mountain of Gold," the "Mountain of Sounds," and the "Sacred Mountain," stood out clear and distinct against the western sky.

It was an evening on which to realise the spell and glamour of the west, which seems to ever brood most deeply over that lonely silent sea, on which, as we drew away from the land, the throbbing of the noisy little motor seemed strangely out of place.

Before us, now coming more clearly into view, lay the "magic island" of the sound, round which and its ancient

hermit have gathered many strange legends. Of St. Carmaig and his miraculous origin, the following tradition is given in the Statistical Account of the Parish of South Knapdale, 1797:—

"Near the west coast of Knap lie a group of small islands, the most considerable whereof is Ellanmore-Kilvicoharmaig. Carmaig was an ancient proprietor of this island. His whole family consisted of a grand-daughter, who used to amuse herself by angling on the shore, which is surrounded with currents, and frequented, to this day, by vast crowds of fish. It happened upon an occasion of this kind that a bone, in place of a fish, came out with her line; she unhooked, and threw it back into the sea. Again and again it came out in like manner. Chagrined with disappointment, she carried it home and put it into the fire. The whiteness of its ashes struck her fancy. She endeavoured to preserve them, but burning her finger in the attempt, instinctively clapt it into her mouth. By this means she became pregnant of the saint, whose supernatural gifts were so long to survive himself. He founded Kilvicoharmaig, the mother-church of Knapdale, and, after a life spent in acts of piety and devotion, was buried in his native island. His tomb, a little oblong building, elevated three feet above the ground, remains uninjured by time. The saint is said to resent, with the most summary vengeance, the least indignity offered to his monument. Near his tomb is a small chapel, built by himself. It is arched over and covered with flags. Within, in a recess of the wall, is a stone coffin, in which the priests are said to have been deposited. The coffin also, for ages back, has served the saint as a treasury; and this perhaps might be the purpose for which it was originally intended. Till of late, not a stranger set foot on the island who did not conciliate his favour by dropping a small coin into a chink between its cover and side.

Upon an eminence not far off is a pedestal with a cross; and near to the cross is a cave possessing the wonderful power of causing sterility in every person who dares to enter it. This magic island, if we may believe the legendary story of the saint, possessed many singular qualities. Nothing could be stolen from it that did not of itself return. The master of a vessel, conceiving a liking to the cross, carried it along with him, but, being overtaken by a storm at the Mull of Kintyre, was obliged to throw it overboard; it floated back to a creek of the island,

called from that circumstance Portnacroish, i.e., the Harbour of the Cross."

Just before sunset we reached the island, and running into the sheltered little "Harbour of the Cross," on the north side, we landed at what might well have been the ancient landing place of the saint. We found that we were not to be the only occupants that evening of the snug anchorage in the little bay, usually so solitary, some lobster fishers having also come to anchor there. On landing, we naturally turned first towards St. Carmaig's Chapel, which stands about the centre of the island, a short distance up from the head of the bay.

Eilean Mor itself is roughly about half-a-mile in diameter, indented on the north by the pretty little inlet called the "Harbour of the Cross," which affords secure anchorage for a small craft in anything but due north winds, which are not at all frequent. Elsewhere the shores are steep and rocky, and off the coast, especially to the south, lie a number of islets and reefs. The highest point, 71 feet above sea level, is towards the south of the island, and on this, on a rough stone base, stands the mysterious cross which so miraculously floated back from the Mull of Kintyre. What is standing is merely the stem, about five feet high, the disk having been broken off. As if to give point to the legend of its miraculous return, the disk was discovered on the shore by T. S. Muir on his visit in 1864, and placed in the chapel, where it still remains. On the west face of the stem is carved an animal surrounded by foliage, and on the east a now almost obliterated inscription. On one side of the disk is a representation of the crucifixion.

Standing on this, the highest point of Eilean Mor, we had a wonderful view of the tide race round the island. The full sweep of the flood tide up the sound had by this time set in, and being broken up by the island and the reefs and islets lying off it, cross currents and eddies were setting in all directions, their lines clearly marked on the calm sea, while the air was filled with a haunting subdued roar, weird and indescribable.

In the south-east of the island is a little roofless building about eleven feet square, with very thick dry-stone walls, and one small opening to the south, which tradition says was St. Carmaig's first cell. Near it is the magic pit.

Close to the chapel itself is the supposed tomb of the saint,

which is now so dilapidated as to be scarcely traceable, though, according to the writer of the Statistical Account of the parish of Knapdale, it was intact at the close of the seventeenth century. It is about 9 feet in length, and close to its west end is a broken cross, the disk of which has disappeared. This cross, as it stands, is about six feet high, with, on its east face, some lattice work, and a horseman. The carving on its west face is practically worn away.

The chapel itself is an oblong building, 37 feet 4 inches long, and 19 feet 11 inches wide, across the east gable. It is not strictly rectangular, there being a difference of about ten inches in the width of the two gables. Internally, it is divided into two divisions, the eastern one or chancel being a semi-circularly vaulted cell 13 feet 3 inches long and 10 feet 9 inches wide. In the east gable, which is over three feet thick, are two round-headed and very deeply splayed windows. Excessively narrow to begin with, one has been contracted still further, evidently at a later date, with a slate slab, through which is pierced a very narrow lancet opening. The other window was probably similarly fitted, but the slab has disappeared, and the window has a somewhat torn appearance. The side walls, except where recessed, are about 4 feet 6 inches thick, and in the south one is a very deep semi-circularly arched recess, about 4 feet 6 inches high, in which is the stone coffin mentioned in the account I quoted. On the cover is carved the figure of a priest, of which the head is awanting. In the north wall are two recesses, not quite so deep as the one in the south wall, both 4 feet 3 inches wide and 6 feet 3 inches high, semi-circularly arched. The eastern one of these has on one side a very small window, which originally only 9 inches wide has been contracted with a pierced slate similar to the window in the gable, except that the opening is slightly cusped. Below this window is a curious little recess, extending to within a few inches of the outside face of the wall, and about fifteen inches high. The barrel arch covering the chapel springs at a height of about 9 feet 3 inches from the floor, and is about 14 feet 6 inches high to the crown. The entrance to the chancel was originally by a semi-circular arch in the west gable, which has been filled in at a later period by a wall about 2 feet thick, with a low and narrow flat-headed doorway in the centre. On one side of this doorway is a small

window, and on the other to the chancel side a recess of about the same size. Above are two other small recesses. Between the arch and the roof is a tiny chamber, entered by a small doorway in the west gable, which is supposed to have been a retreat for the anchorite when danger threatened. The roof of the chapel is formed of stone slabs, now overgrown with moss.

The western division of the building shows signs of later alterations, probably carried out at the same time as the chancel arch was filled in. The original doorway seems to have been a fairly large round-headed opening on the north side. This has been built up, and a low flat-headed doorway formed in the south wall, which has again been further contracted, and the opening skewed. In the side walls are joist holes about 5 feet 6 inches up, and the putting in of this floor would explain the building up of the chancel arch and the north doorway, both of which would rise above the level of this floor. The west gable appears to have been almost completely taken down and rebuilt with a corbelled out fireplace, vent, and chimney head at the level of the upper floor, and two small widely splayed windows formed, one of which is lintelled with a part of what seems to have been a carved tombstone.

At what period these alterations were carried out it is impossible to say, but, as according to Mr Howson in "Ecclesiastical Antiquities of Argyllshire," "the chief parochial minister seems to have lived always in the cell on this island, and to have made periodical excursions to his different 'preaching places,' it is probable that they were carried out to make the cell a more comfortable habitation."

We came out from the gloom of the cell and went down again to the harbour. After the anchor had been dropped, and the cabin erected, we sat for long in the bow watching the moon rise, and as it flooded with soft light the strange old ruin, while ever there came to our ears the low roar of the tide round the island, we felt that even in this century some of its old magic still lingers about Eilean Mor.

17th January, 1908.

Chairman—Dr J. W. MARTIN, Vice-President.

IRONGRAY IN THE EIGHTEENTH CENTURY. By the Rev. SAMUEL DUNLOP, B.D., Minister of Kirkpatrick-Irongray.

On a former occasion I had the honour of reading a paper before this Society on Irongray in the last ten years of the seventeenth century.* My information was drawn from the Session Records (June, 1691, to June, 1700). To-night I again turn mainly to the Session Records, though they are not so full or so interesting as the earlier ones. I have in my custody records from 1714 to 1716, and from 1743 to 1773. I shall stop, however, at the close of Mr Guthrie's ministry in June, 1756. He was minister of Irongray for sixty-two years, from September 14, 1694, to June 8, 1756.

AN ASSAULT ON TERREGLES.

In a very interesting little volume, "The Ancient Catholic Homes of Scotland," we find the first event of our story. On Christmas Eve, 1703, the ministers of Irongray and Torthorwald attacked Terregles House, searching for priests and Jesuits. The Earl of Nithsdale complained to the Privy Council that they invaded his dwelling under cover of night with guns and swords, forced open the outer and inner gate with horrid noise and battery, entered the house, and searched it while the Countess was indisposed. The ministers retorted by accusing the Earl of hearing mass and concealing thereof, resetting Jesuits and seminary priests, and trafficking with papists. The case was heard in Edinburgh on February 4, 1704, and a compromise was effected between the litigants.

THE REBELLIONS.

Though our records include both the years 1715 and 1745, they contain no reference to the two efforts of the Stuarts to recover their ancestral throne. Yet both attempts must have been felt in the parish. We know from the list of rebels re-

* Transactions Dumfries and Galloway Natural History and Antiquarian Society.—Vol. xviii., p. 127.

turned by the supervisors of Excise (May 7, 1746) that at least one Irongray man was out in the '45, William Maxwell, son of Maxwell of Barncleugh, who is returned as a prisoner. In Sir Herbert Maxwell's "History of Galloway" (p. 325) there is a quotation from the journal of a neighbouring minister, Mr George Duncan, of Lochrutton, describing how he felt when the young chevalier entered Dumfries on his return from England, December 22, 1745:—"A melancholy day—the rebels in Dumfries about 4000, with the Pretender's son at their head, in great rage at the town for carrying off their baggage from Annandale, and for raising volunteers and calling out the Militia of the county in defence of the Government; demanded £2000 sterling of contributions. They were most rude in the town, pillaged some shops, pulled shoes off gentlemen's feet in the streets. In most of the churches for some miles round no sermon. God be thanked we had public worship. Much confusion in all the neighbouring parishes—rebels robbing people's tables—pillaging some houses. They came to the border of our parish, but God be thanked came no further." As the Barncleuch estate marches with Lochrutton, we may be pretty sure Irongray was visited by the Highland host.

JEANIE DEANS.

I am often asked if there is no reference to the tragedy of Effie Deans (Tibbie Walker) in the Irongray Records. I am sorry to say we have no records for the year of that tragedy, 1738, and even if we had, it is improbable that any reference to it would have been found, for it was a case for the criminal courts, not for the ecclesiastical. All that is likely ever to be known on the subject may be found in a very interesting article contributed to "Scotsman," May 5, 1906, by my friend, Dr King Hewison of Rothesay. That diligent antiquarian has unearthed most of the details, and corrected not a few errors of MacDiarmid's account, quoted in the notes to "The Heart of Midlothian." I need not refer further to this, as his article has been reprinted in the local papers.

SCENES AT A FUNERAL.

The records from October 24, 1714, till February, 1716, are contained in a shabby little book, and are a somewhat mis-

cellaneous collection—accounts of the Sunday offering, proclamations of marriage, baptisms, deaths, and cases of discipline—a veritable skeleton of parish history, if one could but clothe it with flesh and breathe life into these dead bones. During the year 1715 there are two cases of discipline which are somewhat interesting. On the last day of February in that year the laird of Drumclyer was buried, and his funeral evidently was "a grand success," judging by the Session Records. It produced three cases of drunkenness. John Stot, Joseph Welsh, and Deborah Welsh all were cited to answer to the charge of drunkenness at Drumclyer's burial. All denied the charge, but in the case of John Stot there was too strong evidence against him; he wes seen to stagger to and fro, fall at the Brigghouses, walk in the red land, William Bremner supporting him, and he had not even taken the ordinary precaution of saying he was not well. On April 18 he was rebuked for drunkenness. Deborah Welsh, a sister-in-law of the late laird of Drumclyer, boldly denied that she was drunk, and on the minister warning her to be more circumspect said "she was not sensible of it." Several witnesses testified to her being all right in the morning, but she was in bed sick in the afternoon. Her sickness was ascribed to a tass of brandy. The evidence against her was not conclusive, so "the Session considering the hail affair dismissed her with an admonition to be more cautious and watchful"—that is good Scots for "not guilty, but don't do it again." Joseph Welsh, her brother, had fortified himself with a witness to prove that he had said he was sick before the out-going of the corpse. Another witness was summoned, but Joseph challenged her on the ground that she was a liar and had slandered him. Unfortunately we do not know how Joseph Welsh got off. Both in his case and in that of John Stot drunkenness was not the only cause of offence. Both had absented themselves from sermon, and Welsh was accused also of despising ordinances and unduly delaying the baptism of his child. By January 13, 1716, he had made his peace with the session, for on that day his daughter Mary was baptised. She did not long survive being made a Christian; two days later is the following entry:—"January 15, 1716—Mary Welsh, a child, departed this life, aged one year and some months."

An "Uglie" Person.

The other case of 1715 is that of the Currows (Curries). James Currow called John a thief, a dog, and a liar, a remover of landmarks, and worse, and John's wife he described as a thief and a witch. John complained to the session, but not getting the satisfaction he hoped paid back James in his own coin—for he called James a murderer, on the ground that he took away his good name, and James's wife, "a gipsie and uglie person." The session records do not tell us how this case ended, but it is hard that Mrs Currie should go down to posterity "as a gipsie and uglie person."

Though the records from July, 1743, to June 25, 1756, are much better kept than those preceding they are rather uninteresting. There are few cases which can be quoted; most deal with the filthy vices of a rural parish. There are no witchcrafts, no Sabbath breakings, only one case of slander, and that a mild one, two cases of drunkenness, both in Shawhead in the year 1743.

Money Matters.

The session's attention is mainly devoted to money matters during these years, and at the meeting held on 25th June, 1756, after Mr Guthrie's death, a very full statement of the church affairs is given. The session had no less than eight bonds on money lent to farmers and merchants. This was the only way they had of investing the poor's funds. Sometimes the investments were risky. A bond of Thomas M'George of Auchenreoch and John Kirk in Auchengate caused the session much anxiety. The interest was unpaid in 1748, and 1755 they had to put the matter into the hands of Mr Malcolm, writer in Dumfries, who sent to Edinburgh for a "charge of horning against the foresaid Auchenreoch," and at Mr Guthrie's death the session "charged Arch. Malcolm, writer in Dumfries, to diligence thereon to obtain payment lest the said money be lost."

Benefactions.

I have only been able to trace the source of two benefactions to the poor. Among Mr Guthrie's paper was a copy of the will of William Welsh, surgeon and apothecary in Chelsea, in the county of Middlesex, who left £20 to his brother, Robert Welsh,

Mr Guthrie, and Robert Ferguson of Hallhill for the relief of the poor of Irongray. This will is dated May 15, 1748. I strongly suspect this William Welsh was a son of old John Welsh, the Covenanting minister of Irongray, for it was at Chelsea the heroic field preacher ended his days in peace.

THE POOR'S HOLM.

One benefaction still brings in £5 a year for the relief of the poor. Behind the church of Irongray is a meadow known as the Poor's Holm—formerly the Kirk Holm. This was purchased in 1712 by Mr Guthrie from Alex. Alves, W.S., of Baltersan, in Holywood. The money that bought it was 500 merks left by Jean Biggar in Barbuie to Mr Guthrie and Mr John Hepburne, minister in Urr, for behoof of the poor of Irongray. The annual rents of this sum were to be disposed by the said ministers, and the longest liver of the two during their lives. Guthrie long out-lived Hepburn, and in 1751 transferred the Poor's Holm to the session. It is no longer managed by the session, but has passed into the custody of the Parish Council.

COLLECTIONS—BAD BRASS.

From time to time there is bitter wail over the quantity of bad money in the poor's box. In November, 1743, there is "a considerable bulk of unpassable brass which will do little service." At one collection no less than one shilling and a penny stg. bad brass was found. At Mr Guthrie's death the boxmaster found "ten shillings of brass which the elders thought might pass, and two English pounds save one ounce of bad brass, which was laid by in the box." The money taken thus, fines for irregular marriages, etc., and the interest on the bonds, were mainly devoted to the relief of the poor. It was distributed twice or thrice a year, apparently at no fixed date. The sums given vary from five to one shilling. The beadle was paid at the distribution of the poor's funds; his pay varied from 1s 6d to 2s 6d. But he had other perquisites; for instance, a fee for the use of the mortcloth. In May, 1747, the session ceased to reckon their distribution of poor's funds in £ Scots, and adopted £ sterling. It certainly takes somewhat from the appearance of the accounts, but I trust the poor had none the less money for that reason.

Change from Old Style to New.

It was in September, 1752, that the Act of Parliament decreed that September 2nd should be followed not by September 3rd but September 14th. The country took the change with very bad grace, and certainly it was hard lines losing eleven days with nothing to show for them. The last entry in O.S. in our records was October 22, 1752; the next entry December 15, 1752, is marked N.S. The entry of May 19th N.S. has the alternative 8th O.S. The change in Irongray was ominous. James Guthrie was the last of the Old Style ministers. He had seen "the killing times," if tradition is true, he was the nephew and namesake of James Guthrie, the proto-martyr of the Covenant. He had seen as a young man prelacy deposed and Presbyterianism established. He had in the early days of his ministry been called upon to deal with those who had fallen away in the times of persecution. He had seen Nithsdale and disturbed the heroic Countess Winifred's Christmas Eve. He had heard the Highland host retreat from England. The old romantic Scotland of legend and song passed away in his life-time. The new Scotland of Edinburgh "literati" and "moderate" divines, the Scotland of "Jupiter," Carlyle, Hume, Robertson, and Adam Smith, had come in its stead. I wonder what thoughts passed through the old man's mind when he thought of all the changes he had witnessed. Did he say "the former days are better than these?" or did he console himself with King Arthur's philosophy?—

> "Old order changeth, yielding place to new,
> And God fulfils Himself in many ways,
> Lest one good custom should corrupt the earth?"

Mr Dunlop, in acknowledging a vote of thanks, said the records of the parish had been fairly well kept, and certainly very much better than those of many others in the district. He also read Dr Hewison's account of the trial of Isobell Walker —the sister of "Jeanie Deans"—which appeared in the "Scotsman" on 5th May, 1906. He had often intended, he said, to write a history of the parish, and would be obliged to any person who could supply him with well-authenticated facts.

THE WEATHER OF 1907. By Rev. WM. ANDSON.

I have to report in the outset that the Dumfries station of the Scottish Meteorological Society was visited in September last by Mr Watt, the secretary of that society, in succession to the late Dr Buchan; and that having compared the instruments used with his own standard ones, he found that they retained their usual accuracy. The weather of the past year has been peculiar in some respects, certainly not very favourable, as will appear when we deal with the different elements which combine to distinguish its meteorological character.

I begin first with the barometrical pressure, the variations of which largely constitute the foundation of the changes which fall to be recorded. The highest reading occurred in January, when it rose to a height which has very rarely, if ever, been reached during my 21 years of observation. On the 23rd of that month the abnormal reading of 30.989 in., almost 31 inches, was recorded. In contrast with this, the lowest reading occurred in December, on the 4th of which it was found to have fallen to 28.581 in.—giving an annual range of no less than 2.408 in. The mean pressure of the year (reduced to 32 deg. and sea-level) was 29.805 in., which is about one-tenth of an inch below average. There were four months in which the monthly mean was 30 inches and above it, viz., January, March, July, and September. These were on the whole very favourable months. The months in which the lowest means occurred were June, October, and December, which ranged from 29.561 in. in June to 29.648 in December. These months had an almost constant series of cyclones, with no less than 75 days out of the 92 in which rain fell. The months which had readings below 29 inches were January, February, March, May, October, November, and December; and these depressures were usually accompanied by more or less severe storms of wind and rain.

I now proceed to give the facts regarding the temperature of the year; it being premised that the observations which follow are of temperature in the shade, secured by means of the Stevenson screen and 4 feet above the grass. The highest temperature of the year occurred on the 17th of July, and amounted to 84.8 deg. The lowest was in February, when it fell to 18

deg. twice over, on the 1st and 16th—giving an annual range of 66.8 deg. July was the only month in which temperatures in excess of 80 deg. were recorded, and there were four of them in succession, from the 16th to the 19th, and ranging from 81 deg. to 84.8 deg. The next highest temperature was 78.5 deg. on the 28th September, and the next 76 deg. on the 9th of June. The warmest month of the year was July, which had a mean of 59.7 deg., which is slightly above the average for that month. The next warmest was August, with a mean of 56.4 deg., two degrees below average; but September was very little short of it at 55.3 deg., which was a fraction of a degree above average. Both May and June were cloudy and rainy months, with a notable deficiency of sunshine and consequent heat, especially June, with a temperature no less than 4 degrees below the mean, viz., 53.7 deg., as compared with an average of 57.7 deg. The coldest months were February, April, and November, which were slightly below average, but not much. The mean temperature of the year was 47.4 deg., which is only slightly below the average of the last 21 years. During these years it has ranged from 46 deg in 1892 to 49.5 deg. in 1898; the mean of all these years being 47.6 deg. There was a good deal of frost in the winter months, and especially in February, which was the coldest month of the year. January had only 9 nights on which the thermometer fell below the freezing point, with an aggregate of 42 deg . of frost. But February had 17 with an aggregate of 116 deg. November had 8 nights with an aggregate of 33.7 deg., and December had also 8 nights with an aggregate of only 23 deg. There was thus a total of 42 nights, with an aggregate of 214 deg., besides a very few in the spring months of March and April. This shows on the whole a moderate winter with the single exception of February, which, as previously stated, was 2 degrees below the average. Hence we find that the mean temperature of the year, 47.4 deg., was very little short of the mean, only two-tenths of a degree, although we may have been ready to suppose from the prevalence of cloudy skies and redundant rainfall that the temperature would have been considerably below the usual figure. But it is to be remembered that the winds from the Atlantic which brings abundant rain are also characterised by mildness of temperature, and that is the explana-

tion of the annual temperature not being lower than it is. While I am on this part of the subject, I may mention that since the beginning of August I have been taking observations of the minimum temperature on the grass, and with the following results:

	Mean of month.	Mean in screen.	Lowest in month.
August	44°	46·6°	31°
September	39·4°	56·3°	26°
October	37·2°	48·7°	26°
November	31°	42°	17°
December	31·1°	39·5°	20°

I now proceed to give some account of the rainfall, the abundance of which was the special characteristic of the year. The amount of precipitation during the year, including rain, snow, sleet, and hail, was 43.11 inches, which fell on 218 days —rain on 210 days and snow or sleet on 8. As the average rainfall at Dumfries is about 37 inches, this is fully six inches more than the mean, and is expressive of a wet year. It is not, however, the rainiest during my period of observation. This distinction, if I may call it so, belongs to 1903, when the amount recorded was 50.45 inches; and there was one other year which had an amount in excess of 1907, viz., 1900, which had 47 inches, and 1891 and 1897 were only a fraction of an inch short of the last year's record. But all the rest were under that record, ranging from 30 to 50 inches. The winter months had quite moderate amounts, and so also had the early spring months, March and April, but May was a very wet month, with 21 days on which it fell, and June had nearly three times its average, with 27 days on which it fell and a temperature fully 4 degs. below the mean. This could not but be very injurious to the growth and progress of vegetation, coming at a time when sunshine and genial weather are so important to the productions of the farm and garden. July was a good month, both in respect of temperature and rainfall, but, unfortunately, it was followed by a wet August, before almost anything could be done in the harvest field; and September was also a good month, the driest of the year, with a rainfall of little more than half-an-inch, and only five days on which it fell. It had also more sunshine than any September for years past. But this advantage was largely

neutralised by the prevalence of haze and mist, and the absence of drying winds, so that little in-gathering could be done, and it was followed by the deluges of October, which proved to be the wettest month of the year, with a rainfall of 7.53 inches—more than double the average—and 25 days on which it fell. The result was that much of the grain was destroyed, especially in late places, and not a little so seriously damaged as to be of little value.

The facts regarding the dry and wet bulbs are as follows:—Mean dry bulb for the year, 47.2 degs.; mean wet bulb, 44.9 degs.; temperature of the dew-point, 41.7 degs.; relative humidity (saturation 100), 83. It will be observed that the mean temperature of the dry bulb for the year, ascertained from the observations taken at 9 a.m. and 9 p.m., differs by only two-tenths of a degree from the mean temperature of the year, ascertained in a different method—by the addition of the mean maximum and the mean minimum, the highest and lowest of the 24 hours, divided by 2. The one is 47.2 degs., and the other 47.4 degs.

With regard to thunderstorms, I find that I have noted 10 days on which thunder and lightning, or, in one or two cases, thunder only, were observed. One in February, three in April, one in May, three in June, one in July, and one in September—that is 10 days in all, which is rather in excess of the usual number. Of course, there may have been others which I have failed to notice or record, and I have noted eleven instances on which hail showers occurred, mostly in the same months. There was a very brilliant display of aurora borealis on the 9th of February, and it may be worth while to observe that this was followed on the next day by hail showers, and on the day following that by a pretty severe thunderstorm during the night. Whether there was any connection between these phenomena I am not prepared to say.

As to the wind directions, the south-west, as usual, showed the greatest number of days, viz., 78; the next was north-west, with 61; the west, with 54; the south-east, with 50; the north-east, with 46; the east, with 28; the north, with 22; the south, with 17; besides a few more on which it was calm or variable.

Report of Meteorological Observations taken at Dumfries during the year 1907.

Lat., 55° 4′ N.; Long., 3° 36′ W.; Elevation above sea level, 60 feet; Distance from the sea, 9 miles.
Rain Guage, 70 feet.; Diameter of Rain Guage, 5 inches; Height of Rim above Ground, 10 inches.

1907.	BAROMETER.				S.-R. THERMOMETER. In Shade, 4 feet above grass.					RAINFALL.			HYGRO-METER, In Shade.		Temperature of Dew Point.	Relative Humidity. Sat. = 100.
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean for Month at 32° and Sea Level.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean temper. of Month.	Heaviest in 24 Hours.	Amount for Month.	Days on which it fell.	Mean Dry Bulb.	Mean Wet Bulb.	
	In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·989	28·367	2·132	30·230	50·	21·8	28·7	42·9	34·6	33·8	0·56	1·79	16	38·8	37·6	36·	90
Feb.	30·537	28·637	1·900	29·930	55·5	18·	37·5	43·1	30·	36·5	1·13	2·89	13	38·7	37·1	34·6	87
Mar.	30·445	28·945	1·500	30·036	65·	25·5	39·5	51·7	35·6	43·6	0·90	3·38	19	42·	39·8	37·1	83
April	30·311	29·137	1·174	29·753	64·	28·	36·	53·3	36·7	45·	0·70	2·35	16	45·	41·8	38·2	76
May	30·327	28·803	1·524	29·824	67·	32·	35·	57·	43·	50·	0·79	4·48	21	49·8	46·5	40·	78
June	30·131	29·431	0·700	29·561	76·	39·	37·	61·	46·4	53·7	1·02	6·11	27	53·5	49·5	45·	74
July	30·550	29·600	0·950	30·011	84·8	43·	41·8	67·3	52·1	59·7	0·30	1·83	13	58·3	54·4	50·5	77
Aug.	30·237	29·507	0·730	29·857	69·	35·3	33·2	64·1	48·6	56·4	0·88	4·04	23	55·6	52·7	50·	83
Sept.	30·533	29·417	1·116	30·092	78·5	29·5	47·	64·8	45·8	55·3	0·98	0·61	5	55·1	52·6	50·2	84
Oct.	30·065	28·990	1·075	29·578	64·	31·	33·	54·4	42·9	48·7	0·83	7·53	25	48·6	47·	45·3	89
Nov.	30·500	28·950	1·550	29·883	56·	23·5	32·5	47·4	36·3	42·	0·76	3·05	17	42·7	41·7	39·	92
Dec.	30·330	28·581	1·749	29·948	51·	25·	26·	44·1	35·	39·5	1·01	5·05	23	40·2	38·6	35·	87
Year...	30·989	28·581	2·408	29·805	84·8	18·	66·8	54·2	40·	47·4	1·13	43·11	218	47·2	44·9	41·7	83

WIND—

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var.
22½	46½	28	50½	17½	78	54	61	7½

I give below a note of the rainfall at several stations in this neighbourhood, in addition to that of Dumfries:—

	Amount for year.	No. of days on which it fell.
Dumfries	43·11 in.	218
Lochmaben	47·78 in.	228
Cargen	49·29 in.	164
Drumlanrig	48·14 in.	232
St. Mary's Isle, Kirkcudbright	50·49 in.	—
Glenlair, first 10 months only; Castle-Douglas (10 miles off), 2 months ...	55·93 in.	—
The following is only for a part of the year:—		
Arbigland, from 22nd July to 31st Dec. ...	24·68 in.	

Rainfall at Glengower, Castle-Douglas, recorded by Rev. W. Aitchison, M.A.—First 10 months at Glenlair, Dalbeattie, 10 miles from Castle-Douglas, last two months at Castle-Douglas:—January, 2.72; February, 3.89; March, 5.03; April, 3.45; May, 4.96; June, 6.45; July, 3.04; August, 5.61; September, 1.08; October, 9.12; November, 4.86; December, 5.72. Total, 55.93.

Rainfall Record at the Waterworks, Lochrutton, Kirkcudbrightshire, contributed by Mr Nigel B. Wilson, Engineer. Height above sea level, 272.68 feet; diameter of guage, 5 in.; height of rim above ground, 1 foot.—January 18th to 31st, 1907, .87; February, 3.47; March, 4.45; April, 2.94; May, 4.92; June, 6.71; July, 2.23; August, 5.29; September, 1.09; October, 8.48; November, 4.09; December, 5.96. Total for year to date, 49.63. Heaviest rainfall, March 16th, 1.19.

17th January, 1908.

WEATHER NOTES AT JARDINGTON IN 1907. By Mr J. RUTHERFORD.

January.—Rainfall, 2.45 inches. Rain fell less or more on 21 days. Barometer—The lowest reading was on the 1st, 28.9 in., the highest on the 22d, when the very remarkable height of 31.02 in. was reached. The new year was ushered in with a nice mild winter day. The general weather during the month

was very mild; there was no very hard frost. About an inch of snow covered the ground during the last five days. The water ousel was sitting on a stone singing cheerily on the 16th.

February.—Rainfall, 3.1 inches. Rain fell on 15 days. Barometer—The lowest reading was 29.25 inches; the highest 30.6 in. Snow covered the ground for the first eight days—about 3 inches deep. This went away with a gentle thaw on the 8th and 9th. On one or two occasions a little more snow fell, but to amounts of no consequence. There was very hard frost during the first week, the exposed thermometer registering 20 degrees on the night of the 4th. The weather during the remainder of the month was comparatively mild for February. I heard the mavis first on the 16th. The last 5 days were like April; the birds were singing merrily all round about. On the evening of the 9th there was a remarkably brilliant and beautiful aurora.

March.—Rainfall, 3.65 inches. Rain fell on 21 days. Barometer—The highest reading was 30.5, the lowest 29.30. Tussilago came into bloom on the 29th, and anemone on the 30th. In the middle of the month there was a fortnight of stormy, wet weather, which hindered ploughing and other outdoor work. The last week was fine and dry. There was no east wind.

April.—Rainfall, 2.42 inches. Barometer—The highest reading was 30.4 in., and the lowest 29.25 in. There was a little frost on several nights, but not much. The first ten days were nice and genial, and the grass was looking quite fresh and green. A cold east wind came on the 10th, and just about withered it all up again. From the 20th to the end there was fairly good seasonable weather. Sowing corn began on the 1st; primroses came into bloom on the 12th, flowering currant 13th, blackthorn (sloe) 23d, and jargonelle pear 14th. Sandmartins were first seen on the 25th. The first swallow I saw was sitting singing on the house-rigging at 5 p.m. on the 26th. White butterfly first seen on the 26th, which was a fortnight later than 1906. The sloe was ten days later, and the swallow thirteen days.

May.—Rainfall, 3.57 inches. Rain fell on 17 days. Barometer—Highest, 30.4; lowest, 29.2. There was cold, stormy wet weather during the first fortnight, which kept farm work back. There was no frost during the month. A thunderstorm

was experienced on the 12th. Blenheim orange apple came into bloom on the 2nd. I first heard the cuckoo myself on the 5th, but it was reported to have been heard before that time. Our own swallows took possession of their old homes in the byre on the 5th. The wasp was first seen on the 14th, and spotted fly-catcher on 15th. Chestnut bloomed on the 22d. I heard the corncrake on the 29th. Hawthorn blossom was first seen on the 31st. The chestnut blossomed eight days earlier than 1906.

June.—Rainfall, 6 inches. It rained less or more every day. This is the heaviest rainfall for June recorded here during the last fourteen years, 2.26 in. being the average. Barometer—Highest, 30.2; lowest, 29.6. I began the month with a new 5-inch rain gauge, placed about one yard from the old one, which was a 3-inch one with a float. The new one registered 5.91 inches, and the old 6.12 inches. The difficulty is now to know which to believe, so I put it between the two, and said 6 inches. I also got a new thermo. screen, 4½ feet from the ground, with new maximum and minimum thermometers. The highest temperature recorded was 71 degrees on the 13th, and the lowest during the night of the 25th, viz., 37 degrees. The ox-eye daisy was first seen in bloom on the 6th, and wild rose on the 30th. There was a thunderstorm on the 12th and 30th. Turnip-sowing was kept back with the wet weather, and there was a lot to put in after the 15th. This month was abnormally cold and wet.

July.—Rainfall, 2.22 inches. Rain fell on 15 days. Barometer—Highest, 30.6; lowest, 29.6. Highest temperature (shaded thermo.), 86 degrees on the 17th (the warmest day of the year); lowest, 40 degrees, on the 2nd and 11th. Corn began to rag on the 13th, and cutting ryegrass hay on the 11th. The first cleg was seen on the 16th; meadow brown butterfly on the 26th. The first ripe strawberries were pulled on the 11th. Bluebell was in bloom on the 22nd; knapweed, 29th. Commenced cutting meadow on the 26th (a heavy crop). The weather during the later half of the month was very good for hay-making, and most of the ryegrass in this neighbourhood was secured in nice condition. July flowers were nearly three weeks later in coming into bloom than in 1906. The meadow brown butterfly was three weeks later in being seen.

August.—Rainfall, 4.59 inches. Rain fell on 27 days (that

was the number of days on which 1-100th of an inch and over fell). The maximum temperature was 67 degrees on two days; minimum, 32 degrees on the 30th. Barometer—Highest, 30.3 inches; lowest, 29.65 inches. Grass was very abundant. Apples and pears were a light crop, and small in size. Wasps were very scarce, owing to the cold and wet summer. Almost no meadow hay was secured during the month, and almost none in good condition. Hay-making is quite a pleasure in fine weather, but with such persistent showers and sunless weather as prevailed in this month, it became trying and annoying, and occasioned a great deal of extra labour.

September.—Rainfall, 0.65 inches—fell on 7 days. Barometer—Highest, 30.5 degrees; lowest, 26 degrees. Highest temperature, 76 degrees on the 11th and 12th; the lowest on the night of the 4th. The thermometer in the screen registered 27 degrees; the exposed thermometer 24 degrees. Potatoes were frozen black, and all other plants of that class were frozen. On the 5th and 6th, after the frost, the swallows gathered into flocks, and numbers came into the out-houses at night. On the afternoon of the 13th I saw a very large flock. All the telegraph wires on the Glasgow roadside above Newbridge were covered with them for a considerable distance. No doubt they would take their flight that evening to a summer clime. I did not see one at Jardington from that date till the 23rd. After that, we had them again until the 1st of October. Began to cut corn on the 9th, which was 58 days from the date of ragging, the average being about 59. Corn that was cut in the beginning of the month was secured in fairly good condition. This was the driest month of the year. There was a lot of sunshine, but no good drying winds. There was a lot of mist and fog, and corn dried very slowly.

October.—Rainfall, 7.13 inches—fell on 29 days. The average fall for this month for the last 14 years was 3.76 inches. This was the wettest month of the year. Temperature—Highest, 64 degrees; lowest, 30 degrees; lowest on the grass, 26 degrees. The last swallow was seen on the 1st. This was a cold, wet month. Almost no corn was got in, and it was much spoiled by standing in the stook so long, being quite black, and in some cases growing green (sprouting). When the weather would allow, farmers lifted potatoes, which (in late varieties) were small, owing

to their growth having been stopped by the frost on the 4th of September. I see a shortage of 30 per cent. is calculated.

November.—Rainfall, 3.24 inches—fell on 21 days. Barometer—Highest, 30.5 in. on the 30th; lowest, 29.2 in. on the 27th. Temperature—Highest, 58 degrees on the 7th; lowest, 21 degrees on the 19th; lowest on the grass, 16 degrees on the 19th. The first eight days were more favourable for harvest work, and the most of the corn was got in about that time. Sunday, the 3rd, was a capital day, and a great deal of corn was carted. A great proportion of corn and straw will be of very poor quality.

December.—Rainfall, 5.10 inches—fell on 23 days. Temperature—Highest reading 53 degrees on the 20th; lowest, 23 degrees on the 1st; lowest on the grass, 180 degrees on 1st. Barometer—Highest reading on the 1st, viz., 30.3 inches; lowest on the evening of the 13th, 28.6 inches, with a south wind. Although the glass fell so low, there was little storm here during the night. We seem to have been in the centre of a cyclone. The morning papers informed us of the very severe and disastrous storm which had been all round the British Isles during the night. Several shipwrecks round the coast, heavy floods in the south of England, and a lot of damage by the wind in France. The weather during the month was very mild for December. There was no severe frost, and no snow. A cold east wind continued during the last week.

Considering the weather as a whole during the year, it has been quite abnormal, cold and wet prevailing, and a great want of sunshine.

Total rainfall for the year 1907, 44.24 inches, being 5.86 inches above the average of the last 14 years.

7th February, 1908.

Chairman—Rev. H. A. Whitelaw.

The Corresponding Members whose names appear in the list of members of the Society were nominated by the Council in terms of the rules and elected.

A Galloway Stone-Age Village. By Mr Ludovic M'Lellan Mann, F.S.A.Scot., Glasgow.

The following notes are portions of a paper read to the Society of Antiquarians of Scotland:—

Perhaps one of the most startling and valuable discoveries ever made in Scotland with regard to the early inhabitants was the disclosure recently of a row of little dwelling-places, partly underground, in Stoneykirk Parish, Wigtownshire. Their chronological position seems to reach back beyond the Bronze Period, say before 1000 B.C.

The attention of Mr Beckett was attracted by a row of depressions on the surface of a wooded area, and I was quickly informed of the discovery, and undertook an examination of the place. If there had been one depression only, probably no notice would have been taken of the place. The depressions, however, are five in number. Some of them were dug into, and discovered to be the tops of silted pits containing relics of an early period and substructures of wood. Before excavation they were shallow, basin-shaped, slightly oval in outline, but not very clearly defined and scarcely noticeable. The greatest depth at the centre of any one was about 1 foot, and the greatest area about 10 feet by 8 feet.

The sites are situated on the edge of a plateau. The ground has apparently never been cultivated, and is covered by wild vegetation, consisting of a few small trees of different kinds and a growth of fern. The row of depressions almost coincides with the 50-feet contour line. The area enclosed by the contour line does not at any point rise more than 2 or 3 feet above the 50-feet elevation. The sea at its nearest point is just 1000 yards distant south-east from the sites, and the intervening stretch of country is flat and low-lying. While portions of the surrounding country were once marshy, the ancient settlement being on the higher portion of the plantation could not have been surrounded by water or swamp, nor could it have been on the edge of a water-covered area.

The substructures revealed by the excavations at Sites Nos. 3 and 5 were oval in plan. The ovals had obtusely rounded ends, somewhat like rectangles with rounded corners.

The compass showed that in Site No. 1 the longer axis of

the plan of the substructure bore 30 degrees west of north; in Site No. 3, 65 degrees west of north (or west-north-west); and in Site No. 5, 49 degrees west of north. The same trend—that is, north-west by south-east—seems to exist in the other and yet unexamined sites. For example, in No. 4 the longer axis appears to lie about 18 degrees west of north.

The Excavation of Site No. 3.

Dealing first with the excavation of Site No. 3, which proved to be the most important station, evidence was soon obtained that the depression on the surface was the top of a silted-up pit. The digging work consisted at the first stages in the extraction of the filled-in material, which was of dark vegetable matter mixed with a little sand.

The walls of the pit were not well defined, but in penetrating into them the soil was found to be more dense and almost entirely composed of sand. The cutting revealed in the undisturbed soil round the pit a layer of superficial soil and leaf-mould which varied in thickness from about 1 to 2 feet; below this was about 1½ feet of somewhat blackish, sandy, compact soil. Beneath this there was about 5 feet of hard sand, sometimes greyish and sometimes reddish-brown, which rested upon a deposit of about 6 inches of a wet mixture of blue clay and grey sand. The lowest bed was of wet tough blue clay of unascertained thickness. The reddish sand occurred in rather irregular patches, and its colour varied from a reddish-brown to a dark-brown. The deposit of superficial soil was found in various places which were tested throughout the plantation. It rests upon what seems to have been the surface of the ground at the time the sites were in use.

The material accumulated upon this pre-historic surface is not entirely of vegetable character, as it contains a very small quantity of sand. Probably a slight sprinkling of sand would be brought during gales from the sandy shore to the south, which would be caught by, and retained in, the coating of vegetation. A peculiarity in the stratification at the east side of the pit will be dealt with when discussing supposed entrance passages.

In the pit at a depth of 7 feet were encountered the tops of spongy, much-decayed logs of round timber more or less vertically placed. Down to this depth in the digging the soil taken

out was fairly dry and was largely vegetable mould. Water and sludge, however, began to ooze in at this depth, chiefly from the layer of mixed clay and sand. Well down in the silted material were got many chippings, cores, and implements of flint, and of other stones. Traces of a bed of charcoal containing fragments of pottery were also observed. After carefully working out the wet soil, which was still largely vegetable mould and was somewhat loosely deposited in the spaces between the logs—an arduous operation—the wooden substrucure revealed itself more clearly. It was a longish oval in plan, and measured about 7 feet by $4\frac{1}{2}$ feet. Traces of what was conjectured to be wattle-work occurred round the edges of the oval. Taking into account this marginal wood-work, the dimensions were about 9 feet by 7 feet.

At the north-west end of the substructure piles were placed in two somewhat irregular concentric rings which were in contact with each other. The piles of the inner ring slanted inwards and downwards, forming a hollow inverted cone. At the opposite end the piles occupied a somewhat circular space, but were upright. Connecting these two sets of circularly disposed piles were somewhat irregular parallel rows of logs. These pieces of timber, except at the periphery of the structure where they were perpendicularly set, had a bias inwards and downwards and in several cases towards the north-west end. The number of piles used was 72. Traces of what was thought to have been an entrance passage on the east side were observed.

The Excavation of Site No. 5.

The excavation of Site No. 5 revealed features practically identical with those of Site No. 3, and strata of the subsoils were similar, but the traces of supposed flooring and wattle-work were indistinct. Several implements of stone and pieces of wood charcoal were recovered, but no vestiges of pottery were seen. At a depth of 7 feet moisture began to accumulate, and there was revealed a longish oval wooden substructure about $7\frac{3}{4}$ feet by $4\frac{1}{2}$ feet. The piles comprising the structure were in all respects similar to those found at Site No. 3, but were less tightly set together. At the north-west end they were disposed in a roughly circular manner in two concentric rings, the outer ring consisting of 15 and the inner ring of 12 stakes. The piles of

the outer ring were almost all vertical, and were as a rule thicker than those of the inner ring. The members of the inner ring slanted inwards and downwards, forming an inverted hollow cone, the top inside diameter of which was 2 feet. The apex of the cone—that is, the point towards which the stakes of the ring converged—lay slightly to the south of the true centre of the circle.

One of the heaviest piles from this portion of the structure was 8 inches in thickness and 2 feet in length. Some of them, however, were 3 feet in length, but were of less diameter than 8 inches.

The other, or south-east, portion of the wood-work and the middle portion formed a structure somewhat platform-like in character, and about 4 feet in length by 4 feet in breadth. The angles at which the piles lay were noteworthy.

Close to the rings already described, and all round the edge of the structure, the piles were perpendicularly placed. Beyond the rings to the south-east, with these exceptions, the piles lay at various angles, their tops being towards the south-east end, and their feet or tips in the opposite direction.

This position was accentuated the further the piles were situated from the rings. Some pieces of the woodwork at the platform-like end of Site No. 3 may have been gradually pressed in the course of time from the original positions by the superincumbent material.

Several small twigs were found lying across the ring portion of the structure. These may have been remains of a collapsed roof or floor, or of wattle-work fallen from the walls of the pit.

The platform portion consisted of 28 piles. Adding to these the 27 comprising the rings, the total number of piles employed in this site was 55. Measuring from a point which was reckoned to be the present normal surface of the plantation, that is, from a point 1 foot higher than the centre of the surface of the depressed area, to the lowest point of the substructure was 9 feet 4 inches.

The Excavation of Site No. 1.

This site differed materially only in one respect from its neighbours which have been described. The wooden substructure consisted of only 23 piles (fig. 4), and appeared to have been left half finished. The pit had been anciently excavated

in the same style as the others, and was a longish, rather square-ended oval. The soil at the bottom of the half which contained no substructure was darker than the surrounding soil, and had evidently been disturbed at some time.

The piles were not so securely placed in the soil as at Site No. 3. They occupied the north-west end of the oval, and were bluntly cut at the lower ends. At the west side of the structure they were less substantial than those at the east or opposite side, and were placed at various angles, while those at the east side were perpendicular. This site was drier than its neighbours, and the relics were scarce. The subsoils were much of the same character as those disclosed at the other sites.

Section II.—Details of the Results of the Exploration, and Summaries.

Various kinds of timber were used, no doubt in an unseasoned condition, as the wood was probably placed in the structure not long after it had been cut. The fresh green appearance of the bark points to this conclusion. Moreover, old dried timber would not have given such a fine smooth uncracked surface as may be observed on the cut parts. The bark remained on the stems in many cases, and in the case of the birch wood it gave the timber a fresh and beautiful appearance.

The diameter of the piles was usually about 3 inches, but the diameters varied from 1 or 2 inches to 8 inches. Those of average diameter showed about 15 annual rings. The stems were usually straight and well grown. The wood had retained its shape, but was soft and spongy, and under pressure of the fingers gave way at once, exuding moisture.

It was not possible, owing to the decayed state of the timber, to ascertain at what time of the year the wood had been felled; in other words, whether it was Autumn or Spring felled—a piece of information which would have thrown light upon the question as to whether the structures were built at the beginning of the summer or of the winter season. Many of the logs in ancient pile-structures have a bias or lean, caused by long-continued pressure of the surrounding matter from above or from the side. Most of the Stoneykirk piles which were not perpendicular seemed, however, to have been originally set in a slanting position.

One of the most remarkable facts disclosed was that, in all the cases where the direction of the growth of the tree or branch was recognised, and this was detected in nearly every instance, the piles had been placed upside down, or contrary to the direction in which the timber had grown. In other words, the top end of the branch had been pointed and dressed, and had been placed downwards in the clay. Now it is well understood that stakes inserted in the ground against the line of growth or "cap down," to use the technical term, last longer than those placed in the direction in which the timber has grown.

A knowledge of the obvious fact that the thinner end of a stake was more easily pointed than the thicker end, would not in this case be acted upon, for the simple reason that the logs were short and so finely grown that one end was not appreciably of less diameter than the other. Moreover, the craftsman had presumably to dress both ends of the logs, though the nature of the dressing at the upper ends is unknown, as the wood at the higher level has vanished by decay.

Again, the twigs and branches of the supposed wattle-work (described later), which required little, if any, sharpening, were also as a rule inserted upside down. It seems a fair inference that the inhabitants of Galloway at this early period had recognised a fact known to most present-day foresters and farmers—that stakes last longer when inserted in the ground upside down.

The piles seem to have been forced into the clay for only a short distance, but a great deal of the subsoil immediately above the clay must have been either dug out or loosened before they were inserted, as disturbed soil was found only a few inches above their lower ends. No pile point was recognised as having had the surface scratched. *Striæ* would, of course, have been good evidence that the logs had been driven. The rarity of small pebbles and grit in the grey sand and clay may account for the absence of striation. Though the piles pierced the clay only a few inches, yet the substructure in each of the three explored stations was secure and immovable. This may be accounted for by the fact that each log was in contact with its immediate neighbour, and many were tightly jammed together. There was no packing of the piles by stones. The spaces between the rows had not been filled up, as the matter found there was quite loose, silted-in material largely of a vegetable character

—black mud and wet vegetable mould with an abundance of short lengths of small twigs. The outer surfaces of the logs round the periphery of the structure were in contact with the stiff blue clay and the mixture of sand and clay, which gave a steady support. These outside piles were nearly always perpendicular, except in the case of the west side of Site No. 1. The inner piles, on the other hand, were as a rule lying at an angle. At some places the structures were strengthened by running from the edge inwards rows of closely jammed piles, as at the south-east corner of Site No. 3. The result of this mode of construction would be a basis for a dry, solid, secure, but somewhat hollow flooring.

All the wood was round timber, no piece having been split, squared, or mortised—the sites thus differing from most other places from which anciently cut timber has been recorded. It was not observed that any charring of the wood had taken place before or after the preparation of the logs. The expedient of carbonising the outside of logs to assist the work of dressing them was presumably not practised, the cutting tool alone having been relied upon.

The logs which were allowed to be exposed to the air warped and cracked in the course of a few hours. Ten of them from Sites 1 and 3 were placed in water immediately after they had been dug out, and will be kept in a solution of alum and water until sufficiently "filled" to be able to retain their original shape in a dry environment.

By the favour of Professor Bayley Balfour, Mr H. F. Tagg, Museum Assistant in the Royal Botanic Gardens, Edinburgh, has kindly examined some of the logs, and reports that—

"Portions of seventeen separate logs have been examined, and of these seven prove to be birch, five are alder, and three are hazel. One of the pieces of wood submitted is either poplar or willow, I am not able to say which, and one small piece is oak. One is led to conclude that birch and alder were the timbers chiefly used in the formation of the pile-structure.

"Fungi and other putrefactive organisms have caused the partial dissolution of the wood elements, and this disintegration unfortunately renders it impossible to make deductions as to the time of year in which the timbers were felled."

The smoothness of the cut surfaces of the piles shows that

the axe had a finely polished surface and a clean unbroken cutting edge. The impression on each facet of the cut areas being always similar in character, testifies that only one type of cutting tool has been used. The tool was probably fixed in a handle, as otherwise it could not have been wielded with sufficient force and swing to penetrate, as it has done, into the body of the wood. The facets are each of small area, and are all shallow concavities resembling the inner side of a flattish spoon. They are more numerous than would occur on surfaces of timber operated upon in modern times.

Three styles of cutting occur. There is the long acutely-pointed pile-end, cut away on all sides; and the obtusely ridged, the tool having been worked from two opposite sides until the portion of the log to be severed could be broken off at the ridge. The pile-end in this style has the outline of the roof of a house. The third kind of labouring was a cutting nearly straight across the log. The cut surfaces in all three styles show a large number of small ridges and facets, but this feature is specially prominent in the third class.

It is apparent that this ancient carpentry work has been carried out by means of a tool which had not been able to travel far at one stroke. When the tool was plied inwards and across the log, the length traversed at each blow was extremely small. Where knots have been encountered, there has been no slicing through the hard core, the tool having had to be worked round the knot. After this process the harder timber was wedged off, with the result that a good extent of the lower wood was splintered. There is occasionally a blunt "break off" at the place where the stroke has terminated, the tool when it ceased to penetrate having been used as a wedge, and pulled outwards or so manipulated that it left a splintered surface adjoining the cleanly cut area.

It would thus appear that there has been used an implement comparatively blunt, which possessed not one but two outwardly curving faces, the line of intersection of which formed a slightly curved edge. Now it is precisely this class of tool which is met with in the common polished stone axe.

It must not be overlooked, however, that the thick, socketed axe-head of bronze might leave somewhat similar markings. The bronze tool of this type would undoubtedly travel farther

than the thicker stone axe, if for no other reason than that the metal tool, having a socketed handle, would be assisted (certainly in no way impeded) by such attachment, while the stone axe might be hindered from any long sweeping action by the necessarily bulging hafting with which the middle of the axe-head must have been covered.

Plaster casts of the 10 pile-ends before referred to have been made. A cast has also been taken of a bar of soap which has been sharpened at one end by a locally found stone axe-head simply held in the hand.

The curved hollow adze (which occurs in iron) would give a much longer stroke than even the bulging bronze instrument, and would not leave such decidedly spoon-shaped impressions upon the wood as have been referred to. The bulging bronze axe has not, to my knowledge, been found in the neighbourhood, whereas many specimens of the type of stone axe described have been found there during the last twenty years.

As the same type of markings would have been left on the timber whether the axe were wielded radially or otherwise—that is, as an adze or as a hatchet—we have no clue as to the position of the handle relative to that of the blade.

An inspection of the axe-work on the set of pile-ends which have been preserved, from Sites 1 and 3, shows that the axe has always been made to strike along the line of the length of the log. The breadth of the facets at the widest, it is further seen, does not exceed 2 inches.

It may be mentioned that the stone axe-head used to cut the bar of soap imprints facets not more than 2 inches wide. In this axe-head the lengths across and round the cutting edge are respectively $2\frac{1}{2}$ and $2\frac{3}{4}$ inches.

These pile-ends embrace squarely cut ends and specimens of both the acutely pointed and the obtuse or roof-shaped end. The ridge in the last-mentioned type is seldom centrally placed.

In the case of a log of the roof-shaped type, $4\frac{1}{2}$ inches in diameter, but the ridge of which is centrally placed, there are traces of 15 facets in the cut surface. The ridge does not run horizontally, and measures $7\frac{1}{2}$ inches in length. In another pile-end, $3\frac{1}{2}$ inches thick, there are marks of 5 cuts in a length of $3\frac{3}{4}$ inches; and in another specimen, $4\frac{1}{2}$ inches in diameter, on an oval area, $4\frac{1}{2}$ inches by $3\frac{3}{4}$ inches, 8 facets may be seen.

Seven facets can be detected in a length of 4 inches on the cut surface of another pile 3 inches thick.

Some typical and instructive specimens of acutely pointed pile-ends have been secured. On one log, 3 facets, which touch each other like links in a chain, show that the blade has travelled against the wood during three successive blows at least 4, $2\frac{3}{4}$, and 4 inches at the first, second, and third strokes respectively. The length of each excision is comparatively great, but the cutting is shallow, the blade having been driven along just under the bark. On one of the acutely pointed logs there is an area 7 inches by 2 inches showing 10 cuts. The cut areas on some of these acutely pointed logs exhibit very clearly a succession of concavities and ridges resembling a "choppy," agitated sheet of water—a feature which characterises the carpentry work found on the sites. The sharpening extends in the cases of 2 piles a distance of 14 inches from the point, but the distance varies some inches on different sides of the same log. Indeed, the irregularity of the work and the lop-sidedness of the pointed ends are noteworthy.

It seems undeniable that the balance of the probabilities lies in favour of a smoothly ground and hafted stone axe with a convex edge having been used.

From the study of these and other specimens of pre-historic axe-work which have survived, it becomes clear that not only can the nature of the material of the instrument employed be discerned, but the kind of stone axe and the size of the tool may be determined with some exactness.

Section III.—Inferences and Conclusions.

By considering all the purposes for which it might appear possible that these places have been constructed, the probabilities of the case may be arrived at. There is no trace of any interments having taken place in them; and it is not a feature of early graves that they are marked by a *hollow* on the surface. There is no evidence that these places have been graves. It is improbable that they have been refuse pits. They were apparently not holes such as were excavated during early times for the extraction of clay for pottery-making, or such as were mined in the chalk districts of England and France to obtain flint nodules and chalk. The under-structures of timber appear

to put all these suggestions out of court. Flint nodules, moreover, do not occur in this particular formation, but are to be found not far distant, and in various other parts of Western Wigtownshire, but only in the stratified gravels, at points from 30 to 200 feet above sea-level.

If the sites have been wells, why should there be more than one, and why hearths? If they have been pitfalls to entrap wild animals, or shelters for huntsmen, or if they have merely been stores or crematories, how account for the presence of workshop utensils?

More probably they have served as workshops of some kind, and certainly for some grinding and polishing operations and the manufacture of flint implements. They may have been cooking places also.

While probably stores, workshops, and cooking places, these curious sites, bearing traces of human activity and distinct domestic associations, may, nevertheless, have been dwellings, or cellars beneath dwellings.

The theory, then, of dwellings is by far the most plausible. From the dimensions of the places it may be that they were more in the nature of shelters or sleeping places than dwellings in the modern sense.

Flooring.

At each end of Site No. 3 traces of what was supposed to be flooring were noticed. It was at these points only that the fragments of pottery were obtained. No doubt any pottery on other and central portions of the floor would be carried down to the lower and very much wetter layer on the collapse of the floor, and the ware, being soft and non-glazed, would soon resolve itself into its original clay and pounded pebbles. At the south end a portion of a layer of charcoal about 2 inches thick was associated with the fragments of pottery.

Mr Richard M'Kay has kindly examined some pieces of the charcoal microscopically, and reports that it is of coniferous wood, probably pine.

The heavier stone utensils were found at all the sites lying far down between the piles. They had perhaps once rested on the floor, and as the floor decayed they had fallen through it into the lower zone.

The layer of charcoal and the pottery bed on the end margin of No. 3 gave a valuable clue as to the height of the flooring relative to the pre-historic surface and to the level at which the tops of the piles appeared during the examination of the site.

Assuming, as may quite safely be done, a floor 6 inches thick and a layer of charcoal 2 inches in depth, the floor level must have been between 1½ feet and 2 feet above the tops of the piles —that is, the tops as discovered in the diggings.

This indicates that, owing to the comparative dryness of the layer immediately underneath the flooring, the timber in that zone had so decayed as to be unrecognisable among the silted and other vegetable matter.

In other words, the logs as extracted had 18 to 24 inches of their top portions decayed.

The perishing of the timber of the flooring, and the wood immediately beneath the flooring, would set in, no doubt, rapidly after desertion of the settlement, owing to the comparative dryness and openness of the soil in that part. But this did not take place in the still lower zones, where the wetness, the presence of clay, and the depth from the surface would all tend practically to seal hermetically the contents, thus ensuring the preservation of the shape and contour of all the pieces of timber.

Supposed Wattle-Work at Site No. 3.

Round the walls of the pit at No. 3 Site, on the margin of the area in which the piles occurred, and imbedded in the sand and clay, were found twigs and small branches, some set vertically and others at angles. Some modern tree-roots were encountered, but were not confused with the ancient wood. In no instance were the twigs seen to be horizontally placed, but they occasionally crossed each other. The thickness of the twigs varied from ½ inch to 2 inches. Some of them were placed immediately outside the wooden substructure, while others were found 1½ feet from it. They were detected in different conditions of decay according to the stratum at all the levels, except in the layer of vegetable matter at the modern surface. Considering first their condition in the deepest zone—the stratum in which the piles were encountered—the twigs were in the same state of preservation as the piles, spongy but unaltered in shape. In the zone immediately above, the same pieces of wood were

traced; but the timber was dark-brown, moist, and stringy. The greater amount of air and the less amount of moisture in this zone account for the difference in the condition. At a still higher level the same twigs were visible, but the remains were in a different state of decomposition. The decayed matter resembled soft, moist, brownish-black soot mixed with sand, and was in contrast with the surrounding lighter coloured sandy soil. It would not have been recognised as the remains of much decayed timber unless the lines of the branches had been traced continuously from the lower levels. The rotundity of the twigs and their forking at some places were also useful clues in the identification. In the still higher stratum, and in channels which were observed rising upwards in the same lines as the remains just mentioned, faint traces of slightly dark-coloured sand were detected, and this was considered to be the vestiges of the branches which had thus been traced from point to point through the various levels. It was the detection of well-preserved wood in the lowest zone which led to the recognition of the identical branches, though in different conditions, at the higher levels. It is remarkable that these branches had been placed upside down, a position in which the logs forming the under structure were also found. It is conjectured that the branches were remains of basket or wattle-work, which may have lined the walls of the pit. As mentioned, horizontal twigs were not seen, but these may have fallen down, leaving the vertical standards only as survivors.

As the surviving twigs were not very numerous, nor set very closely together, it is probable that the exploration revealed a portion only of the wattle-work—probably the branches which were farthest removed from the pit and in the least disturbed soil. The lining facing the inside of the pit would, no doubt, be more exposed, and would more readily decay and fall into the pit after abandonment of the place.

It was only by the careful use of a penknife that the continuity of individual stakes was traced from one level to another, and the presence of the supposed wattle-work in the upper levels established. It seems indeed probable that the walls of the pit were strengthened and protected by a lining of this description which reached from the floor level to the pre-historic surface, if not higher. At the south end, but at the higher levels only, were

observed interesting vestiges of what appeared to have been unusually large branches. One piece had many of the branches forking upwards from it for a distance of 2 or 3 feet. They had been placed vertically and in the direction of the growth of the tree a direction, it will be remembered, contrary to that of the other wood-work of the walls and of the logs of the under structure. As none of these larger branches were found at the level of the piles, the nature of the wood was not determinable. At the higher levels the interior of the branches had vanished, leaving a vacancy which was surrounded and protected by a rather hard crust of black matter.

At this end of the site the sand has been discoloured red and brown and hardened by the presence of ferruginous matter, and in the vacant interiors of the branches there was a slight sprinkling of light coloured sand not so discoloured. Probably the white sand in the interiors gained admission through cracks at a time when the interior had become much decayed or had vanished, but before the *eremacausis* of the bark or crust, or the hardening and discoloration of the outside sand, had taken full effect.

Supposed Entrance Passages.

In testing the ground at various points in the immediate vicinity of the pits, it was found that the superficial black layer was of almost uniform thickness. Beneath it was sand somewhat dark in colour. At some places, though not in all, near the foot of the black layer was observed a very thin layer—a mere sprinkling—of whitish sand.

From a careful inspection of this sprinkling it was conjectured that the sand composing it had been carried by a gale from the shore region, where great quantities of white sand occur, and, as can be proved, did also occur during the later pre-historic periods.

The drifting sand had been deposited in varying degrees of thickness, like a slight fall of snow which has drifted over somewhat uneven ground, and in some spots it was absent.

A section of the soil at the east wall of the pit at Site No. 3 revealed the presence of the same sprinkling of white sand. It occurred under the black layer and was several inches thick, thinning out on each side. It was not so white nor so readily

recognisable as the sprinkling disclosed by the test diggings in the vicinity, yet no one present failed to detect it. While the black layer appeared horizontal at its top, its base dipped considerably in the middle of the east wall, reaching to within $1\frac{1}{4}$ feet of the floor level. At the lower part of the east wall, and in a curvature coinciding with the dip of the black layer, lay the white sand to a maximum depth of over 12 inches.

Slicing away the soil of the east wall, the dip of the strata became less until it disappeared, and the presence of the white sand became gradually less noticeable.

No similar feature was observed at the other side of the pit. It is conjectured that the vestiges of some kind of entrance passage or doorway had thus made themselves evident. Similar but less pronounced traces were also seen at the east wall of Site No. 1.

No matter what type of hut may have been in vogue at these places, the function of the wooden substructure is an interesting problem.

The reasons for primitive man having lived in a sunken or earth-hidden dwelling are obvious. Whether the under-surface habitation was of stone or wood, or whether half or wholly subterranean, it was warmer and less exposed to adverse weather conditions than the ordinary surface hut, and—an important consideration—it was not readily liable to detection by an enemy.

The sunken flooring might, however, be a serious drawback and act merely as a hollow in which rain and ground water would accumulate. If the subsoil were gravelly, chalky, or of pure sand, the dwelling would be dry and comfortable. Should the subsoil be moisture-retaining, or overlie a bed of clay, the great discomfort of a damp floor would arise. Now the excavations revealed the presence of a bed of moist blue clay, and, what in these circumstances might be expected, a wet stratum immediately above it. A likely hypothesis then is that the moisture in and above the layer of clay rendered the earthen floor uninhabitable, and, as a means to prevent a wet floor, the pre-historic architect hit upon the ingenious expedient of a structure of wooden piling, more or less unright, under and supporting a horizontal flooring. The flooring would thus be insulated against direct contact with the moisture-laden strata, and thus render the dwelling comparatively dry and comfortable.

The position selected for these pit-dwellings, if such they were, seems to have been chosen because of its comparative dryness, the place being not lower than any of the surrounding stretches of country, yet we find the constructors had to face the difficulty of under-surface moisture. It has been seen how desirable a half or wholly hidden under-surface dwelling would be in primitive times, and that where the climate and the subsoil are wet, a damp floor would result in this class of house unless special measures were taken to overcome the difficulty. What these measures were is now perhaps elucidated.

A common feature of pre-historic exploratory work is the disclosure of pits. A review of some of these discoveries shows that none are quite similar to the sites at Stoneykirk.

Pottery.

As already mentioned, vestiges of pottery were observed at Site No. 3 only. The fragments are in a poor condition, and are portions of hand-made, non-glazed vessels of darkish coarse paste. The paste has been mixed with pounded-up fragments of some whitish sandy stone. When extracted, the pieces were scarcely recognisable as pottery, being coated with soil; but after slow natural drying the crust of soil was picked off, and by the application of a soft brush the particles of charcoal, loam, and sand which filled the interstices were got rid of, disclosing the original skin of the ware. The ornamentation upon the skin is quite distinct. The fragments consist of more than one set, representing more than one vessel. One set was found at the north end, and the other at the south end.

North End. So far as can be guessed from the appearance of the few fragments, the feature of the vessel (or vessels) from the north end was that the pottery had rounded, plain, raised ridges of varying breadth which ran, more or less parallel, horizontally round the exterior of the ware. The walls were $\frac{1}{3}$ inch in thickness, and where mouldings occur the thickness was about $\frac{1}{8}$ inch greater. The average breadth of the mouldings was about $\frac{1}{3}$ inch. The intervening space between the ridges varied from 1 to 2 inches, and had (lying approximately parallel to the mouldings) rows of little closely-set, indented, squarish punctuations, impressed as with a comb-shaped implement before the clay was fired, and resembling the surface-work on some modern

granolithic pavements. It is probable that the number of these rows in a panel varied from one to four, and some of the intervening panels may have been quite plain. In one panel where the rows are absent plain lines have been incised diagonally and across each other. The curvature of one piece indicates an inside diameter at the rim of about 8 inches. Another small fragment (fig. 8), ornamented with parallel lines crossing each other diagonally, has a ridge on the exterior apparently running vertically.

Neither the style of the rim nor the shape of the base can be determined from the recovered fragments.

South End. The pieces from this end show the presence of similar lines of small, closely-set, squarish indentations as if made by the teeth of a comb-like implement, but the system of decorating by raised ridges has not been adopted. The lines have been set more or less parallel to each other, and diagonally to the horizontal lip of the vessel. Fortunately in this group of fragments some portions of the rim were recovered. The rim was about $\frac{3}{4}$ inch broad with an inwardly slanting bevel, and was ornamented by the same kind of rows of small indentations. The rows on the rim were arranged almost parallel to each other, at right angles to the edge, and equidistantly about four rows in the space of an inch. The thickness of the sides decreased from 1 inch at the rim to $\frac{1}{2}$ inch at a point about 2 inches down. This and other rim portions betray an affinity in shape and ornamentation to the type of rim to be seen in some of the vessels of the Scottish Stone Age. The interior surface of the pieces is unadorned. The curvature shows an inside diameter at the rim of about 8 inches. The shape of the lower portion of the vessels is not determinable.

Some of the fragments are too much wasted for useful description.

The sites yielded a profusion of stone implements. Seven implements of flint and two dozen implements of other stone, fragmentary or whole, were recovered, mostly from Site No. 3. Two hundred and thirty-seven nodules, cores, and chippings of flint were also found. The number of logs in the substructures examined was 15.

The most interesting flint implement got is a massive horse-shoe shaped tortoise-backed scraper. There were got also some

fine hammer stones, anvil stones, rubbing stones, pounders, and pestles.

Chronology.

Estimates of the age of the settlement may be based on the shape of the hut, and on the character of the relics recovered.

The long or oval hut would scarcely have been in extensive use in the same region and at the same period as the round hut. In any case, in the Scottish area one type probably originated before the other. Was then the oval hut anterior to the round hut? It is natural to consider the oval hut the more primitive, as it was more easily constructed. The round hut, when it reached a diameter of 20 or more feet, seems to have had the roof centrally supported, as in the Glastonbury examples. There are good grounds for believing two theories often propounded—that the construction of the early grave-chambers was in imitation of the architecture of dwellings, and that the long barrow of Britain belonged to the Age of Stone, and the round barrow to the Age of Bronze. It may be taken, therefore, as probable that the long or oval type of dwelling is the earlier.

The presence of pottery is, of course, of great value in any effort to fix the chronological horizon of the sites. It is, unfortunately, impossible to tell whether the bases of the vessels were rounded or flat. However, the colouring of the fragments, and the ornamentation on the ware, and the shape of the rims, are characteristic of the Stone Age in Scotland.

While the pottery and utensils are all archaic, yet the absence of relics characteristic of Mediæval times or of the early Iron Age, such as objects of glass and vitreous paste or of any of the metals, does not allow us positively to assign the remains to a time earlier than these periods, though at present the evidence is strongly in favour of the sites having been anterior to the brochs, earth-houses, and the usual type of crannogs in Scotland. The character of the axe-marks points to the same conclusion. No vestiges of horn or lignite were noticed. Early wrought objects in horn are extremely rare in Wigtownshire, but not so relics of lignite, which have very frequently been found in Wigtownshire on sites of the Bronze Age, and of later times. While the type of oval hut in Stoneykirk has yielded no relics definitely characteristic of the Bronze Period or of any later age,

the various pieces of evidence point to the Stone Age as the period during which the sites were in use.

The situation of the settlement was well chosen, as the inhabitants could see a long distance in all directions, while the houses could, only with difficulty, be detected from afar, more especially as they were partly sunk under the surface and doubtless mound-like above.

The direction of the row of huts was also selected intelligently. The row follows the crest of the plateau and is on its sunny side.

The position of the individual houses is also noteworthy. It would seem that the entrance passage was preferred not at the end but in the middle of one of the sides. As shown by the excavations, the east side seems to have been chosen. It is natural to expect the door to be placed there, as it would be protected from the prevailing rains and winds from the south and west.

Guided apparently by some such requirements, the prehistoric architect laid down the plan of the oval foundation in each case, so that the longer axis bore approximately north-west and south-east, and, it would appear, arranged that the entrance passage ran at right angles to that direction and was situated on the east side.

The inhabitants of this group of sites were workers in the wood of the birch, hazel, and alder, and had well shaped domestic pottery ornamented with incised and impressed work and work in relief. They lighted fires of some coniferous wood, and had a variety of implements of stone—scrapers, polishers, rubbing-stones, pounders, hammers, and anvils. They had an effective form of axe, with a smooth surface and a finely made edge. They carried on the manufacture of large and small flint implements from the rough nodules. The fact that they spent considerable time and labour in the construction of their houses tells that the method of life was at least in some measure settled, and not purely nomadic, and the occurrence of a group of sites may signify that a system of village life was in vogue.

The individuals who lived there did not follow the architectural methods of the Terremare men of pre-historic North Italy, or the Terpen dwellers of ancient Holland. They do not appear to have been like the cranog-builders who built their

dwellings so as to have them more or less surrounded by water or marsh. They did not construct their houses of stone half-underground or wholly subterranean like the earth-houses or weems, nor did they follow the methods of the hut-circle men who lived in circular wood and wattle huts built on the surface of the ground.

While the bottom of each pit was at some depth under the surface, it should not be forgotten that the supposed flooring was sufficiently near the pre-historic surface to make it necessary to have a good proportion of the cubical contents of the chamber above the level of the surface if the chamber were to be habitable. There is no reason to believe that the huts were open to the heavens, or that the excavated soil was removed from the spot. It then follows that the upper part of the dwellings was more or less mound-like in character, the heaped-up earth from the original excavation having assisted towards this appearance. It seems difficult to escape from such a conclusion.

The shape of the mound would naturally follow the plan, whether round or oval, of the structure covered by the mound. Again the structure would be in harmony necessarily with the plan of the foundations, the flooring, and the walls, all of which were apparently in the shape of a longish oval. It would appear then that the mounds were somewhat long in shape, though perhaps not so pronouncedly so as the plan of the wooden substructures.

In considering this peculiarity of the Stoneykirk remains, it is interesting to consider that most of the ancient British dwellings, built of wood and wattle, which have been examined and recorded, are round, and, further, that they belong to the Bronze, the Early Iron, and later periods. The huts which comprised the marsh village at Glastonbury, occupied a few years before the Romans arrived in that district, were roughly circular and about 20 feet in diameter. With the exception of the Isle of Wight specimens, the pit-dwellings found in England appear to have been circular, as were also the crannogs and hut-circles.

No stones were used in the Stoneykirk structures, and stones sufficiently large for building walls are rare in the locality. It seems safe to say that the walls were of turf and wood and wattle. If the places were roofed, it is safe to assume further

that at least a small amount of some covering of vegetable fibre, or even of soil or turf, rested upon the roof. A stoneless structure, however, could not bear the weight of a large amount of superincumbent matter; and the fact that a depression, and not a mound, marked each site indicates that a light form of roofing was employed. This roofing, after desertion of the settlement, would fall in, and the hollow would gradually become silted up.

As has been seen, the flooring arrangements were ingeniously, laboriously, and substantially contrived, and admirably adapted to the end in view. It is natural to believe that the less difficult matter of walling and roofing should also have been successfully met by the same men. Doubtless the whole place of abode, while very small, would be well suited to protect the inhabitants against the discomfort of too much sun, rain, wind, or cold.

It would be hazardous, nevertheless, to conjecture what exactly was the nature and appearance of the structures when entire. They were probably single-chambered wooden dwellings partly sunk under the surface level, and wholly, or in part, hidden by a mound of turf and earth.

Dwellings presenting the external appearance of mounds survived in Scotland to recent times. This type of house seems to have existed at a very early period, and to have been copied, though perhaps on a smaller scale, but naturally in a more substantial style, in the architecture of graves. There are thus cairns with internal sepulchral chambers. Houses and graves of this type were usually of stone, but it is reasonable to believe that wood might take the place of stone in districts where stones of the size required for building purposes were not plentiful. Now, if it can be shown that grave-mounds with internal constructions of timber once existed, it is a fair inference that there may have been dwelling-mounds with timber-built chambers, the roof protected by turf or simply earth-covered. This link in the chain of evidence is fortunately forthcoming, for at least two cases in Britain have been carefully recorded of what appeared to be grave-mounds or barrows containing timber constructions in the interior—the Dalry mound, Ayrshire, which probably dated from the Bronze Age; and the Wor Barrow, Dorset, assigned to the Stone Age. In the Wor Barrow district building

stones are scarce, and in the vicinity of the Wigtownshire sites building stones are so difficult to procure that the fields are not bounded by stone walls, but are either fenced, hedged, or enclosed by earthen dykes.

As we have thus earth-hidden, stone-lined, sepulchral chambers constructed apparently in imitation of earth-hidden, stone-built dwellings, and also sepulchral constructions of timber within mounds, it is an easy deduction that wood-built chambers for the living once existed wholly or partly earth-hidden. Perhaps the evidence for such wood-built, earth-hidden dwellings is not only presumptive, but has become direct testimony, through the discoveries in Stoneykirk.

In the Scottish area many unique non-historic and proto-historic archæological phenomena have been observed, especially in the domains of art and architecture. May not the "piled pit" of Stoneykirk be another example of the ingenuity and perseverance in overcoming difficulties which seem to have characterised the pre-historic craftsman of North Britain?

The Local Fungi. By Mr W. M'Cutcheon, B.Sc.

The following is a list of eighty fungi found in and around Dumfries in the months of September and October. A number of them have been verified by Mr R. B. Johnstone, honorary secretary to the Andersonian Naturalists' Society, Glasgow. I hope to be able to add to the number on future occasions.

HYMENOMYCETES.

Agaricineae.

Amanita mappa. Goldielea and Conhuith Woods.
Amanita muscaria. Third wood from town on Castle-Douglas Road.
Amanita rubescens. Terraughtie Glen.
Amanita vaginata. Terraughtie Glen.
Armillaria mellea.
Tricholoma murinaceum. Dalskairth.
Tricholoma personatum. Dalskairth.
Tricholoma nudum. Dalskairth.
Tricholoma cinerascens. Moss Road, Dalskairth.
Marasmius urens.
Marasmius peronatus.
Marasmius oreades. Goldielea.
Collybia maculata. Dalskairth.
Collybia butyracea.
Collybia radicata. Carruchan.
Collybia velutipes.
Collybia dryophila.

Russula nigricans. Kilnford Wood.
Russula vesca. Kilnford Wood.
Russula cynoxantha. Kilnford Wood.
Russula fellea. Kilnford Wood.
Russula foetans. Conhuith Wood.
Russula rubra.
Russula fragilis.
Russula emetica.
Lactarius torminosus. Kilnford Wood.
Lactarius turpis. Lochar Moss.
Lactarius blennius. Kilnford Wood.
Lactarius vellereus.
Lactarius deliciosus. Dalskairth.
Lactarius rufus.
Lactarius mitissimus.
Lactarius subdulcis.
Lactarius camphoratus.
Lactarius emetica.
Lactarius trivialis.
Mycena galericulata.
Mycena polygramma.
Laccaria laccata.
Clitocybe maxima.
Hygrophorus coccineus.
Nyctalis parasitica. Goldielea.
Pholliota squarrosa.
Cortinarius cinnamomeus.
Paxillus involutus. Park Road.
Agaricus campestris.
Stropharia aeruginosa.
Hypholoma fascicularis.
Hypholoma sublateritium. Carruchan.
Panaeolus campanulatus.
Coprinus atramentarius.
Coprinus comatus. Terraughtie, Newabbey Road.

POLYPOREAE.

Boletus luridus. Lochar Moss.
Boletus chrysenteron. Lochar Moss.
Polyporus squamosus.
Polyporus picipes. Willows, near Lochanhead.
Polyporus betulinus.
Polyporus annosus.
Polyporus versicolor.
Polyporus adustus. First wood from town on Castle-Douglas Road.
Polyporus abietinus. Conhuith Wood.
Daedalia quercina. First wood from town on Castle-Douglas Road; Cargen.

HYDNEAE.

Hydrum repandum. Abundant in October, first wood from town, Castle-Douglas Road.

THELEPHOREAE.

Stereum hirsutum. Carruchan.
Stereum purpureum. Carruchan.

CLAVAREAE.

Clavaria amethystina. Third wood from town on Castle-Douglas Road.

TREMELLINEAE.

Calocera cornea.
Calocera viscosa.

GASTROMYCETES.

Scleroderma vulgare.
Cyathus vernicosus.
Crucibulum vulgare.
Nidularia pisiformis. Railway sleepers, Gatelawbridge Quarry line.
Lycoperdon pyriforme.
Lycoperdon bovista.
Geaster rufescens. Near tree roots, Pearmount, Dalbeattie Road.
Ithyphallus impudicus. Conhuith Wood.

DISCOMYCETES.

Gyromitra esculenta. Railway, Thornhill to Gatelawbridge. Sent to Kew for identification. Only once before recorded for Scotland.
Helvella crispa. Newabbey Road, under beech trees.
Leotia lubrica. Terraughtie Glen.
Peziza (Cochlearia) aurantia. Dalskairth.

Notes on the late Transit of Mercury: On Jupiter and Saturn. By Mr J. Rutherford.

Mercury.

In these notes Mr Rutherford detailed his observations of the Transit of Mercury on 14th November, 1907. In the early morning the sky was completely overcast with dense clouds. At 10 h. 23 m. 40 s., when the Transit was expected to begin, there was no appearance of the sun through the clouds, this continuing until a few minutes before noon, when a little break was noticed near the sun's position. On directing the telescope to the spot he was rewarded by seeing the sun through a thin cloud. Through this his first view of Mercury on the sun's disc was seen. In a few seconds the cloud was cleared off, and at noon this was seen for six or eight seconds. After this the sun was obscured until 1.35. Then glimpses of the planet were seen through thin cloud.

During the short time of clear vision he directed his attention to the border of the planet, which appeared to be quite sharp, and free from any luminous or penumbral appearance. The colour of the planet seemed a little grey.

Mr Rutherford said:—I am sure that no one has any conception of the joy I felt at being privileged to see this transit, even for such a short time. Impressions of such sights are engraven on the mind in such an indelible way that they are

never forgotten. Another thing that strikes one as being simply marvellous is the accuracy of the predicted time.

JUPITER.

As seen on the morning of November 30th, 1907, between 7 and 8 o'clock. On several mornings during this month I had some very fine views of it. In fact, I think the finest I have ever had. Previously, when looking at Jupiter in the evening, transits of its moons and their shadows have nearly always been seen with some doubt and difficulty, but on the morning of the 30th the moment I looked into the telescope a black spot was seen. I looked up the Ephemeris for that day, and found that it was the shadow of Moon I. I observed it for fully half-an-hour. During that time it moved some distance across the disc. There was also plainly seen a dark elliptical spot on the north equatorial belt, nearly above the shadow of the moon.

VENUS.

I may add that the finest views of Venus I have had have been in the morning when it was almost daylight, the horns are then quite sharply defined, and there is not the same amount of flare about it, which is such a drawback to good seeing of this planet in the evening. When the morning is suitable the air seems steadier, and a brighter and sharper image is obtained.

SATURN.

In the month of November the rings of this planet were turned edge ways on to our line of sight, and according to the position of the earth and sun they should have been invisible. One evening, about the 11th or 12th, vision was fairly good. I could plainly see the shadow belt across the ball, and tried to trace the ring at each side on to the sky beyond. When attention was directed to the east side the eye saw at times a faint trace of light where the ring should be on the opposite side. This occurred several times, and when the eye was turned to that side the light was not seen. I have read of several other observers who have seen those flashes, and also have read of one or two astronomers of note who say that it is an optical illusion.

Since I wrote the foregoing notes I find that a number of other observers have seen the flashes of light on the Ansæ of

Saturn's Ring, in November last, when they should have been (theoretically) invisible. The question naturally follows what was the cause?

A Night with a Microscope. By Mr T. T. Ovens.

In his preliminary remarks Mr Ovens observed that people were so accustomed to regard with admiration and wonder the mighty and impressive works of nature that they were apt to treat as insignificant her elaborations in minutiæ. Time would not permit him to deal with a very large variety of subjects, although every mote that danced in the sunbeam—every particle of trampled dust—contained inexhaustible treasure of knowledge and instruction. He would first centre their attention to a view of the Flea of Man, which, though not very elegant in the æsthetic sense, was beautifully and perfectly formed for the life it had to lead. They would notice the length and development of the hind legs which enabled the insect to take immense leaps. Indeed were man endowed with the corresponding muscular power he could without difficulty bound over Criffel in three strides. The next specimen dealt with was a female flea, and it was noticeable that while the female was much larger than the male, it was by no means prettier. After mentioning the flea of a mole which, he said, was different from other insects inasmuch as it lived mostly under ground and had no eyes, these not being necessary, Mr Ovens went on to deal with the proboscis of the Blow Fly. They had all observed the house fly on the edge of the sugar basin, and dipping its trunk which, to the naked eye, looked very much like a bent bit of wire with a pad at the end. But the organ was most complicated and beautiful. The most wonderful thing about the organ was the system of half rings forming a series of tubes in the substance of the lobes and acting as connected channels, up which the food of the fly was conveyed to the mouth. Not less interesting was the eye of the fly. Each one of the tiny spaces was a distinct eye in itself, but as it had only a limited range of vision it seemed that nature had compensated the want by providing such a number of eyes as occupied nearly all the surface of the head. The house fly had about 4000 eye facets, but the dragon fly had at least 24,000. Another most remarkable part

of the fly was the foot, the pad of which secreted the glutinous substance which they had observed after the insect had walked across polished glass. After dealing with the breathing tubes of insects, such as the spiral filament inside a caterpillar, Mr Ovens spoke on the wing of a butterfly, pointing out that the powdery substance which adhered to the hand that touched it was composed of beautiful scales, each so infinitesimal that on every square inch of wing surface the number of scales was reckoned at 100,000. The antannæ or horns of insects presented another series of organs of endless variety, and of all conceivable forms. In the case of ants, observation showed that by means of their antennæ communication and recognition were established. The lecturer likened the sting of a hornet unto a fishing hook or arrow head, but a curious point was that the possession of stings was only enjoyed by the female. The Ovipositers were all highly interesting objects, but perhaps none more so than those of the saw fly, where a pair of elaborate toothed saws slid backwards and forwards with great rapidity. The Ticks were characterised as wingless, degenerated parasites, which lived on all sorts of creatures, a good example of the species being the sheep tick, which lived on the sheep solely by suction. The far-off date of 1670 saw the advent of the Simex lectularius or what was commonly known as the bed bug. It had been said that this troublesome and repulsive insect was imported in the timber brought from America for use in rebuilding the city of London after the great fire. At first its bites were mistaken for plague spots; but in the middle of last century the insect got the title of bug or goblin. Aphides or Plant Lice were next spoken of. By a surprising departure from the common law of nature, each female of the species of insects could alone produce many generations of offspring. Another peculiarity about the family was the fact that females were exclusively produced in the spring, no males being found until the autumn. Referring to the difficulty of defining the difference between animal and vegetable life, he said, for instance, the Volvox globator was a wonderfully endowed plant which moved about in a wonderful manner, and in that small part of the creation the 50th part of an inch. This plant was to be found near Dumfries, in Babington Loch, Maxwelltown, though not in great quantity. Ditoms were also dealt with.

21st February, 1908.

Chairman—The President.

Stone Remains of Brittany. By Mr John Glover, W.S., Edinburgh.

The special feature of Brittany which distinguishes it from all other European countries is to be found in those remarkable antiquities of the stone age which abound in every district, and which are to this day held in superstitious veneration by the simple inhabitants. The Druidical remains of Stonehenge, though finer individually than anything to be seen elsewhere, are but isolated examples, whereas in Brittany Celtic monuments more or less important may be counted by thousands, especially in the region known as the Morbihan on the borders of that singular archipelago, which was evidently the chief centre of the Celtic population. The principal monuments are:—

Puelvens—pillars of stone. They are stones varying in height from 2 to 8 feet set upright in the ground at varying intervals.

Menhirs are a larger description of monolith (the name means long stone). The largest in Brittany is at Pennargal, near Brest—it is more than 42 feet high. Another about a mile and a half to the south-east of Dol is 30 feet high, and one at Logmariargner, now thrown down and broken in two, was formerly more than 60 feet high. How these huge masses of stone were brought to their standing place or how they were reared to their upright position is as great a mystery as the purpose they were intended to serve. Conjectures have been formed that they were in some way connected with the worship of the sun, but beyond conjecture nothing is known.

Dolmens—stone tables—are what in England are called Cromlechs. They consist of a horizontal slab of unhewn stone supported by two or more upright stones. In many cases they resemble a stone table, but in others their supports are placed side by side beneath a very large slab—often 60-80 feet high. Many examples of dolmens may be seen in the neighbourhood of Auray.

Kistvaens are a smaller kind of Dolmen, generally closed at one or both ends. The best example is on Goat Island, at the mouth of the archipelago of the Morbihan.

Galgals are equivalent to what are known as cairns. They generally contain a sepulchral chamber, the stone walls of which are inscribed with hieroglyphics . which no one hitherto has been able to decipher.

The country round Carnac is solemn and impressive, full of strange Druidical monuments. Menhirs and Dolmens of fabulous antiquity, ancient stone crosses, calvaires and carvings. One finds intimate traces of the Middle Ages. The land is still half cultivated and divided into small holdings: the fields are strewn with ancient stones.

The lines of Carnac are impressive—lines of colossal stones planted point downward, some as high as 20 feet, and stretching away to the horizon on a space of several miles like a gigantic army of phantoms. Originally the lines were composed of 6000 stones, but to-day there remain only several hundreds. They have been destroyed bit by bit and used by the peasants.

Historians and archæologists have sought in vain to find a solution to the problem of the formation of the lines: some say that the stones planted in the fields are temples dedicated to the worship of the serpent: others maintain that this is a kind of cemetery where the dead were interred after a terrible battle. They are variously taken to be sacred monuments, symbols of divinity, funeral piles, trophies of victory, testimonies to the passing of a race, the remains of a Roman encampment. Innumerable are the surmises.

The country people have in their folk-lore their own versions of the origin of these stones.

The stones at Carnac embrace three groups of Menhirs, those of Menec comprising 874 Menhirs in 11 rows or alignments, Kermario 865 in 10 rows, and Kerlescant 262 in 10 rows.

The stones at Kerlescant run from east to west in three chief rows, being smaller and fewer to the westward and larger and more defined to the east, where the number of rows increases to 10, forming the boundary to an enclosure called Le Bal.

On leaving Le Bal in a south-westerly diretcion only scattered stones are seen, but near the windmill of Kermario the same order is repeated, the number of rows being again 10. This

formation ends abruptly in a large dolmen, similar to those of Stonehenge.

This singular arrangement is continued again to the south-west, where the 10 rows again appear at Menec, terminating in front of a round enclosure. The stones of the third group are in some cases 18 feet in height.

Excavations at the bases of the remains have disclosed:—

1. Stone hammers, adzes, whetstones, sling stones, hand projectiles in granite quartz, and schist.
2. Flint arrow-heads and flint chips in abundance.
3. Dice or marbles in granite.
4. Fragments of iron weapons and utensils—iron nails and adzes.
5. Horse bells in bronze and horse teeth.
6. Bricks.
7. Fragments of Celtic and Gallo Roman pottery.
8. Roofing tiles.
9. Mortars and whorls in stone.

All lying in the brown earth—in many cases above a scattered layer of charcoal or ashes.

From the majority of the remains being those of implements of war—mostly Celtic—it is obvious that between the lines there lay a long stretch of defensive works erected by the Celts at a period anterior to the Roman invasion, while the bronze and iron remains and the fragments of Roman pottery point to the Romans on their arrival having occupied some of these, and in the more advantageous positions had constructed other works of greater solidity.

Several of the Menhirs were used as buttresses to the Roman camps, and there would be little doubt that many of them were broken up to strengthen the outer wall.

The presence in the same place of Celtic and Roman remains points to the conclusion that the inhabitants of the country, when forced by some invasion in the troublous times succeeding the fall of the empire, had there found a refuge for themselves and their animals.

It had at one time been supposed that the Menhirs had been brought from a distance, but this contention is destroyed by the fact of the grain of the Menhirs being that of the granite of the district. Others, which are of a pear-like shape, are sometimes

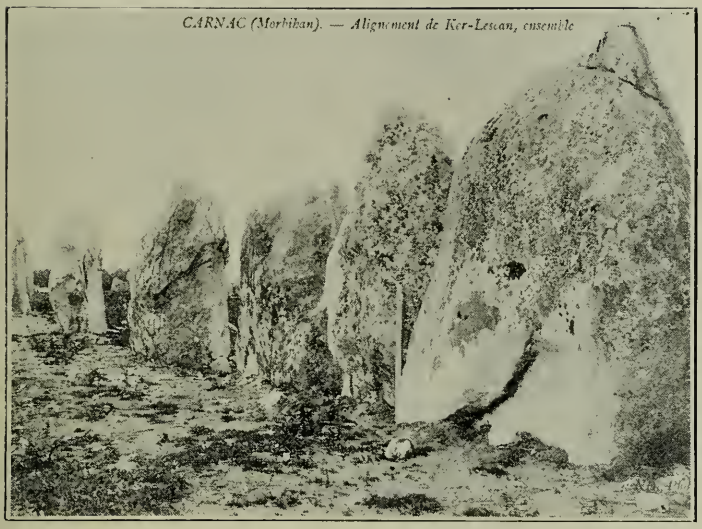
set up as if balanced on their pointed end, and would seem to be in some cases boulders, in others rolled stones from the sea coast, where similar ones may still be seen. In connection with this it is to be remembered that the centuries have seen a mighty advance by the Western Sea on the ancient coast line of Brittany.

The fact of Menhirs having been built into walls, which were obviously of early Roman origin, proves that the alignments are older than the walls, and consequently anterior to the Roman occupation. But the evidence of their being much older comes out more decisively from the deep groovings on the eleventh Menhir of the tenth alignment, which now lies on its side, but at one time stood erect. It is obvious that these deep groovings had been produced by an exposure for centuries to atmospheric action, and that these grooves which exist on the south end alone could not have been produced during the period of its position on its side lengthways and covered with earth. The conclusion, therefore, is inevitable that it must have stood erect for many centuries before the construction of the west wall of the Roman camp, and that period, if we could ascertain it, would indicate the date of the alignments. The grooved weather markings on the summit of many of the Menhirs standing erect in the alignments are more or less deep according to the grain of the stone. For, unfortunately, the granite of which they are composed is not all of the same nature. If it were so the depth of the markings would serve in some measure as a basis for calculating their age. It is, however, impossible by this procedure to arrive at any exact result.

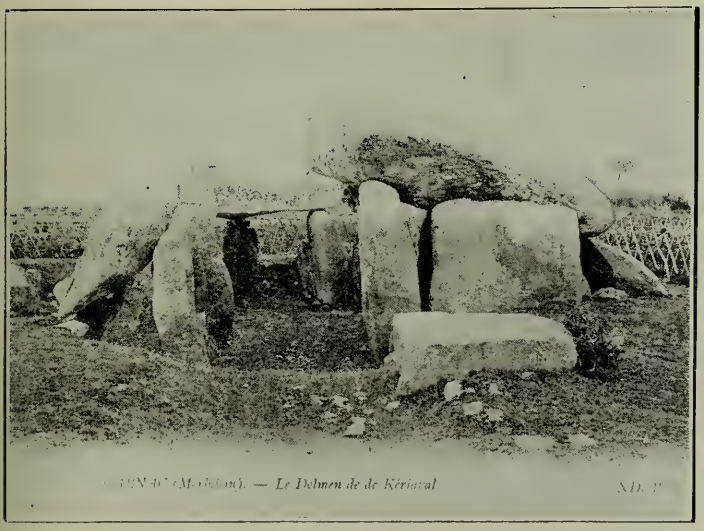
The names of the three alignments of Carnac would in a measure indicate a sepulchral use. They are named Kerlescant, corrupted probably from Kerlosquet (burnt town or town of burning) by allusion to cremation, Kermario—village of the dead, and le Menec, place of the stones.

It is the same for analagous monuments in other parts of the country.

The orientation of the alignments varying from E. to E.S.E., that is in the line of the equinox and of the solstices, is held to indicate their having been places of assembly for sun worship. According to Combry, the celebrated La Tour d'Auvergne, states in his "Origines Altiques" that the constant



STONES AT CARNAC—KERLESCANT.



STONES AT CARNAC—DOLMEN OF KERIAVAL.

tradition of the Bretons was that the alignments were the principal temple of the Druids, and that Armorica was always regarded as their privileged land.

Ashes, charcoal, flint chips, pottery, and other objects are the invariable accompaniments in the dolmens of the rites of sepulture whether by burial or by cremation, and the numerous excavations have shewn that the dolmens, whether covered by a tumulus or otherwise, are sepulchral monuments. We have seen all of these objects at the base of the menhirs: we have seen that the names given to the menhirs and handed down from a remote period are suggestive of sepulture, and their orientation also is the same as that of the dolmens. We may thus conclude regarding the destination of the alignments that they may also have been erected as sepulchral monuments.

Turn now to examine the correlation existing between the alignments, cromlechs and dolmens. In the head of each of the alignments of Menec and Kerlescant the large menhirs form a cromlech. These cromlechs, from their forming an integral part of the alignment and from their stones being of the same composition and character, must necessarily be regarded as having the same destination.

Many of the dolmens are covered by tumuli or cairns, others are uncovered—everywhere they have been either explored or destroyed. The names given to many of the dolmens are significant of sepulture. Very few of them, as in the case of the dolmens, are sculptured, and then only in the rudest way, representing concentric figures, zig-zag lines, cup markings, and stone axes.

Researches have proved that in some of the dolmens of the Morbihan the sepulture had been by cremation, in others by burial, and in some few cases the evidences of both rites were found in the same dolmen. Cæsar speaks of cremation, of magnificent funerals, and of the most cherished objects being thrown on the funeral pyre. If it is not ascertained when the practice of cremation commenced, there can be no doubt about its having continued up to the introduction of Christianity, and that there had been great difficulty afterwards in weaning the people from this and from the worship of trees, stones, and fountains, is shewn by the edicts against these practices. There is another edict, so late as the eleventh century, against the

practice of burying at the roadsides—which may account for the extraordinary number of crosses which one everywhere sees along the roadsides in Brittany.

In considering the association of menhirs, alignments, cromlechs, and dolmens, we come to the conclusion that these are the mutilated remains of an immense necropolis, the construction of which had extended over a long period, and must necessarily have required a great amount of organised labour and skill, but nothing is known as to the appliances used in moving some of these huge monoliths. This must for ever remain a mystery.

In considering the immense number of Celtic funeral monuments which extend along the seaboard of the Morbihan the question naturally arises—Why are these monuments concentrated in this district? The abundance of blocks of granite in the district is at once suggested as a probable cause of this result, but we would rather look for the explanation in the Celts having chosen this region as a *terra sacra* or necropolis, destined to receive from generation to generation the ashes of their families.

6th March, 1908.

Chairman—Mr JAMES BARBOUR, Vice-President.

CLAVERHOUSE—SOLDIER, JUDGE, AND SHERIFF IN DUMFRIES AND GALLOWAY. By the Rev. Dr J. KING HEWISON, Rothesay.

John Graham of Claverhouse was one of the most notorious personages connected in any way with the south-western counties of Scotland, over which he passed like a blight, leaving a trail and memory which nothing can now efface. John Graham was the son of William, laird of Claverhouse, Ballargus, and Glenogilvie, who married Magdalene Carnegie, daughter of John, Earl of Ethie, and first Earl of Northesk. They had two sons, John and David, and two daughters, Magdalene and Anne. I have searched five-and-twenty likely registers for the announcement of John's birth and failed to find it. He is supposed to have been born in 1648. A similar doubt exists about the date

of his matriculation in St Leonard's College, St Andrews, one John Graham matriculating in 1658, another in 1665. Whatever our subject learned, he did not master the spelling of the English tongue, as his extant letters prove. In 1669 Claverhouse, his father being dead and leaving him rich, as compared with the universally bankrupt landowners of the day, with six hundred pounds a year, appears as a Commissioner of Excise and Justice of the Peace for Forfarshire, not long after he left college. Like others of his class, he sought excitement in foreign wars, and is credited with serving two years (1672-4) in a Scots regiment in France before, in 1674, he joined Prince William of Orange's company of Guards. At the battle of Seneffe he distinguished himself by extricating William from danger and death. Becoming captain in November, 1676, he retired from that service in December, 1677.

Probably Sir Walter Scott is correct in asserting that Archbishop Sharp was his early patron. Claverhouse may have accompanied William of Orange to England. William recommended him to James, Duke of York, who in turn recommended Claverhouse to his kinsman, Montrose—himself appointed to a troop in "His Royal Highness' Regiment of Horse," raised for service in Flanders in 1678. Montrose offered him a lieutenancy, which he declined.

At this time the Scots standing army was under the command of Lord Linlithgow, and consisted of 1 regiment of Horse Guards, 1 Foot Guards, 1 (Mar's) Infantry, 2 companies of Highlanders under Colonel James Menzies and the Earl of Caithness, and 3 companies of Dragoons under Viscount Kingston and Captains Strachan and Inglis. On 23d September, the Earl of Airlie, the Earl of Home, and Claverhouse got captaincies in three new troops of horse, each troop consisting of 69 men. In December, 1678, Claverhouse with his troop and Inglis's company of Highlanders patrolled Dumfriesshire. Lieutenant Andrew Bruce, an immoral and thievish fellow, was lieutenant to Claverhouse. On 27th December they were at Moffat, on 3d January at Castle Milk, and on 6th January at Dumfries. The Committee for Public Affairs, considering that the Magistrates in the south were remiss in putting down the rebellious Covenanters, recommended the appointment of sheriff-deputes and bailie-deputes, a course approved of by the King.

The Earl of Queensberry was then Sheriff of Dumfries and Annandale, and the Earl of Nithsdale of Galloway. Consequently, on 27th February, 1679, Claverhouse and Bruce were commissioned depute sheriffs for the three south-west counties, Robert Grierson of Lag, then a young man, being also appointed for Wigtown, and Captain John Paterson for Kirkcudbright.

Some of the letters of Claverhouse at this period are extant, and from them we learn that he had his headquarters in Dumfries in January and February, from which he was wont to sally out, in order to undertake even forty mile rides by night to arrest the suspects. The want of spies—rather a creditable aspect of the case—made his raids often unsuccessful. These deputes, by instruction of the Privy Council, met at least once a week to try conventiclers and withdrawers from worship. In John Welsh, the ousted minister of Irongray, Claverhouse had one of those elusive preachers who were as intangible as the mists through which they escaped, leaving the troopers bogged in the mosses and hills where Claverhouse was active in March and April. He reported that Welsh was the ringleader of people about to break "into open rebellion." The Sheriff-Depute was in Dumfries on 21st April, and left on the 5th May to join headquarters. A terrible tragedy had occurred on 3d May when James Sharp, the Primate of Scotland, was slain in cold blood on Magus Moor. We next find Claverhouse at Falkirk on 29th May on the track of a great assembly of Covenanters, who were soon to gather in front of Loudoun Hill. He was at Mugdock Castle on the 30th, and at Glasgow on the 31st May. Passing through to Hamilton, he was in the saddle early on Sabbath morning, 1st June, and by 6 a.m. he reached Strathaven. A few hours later he was facing the foe at Drumclog—with the result all know—that that night he was in Glasgow again without many of his bold troopers, whom he ignominiously left to their fate. It was no wonder that he wrote, "Bot I am swre thes was the warmest day I saw the yeare," by no means classical terminology for a 'Varsity man. He rode to Edinburgh and waited the arrival of the new Commander-in-Chief, the Duke of Buccleuch and Monmouth, with whose force he marched to Bothwell Bridge, where on 22nd June, another Sabbath, he slaked his thirsty and vindictive sword, obtaining that opportunity of fulfilling what he considered to be his heaven appointed function

—the slaying of Whigs in order to stay the infectious plague of Whiggery.

Doubtless with zest he followed the trail of the slayers of the Primate, and it was probably at this time he gave cause for the following epitaph in Galston Churchyard:—"Here lies Andrew Richmond, who was killed by Bloody Graham of Claverhouse, 1679."

In January, 1680, he was on the southern hunt again. In the spring and the summer he was in London on marriage business and looking after forfeitures, remaining in London till 1681, when he returned to Scotland with the Duke of York.

On 21st July, 1680, Claverhouse got a charter of Freuch (Stoneykirk) as a reward for his services, but he did not enter into possession of it for more than a year. We next find him on the jury that tried Argyll on 12th and 13th December, 1681. The Test wrought woeful changes in the country. Among those who refused to take it were Sir Andrew Agnew of Lochnaw and Viscount Kenmure, in consequence of which they forfeited their offices as Sheriff of Wigtown and Bailie of the Regality of Tongland. Claverhouse was lucky successor in both posts. So that with a new commission as Sheriff-Depute in Dumfriesshire and Kirkcudbright he was omnipotent.

The student is fortunate in having preserved in the Drumlanrig charter room those letters which Claverhouse wrote at this time to Queensberry. They are easily and cheaply accessible in the Historical MSS. Commissioners' Report XV., viii. Claverhouse is found writing in New-Galloway on 16th February, 1682, informing his chief that the people at his feet were "in great dreed." It is not the letter either of a soldier or of a respectable sheriff. It is the tally of a slaughter man, the report of a cunning exterminator, who writes:—"I will threaten much, but forbear sever exicution for a whyll, for fear people should grou desperat and increase to too much the number of our enimy." The peasantry fled his presence as if it were the plague. At Dumfries, on 22nd February, he wrote, "I can catch nobody, they are all so alarumed." He was not to be baffled. He invited them to meet him at church; and never had booted apostles such overflowing congregations, gathered from several parishes. For example, at Kirkcudbright he reported that "some that for seven years before had never been there were

present." On 1st March he was in New-Galloway. He, however, felt the counteracting influences of the Dalrymples, who sympathised with the persecuted; and although he could write "This contry nou is in parfait peace," referring to Kirkcudbright in April, and also report from Moffat on 17th April, "I have examined every man in the Shyr, and almost all in the Steuartry of Galouy, and fixt such a guilt upon them that they are absolutely in the King's reverence," still, he continued his activity in Galloway in August and September, and soon found himself in open conflict with John Dalrymple, son of James, first Viscount Stair, hereditary Bailie of the Regality of Glenluce. It appears that Claverhouse had apprehended several suspects whose cases had been already dealt with by the Bailie, who considered that Claverhouse was overstepping his powers. Dalrymple accordingly raised an action against the Sheriff by presenting a Bill of Suspension, to answer which Claverhouse was forced to appear before the Privy Council in December. Therein he had approvers and abettors, so that he was not only pronounced guiltless, but was praised for his wariness and legal procedure, while Dalrymple was fined and deprived of office.

It was during this case that the peppery little soldier, who declared that there were as many crocodiles in Galloway as there were peaceable persons, rose up in Council and boxed Dalrymple's ears. He himself got a more pleasant box at Christmas in a commission promoting him Colonel of "His Majesty's Regiment of Horse," four troops in all, and a paid captaincy as well. While fortune favoured the Sheriff, the shrievalty was to receive more drastic treatment. Claverhouse was in touch with York. He was promoted Privy Councillor on 11th May, and next day his brother David was appointed conjunct-Sheriff of Wigtown.

Claverhouse's connection with the Privy Council legislation is of the first importance, more especially since hitherto it has been the vogue of magnanimous literary men, magnanimous, however, in face of recorded fact, to view Claverhouse merely as the faithful soldier obedient to his superiors, and not responsible for the indefensible acts of his sanguineous masters. I have extreme satisfaction in laying bare the facts of the case. Claverhouse took his seat in the Council on 22d May, 1683, and attended its meetings three times that month. He attended

only once in June. On that occasion the "instructions" were given to the Commissioners of Justiciary, who were about to perambulate the country in June, and the Sheriff of Wigtown was instructed to attend them. Consequently he was in Dumfries on the 26th June with his troop guarding the judges. He was soon in the saddle scouring the Borders in search of the Rye House plotters, but soon again appearing in Council, 4 times in July, 6 in August, 4 in September, 1 in October, 11 in November, and 4 in December—in all 34 times since appointed. He was also placed on the Committee of Public Affairs on 4th October. From that time on we may say he was up to the elbows in the blood of his countrymen, attending the Council 53 times in 1684 and 40 times in 1685. On Tuesday, 10th June, he married the Hon. Jean Cochrane.

Claverhouse was present when the Council authorised a letter advising Charles that it was better to disable his enemies than to flatter them (15th July, 1684). On 5th September he watched Carstares, afterwards Principal, tortured in the thumb screws for an hour. Next day he was present when "instructions" regarding conventicles were given, and justices were empowered to use fire and sword. Meantime a gallant affair had occurred in Nithsdale. On 2d July General Dalyell was ordered to convey from the jail in Dumfries Alexander Gordon in Kinstuir, William Grierson of Lochurr, James Welsh of Little Cluden, and other prisoners who had been sentenced at the circuit court in June, and who, with all the idle and vicious wastrels of Edinburgh, were to be handed over to Robert Malloch and shipped to the Plantations. Claverhouse's troop got the string as far as the defile of Enterkin, where a successful ambuscade was laid, so that the prisoners were released on 29th July. Claverhouse, during his honeymoon in June, was absent from meetings of the Council, but he attended ten times in July, and was present on 29th and 31st July, and also on 1st August, 1684. He was soon in the saddle again. He rode by Douglas, Mauchline, and Thornhill. In Closeburn, on the 7th or 8th, he caught four men, whom he haled to Dumfries, where he was on 9th August. Three days later he was in Edinburgh with his prisoners.

On 6th September, Queensberry, Drumlanrig, and Claverhouse were commissioned to hold justiciary courts in Dumfries,

Kirkcudbright, and Wigtown shires; and on 23rd November, Claverhouse was present in Council and signed the instructions given to the various judges, authorising the instant execution of all refusers of the test of allegiance. The court began its work in Dumfries on 2nd October, sitting in the Tolbooth. The first case was that of persons suspected of complicity in the Enterkin Rescue. Some were fined; absentees forfeited their bonds. In Dumfries these judges kept 23 men and women in custody, some of whom were sentenced to banishment. They sat in Kirkcudbright on 7th October, and called 170 suspects. Nearly all the parish curates compeared, bringing lists of the disorderlies in religious matters. Some were sent to the "Joggs;" others to the Repentance Stool; others to be scourged (two being women); others sent to prison; and a few ordered into banishment. It was on the 17th October they had before them a batch of 14 prisoners caught by Clavers' men a few days before, among them being Lady Gordon of Holm; Mr William M'Millan, a conventicle preacher; and James Graham, of Crossmichael, who was afterwards hanged in Edinburgh. The court sat in Kirkcudbright on 7th, 8th, 9th, 10th, 11th, 13th, 17th, 18th October, and at Wigtown on 14th, 16th, 17th October. They were back in Dumfries on the 23d, and again sat on the 23rd, 24th, 25th, and 27th October. The minute books of these courts, with many interesting papers relative to them, are preserved in the Register House, Edinburgh. Not the least interesting are the long lists of suspects carefully prepared by the curates, and the depositions of witnesses and attested "tests" of the persecuted for religion's sake.

He did not return to Council till the 15th November. A week later he voted on the question whether or not "any persons who ounes or does not disoune the late traiterous declarations on oath, whether they have armes or not, should be immediately killed before two witnesses." This was carried in the affirmative, and on 23rd November Claverhouse signed the instructions on the subject. This was the instruction that gave himself the authority to shoot John Brown of Priestshiel on Mayday, 1685. He was also present in the Council on 13th January, 1685, and signed the instructions which gave Lag and his brother David the authority to drown the Wigtown martyrs on the (2nd ?) 11th May. The instruction was in these terms:—

"If any person oune these principles or doe not disoune them, they must be judged by at least three, and you must immediately give them a lybell and the names of the inqueist and witnesses; and they being found guilty are to be hanged immediately upon the place, according to law. But at this time you are not to examine any women, but such as has been active in those courses in a signall manner. And these are to be drouned."

The death of the King, in February, 1685, temporarily spoiled the fortunes of Claverhouse. He had quarrelled with Queensberry. He was not placed on the new Council till 11th May, and did not take his seat till 16th July. He attended, but seldom during the rest of the year 1685. He was leaving his indelible mark elsewhere. Although Professor Terry asserts that the commission of Claverhouse as Sheriff expired on the death of King Charles, yet the Council on 12th February announced that James "allowed all his judges and officers to act as formerly, until they receive new commissions." Viscount Kenmure was notified of this fact, and Claverhouse was at the meeting of Council on that date.

On the 13th December, 1684, Peter Peirson, Episcopal incumbent in Carsphairn, a man of doubtful reputation, was shot by night in his manse by "The Black Macmichael," the fowler of Maxwelton, and other fugitives. Claverhouse tracked them down, and in a skirmish on Auchencloy killed four or five of them, capturing two, who were tried and executed at Kirkcudbright, shortly after 18th December—the date of the fight. Macmichael and Stewart were buried in Dalry. Claverhouse ordered their bodies to be exhumed and exhibited on the gibbet there.

Claverhouse was in Dumfriesshire on 10th May, and shot Andrew Hislop at Craighaugh, in Eskdalemuir. It is his subaltern, Andrew Bruce, who is credited with shooting James Kirko on the White Sands of Dumfries, on 13th May, 1685. We do not know where the Colonel was that day. But there is a remarkable story which may link him to this very deed, although it refers to a double execution of which we have no trace yet. John Morrison, an engineer, and native of Terregles, recounted to Sir Walter Scott in 1803 a story which he heard from his father. Hitherto Claverhouse has always been reckoned the beau ideal of a cavalier—handsome as Apollo,

gallant as Bayard, faithful as Douglas. There is disillusionment in hearing that he was diminutive (wearing a cuirass only 15½ inches deep), not shapely, red haired, squinting fiery tempered, fond of other people's moveables. So Joseph Robson, an old friend of Morrison's father, was wont to narrate. He saw "Claverhouse attending the murder of two martyrs on the sands of Dumfries. He rode his horse along the coping of a parapet wall, built to guard off the waters of the Nith in time of floods, and when the horse had arrived at one end, he wheeled round on one of his hind legs as on a pivot, repeating the same manœuvre. His arms were long, and reached to his knees; his hair red or frizzly, and his look altogether diabolical." That such really was the presentment of the persecutor I have other evidence to show, and such a picture is the true counterpart of the sleepless rider of the moorhags and mountains, and the merciless legislator of the Privy Council.

With James as his patron he was not long in vaulting into position again. On 20th of September he was promoted to be Major-General, with a substantial pension, and on 12th November, 1688, he had the royal reward for his devotion in his elevation to the peerage of Scotland, with the title of Viscount of Dundee and Lord Graham of Claverhouse. He fell leading the royal army at Killiecrankie on 27th July, 1689. His widow and only child were killed in Antwerp. The occasion of Dundee's visit for the last time to Dumfriesshire and Galloway I have not discovered.

20th March, 1908.

Chairman—The PRESIDENT.

DEVORGILLA BALIOL AND THE OLD BRIDGE OF DUMFRIES. By Mr JAMES BARBOUR, F.S.A.(Scot.).

The Old Bridge of Dumfries is, with the exception of certain earthworks at Castledykes, the only reputed mediæval monument in the town which has escaped entire destruction. It has, however, come down sadly diminished and marred of its fair proportions. Of nine large arches of which it consisted,

three with their piers and east abutment, except what remains of them under the street, have been razed and levelled, as was also an arched culvert which passed through the abutment in continuation of the lead or water-gang to the water wheel of the adjoining Sandbed mill. The bridge as it now exists, notwithstanding the repairs it has undergone and the rebuilding or partial rebuilding of two or three arches, is still in form and mainly in substance the original structure. Its strength is not greatly impaired by age, and the piers remaining, being founded on rock, if suitably cared for, may yet survive many generations of men.

It is a structure which for several reasons is most worthy of being guarded from further dilapidation. Its usefulness as a footway over the river is to be considered; the enhanced artistic display it lends to the town; its antiquity and association with historic events; and specially the keeping in remembrance of the great and good lady, its reputed founder—"A better lady," says an old poet, "than scho was nane, In all the yle of Mare Bretane."

Antiquaries and historians as Grose, Pennant, Chalmers, M'Dowall, Sir Herbert Maxwell (the eminent author of the "History of Dumfriesshire and Galloway"), and the latest historian of Scotland, Dr Andrew Lang, unanimously attribute the foundation to Devorgilla Baliol, Lady of Galloway, in the thirteenth century, and it seems desirable, in order to promote intelligent belief and induce interest in the preservation of the structure, to broaden the grounds on which this conclusion rests.

With this object in view, I have put together the following suggestive considerations, largely from an engineering point of view, which seem to me to have a bearing on the subject.

A brief notice of early bridge-building in this country will tend to make more clear the position of the bridge of Dumfries. I am indebted for information chiefly to Smiles's "Lives of Engineers" and Cosmo Innes's "Sketches of Early Scotch History."

Fords and ferries, which originally served for crossing the rivers, were frequently impracticable during winter, and nearly always unsafe; from the inconvenience attending them much difficulty in travelling arose and many lives were lost; apprehen-

sion of danger was always present to the mind of the traveller; and it was customary to erect crosses at the fords, where prayers might be offered for safety before attempting the passage of the waters. One such cross remains in Dumfriesshire, although possibly not exactly in its original position. It stands at the old ford of the Nith, near the village of Thornhill.

As civilisation advanced and population and travelling increased, the building of bridges became a matter of urgency, and gradually led to their ercetion along the principal routes throughout the country; and so great were the advantages accruing in course of time felt to be, as to lead benevolent and pious persons, in those early days, to bequeath large sums of money for the purpose of building and maintaining bridges. The Church regarded bridge-building as pious work, and Churchmen were active promoters of the movement, and frequently themselves the architects of the structures.

The first known bridges in Britain cross the streams at Dartmoor. They exhibit peculiar construction; the piers are built of granite blocks, and the spaces between them are spanned with great slabs of similar material, some of them fifteen feet in length and six in breadth, which form the roadway. One of these bridges measures thirty-seven feet in length. It is said cyclopean bridges such as these exist nowhere else; not even in Brittany, noted for aboriginal monuments, and probably they are cœval with the building of Stonehenge.

The Romans were noted experts in the art, who built in England bridges both of wood and stone, and fragments of the latter yet exist.

The curious triangular bridge at Croyland is referred to, it is said, in an ancient charter of the year 943. The architecture of the existing structure, however, clearly proves it to belong to the thirteenth century.

The first mediæval bridges of which authentic accounts are preserved are a pair erected over the two branches of the river Lea at Stratford, built between 1100 and 1118 by Matilda, Queen-Consort of Henry I., who narrowly escaped drowning there, and where many others had perished; she bequeathed certain manors and a mill to the Abbess of Barking for their maintenance and repair.

London Bridge, although by no means the longest in Eng-

land, probably out-weighed all others in respect to the mass of masonry it contained. Its erection occupied thirty-three years, the work being commenced in 1176 and finished in 1209. A priest, Peter of Colchurch, was the architect. It consisted of twenty arches, proportionately narrow, the piers being nearly as wide. The roadway was nine hundred and twenty-six feet in length, and from end to end it was enclosed by lofty timber houses. On the centre pier was the chapel with its tower, and at the ends were the gate-houses, on which were stuck upon poles the heads of traitors and unfortunate partisans, it might be as many as thirty at one time. This old bridge carried safely across the river the traffic of London for six hundred years.

A famous bridge, and the longest in England, spanned the Trent at Burton, built in the thirteenth century by Abbot Bernard. Its length was fifteen hundred and forty-five feet, embracing no fewer than thirty-four arches. It was only recently removed.

Chester bridge and others in England were built about the same period, and Scotland was not without examples, as the following interesting and instructive passages from Cosmo Innes's "Sketches" show. Page 157:—"When we consider the long and united efforts required in the early state of the arts for throwing a bridge over any considerable river, the early occurrence of bridges may be well admitted as one of the best tests of civilisation and national prosperity. The bridge over the North water (of stone) has already been mentioned. We find a bridge existing over the Esk at Brechin, and the land of Drumsleid appropriated for its support in the early part of the thirteenth century. In that age there was a bridge over the Tay at Perth; bridges over the Esk at Brechin and Marykirk; a bridge over the Dee at Kincardine O'Neil, probably another at Durris, one near Aberdeen, and one at the mouth of Glenmuick; even a bridge over the rapid Spey at Orkill. If we reflect how few of these survived the middle of the fourteenth century, and how long it was and by what painful efforts before they could be replaced in later times, we may form some idea of the great progress in civilisation which Scotland had made during the reign of William and the peaceful times of the two Alexanders." Page 194:—"We are not informed of what materials the bridge of Ettrick was constructed, for the support of which King

Alexander II. gave the monks (of Selkirk) a grant of land, and where the Abbot afterwards held his court of regality; but we have a very formal transaction recorded for leave to build a bridge across the rivulet of Blackburn, and to have passage for carts and waggons to and fro; and we find the bridge was designed to be of stone, in the middle of the thirteenth century."

It must be evident from the preceding particulars that the thirteenth century was a period of active bridge-building, probably the chief era both in England and Scotland.

Early bridges were, of course, subject to great vicissitudes. Generally they were well built, but their weak point was the foundation, which, unless on rock as at Dumfries, was liable to be undermined by the scour of the river; and improved modes of travelling, for which they were found altogether inadequate, necessitated in many cases their destruction, in order to be superseded by structures adapted to modern needs. An instance is mentioned in Smiles's "Lives of Engineers," where a post-chaise was obliged to retrace its route for fourteen miles on coming to an old bridge unfortunately too narrow by three or four inches to enable the vehicle to pass.

I should mention that as crosses were reared at the fords, so, wherever a bridge was built, a chapel appears to have been founded, to which a priest was attached to pray for the soul of the founder, to receive passage money, and sometimes to pray with the passenger for the safe termination of his journey; usually it was placed over the centre pier, which was carried up for its support.

Returning to the bridge of Dumfries, the structure, like all mediæval work, displays some evidence of architectural art. Even the small culvert through the abutment before mentioned is furnished along the side walls with a neatly splayed and hewn projecting base-course, and the top appears to have been originally closed by a pointed arch of early English form. The piers also show a similar base-course, and the outer angles of the soffits of the arches are neatly chamfered. Another point suggestive of early work is the thinness of the arch stones. Up to the parapets, which have evidently been rebuilt of rubble, the masonry of the bridge is squared ashlar in courses. The exposed parts are much weathered and patched by repairs, but the parts underground, which were exposed some years ago,

exhibit high-class workmanship, the ashlar being finely hewn and in regular courses eleven inches in height. One other characteristic of an early period is revealed in the proportionally narrow arches compared with the piers. This may be tested by comparison with the old bridge at Ayr, built two centuries later. In our bridge the average arch is only one and three-quarter times the width of the pier, while the arch of the Ayr bridge is three and a half times the width of the pier. The following considerations likewise enforce acceptnce of the thirteenth century origin of the bridge:—

Of all periods the thirteenth century was the most propitious for the accomplishment of such a work. Civilisation was advanced, the country was prosperous and at peace, and no symptoms manifested themselves of the devastating War of Independence which shortly emerged and which impeded building operations in Scotland for a hundred years.

It was pre-eminently the building age. Gothic architecture reached its full development, exhibiting the perfection of art, and of engineering feats in securing equibilibrium of the parts of light and airy buildings, such as had never before been seen.

Bridges had become a necessity along the main thoroughfares, and there was no more important route than the great road leading from England to Galloway, including all the westmost parts of Scotland and Ireland; and the water of Nith, on account of its width and volume and the frequency and force of its floods, specially demanded provision for a dry passage from bank to bank; and it is hardly conceivable that a task so vital should be left unaccomplished.

The bridge of Dumfries was closely associated with the Friars Minors, and it will be observed that the relative geographical situation of the Friary and the Bridge points to the fact that the structures were parts of the same building plan.

The foregoing circumstantial evidence establishes, I think, a highly probable case in favour of the reputed era of the founding of the bridge, and must weigh in giving support to other proofs which it may be possible to adduce.

I come now to Charter evidence, and as a layman am sensible of inability to give it adequate treatment. This, however, is of less consequence, as Mr Moir Bryce deals with this aspect of the case in his book on the Grey Friars of Scotland,

now in the publishers' hands. I will only outline the evidence under this head. Mr Moir Bryce's book will be of great interest here, containing as it does much new matter regarding the Dumfries establishment of the Friars.

Devorgilla Baliol in the thirteenth century possessed the superiority of Galloway, which she had heired from her father Alan. Among her other good works she founded the large and beautiful pile of Sweetheart Abbey, compared with which any person of ordinary skill must be satisfied that the building of the bridge of Dumfries was of easy execution. She died in 1289, and her family having become extinct, King David II. in the month of September, 1367, granted and confirmed to Archibald Douglas the Grim, for his diligent and acceptable service, all the royal lands of Galloway, with all feudal pertinents, etc., he (Douglas) rendering, in the name of blenche farme, a white rose at our castle of Dumfries.*

The connection of the Douglas family with the bridge is important. Two of their charters relative to the bridge customs are extant. The first is dated 16th January, 1425, and the second 27 years later, viz., the 4th January, 1452. I am indebted to the Town Clerks and their Council for liberty to use these charters, and the Curator of the Historical Department of the Register House kindly furnished me with translations, the text of which follows.

The charters were as follows:—

Grant by Margaret Duchess of Touraine, etc., of the toll exigible at the Bridge of Nith, to the Friars-Minors, Dumfries. Threave, 16th January, 1425-6.

To all who shall see or hear this charter, Margaret Duchess of Touraine, Countess of Douglas, Lady of Galloway and Annandale, greeting in the Lord everlasting. Know ye, that we in our pure and simple widowhood, have given, granted, and by this our present charter, confirmed—for the salvation of the soul of the most serene prince, James, by the grace of God, illustrious King of Scots, for the salvation of the soul of our late most revered lord and spouse, Archibald Duke of Touraine, Earl of Douglas, Lord of Galloway and Annandale, of our soul and the soul of our late dearest son, Sir James Douglas, and for the salvation

* Dr Nelson—Dumfries Society's Transactions, 1904-5, p. 399.

of the souls of our predecessors and ancestors, our sons and our daughters, and the souls of all the faithful dead—to God Almighty, the blessed Virgin Mary, St. Francis and the Warden and Friars-Minors of Dumfries, for ever serving God there, All and Whole that toll or custom which we and our predecessors were accustomed to receive at the bridge-end of Nith of Dumfries. To be held and had the said toll or custom, with the pertinents, to the said Warden and Friars, as freely, quietly, wholly, honourably, well, and in peace, in all and by all, without any contradiction or drawback, as fully, quietly, or honourably as it was held, received or in any manner possessed by us or our predecessors. Rendering therefor yearly, the said Warden and Friars, the offering of holy prayers, for every other secular service, exaction and demand, which can in any manner be asked or required from the said toll or custom. And we forsooth, the foresaid Margaret, Douchess of Touraine, shall warrant, acquit, and for ever defend, the above-mentioned custom or toll, to the said Warden and Friars, as said is. In Witness Whereof we have commanded our seal to be appended to this our present charter. Witnesses discreet men, Master Johne M'Ilhauch, rector of Kirkandris, our secretary, Sir William Jhonson, our chaplin, George Mur, and Patrick of Spens, with many others. At the "Treif," the 16th day of January, 1425.

Charter by James (ninth and last) Earl of Douglas to the Friars-Minors of Dumfries, of the Bridge toll, Dumfries, 4th January, 1452-3.

To all who shall see or hear this charter James Earl of Douglas and of Annandale, Lord of Galloway, etc., greeting in the Lord everlasting, know ye, that we have given, granted, and by this our present charter confirmed—for the salvation of the souls of noble and potent lords, James and William, formerly Earls of Douglas and Annandale and Lords of Galloway, and our dearest father (progenitoris) and brother, as also for the salvation of our soul, and the souls of our ancestors, and for the salvation of the souls of all the faithful dead—to God Almighty, the blessed Virgin Mary, St Francis and the Warden and Friars-Minors of Dumfries, for ever serving and to serve God there, All and Whole that toll or custom with the pertinents, which we and our predecessors were accustomed to receive at the bridge-end of Nith of Dumfries. To be held and had the said toll or

custom, with the pertinents, to the said Warden and Friars as freely, quietly, fully, honourably, well and in peace, in all and by all without any contradiction or drawback, as fully, quietly, or honourably as it was held, received, or in any manner possessed, by us or our predecessors. Rendering therefor yearly the foresaid Warden and Friars, the offering of holy prayers, for every other secular service, exaction and demand, which can in any manner be asked or required from the said toll or custom. And we forsooth the foresaid James, Earl of Douglas, shall warrant, acquit, and for ever defend the above-mentioned toll or custom, to the foresaid Warden and Friars, as said is. In Witness Whereof we have commanded our seal to be appended to this our present charter. Witnesses:—Hugh, Earl of Ormonde, our dearest brother; Master William Croyster, protho-notary of the Apostolic See; Sirs William Stewart and Symore of Glendynewyn, of Dalswynton and Glendynewyn Knights; Master John Olyver, vicar of Kyrkleyn and Sir Thomas Gilbagy, vicar of Tralflate, with many others. At Dumfries, 4th day of January, 1452.

I am advised that these charters follow in form the usual mode of confirmation peculiar to the times, and they are not original grants.

It is made abundantly clear by the terms of these charters that the bridge was in existence and a going concern before 1425, and that the customs had been in the possession of the Douglas family for an indefinitely earlier period. Obviously the bridge was a pertinent of the lordship of Galloway included in King David's charter, and we must search for the era of its origin prior to the infeftment in favour of Archibald the Grim, and in connection with the establishment of the Friars-Minors in Dumfries, for whose benefit the customs it bore were imposed.

The Friars were established at Dumfries prior to the year 1265, say the middle of the thirteenth century. This is proved by the Exchequer accounts of that year (1265), in which are noted items of payment in connection with an embassage by the Friars to the Isle of Man.* Devorgilla Baliol, as already stated, at that time possessed the lordship of Galloway, and as superior the duty and privilege lay with her and no one else to rear the fabric of the bridge and, with the King's consent, to impose the tolls or customs. There is no competing name claiming to be

its author, and if we reflect that at this period the country was more civilised, prosperous, and peaceful than it was at any after mediæval time; that building in Scotland had expanded to the utmost limit ever attained, not only as regards stately ecclesiastical edifices, but in the art of bridge-building also—a fact which has not been appreciated, thereby leading to the antiquity of the bridge being challenged; that a bridge over the Nith at Dumfries was at the time and for the convenience of the founder imperatively needful; and that the characteristics of the fabric itself chronologically harmonise with the reputed era of its foundation. "The vera wrinkles Gothic in his face," as Burns says, prove, we think, that the old bridge of Dumfries, which we still have, was reared six hundred and fifty years ago by a lady of great bounty and unbounded beneficence.

How many and varied are the burdens this old bridge has borne! It has rung under the hoofs of the First Edward's celebrated white charger, and the horsemen and footmen marching to and from his Galloway wars; Baliol, Comyn, and Bruce, and many high officers known to history trod its pavement. In later and evil times of the Civil War the heads of the guilty, and frequently of the innocent, were, as at London Bridge, here exposed. The heads and right arms of John Grier and William Welsh, fugitives from Pentland, in 1666, and in 1685 a quarter of Richard Rumbold, alleged to be concerned in the Ryehouse plot, of whom in Macaulay's History there is a vigorous defence.

It is pleasant to turn from such gruesome associations to speak a word of Robert Burns, in whose day the whole traffic of the town continued to be borne by the old bridge, the new one being opened only a year before his death. If Burns has not immortalised our bridge in song he has done so by frequent journeyings, sword-cane in hand, to and fro to the house of his trusty friend, John Syme of Ryedale, over, as the new bridge has it, "your poor, narrow footpath of a street, where twa wheelbarrows tremble when they meet."

Bailie Lennox, in proposing a vote of thanks to Mr Barbour, said it was of great value to have an interesting translation of the two old Douglas charters, which bore out the tradition that the Old Bridge was built by Devorgilla. They hoped that Mr Barbour would long be spared to give similar interesting papers.

Mr W. A. MacKinnell, in seconding, said this was an age in which some of the most cherished traditions were swept away, but he thought that after hearing the paper from Mr Barbour there could be very little doubt remaining that the association of Devorgilla with the building of the Old Bridge had been conclusively proved. They were also glad to hear that the bridge was likely to be a structure for a considerable time to come. He thought its artistic value could not well be over-estimated, and it would be difficult to imagine what Dumfries and the river would be without it.

In reply to some questions by the Chairman, Mr Barbour said whether there was a toll-house at the end of the bridge or not he could not tell. The central pier, however, was carried up, and in those days it was at this part where chapels were erected. At the present time there was only one bridge chapel in existence, but he did not recollect at the moment where that was. It was quite possible there might have been a chapel at the centre, and if there was a gate, it would be at the end, the same as in the case of London Bridge. Comparing the Old Bridge with Ayr Bridge, Mr Barbour pointed out that, while the latter had four arches, the former had originally nine. At a meeting of committee held earlier in the evening they had been discussing the excursion to Dundrennan, and one of the reasons for going there was to see a fine old bridge, which had scarcely been noticed. It had been widened, but he believed that one-half of it was co-eval with the abbey and the other half was modern.

Mr S. Arnott said he wished to express his own personal obligation to Mr Barbour for his most interesting and valuable paper. He was sure that all Dumfriesians regarded the Old Bridge with very special reverence. It was part of their lives, and they felt a special liking for the Old Bridge, with its picturesqueness and beauty. When they compared it with the Ayr Bridge, he thought they would feel specially proud of the architecture and the construction of the Old Bridge of Dumfries. On this occasion they owed Mr Barbour a special vote of thanks, because he was in a sense a guardian of this bridge. On a former occasion that society intervened with very satisfactory and happy results, in order that the character of the Old Bridge might not be destroyed. He believed that at that time Mr

Barbour was one of the moving spirits, if not the moving spirit, in preserving the Old Bridge to them. Mr M'Diarmid mentioned in the course of a discussion about the builder of the Old Bridge that Mr Cosmo Innes appeared to hold at that time the opinion that no bridge of this kind could have been built by builders of the period of Devorgilla. Mr M'Diarmid, however, preferred the old tradition, and although tradition did not count for everything it counted for a good deal in a matter like this, and he thought that the statement referred to that no builders could have erected buildings of that kind did not carry very much weight, in view of the character of Sweetheart Abbey and other buildings of that period. The ancient date of the bridge was largely borne out by various documents, which had been translated by Dr Chinnock, and which would appear in a future volume of the transactions. He hoped that at some future time Mr Barbour would deal with another very interesting subject, the old streets of Dumfries. They did not know very much of these. When some alterations were being made at Mr Kelly's shop in Friars' Vennel, the workmen came on some pavements behind the shop, which was supposed by some to be the old Friars' Vennel. He did know whether that was correct or not, but it would be very interesting to clear up questions as to which were the old streets of Dumfries. In his early days he knew many old houses in Friars' Vennel, and one of the oldest stood on the site of the building at the west corner of Irish Street and Friars' Vennel, with a projecting porch-way, and which was a butcher's shop in those days. There were a number of other very old buildings, which seemed to show that that was then the main street to the river, and the position of the old chimney of the monastery also pointed to that.

Bird Notes. By Mr R. Service, M.B.O.U., Janefield, Dumfries.

Mr R. Service gave an address of considerable interest on some incidents in bird life during the past year. He said that the season of 1907 was a very peculiar one from the meteorological point of view. It was rare indeed that they experienced such a long-continued period of low temperatures with extremely humid air, and these circumstances were not without strong

influence upon the birds. The first thing that they caused was a general retardation of the vernal migration movement. Up till the middle of April the weather was fairly normal, and the birds shewed every indication of coming away with their usual activity. Both in our own neighbourhood and throughout Great Britain unusually early dates were recorded among the small birds. That, however, soon came to a termination, and a long succession of bad weather set in about the third week of April. One very prominent incident was the stay opposite Southerness and Carsethorn, and along the estuary of the Nith, of a very considerable flock of the bar-tailed godwits, a species which went to the Lapland fells, and not any nearer, for nesting purposes. They remained there through the brief summer of the northern regions, and were back here again by the beginning of August. That particular flock to which he referred remained on week after week throughout the whole of last summer, and was noticed by many of the local gunners at Carsethorn, although he did not see them till the end of July. About two-thirds of them were in full breeding plumage, probably a unique incident so far as this district was concerned. Another incident which was worthy of mention was the stay of two pairs of eider ducks on the Colvend coast during the whole of last summer; but whether they bred or not was doubtful. Many times during the twenty-four hours one or other of the sexes was absent, showing that nesting operations were attempted. Nests must have been prepared, and probably eggs were laid. The eider duck had gradually crept round the Wigtownshire and Ayrshire coasts, but so far it was not recorded that the nests had been made in the Stewartry, and the Dumfriesshire coasts were not at all suitable. There was, however, little doubt but that this year or next year someone would be lucky enough to find the first eider duck nest in the Stewartry. He also noted the stay at a certain place—not far from where they were, but it would not be proper to mention where—of five ruffs and reeves along the Nith margin during last season, though they might not have attempted to nest. The ruffs had on their beautiful and very characteristic nuptial plumage during that time, and they carried out their sham fights to perfection. They stayed in the neighbourhood during the summer, and were a matter of great interest to local faunists. No doubt their stay was caused by the unusual weather conditions which were ex-

perienced last season, and he for one would not care if he never saw a similar one. Autumn came on, and was characterised by extremely rapid movement of birds southwards. Birds did not linger as they usually did, but passed on with great rapidity, many of the species which were in the habit of staying for weeks passing by in a single day or night. Night was the usual time for travelling, and in many cases their identity could only be made out from a considerable experience of their notes. The notes of birds travelling at night during the autumn migration differed from these emitted during the migration northward in the spring, and both series of notes were widely different from any that they emitted while feeding or courting, or sitting at their usual daily occupation in the fields, woods, or hedges. That constituted one of the particular charms of migration, because at night, when the birds were passing, as they always did—and he had heard some of them as he came along to that meeting—they emitted notes which were of extreme interest and of considerable value to migration data. The great bulk of these birds made no attempt at song, but by means of their squeaking chirps or cheeps they were able, if he might so express it, to keep in touch with one another on their journey. An unusually large number of birds passed the winter with us, including any number of wild ducks, and at least four species of geese. These grand winter visitors, the wild swans, also put in considerable appearance, and the bird observer and others had ample employment during the last winter to watch the different species. One instance he might mention was rather rare, and he happened upon it by mere chance. On the 12th of last December he was on business along the Kirkcudbright coast, and at that time they had a long series of stormy winds. Birds were driven off their usual feeding grounds, and that particular day, during a calm between storms, he was astonished to see thousands of birds in a grass field near the Manxman's Lake, off the ordinary shore, and well up among the pasture lands, and not far from the hedge along the public road. A large proportion of the birds were bar-tailed godwits, which were extremely shy birds. He was privileged to get pretty close to them, but they were unconscious of any intruder about. He watched them indulging in their usual interesting habits, and picking up worms, grubs, caterpillars, and beetles in a way one could hardly think possible with such a long up-turned bill, all

feeding with the utmost unconcern within half-a-gunshot of the hedge. Although he stood up without any attempt at concealment, they went on feeding, oblivious of his presence, which was rather an ususual thing, a similar incident having never occurred before in his experience. He came upon another movement in the same accidental way some weeks ago. He was on business on the Dalbeattie road between Whiteside of Kirkgunzeon and Lochanhead, and he passed several hours in that direction. That was the day before the great snowfall, and a long stretch of fields along the road was covered with birds of many different species, such as gulls, plovers, starlings, in thousands. Probably there would be twenty thousand of them, and they were in an extremely restless mood, fighting with each other as if they were strangers, as no doubt they were. He thought perhaps that an early migration movement was the explanation of their presence, but he found that he was quite mistaken in that; and that this was entirely one of these movements caused by the bad weather in front driving the birds back from their usual travels. He saw them in a long stretch of fields, where they were comparatively sheltered from the storm. They had strong gusts of westerly wind, driving showers of snow before it, and the birds appeared to be in a tired state and glad indeed to get the shelter. Such a movement as that, retarding migration, did not occur in this country to any extent, and this was the only one of any magnitude in the course of a long while he had seen. Ornithological literature was often taken up with descriptions of similar things elsewhere, and especially the countries around the Baltic Sea, where millions of birds were driven back in the same way by some unexpected snowstorm. He wished to refer to another subject for the purpose of voicing, he hoped, their as well as his own great reprobation of an act that was paragraphed recently which took place at Auchenskeoch in the shooting of a golden eagle. He considered it a most dastardly and uncalled for act. As a rule, he did not agree very much with the rather ignorant sentimentalism that was sometimes expressed at the killing of rare birds. The shooting of some of these birds was the means sometimes of finding out many of the problems attached to the study of bird life, and particularly the migration and distribution of birds. But the killing of a bird such as the golden eagle was, he thought, very reprehensible indeed, and all the more so

as during the last few years a very successful attempt had been made at protecting this bird—successful in respect that nesting was brought off and hatching took place. The Duchess of Bedford had taken a great interest in the golden eagle, and this species had returned to Cairnsmore as a breeding place after an absence of more than sixty years. The nest was protected day and night for six weeks, a man never being absent all that time. That of itself meant considerable expense, and they hoped that the results would be satisfactory. Yet when all this care was being taken, they had one of these eagles being shot by a misguided keeper on Criffel, and he hoped they would join him in expressing their disapprobation of such a thing taking place. A good deal of talk had taken place among agriculturists during the last ten or twelve years in reference to the killing of rooks, and what, he thought, he might call a rather artificial agitation had been carried on for the destruction of the birds in the supposed interest of agriculturists. For his part he had taken a life-long interest in rooks and their ways, and he never saw why agriculturists, of all people under the sun, should wish to destroy them. No doubt they did harm to farm crops, but that could be got over with the greatest of ease. For ten months of the year the rook was the only friend the farmer had in the bird direction, so that it was rather a queer thing to hear farmers being constantly asked to shoot down the rooks. This so-called demand—an artificial demand—for the destruction of rooks was really in the interests of the game preservers. He did not say a single word against game preserving; that was a different matter altogether; but the gamekeepers were a body who could look after these things quite well, and destroy such rooks as they wanted to, without asking the farmers to do it, and try to make them believe that it was in the farmers' interest it should be done. The whole thing had arisen from a curious change that took place in the habits of the rooks 28 or 30 years ago. Much time had been spent in investigating why the rooks should have developed the carnivorous habit of the carrion crow, but it was a fact that this change had taken place. This had led to rooks destroying game eggs, and even rabbits and hares in the young stage. The game preservers ought to look after that and allow farmers to preserve them for the purpose of looking after grubs and other insect pests which would, in the absence of rooks,

destroy an untold amount of farm crop. An interesting discussion took place at a meeting of Dumfries Agricultural Society the other day, at which it was advocated at the same time as rooks were being destroyed that wood pigeons should also be shot down or killed in some way. It was advocated that some one should try to introduce pigeon diphtheria for the purpose of inoculating wood pigeons here, and so lead to the diminution of these birds. Those who talked about the destruction of pigeons seemed to overlook a great deal of the biology of the bird. They forgot that most of the pigeons with us during the winter season were nearly all imports. Almost all of them came over the North Sea in great numbers from North Germany, Sweden, Norway, and Western Russia. So that even if they killed the pigeons in this district of ours they would not destroy the stock to any appreciable extent. He maintained that the proper time and method of killing pigeons or lessening their numbers was during the nesting season. The diphtheria of pigeons, he was sorry to say, was to be seen in our own neighbourhood, although in small numbers as yet. Diphtheria was an exceedingly contagious disease, and there was no saying where it would go. Only the other day he came upon a couple of dead pigeons, but he found that they had had diphtheria, and he threw them down. They would probably have been of some interest for study if he had taken them home, but diphtheria was a very dangerous trouble indeed, and there was no doubt that it was communicable to human beings from the lower animals. Many people held different views as to the origin of the diphtheria among the wild pigeons. To him it seemed plain that the wild pigeon diphtheria came from the domestic pigeon. For a great many years past the sport of pigeon homing had developed in an extremely rapid manner. Nearly every Saturday during summer large special trains were run from various of the manufacturing centres of England with thousands upon thousands of the ordinary domestic homing pigeons. Many of these pigeons were taken a greater distance than they could find their way home, and they never returned. They strayed, and with no water and not much food, diphtheria set in among them. These stray pigeons went to the haunts of the wood pigeon, and that accounted for the spread of diphtheria to the wild ones. For a long period of years they had enjoyed the operation of that

beneficent Act, the Wild Birds Protection Act, originated and largely improved in various amendments by Sir Herbert Maxwell, and only the other day an important alteration was made. Woodcocks were protected from the first of March to the first of August, and by an extension recently adopted by the three County Councils of Dumfries, Kirkcudbright, and Wigtown, they were protected till the first of October. He noticed a communication to the "Times" a few days ago by Sir Herbert, in which he approves of the extension on the score that local sportsmen will now get a certain amount of woodcocks bred in our own neighbourhood. It was a question if the baronet was right; he doubted very much if he was. It was the case that our own local woodcocks went away from their breeding places as soon as the nesting season was over, and immediately they were strong enough to go on the wing; and he thought that the extension of the period would have the effect of allowing some foreigner to have a larger share of the woodcocks than he was entitled to.

Gleanings of Old Dumfries and Galloway. Translated in the British Museum from the Register of the Great Seal of Scotland. By Dr E. J. Chinnock.

The Lordship of Galloway.

1426. The 21st year of James I. At Edinburgh, 3rd May.

The King has granted to his sister Margaret, Duchess of Tyrone, Countess of Douglas, Lady of Galloway and Anand-dale, that she should hold and possess the lordship of Galloway, for the whole of her life, with all the liberties, statutes, and customs as Archibald, Duke of Tyrone, etc., the King's brother, or Archibald de Douglas, the said Duke's father, held in their times.

The Lordship of Annandale.

1427. 21st year of James I. At Edynburgh, 3rd Jan.

The King has confirmed a charter of the late Archibald, Earl of Douglas, etc. [by which he granted to Michael de Ramsay, for his service, the lands of Ramarskalis and Grenelandis in the lordship of Anand-dale, which belonged to William, the son of Henry: also he granted to the aforesaid M. de R. and his wife Christian and to the survivor and to the heirs of

their bodies begotten from legal and mutual concubitus, the lands of Harthwat in the forest of Daltoun, and in the lordship of Anand-dale, which belonged to Roger of Lochiemos: the said lands of Remarskalis and of Grenelandis to be held by the said Michael and his heirs whomsoever; and the said lands of Harthuat by the said Michal and Christian, and the heirs of their bodies mutually begotten, in fee; but the aforesaid Mich. holding the strigils for the said Arch. once every year during the lifetime of the said Arch., and after the death of the said Arch. for the said Mich. and his heirs; failing whom, the said Arch. wished that the land of Harthwal should return to himself and his heirs. To be paid annually to the heirs of the said A. at the castle of Lochmabane one penny of silver in name of white farm. At Edynburgh, 10th May, 1419].

THE BARONY OF SANQUHAR.

1440. The 4th year of James II. At Edinburgh, 27th April.

The King has confirmed to Robert de Crechtoun of Sanquhare, knight, the barony of Sanquhare in the sheriffdom of Drumfres, which the same Robert has personally resigned, to be held by the said Robert and his male heirs lawfully begotten of his body, failing whom, by William, Lord of Crechtoun, knight, and his heirs, etc., failing whom, by the lawful and nearer heirs of the said Robert whomsoever.

THE SHERIFFDOM AND BURGH OF DUMFRIES.

1450. 13th year of James II. 6th January.

The King has granted to Ninian de Murray for the whole of his life, 10 marks yearly, to be raised from the roads of the Justiciary and from the dues of the court of the sheriffdom of Drumfres and stewardship of Ananddale; if these be not sufficient from the King's treasury.

The King has granted to David de Murray, brother of Ninian de Murray, for the whole of the life of the said Ninian, 10 marks a year, to be raised from the royal farm of the burgh of Drumfres.

THE BARONY OF KIRKMICHAEL.

1440. 4th year of James II. At Edinburgh, 2nd March.

The King has confirmed the charter of David de Lyndesay,

Earl of Crawfurde, and lord of the barony of Kirkmichel [by which he granted to William, Lord de Crechtoun, Knight, and his heirs, the lands of Dalfubil-Garvald, the town of Dalfubil, with the mill of the same, Garvald, Mikkilholme, Achinkeash, the Knoppis, Molinne, Rahillis, Monygep, Cronyantoun, with the tenantries and services of the freeholders in the barony of Kirkmichel, in the sheriffdom of Drumfres, which Sir James de Douglas, Lord of Dalketh, has personally resigned. To be paid at Kirkmichel one pound of cinnamon on the feast of St. Michael the Archangel (29 Sept.), in the name of white farm. Witnesses—John, Bishop of Glasgow; John, Bishop of Murray; Alexander de Levingstoun, Lord of Calentare; Sir Alexander de Setoun, the Master of Gordon, Sir James de Edmonstoun, John de Cokburn, and William de Cranstoun, knights; Master Thomas de Lawedre, the master of Soltre; Master Richard Crag, Vicar of Dunde; and Thomas de Cranstoun, Provost of Edinburgh. At Edinburgh, Feb. 26, 1439].

The Stewardship of Annandale.

1440. 4th year of James II. At Strevelyn, 6th August.

The King has confirmed the charter of Archibald, Earl of Douglas, Lord of Galloway and Anand-dale [by which he granted to Sir Herbert de Maxwell, knight, Lord of Carlaverock, for his homage and service, the office of steward of the whole lordship of Anand-dale, to be held by the said Herbert and his heirs for ever from the said Earl, with the power of holding courts, punishing of offenders, and levying dues of court, etc., and of doing all and singular the things which are known to pertain to the office of steward. Besides he has granted that the said Sir Herbert and his heirs may receive and levy to their hands 20 pounds from the dues of the steward's courts, which they will hold; and whatever remains shall be carried to the chamberlain of the said Earl. And also he has granted to the said Herbert all fines of 18 shillings and below, which are made in the said courts, to be levied and taken at his good pleasure. At Linlythkow, 8th Feb., 1409].

The Lordship of Galloway.

1450. 13th year of James II. At Edinburgh, 26th Jan.

The King, after mature deliberation, etc., has granted to William, Earl of Douglas, etc., for his service the lands of the

whole lordship and regality of Galloway, both above and below the water of Cre, in the sheriffdom of Drumfres, which the same William has resigned in the said Parliament, and which also Margaret, Duchess of Tyrone, the King's aunt, in her pure widowhood, has resigned through her agents: to be held by the said William and his male heirs; which failing, by the lawful and nearer heirs of the said William whosoever. To be paid annually at the bridge of Drumfres, one red rose, on the feast of the Nativity of the Blessed John the Baptist (24 June), in the name of white farm.

THE LORDSHIP OF ANNANDALE.

1450. 14th year of James II. At Edinburgh, 31st March.

The King has confirmed to Robert Creichtoun of Sanchquhare, knight, and to his heirs and assigns, the lands of Houthwate, Stanyris, Knokkis, Twathtwatis, 5 merks of the lands of Wamfra, 1 merk of the lands in the village of Moffat, in the lordship of Anand-dale, in the sheriffdom of Drumfres, which the same Robert has personally resigned. Three cuttings to be paid annually to the court at Lochmabane.

THE BARONY OF TIBERS.

1451. 15th year of James II. At Edinburgh, 27th Feb.

The King for the singular favour, zeal, and affection which he has exhibited towards himself, has granted to George de Creichtoun of Carnis, knight, the King's Admiral, and to his assigns, the lands of the barony of Tybris, in the sheriffdom of Drumfres.

THE LORDSHIP OF GALLOWAY.

1451. 15th year of James II. At Edinburgh, 6th July.

The King, after mature deliberation and with the full assent of the three estates of the realm in open Parliament, has confirmed to William, Earl of Douglas, etc., for his faithful service, etc., the lands of the lordship and regality of Galloway, on the eastern side of the water of Cree, in the sheriffdom of Drumfres, which the same William has personally resigned. To be held by the said William and his male heirs; failing whom, by the lawful and nearer heirs of the same William whomsoever, in free regality, cum furea and fossa, etc., to-

gether with the presentations of churches belonging to the aforesaid lordship and regality, notwithstanding any statutes, etc. To be paid one red rose at the bridge of Drumfres on the feast of the birth of the Blessed John the Baptist in the name of white farm.

The Lordship of Galloway.

1451. 15th year of James II. At Edinburgh, 6th July.

The King, after mature deliberation, etc., of the three estates of the kingdom in open Parliament, has confirmed to William, Earl of Douglas, etc., for his continuous and faithful service, etc., the lands of the lordship and regality of Galloway on the east side of the water of Cree and the lands of Butill, in the sheriffdom of Drumfres; which the same William has personally resigned: the said lands of the lordship and regality of Galloway, together with the castle of the Trew, and the lands of Butill, to be held by the said Earl, and the male heirs of his body lawfully begotten; failing whom, by James de Douglas, knight, full brother of the said William, and the heirs, etc.; failing whom, by Archibald de Douglas, Earl of Moray and his heirs, etc.; failing whom, by Hugh de Douglas, Earl of Ormonde and his heirs, etc.; failing whom, by John de Douglas of Balvany and the heirs, etc.; failing whom, by the lawful and nearer heirs of the said William whomsoever, in free regality, cum furea et fossa, etc., notwithstanding any statutes, etc., made in any Parliament and general councils in the minority of the King or any other premisses or any premiss will be able in any way to be derogated in future. To be paid one red rose at the Bridge of Drumfres on the feast of the birth of St. John the Baptist (24 June), in name of white farm.

The Barony of Tibers.

1451. 15th year of James II. At Edinburgh, 10th June.

The King has confirmed the charter of William Matelande of Thrilstane [by which in zeal of brotherly love he granted to his full brother, James Matelande, and Egidia Skrymgeoure, his spouse, conjointly and separately the lands of Achinbrek, Dumbine, Quhithill, Clonga, Clongare, Ferdenalane, Clauchane, Auchinach, Braunchevil, Capilrig, and the Bagraw, in the barony of Tybris in the sheriffdom of Drumfres, to be held by the said James and Egidia and either of them surviving, and the

heirs lawfully begotten between the same; failing whom, again to return to the said William and his lawful and nearest heirs whomsoever in one free lordship. One penny of silver to be paid at the town of Tybris, in name of white farm. At Dunde, 3 Jany., 1450. The wards, etc., being saved to the King].

THE BARONY OF KIRKMICHAEL.

1450. 14th year of James II. At Striveline, 11th June.

The King has granted to William, Lord Creichtoune, Chancellor, his heirs and assigns, the lands of the barony of Kirkmichell, in the sheriffdom of Drumfres, which Alexander, Earl of Crawfurd, has resigned. One penny of silver to be paid in name of white farm.

THE LANDS OF TERRAUCHTIE.

1457. 21st year of James II. At Linlithqw, 25th July.

The King has confirmed to John Durant the lands of Traachty, in the lordship of Galloway, and in the Stewartry of Kirkcudbright, which the same John has resigned: to be held by the said John and Isabella, his wife, and either of them surviving, and after their death by John D., their son and heir, and by the male heirs of his body lawfully begotten; failing whom, by the male heirs lawfully begotten between the said John and Isabella; failing whom, by the lawful and nearer male heirs of the said John, the father, whomsoever; three cuttings to be paid annually at the three chief councils in the court of the Stewartry of Kirchcudbrycht, and the services due and customary.

THE LANDS OF KIRKPATRICK.

1463. 4th year of James III. At Edinburgh, 23rd August.

The King has confirmed the charter of Robert Crechtoun of Sanquhare, knight, and lord of the lands of Kirkpatrik [by which he granted to his son, Alexander de Crechtoune, for his good and faithful services, etc., the lands of Kirkpatrik, in the sheriffdom of Drumfres, excepted and reserved for himself and his heirs one acre of land of the said lands for his chief messuage of the same, to be held by the said Alexander and his male heirs begotten of his body lawfully; failing whom, by Laurence de Crechtoun, full brother of the said Alexander, and by his heirs, etc.; failing whom, by Thomas de C., also full brother

of the said Alex., and by the heirs, etc.; failing whom, by Patrick de C., full brother of the said Alex., and by the heirs, etc.; failing whom, to return to the aforesaid Robert and his heirs freely. Ward and relief to be paid when they occur. Witnesses: George de Crechtoun, son of the said Robert C.; Alexander Cathkart, Oswald Lockharte, Pat. Forman, Rob. Marschal, notary public. At Edinburgh, 20 Aug., 1463]. Wards, etc., being reserved for the King.

The Lands of Kirkpatrick Irongray.

1463. 4th year of James III. At Edinburgh, 15th October.

The King has granted to Robert Heris and his heirs the lands of Kirkpatric-Grangray, within the Stewartry of Kirkcudbricht, in the sheriffdom of Drumfres, which Joneta, lady of Frendracht, has personally resigned.

John Herries of Terregles.

1459. 23rd year of James II. At Striveline, 24th January.

The King, because it was clearly evident to him that John Heris of Trareches, was *incompos mentis*, a fool, a natural idiot, and it is known that the royal majesty provides for such with timely remedy, lest their lands, moveable goods, and immoveable, be alienated, dissipated, etc., at the instance of the cousins and friends of the said John and for his advantage and profit, has appointed Herbert Heris, the brother of the said John, caretaker, administrator, and governor of the person of the said John and of the barony of Trareglis, Kirkgunzane, and half of the barony of Urr, and of all the other lands, etc., except 40 pounds of lands for the support of David Heris, son and heir apparent of the said John, at the ordering of the Queen; the present to last up to the legal age of the said David, namely 25 years.

The Lands of Kirkmichael.

1464. 4th year of James III. At Edinburgh, 28th January.

The King has granted to David, Earl of Craufurde, and Lord Lindesay, and his heirs, the lands of Kirkmichel, in the sheriffdom of Drumfres, which Margaret, Countess of Craufurde, mother of the said David, has personally resigned; free holding of the lands being reserved to the aforesaid Countess.

The Barony of Kirkmichael.

1464. 4th year of James III. At Edinburgh, 5th March.

The King has confirmed a charter of David, Earl of Craufurde, Lord Lindesay, and of the barony of Kirkmichel [by which he granted to Herbert de Johnstoune of Dalebank and his heirs, for his faithful service to the said Earl at the time when he was held a prisoner by James, the late Earl of Douglas, etc., and especially for the liberation and abduction of the person of the said Earl David from captivity and the hands of the said James, the lands of Nese and Gleneybank, namely, 3 merks; and also the lands of Dalerome and Cragschellis, namely other 3 merks; also the lands of the two Glenkillis, namely 6 merks; and also the lands of Holehous and Ledere, namely 3 other merks, lying in the barony of Kirkmichel, in the sheriffdom of Drumfres; and also the principal mill of the aforesaid barony of Kirkmichel, together with the office of baillie of the barony itself, as in another letter made for himself thence is more fully contained, to be done and answered annually from all the returns revenues, gains, and escheats of the said barony; but a fine only reserved from *Wrangis* to Herbert himself and his heirs, for his fees and services; one penny of silver to be paid at the chief messuage of the said barony on the feast of the birth of John the Baptist, in name of white farm. Witnesses: James, Bishop of St. Andrews; Andrew, Lord Avandale, Chancellor of Scotland; Master James Lindesay, Provost of Lincloudan and keeper of the King's private seal; Sir Walter Scot of Kirkurde; Alexander Forester of Corstorfyn, knights; Master George Abirnethy, Provost of the Collegiate Church of Dumbertan; and Nicholas Grahame, vicar of Kirkpatrik, notary public. At Edinburgh, 26th February, 1463.] Also another charter of the said Earl of Craufurde [by which, for his faithful service, etc. (as before), he granted to the said Herbert de Johnstoune and his heirs, the office of baillie of the whole barony and lordship of Kirkmichel, in the sheriffdom of Drumfres, to be done and paid from all returns, etc. (as before): he also granted to the said Herbert the power of holding courts, etc. At Edinburgh, 26 February, 1463].

THE LANDS OF ELEOCK.

1464. 5th year of James III. At Edinburgh, 21st October.

The King has confirmed the charter of Robert Charteris, Lord of Amysfield and Eleok [by which he granted to Sir Robert Creichtoune of Sanchare, knight, to his heirs and assigns, for his good services, etc., the lands of Eleok, in the barony of Sanchare, in the sheriffdom of Drumfres; to be held by the said Robert of the King; one penny of silver to be paid in name of white farm. Witnesses: Sir David Heris, son and heir apparent of John H., Lord of Trarikillis, knight; William de Douglas, Lord of Drumlanrig; James de Douglas, John Menzeis of Balveny, Luke Charteris, Master Thomas of M'Ylhauch, rector of Tynwald; and David Rede, notary public. At Edinburgh, 21st August, 1463].

THE BARONY OF SANQUHAR.

1464. 5th year of James III. At Edinburgh, 21st October.

The King has confirmed the charter of Robert de Creichtoune of Sanchare, knight [by which he granted to Robert Charteris of Amysfelde, his heirs and assigns, for his good service, etc., an annual return of 20 pounds from the lands of the barony of Sanchare, in the sheriffdom of Drumfres; one penny of silver to be paid in name of white farm. Witnesses: Sirs David Heris of Avandale, John Karlile of Torthorwald, knights; John Maxwell, steward of Anand, Arch. Stewart of Castelmylk; David Kirkpatrik, Thos. Unthank, notary public.

THE SHERIFF OF DUMFRIES.

1464. 4th year of James III. At Edinburgh, 23rd April.

The King has confirmed a charter of King James II. [by which he granted to Robert de Creichtoun of Sanchare, knight, the office of Sheriff of Drumfres, to be held by the said Robert and the male heirs of his body lawfully begotten; failing whom, any lawful and nearer heirs of the said Robert, with the fees and profits of the same; and with the power of holding courts, etc. Witnesses: William, Bishop of Glasgow; John, Bishop of Dunkeld; William, Lord Creichtoun, Chancellor; Thomas, Lord Erskin; Patrick, Lord le Graham; Alexander, Lord Montegomery; Andrew, Lord le Gray, Master of the King's Household. At Strivelin, 6th November, 1452].

THE LANDS OF DRYFESDALE.

1464. 4th year of James III. At Edinburgh, 23rd April.

The King has confirmed a charter of James II., King of Scots [in which he confirmed to William, Lord de Creichtoune, knight, the lands of the holdings of Drivisdale and of Turmore, in the lordship of Anand-dale, in the sheriffdom of Drumfres, which the same William personally resigned: to be held by the said William and his male heirs lawfully begotten of his body, by Robert de Creichtoune of Sanchquhare, knight, his heirs, etc.; failing whom, by any lawful and nearer heirs of the said William whomsoever. Witnesses: John, Bishop of Glasgow; David, Abbot of the Monastery of Cambuskuneth; Walter, Abbot of the Monastery of the Island of St. Columba; Alexander de Levingstoune of Calentar; John de Cokburn, knights and masters William Trumbule, Keeper of the Privy Seal; John Scheves, Clerk of the Rolls and Register; Nicholas de Schoriswod, Clerk of the King. At Striveling, 19th August, 1441].

THE CORONATOR OF NITHSDALE.

1469. 9th year of James III. At Linlithqw, 8th January.

The King has granted to Robert de Crechtoun of Sanchare, knight, and to his heirs, the office of Coronator of Nythisdale, in the sheriffdom of Drumfres, which Alex. M'Math of Dalpedar has resigned.

THE LANDS OF KIRKENNAN.

1464. 4th year of James III. At Aberdeen, 17th July.

The King has granted to William, Lord Monepenny and his heirs, the lands of Kirkennane and the barony of Torstrachane, with its tenants and tenancies, in the lordship of Galloway and the Stewartry of Kirkcudbricht, which Lord Hammyltoune and Eufamia, Countess of Douglas, his wife, have resigned at the Monastery of Aberbrothok.

LANDS OF MABIE, &C.

1468. 8th year of James III. At Edinburgh, 18th June.

The King has confirmed the deed of William M'Coulloch of Kirkmabrik [by which he sold and alienated to Robert Heris of Kirkpatrick Yrnegray, his heirs and assigns, the lands

of Doularg, Sanctbridesholme, the Crukis, half of the lands of Maby, Dalchene, and Cragvile, half of the lands of Machrewin, in the lordship of Galloway, the stewartry of Kirkcudbricht, for a certain sum of money paid by hand, to be held by the said William from the King, one red rose to be paid to the King in name of white farm, upon the Bridge of Drumfres. Witnesses: Gilbert M'Culloch of Cardennes, Rolland Elwald, George of Wardelaw, Donald of Law, John Bell, public notary. At Kirkcudbricht, 8th July, 1466].

The Barony of Closeburn.

1470. 11th year of James III. At Edinburgh, 15th October.

The King has confirmed to Thomas de Kilpatrik of Closeberne and Mary Maxwell, his spouse, the lands of the barony of Closeberne and of the barony of Birdburgh and the lands of Achinlek and Sundrum, in the sheriffdom of Drumfres, which the same Thomas has resigned, to be held by the said Thomas and Mary, or either of them surviving, and the heirs lawfully begotten between themselves; failing whom, by the lawful and nearer heirs of the said Thomas whomsoever.

Lands of Moffatdale.

1473. 14th year of James III. 3rd September.

The King has confirmed in greater form the charter of confirmation of James de Douglas, Lord of Dalkeith, made to Henry Douglas, son of the said late James, and to the late Mergarete de Douglas, wife of the said Henry, and to either of them surviving, and to the heirs legally begotten between them, of the lands of Moffatdale in the lordship of Anandale in the sheriffdom of Drumfres, namely of the lands of Corehede, Grauntone, Moffet, with the mill and all their pertinencies.

The Lands of Mabie, &c.

1473. 14th year of James III. At Edinburgh, 15th October.

The King has granted to George Heris, son and heir apparent of Rob. H. of Kirkpatrik Irnegray and Mariot de Murray, his wife, the lands called the Krukis, Saintbridisholme, Dowlarg, Dalchane, Cragwill, with half of the lands of Maby and Machroune in the Stewartry of Kirkcudbrycht in the sheriff-

dom of Drumfres, which the said Robert has resigned, to be held by the said Geo. and Mar. and either of them surviving, and by the heirs lawfully begotten between them; failing whom, by the lawful and nearer heirs of the said Robert whomsoever. The free holding being reserved to the said Robert.

THE LORDSHIP OF GALLOWAY.

1473. 14th year of James III. At Edinburgh, 11th October.

The King, after mature deliberation and with the advice and consent of the three Estates of the Realm in Parliament, has granted to the Lady Mergaret, Queen of Scotland, in substitution for a third part of the property of the Realm, and for the revenues of the property of the same kingdom, otherwise to his said wife promised and appointed, on account of the marriage contracted between his ambassadors on the one side and Christian, King of Denmark, Sweden, Norway, of the Goths and Sclavs, father of the said Mergaret, on the other side, the Lordship of Galloway, both on this side the water of Cree and beyond, with the customs and burgh farms of the burghs of Kirkcudbryght and Wigtoun, with the castle of Treif, in the same Lordship of Galloway, and the Lordship of the forest of Ettrick, with the tower and manor of Newerk in the said forest; the Lordship of Strivelingschir and Tulicultre, with the castle of Striveling and with the great customs and burgh farms of Striveling; and the Lordship of Strathern, with the great customs of the burgh of Perth; the Lordship of Menteith, Strogartnay, and Buchquhidder, with the castle of Doune in Menteith; the Lordship of Kincleven, the Lordship of Methvene, with the castle of Methvene; the Lordship of Linlithqwschir, with the palace of Linlithqw, and with the great customs and burgh farms of the burgh of Linlithqw, to be held by the said Mergaret during the whole time of her life, if the King should happen to close the last day before the same dearest wife; and the King has granted the aforesaid lordship, etc., with tenants, tenancies, and services of freeholders, in testimony of which thing the Great Seal has been appended, with the seals of divers prelates, chiefmen, earls, barons, and commissaries of burghs assembled in the aforesaid Parliament, representing the three Estates of the Realm, in sign of their consent and assent.

The Lands of Terrauchtie.

1477. 18th year of James III. At Edinburgh, 29th October.

The King has confirmed the charter of John Durant of Trarachty [by which, for the payment of a certain sum of money, he sold and alienated to George Heris, son and heir apparent of Rob. H. of Kirkpatrik Irnegray and to his heirs, the lands of Trarachty within the Lordship of Galloway and the Stewartry of Kirkcudbrycht, to be held of the King in fee, three cuttings to be paid to the King at the three chief councils in the Stewartry of Kirkcudbrycht, and the other services due and customary. Witnesses: Herbert Ascloane of Garehauch; John Ascloane, his brother; Rob. Blak, David Blak, John Cammok, Gilbert Cammok, John Durant. At the Manor of Trarachty, 18th July, 1477]. The wards, etc., being preserved to the King.

The Barony of Carlaverock.

1478. 18th year of James III. At Edinburgh, 14th February.

The King has granted to John de Maxwell, son and heir apparent of Robert, Lord Maxwell, and to his heirs, the lands of the barony of Maxwell, in the sheriffdom of Roxburgh, the lands of the barony of Carlaverok in the sheriffdom of Drumfres, the lands of Mernys in the sheriffdom of Renfrew, which the said Robert has personally resigned, free tenement of the said lands of the barony of Carlaverok being reserved to the said Robert and a reasonable third of the same to his wife, Joneta, when it occurs.

John Herries of Terregles.

1478. 18th year of James III. At Edinburgh, 24th April.

The King, though at another time he appointed David Heris of Traregles, knight, the curator of his father John Heris of T., who was *incompos mentis*, a fool and natural idiot, and the administrator of the lands and property of the said John, nevertheless, because it has been discovered by the King's advisers that he has neglected the execution of the said office, and has been incompetent to enjoy the said office, he has relieved the said David from the said office, and has appointed John, Lord Carlile, and Herbert Heris, son and heir apparent of the said David, jointly and separately curators of the

said John and administrators of the lands and possessions, always and until the most high God disposes of the health of the said John or of the death of the same, with the power of ruling his person and managing his lands, etc.

THE BARONY OF AMISFIELD.

1480. 21st year of James III. At Edinburgh, 26th January.

The King has confirmed the charter of Robert Charteris of Amysfeld [by which he sold and alienated to Sir John, Lord Carlile, his heirs and assigns, an annual return of 10 pounds from his lands of the barony of Amysfeld in the sheriffdom of Drumfres for a certain sum of money paid before, to be held of the King in fee. At Edinburgh, 16th January, 1480].

3rd April, 1908.

Chairman—Mr JAMES BARBOUR, Vice-President.

THE BRITISH BUTTERFLIES. By Mr BERTRAM M'GOWAN, Dumfries.

A most interesting description of British butterflies was given by Mr M'Gowan, who also exhibited a valuable collection of the 68 species to be found in Britain. Altogether, said Mr M'Gowan, there were probably over twelve thousand different species in the world. In Europe they were much more numerous than in Britain, and on the Continent there were probably over 300 different kinds. The specimens of British butterflies shown by Mr M'Gowan were extremely beautiful and varied, and altogether the lecture was very interesting. One of the specimens shown—the Melitaea didyma—had not been found in this country for forty years, and the only record of its having been captured was given by the late Mr Lennon, who had caught it at Dalscairth. He (Mr M'Gowan), however, thought that Mr Lennon must have made an error in regard to that specimen.

Mr M'Cutcheon moved a vote of thanks to Mr M'Gowan, and Mr Robert Service, in seconding, said that many of Mr M'Gowan's notes brought to him some old and pleasant recollections. He was particularly pleased to note that Mr M'Gowan

mentioned Mr Lennon's very interesting capture. He (Mr Service) still maintained that it was captured at Dalscairth, and he thought there could be no doubt of the bona fides of Mr Lennon. Continuing, Mr Service referred to the fact that Mr Lennon was a very careful collector, and to the fact that he never had any Continental butterflies, so that it must have been a bona fide capture.

The Study of Bird Life. By Mr Chas. H. Marriott, M.A.

Its Difficulties.

The first difficulty presents itself in the shape of time. I am supposing such an ornithologist as I am speaking of to have not only some knowledge of the birds more generally distributed throughout the country, but a desire to investigate further. And I am also supposing that he, like the great majority of people, has to find time as best he can outside of the time he is occupied with the various matters of life. With one whose time is all his own I am not concerned. If such a one cannot become at least a fairly competent authority, it is simply because he has no wish for more than the mere dilettante's knowledge; and that knowledge, of course, in ornithology as in any other science, only survives in its brilliant plumage till it meets with the eagle of solid knowledge, when it is apt to fly out of the way as quickly as possible—if it can.

In the first place, then, time must be practically no object. To say that half-an-hour or an hour in such-and-such a copse or lane in pursuit of the less common birds is all he can spare is in nine cases out of ten equivalent to saying he has no time to spare at all. And in nine cases out of ten it would be better to spend the time in doing something else. He must have practically unlimited time if he wishes to investigate the habits and history of any bird. (And by unlimited time, I mean unlimited only on the special occasions on which he can afford to indulge in some special ornithological pursuit.) If he has seen the bird, or thinks he has, hour after hour may pass away without his being able to get near enough to it to observe it, and in the end he may find that he is practically no further advanced. This means that he must return again and again with practically the same amount of unlimited time, and must continue till he

has noted all he can—flight, song, call-note, where feeding and on what, nest, eggs, and what not—and afterwards he must compare with some good standard work what he has found. If the standard work does not agree with his observations, he must begin again, and see whether he was mistaken, though if he finds the same results he need not conclude that he is necessarily wrong and the book right. Both may be right in generals, but in details no ornithological work can give all information, and his own laboriously-collected information may sooner or later be corroborated, and if not, he can keep it as special information to be certified or otherwise by frequent noticing of the same bird at odd times.

If the ornithologist knows when and where to find the bird he wants, he is far advanced, and these remarks about time do not apply so much to him. But it must be remembered that it took even him many weary days and hours before he arrived at such a state of perfection. He takes a friend with him and shows the bird he wants and thinks nothing of it, forgetting how long it was before he could locate it himself; but his eager and anxious friend is filled with wonder and admiration, and rightly too, for birds are not inanimate things, and are not accustomed to remain always in one place at one period of the day even to suit the pleasure of those who are most intimately acquainted with that time and place. At times they will do so—but it is to suit themselves.

But all this, someone may say, takes an unconscionably long time, and is very laborious. Quite true; but no real knowledge of birds will be gained that is not so gained. If I may give one personal experience, I may say that I went every day for over three months to one locality to find out the exact call and warning notes of the Marsh Tit. Around Dumfries the Marsh Tit is nowhere particularly common, and it took me some time to find the bird and to be sure of its regular habitat. When I had found it, it was not at home every day at the particular time I went, and when at last I did hear its note and wrote it down as best I could, the next day I wanted to be a little more certain, and the next quite certain, and the next to be able to describe it to others, and so more than three months passed away before I was perfectly satisfied. Whenever that note is heard again, and wherever, I can be absolutely certain that it is

a Marsh Tit, and have no need to spend time in waiting to see it. And so with other birds.

When the ornithologist knows something about the more ordinary birds, and is at least able to recognise them when he sees them, this unlimited time I speak of will only be necessary when he is looking for others, such as the Lesser Whitethroat in the Solway district, the Green Woodpecker in Cumberland, the Dartford Warbler on Ranmore, or the Woodlark on Sutton Common, and so on.

Before going on to the next difficulty, the opinion may be hazarded that it will save a vast amount of time if the ornithologist will make up his mind before he starts as to what bird he is going to look for and where, and find out from some good source the *natural* habitat of the bird, and also its habitat at different seasons and at different times of the day, and so save himself the trouble of looking for a Nightingale on the seashore or an Oystercatcher in a plantation; or a Willow Warbler in winter or a Fieldfare in summer; or a Tawny Owl in the middle of the day; or a Swallow in the middle of the night; and having done all this if he will adhere to both the bird and place and time, not allowing himself to be distracted by this bird or that which he fancies he has not seen before, or this spot or that which allures him by presenting fewer difficulties in exploring.

The next difficulty concerns itself with the question as to wether he should go alone or not. Of walking tours R. L. Stevenson says somewhere, "To be properly enjoyed a walking tour should be gone upon alone. If you go in a company, or even in pairs, it is no longer a walking tour in anything but name; it is something else and more in the nature of a picnic. A walking tour should be gone on alone, because freedom is of the essence; because you should be able to stop and go on, and follow this way or that, as the freak takes you; and because you must have your own pace, and neither trot alongside a champion walker or mince in time with a girl."

All this, I think, is equally applicable to the ornithologist. More than one, I think, is a hindrance. Many people object to being alone or going anywhere alone, but in this pursuit a man is never really alone and after a little time the most recalcitrant will find it so.

If "a poet could not but be gay in such a jocund company

as that of the daffodils" how much more gay ought he or any other man indeed to be in the company of the birds.

All the same this going alone is felt by many to be a fatal objection, and where it is so it is better for two or three to go than not to go at all, but they must not expect the same results.

It is quite useless for him to try and explain to critics the object of his daily seeming waste of time and eyesight. They seldom understand, unless he is prepared to draw the long bow and shoot at them the arrow of pecuniary profit. Then they do.

Those who have little idea of the absurd notions entertained by people in the country about field-ornithologists will do well to turn to the "Scottish Reminiscences of Sir Archibald Geikie," and read what he says about field-geologists, and apply it to ornithologists.

The really great objection to two or more is that it is seldom two people have the same temperament. If, therefore, one wants to keep still in one place for some time the other does not or cannot, and so on. And where difficulty in keeping quiet is unavoidable the chances are always greatly in favour of one.

But there is no need to dilate on the many advantages in being alone. "Two heads are better than one" does not apply in this case, as seldom can two heads be brought to bear on the same living and often moving object in the same position, and under similar circumstances. As the ornithologist will often have to wait comparatively idle he can pick up by the way some knowledge of botany, entomology, or whatever else is useful to his science, taking care that what he does pick up is merely for use as the servant of his own particular science and not as its master. To my great sorrow, I know of one case in which botany in this way became the master, and ornithology not even the servant.

Some years ago now, I filled a note-book with bird poetry taken from all the best authors, so that I was able to turn to it in enforced idleness. I believe such a book can now be bought, but it is not the same thing. Each man has his own favourite odes or sonnets or what not, and the book he buys is sure to leave these out.

The third difficulty consists in getting over the land and water he wants to explore. It is pretty certain that the very copse, field, or pool he cannot frequent is the very one the

ornithologist is most anxious to explore, although it must be said that in many cases when he is able to explore either the one or the other, it turns out of little or no value in comparison with others which he has liberty to explore whenever he likes, and which for that very reason he leaves, for the most part, unexplored. But this peculiarity applies to other things besides ornithology.

As a general rule, it will save an immense amount of trouble and anxiety if permission is asked, and it will not be often refused. And here again the advantage of going alone comes in, as it is easier to get permission for one than for two or more. Common sense will guide anyone as to the possible damage he may do to game—the main obstacle to permission—and indeed it would be useless and almost an impertinence for an ornithologist to go over any preserved land if he were not at least fairly well acquainted with all that comes under the head "game," the living thing itself, its haunts and habits, and so on. Otherwise he might not only do much real damage, but what is almost as bad from another point of view he might bring his science into contempt.

It is pretty safe to say that when a man wants to go in pursuit of ornithology, he will find himself able to go, and it is also pretty safe to say that where he goes without permission he will do much less good for himself, as every rustle behind him, every bark of a distant dog, and every other sound which might denote the coming of the owner or of a keeper will so distract his attention that he will be looking round at the very time he ought to be looking forward, or listening for notes very different from those of birds, or thinking of anything rather than the business in hand.

If the ornithologist is accidentally on land where no notices are posted, civility and a certain amount of modesty will go far in turning away the wrath of the owner or keeper, and a little gentleness in pacifying even the dogs.

It may not be out of place in this connection to call to mind the advice of a late naturalist to those who find themselves in a part of the country new to them, and which they wish to explore. It is this:—

1. Get ordnance maps or sheets of the district to be visited.
2. Read all about the district to be visited, its features,

products, geological formation, animal, vegetable, and mineral products, the habits and personal appearance of the people cultivating the soil, state of cultivation, etc., before starting out.

3. Trace out especially, where possible, the various watersheds which go to form the "catchment basins" of the rivers.
4. Watch and observe the living animals, birds, etc., when you begin your investigations, and their ways, and do not destroy them or take eggs unnecessarily.

The fourth difficulty is that of getting assistance in the identification of his finds. This is a great difficulty, though not so great as it once was. I refer to the identification of both dead and living birds.

It may sound absurd to say that many very well-known ornithologists are very little known, but it is so.

Comparatively few know any expert to whom they can send in case of doubt, and if they do, they rightly or wrongly—for the most part rightly—believe he is too great a man to be bothered with their small matters (unless he knows something of their qualifications previously), and thus, though that expert may be well-known, the knowledge of him is purely academic.

In such a case the enquirer must proceed as best he can by stages—by men older than himself in experience though they may have no claim to be experts, by papers, and by books; but before being perfectly satisfied an expert's decision must be obtained, however long he has to wait.

For the ornithologist must remember that in his science there must be no "I think," "I'm almost sure," in the matter of saying what any particular bird is. Facts and facts only are wanted. There can be only "It is." The same applies to what he thinks he has heard. It will satisfy him very well, perhaps, but no one else. "I got a yellowish bird to-day," says one. "It must be a golden oriole;" in fact, after looking at the coloured plates, I'm quite sure it is." But I'll send it to so-and-so who's supposed to be an expert." By-and-by comes the reply, "A Yellow Hammer!" And so *ad libitum*.

All this comes from the wish to discover rarities or strange occurrencies, and, although it is the business of the expert to make a special point, among other things, of doing so, it will be

a long time before the ordinary ornithologist has arrived at the requisite knowledge of the life-history of the birds around him to warrant him in going further afield. Perhaps this is, or appears to be, a greater failing in the earlier stages of the ornithologist's career than later on.

For variety there is ample room for "I think" in such speculations as to why an old rook's bill is bare of feathers at the base (if it always is) and such like. Several opinions he can find already expressed. Or why the middle claw of the Nightjar is serrated and so on. In all such "I think" is all that the greatest expert very often can say absolutely and definitely, though undoubtedly he can give good reasons or apparently good ones for the faith that is in him, whereas the other cannot.

I think it right to add the truism that no man ought to give an opinion about anything unless he can give some valid reason for holding that opinion. "It is so because it is so" is a method of argument which is the prerogative of the fair sex only.

The ornithologist then must not remain satisfied until by some means or other an expert has given his pronouncement. He must never mind risking everything by getting the opinion of an expert finally; risking the unkind remarks of his friends who have given him information which he has not accepted; the cold scorn of the pages of the well-marked book; the idle complaints of the self-styled ornithologist when he hears that expert's opinion and finds it totally contrary to all he has said.

In nearly every case the utmost he can hope for is the identification of that which is lifeless. Should he know an expert, however, to whom he can show his bird alive in its natural haunts, then, when it is identified, the identification is of far greater value (to him), as he has its flight, song, perhaps, call-notes, habits, and various other aids to help him in impressing it on his mind.

A "dead bird" expert is practically useless in this latter case, since he knows the bird when dead only and apart from their lives, ways, and habits, except in so far as he has read about them, and thus he is in much the same position with regard to them when alive as a man who has only read how to ride is with regard to the horse he would mount.

All this applies to the birds difficult of identification only. Many he will be able to identify from good drawings, not neces-

sarily coloured, and so forth. There is no space here to refer to the identification of eggs, nests, and so on.

It is only right to add that ornithologists in the Solway district have an exceptionally kind and considerate authority always ready to give them the benefit of his wide experience and great knowledge, either in the actual haunts of the birds—where possible—or in the house. The one found righteous among so many not so, has done much, unwittingly it may be, to redeem the rest. I speak for myself personally in this matter of redemption, after a considerable experience in many counties. I miss more than I care to say the many pleasant hours I have spent in his company.

The fifth difficulty is connected with the local names of birds. This is undoubtedly a great difficulty to many.

As a general rule it will be best for the ornithologist to take no notice whatever of anything he is told about any bird, name, or anything else, until he has seen it himself. The local names may so mislead him and waste so much time that it is better to go his own way and ask no questions except from capable people. It is not at all that the people do not know the birds he wants when they see them. They do, and a great deal about them too, but they only know them by names useless to any but themselves and those of their particular locality.

This great frequency of local names is a much more serious matter to ornithologists than to botanists, as the former have to look for moving things. Of course all this applies mainly to those whose experience is not great in birds. A man with a certain amount of experience will take no notice of any name but the recognised one, or the scientific one.

As instances of the difficulties in which beginners find themselves—and even those further advanced—I give the following out of numerous others.

In one county a certain bird is termed a Yellow Hammer, in another the Goldfinch. In getting a countryman or ordinary individual to describe either he does so in a way that might apply to each bird, in ignorance, of course, for it is a difficult matter to give a good and even fairly accurate description of anything whatever. Now as the Yellow Hammer is very common and the Goldfinch is not (save in a few localities) the ornithologist may spend a whole day in some places looking for the

latter before he finds that the former is the bird as to which he has been misled.

And so with the Common Linnet, the male of which in some localities is termed a Red Linnet, while in others the term Red Linnet is applied to the Goldfinch.

Again, in many parts if you ask about the Flycatcher you will be told it is common enough. If you ask to be shown one you will have pointed out to you a few specimens, including a Willow Wren, a Whitethroat, anything that looks like a bird catching flies, and, perhaps, a genuine Flycatcher, though the latter will not be at all distinguishable from any of the others by your informant.

The Little Cole Tit with its black crown is often called a Blackcap, and this leads to much trouble by confusion with the Blackcap Warbler, the male of which has also a black crown. Asking for the latter and omitting the word warbler you will be told there are lots of them about. This would be enough as a rule to save you further trouble; the very fact that there were lots of them showing you they were not the birds you wanted.

Confusing the Marsh Tit with the Cole Tit is not likely to happen often, because as the one has a black head and the other almost a black head, the two birds are to most people one and the same bird, and no arguments will convince them otherwise unless you have a specimen of each in your hand to shew them.

Again, the Black-headed Bunting is a rare bird, but the so-called Black-headed Bunting, which is properly the Reed Bunting, is fairly common. The confusion is due to the black head, but in this case the confusion is not quite so bad, as both belong to the same sub-family.

To confuse the Cormorant with the Shag is natural enough, and to settle the matter, as regards inland waters at any rate, it needs only care in remembering that the Shag rarely frequents them, and so what is named to you as a Shag away from the sea is almost certainly a Cormorant.

But these few examples must suffice.

As to actual local names the number is so very great that there is no space here to allude to them even briefly. I may, perhaps, be allowed to give a few instances in a single sentence.

In certain districts in England, on enquiry as to the birds, a

man might possibly be told that the district contained Huckmucks (Long-Tailed Tits), Wynkernels (Waterhens), Yafflers (Green Woodpeckers), Yoldrings (Yellow Hammers), Shrites (Missel Thrushes), Shepsters (Starlings), Horniwinks (Lap Wings), Puckeridges (Nightjars), and Chauciders (Spotted Flycatchers), all common birds with names simple enough, no doubt, if one only took the trouble to find out their derivations and a few other details employed in their manufacture, but names which in themselves would leave the enquirer no wiser than before.

For the second time I venture to give a personal instance. In Surrey, not far from Boxhill, I wanted to find the nest of the Red-backed Shrike. No countryman knew of such a bird. I could not find the bird myself for some time, and when I did find it and happened to shew it to one of them saying it was a Red-backed Shrike—"Not it," said he, "it's a Jack-baker, there are lots about a mile from here." I could see he didn't think much of my knowledge as I could not tell a Red-backed Shrike (whatever that represented to him) from a Jack-baker, and I, for once, kept my thoughts to myself.

I have put down these few names at random out of a pretty complete list of local (English) names of British birds I have got together in one county and another and they are fairly typical examples. What the local names may be in some parts of Scotland I have never yet even dared to imagine.

The last difficulty but one is that of distinguishing the notes of birds. Nothing but constant practice can get over this. It is not the song that is so important. It is the call-notes and the warning-notes. No one who has heard the warning note of the nightingale will be likely to forget it, nor will he forget that of the Blackbird or the Sparrow or the Great Tit and many others, but it would be quite excusable for anyone to forget—unless he saw the bird—the warning note or the call-note of the Golden-crested Wren, or the Tree Creeper, or the Marsh Tit, or a host of others. The various call-notes used by birds to indicate to one another their whereabouts must not be confused with the notes of warning when enemies are supposed to be about. And neither must be confused with the song, so that in this alone there is plenty of room for observation.

And it must be remembered again that in many cases a bird

can be identified by these notes at a considerable distance, and thus much time is saved when all we want to know about it at the particular time is whether it is such and such a locality or not.

I may, perhaps, again be allowed to digress a little and to say that great attention also ought to be paid to the flight of birds—another difficult matter, and one requiring much time—for by a good knowledge of this the lolloping flight of the Green Woodpecker in the distance would serve to distinguish it for certain from any other bird, whilst the quick hurried flight of the Starling, the dipping flight of the Wagtails, the measured flapping of the Rook, the quicker one of the Jackdaw, the zig-zag flight of the Snipe, and so on, would tell you at once what each bird was.

I may mention also the difficulties connected with oology and caliology, but they are too many and too intricate, and too much beyond the scope of my personal knowledge in their higher details for me to do more than mention them.

In concluding this part I cannot help alluding also to another difficulty in ornithology which needs a great amount of attention, labour, and observation, and which is one that has, as it seems to me, been somewhat neglected. It is that of the pairing of birds. It will be sufficient to say here in this limited paper that all birds can be divided into three classes with respect to this. Those which pair for life, those which pair each year, and those which never pair, but are polygamous. It will be easily seen that there is plenty of room for close observation here. I have no intention of attempting to shew how the classes can be separated. There is certainly a broad general rule, but all I have to do to-night is to call attention to a very interesting difficulty with the purpose of giving some idea of another of the many difficulties of the ornithologist in his study of bird life, and to shew what an amount of delightful work the field ornithologist has which the cabinet ornithologist has not and never can have till he comes out into the open.

The final difficulty with which I have space to deal is that the ornithologist finds it very difficult to get anyone in his vicinity to appreciate his labours. Everyone, if he confesses the truth, likes to have his labours appreciated and likes to find that someone takes an interest in his work and its results. The dis-

covery of anything interesting or strange or new loses half its charm for the discoverer if he has no one to whom he can impart it.

The ornithologist in reality has seldom much to show. He cannot talk to the uninitiated about strange things he has met with because he will be quietly put down as a "De Rougemont," however good his reputation may have been previously to his turning ornithologist. He will have to keep his notes and his observations and his successes and failures all to himself until he meets with some kindred spirit. It may be years before that happens, although it is more easy now than some years ago.

But he can practically have that kindred spirit always near him, if he keeps good notes, for as he passes from month to month and year to year and compares this one with that and so on his notes will serve him as a friend, and a friend too who will, without prejudice, criticise him, and who will, without complaint, submit to correction or emendation.

His notes, too, even if he finds by comparing them with the notes of other observers that they contain nothing whatever new, will give him many a summer day in winter and will call up old associations and pleasant places over which he can linger with often as great pleasure as he derived from the actual things themselves.

And, perhaps, I may add in reference to this, that it is very questionable to me at anyrate whether the majority of people ever delight in what they see in nature simply for itself and in itself so much as they delight in it on account of the associations connected with it.

"The sensation of pleasure we experience on seeing natural objects depends much upon association of ideas with their uses, their novelty, or their history," wrote a great naturalist. "What causes the sensations we feel on gazing upon a waving field of golden corn? *Not* the mere beauty of the sight, but the associations we connect with it," and so on. But this is too great a subject to do more than allude to here and so I pass on.

To make up then for this want of sympathy the ornithologist has his science ever before him, always showing something new, in small or great degree. He can pursue it in frost and snow, in heat or rain, always expecting, and more often than not, receiving something. He has no need to strain after rarities. The

very commonest birds are really little understood, and some new habit of the sparrow or the starling or other common bird on the high road to becoming a permanent habit is often just as valuable knowledge as the discovery of some rare bird or of some bird in a place not frequented by it before.

And so the ornithologist can always appreciate his own work without too much self-satisfaction and without undue bias, and in time, if he altogether fails to meet with a spirit like his own, he will make the best of it.

"Old Mortality" in Kirkcudbright. By Mr Joseph Robison, Kirkcudbright.

A short paper was then read by the Secretary from Mr J. Robison, Kirkcudbright, which detailed some incidents in the life of Robert Paterson, supposed to be "Old Mortality." The first incident was Paterson's petitioning the St. Cuthbert's Lodge of Freemasons for reception and admission into their Order, and the second referred to a decree granted against Paterson for 6s in favour of a Kirkcudbright shoemaker, for the hire of a mare for ten days five years previously.

25th April, 1908.

SPECIAL DISTRICT MEETING.

Town Hall, Annan.

Chairman—Mr H. Steuart Gladstone, Yr. of Capenoch.

Kelhead Limestone.

Mr W. M'Pherson, F.G.S., submitted a paper on a section of the carboniferous limestone found at the quarry at Kelhead, and also showed numerous specimens of fossils. Mr M'Pherson stated that the quarry was situated about four miles from Annan, on the upper Dumfries road, opposite to Kinmount House. It had been worked for nearly one hundred years. The old works, nearly half-a-mile in length, were quite covered by fallen debris from the alluvial deposits above. He had been unable to find

any previous record of its geological strata, and he submitted it as follows:—

QUATERNARY ...	... 8.	2 to 15 feet Glacial Deposits.
PERMIAN ...	... 7.	10 feet Purple Limestone.
	6.	8 feet Grey Marl, unfossiliferous.
	5.	10 feet Purple Limestone.
CARBONIFEROUS	... 4.	6 inches Brown Shale.
	3.	2 feet Calcined Limestone.
	2.	11 feet Brown Marl.
	1.	30 feet compact Mountain Limestone.

After describing the conditions under which the various strata were deposited, and referring to Annan as situated at the bottom of the great and widely distributed carboniferous ocean, and gradually rising to the glacial deposits of the present alluvial surface, he drew attention to the great gap in the strata where No. 5, the Permian strata, rests on the lower carboniferous limestone, where the series of coal measures must have been denuded. Notice was also taken of frequent patches of the mountain limestone calcined by volcanic action, No. 3 being completely altered by heat, showing by analysis 16 per cent. more impurities than No. 1. The latter is almost pure carbonate of lime (96 per cent.). He placed Nos. 5, 6, and 7 as Permian marine limestone, a determination that may require further confirmation during the summer, when the deposits will be more accessible by further openings during excavation. The fossils, which are abundant and characteristic of the Scotch lower carboniferous limestone, were then described, particularly those selected for presentation and accepted by the British Museum.

AN ANNAN REFERENCE IN THE DIARY OF GEORGE FOX. By Rev. JOHN CAIRNS, M.A.

The Journal of George Fox, shoemaker, apostle, and founder of the Society of Friends, is one of the great religious classics of the world—the extraordinary book of an extraordinary man. In it he gives an account of his spiritual experiences and of his wanderings, his preachings, his stripes and imprisonments. There is much that is confused in the narrative, and much that is provokingly indefinite; but it is a real man who speaks to us from its pages, with a view and a message of his own, and what he tells us is, therefore, always worth attending to. But it is not

with the Journal as a whole, or even with any considerable part of it, that we have now to deal. We shall confine ourselves to the elucidation of one comparatively small point.

In 1657, a year before the death of Oliver Cromwell, George Fox visited Scotland. He entered the country from Cumberland, accompanied by a number of friends, including Captain William Osborne, who had gone over the Border to meet him, and Robert Widders, "a thundering man against hypocrisy, deceit, and the rottenness of the priests" (i.e., of the Presbyterian ministers).

Then Fox goes on to say:—"The first night we came into Scotland we lodged at an inn. The innkeeper told us an Earl lived about a quarter of a mile off who had a desire to see me; and had left word at his house that if ever I came into Scotland I should send him word. He told us there were three drawbridges to his house, and that it would be nine o'clock before the third bridge was drawn. Finding we had time in the evening, we walked to his house. He received us very lovingly; and said he would have gone with us on our journey, but he was previously engaged to go to a funeral. After we had spent some time with him we parted very friendly and returned to our inn. Next morning we travelled on, and passing through Dumfries, came to Douglas, where we met with some friends; and then passed to the Heads, where we had a blessed meeting in the name of Jesus and left Him in the midst" (Journal, Vol. I., pp. 393-4).

Who was this unnamed Earl, and where was his house? Supposing Fox to have come by the ordinary road from Carlisle to Dumfries, this inquiry is confined within manageable limits. Dr Hodgkin, the well-known Quaker historian and the author of an admirable biography of Fox, suggests that the Earl may have been the Earl of Nithsdale, and his residence Caerlaverock Castle. No doubt the mention of the three drawbridges does seem to indicate some such moated fortress as Caerlaverock was. But it was at that time quite a common thing for the residences of the nobility and gentry to be surrounded with moats. Thus Mr Barbour informs me that in carrying out the restoration of Comlongon Castle some years ago the remains of a fosse, 40 feet wide and 20 feet deep, had to be dealt with. And there are at least two reasons which compel us to reject the suggestion of Dr Hodgkin. In the first place, the Earl of Nithsdale of this period —Robert, second Earl, known as "the philosopher," from his

dabblings in astrology—was, like all the other members of his house, a Roman Catholic, and therefore not likely to interest himself in the way here described in a Quaker sectary. Further, and more especially, Caerlaverock had been so seriously injured in the siege of 1640 that it had then ceased to be the residence of the Earls of Nithsdale, and was now, twenty-seven years later, in a dismantled and ruinous condition. There were, however, at this time two other Scottish Earls whose mansions were in the neighbourhood of the Carlisle and Dumfries road. The first of these was James Murray, second Earl of Annandale, whose seat was at Comlongon Castle, already referred to. This nobleman, the head of the family of Murray of Cockpool, succeeded his father in 1641, and died without issue in 1658, when his Annandale title became extinct and his second title of Viscount Stormont passed to his kinsman, David, second Lord Balvaird, the ancestor of the Earl of Mansfield, the present owner of his estates in Dumfriesshire. The Earl of Annandale was thus alive when George Fox visited Scotland, but for twelve years—ever since the overthrow of Montrose, of whom he had been an adherent—he had lived privately in England, where he died a year later.

We are thus by a process of exclusion brought to the only remaining Scottish Earl connected with this district at the time with which we are dealing. This was James, second Earl of Hartfell, the chief of the house of Johnstone, whose principal residence was at Newbie, near Annan. His father, the first Earl, had been a Covenanter; but, like his neighbour, the Earl of Annandale, had gone over to the Royalist side under Montrose, after whose defeat he had endured several terms of imprisonment, and had even lain for a time under sentence of death. The second Earl, then Lord Johnstone, had for a time been imprisoned along with his father, but had during the Protectorate acquiesced in the existing state of things, and was now in this very year, 1657, using his best endeavour to secure a favour from the Government. This was to have an alteration made in the destination of his titles. These had in the grant to his father been limited to heirs-male; but the Earl, having now been married for twelve years and having as yet no sons, and his only brother having recently died, there appeared to be a probability of the honours expiring with him. Accordingly, he had resigned all his titles in the hope of getting a grant of new ones, which

might pass on his decease to his daughters. This new grant was not made until after the Restoration, when Charles II., in acknowledgment of the Earl's loyalty to the royal house, not only gave him back all his old titles without the old limitations, but added to them, under similar conditions, the titles of Earl of Annandale and Viscount Annan, which had become extinct on the death of the last Earl of the Murray line, who had died in 1658. These titles were inherited on his death in 1673 by the eldest of four sons, who were ultimately born to him, and this nobleman at a later date became the first Marquis of Annandale. Let us now see how far the description given by Fox fits the character and circumstances of the Earl of Hartfell. No doubt Newbie is a good deal further than a quarter of a mile from Annan; but it will be remembered that Fox does not say that the inn in which he lodged was in a town. There were, indeed, in former times a great many inns on the main roads. On this very road between Annan and Dumfries I am informed that there were, so lately as fifty or sixty years ago, no fewer than twenty inns. That at which Fox put up was no doubt of a very humble kind. Further, he does not even say that the Earl's house was a quarter of a mile from the road, but about a quarter of a mile from the inn; so that there is nothing in his description, so far as this note of distance is concerned, to exclude Newbie. Whether there are still indications on the site of the old Newbie mansion-house of the existence of a moat or moats, or whether any picture of the old house (which was burned down in 1682) is in existence to confirm or disagree with Fox's description of the three drawbridges, I have not been able to ascertain. But, as I have already said, the existence of such moats round the better-class houses in Scotland at that period was quite common, and there is nothing unlikely in the supposition that Newbie may have been thus defended. As to Lord Hartfell himself, he was no doubt a royalist, and after the Restoration he took a pretty decided stand on the side of the persecutors of the Covenanters. But this need not lead us to suppose that he would be unfavourably disposed at this particular time to Fox and the Quakers. The Quakers experienced very little toleration at the hands of the still dominant Presbyterians, between whom and Lord Hartfell there was probably very little love lost, and he may have been interested in Fox on other grounds. Amongst the places in

Scotland where Quakerism at that time had made considerable progress, Principal Robert Bailie, of Glasgow, in one of his letters specially mentions Douglas, and it will be remembered that Fox was on his way to Douglas when he had this very interview. Now, Lord Hartfell's wife was a daughter of the first Marquis of Douglas, and it may quite well have happened that on one of his visits to Douglas Castle he had heard of this strange new sect that had so many quaint usages, that took literally Christ's precept to "resist not evil," and that set forth such a high and beautiful standard of Christian living, and that, owing to his interest having thus been aroused, he was eager to see and talk with its founder.

Those considerations are, I admit, by no means conclusive, and they are only offered by way of suggestion. But until a better solution offers itself, I think we are entitled to say that there is a considerable degree of probability in the identification of the Earl with whom George Fox had this interview with James, second Earl of Hartfell, and of the house where it took place with the old Tower of Newbie.

Natural History Notes.

Mr J. W. Payne submitted some notes on the natural history of the Annan district. One of the most important discoveries of recent years, he said, was the finding in the sand of the Solway of a handsome specimen of the antlers of the large red deer which existed in the country about a thousand years ago, and was now, of course, extinct. The specimen belonged to Mr Rutherford, Scott's Street, Annan. He also shewed another specimen, hardly so fine as the first, belonging to Mr Watson, Greencroft, Annan. The antlers, he said, showed what a handsome animal the red deer had been. He also gave a few notes on the birds of the locality. Last year he saw an interesting early nesting of the short-eared owl. This season a friend and he had found an early nest of the grey wagtail. He then showed various specimens of butterflies and moths, taken by Mr Douglas Watson, Greencroft. Included in the collection was a specimen of the convolvulus hawk moth, which had been caught in the neighbourhood of Annan during the year. He had received anonymously from Australia a box containing one of the famous stick

insects of Australia; and from America he received a specimen of the butterfly known as the monarch. Two rather interesting birds had been shot during the winter—the bernicle and the bean goose.

Annan in the Last Four Decades of the 18th Century.

By Mr Frank Miller, Annan.

In August, 1764, Annan was visited by Thomas Gray, whose "Elegy in a Country Churchyard" was already universally popular. He does not appear to have been favourably impressed, for he declares that the inn where he dined was bad, and describes the dwellings of the people as "huts of mud with no chimneys." Probably if the poet had found more solid comfort at the hostelry he would have presented a more flattering picture of Annan. But it cannot be denied that in the seventh decade of the eighteenth century the town was unattractive in appearance. Every vestige of the old castle had disappeared, with the exception of the inscribed stone that attracted Pennant's notice in 1769. The Town Hall was destitute of architectural merit, though it possessed a steeple of which the untravelled burgesses were proud. The church was a barn-like erection at the west end of the town, where the dismal graveyard that was connected with it may still be seen. In the kirkyard, under the shadow of sepulchral yews, the schoolhouse had stood prior to 1739; but happily the children of the parish were now taught and whipped in a building that, if scarcely less humble than the one it superseded, was undoubtedly situated in a healthier locality. The principal inn was the homely King's Arms—afterwards known as the Buck Inn—where Bonnie Prince Charlie on a bleak December day in 1745 had found shelter. In the front wall of the inn was a sun dial, a public timekeeper which is preserved and exhibited in the new Buck Hotel. At the time of Gray's visit to Annan the High Street extended from Kilncloss to Bridge-end, a distance of about a quarter of a mile; and it was lined on each side with small houses, too many of which were of the type referred to by the poet. As yet "the high town street" was unpaved, but it had been cleared of "peat stacks" by the vigorous action of the Town Council. Butts Street, or "The Butts," as I have often heard it called, was

then the favourite residential part of the town. As evidence of its former dignity I might point to a beautiful eighteenth century iron gate within a stone-throw of the house where Edward Irving was born. Two or three families dwelt in Wilkin's Wynd, which ran parallel with Butts Street; and in Pott's Wynd or Greencroft Wynd the town had an extension southward. Bank Street was not yet in existence; and, standing on the spot now occupied by the Post Office, Gray may have watched a soaring lark, and repeated his own divine words:—

> "But chief the sky-lark warbles high
> His trembling, thrilling ecstasy,
> And, lessening from the dazzled sight,
> Melts into air and liquid light."

In the last forty years of the century the trade of Annan made substantial progress. About 1770 an extensive business in wine was carried on, as some old merchants' books which I have seen attest; and bushels of corn were exported annually. At the close of the century the town had a good and increasing shipping trade. West India produce and timber were imported; while the exports consisted chiefly of grain, malt, and bacon. In 1774 the Magistrates and Council, hoping to attract a new and important industry to Annan, made several attempts to obtain coal in the neighbourhood of the town. Their efforts were unsuccessful; but the failure which attended them was attributed by many to the fact that the Council did not bore to any great depth. A copy of the minute which authorised operations may be acceptable:—

"23rd April, 1774.—The which day the Magistrates and Council in council convened, having taken into their consideration a representation given in to them upon the 29th day of December last by George Bell, in Fleamby (in the county of Cumberland), setting forth that he had at the desire of Mr Currie Carlyle, of Bridekirk, the Magistrates and Council of Annan, and some other gentlemen, examined different places in the neighbourhood for coal, and particularly many places within the Burrow roods of Annan, where, in his opinion, there is the greatest probability of success, the Magistrates and Council, sensible of the great utility of coals for the country in general and this burgh in particular, are of opinion that a proper trial should be made within the Burrow roods, and for that purpose

hereby empower and authorise the Provost and Bailies to contract with the above designed George Bell on such terms as to them may seem meet for making such trials. And also empower and authorise the said Magistrates to draw upon the Treasurer from time to time for such sums of money as may be necessary for making the said trials, providing always the said sums drawn for do not exceed the sum of £80 sterling."

While the majority of the burgesses were engaged solely in legitimate trade, a not inconsiderable minority devoted their energies to smuggling. A large contraband trade was carried on with the Isle of Man, and Powfoot—well-known at the present time as a summer resort—was one of the places where goods were landed. Some of the Annan smugglers, or "free traders," as they preferred to be called, were respectable-looking men, who could quote Scripture like the revered elders of the Kirk, and "never broke the Sabbath but for gain." Depend upon it, old Tom Trumbull, the hypocritical Annan smuggler in "Redgauntlet," is no mere fancy sketch! During the last few years of his life Burns had frequently occasion to visit the town in the discharge of his duties as an officer of the Inland Revenue. No doubt the Trumbulls of the place found him sharp enough; but according to local tradition he always displayed leniency in his dealings with the less hardened offenders. The poet's tenderness of heart is well illustrated in "The Smuggler's Ruse," an interesting tale of the Solway by Mr Walter Hawkins, which appeared in the "Annandale Observer" a year or two ago.

When the town became fairly prosperous the burgesses boldly resolved to build a new church, the accommodation afforded by the old place of worship near the bridge having long been out-grown. A minute of Council relative to the building of our present parish church may have for you a certain interest:—

1st June, 1789.

"In a meeting of the Magistrates and Council held this day within the Council House, the Provost represented that, in consequence of the Act of Council of the second of October last, he and the other Magistrates had attended different meetings of the Presbytery and Heritors in order to fix upon a situation for building a new church, upon receiving plans and estimates from tradesmen, and finally settling with the Heritors what proportion of the new church should be sett off to the Burgh—when, after

examining the different situations proposed for building the church upon, with the plans and estimates given in, the Presbytery and Heritors fixed upon Kilncloss as the most proper situation; adopted the plans and estimates given in by James Beattie and John Oliver, joiners, and John Hannah, mason, all in Annan; and agreed that the town and community of Annan should have right to one-half of the said new church."

Though the church bears the date 1789, the well-proportioned steeple, which is the principal feature of the building, was added some years later. The finely-toned bell of the kirk is said to have been appropriated, not bought. Mr J. H. Wilkinson, Annan, writes:—"I have been informed by old residents that the bell was made for some steeple in England, but being sent by mistake to Annan was there annexed, its value being recognised by the burgesses. It appears to have been brought from London to Leith by sea, and then carted to this town."

The minister of Annan in 1789 was the Rev. William Hardie Moncrieff, whose father had held the living from 1754 to 1783. When the younger Moncrieff, after a long ministry, passed away, Susannah Hawkins, "the Annandale poetess," as she styled herself, paid a tribute to his memory:—

> "By all he knew he was beloved—
> He unto all was kind;
> For virtues good, and charity
> How few like him we find."

Towards the close of the eighteenth century Congregationalism made great progress in Scotland, owing to the missionary enterprise of the Haldanes. The distinctive principle of Congregational polity commended itself to many in Annan, and the Independents erected a chapel at Closehead. Hope of permanent success was soon abandoned by the devout men who honoured Haldane's name; and early in the nineteenth century their chapel was sold to the Secession Church. Few ecclesiastical buildings in the district have so strange a history as the old "meeting-house" at the head of the town. Built by the Independents, it was afterwards bought by Scottish Seceders, and eventually it became the property of the Roman Catholic Church. Excepting the Parish Church and St. Columba's, all the existing places of worship were built later than 1801.

In 1790, a year after the erection of the new Parish Church, there died in Edinburgh a distinguished man who had wielded the schoolmaster's rod in this town. At a meeting of Annan Town Council held as far back as 11th June, 1739, the Provost reported that he had "contracted and agreed with Robert Hendrie, schoolmaster, to teach the school of Annan for the year commencing upon the 9th day of April last, and in name of the said burgh had engaged to pay to the said Robert Hendrie the sum of ten pounds sterling in name of salary the said year, and that the inhabitants of the burgh and territories thereof who sent their children to the said school should pay to the said master the school wages following, viz.:— "For teaching English, one shilling sterling per quarter; for teaching English, writing, and arithmetic, one shilling and sixpence sterling per quarter; and for teaching Latin and writing, two shillings sterling per quarter." I have been able to identify the "Robert Hendrie" of the minute quoted with the Rev. Dr Henry, moderator of the General Assembly in 1774, and author of a "History of Great Britain" that excited the curiosity of Samuel Johnson and won generous praise from David Hume. It is strange to reflect that a historian whose monumental work cleared for him £3300 should at the outset of his career have been glad to accept £10 a year and some paltry fees for teaching a few dull children in a border town!

Dr Henry's death was followed by that of another well-known Edinburgh author connected with Annan—Dr Blacklock. As the productions of a poet who, to use his own words, "never saw light," the descriptive passages of Blacklock excited much attention in his own day. Dr Johnson declares that they are "but combinations of what he remembered of the works of other writers who could see." No doubt Dr Blacklock's familiarity with the English poets accounts for his command of poetical language; but as Henry Mackenzie, his biographer, points out, this does not completely solve the difficulty, for "it throws no light on his early passion for reading poetry, and poetry of a kind, too, which lies very much within the province of sight." Not having much intrinsic value, Blacklock's poetry is seldom read now; but as the friend of Burns he has a secure title to remembrance.

Probably the ablest man resident in Annan at the date of Blacklock's death was Dr Clapperton, father of Hugh Clapperton, the African explorer. He was an enthusiastic collector of "antient ballads;" but, as Kirkpatrick Sharpe says, he "sometimes cheated in his responses." By the kindness of a relative of his, I was enabled, many years ago, to exhibit to the society the doctor's ticket of admission as a burgess of the royal burgh.

Among Dr Clapperton's neighbours in Butts Street was Gavin Irving, tanner, father of the illustrious man whose statue is the chief ornament of our town. He held the office of bailie—a distinction the greatness of which may be inferred from the fact that an Annan bailie once found it necessary to remind his townsmen that after all he was "a mere man." Under the boughs of some stately elm trees that stood in the space called Gracie's Banking the future traveller and the future orator often played together.

At the close of the eighteenth century Annan was a prosperous little town, with many dignified associations. In twenty years the population had increased from about six hundred to sixteen or seventeen hundred. The census roll of 1801 does not state the population of the burgh separately, but it shews that at the opening of last century the parish contained 2570 inhabitants, who occupied 465 houses. Annan Public Library is fortunate enough to possess an old MS. copy of the roll, evidently written by the compiler, Richard Forrest, schoolmaster. Sir John Sinclair, in his "Old Statistical Account of Scotland," published in 1797, gives some curious information about the Annan of the last decade of the century:—

"Annan contains within the town and upon the burgh roods 1620 souls out of the whole population of the parish. It possesses very extensive burgh roods, which are in great part very imperfectly cultivated. There is a vast common, open to all the inhabitants for pasture, peats, and 'divots.' The revenue of the town is about £300 sterling a year, arising from tolls, fisheries, and feu duties. . . . . The town has in it four writers, one surgeon, a schoolmaster. The fisheries are let at the annual rental of £210. Such farm houses as have been lately built are good and commodious, and of one or two storeys. Servants and master eat commonly at the same table. The farmers'

ANNAN IN 1824.

Sunday clothes are of English cloth. Epidemical fevers are unknown. Consumption and ague are rare. There is on the river a cotton work, about which 100 to 130 men, women, and children are commonly employed."

The common referred to by Sinclair consisted of 1800 acres of moorland, lying north of the Carlisle road. In 1801 it was divided among the burgesses and those landward heritors who enjoyed the right of servitude over it, the whole being burdened with the annual feu rent of £200. The poorer inhabitants of the town strongly disapproved of the action of the Council in disposing of land which could not fail to rise greatly in value; and expression was given to their indignation by a poetaster named James Fisher, who wrote:—

"It made us welcome, ane an' a',
Our horse an' kye on it to ca'—
But now it seems they've made a law
An' will the same fulfil,
To tak' this commonty awa'
In spite o' a' our will.

An' it divide amang the lairds
By akers, ruids, an' fa's, an' yardes,
In just proportion as regards
Their houses, rents, an' lan's;
Sae weel they ken to play their cards
To ane anither's han's."

We must not forget that Annan Academy, famous as the Hinterschlag Gymnasium of "Sartor Resartus," came into existence through an endowment set apart when the great moor was divided. If the burgh had retained its broad acres, Annan would have had no Academy at the beginning of the nineteenth century, and some other town would have had the glory of educating Thomas Carlyle.

In illustration of the foregoing paper, Mr Miller exhibited an old painting of Annan, which had been lent by Mr Macdougall, banker, Annan. It bears the date 1824; but, as Mr Miller remarked, the town in its exterior semblance did not alter greatly during the first quarter of the nineteenth century. The photograph here inserted is given by permission of the owner of the painting.

The Old Burgess Roll of Annan. By Mr James Barbour, F.S.A.Scot.

Mr Barbour made a number of interesting remarks based on the Old Burgess Roll of Annan from 1682 to 1705, in which mnay details regarding the burgesses admitted were given.

Contribution to the Study of Dumfriesshire Fungi. By Miss A. Lorrain Smith, F.L.S.

Dumfriesshire has been well provided with a flora of seed-plants, owing to the ungrudging labours of our President and of those associated with him, but the spore-plants, and more especially the fungi, have been somewhat neglected. I therefore venture to send this small contribution to mycology, hoping to supply some blanks in our knowledge of the county flora. For a number of years I have been making observations, but as my stay in the county has been limited and often too early for the autumn growths, my list has grown very slowly, and there are great gaps that might easily be filled by anyone on the spot. There should be a rich fungus-flora in a county of such varied conditions of lowland and moorland as we find in Dumfriesshire. The rather abundant rainfall that it shares with other western districts accounts for the rivers that have formed the great dales, and these are supplemented by the many waters and burns that have cut into the land and formed miniature dales and glens often beautifully wooded. It is in such places that we find the broken branches, the stumps, and the humus, with the moist atmosphere, that are so peculiarly advantageous to fungoid growths. There are no forests of large extent or of great antiquity, but there are many bits of old woodland, and they provide happy hunting ground for the mycologist.

Fungi are somewhat fickle in their occurrence; and much depends on the season. A warm summer followed by heavy rains seems to be the most favourable weather for this crop; but even with good seasons the species do not recur as one would expect them to do. I found one autumn a beautiful growth of Psathyrella disseminata covering a large stump, but though I looked again year after year I did not see a single specimen. Tricholoma terreum grew abundantly in a field near a wood, one season only. As far as I could judge it seemed to have died out; and

so with other forms. There are, however, certain species such as Inocybe rimosa, Collybia radicata, Coprinus atramentarius, etc., that have come up several years in succession in the same locality. The subject is one of much interest, and I can assure any botanist that mycology will prove a study of never-failing enjoyment.

Basidiomycetes.

1. Scleroderma vulgare Hornem. On the ground, common.
2. Sphaerobolus stellatus Tode. On very damp sticks, Half-Morton.
3. Crucibulum vulgare Tul. On posts, Annan, river banks.
4. Ithyphallus impudicus Fisch. In woods, near Annan.
5. Dacryomyces stillatus Nees. On paling, common.
6. Tremella viscosa Berk. On moist wood, Half-Morton.
7. Calocera viscosa Fr. On moist timber, in woods.
8. Clavaria cinerea Bull. On the ground, Annan, river banks.
9. Clavaria fusiformis Sow. On the ground, Annan, river banks.
10. Clavaria vermicularis Scop. On the ground, Half-Morton.
11. Clavaria cristata Pers. On the ground, Hoddom.
12. Pistillaria quisquiliaris Fr. On herbaceous stalks, in damp woods.
13. Thelephora laciniata Pers.
14. Soppittiella sebacea Mass. On the ground, Hoddom.
15. Soppittiella caesia Mass. On sticks, Hoddom.
16. Peniophora quercina Cooke. On sticks, Hoddom.
17. Hymenochaete rubiginosa Lév. On dead branches, Half-Morton.
18. Stereum hirsutum Fr. On dead branches, common.
19. Stereum sanguinolentum Fr. On dead branches, near Annan.
20. Solenia anomala Fr. On branches (dead), near Annan.
21. Hydnum repandum L. On the ground, Canonbie.
22. Grandinia granulosa Fr. On dead wood, Hoddom Bridge.
23. Merulius lacrymans Fr. In houses.
24. Daedalea quercina Pers.
25. Trametes gibbosa Fr.
26. Poria vaporaria Fr. On dead wood, common.
27. Polystictus veriscolor Fr. On dead wood, common.
28. Polystictus abietinus Cooke. On pine wood.
29. Polystictus velutinus Cooke. On dead wood.
30. Fomes annosus Cooke. On roots of stumps, Annan.
31. Fomes ferruginosus Mass. On fallen branches.
32. Polyporus squamosus Fr. On stumps, Annan.
33. Polyporus sulphureus Fr. On decaying trees.
34. Polyporus adustus Fr.
35. Boletus luteus L. Ground, Annan, river banks (in woods).
36. Boletus flavus With. Ground, Annan, river banks (in woods).

37. Boletus chrysenteron Fr. Ground, Annan, river banks (in open fields).
38. Boletus piperatus Bull. Ground, Annan, river banks (in open fields).
39. Boletus badius Fr. Ground, Annan, river banks (in woods).
40. Boletus luridus Schæff. Ground, Annan, river banks (in woods).
41. Boletus scaber Fr. Ground, Annan, river banks (in woods).
42. Boletus edulis Bull. Road sides, Annan.
43. Coprinus comatus Fr.
44. Coprinus atramentarius Fr. Base of tree, near Annan.
45. Coprinus micaceus Fr. Near stumps, Annan.
46. Coprinus plicatilis Fr. On dung in fields.
47. Anellaria separata Karst. On dung, road sides.
48. Panaeolus campanulatus L. On manured land, Annan.
49. Panaeolus phalaenarum Fr. On manured land, Annan.
50. Psathyrella disseminata Pers. On a stump in great abundance (only once), Annan.
51. Psilocybe semilanceata Fr. In fields, common.
52. Psilocybe cernua Vahl. In fields, common.
53. Psilocybe spadicea Fr. In woods.
54. Psilocybe foenisecii Pers. Among grass, near Annan.
55. Psilocybe coprophila Bull. On dung in pasture.
56. Hypholoma fasciculare Huds. On stumps, common.
57. Hypholoma sublateritium Schæff. On stumps in woods.
58. Stropharia aeruginosa Curt. Among grass, common.
59. Stropharia squamosa Fr. In woods, near Annan.
60. Stropharia stercoraria Fr. On roadsides (on dung).
61. Stropharia semiglobata Batch. On dung in pastures.
62. Stropharia inuncta Fr. In wood among grass.
63. Agaricus campestris L. Among gross.
64. Agaricus arvensis Schæff. Among grass.
65. Paxillus involutus Fr. Annan, river banks (woods).
66. Cortinarius elatior Fr. Annan, river banks (woods).
67. Cortinarius cinnamomeus Fr.
68. Tubaria furfuracea Pers. Among grass, common.
69. Flammula alnicola Fr. In clusters on a thorn near Annan.
70. Flammula flavida Pers. On a beech trunk, near Annan.
71. Galera tenera Schæff. Among grass, common.
72. Galera spartea Fr. Among grass.
73. Galera hypnorum Batsch. Among moss, etc., common.
74. Galera rubiginosa Pers. Among moss, common.
75. Hebeloma mesophaeum Fr.
76. Inocybe rimosa Bull. Among grass, side of walk, Annan.
77. Inocybe geophylla Sow. Among grass, near Annan.
78. Inocybe margarispora Berk. Among grass, near Annan.
79. Pholiota spectablis Fr. On stumps, near Annan and near Cummertrees.

80. Pholiota squarrosa Mull. On stumps.
81. Clitopilus prunulus Scop.
82. Nolanea pascua Pers. In fields.
83. Nolanea mammosa L. In fields.
84. Pluteus cervinus Schæff.
85. Lenzites betulina Fr.
86. Lentinus cochleatus Fr. On stumps, Hoddom.
87. Cantharellus cibarius Fr. Annan river bank.
88. Cantharellus aurantiacus Fr. Wood, Fairy Row.
89. Nyctalis asterophora Fr. Hoddom.
90. Hygrophorus coccineus Fr. Meadows, Annan river.
91. Hygrophorus puniceus Fr. Meadows, Annan river.
92 Hygrophorus conicus Fr. Meadows, Annan river.
93. Hygrophorus psittacinus Fr. Meadows, Annan river.
94. Hygrophorus virgineus Fr. Meadows, Annan river.
95. Omphalia pyxidata Bull.
96. Omphalia fibula Bull.
97. Clitocybe claoipes Pers.
98. Clitocybe odora Bull.
99. Clitocybe infundibuliformis Schæff.
100. Clitocybe (Laccaria) laccata Scop.
101. Lactarius scrobiculatus Fr.
102. Lactarius controversus Fr. Woods, Annan river bank.
103. Lactarius blennius Fr. Woods, Annan river bank.
104. Lactarius piperatus Fr. Woods, Annan river bank.
105. Lactarius deliciosus Fr.
106. Lactarius pallidus Fr.
107. Lactarius quietus Fr.
108. Lactarius aurantiacus Fr.
109. Lactarius rufus Fr.
110. Lactarius serifluus Fr.
111. Lactarius subdulcis Fr.
112. Lactarius mitissimus Fr.
113. Russula alutacea Fr.
114. Russula coerulea Fr. Open turfy ground.
115. Russula nigricans Fr. Hoddom.
116. Russula adusta Fr. Hoddom.
117. Russula furcata Fr.
118. Russula fellea Fr. Wood near Annan.
119. Russula drimeia Cooke.
120. Russula ochracea Fr. Wood near Annan.
121. Russula ochroleuca Fr. Wood near Annan.
122. Russula foetens Fr. Woods, Hoddom.
123. Russula emetica Fr. Woods, Hoddom.
124. Russula fragilis Fr. Woods, Hoddom.
125. Russula integra Fr.
126. Russula sanguinea Fr.
127. Russula cyanoxantha Fr.

128. Mycena epipterygia Scop.
129. Mycena galopoda Pers.
130. Mycena alcalina Fr.
131. Mycena rugosa Fr.
132. Mycena pura Pers.
133. Collybia radicata Relh. Near Annan.
134. Collybia platyphylla Fr. Wood, Half-Morton.
135. Collybia maculata A. and S. In woods, near Annan.
136. Collybia distorta Fr. Half-Morton.
137. Collybia butyracea Bull. Hoddom.
138. Collybia confluens Pers. Wood, near Annan.
139. Collybia conigena Pers. Wood, near Annan.
140. Collybia dryophila Bull. Wood, near Annan.
141. Marasmius peronatus Fr. Hoddom, etc.
142. Marasmius oreades Fr. Among grass.
143. Marasmius ramealis Fr. On sticks, near Annan.
144. Marasmius rotula Fr. On sticks, near Annan.
145. Marasmius androsaceus Fr. On decaying grass, in woods.
146. Tricholoma rutilans Schæff. Open turfy ground.
147. Tricholoma terreum Schæff. Field near wood.
148. Tricholoma nudum Bull. Roadsides, near Annan.
149. Armillaria mellea Vahl. On stumps.
150. Lepiota procera Scop.
151. Lepiota rachodes Vitt.
152. Lepiota cristata A. and S.
153. Lepiota granulosa Batsch.
154. Amanita phalloides Fr. Roadsides, near Annan.
155. Amanita mappa Fr. Woods, Annan river bank.
156. Amanita muscaria L. Woods, Annan.
157. Amanita rubescens Fr. Woods, Annan.
158. Amanita vaginata Cooke. Woods, Annan.

Hyphomycetes.

159. Fusidium griseum Link. On oak leaves, common.
160. Monilia Koningii Oud. On herbaceous stalks, rare.
161. Oedocephalum roseum Cooke. Common on vegetation.
162. Aspergillus glaucus Link. Common.
163. Trichoderma lignorun Harz. On sticks, etc., common.
164. Penicillium glaucum Link. Common.
165. Botrytis cinerea Pers.
166. Botrytis cinerea var. sclerotiophila Sacc. On sclerotia formed on herb stems.
167. Sepedonium chrysospermum Fr. Common on Boletus.
168. Acrostalagmus cinnabarinus Corda. On dead vegetation, common.
169. Tricothecium roseum Link. On dead vegetation, common.
170. Acremoniella pallida Cooke and Mass. On herbaceous stalks.
171. Torula herbarum Link. On herbaceous stalks.

172. Bispora monilioides Corda. On beech stumps.
173. Haplographium finitimum Sacc. On fir leaves, Half-Morton.
174. Cladosporium herbarum Link.
175. Fumago vagans Pers.
176. Helminthosporium fusiforme Corda.
177. Triposporium elegans Corda.
178. Stemphylium alternariae Sacc. On damp wall paper.
179. Tubercularia vulgaris Tode.
180. Cylindrocolla Urticae Bon. On nettle stems.

DISCOMYCETES.

181. Dichaena quercina Fr. Common on oak branches.
182. Dichaena faginea Fr. On young beech, Annan river banks.
183. Rhytisma acerinum Fr. Common on sycamore leaves.
184. Bulgaria polymorpha Wettst. On logs, Hoddom.
185. Ascobolus furfuraceus Pers. On dung, fields near Annan.
186. Ascophanus equinus Mass. On dung, fields.
187. Ascophanus cinereus Boud. On dung, fields.
188. Saccobolus neglectus Boud. On dung, fields.
189. Mollisia cinerea Karst. Common.
190. Helotium virgultorum Karst. Common.
191. Helotium cyathoideum Karst.
192. Helotium citrinum. Fr.
193. Dasyscypha virginea Fuck.
194. Dasyscypha barbata Mass.
195. Lachnea scutellata.
196. Humaria melaloma Mass.
197. Humaria granulata Bull.
198. Otidea onotica Fuck.
199. Acetabula vulgaris Fuck.
200. Helvella crispa Fr. In wood on Dumfries road.
201. Spathularia clavata Sacc. Hoddom.
202. Mitrula viridis Karst. Hoddom.
203. Morchella esculenta Pers. Hoddom.

PYRENOMYCETES.

204. Epichloe typhina Tul. On grass by the sea, Annan.
205. Cordyceps capitata Link. On the ground in wood on Dumfries road.
206. Claviceps purpurea Tul. Abundant in various grasses.
207. Nectria coccinea Fr.
208. Nectria cinnabarina Fr.
209. Gibberella cyanogena Sacc. On cabbage stalks.
210. Erysiphe graminis DC.
211. Erysiphe martii Lév. On cultivated peas.
212. Erysiphe Umbelliferarum de Bary. On hemlock.
213. Microsphaera Berberidis Lév. On Barberry.

214. Myxotrichum chartarum Kunze.
215. Ticothecium pygmaeum Koerb. On fruits of Lecanora sp.
216. Rosellinia aquila De Not. On decaying wood.
217. Pleospora herbarum Rabenh. On herbaceous stalks.
218. Melanomma pulvis pyrius Fuck. Hoddom.
219. Leptosphaeria vagabunda Sacc. On gooseberry shoots.
220. Leptosphaeria doliolum Ces. and de Not. On herbaceous stalks.
221. Leptosphaeria acuta Karst. On nettle stalks.
222. Trichosphaeria minima Wint.
223. Diatrypella quercina Nitschke.
224. Rhopographus Pteridis Wint. On bracken.
225. Hypoxylon concentricum Grev. Hoddom.
226. Hypoxylon coccineum Fuck. Hoddom.
227. Hypoxylon fuscum Fr. Hoddom.
228. Xylaria polymorpha Wint. Hoddom.
229. Xylaria Hypoxylon Grev. Common on stumps.

Sphaeropsideae.

230. Steganosporium pyriforme Sacc. On sycamore.
231. Coniothyrium vagabundum Sacc. On gooseberry.

Phycomycetes.

232. Peronospora leptosperma de Bary. On Compositae.
233. Mortierella nigrescens Van Tiegh. On decaying grass.
234. Pilobolus crystallinus Tode. On dung.
235. Sporodinia aspergillus Schröt. On Russula.
236. Cystopus candidus Lév. On Shepherd's purse.

Uredineae.

237. Uromyces Ficariae Lév.
238. Uromyces Poae Rabenh.
239. Puccinia Magnusiana Körn. On Ranunculus.
240. Puccinia Adoxae DC.
241. Puccinia suaveolens Wint. On thistle, Hardgrave.
242. Puccinia galii Schwein.
243. Puccinia Poarum Nielsen.
244. Puccinia Menthae Pers.
245. Puccinia Malvacearum Mont.
246. Puccinia Violae Wint.
247. Puccinia Pimpinellae Strauss.
248. Puccinia Pringsheimiana Kleb. On gooseberry.
249. Phragmidium fragariastri Plowr.
250. Phragmidium subcorticium Wint. On roses.
251. Phragmidium violaceum Wint. On bramble.
252. Melampsora Helioscopiae Wint. On Euphorbia.
253. Melampsora farinosa Schröt. On willows.
254. Coleosporium Euphrasiae Wint.
255. Coleosporium Campanulae Lév. Hardgrave.

256. Ustilago Tragopogi Schröt.
257. Ustilago segetum Wint.
258. Urocystis anemones Schröt. Wood near Annan.

Where the locality is not indicated the specimens were collected in the immediate neighbourhood of Annan.

Charters Granted to Annan by Kings James V. and James VI. Extracted from the Register of the Great Seal of Scotland, and Translated by E. J. Chinnock, LL.D.

26th of James V. At Edinburgh, 1st March, 1539.

The King, because the town and burgh of Annand, situated upon the western borders and near adjacent to the Kingdom of England, had frequently been burned and destroyed, and the burgesses and inhabitants had been plundered and slain by the English, in protection of the Kingdom of Scotland, in the times both of peace and war, and they had always been faithful and just Scots to his crown, and because the ancient charters of the foundation and infeofment of the said burgh, made by the King's ancestors had been destroyed and burnt through the siege and burning and otherwise by the enemies of the said King, whence the practise of trades had ceased among them; therefore he has enfeoffed anew to the said burgesses and community the burgh and town of Annand as a free burgh for ever, with all the lands, yearly rents, and possessions, and fishings whatsoever belonging to the same, viz., beginning at the Sandy-pule of Kirkbank Bencherbek and ascending to the height of Holingbog, bordering between Dunbertane and Wrmanbe to Robgillistrand to the carne of Cragkow, and then to the height of Ragilschawis, and thence to the three stones of Sandygile, and from these to the Southwod, and thence before the mor of Grekane to the Merebek running into the sea, and from this to the Altarestane within the water of Sulway, and thence to the foot of Annand-water, *scare* and *schand;* and so that the Northburnfute, with fishing nets from the river as far as the sea, with power of breaking up and cultivating the common land and of making mills besides, mill lands and water-courses, the *dammis* to their greatest advantage and profit; of electing annually bailies, etc., and swearing them in, of having a market-cross and a market day weekly on the Sabbath-day, and a market day called the

fare-day annually on the day of the Ascension called Alhallow Thurisday, and through the week of the same, with a town-hall, etc., with power of buying and selling, etc., burgh farms, etc., to be paid.

45th of James VI. At Edinburgh, 10th July, 1612.

The King, understanding that the town and burgh of Annand, then situated in the Middil schyrs of the Kingdom of Great Britain, has very often been destroyed, and calling to mind that King James V. had erected the said town into a free burgh by a charter, in which, through the ignorance of those who obtained it, no certain yearly rent was fixed to be paid to the King, but he was referred to the old custom of payment; whence it came to pass that it was uncertain what it had been the custom to pay; because the old charters had been destroyed; he has ratified the said charter and the others granted to the said burgh. Moreover he has again erected the said town into a free royal burgh, with all its lands, yearly rents, and fishings within the bounds specified, with salmon and other fishings by boats, nets, and the *halfis* and *coupis;* and from the Alterstane in Silway at the foot of Annand-water, with power to the burgesses of breaking up and filling the common lands, and of making mills, mill lands, and *damis* upon them; also of electing annually a provost, bailies, etc., with power of the *pack and peill*, of buying and selling, etc., also building a town-hall, prison, and market-cross and of holding a market on Thursday and Friday in each week, with free fairs twice a year, namely, on Ascension-day, called Allhallow Thurisday, and on St Michael's day, 29th of September, and through the weeks of the same, with customs, etc. 40 shillings to be paid, with the usual burghal service.

WATER OF ANNAN.

22nd of James V. At Striveling, 7th March, 1535.

The King has granted to John Kennedy, son and heir apparent of John Kennedy of Halleaths and to his heirs, 10 mercats of land of ancient extent of Halleaths, with the fishing of the same above the water of Annand between the church of Apilgarth and the King's lands and the lands of Lochmabane, in the parish of Lochmabane, stewartry of Annanderdale,

sheriffdom of Drumfres, which the said John the elder has resigned the rights and services due and customary to be performed; free tenement being reserved to the said John the elder.

Note on James V.'s Charter to Annan.—Before the time of the Reformation Saturday was called the Sabbath Day and Sunday the Lord's Day. *Sabbati dies* (Saturday) and *Dies Dominicalis* (Sunday). So Annan market day was on Saturday.

18th May, 1908.

Chairman—Dr Martin, Vice-President.

An Episode in the Life of Paul Jones. By Mr Joseph Robison.

Among the many incidents in the life of John Paul, or, as he is better known, Paul Jones, the father of the American Navy, none is more mysterious than his arrest at Kirkcudbright on a charge of being concerned in the death of one Mungo Maxwell, a native of Clonyards, Buittle. Jones followed the calling of the sea at an early age, and had made voyages to the States and West Indies. In 1766, although only 19 years of age, he was appointed chief mate of the brig Two Friends, a vessel engaged in the Slave Trade. Disgusted with the diabolical cruelties of that trade, he abandoned it on this account. This we may well believe, as wanton cruelty, so far as we can make out, was never one of the attributes of Jones. He took passage home to his native county of Kirkcudbright in the "John of Kirkcudbright" of and to that port, which appears to have been then in a much more flourishing condition than it is now. Captain M'Adam was the commander, and both he and his mate died of fever on the voyage. The qualities of Jones as a seaman came into requisition, as there was no one else on board capable of navigating the vessel home. He assumed the command and brought her safely to port, and, in recognition of his services the owners, Currie, Beck & Company, appointed him master and supercargo. So long as he remained in command he retained the confidence of his owners, and appears to have made several

voyages to the West Indies before the incident of Mungo Maxwell. In the beginning of October, 1769, we find a petition by Robert Maxwell, father of Mungo Maxwell, and residing at Clonyards, stating that "Mungo Maxwell was hired or engaged by John Beck, merchant in Kirkcudbright, who is one of the owners of the ship or brigantine, called the 'John of Kirkcudbright,' to go on board the said vessel, which was then about to sail for Jamaica and other parts of the West Indies, and to act on board the same as a carpenter until she should return to the port of Kirkcudbright." He goes on to say that his son accordingly entered on board the vessel, of which Paul Jones was master, and soon after the vessel sailed from Kirkcudbright. The "John" did not return to Kirkcudbright till Saturday, the 3rd November following, and the next day Robert Maxwell, having got notice of her arrival, went to Kirkcudbright to visit his son. He, however, was informed of his son's death, and the petition proceeds:—"While in the West Indies, and on board the said vessel, he (Mungo Maxwell) was most unmercifully, by the said John Paul, with a great cudgel or batton, beat, bled, and bruised, and wounded upon his back and other parts of his body, and of which wounds and bruises, he soon afterwards died on board the Barcelona packet of London, then in the West Indies, and lying near to the place where the said other vessel was. That the informer cannot learn the particular time or place, when and where his said son received the aforesaid death wounds, nor the particular time or place when and where he died; but he is well satisfied that the men and other sailors on board the said brigantine, upon examination before your lordships, will clear up the matter, and show that the said Mungo Maxwell was beat, bled, and wounded, and died in the manner before set forth. May it therefore please your lordships to precognose the whole sailors or mariners on board the said vessel or brigantine 'John,' and in the meantime to grant warrant to search for and apprehend the said John Paul, and to incarcerate his person in the Tolbooth of Kirkcudbright, or some other sure warding place, therein to remain to and while he be tried for the aforesaid crime, and be liberated in due course of law, according to justice, and the informer shall ever pray." The petition is addressed to the Right Honourable William Earl of March and Ruglen, Vice-Admiral of Scotland, and John Goldie,

Esquire of Craigmuie, his lordship's deputy for the bounds betwixt the south side of the water of Cree in Galloway, and the Border of England, and his substitute, offices long since fallen into desuetude.

His lordship or his deputies acted with great promptitude, and warrant was granted to Messengers-at-Arms, Officer of the Vice-Admiralty, Steward Officers, and Constables of the Stewartry of Kirkcudbright, and all officers of the law to search for and apprehend Jones wherever he can be found within the bounds of the jurisdiction. On being apprehended it was ordained that he should be imprisoned in the Toolbooth of Dumfries or Kirkcudbright, whichever of them happened to be nearest. The Magistrates of both burghs and the Keepers of the Tolbooths were required and warranted to receive and detain Jones, and further warrant was granted to summon the whole of the sailors and other persons on board the "John," whenever the vessel arrived at Kirkcudbright, before John Kirkpatrick of Raebury (afterwards Provost of the Burgh), William Gordon of Campbelton (another Provost), and James Laurie of Barnsoul. Warrant is also granted to the Magistrates to examine these persons on oath in relation to what they knew concerning the crime with which Jones was charged; that before he was imprisoned, he was to be carried before the three Justices for examination, and his declaration set down and signed by him and them. The warrant is given at Dumfries, dated 10th November, 1770, and signed John Goldie.

In the next paper Robert Maxwell acknowledges that the warrant has been granted and duly executed by James Fowler, Admiral Officer. No date is given as to when the apprehension took place, but it was at Kirkcudbright, as he had been delivered to the Magistrates there, along with the principal application and warrant. It being therefore necessary to have the "samen" returned to the Admiral Depute along with precognition of witnesses taken upon that subject, and the Magistrates affirming that the application and warrant was the only authority they had for the detaining of Jones, declined delivering the same to him without his granting the obligation underwritten. Maxwell therefore not only acknowledged the receipt of the principal obligation or warrant, but also obliged himself "to make the samen or a notorial copie thereof furthcoming to the Magistrates

whenever found necessary for their defence in case they shall ever be quarrelled for delivering the same to him in the penalty of £10 sterling in case he failed therein." This was subscribed at Kirkcudbright on 13th November, and was witnessed by John Thomson, clerk to William Gordon, and James M'Gowan, shoemaker, Kirkcudbright. On 15th November, 1770, a petition was presented by Jones to the Earl of March, in which he states that at present he is incarcerated in the Tolbooth of Kirkcudbright in virtue of a warrant issued by his lordship's deputy on Maxwell's information. He proceeds to say that he is conscious of his innocence, and that there is not the least cause or reason for harassing him or detaining him in prison upon the complaint, as the same is absolutely false and groundless; that from the precognition taken in the affair under his lordship's warrant there is not the least evidence or presumption that Mungo Maxwell died of any abuse received from the petitioner, nor was there any proof brought of his being actually dead. In these circumstances he applied to his lordship to be liberated on bail to stand trial for the alleged crime. That bail he says he is ready to find, whether by himself or by the help of his friends he does not say. He confidently anticipated liberation, as he does not entertain a doubt of his lordship complying with the request, and his argument that there was not the smallest presumption of his guilt was of itself sufficient to entitle him to be liberated. Further, his health and fortune and a valuable ship and cargo entrusted by his employers to his care were all at stake, and must suffer considerably if he is not immediately set at a liberty. Besides all this, he had good reason to believe that Robert Maxwell, the informer, would consent to his being liberated upon bail to stand trial. In respect of all this he appealed to his lordship to order the Magistrates of Kirkcudbright and their jailer to set him at liberty upon his finding sufficient caution to stand trial. The petition is signed by Thomas Stothart. Then follows the deliverance, in which the Vice-Admiral Deputy states he has considered the petition, and in respect of the consent of the informer, Robert Maxwell, finds that the crime charged against Jones was bailable, and grants warrant to the Magistrates to set him at liberty "furth of their Tolbooth upon his finding sufficient caution, and that he should appear and answer to any indictment or criminal libel that might be brought

against him in any competent court in Scotland within the space of six months under the penalty of 1000 merks Scots, and that he shall attend the whole diets of court, and not depart without leave of the same. The warrant is signed by John Goldie, and witnessed by Samuel Clark, clerk to the Court of Vice-Admiralty," kept at Dumfries in the bounds betwixt the Water of Cree and Galloway and the Borders of England."

Jones was set at liberty, and twelve days later presented his famous petition to the members of Lodge St. Bernard, Kirkcudbright, for admission to the Lodge. The petition (now in the possession of Mr Andrew Montgomery of Netherhall, Kirkcudbrightshire) is in the following terms:—

To the Worshipfull Master Wardens and Remanent Brethren of Free Accepted Masons of the Lodge of St. Bernard held at Kirkcudbright.

The Petition of John Paul, Commander of the "John of Kirkcudbright."

Humbly Sheweth,—That your Petitioner for a considerable time by past hath Entertained a strong and sincere Regaird for your most noble Honourable and Ancient society of free and Accepted Masons. But Hitherto not meeting with an seasonable opportunity Do now most Humbly Crave the Benefits of Receiving and Admitting me Into your fraternity as an Entered Apprentice promising assuring and Engaidging to you That I shall on all Rules and Orders of your Lodge be most obsequient and observiant. That I shall in all things Deport behave and act answerable to the Laws and Instructions of the Lodge, and in every thing to which I may be made Lyable, promising faithful obedience.

The Complyance of your Right Worshipfull wardens and rest of the Brethren will singularly oblidge and very much Honour Right Worshipfull your most Humble Petitioner and most Humble servant.

JNO. PAUL.

I do attest the Petitioner to be a Good man and a person whom I have no doubt will in due time become a worthy Brother.

JAMES SMITH.

From the above it will be seen that the brethren at any rate had sufficient confidence in the integrity of Jones, and that he

would be able to meet the charge hanging over him. He was duly admitted a member, and at the end of the entry is, "Paul Jones entered." This latter seems to dispose of the statement that it was in 1773, after inheriting his elder brother's property in Virginia, that he changed his name from John Paul to Paul Jones. It would therefore be extremely interesting to know what his reason really was for doing so. Could it be that he was so much scandalised by a charge of which he knew himself to be innocent? It is all the more strange in view of the fact that on 1st April, 1771, his employers, Currie, Beck & Co., gave him a testimonial stating that on two voyages of the "John" to the Indies he had acted as master, and had approved himself in every way qualified for the post. The firm had been dissolved, and the vessel sold, and the certificate goes on to say that all accounts between him and the owners had been amicably settled. They at anyrate had seemingly every confidence in him. The Lodge minutes give scanty information as to Jones. He was admitted on 27th November, and attended meetings on 29th and 30th of the same month. On 1st February, 1771, he was admitted to the 2nd degree, and the last time he was present was on 9th April. The latter was the occasion on which Jones marched with the brethren to the laying of the foundation stone of what is now known as Old Bank House, presently occupied by Sheriff Napier, and standing near the site of the Meikle Yett. The house built by Mr Freeland, a magistrate of the burgh, was that day named Castle Cannon, and it is curious to note how, in the process of time, the name in part has been transferred to the adjoining building, known as Cannonwalls.

The records are silent as to whether any further proceedings were taken against Jones in regard to the charge or whether they were quietly dropped. In any case, his innocence was manifested in an affidavit sworn at the Mansion House, London, on 30th January, 1773, by James Eastment, just about the date when Jones visited Virginia in connection with his brother's property. Eastment swore that Mungo Maxwell, in good health, came on board his vessel, the Barcelona packet, then lying in Great Rockley Bay, in the island of Tobago, about the middle of June, 1770, and in his capacity of carpenter. He was in perfect health for some days after he came on board, after which he was afflicted with fever and lowness of spirits. This continued for

four or five days, when he died on the passage from Tobago to Antigua. He never heard Maxwell complain of having received any ill-usage from John Paul, and he believed that his death was occasioned by fever and lowness of spirits. This should be sufficient to dispose of the charge, and one is glad to know that the fame of the "Father of the American Navy" is not besmirched by such a scandal. Whether it was his treatment at this period, or whether it was the result of honest conviction, one would like to know, but within another four years he had cast in his lot with the revolted Colonies and had offered his services to Congress. In April, 1778, he made his celebrated raid on these coasts in the "Ranger," 18 guns, and performed some daring exploits, which do not come within the scope of this paper, unless it be the descent on St Mary's Isle, when he carried off Lord Selkirk's plate, to restore it six years later. The wonder is that he did not come up the river to the town in whose Tolbooth he had been incarcerated on a serious charge. In Mackenzie's "History of Galloway" the curious may read a circumstantial account of the state of terror and excitement into which the inhabitants were thrown, and which was contributed by Malcolmson, the correspondent of Sir Walter Scott, the Ettrick Shepherd, and Joseph Train.

The Lapwing. By the Late Mr Wm. Hunter, Carlaverock.

Everyone must be acquainted with the habits of the familiar lapwing, the bright and attractive form of which adorns almost every landscape. It is the most common of the plover family, and, during the daytime in the autumn and winter months, after its paternal and maternal duties are o'er, it is to be found scattered over the country, usually in large flocks, sometimes on pasture and marshy land, but more often on fallow land and land where root crops have been raised in search of worms, slugs, and other food. It is not easily seen on the latter ground as it runs to and fro, but whenever the birds take flight their bright, white under parts are then plainly visible. On pasture land, however, it is a very interesting bird to watch. How coolly does it go about all its movements too! After running a few feet over the surface of the ground, its head is lowered, and almost immediately its alert eye has caught sight of some unfortunate

worm, which, alarmed by the noise above his home, has come out of his hiding place to investigate matters, thinking the cause due to the action of his enemy the mole. Needless to relate, he is soon disposed of, while the lapwing goes on a fresh search, making, perhaps, several other short runs before he comes across any more. The lapwing procures a great deal of its food during the night-time, and as the shades of the silent evening hour are setting in, it is often observed in small flocks going through the air at a great rate, its wings then making a kind of rushing sound which is distinctly audible. Its cry is often heard at dusk either when flying overhead or emanating from some fallow or pasture land. It is especially noisy on clear moonlight evenings. After the frosts and snows of winter have gone the lapwing pairs, when it is very pleasant to listen to its breeding call, more especially when darkness has settled over the still country. Everything appears enshrouded in a solemn silence; bird songsters have retired to roost amongst the trees, shrubs, etc., and the last thrush has stopped its evening lullaby until the advent of a new day, when the love song of the lapwing is heard from the fallow fields, where it is searching a place suitable for it and its mate to nest. If the night be calm its notes can be heard throughout the whole evening, but as daylight breaks it begins to get more silent, and its place is taken by some early thrush or blackbird, the songs of which seem to drown all other sounds. The notes during the breeding season somewhat resemble the words who-e wee, who-o-wee, who we, who we, whoo-we-e, the wee being pronounced like the French "oui." The lapwing rises a short distance in the air when uttering these notes, tumbling over several times when going downward, before it again returns to land. Its other notes at this time resemble "pee-weet," or "peesweep," whence the bird derives one of its names. It utters these usually when anyone is in the neighbourhood of its nest, the first syllable being prolonged, with a plaintive accent. At other times it seems to have a variety of calls, often first a shrill single note.

THE NESTING SEASON.

This is among the first of birds to nest, which is usually a round hole scraped on fallow, pasture, moor, or marshy land, lined at times with dead grass, small pieces of straw, or rushes, but often this is reduced to a minimum, especially on fallow land,

in which the bird lays its pyriform eggs. These are usually four in number, although I have heard of an instance where five has been found. This seems to be a very rare occurrence though, as I have noted from various works on ornithology. If the first clutch be taken the bird often lays no more than three next time, and it will not forsake the nest if one egg be left, which it will sit on and hatch. In going over the breeding haunts a great many empty nests may often be come across, seemingly just scraped in the soil. These are "false" nests which the male makes when showing off to its mate. The eggs vary a great deal in marking, being dark olive green in ground colour, spotted and blotched with shades of black and blackish brown. The nest is often found in some depression of the ground, like the footprints made by horses or cattle. The lapwing is a very close sitter, and soon after the last egg of the clutch is laid is very attentive over its brooding duties, when it places the eggs points inwards. Before that, however, when incubation has hardly commenced, they are often found sideways in the nest, and that is thought to be a sign that all are fresh. How zealously it guards the eggs, which are often very difficult to find owing to their being so like the ground around them! Should an intruder be seen at some distance off, if he be a close observer, he will notice the lapwing stealing away from its eggs in several short runs, and after going a certain length, it will rise straight up into the air, but should he be in hiding behind a bank or hedge and then suddenly spring up into full view of the breeding ground, all he has to do is to watch for the lapwing, which rises into the air, and then make for the spot from where the bird has flown, when he will likely be rewarded by a find, which otherwise he might have taken hours to accomplish. At times the bird adopts a great many tactics to entice its enemy from its breeding ground, such as wheeling around him with angry cries, even occasionally coming within reach of his head, often trailing itself on the ground in front of him pretending it has got a broken wing. The latter device is usually resorted to after the young are hatched, about which the parent birds show the greatest anxiety and concern. How closely do these harmonise with the vegetation around them too, where they will remain squatted until all danger is past, but when once "spotted" and made to run they will do so with the utmost rapidity, swimming across any shallow which may come

before them, when they will try to hide in any opening which may present itself, the old birds all the while giving vent to cries of woe, as they wheel around the intruder in the air above. The young run directly they leave the shell. The lapwing begins laying towards the end of March, and onwards to April, May, and June.

ENEMIES AND OTHER DISADVANTAGES TO CONTEND WITH.

The hungry carrion crow is one of its greatest enemies, being most persistent in its search for the eggs. He usually glides quietly over some bank or other barrier next the breeding place, with beak pointed downwards, eagerly scanning the ground below him, which he does with the utmost precision, quartering every foot, with the result that not an egg escapes his observant eye. At last he sees a nest, and is up with an egg in his bill before the lapwings have realised what is going on. With speedy wing and cries of distress the parent birds make after the persecutor, but as the latter has obtained a start he serenely steers his course for the nearest refuge and there devours his ill-gotten gain. After his meal is finished, and when he thinks the course is again clear, once more he makes for the nesting ground, but the old birds are not to be caught napping this time, and before he has reached the desired object are giving him a much-needed lesson. They buffet him with their hard wings time after time, and, having been joined by all the lapwings in the neighbourhood, the crow is enjoying anything but a happy time—a piteous caw, caw being heard time and again, showing the effect of the punishment on him. Not until he has been thoroughly chased from their domain will the lapwings give up the hunt. Once more the noise subsides and the birds return to their haunts, happy in the thought that their hated enemy has been so disastrously beaten and discomfited. Needless to say that crow does not often return to the same place a third time on a like errand.

Partridges are often wont to stray near the nest, and no sooner does the lapwing see this than it endeavours to chase them off with its wings. The former, having no evil designs on the eggs, rather resent this unceremonious treatment, and there is often a short combat between the birds, which usually ends in favour of the peewit.

The eggs in some cases being laid rather early are often

apt to suffer through late frosts and snows, which always suspend further nesting operations. Then, too, a great many are destroyed when preparing the fallow fields for crop.

Large tides also occasionally account for the destruction of not a few when the nesting ground is submerged. Notwithstanding that, however, the lapwings always come back and nest close to the sea. In stating that fact, I can recall an occasion when a pair of landrails nested on marshy ground covered with rushes. I was unable to find the eggs, but after a very stormy evening, when the place was swept by a heavy tide, I came across several on the tide mark. As far as I can recollect, the landrails never again returned to breed after that trying experience.

Then, again, the eggs are collected up to a certain time in each year as a table delicacy, after which the birds are allowed to hatch them.

Many a lonely moor would be dismal indeed if it were not brightened up during the breeding season by the picturesque figure of the lapwing. Its wild notes and tumbling flight seem to add a charm to the solemn grandeur surrounding it, which is greatly increased if the day be a little stormy.

The lapwing is often found breeding in company with the redshank, and on several occasions I have found the nests of the two birds within a few yards of each other. There thus appears to be a kind of mutual understanding between them, the redshank ably performing the duties of a sentinel, which it does to perfection with its shrill, piping notes on the slightest approach of danger, and the lapwing undertaking the duties of a policeman by driving all bird robbers from the nesting ground. According to Mr Howard Saunders, "it is the male which indulges in such frantic swoops and twirls, accompanied by noisy cries, though when the young are hatched both parents practise every artifice to allure man or dog from their broods."

How pretty it is to watch the movements of the lapwing during the colder months! Perhaps a large flock, in close formation, may be seen flying in a certain direction and then suddenly change their minds. The close formation is broken up and a turning movement is performed, which makes the birds appear in a long, struggling line directing their course to quite a different destination. In this manner they go another short distance, the large flock being in the interval often split

up into several smaller companies, which after a while usually rejoin the main body. Perhaps this time they may make a fallow field their destination, and on arriving there swoop down close to the ground with an apparent intention of settling, but no—the flock is up in the air once more, going through a great many evolutions in like manner, after which they finally make in another direction. Against the dark background of "red" land the birds are seen to great advantage, one second appearing in a nice black coat with narrow strip of white at tail, and the next in a vivid white and black.

As an edible bird, the lapwing is inferior to the golden plover, but nevertheless is not to be despised. The wings of the lapwing, it will be noticed, are not pointed as in other plovers, but are rounded instead, and consequently have a much slower and heavier mode of flight.

The lapwing is one of the best friends the agriculturist has got, as it destroys a very large number of worms, caterpillars, and other injurious insects, which might do a great deal of harm if left undisturbed, and it should therefore be accorded a greater degree of protection than that at present afforded to it. Notwithstanding its merits, however, it is shot at wherever found by gunners whose sole object is to make up a bag. Luckily the birds get extremely wary, and are not easily got at by the ordinary gun, but a very large quantity must fall victims annually to the deadly punt gun with its raking charge of shot.

The cunning reynard, too, it may be mentioned, does not object to a lapwing for supper, as many a feather-strewn patch in some quiet nook plainly testifies. The lapwing is said to make a very nice garden pet, when it will prove itself of the greatest possible use in destroying all worms, slugs, and noxious insects found there.

NOTE ON GOLD TOUCH PIECE OF CHARLES II. Exhibited by Mr JAS. DAVIDSON, Summerville. By Mr DAVIDSON.

I exhibit a Gold Touch Piece of Charles II., which may be of interest to the members.

The English Sovereigns, according to the ancient custom of "Touching for the King's evil" or scrofula, by which it was supposed that persons afflicted by that malady could be healed

by his touch, distributed to their patients the current gold coin called the Angel, which was hung round the neck of the afflicted person as a charm against further attacks of the disease.

Angels continued to be struck until the end of the reign of Charles I. After the Restoration, Charles II. substituted small gold medallets somewhat similar in type, which were known as Touch Pieces. The practice of touching was scorned by William III. Anne, however, continued to dispense the Royal Gift of Healing. One child she touched was Dr Samuel Johnson, whose Golden Touch Piece may be seen in the British Museum. The Touch Piece enclosed is one of the above medallets, and would be given to the sufferer by His Majesty King Charles. It would be suspended round the neck by means of a white silk ribbon.

On the obverse is a frigate of so many guns, with the legend, Car II, DG. M.B.FR.ET.HI.REX.

On the reverse side is St. Michael and the Dragon, with the motto—Soli Deo Gloria.

Buchanan's Account of the Death of Cumin. By Dr E. J. Chinnock.

George Buchanan's History of Scotland was published in 1582. I have translated his account of the death of Cumin, not because it is of any historic value in itself but because it gives a different account of the "mak' siccar" incident from that generally received.

Book VIII., Chapter 28.—"On the same night he set out with two companions, and men and horses being much fatigued, at last on the seventh day he arrived at his castle near the lake Maben. There he found his brother David and Robert Fleming, and taking them with him he explained to them the cause of his flight. He fell in with a courier, who was carrying a letter from Cuming to England. In this it was written that Robert must be removed as soon as possible; for that there was danger in delay, lest the man noble and popular, with equal wisdom and daring, might stir up a revolution. Having received this proof of Cumin's treachery, Robert, inflamed with wrath, proceeded straightway to Drumfries. For he learnt that his enemy was there. He found John in the church of the Franciscan friars, and

producing the letter he accused him. But as he shamelessly denied that the letter was his, Robert could not restrain his wrath, and driving his dagger into his belly, he left him lying as if dead. As he was mounting the horse James Lindesey, a kinsman of his, and Roger Kirkpatrick, an old friend, perceiving from his countenance that his mind was perturbed, asked him the reason. Having briefly explained, he added that he thought Cuming was dead. "What," said Lindesey, "have you then left so important a thing in doubt?" and with the word he entered the church and finished not only him but also Robert Cumin, who tried to protect his kinsman. This murder was committed in the year 1305, on the 10th of February."

Here Buchanan relates that Lindesey finished the deed commenced by Bruce, and gives Kirkpatrick the position of an accessory only. He calls him "Roger from the cell of Patrick." Like all legends this one took a long time in growing to maturity.

FIELD MEETINGS.

6th June, 1908.

AT TIBBERS AND DRUMLANRIG.

Ideal weather conditions favoured the first field meeting for the session of the Dumfriesshire and Galloway Natural History and Antiquarian Society, which took place on June 6 to Drumlanrig Castle and the ruins of Tibbers Castle. For the student of Scottish history this locality has many interesting associations, while the lover of nature is delighted by the picturesque scenery of the Nith valley; and needless to say a thoroughly enjoyable and interesting afternoon was spent. The party numbered over twenty, including half-a-dozen ladies. Having reached Thornhill by train, they had a pleasant drive of over two miles to Tibbers Castle, which is situated at the influx of Mar Burn to the river Nith, opposite the little village of Carronbridge. The remains of the castle are now very slight; but, standing as it does on ground rising from all sides, it is clear that it must have been a veritable stronghold. Its origin is uncertain, but according to one theory it was built by the Romans and named in honour of Tiberius Cæsar, the name being corrupted to Tibbers. On the other hand, there may be reason for believing it to have been of Norman architecture. Nothing certain is known of the history of the castle till near the end of the thirteenth century. In 1292 it was probably occupied by Sir Richard Siward on behalf of Edward I., shortly before being handed over to John Baliol. In 1297, as chronicled by Harry the Minstrel, the patriot Wallace, after overpowering the English at Stirling Bridge, rode through Durisdeer with three hundred picked men, lightly mounted, and drove the English before him to the Solway. In 1298, however, occupation was resumed by the English, and Sir Richard Siward again became Edward's Warden of Nithsdale and owner of Tibbers Castle, which he rebuilt or repaired, the King ordering payment of £100 due to him so that the work should

not be hindered. For eight years the castle remained in possession of the English, but in 1306 Bruce, after killing Comyn and taking the Castle of Dumfries, captured Tibbers, in which he imprisoned Siward. The castle was held for a few weeks on behalf of Bruce by Sir John de Seton, but it was re-captured by the English, and Seton was sentenced to be drawn and hanged. According to the indictment he was "taken in Richard Siward's castle of Tibbers, which he, John, was holding against the King, for Robert de Bruce, a traitor, and for aiding the said Robert in killing John Comyn in the Church of the Friars' Minors of Dumfries." Such is the first chapter in the known history of the castle. About 1380 it was occupied by the Earl of March, and afterwards by the Maitlands of Lethington. In 1509 the barony of Tibbers was conveyed to the sixth baron of Drumlanrig, but the castle mote had been reserved by the Earl of March. In 1544, James, seventh baron of Drumlanrig, acquired the castle, mote of Tibbers, and two acres of land belonging thereto from John Maitland of Auchengassel.

Except for a space in the centre, the site of the castle is now overgrown by trees. In the open space there is a well in a good state of preservation, judged to be nearly fifty feet in depth. The remaining foundations of the castle show that it has been of considerable extent, embracing a central court and surrounding buildings, and having round towers at three of the angles, and a similar tower on either side of the entrance.

Those of the party interested in botany found a variety of flowers at Tibbers. There is any quantity of the common bluebell, as well as wood loosestrife, wild parsley, and the early purple orchis. Less common flowers are the burnet saxifrage and the wood cranesbill, but the latter was found in rather unusual quantity.

The party afterwards drove to the gardens at Drumlanrig, which are situated on lower ground than the castle and nearer the Nith, and were there shown round by Mr George Angus. The walled-in garden extends to about four acres, and in it and the grounds and flower-beds at the castle forty men are employed. The whole length of one end of the enclosure is occupied by glass houses for the cultivation of fruit. One-half of these are devoted to peaches, the greater part of the other half to plums, and the rest to pears and figs. At the opposite end of the garden

a similar amount of space is taken up with vineries and hothouse flowers, tomato houses, and so forth. The houses, or most of them, are heated by underground furnaces, and the smoke is carried through a flue to a point in the woods a quarter of a mile away, where it escapes through a chimney. Most of the space in the garden is, of course, given over to the raising of kitchen produce and outdoor fruit, but the borders are very tastefully laid out with herbaceous flowering plants. The garden, which is kept in splendid order, was looking its best, there being a fine show of outdoor flowers in bloom, while vegetation was in an advanced stage of growth. It may be mentioned that strawberries and red currants give promise of an excellent crop this season. Gooseberries, however, will be rather thin, and black currants do not seem to be a success. The crop of apples should be satisfactory. The apple trees, which are numerous, are all under sixteen years old, the old ones having been removed some time ago. The hothouse flowers and fruit commanded a good deal of attention and admiration. There were two houses with a grand show of schizanthi and calceolarias, and another with a very fine show of miltonia-orchids, while there was a good deal of odontoglossum, but these were past their best. In one house there is a large mass of Malmaison carnations, but they were only beginning to come into flower. The vineries are looking very well indeed, some bearing better bunches than they have produced for years. The two varieties principally cultivated are the Black Hamburgh and le Gros Colman, the vines of these varieties being about thirty years old. One variety named the Duke of Buccleuch is also cultivated. It is a fine kind, but requires more than the usual care in management. On leaving the garden attention was directed to a very good example of the fern-leafed beech. Branches bearing the ordinary type of leaf appeared among the others, but getting too strong and numerous, they were cut away.

The stately castle of Drumlanrig was next visited, and although members of the party were able to form a very good idea of its characteristics, time proved all too short to permit of a thorough examination. The building, which is four storeys high, forms a hollow square, and is surmounted with corner turrets. There is such an array of windows that, according to a common saying, there is one for every day in the year. In front there is a

fine stairway in the form of a horseshoe ascending to the entrance, and the walls are richly ornamented, the architraves of windows and doors being profusely adorned with armorial bearings. Owing perhaps to its resemblance to Heriot's Hospital, the building has been ascribed to Inigo Jones, but this has been shown to be wrong. The present castle took ten years in building, and was finished in 1689, the year after the Revolution. Inside there is a wealth of tapestry and carving, with a large number of portraits, mostly by Lely and Kneller. One of these—a portrait of William III.—bears marks of Highland dirks, inflicted by some of Prince Charlie's men on their retreat from Derby in 1745. Among the other portraits is one of "Old Q," a noted patron of the turf and sport, who wrought havoc in the woods at the end of the eighteenth century, leaving the hills bleak and bare, though they continued so only for a short time, as a successor commenced the work of restoration in 1827. Among the features of the interior of the castle are the chapel, part of which, notably the doorway, is of very old architecture; the dining-room, with carving by Grinling Gibbons; and the drawing-room, in which there is very fine carving over both doorways, as well as a large extent of walls covered by tapestry on which are represented scenes, mostly of a martial character. In an ante-drawing-room, and in the smoking-room also, part of the walls are covered with tapestry. Family portraits are conspicuous in the dining and drawing-rooms, and especially in the entrance hall, in which there are also a number of antlers and other trophies of the chase. The outlook from some of the windows is magnificent. In one case the foreground is occupied by what is known as the American garden, and in another by finely laid out grounds with flower-beds of brilliant colours, called "The Paisley Shawl." There are very few trees more than eighty years old standing in the grounds, apart from the lime-tree avenue of 1754; but from the North Avenue, along which the party passed on returning, a splendid view is obtained of the woods which encircle the castle, adding much to the dignity of Drumlanrig.

4th July, 1908.

AT ST. MARY'S ISLE.

(From the Kirkcudbrightshire Advertiser.)

On Saturday, about thirty ladies and gentlemen, members of the Dumfriesshire and Galloway Natural History and Antiquarian Society, held a field day at St. Mary's Isle, by the kind permission of Captain Hope, R.N. The party were met at Kirkcudbright by Mr John M'Kie, R.N., ex-Provost M'Ewen, and Mr Robison, hon. secretary to the local Museum Association, and conducted to some of the interesting places in the town. A start was made with the Old Church School, containing the M'Lellan tomb, on the latter of which Mr Barbour, architect, offered some observations. Part of the tomb, in his opinion, dated back to the 12th century, the remainder being clearly of other dates. A work was at present in progress in regard to the greyfriars of Scotland, including those of Kirkcudbright, and perhaps some information might be gleaned regarding the church, which stood on the site of the school. Other places pointed out were the old Tolbooth and Mercat Cross, the site of the Meikle Yett and the Museum, with which the visitors were much interested. Later on, the party were conducted over the Isle grounds by Mr Jeffrey, head gardener, who was a most courteous guide. Entering by the north lodge, they traversed the main avenue for some distance, admiring on the way the many fine trees in the policies, and, turning to the right, followed the paths by the shore, where Professor Scott-Elliot observed several uncommon native plants. The heronry was also inspected, but, unfortunately, the nesting season was over, and only one or two herons were seen. Continuing the walk, Paul Jones's point was reached; before passing to the garden through the old and picturesque orchard, near which a singular specimen of Robinia pseudacacia of great age, which had been blown down and had rooted at various points, was seen. There are many noble trees of various kinds throughout the policies, and Professor Scott-Elliot remarked upon these. Great interest was manifested in an ancient font at the mansion house.

A considerable time was enjoyably spent in viewing the

beautiful gardens, noted for their arrangement and for the variety and beauty of the plants they contain, these including many shrubs and herbaceous plants, not generally hardy in Scotland, but thriving under the genial conditions of St. Mary's Isle. The gardens were found in perfect order, and the visitors were much delighted by their appearance and the wealth of bloom. Roses form a special feature of the gardens, and constant additions of the best of the new varieties are being made, while the most satisfactory of the older are retained. They are cultivated in various ways, especially beautiful being the pillar roses, those on the walls, and the weeping roses near the gardener's cottage. In the beds of dwarf roses there were many perfect flowers, worthy of being exhibited at any rose show. Much notice was taken of the stately giant lily, Lilium giganteum, from China, of which some fine specimens were seen—one being about 10 feet high. The borders contain a great variety of herbaceous plants, and many of these were in bloom, such as campanulas, delphiniums, hardy geraniums, the fine blue Lactuca Plumieri, a good French honeysuckle, poppies, irises, pyrethrums, pæonias, spiræas, and a host of others. Some extremely fine specimens of Phormium tenax, the New Zealand flax, were much admired. There are many shrubs and trees, including New Zealand shrubby Veronicas, a good collection of bamboos, which flourish at St. Mary's Isle, fine examples of the orange-ball tree, Buddleia globosa, and the Mexican orange, Choisya ternata, and a vast number of others, such as tree pæonias, clematises, smilax, and many more. The spacious conservatory and other ranges of glass houses were also inspected, the company viewing with admiration the flowers in the first-mentioned, where are splendid carnations, bougainvilleas, pelargoniums, and other tender plants. In the fernery some exceptionally fine gloxinias were much admired. The other plant houses were full of flowers and fruit in various stages of growth, displaying the cultural skill of Mr Jeffrey, the head gardener, and his staff. A new vinery, constructed a short time ago, is full of promising vines and other plants; while the out-door fruit and vegetable departments were found in a most promising condition. In the rockeries and borders adjoining the houses were to be seen some rare plants, and those of the party interested in flowers were

gratified to see crinums and agapanthuses flourishing in the open air. The mansion house is covered with roses and other climbing plants, and these were in perfect condition.

Captain and Mrs Hope and their family take keen interest in the gardens, and to the taste and interest they display, their beauty is due.

The company having again gathered together, Mr Barbour made a few remarks regarding the foundation of the ancient Priory. St. Mary's Isle, he said, was originally called the Island of Trayl, upon which Fergus, Lord of Galloway, built the Priory, and dedicated it to the Virgin Mary in 1129. It was founded in the reign of David I. by Fergus, to regain the favour of the King, whom he had offended. He appeared in the habit of a canon regular, and was introduced to the King by the Abbot of Holyrood in full chapter. The Priory held the churches of Galtway, Anwoth, and Kirkandrews. The site of the precinct-gate is called the Great Cross, and Little Cross denotes the place of the court gate. Fergus granted the Isle of Trayl, with the Priory founded on it to the monks of Holyrood, where he died in 1161. The Prior was a Lord of Parliament, and at the Reformation it came into the hands of the Lidderdales. The charter of the foundation is a characteristic mediæval story, taken from Gordon's "Monasticon":—"This is the history of the foundation of the Priory of the Island of Trail, and how Fergus, Great Lord of Galloway, the founder thereof, obtained pardon from King David, and gave that island and other possessions to the Monastery of Holyrood, and how, having become one of the religious, he was buried therein. When the fabric of the Monastery of Holyrood, near Edinburgh, was progressing under St. David, a most happy monarch, it happened that Fergus, Earl and Great Lord of Galloway, failed in his duty to his Majesty, and committed a grievous fault, at which the King, evidently very angry, determined to put the law in force rigorously against him. This Fergus, being very much devoted to God, and notwithstanding his accidental fault, always faithful to the King, knowing that the King was most determined in the execution of justice, was very much afraid, and in many ways and by various means was endeavouring to regain the King's favour. At length, being inspired by Divine counsel, in a change of habit, and in the most secret

manner, he repaired to Alwyn, Abbot of the Monastery of Holyrood, the King's confessor and confidential secretary, for advice and assistance. The Abbot therefore, compassionating the aforesaid penitent, Lord Fergus, prayed to God and obtained the Royal favour for him; and because he well knew in this case that the King's determination for the execution of justice was inflexible, he was afraid incautiously to intercede in his behalf. At last, by the ingenuity of both Fergus and the Abbot, it was contrived that the said Lord Fergus should assume the cloister habit of a canon regular, and thus, God directing, should obtain, along with his brethren, the King's favour, and at the same time the pardon of this offence, though supplication under a religious habit. Leaving to God their purpose, they wait for a convenient day and hour, with the intention of the Abbot speaking to the King on this matter. One day, as usual, when the King was visiting the builders of this monastery, the Abbot, at a seasonable moment, thus addressed him:—'O, most gracious Prince and founder, though unworthy petitioners and conventual chaplains, by reason of the wounds of our transgressions, to be cured only by a spiritual remedy, beg to have often the presence of your Highness in chapter.' At this the merciful Prince, highly pleased, enters the Chapter House, in order at the hour of meeting, sits down in the middle, the brethren prostrating themselves to the ground at the entrance. The Abbot thus speaks:—'O, most gracious Prince, we, the petitioners of your Highness, confessing our faults that we are guilty and transgressors, most humbly beseech thee, in the bowels of Jesus Christ, that your most Benignant Highness would condescend to pardon us, every fault and offence committed against your Majesty, with a single unfeigned heart, and at the same time bestow upon us your blessing, in order that, for the future, we may be deserving to meditate and pray for the safety of your kingdom more holily and devotedly, and that your most merciful Highness would be pleased, in token of this gracious pardon, to bestow upon everyone of us the kiss of peace.' The King, with a most placid countenance, replied:—'Dearly beloved brethren, I forgive you all charges, and commend myself to your prayers;' and immediately rising from his seat, and taking the Abbot by the hand, kissed him saying—'Peace be to thee, brother, with the Divine benediction.' "

Mr S. Arnott, Sunnymead, Maxwelltown, hon. secretary to the Society, proposed the following as members:—Rev. A. Angus, U.F. Manse, Ruthwell; Dr Scott, Ruthwell; Mr S. H. were unanimously elected, the President, Professor Scott-Elliot, Scott, Dumfries; and Mr D. Paterson, solicitor, Thornhill, who expressing his gratification at this accession.

Professor Scott-Elliot proposed a vote of thanks to Captain Hope for so kindly allowing them to go over his beautiful grounds. It had been a most interesting day in every respect, not merely in regard to the wild flowers along the seashore, of which many interesting varieties had been detected. They ought also to express their gratitude to Mrs Jeffrey for having forwarded a list of the wild flowers, especially of the rarer forms. It was a very large list—233—and showed conclusively what comparatively favourable climate and soil there were in that part of the country, and was very good indeed for such a small district as that. He thought he had never seen such quantities of roses. Each bush seemed to have been carefully consulted as to its individual requirements, and they had responded most satisfactorily in giving the greatest possible amount of bloom in order to show their gratitude for the care bestowed upon them. The trees also were very interesting, and especially from the fact that, although they grew within a few yards of the seashore, it would be difficult to find anywhere more magnificent specimens of forest timber. Round about Kirkcudbright was, perhaps, for climate and soil, one of the most favoured spots that existed in the South of Scotland.

Mr Arnott then proposed votes of thanks to ex-Provost M'Ewen, Mr Jeffrey, and Mr Robison, which were heartily awarded and acknowledged.

15th August, 1908.

AT RAEHILLS.

(From the Dumfries and Galloway Standard.)

On Saturday members of the Antiquarian Society, together with a few friends, spent a very enjoyable afternoon at Raehills, by the kind permission of Mr J. J. Hope-Johnstone of Annan-

dale. The weather, fortunately, was of an ideal description for such an outing. The party from Dumfries and Maxwelltown, which numbered twenty, assembled at Burns' Statue at one o'clock and drove in a char-a-banc provided by Mr Irving, King's Arms Hotel, the route being along the Moffat road, passing Locharbriggs and Amisfield, then across "the moor," over the Æ water, and onwards to St Ann's Bridge, where a turn to the left was made to Raehills, the distance in all being about fourteen miles. The drive was a very pleasant one, passing as it did through undulating and nicely-wooded country, with the fast-ripening crops making pleasing contrast with the still fresh green of the trees. A smaller contingent of visitors from Moffat and Lockerbie drove from the latter town, and arrived at Raehills some short time before their Dumfries friends. The party was cordially received by Mr Hope-Johnstone, who, after showing his visitors a number of fine family portraits in the hall and dining-room, also conducting them through the library, invited them to view the policies, which they did after partaking of tea on the lawn. The architectural beauties of the house received attention, while the extensive grounds which surround the house were the object of much admiration. The party, however, did not go any further afield, as their drive was a long one, and there was not much more than a couple of hours to spare. Had time permitted a visit to Raehills Glen or to the ruined tower of Lochwood, which is some two miles distant, would no doubt have been very interesting.

The mansion of Raehills was built in 1786 by James, third Earl of Hopetoun, and received a large addition in 1834. The Earl and his Countess, in the course of their visits abroad, were so pleased with a mansion house which they found there that they formed the idea of having a similar mansion on the lands of Raehills. Many plans were made of the proposed mansion, and much consideration was given to the subject between the years 1782 and 1786, during which portions of the building were proceeded with annually. The designers were Robert and James Adam, who studied in Italy and were prominent architects in their day. The Edinburgh University and the Register House at the east end of Princes Street, Edinburgh, are perhaps the best-known examples of their work. At one time it was proposed that the mansion at Raehills should be completed by a

great dome like that of the Register House, which had recently before been built. This scheme was, however, abandoned, as there was a belief that the dome of the Register House was the cause of so much smoke as to hinder the clerks in their work. The old part of Raehills mansion is of the Italian style of architecture, and includes two fine balconies supported by pillars of white stone believed to be quarried at Cove, near Annan. The modern part of the building is in a style resembling the Scottish baronial, but there is a freedom in the architecture which gives it charm. It is built of red Corncockle stone, and the architect was Burn, of Burn & Billings, Edinburgh. This addition added greatly to the accommodation of the house and made it one of the most imposing mansions in the south of Scotland.

Raehills is very prominently and picturesquely situated in the valley of the Kinnel, which it dominates from its commanding position. The lands of Raehills, as the name indicates, lay in a bleak, hilly country, and the higher portions of it were frequently used as sporting ground for wild fowl. The Earl of Hopetoun, who in 1792 inherited the estates from his grand-uncle, the third Marquis of Annandale, made great improvements on them. He planted extensive woods, including some very fine trees on Gallowhill, while the policies of Raehills were laid out on an extensive scale, and were adorned by gardens, conservatories, and lakes. Previous to the time that the Earl of Hopetoun undertook the formation of Raehills a popular idea prevailed that the whole district did not contain a single tree in which even a "cat could have been hanged." The scene that now meets the eye is entirely different. The whole valley is laid out to the greatest advantage with numerous kinds of trees and shrubs, which include many fine specimens of firs, beeches, and oaks. Round about the mansion one of the most striking features is the fine display of rhododendron shrubs. These are very large and densely-foliaged, and when in bloom must present a very imposing appearance. The visitors on Saturday, who strolled along the walks in groups, found much to admire in the grounds. After passing a lake in which a pair of swans and their brood were disporting themselves, they went on to the garden, which is situated in a sheltered position on the lower ground, and is surrounded by walls. It is not extensive, and

there is quite a small area under glass. It is, however, well laid out, though from a utilitarian point of view, the flower display not being specially prominent.

The connection of the Johnstone family with the lands of Raehills commences so early as the reign of King David the Bruce, from whom a member of the family whose history has not been traced obtained a charter of certain lands in the barony of Kirkmichael. But these lands passed out of his hands in the beginning of the following century, and though they reverted to a branch of the family for the few years between 1605 and 1612, it was not till 1659 that they resumed undisturbed possession. The owner at this time was the second Earl of Hartfell, afterwards created first Earl of Annandale, who married Lady Henrietta Douglas. His son, William, who was a famous statesman, is described as the greatest of all the long line of his family. He lived in the reign of six sovereigns, and played various parts, taking a hand in the Revolution of 1688, though he was afterwards restored to royal favour and was created Marquis of Annandale in 1701. He was succeeded by two of his sons, neither of whom had issue—so that the marquisate became dormant in 1792—and one of his daughters married the Earl of Hopetoun, who adopted Raehills as his principal Annandale residence. Their great-grand-daughter, Anne, married Sir William Johnstone Hope, who served with distinction in the time of Nelson, being attached to the Bellerophon. A picture of the Admiral and Lady Anne and their family occupies a prominent position in the dining-room at Raehills, and there is a half-length portrait of the Admiral in the Court-house, Dumfries. Their eldest son, Mr John James Hope-Johnstone, was for long convener of the county, and there is a full-length portrait of him in the Court-house. In 1825 he claimed the title of Earl of Annandale, but this was repelled by the House of Lords, who again in 1879 adhered to their resolution. His grandson, Mr John James Hope-Johnstone of Annandale, who was M.P. for the county in 1874-1880, is the present laird of Raehills. It may be mentioned that the famous Ben Jonson was really not a Jonson, but a Johnstone, a descendant of the Annandale Johnstones.

Before leaving, Mr James Barbour, architect, Dumfries, in a few appropriate words voiced the visitors' appreciation of

the beauties of Raehills, of the privilege of inspecting the seat of such an ancient family as the Johnstones, and of the hospitality of their host. Mr John F. Cormack, solicitor, Lockerbie, seconded the vote of thanks. Mr Hope-Johnstone, in reply, said he had great pleasure in receiving the party and giving them an opportunity of viewing the place. It being a fine day, they had had a pleasant drive, and that, he thought, was half the battle. He would be glad to see them back at Raehills on a future occasion. Mr Arnott, the secretary, proposed the election of Mr and Mrs Thomson, George Street, as members of the society. He said it had been greatly to the advantage of the society to come to Raehills, and he was sure they would be glad to avail themselves of Mr Hope-Johnstone's kind invitation at another date. The two parties then took their seats in the brakes, hearty cheers being raised as they made their departure homewards.

13th September, 1908.

IN CUMBERLAND.

(From the Dumfries and Galloway Standard.)

A party of twenty-two members of the Dumfries and Galloway Natural History and Antiquarian Society crossed the Solway on Saturday and paid a visit to the villages of Bowness and Burgh-by-Sands. As they steamed across the Viaduct, shortly before noon, a strong tide was flowing up the firth, under a brilliant sun. Alighting on the English shore, they turned their attention first to vestiges of the Roman Wall, which had its eastern end here and its western end seventy-two miles distant, at Wallsend, on Tyne. The remains are scanty, for the village, its church, the farm buildings and farm fences of the district, have all been built out of the quarry which the wall itself and the camp or station at Bowness furnished. Houses built within the last fifty years were pointed out for which the stones had been taken from the wall. Large part of the village sits within the space which the camp had occupied; and the fosse which marked its western boundary and part of a rampart at the north-eastern angle are still apparent, the latter being a mound in a

back garden overlooking the firth. A small altar stone, dedicated to Jupiter, has been built into the front wall of a stable adjoining the King's Arms Hotel. The inscription is now much weathered. The line of the wall itself can be traced pretty continuously in the fields between Bowness and Port Carlisle. At no point does it now rise much above the level of the surrounding land; but at some places—where it slopes towards a water course, for example—the masonry can be detected. It was a herculean work, one of the many wonderful products of mechanical skill and vast labour which the Romans scattered over the lands which they held temporarily in their grip. A massive structure, twelve to fifteen feet high, and some eight feet broad, it was faced on both sides with squared freestone, conveyed often from distant quarries, and filled inside with rubble, bound together with strong mortar. At every mile there was a guard house, or "mile-castle;" every few miles a fully equipped station for a body of troops. And a deep fosse was excavated alongside the wall, on its northern side, as an additional defence. About fifteen thousand men, the late Dr Bruce has calculated, would be required to garrison the wall. The same authority estimates that the stone wall and the earthen rampart, or "vallum," which crossed the same belt of country and was roughly parallel with it, would engage the labour of ten thousand men for two years, and represent an outlay of more than a million pounds of our currency. Hadrian's Wall is the name popularly applied to the stone structure; and Dr Bruce regards it and the vallum as contemporary works, and ascribes them both to that Emperor, who visited Britain in 119. But it is open to question whether it was not simply the vallum that was the work of Hadrian, and the wall itself was erected during the later reign of Severus, when it had been resolved to give up the attempt to conquer Scotland, and to fix the line from Tyne to Solway as the boundary of the Roman Empire.

The Solway at Bowness presents at full tide a sheet of water two miles in breadth; but when the tide recedes its sands are left bare to such an extent that it is fordable by those who know how to avoid the dangers of the course; and until the building of the railway viaduct brought the opposite shores into closer contact, a carrier at Dornock Brow used to act as ferryman, if we may use the word. A board displayed as a signal on the

English side brought him across with his cart for the conveyance of passengers or goods.

The parish church of Bowness, which is said to date from about the year 1300, is a building remarkable for the unusual size and strength of buttresses supporting it, on the south side and at the east and west ends. Doubtless a stone roof at one time added to the weight resting on the walls. The bells are hung in a belfry of peculiar flattened shape. Within a porch are placed two disused bells, one of them bearing the date 1616, the other without any date or inscription, which are known as "the stolen bells of Bowness." The story is that they were carried off by a party of English raiders from the churches of Middlebie and Dornock, and that the Scotsmen by way of reprisal came over the Solway and took with them those of Bowness. These must have been sportive expeditions. It is said of the mosstroopers of earlier date that they would carry off anything which was neither too hot nor too heavy; but they generally, we fancy, sought something more utilitarian and less unwieldy than church bells. The church was restored some nineteen years ago; but its fine old architectural features have been preserved, alongside the elegance of modern equipment. The baptismal font is a massive and curious piece of antique carving, which had lain neglected for generations in a village garden.

Driving from Bowness to Burgh (which the Cumbrian pronounces Bruff), the way lay for some distance close to the Solway and along a road still wet from having been overflowed by the 21-feet tide of the previous night. At Port Carlisle, a mile from Bowness, is another tiny altar stone, built into the wall of the Steam Packet Inn. The name of the inn and the island remanant of a stout stone pier belong to a period when this was a busy shipping centre; but Silloth has long since superseded it as the port of Carlisle, and the barrier interposed by the Solway Viaduct prevents any ships from now reaching it. The "dandy railway," along which a one-horse car runs in the track of the old canal, links the stranded village on to the locomotive railway system at Drumburgh. At the latter place (three miles and three-quarters from Bowness) was a small military station of the Romans; and there is, in good preservation and serving as a farmhouse, a castle or fortified manor house of the Lords

Dacre of the north. In the further course of the drive (extending to about eight miles in all) several pleasant and quaint-looking little villages were passed, and some farmhouses, at one of which a flock of white turkeys was observed. Burgh-by-Sands, the objective of the journey, is a long village, bright with flower gardens, with an air of ease and comfort, and a pleasant flavour of the antique in its architecture. Its chief object of interest is the church. Erected somewhere between 1080 to 1150, it has been well cared for, and the work of restoration recently carried out has been judiciously restrained; so that the fine old pillars and arches are fully preserved. Attached to the church, and forming with it one building, is a massive square tower intended as a place of strength, and with seven-feet thick walls loopholed for the purpose of firing on assailants. The vaulted chamber which forms the basement is entered from the nave of the church by a doorway in which the iron grill remains *in situ*. A narrow winding stair gives access to the upper chambers and to the belfry. The Rev. J. Baker, vicar of the church, who met the party and kindly acted as their guide, remarked that in all probability the same bell which tolled from that tower on the death of Queen Victoria tolled also the requiem for Edward I., when he died in his tent on Burgh March 601 years ago. Train arrangements did not permit of time to visit the modern monument which marks that spot, and which was seen in the distance.

On the return to Bowness a business meeting was held, under the presidency of Dr Maxwell Ross, and the following new members were admitted to the Society:—Mr W. Common, Gracefield, Dumfries; Mr Maitland-Heriot of Whitecroft; Mr R. Pairman Miller, 50 Queen Street, Edinburgh; Mr J. J. Carruthers, Sunderland; Mrs R. S. Dewar, George Street, Dumfries; Mr Bell, Schoolhouse, Parton; Mr R. W. Miln, Annandale Estate Office, Hillside, Lockerbie.

ABSTRACT OF ACCOUNTS

For Year ending 30th September, 1908.

CHARGE.

1.	Balance from last year	£6	17 4
2.	Annual Subscriptions, 307 at 5s, 21 at 2s 6d, 8 Arrears, 1 Life Member	61	5 0
3.	Transactions sold	4	2 6
4.	Interest on Deposit Receipt	0	4 11
5.	Arrears of Subscriptions	2	15 0
		£75	4 9

DISCHARGE.

1.	Rent, Taxes, and Insurances			£8	16 0
2.	Books bought and Transactions printed and issued—				
	Subscription for Periodicals	£2	2 2		
	Books bought	5	10 0		
	Dumfries Standard for printing Transactions	24	0 0		
	Aberdeen Free Press for Blocks	0	18 0		
	Posts and Delivery of Transactions, &c. ...	5	12 2		
				38	2 4
	Note.—This item includes the expense of posts of most of the last two issues of the Transactions.				
3.	Stationery, Advertising—				
	J. Swan	£0	11 0		
	Advertising Meetings	2	3 6		
	J. Maxwell & Son, Printing and Addressing Post Cards calling Meetings	9	1 3		
				11	15 9
4.	Miscellaneous—				
	A. Turner, Chemist, Oxygen, &c.	£0	13 0		
	Rae Brothers, Photographic Dealers ...	0	14 9		
	Commission on Cheques	0	1 4		
	Gratuities	1	2 6		
	Cabs	0	2 0		
	Secretary's Outlays	1	18 1		
	Treasurer's Do.	1	0 0		
				5	11 8
5.	Cash on Deposit Receipt, Life Member's Subscription	5	0 0		
	On hand	3	4 0		
				8	4 0
	Arrears outstanding			2	15 0
				£75	4 9

We have examined the Books and Accounts of the Dumfriesshire and Galloway Natural History and Antiquarian Society for the year ending 30th September last, and certify that the foregoing Abstract exhibits a true and correct account of the Treasurer's operations.

(Sgd.) JOHN SYMONS, Auditor.
BERTRAM M'GOWAN, Auditor.

Dumfries, 3rd October, 1908.

EXHIBITS AND PRESENTATIONS TO THE SOCIETY.

SESSION 1907-8.

4th October, 1907.

Mr James Barbour—Photograph of Roman helmet found at Newstead Camp, Melrose.

Dr J. W. Martin—Natural history specimens.

Professor Scott-Elliot—Haloragia and Abelia.

Mr Samuel Arnott—Acaena burs, Tolmeia Menziesii.

1st November.

Mr Wellwood Maxwell—A number of specimens of tree diseases.

Professor Scott-Elliot—A number of specimens illustrating his presidential address.

Mr William M'Cutcheon—Specimens of local fungi, including one of Gyromita esculenta, found near Thornhill, and said at Kew to be the second recorded from Scotland.

Mr R. H. Hunter—Specimens of Black Currant Mite, specimens of Spruce Gall attacking Larch—from Capenoch, Thornhill.

Mr Robert Service—Red Necked Phalarope, taken at Powfoot on September 8th, 1907; Stone Whorl of large size and beautifully incised pattern, sent to him by Mr John Hill, found at Bowerhouses, Ruthwell.

15th November.

Mr John Corrie, Moniaive—Stone Hammer, found near Auchenstroan, Glencairn, 24th May, 1907, by, and the property of, Mr Hyslop; curious old Knife, found near Lorg, Dalry, the property of Mr Thomas Kerr, Holmhead.

Dr J. W. Martin—Old Property Receipt Book for rents, etc., paid.

6TH DECEMBER.

Mr John M. Corrie—Stone Axe.

Lady Johnson-Ferguson—Photograph of Ancient Tombstone, recently found in Kirkconnell Old Churchyard, with an interesting note thereon (vide Proceedings at Meeting of December 6th). The Photograph presented.

20TH DECEMBER.

Mr John T. Johnstone, Moffat—MS. Catalogue of the Library of the Marquis of Annandale.

Mr Andrew Watt, M.A.—Block showing Rainfall at Cargen from 1866 to 1905. Presented to the Society.

17TH JANUARY.

Mr Thomas Fraser—Old Account Book, which belonged to the Carruthers' Family of Rammerscales. Presented.

Provost Nicholson—Old Book, printed in Glasgow in 1772 "for E. Wilson, Bookseller in Dumfries."

Miss Hearder—Copy of Bewick's "Birds" and Old Indian Teapot.

6TH MARCH.

Mrs Bryce Duncan, on behalf of Mr Henderson, Logan—A very fine collection of about 1600 Church Tokens.

20TH MARCH.

Mr Geddes—A number of Micro-Photographs by his brother, Mr Geddes, London.

Mr Bertram M'Gowan—British Butterflies, illustrating his lecture.

25TH APRIL.

At the District Meeting at Annan Colonel Jackson and others exhibited a large number of interesting Curios and Antiquities together with Natural History Specimens, the most interesting of which were a stone hammer head found in a field near Rigg-of-Gretna; a number of coins of the time of Robert I., Edward I., and William the Lion; Burmese knife; Afghan sword, with which several murders had been committed; Burmese comb, Burmese dice box, Burmese spoons, opium pipe, two old monastery seals, brooch of a Roman soldier; brooch worn by a Royalist in

the time of Charles I., containing two cameo portraits. Other exhibits were :—Ticket admitting Andrew Glendinning to the freedom of the burgh of Annan in 1802; Bible 275 years old, with genealogical tree from Adam to Christ, and "Psalms of Spiritual Songs," with music, etc.

18TH MAY.

Professor Scott-Elliot—A number of interesting Plants.

Dr J. W. Martin—Stone Coral from the Arbigland Reef and other Specimens and Curios.

Rev. H. A. Whitelaw—A Coin of Claudius, struck to commemorate the Conquest of Great Britain by the Romans.

Mr Robert Rawson—A number of specimens of Wool and other Textile Raw Material. (Mr Rawson gave an interesting explanation of the materials and their values and uses.)

Miss A. Murphie—An Old Edition of "Peden's Prophecies."

LIST OF EXCHANGES.

1. The British Museum.
2. The Advocates' Library, Edinburgh.
3. Bodleian Library, Oxford.
4. University Library, Cambridge.
5. The British Natural History Department, South Kensington.
6. The Yorkshire Naturalists' Union, The Museum, Hull.
7. The United States Department of Agriculture, Washington, U.S.A.
8. Museum of Comparative Zoology, Cambridge, Mass., U.S.A.
9. Meriden Scientific Society, Meriden, Connecticut, U.S.A.
10. Minnesota Academy of Natural Sciences, Minneapolos, Minnesota, U.S.A.
11. The Hawick Archæological Society, Hawick.
12. Harvard College of Comparative Zoology, Harvard, Cambridge, Pennsylvania, U.S.A.
13. Austral Association for Science, 5 Elizabeth Street, Sydney, Australia.
14. The Edinburgh Botanical Society, Royal Botanical Gardens, Edinburgh.
15. New York Academy of Sciences, New York, U.S.A.
16. Philadelphia Academy of Natural Sciences, Philadelphia, Pa., U.S.A.
17. Rochester Academy of Sciences, Rochester, New York, U.S.A.
18. Staten Island Association of Arts and Sciences, Staten Island, New Brighton, Borough of Richmond, New York, U.S.A.
19. Liverpool Institute of Commercial Research in the Tropics, Public Museum, Liverpool.
20. Buenos Ayres Museo Nacional, Museo Nacional, Buenos Ayres, Argentina.
21. Brooklyn Institute of Arts and Sciences, Brooklyn, New York, U.S.A.
22. The Edinburgh Geological Society, Edinburgh. (D. Gloag,

India Buildings, George IV. Bridge, Edinburgh, Secretary.)

23. Geological Society of Glasgow, Bath Street, Glasgow.
24. Wisconsin Academy of Arts and Sciences, Madison, Wisconsin, U.S.A.
25. Banffshire Field Club, Banff.
26. Berwickshire Naturalists' Club, c/o Rev. J. Marshall Aitken, Ayton, N.B.
27. Glasgow Natural History Society, Bath Street, Glasgow.
28. Perthshire Society of Natural Science, Natural History Museum, Tay Street, Perth.
29. Stirling Natural History and Archæological Society, Stirling.
30. Belfast Naturalists' Field Club, Belfast, Ireland.
31. Cardiff Naturalists' Society, Cardiff, Wales.
32. Essex Field Club, Essex County Museum of Natural History, Romford, Essex.
33. Holmesdale Natural History Club, Reigate.
34. Marlborough College of Natural History, The College, Marlborough.
35. Nova Scotia Institute of Science, Halifax, Nova Scotia.
36. Smithsonian Institute, U.S. National Museum, Washington, U.S.A.
37. Davenport Academy of Natural Sciences, Davenport, Iowa, U.S.A.
38. Elisha Mitchell Scientific Society, Chapelhill, N. Carolina, U.S.A.
39. U.S. Geological Survey, Washington, U.S.A.
40. U.S. Bureau of Ethnology, Washington, U.S.A.
41. Glasgow Archæological Society, 88 West Regent Street, Glasgow.
42. The Missouri Botanical Garden, St. Louis, Missouri, U.S.A.
43. Society of Antiquaries of Scotland, Queen Street, Edinburgh.
44. British Association for the Advancement of Science, Burlington House, London, W.
45. Canadian Institute, 198 College Street, Toronto.

LIST OF MEMBERS OF THE SOCIETY.

SESSION 1907-8.

Those who joined the Society at its reorganisation on 3rd November, 1876, are indicated by an asterisk.

LIFE MEMBERS.

Duke of Buccleuch and Queensberry, K.G., K.T. ...10th Jan., 1895.
Earl of Mansfield, Scone Palace, Perth.....18th Nov., 1907.
F. R. Coles, Edinburgh .....11th Nov., 1881.
Wm. D. Robinson Douglas, F.L.S., Orchardton.....11th Nov., 1881.
Thomas Fraser, Maxwell Knowe, Dalbeattie .....2nd March, 1888.
Alex. Young Herries, Spottes, Dalbeattie.
J. J. Hope-Johnstone, Raehills, Lockerbie .....3rd May, 1884.
Wm. J. Herries Maxwell, Munches .....1st Oct., 1886.
Sir Mark J. M'Taggart Stewart, Bart., Southwick...7th June, 1884.

HONORARY MEMBERS.

Baker, J. G., F.R.S., F.L.S., V.M.H., 3 Cumberland Road, Kew .....2nd May, 1890.
Brown, J. Harvie, F.L.S., Dunipace House, Larbert.
Carruthers, Wm., F.R.S., British Museum.
Chinnock, E. J., LL.D., 41 Brackley Road, Chiswick, W. .....5th Nov., 1880.
M'Andrew, James, 69 Spotteswoode Street, Edinburgh.
Sharp, Dr David, F.R.S., Cambridge.
Shirley, G. W., Dumfries .....28th Oct., 1904.
Wilson, Jos., Liverpool .....29th June, 1888.

CORRESPONDING MEMBERS.

Anderson, Dr Joseph, LL.D., H.R.S.A., Assistant Secretary Society of Antiquities of Scotland, Keeper of the National Museum of Antiquities, Edinburgh.
Borthwick, Dr A. W., B.Sc., Royal Botanic Gardens, Edinburgh.

Bryce, Professor Thos. H., M.A., M.D., F.R.S.E., F.S.A.Scot., Lecturer on Anatomy, Glasgow University, Member of the Royal Commission on Ancient and Historical Monuments, 2 Grantley Terrace, Glasgow.

Curle, James, W.S., F.S.A.Scot., Priorwood, Melrose.

Gregory, Professor J. W., D.Sc., F.R.S., F.R.S.E., F.G.S., M.I.M.M., etc., Professor of Geology, Glasgow University.

Holmes, Professor E. M., F.L.S., F.R.B.S., Edinburgh and London, F.R.H.S., etc., 17 Bloomsbury Square, London, W.C.

Johnstone, R. B., Hon. Secretary and Editor, Andersonian Naturalists' Society, 17 Cambridge Drive, Glasgow.

Keltie, J. Scott-, LL.D., F.S.A.Scot., Secretary, Royal Geographical Society, Hon. Member Royal Scottish Geographical Society, 1 Savile Row, Burlington Gardens, London, W.

Lewis, F. J., F.L.S., Lecturer in Geographical Botany, The University, Liverpool.

Macdonald, Dr George, M.A., LL.D., 17 Learmonth Gardens, Edinburgh.

Reid, Clement, F.R.S., F.L.S., F.G.S., 28 Jermyn Street, London, S.W.

Rhys, Professor Sir John, M.A., D.Litt., Professor of Celtic, and Principal of Jesus College, Oxford, Fellow of the British Academy.

Smith, Miss Annie Lorraine, B.Sc., F.L.S., Temporary Assistant, Botanical Department, British Museum, 20 Talgarth Road, West Kensington, London, W.

Watt, Andrew, M.A., F.R.S.E., Secretary Scottish Meteorological Society, 122 George Street, Edinburgh.

ORDINARY MEMBERS.

Affleck, James, Castle-Douglas .....23rd March, 1907.

Agnew, Sir A. N., Bart., of Lochnaw, Stranraer .....9th Jan., 1891.

Aitken, Miss M. Carlyle, 2 Dunbar Terrace, Dumfries .....1st June, 1883.

Andson, Rev. W., Newall Terrace, Dumfries .....3rd Oct., 1886.

Angus, Rev. A., Ruthwell .....4th July, 1908.

Armstrong, T. G., Timber Merchant, 24 Rae Street, Dumfries .....9th Sept., 1905.

Armstrong, F., Burgh Surveyor, Dumfries .....6th Oct., 1905.

Arnott, S., F.R.H.S., Sunnymead, Maxwelltown .....5th Feb., 1893.

Armistead, W. H., Kippford, Dalbeattie.

Atkinson, Mrs, The Ladies' Club, Castle Street, Dumfries .....28th Oct., 1904.

Aitchison, Rev. Wm., M.A., Glendower, Castle-Douglas .....19th Jan., 1908.

Barbour, James, F.S.A.Scot., St. Christopher's, Dumfries .....3rd Dec., 1880.
Barbour, Robert, Belmont, Maxwelltown .....4th March, 1887.
Barbour, Robert, Solicitor, Maxwelltown .....11th May, 1889.
Barker, John, Redlands, Dumfries .....23rd Sept., 1905.
Beattie, Thos., Davington, Langholm .....30th May, 1896.
Bedford, His Grace the Duke of .....7th Feb., 1908.
Bedford, Her Grace the Duchess of .....7th Feb., 1908.
Bell, Richard, of Castle O'er, Langholm .....30th May, 1896.
Bell, T. Hope, Morrington, Dunscore .....22nd Oct., 1897.
Bell, James, Schoolhouse, Parton.
Bennet, Thos., Knockbrex Gardens, Kirkcudbright, 5th April, 1907.
Blacklock, J. E., Solicitor, Dumfries .....8th May, 1896.
Borland, John, Auchencairn, Closeburn .....7th Sept., 1895.
Bowie, J. M., The Hain, Dalbeattie Road, Maxwelltown .....15th Dec., 1905.
Brodie, D., Ravenscraig, Rotchell Road, Dumfries, 23rd Dec., 1908.
Browne, Sir James Crichton, 61 Carlisle Place, Mansions, Victoria Street, London, S.W. .....3rd Sept., 1892.
Brown, Stephen, Borland, Lockerbie .....10th June, 1899.
Brown, T. M., Closeburn, Thornhill .....6th Aug., 1891.
Bryson, Alex., Irish Street, Dumfries .....6th Feb., 1891.
Byers, J. R., Solicitor, Lockerbie .....14th Sept., 1907.
Cairns, Rev. J., Rotchell Park, Dumfries .....6th Feb., 1891.
Cairns, R. D., Selmar, Dumfries .....20th Dec., 1907.
Campbell, Rev. J. Montgomery, St. Michael's Manse, Dumfries .....15th Dec., 1905.
Campbell, Rev. J. Marjoribanks, Torthorwald .....21st Nov., 1908.
Carmont, James, Castledykes, Dumfries .....6th Feb., 1891.
Carruthers, J. J., Park House, Southwick-on-Weir, Sunderland .....Oct., 1908.
Clarke, Dr, Charlotte Street, Dumfries .....6th June, 1889.
Charlton, John, Huntingdon, Dumfries .....15th Dec., 1905.
Chapman, A., Dinwiddie Lodge, Lockerbie ..... 1907.
Crichton, Douglas, F.S.A.Scot., London .....7th Feb., 1908.
Coats, W. A., of Dalskairth .....18th Sept., 1896.
Common, W. Bell, Gracefield, Dumfries .....14th Sept., 1908.
Copland, Miss, The Old House, Newabbey .....5th July, 1890.
Cormack, J. F., Solicitor, Lockerbie.....4th June, 1893.
Corrie, Jos., Millbank, Maxwelltown ..... 1908.
Corrie, John, Burnbank, Moniaive .....6th Aug., 1887.
Corrie, John M., St. Michael's Street .....4th Oct., 1907.
Cowan, John, Glenview, Maxwelltown .....15th Dec., 1905.
Cossar, Thos., Craignee, Maxwelltown .....23rd Oct., 1908
*Davidson, James, Summerville, Maxwelltown .....3rd Nov., 1876
Davidson, J., Hillhead, Bankend Road, Dumfries...10th May, 1895.
Dewar, R. S., 35 George Street, Dumfries ..... 3rd Nov., 1905.
Dickie, Wm., Merlewood, Maxwelltown .....6th Oct., 1882.

Dickson, G. S., Moffat Academy, Moffat .....14th Sept., 1907.
*Dinwiddie, W. A., Bridgebank, Buccleuch Street, Dumfries .....3rd Nov., 1876.
Dinwiddie, Rev. J. L., Ruthwell .....18th May, 1908.
Dinwiddie, R., Overton, Moffat Road, Dumfries...9th March, 1883.
Dods, J. W., St. Mary's Place, Dumfries .....2nd March, 1883.
Drummond, Bernard, Plumber, Dumfries .....7th Dec., 1888.
Drummond, J. G., Stewart Hall, Dumfries .....17th Nov., 1905.
Duncan, Jno. Bryce, of Newlands, Dumfries .....11th Feb., 1898.
Duncan, Mrs, of Newlands, Dumfries .....20th Dec., 1907.
Dunlop, Rev. S., Irongray Manse, Dumfries .....10th June, 1905.
Easterbrook, Dr, Crichton House, Dumfries .....20th March, 1908.
Edie, Rev. W., Greyfriars' Manse, Dumfries .....15th Dec., 1905.
Foster, Wm., Nunholm, Dumfries .....20th Oct., 1908.
Fergusson, Rev. G. F., St. Mary's Place, Dumfries...15th Dec., 1905.
Forbes, Rev. J. M., Kirkmahoe .....21st Nov., 1908.
Gillespie, Wm., Solicitor, Castle-Douglas .....14th May, 1892.
Gladstone, H. Stewart, F.Z.S., Lannhall, Thornhill, 15th July, 1905.
Gladstone, Mrs H. S., Lannhall, Thornhill .....13th July, 1907.
Gladstone, J. B., Architect, Lockerbie .....15th Feb., 1907.
Glover, John, W.S., 1 Hill Street, Edinburgh .....23rd Nov., 1906.
Gooden, W. H., Glebe Terrace, Dumfries .....14th Sept., 1907.
Gordon, Robert, Brockham Park, Betchworth, Surrey .....10th May, 1895.
Gordon, Miss, Kenmure Terrace, Dumfries .....14th Sept., 1907.
Grahame, Mrs, Springburn Cottage, Kilbarchan, Renfrewshire .....28th July, 1906.
Grierson, John, Town Clerk, Dumfries .....6th Oct., 1882.
Grierson, R. A., Town Clerk, Dumfries .....15th March, 1907.
Haining, John M., Solicitor, Dumfries .....21st Nov., 1908.
Halliday, T. A., Leafield Road, Dumfries .....26th Jan., 1906.
Halliday, Mrs, Leafield Road, Dumfries .....26th Jan., 1906.
Halliday, W. J., Esthwaite, Lochmaben .....6th April, 1906.
Halliday, D., Lockerbie .....24th Feb., 1906.
Hannay, Miss, Langlands, Dumfries .....6th April, 1888.
Hannay, Miss J., Langlands, Dumfries .....6th April, 1888.
Hare, H. Leighton, Lochvale, Dumfries .....10th June, 1905.
Hastie, D. H., Victoria Terrace, Dumfries .....24th Feb., 1906.
Henderson, Mrs, Logan, Cumnock .....18th Dec., 1908.
Henderson, James, Solicitor, Dumfries .....9th Aug., 1905.
Henderson, John, Solicitor, Dumfries .....5th July, 1890.
Henderson, Thos., Solicitor, Lockerbie .....17th Oct., 1902.
Herries, Right Hon. Lord, Everingham Park, Yorkshire .....10th Jan., 1895.
Heriot, W. Maitland, Whitecroft .....14th Sept., 1908.
Hill, Edward J., Ladyfield, Dumfries .....25th Nov., 1904.
Houston, James, Marchfield, Dumfries .....9th Aug., 1905.
Hughes, Rev. G. D., Dumfries .....25th April, 1908.

Hughes, Mrs, Dumfries .....25th April, 1908.
Hunter, Dr Joseph, Castle Street, Dumfries .....24th June, 1905.
Irving, Colonel, of Bonshaw, Annan .....18th Jan., 1901.
Irving, John B., Balmacneil, Ballinluig, Perthshire 16th Oct., 1903.
Irving, John A., West Fell, Corbridge-on-Tyne .....7th Dec., 1906.
Irving, H. C., Burnfoot, Ecclefechan .....1907.
Irvine, Wm. Ferguson, F.S.A.Scot., Birkenhead ...7th Feb., 1908.
Jackson, Colonel, 6 Fruid's Park, Annan .....9th Aug., 1905.
Johnson-Ferguson, Sir J. E., Bart., of Springkell, Ecclefechan .....30th May, 1896.
Johnson-Ferguson, A., Wiston Lodge, Lamington ...9th Sept., 1905.
Johnstone, John T., Victoria House, Moffat .....4th April, 1890.
Johnstone, T. F., Balvaig, Maxwelltown .....12th Sept., 1908.
Johnstone, Mrs, Victoria Terrace, Dumfries .....17th Feb., 1896.
Johnstone, W. S., Victoria Terrace, Dumfries .....11th Feb., 1898.
Johnstone, T. S., Victoria Terrace, Dumfries.
Keswick, J. J., of Mabie .....6th March, 1908.
Kidd, Rev. Thos., U.F. Manse, Moniaive .....29th June, 1895.
Kirkpatrick, Rev. R. S., The Manse, Govan .....17th Feb., 1896.
Laidlaw, John, Plasterer, Lockerbie .....18th Oct., 1901.
Law, Rev. James, South U.F. Manse, Dumfries ...2nd June, 1905.
Little, Thos., Buccleuch Street, Dumfries .....4th Oct., 1907.
*Lennox, Jas., F.S.A.Scot., Edenbank, Maxwelltown, 3rd Nov., 1876.
Loreburn, The Right Hon. Lord, 6 Eton Square, London, S.W. .....9th Jan., 1891.
Lowrie, Rev. W. J., Manse of Stoneykirk, Wigtownshire .....2nd March, 1908.
Lusk, Hugh D., Larch Villa, Annan .....25th April, 1908.
Malcolm, A., George Street, Dumfries .....2nd Oct., 1894.
Malcolm, W., Lockerbie Academy, Lockerbie .....14th Sept., 1907.
Maloney, Miss Lily, Benedictine Convent, Dumfries, 4th Dec., 1908.
Mann, R. G., Cairnsmore, Marchmount Park, Dumfries .....24th Oct., 1900.
Manson, D., Maryfield, Dumfries .....16th June, 1906.
Manson, Mrs, Maryfield, Dumfries .....16th June, 1906.
Matthews, Wm., Dunelm, Maxwelltown .....28th July, 1906.
Matthews, Mrs, Dunelm, Maxwelltown .....28th July, 1906.
Martin, Dr J. W., Newbridge, Dumfries .....16th Oct., 1896.
Marriot, C. W., 21 Burnbank Gardens, Glasgow ...27th June, 1907.
Maxwell, Sir H., Bart., of Monreith, Wigtownshire...7th Oct., 1892.
Maxwell, W. J., Terregles Banks, Dumfries .....6th Oct., 1879.
Maxwell, Wellwood, of Kirkennan, Dalbeattie .....5th Nov., 1886.
Maxwell, John, Tarquah, Maxwelltown .....20th Jan., 1905.
Miln, R. W., Hillside, Lockerbie .....14th Sept., 1908.
Milligan, J. P., Aldouran, Maxwelltown .....17th Oct., 1905.
Milligan, Mrs, Aldouran, Maxwelltown .....17th Oct., 1905.
Mihaltsek, Miss Kathe, Benedictine Convent .....4th Dec., 1908.
Millar, F., Bank of Scotland, Annan .....3rd Sept., 1886.

Millar, R. Pairman, S.S.C., 50 Queen Street, Edinburgh .....14th Sept., 1908.
Mond, Miss, Aberdour House, Dumfries .....9th Sept., 1905.
Murdoch, F. J., Cluden Bank, Holywood .....21st Dec., 1906.
Murphie, Miss Annie, Cresswell House, Dumfries...23rd Nov., 1906.
Murray, G. Rigby, Parton House, Parton .....4th Dec., 1908.
Murray, Wm., Murraythwaite, Ecclefechan .....8th Feb., 1895.
Murray, Mrs, Murraythwaite, Ecclefechan .....29th July, 1905.
M'Burnie, John, Castle Brae, Dumfries .....21st Nov., 1908.
M'Call, James, of Caitloch, Moniaive .....29th June, 1895.
M'Cargo, James, Kirkpatrick-Durham .....24th April, 1896.
M'Cormick, Andrew, Solicitor, Newton-Stewart .....3rd Nov., 1905.
M'Cormick, Rev. F., F.S.A.Scot., Wellington, Salop 4th Oct., 1907.
M'Cracken, Miss, Fernbank, Lovers' Walk .....9th Nov., 1906.
M'Cutcheon, Wm., B.Sc., Inverie, Park Road, Maxwelltown .....18th Oct., 1901.
Macdonald, J. C. R., W.S., Dumfries .....6th Nov., 1885.
M'Dowall, Rev. W., U.F. Manse, Kirkmahoe .....20th March, 1908.
M'Evoy, Miss May, Benedictine Convent .....4th Dec., 1908.
M'Gowan, B., Solicitor, Dumfries .....26th Oct., 1900.
M'Jerrow, David, Town Clerk, Lockerbie .....22nd Feb., 1906.
Mackenzie, Colonel, of Auchenskeoch .....25th Aug., 1895.
M'Kerrow, M. H., Solicitor, Dumfries .....19th Jan., 1900.
M'Kerrow, Matt. S., Boreland of Southwick .....9th Jan., 1890.
M'Kie, John, R.N., Anchorlea, Kirkcudbright .....4th April, 1881.
MacKinnel, W. A., The Sheiling, Maxwelltown ...22nd Feb., 1906.
MacKinnel, Mrs, The Sheiling, Maxwelltown .....22nd Feb., 1906.
M'Lachlan, Mrs Dryfemount, Lockerbie .....26th March, 1906.
M'Lachlan, Jas., M.D., Lockerbie .....25th Oct., 1895.
Neilson, George, LL.D., Wellfield, Partickhill Road, Glasgow .....13th Dec., 1895.
Neilson, J., of Mollance, Castle-Douglas .....13th March, 1896.
Nicholson, J. H., Airlie, Maxwelltown .....9th Aug., 1904.
Ovens, Walter, of Torr, Auchencairn .....13th March, 1896.
Pairman, Dr, Moffat .....24th Feb., 1906.
Palmer, Charles, Woodbank Hotel, Dumfries .....29th July, 1905.
Paton, Rev. Henry, Mayfield Road, Edinburgh .....21st Nov., 1908.
Payne, J. W., 8 Bank Street, Annan .....8th Sept., 1906.
Paterson, D., Solicitor, Thornhill .....4th July, 1908.
Paterson, John, 7 Holmend, Moffat .....4th Dec., 1908.
Pattie, R., Buccleuch Street, Dumfries .....23rd Oct., 1908.
Penman, A. C., Mile Ash, Dumfries .....18th June, 1901.
Penman, Mrs, Mile Ash, Dumfries .....17th Oct., 1905.
Phyn, C. S., Procurator-Fiscal, Dumfries .....6th Nov., 1885.
Pickering, R. Y., of Conheath, Dumfries .....26th Oct., 1900.
Primrose, John, Solicitor, Dumfries .....5th Dec., 1889.
Proudfoot, John, Ivy House, Moffat .....9th Jan., 1890.
Rae, Rev. R. Neill, The Manse, Lochmaben .....21st Dec., 1906.

Rawson, Robert, Glebe Street, Dumfries .....4th Oct., 1907.
Reid, James, Chemist, Dumfries.
Reid, R. C., of Mouswald Place .....18th Nov., 1907.
Robertson, Dr J. M., Penpont .....3rd Feb., 1886.
Robson, John, Westbourne, Maxwelltown .....25th May, 1895.
Robson, Dr J. D., Maxwelltown .....6th March, 1908.
Robertson, Rev. G. Philip, Sandhead U.F. Manse, Wigtownshire .....20th March, 1908.
Romanes, J. M., B.Sc., 6 Albany Place, Dumfries...18th Jan., 1907.
Ross, Dr J. Maxwell, Duntrune, Castle-Douglas Road .....11th July, 1891.
*Rutherford, J., Jardington, Dumfries .....Nov., 1876.
Saunders, Mrs, Rosebank, Lockerbie.
Scott-Elliot, G. F., F.L.S., F.R.G.S., of Newton, Dumfries .....4th March, 1887.
Scott-Elliot, Mrs, Newton, Dumfries .....26th Oct., 1906.
Scott, Alexander, Solicitor, Annan .....7th Nov., 1890.
Scott, Rev. J. Hay, F.S.A.Scot., Sanquhar .....6th Aug., 1887.
Scott, R. A., per Geo. Russell, Banker, Dumfries.....1st Oct., 1890.
Scott, S. H., Glebe Terrace, Dumfries .....4th July, 1908.
Scott, W. S., Redcastle, Dalbeattie .....14th Jan., 1898.
Scott, W. Hart, The Hovel, Maxwelltown .....9th Nov., 1906.
Scott, Dr W., Clarencefield .....4th July, 1908.
Semple, Dr, D.Sc., Mile Ash, Dumfries .....12th June, 1901.
*Service, Robert, M.B.O.U., Maxwelltown .....1876.
Service, Robert, Jun., Janefield, Maxwelltown...24th March, 1905.
Shannon, John P., Noblehill Mill, Dumfries .....18th Jan., 1907.
Sinclair, James, Langlands, Dumfries .....20th March, 1908.
Smith, Miss, Llangarth, Maxwelltown .....6th Oct., 1905.
Stark, Rev. W. A., The Manse, Kirkpatrick-Durham .....23rd Oct., 1908.
Smart, J. T. W., Catherine Street.....18th Dec., 1908.
Stephen, Rev. W. L., St. Mary's Manse, Moffat.....28th June, 1904.
Stewart, William, Shambellie, Newabbey .....21st Dec., 1906.
*Stobie, P., Cabinetmaker, Dumfries .....3rd Nov., 1876.
Swan, J., Stationer, Dumfries.
Symons, John Royal Bank, Dumfries .....2nd Feb., 1883.
Symons, John, Solicitor, Dumfries .....6th Nov., 1885.
Taylor, Captain William .....20th March, 1908.
*Thomson, J. S., Jeweller, Dumfries .....3rd Nov., 1876.
Thomson, Miss, c/o Miss Dunbar, Langlands, Dumfries.
Thomson, Mrs, George Street, Dumfries .....4th July, 1908.
Thomson, G. Ramsay, George Street, Dumfries .....4th July, 1908.
Thompson, Mrs H. A., Inveresk, Castle Street, Dumfries .....25th Nov., 1904.
Todd, George Eyre, 7 Oakfield Terrace, Hillhead, Glasgow .....6th Dec., 1902.
Turner, Alex., Chemist, Dumfries .....17th Oct., 1905.

Veitch, W. H., Factor, Hoddom .....26th Oct., 1900.
Waddell, J. B., Airlie, Dumfries .....11th June, 1901.
Wallace, M. G., Terreglestown, Dumfries .....11th March, 1898.
Wallace, James, The Hope, Moffat .....18th May, 1907.
Wallace, James Cecil, The Hope, Moffat .....18th May, 1907.
Wallace, Miss, Lochvale House, Lochmaben .....7th Oct., 1892.
Wallace, Robert, Durham Villa, Dumfries .....6th Nov., 1908.
Watt, James, Crawford Villa, Johnstone Park, Dumfries .....7th March, 1879.
Watt, Miss, Crawford Villa, Johnstone Park, Dumfries .....6th Oct., 1905.
Watson, Thos., Castlebank, Dumfries .....9th Jan., 1880.
Weatherstone, Andrew, Bank of Scotland House, Dumfries .....1st Dec., 1905.
White, John, Oaklands, Noblehill .....28th July, 1906.
White, Mrs, Oaklands, Noblehill .....28th July, 1906.
Whitelaw, J. W., Solicitor, Dumfries .....6th Nov., 1885.
Whitelaw, Rev. H. A., U.F. Manse, Albany, Dumfries .....20th May, 1904.
Wightman, J., Post Office, Dumfries .....18th Nov., 1907.
Will, Geo., Farm Manager, Crichton Royal Institution .....28th July, 1906.
Wilson, Mrs, Castledykes Cottage, Dumfries .....24th May, 1905.
Wilson, Miss, Castledykes Cottage, Dumfries.....24th Feb., 1906.
Wilson, J. R., Solicitor, Sanquhar .....2nd Oct., 1885.
Witham, Colonel J. K. Maxwell, C.M.G., of Kirkconnel, Dumfries .....7th March, 1890.
Witham, Miss Maud, Kirkconnel, Dumfries .....6th Feb., 1890.
Yerburgh, R. A., of Barwhillanty, Parton, R.S.O., per R. Powell, 25 Kensington Gore, London, S.W. .....17th Feb., 1896.