

DUMFRIESSHIRE AND GALLOWAY
NATURAL HISTORY & ANTIQUARIAN
SOCIETY.

FOUNDED 20th NOVEMBER, 1862.

TRANSACTIONS
AND
JOURNAL OF PROCEEDINGS
1918-19.

THIRD SERIES, VOLUME VI.

EDITORS:
R. C. REID AND MRS G. W. SHIRLEY.

DUMFRIES
Published by the Council of the Society.
1919.



SIR WILLIAM JARDINE, *circa* 1822.
From a Portrait at Luce.
[See "A Naturalist's Calendar," pp. 88-124.]

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EDITORIAL NOTE.

With the publication of this volume, the war-time Editors of the *Transactions* terminate their work, which is being taken over once more by Mr G. W. Shirley, now demobilised, who is responsible for the Index to this volume.

The Society has to express its obligations to Messrs A. Henderson Bishop, Robert Gladstone, and Captain H. S. Gladstone for the loan of blocks to illustrate their papers.

It must be understood that as each contributor has seen a proof of his paper, the Society does not hold itself responsible for the accuracy of the data given therein.

Members working on local Natural History and Archaeological subjects should communicate with the Hon. Secretary.

Papers may be submitted any time, preference being given to original work on local subjects.

Enquiries regarding purchase of *Transactions* and payment of subscriptions should be made to the Hon. Treasurer, Mr M. H. M'Kerrow, 43 Buccleuch Street, Dumfries.

Exchanges, presentations, and exhibits should be sent to the Hon. Secretary, Ewart Public Library, Dumfries.

PROCEEDINGS AND TRANSACTIONS
OF THE
Dumfriesshire and Galloway
Natural History & Antiquarian Society.

SESSION 1918-19.

25th October, 1918.

Annual Meeting.

Chairman—Mr G. M. STEWART, V.P.

The office-bearers and members of the Council for the session were elected. (See page 3.)

The Secretary and Treasurer submitted their reports, which were approved. The former showed that 3 members had died and 7 resigned. On the other hand, 23 new members had been elected—6 life and 17 ordinary members.

The Treasurer reported that in August, 1918, it was found necessary to issue the following appeal to a few of the more prominent members of the Society :—

“ The Council of the Society regret to have to inform Members that, owing to an increase of rent and rates, together with the greatly increased cost of publishing—which now exceeds three times the amount before the war—there is a prospect of the activities of the Society having to terminate unless funds can be raised to enable it to continue.

“ A large number of members are in the Army or Navy, and cannot be expected to continue their annual subscriptions at present; but, apart from them, the membership does not show any serious decline. Efforts to enrol new members have had considerable success.

“ Every economy has been practised. The bulk of the *Transactions* has been much reduced, and the annual volume is now a biennial covering two sessions. The quality and value of the papers submitted and printed is steadily increasing in number, interest, and permanent value, and the Society now takes high rank amongst its kindred contemporaries. Its activities cover a wide field, and there is an abundance of material to hand, and no lack of good and interesting papers are forthcoming.

“ The Council are of opinion that no effort should be spared to keep in existence the Society, founded in 1862; for only those who have built up such a Society know how difficult it would be to start it again if its thread of continuity has been broken.

“ The last volume of *Transactions*, recently issued to members, was only rendered possible by the liberality of one or two members. The Council, whilst very grateful to them, does not think it fair to them that this should continue, and, after careful consideration, has decided to appeal to members to raise a fund of £50—sufficient to carry the Society over the next two years—when it is hoped that more normal conditions will prevail.”

That there was a strong desire locally that the Society should not be allowed to fall into abeyance is shewn by the gratifying list of subscriptions. The Society's thanks are due to the subscribers for having enabled it to carry on during the War. An asterisk denotes those who have become life members.

The Duchess of Bedford	£20	0	0
Captain H. S. Gladstone	10	10	0
J. Lang of Lannhall	5	5	0
Captain H. Keswick	5	0	0
W. D. Robinson Douglas	5	0	0
J. I. M'Connel	5	0	0
*William Weir	5	0	0
*Mrs Thomas M'Kie	5	0	0
*William Irving	5	0	0
*Sir Robert Nivison	5	0	0
C. F. Davidson-Wilsons	4	4	0
Sir William Younger, Bart.	2	2	0

D. J. Jardine	...	...	...	...	£2	2	0
F. A. Johnston	...	...	...	...	2	2	0
Sir E. Johnson-Ferguson	...	...	...	...	2	0	0
W. J. H. Maxwell	...	...	...	...	2	0	0
Colonel Sir C. Laurie, Bart.	...	...	...	...	1	1	0
R. Y. Pickering	...	...	...	...	1	1	0
Colonel Mackenzie	...	...	...	...	1	1	0
J. H. Balfour-Browne, K.C.	...	...	...	...	1	1	0
C. Brook	...	...	...	...	1	0	0
Arthur Bell	...	...	...	...	1	0	0
Dr Easterbrook	...	...	...	...	1	0	0
S. Wallace Williamson	...	...	...	...	1	0	0
R. C. Reid	...	...	...	...	1	0	0
Stephen Brown	...	...	...	...	0	10	0

The following further subscriptions were received in October, and therefore figure in the 1918-19 accounts:—

His Grace the Duke of Buccleuch	...	...	...	...	£5	0	0
P. A. Moltano	...	...	...	...	5	0	0
*William Brown	...	...	...	...	5	0	0
Robert Gladstone, Junior	...	...	...	...	5	0	0
Captain H. S. Gladstone (second donation)	...	...	...	...	5	0	0
Sir R. Buchanan Jardine	...	...	...	...	2	2	0
J. Bryce Duncan	...	...	...	...	1	1	0
H. W. F. Hunter Arundell	...	...	...	...	1	0	0

As the accounts show, the Deposit Receipt and Excavation Fund have been uplifted, and reinvested with new subscriptions in War Savings Certificates, though part of the new subscriptions will have to be transferred later to income account.

The Chairman announced that with the kind assistance of Mrs Thompson of Inveresk a large number of photographs, chiefly of local antiquities, had been mounted in the Society's album, and that he had completed a classified list of all papers and publications in the Society's possession, by means of which members could tell at a glance exactly what had been published relating to any given subject.

It was agreed that the annual subscription should remain as before.

Antlers.

By Sir HERBERT MAXWELL, Bart.

In the summer of 1913 a remarkable exhibition was organised by *Country Life*, arranged by Messrs Rowland Ward, and displayed in the gallery of the Royal Water-Colour Society, Pall Mall, consisting entirely of the heads and antlers of red and fallow deer. It was a chance not to be missed by any one interested in British natural history, for such a representative collection had never before been got together, nor is it likely that so fair an opportunity will recur of comparing the extremes of dimension in the antlers of red deer—the fantastic exuberance developed by sheltered quarters and abundant food, as in the head of the great Warnham stag with its thirty-nine points—the baneful effect of severe exposure, as shown in the horns from Loch Maddy and Corrour Forest—the noble development of antlers in British red stags acclimatised in the rich pasture and genial sunshine of New Zealand.

To the owners of Scottish deer forests the exhibition was not devoid of melancholy, for it showed how the Highland heads have deteriorated within the last hundred years. Except in rare instances, where a temporary effect has been produced by the introduction of fresh blood from English parks or Continental mountains, it would be impossible at the present day to match such heads as the ten-pointer from Kinlochewe, shot in 1814,¹ or the grand seventeen-pointer from Gordon Castle, shot in Glenfiddich in 1831.²

“It is curious,” observes Mr Walter Winans in his treatise on *Deer-Breeding for Fine Heads*,³ “that Scottish stags are at the present time the worst in Europe.” It would be strange if they were not, having regard to the conditions of

¹ It is doubtful whether the Kinlochewe horns, with their extraordinary width of spread, stand now as they did on the stag's head when living. Probably if the piece of skin covering the junction were removed, it would be found that the horns had been sawn off the skull and re-set at a wider angle.

² This splendid stag weighed 37 stone 7 lb. as he fell on 21st September. The length on outside curve of each antler is 40 inches.

³ London: Rowland Ward; 1913.

climate, exposure, and food with which they have to contend. The real wonder is that they have not degenerated still further from the magnificent animals that once roamed the Caledonian forest—that fine type which, as shown by the size of bones and horns exhumed from peat mosses and estuaries in Scotland, was once no whit inferior to the red deer which now inhabit the Caucasus, the Carpathians, Asia Minor, and, it may be added, certain English parks. Originally and constitutionally the red deer was a woodland dweller, resorting, no doubt, to high bare ground in the heat of summer to escape the torment of flies and to browse on the fine flush of upland grass, but ever relying upon the forest—the true forest—for shelter, warmth, and food in winter. Man stripped the land of trees, expelling the deer from plain and valley, and confining them to storm-swept wastes at high altitudes. It is through a grim kind of irony that the term “deer forest” has come to connote some of the bleakest, most treeless tracts in Northern Britain. Of the true forest nothing remains but a few—very few—shreds and patches; the finest of which, that dark mantle of noble pine, along the south shore of Loch Arkaig, has been consigned to the timber merchant within the last few years.⁴

It would be folly now to search the deer ground of Sutherland and Caithness for a head approaching in grandeur to one preserved in the museum at Dunrobin. This was found in the Halladale river in 1869. “The circumference of the beam above the bay point is extraordinary, no less than nine

⁴ In 1788 Alexander, 4th Duke of Gordon, sold a great breadth of the pine forest of Glenmore to an English merchant, who took eighteen years to fell it. The logs were floated down the Spey and built at Speymouth into forty-seven ships of an aggregate burthen of 19,000 tons. When Mr Osborne, the purchaser of the timber, finished his work in 1806, he sent a memorial plank to the Duke, which now stands in the entrance hall at Gordon Castle. It measures 5 ft. 5 in. wide at the butt end, and 4 ft. 4 in. at the top, and is of a rich dark brown colour. In 1912 the top of this magnificent tree was still lying where it was cut off more than a hundred years ago, on the hill above Glenmore Lodge, 1400 feet above the sea, and was still hard and sound. It measured three feet in diameter—nine feet in circumference—where it was cut off.

inches, greater, in fact, than any modern Wapiti. The horns are not long (36 inches), but very massive, and carry twenty-six points.⁵

Not far from my own home in Galloway the river Cree winds for about eight miles in a tidal estuary before it reaches Wigtown Bay. The deep alluvium through which it has cut a devious course contains the ruins of the primæval forest—huge stems of oak, which, unlike the usual black timber from the bogs, retain a beautiful yellow or fawn colour. Before Austrian supplies had practically ousted British oak from the market, it was well worth considerable labour to recover such of those ancient trees as became partially exposed through the action of the tides. Simple means were adopted to extract them from the mud. Empty barrels were attached to a log at low tide; when the tide rose, the barrels rose also, slowly but surely drawing the tree from the place where it had lain for, perhaps, thousands of years. It was a common thing that during this operation the remains of immense red deer were brought to light, relics of the herds which no longer roam over the Southern Upland.⁶

Two horns recovered in this manner are before me as I write. They are not a pair; one is a live horn with part of the skull attached. It measures 37 inches along the outer curve and $7\frac{1}{4}$ inches in circumference between brow and bay, and has seven points. The other is a cast horn with six points remaining, the brow tine having been broken off. It

⁵ *Mammals of Great Britain and Ireland*, iii., 95.

⁶ According to local tradition, the last wild red stag killed in the Galloway hills fell to the minister of Kirkinner towards the close of the 18th century. After the 9th Earl of Galloway acquired the lands of Cumloden in 1827, he enclosed a wide tract of hill and dale, and stocked it with red and fallow deer. In the good shelter of this chace, the stags bear horns which would put average modern Highland heads to shame. In a deer drive at Cumloden I was ensconced under a stone dyke in company with a fair lady. I saw about half-a-mile off a very large stag making straight for my lair, and told my companion of it. She rose to look over the wall; a large blue bow in her head gear flapped in the wind; my stag promptly altered his course, and fell to a neighbouring rifle. His head was an imperial—14 points.

is 38 inches long and $7\frac{1}{2}$ inches round the horn between brow and bay. The bay tine is of the extraordinary length of $20\frac{3}{4}$ inches.

So long as Scottish red deer remain in their present environment, exposed in winter to long periods of slashing wet and violent winds—conditions far more trying to these animals than severe dry cold—so long must they remain but stunted representatives of their kind. Moreover, expulsion of the deer from the low ground and the destruction of the forest (using that term to denote extensive natural woodland) has deprived them of much of their food supply. Except in so far as hand-feeding mitigates the suffering of the herds in hard weather, their existence is one of summer glut and winter famine. “Most of the deer tribe,” says Mr Winans, “are fond of eating leaves; and if a branch falls or is blown down all the deer in the park seem to know of it at once, and come galloping up from all directions to feed on the leaves.”

Those who have experienced the rigours of a Highland spring at even moderate altitudes will have noted that May is well-nigh spent before there is any appreciable growth of grass in the deer ground, and will have realised to what hardship the poor animals are exposed as the result of exclusion from their natural winter quarters. This circumstance alone would account for the deterioration of Highland red deer; nor can I share Mr Winans' faith in regenerating them by crossing the native race with allied species, such as the Wapiti of North America and the Altai deer, which is the Asiatic form of Wapiti, so long, I mean, as the native race remains under the present conditions of exposure and shortage of winter food. Mr Winans has achieved satisfactory results by his experiments with crossing deer in his park at Surrenden in Kent; but the winter conditions in “the Garden of England” are not comparable with the alternation of arctic cold and pitiless wet that prevails for at least half the year in such elevated forests as Corrou, Ardverikie, and Rannoch. In the Eastern Highlands, indeed, where the rainfall is not so excessive, the Wapiti strain might have a favourable influence for a time; but this cannot be expected to be permanent, for the Wapiti is much less patient of wet than our native

red deer; even in sheltered parks it is very liable to consumption and wasting.

So much for the conditions of climate and nutrition with which Scottish red deer have to contend, and in which it would be unreasonable to expect any improvement; but, as if these adversities were not injurious enough to the quality of the stock, the mischief is greatly aggravated by the reckless mismanagement prevailing in most Scottish forests. On the Continent (I write of things as they were before the great war) scrupulous care is shown to improve the race; but in our Highlands the finest stags are picked out by the stalker, without a thought for the future quality of the herd. "How often," says Mr Winans, "one hears a stalker say—'Do not shoot that stag; he has a bad head;' or 'We had better go on; there is no head worth shooting in this lot.' Whereas he ought to say—'There is a stag with a very bad head; you had better shoot him.' What would be thought of a breeder of horses and cattle who killed every good animal he bred and only kept the trash? And yet this is just the way most Scottish forests are managed."

Unluckily, it would be almost as practicable to alter the climatic conditions of the Highlands as to establish a rational and provident system of deer stalking. Very few owners of forests are able to keep them for their own sport; the great majority of forests are hired by strangers who have no permanent interest in them, and naturally wish to carry away as many good heads as possible in token of their prowess. *Emulation* is a fair element in all field sports—is, indeed, inseparable from the spirit of them—but so soon as it is allowed to degenerate into *competition*, the blight of record-breaking sets in, prevailing over sportsmanlike forbearance alike in stalkers and in those put under their guidance on the hill.

At the present time of writing the conditions affecting ownership alike of deer forests and deer parks have been profoundly affected by the great war. The paramount interest of food supply has been brought home to us more urgently than ever before in the history of the United Kingdom, and every other interest must yield to the necessity of turning land to the best account. First as to deer forests:

it is doubtful whether much of the land now cleared for deer is capable of producing more meat for sheep or cattle than it might be made to do under deer. There is no more nourishing and palatable flesh than that of red hinds and fallow does in winter, or of stags and bucks in summer, yet it is practically unsaleable. It is difficult to account for the indifference, amounting in many cases to prejudice, of the non-sporting public in regard to venison, once esteemed *par excellence* the dish to set before a king. But kings in the olden time thought more of bodies than heads; they did not wait for the velvet to be off the horn, nor put off killing the stags till the approach of the rutting made their flesh rank and unsavoury. Thus it was in the month of June, 1530, that young James V. of Scotland rode up Yarrow with a great company of hunters into Meggatdale, and there, according to Pitscottie, slew eighteen score of harts with the velvet thick and tender on their young horns, beside all manner of small game taken with hawks.

But King James was out after nobler game than red deer and moor fowl on that occasion; and if the memorial tablet at Carlenrig be not a slander on his honour, he treated them in a more unsportsmanlike manner than he had shown to the summer stags on Meggat Water. The young King (he was just eighteen) had set out with the purpose of suppressing the bandit class on the Border and in the Debateable land. He took the prudent preliminary course of arresting and committing to ward those powerful personages to whom he was entitled to look for maintaining order in those districts, namely, the Wardens of the East, Middle, and West Marches, the Lords Home, Bothwell, and Maxwell, together with several other barons, who, says Sir James Balfour, had "winked at the willanies" of the Armstrongs and their like. The tradition runs strong that the King, on entering Teviotdale, promised a free pardon to all broken men who would come in to his peace. There is not a shred of documentary or other evidence in support of this, which is just the sort of story that would gain currency and credence in a district where half the inhabitants were mosstroopers and half of the rest were in league with them; but, be it true or not, it fur-

nishes the darkest shade in the ballad of *Johnnie Armstrong*, whom, with some forty of his men, King James caused to be hanged on the trees round Carlenrig Chapel, after they had ridden in on the faith of the proclamation to receive the royal pardon.

But I have been tempted into an unpardonable digression. Let me get back to my text.

Even if the prejudice against venison as food were overcome, it would still be reckoned an offence against the community that deer have to be fed in the forest in hard weather. So, for that matter, must sheep and cattle be supplied with fodder if they are to survive the winter on the kind of ground now given up to deer; but sheep and cattle are free from the taint of being kept for the sport of rich men.

Considerations of a different kind affect the keeping of deer in parks. I have in mind a lovely dale in Westmoreland, part of which was fenced as a chace under license from Edward III. in the fourteenth century. For six hundred years, therefore, it has been a deer park, traversed by a salmon river, by the side of which runs a right-of-way, greatly appreciated by lovers of fair landscape. The strict political economist may denounce such a scene as an eyesore—the wasteful appanage of a manor house—the lounging ground of a selfish landowner. He would demand that the ancestral oaks which enrich the vale should all be felled and the land ploughed to provide food for the people. It is true that the owner might derive a good profit by adopting this course. The pasture in this park is very poor, as often is the case where deer have long been the only stock; much of it is overshadowed by splendid trees, and more of it over-run by worthless bracken. The sale of the timber when felled would cover the cost of reclaiming, ploughing, fencing, and building, and the rent obtained from a farmer be a permanent addition to income from the estate. No doubt the economist is right: the land at present is not put to the best commercial use. At the present time (1918), when maritime warfare has rendered our food imports precarious and the price of corn and meat has mounted beyond the experience of this generation and the foregoing one, it behoves all men to cast about for means to

increase the home production. But it is well to look back as well as forward before precipitate action is taken. It is not very long since the price of corn had fallen so low as to throw many farms derelict. Unless some guarantee be obtained against cultivators being exposed to heavy loss through fluctuating markets, no prudent man will invest capital in turning old pasture into arable. After all, man doth not live by bread alone; there is a real, as well as a sentimental, value in beautiful scenery; the mind stands in as constant need of refreshment as the body does of nutrition. It may be expedient to curtail the park landscapes, which are the glory of the English counties; but it is wise to hesitate before condemning them wholesale and irreparably destroying them.

Here again I am wandering away from the question of improving the stock of deer and increasing their importance as food for men. Much may be done by good management and careful selection of breeders. Hitherto, none of that skill and forethought that has rendered British cattle and sheep the finest in the world had been bestowed upon deer until Mr Winans applied himself to the task many years ago. He has set forth in the volume above quoted the results attained and the means by which they were attained. Too often—as a rule, in fact—park deer are kept on the same pasture for generations, even for centuries, without any attempt to maintain or improve the quality of the grass, which is allowed to become harsh and poor. Mr Winans lays much stress upon the advantage of fencing off portions of the park in rotation, to be top-dressed and rested for a year or more before the deer are allowed in again. The herd should always be provided with rock salt to lick, which greatly improves their condition,⁷ and to all deer, especially red deer, water in the shape of a stream or pools is a primary requisite, and the more mud and marsh the better, to roll in when flies are troublesome.

Fallow deer run into more varieties than red deer; he who takes intelligent pride in his herd will aim at having it of

⁷ To how few owners of live stock does it occur to provide this wholesome luxury in their stables and byres!

a uniform type, whether that be the bay, the spotted, the black, the grey, or any other strain. This cannot be achieved under fifteen years. Mr Winans prescribes that, in eliminating whatever varieties are not desired, a start should be made by killing off the bucks of those varieties. Thus, if a spotted herd is the object (and that variety is the most typical and ornamental), dark bucks and those indistinctly spotted should be shot. In a large park this may take two or three seasons to accomplish; after which elimination of the does should begin, all dark coloured fawns being killed meanwhile. A herd of fallow deer which has been treated in this discriminating manner is far more attractive than a motley crowd of various colours, suggestive of domestic cattle. There is, however, no objection to one white buck in a spotted herd, for his influence will tend to increase the spottiness.

Red deer in parks are capable of improvement to an indefinite extent, both in heads and bodies, by judicious management. Mr Winans has effected much in this direction by crossing the native race with Wapiti and Altai deer. Personally, I have a strong aversion for crossing species; but as the union of these races produces fertile offspring, these cannot be reckoned as hybrids or mongrels, but the joint progeny of geographical varieties of a single species of as honourable parentage as the child of an English father and a Celtic mother. Mr Winans speaks very highly of the offspring of a Wapiti stag and a red hind, crossed again with an Altai stag. They are more grey in the coat than pure red deer, but they weigh half as much again, and the stags carry horns than can hardly be distinguished from such as one may see in old German and Austrian castles. Here, then, we have a distinct advance in the value of deer as flesh producers. There remains only needful to overcome the prejudice against venison, which is as irrational as the universal prejudice against eels among the people of Scotland.⁸ Probably this

⁸ Eels were at one time an important article in the Scottish peasant diet. Camden describes in his *Britannia* (1586) the incredible quantity of most savoury eels—*incredibilem anguillarum Sapidissimarum multitudinem*—which were taken by the people of Galloway in baskets in autumn. One hundred years later Andrew

could be overcome if one of the fashionable hotels, the Ritz for instance, were to make a speciality of venison, consummately cooked and of the choicest quality.

I cannot dismiss this prose about antlers without reflecting upon the prodigious waste of material involved in the annual shedding of these ornamental, offensive, and defensive appendages in solid-horned animals. One is tempted to exclaim with the disciples of Christ—"To what purpose is this waste?" Why should a pair of cored horns serve throughout the lifetime of a buffalo or an antelope, and the far heavier head gear of a Wapiti or red stag be laboriously and painfully produced every summer, only to be thrown off in the following spring? A pair of antlers of a red stag taken from the ooze in Wigtown Bay weigh exactly 18 lb. One can understand the relief experienced by the animal in ridding himself of such a strain upon the muscles and tendons of his neck; perhaps if he were given the choice he would remain a "hummel"⁹ for the rest of his career. But *noblesse oblige*; and by the time the hunter's moon is at the full he will be as proudly attired as ever.

On Otoliths.

By Colonel C. E. SHEPHERD.

The name supplies the explanation as to what they are, viz., "ear stones." They are known to many people as "ear bones," but this is a misnomer. They are concretions of limestone with very much the chemical composition and appearance of a piece of white marble, being composed of approximately 95 per cent. of carbonate of lime, a small percentage of phosphate of lime, and traces of organic matter. Otoliths exist in the heads of teleostean fishes, i.e., fish having a bony

Symson, minister of Kirkcubright, states in his *Large Description of Galloway* (1684) that great quantities of eels were caught about Martinmas, salted in barrels, and eaten in winter "roasted upon the coals." At the present day it would be difficult to find a Galloway man, woman, or child that would eat an eel, knowing what it was.

⁹ The technical term for a hornless stag.

skeleton. Those with a cartilaginous skeleton do not have them but their places are taken by *otoconie* eardust : this occurs in the sharks, rays, and skates. The fishes having otoliths normally have six, three on each side of the head; cases do occur where there is one in excess or where one or two are wanting, but these exceptions are very rarely met with. The otoliths are contained in the labyrinth of the ear. In fishes this labyrinth is very similar in some ways to that of the human ear : each consists of a *sacculus*, a *utricle*, and three semi-circular canals. The *cochlea* in the human ear is taken as represented by the *lagena* in fishes. The *sacculus* contains the largest of each set of three otoliths, with some exceptions, which will be noticed presently. This otolith is called by scientists the *sagitta*. The *lagena*, which looks like a little sack-like excrescence to the *sacculus*, contains an otolith named the *asteriscus*; and in the *utricle* is found the third otolith named the *lapillus*. In the families of the *Cyprinidæ* (the carps) and the *Characinidæ* (a family that represents the carps in South America) the *asteriscus* is the largest of the three otoliths. In the family of the *Siluridæ* (the cat fishes so-called, as they have barbels growing on the snout and under the chin representing whiskers) the *lapillus* is the largest of the three otoliths, and is found in the *utricle*. In salt water *Siluroids* this grows to an appreciable sized solid stone. These cat fishes must not be confounded with the fish known by the same name to the fishermen of the East coast, which is of quite a different family. There are no *Siluroid* fishes in England indigenous thereto. Attempts to acclimatise some have of late years been made, it is believed; but in ancient times they existed here, as there is geological evidence to prove, and this will be alluded to later. Unlike the calcareous stones found occasionally in humans and in horses, the otolith is not a product of disease, but a normal calculus. It is credited in some way with the hearing of the fish. Finding it in the labyrinth of the ear, analogy would lead one to conclude that it has to do with the hearing, and this conclusion has been proved to be correct by experiments carried out by a biologist in America. On dissecting a fish's head, the roots of the nerve ascending to the brain are seen spread over the surface of the

outside of the *sacculus*; the otoliths are seen standing on edge with the forward ends rather divergent. The outer faces are generally concave; the inner faces are always convex. Along this face a furrow of different shape in different fishes, but generally typical of the family, is seen, consisting of a broad opening at the anterior end, called the *ostium*, merging into a narrower portion called *cauda*, often running sometimes right across the face of the stone or terminating in a bend. Along the centre of the *cauda*, notably in the family of the *Gadidæ*, two little protuberances may be noticed, known as *coliculi*. The whole furrow is known as the *sulcus acusticus*. The largest otolith, be it a *saggitta*, *asteriscus*, or *lapillus*, is distinctive, and it and its *sulcus* would enable anyone studying the subject to say what family, and often what species, the fish belonged to that furnished any given otolith. The distinctive shape of the otolith of the John Dory, the Cod, the Hake, the Whiting, and many others need but the most cursory glance to fix their original owners.

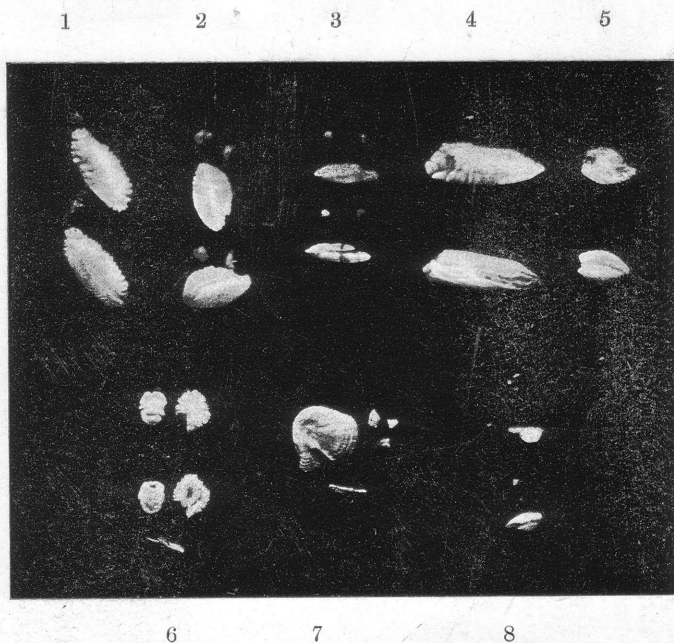
The relative sizes of fish is no criterion as to the relative sizes of the otoliths. The "Smelt," a much smaller fish than either the Mackerel or the Herring, has a much larger otolith than either of these two. But, naturally, a big Haddock or big Cod would have a bigger otolith than a smaller fish of the same species. The largest specimens of otoliths known so far are one in the Museum of the Royal College of Surgeons in London, and one in the Geological Department of the British Museum, Natural History. Both have been taken from fish of some *Sciænoid* family.

The otoliths grow round a central spot known as the *umbo*. Take an otolith freshly out of a Plaice's head, and with the naked eye a number of concentric markings will be seen, showing as a dark or light coloured ring much as in the section of a tree. One dark and one light ring marks a year in the life of the fish, and by counting the rings its age may be accurately known. The Plaice perhaps, of all the commonly available fishes, shows these rings the most plainly, but they are also to be seen in many others. In many fishes, the Whiting for example, the bone of the basiocciput is so thin that the otolith can be seen *in situ* through the bone, which is

semi-transparent, but this, of course, only when the head has not been cooked. In other cases a large and prominent boss on the basiocciput, as in the Cod, shows where the *sagitta* and its enclosing *sacculus* is located. In many fishes the *sacculus* and the *lagena* especially are so enclosed in bone that it must be carefully cut away to free the stones; in others the *sacculus* and its contents can be lifted out of the bony pocket through an opening at the top, very little if any cutting away being required, except perhaps to free the *lagena*. In the case of the John Dory the labyrinth can be picked up from the inside of the skull quite easily, the semi-circular canals only requiring to be cut across as they pass through the walls of the cranium in special little tunnels of their own in the body of the bone. The labyrinth of the ear is charged with a fluid, the *endo lymph*, which surrounds all the otoliths, and inside the skull it is supported by more fluid, the *peri lymph*. Another of the functions of the otoliths is supposed to be connected with the equilibration of the fish: its ability to swim vertically as a rule, as experiments have proved that where the otolith has been removed from one side the fish cannot keep itself swimming properly, but leans over to one side, though this may be due also to the escape of the *endo lymph*. How much is due to the absence of the stone or the fluid which is bound to escape when the *sacculus* is opened to extract the stone, it is difficult to say.

These stones were known to the ancients, being mentioned by Aristotle and Pliny. Mediæval writers lauded them as amulets, and ascribed healing powers to them in cases of colic and headache. The *sulcus* of some of the *Sciænidæ* found in the Mediterranean were thought to represent a key, and these stones were known as "Peter stones." The apothecaries of olden times displayed them in their shops, labelled as *lapides percarum*, very costly stones. Even men of science recorded absurd ideas anent them, such as that these stones attracted cold and cause the death of the fish by the freezing of the brain. In Madras, even nowadays, they are regarded by the natives as being good for sore eyes, if rubbed over them on the closed lids or tied on to the lid. Another superstition was that any of these stones, if used for the cure

OTOLITHS.



1. *Genypterus blacodes* (Cloudy Bay Cod, New Zealand).
2. *Pegellus centrodontus* (Sea Bream).
3. *Serranus cabrilla* (Kitty Conor, Cornwall).
4. *Gadus aeglefinus* (Haddock).
5. *Psetta lœvis* (Brill).
6. *Leuciscus cephalus* (Chub Cyprinidæ).
7. *Arius Parkeri*, Siluridæ (Catfish from Demerara).
8. *Salmo faris* (Trout).

of colic, lost virtue if it were purchased; it had to come to the sufferer as a free gift.

Fossil otoliths are found in England, the most prolific source being the Barton clay, Upper Eocene strata, from which many thousands have been picked out by one collector, Mr Eliot Walton. They are occasionally met with in the Red Crag deposit of the East coast, but in no way abundantly. They are also known from the Kimeridge clay and from the Gault, near Folkestone. They have been found in the following countries as well as in England, viz. : France, Italy, Germany, Denmark, Austria, Hungary, Bosnia, Belgium, Sardinia, Corsica, Bohemia, Moravia, Russia, Roumania, Portugal, Burma, the United States of America, and Nigeria, West Africa. They have been found abundantly on Monte Gibio, near Modena. They are found in Miocene and Pliocene strata, as well as the before-mentioned Eocene strata. A notice of fossil otoliths was made by Dr Eugenio Sismonda, who published figures of some found in Piedmont, his paper being dated 1849. In the Journal of the Linnæan Society, London, 1867, there is a paper by Mr E. T. Higgins, in which he pointed out that the otoliths could be used as a test in verifying recent and fossil species. Since 1884 many papers on fossil otoliths have been published in German, Austrian, French, and Italian geological publications, and anyone interested in the study should refer to these publications. In *Knowledge* for September and October, 1916, an article on this subject was published by the author of this paper.

A few specimens are put up to accompany this article, which it is hoped will add to the interest of it. Nos. 1-3 show three complete sets of otoliths of different families. The upper three are all from the right side of the head, and the *sagitta* shows the external face. Of the two smaller otoliths, the *lapillus* is to the left, the *asteriscus* to the right. Nos. 4 and 5 are the *sagittæ* only. The lower *sagittæ* in all cases are from the left side, and show the inner face with its *sulcus*. No. 6 is a specimen of one of the *Cyprinidæ* (the Carps). The *asteriscus*, as mentioned above, in this family is the largest of the three otoliths. It will be noted that the *sagitta* takes the form of a splinter of bone (see the lower, the left-side one).

Unfortunately the right *sagitta* was broken in dissecting. No. 7 shows a *Siluroid* example; the *lapillus* in this is the largest. The *asteriscus* was unfortunately broken on extraction. The *sagitta* of this family, like that of the Carps, is, in shape, like a splinter. The otoliths from the left side of this specimen were kept for other purposes. No. 8 is a specimen of the otoliths from a Trout, and are put up as an example of those of a well-known fish. The left *asteriscus* was lost in dissection, and the right side one failed to stick on. They are very small.

Of the fossil otoliths, No. 9 is one from an undoubted *Siluroid* fish. Hundreds of these are got from the Barton clay, and prove that this class of fish was a native of England in the Upper Eocene period. Besides the otoliths, spines similar to present-day *Siluroids* are abundantly found in the Barton clay. The similarity of the otoliths, if No. 9 is compared with No. 7, is at once apparent. Larger specimens than those shown as No. 9 are procurable; quite as large and even a little larger than that shown under No. 7. No. 10 has been allocated as belonging to one of the *Serranidæ*, and the name, *Serranus concavus*, has been suggested for this otolith by Professor Priem of Paris. The *sulcus* is similar in shape to that of *Morone labrax* (the Bass), a present-day *Serranus*.

The specimen No. 11 assimilates in shape of *sulcus*, and of the depression above it to what is found in the *Apogon* family of the present day, and has been allocated to that family. They are abundant in the Barton clay. *Apogon*, *Morone*, and *Serranus* are known by other evidence than that of the otoliths alone as having been represented in Eocene times. No. 12, by its *sulcus* and also by a depression above the *sulcus*, resembles what is now found in the otoliths of *Trigla-lyra*, one of the *Gurnards*, the name *T. prælyra* has been given to this specimen. The *sulcus* of *Cepola rubescens*, the Band fish, sometimes now caught off the British coast, is similar to that shown in specimen No. 14. The name, *Cepola bartonensis*, had been suggested by the late Professor R. J. Schubert.

No. 15 is a very distinctive specimen. Numbers of them

FOSSIL OTOLITHS.

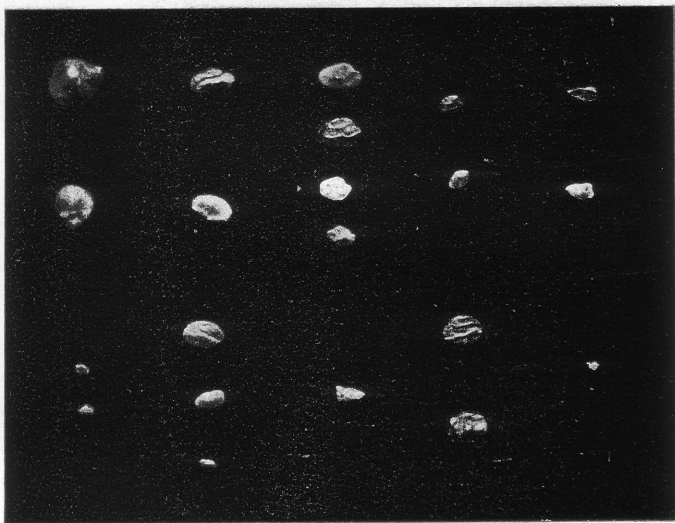
9

10

11

12

13



14

15

16

17

18

- | | |
|--------------------------------|--------------------------------------|
| 9. <i>Arius crassus</i> . | 14. <i>Cepola bartonensis</i> . |
| 10. <i>Serranus concavus</i> . | 15. <i>Incertæ sedis umbonatus</i> . |
| 11. <i>Apogon Eocenicus</i> . | 16. <i>Merluccius emarginatus</i> . |
| 12. <i>Trigla prælyra</i> . | 17. <i>Dentex nobilis</i> . |
| 13. <i>Gadus Waltoni</i> . | 18. <i>Gobius francofurtanus</i> . |

are found in the Barton clay and other places. They were first described by Professor E. Koken, but as he could not assign them satisfactorily to any existing family, he classed them as *Incertæ sedis*, adding *umbonatus* for a specific name. A strong magnifying glass will show the striated sculpturing of the outer face, and this is quite unlike any of the present-day otoliths, so that even now these otoliths cannot be satisfactorily allocated. The *sulcus*, however, is rather similar to that of the *Sparidæ*, but one has to reconcile both faces if possible.

No. 13 has been so named in compliment to Mr Eliot Walton, by whose courtesy I obtained all the specimens here shown. No. 18 is an otolith belonging to one of the *Gobius*, and given the specific name of *francofurtanus* by Professor Koken. It resembles his picture of *G. francofurtanus*, and is put up with these specimens to show the minute care devoted to getting these otoliths by Mr Walton. Nos. 16 and 17 call for no special remarks. The names are given from illustrations of similar ones; the first by Professor Koken, the second by Professor Bassoli.

Some Letters of James Hyslop.

By Mr TOM WILSON.

[This short paper on a few letters by James Hyslop, the Sanquhar poet, has had to be held over. The letters do not add much to what is known of his life.]

The Colchicum, or Meadow Saffron.

By Provost S. ARNOTT, F.R.H.S., Hon. V.P.

The Colchicum, or Meadow Saffron, is a member of the Natural Order *Liliaceæ*, or Lily Family. It is nearly allied to a class called by certain botanists "the aberrant tribes of the *Liliaceæ*," members of the Order presenting various divergences from the Lilies proper. It does not bear a close apparent resemblance to the queenly Lily, as generally represented by such flowers as *Lilium auratum*, the Golden-rayed

Lily of Japan, or even the chaste Madonna Lily, *Lilium candidum*. In flower it more nearly resembles the Crocus, and the casual observer fails to recognise one special point of distinction in the flowers. The Colchicum has six stamens, and the Crocus three. The latter belongs to the Iris Family, the *Iridaceæ*, and is allied to the Fleur-de-Lys, the "flower of chivalry," as it is termed. The flowers are also more fleshy than those of the Crocus. It is, however, frequently called the "Autumn Crocus," although this causes confusion with the true Crocus, of which there are autumnal as well as spring bloomers. The Meadow Saffrons usually give their flowers in autumn and early winter, although there are a few species which yield their blooms in spring. With the coming of spring the points of difference between the two become more apparent. The Crocus sends up narrow leaves, but those of the Colchicum are broader and more fleshy. They appear in spring, and soon after they come through the soil the seed capsules are to be discovered in the centre of the foliage. As the leaves grow, so do the seeds, and when the former have withered the capsules become soft and open to allow the egress of the seeds. There are some interesting questions which arise in connection with this seed production by which the Colchicum perpetuates its race, although it also does so by means of offsets, as is usual with what are broadly called bulbous plants, although, strictly speaking, the Colchicum is a cormous plant—that is, one with a fleshy root-stock, and not one composed of different layers or scales, the latter being the true bulbs, of which an Onion or a Snowdrop may be taken as an example. It is obvious that the production of the seed and leaves in spring is designed as a protection against injury by frost in winter. It must be apparent that the fleshy leaves and capsules would be exceedingly liable to injury by frost. In that case the seeds would not ripen, and the increase of the Colchicum by this method of reproduction would be seriously endangered, if not rendered hopeless, especially as the plants are usually natives of cold regions or of mountainous districts having severe frost in winter. But it may be said that the reproduction by offsets would remain. One authority says that the Colchicum does not ripen seeds in Scotland. This is

an error, as the author has proved. This would not be reliable either, as it is necessary for the growth of the corm that it should have a supply of nutriment from the foliage. Were this destroyed in winter the chances of increase would be reduced to almost nil. But the seed production and that of the foliage is past before the flowers of the autumn appear, and the process is consummated during the best weather of the year.

Now, this question of spring and summer seed production means that the ovary must be so placed that it also is beyond the reach of frost, and therefore it is situated at the base of the long tube which forms part of the flower, and down which the precious pollen grains are conveyed to the ovary in autumn, when the flowers are fertilised, generally by insects. In these things we surely trace evidences of design to meet the special conditions of the plant.

It is not for us to hazard any expression of opinion as to why the Colchicum flowers in autumn, but it appears to me that the reasons for the leaf-production and seed-bearing of the plant in spring are sufficiently obvious from what I have said.

There is, however, another point to which I would direct attention, although with some diffidence, as I do not remember having observed any reference to it in literature. This is with regard to the poisonous properties of the plant. The Colchicum is poisonous in all its parts, and it appears to me that this fact lends great assistance to the plant in its struggle for existence, particularly in view of the circumstance that the species, as a rule, are natives of meadows, where animals graze and where the foliage and seed pods would be in jeopardy from cattle and other animals browsing thereon. The succulent foliage is tempting in appearance, and would probably be eaten with avidity were it not that it is poisonous.

That even this is not a sufficient protection is evidenced by the fact that in some English meadows cattle have been poisoned by eating the leaves of the Meadow Saffron, and that the Board of Agriculture deemed it advisable to publish an article in their official *Journal*, giving instructions how to destroy the Colchicums. The *modus operandi* was to destroy

the foliage when it appeared in spring, so that the bulbs would be weakened and eventually destroyed, and also that the seeds might not be ripened. It may be said that the fact that cattle were poisoned by eating the leaves confutes my theory that the poisonous nature of the plant was a protective contrivance. It is only occasionally, however, that the plant, however plentiful, is eaten, and it is perfectly well known that the instinct or unacquired wisdom natural to most creatures is often absent or almost dormant in certain individuals, and that these may be described in the same category as the "fools who walk where angels fear to tread"—but do so with fatal consequences. I can think of no other reason for the poisonous nature of the Colchicum than this protective idea.

Of course, there are some who contend that the medicinal virtue of the poison contained in the Meadow Saffron is sufficient justification for its existence, and that this has been provided specially for the benefit of mankind. But, however agreeable this might be to our vanity, I fear we must abandon it. Most students of Nature and her ways come to much the same conclusion as that which is the burden of most of the writings of Richard Jefferies, though we may put it less strongly than that gifted but pessimistic student of her mysteries—that she has no consideration for man, and that he counts for nothing in her plans so far as regards other works of creation. It is not flattering to our vanity, but it is, I fear, all too true, that we are not of sufficient importance to be the creatures for whom all things were created.

An Annandale Minister in the 17th Century.

By MR D. C. HERRIES.

An ancestor of mine, Robert Herries, was minister of Dryfesdale (or Drysdail), in Annandale, from 1616 till his death in 1662, and it is natural to wonder how he acquitted himself in such eventful times. Unluckily, mention of him in public and private records is rare, but some idea may be formed of the social conditions in which he lived and of the nature of his wild border parishioners.

His father, William Herries,¹ a merchant and burghess of Edinburgh, died the 1st January, 1597-8, having made his will on the previous 23rd December, when sick in body but perfect in memory. He appointed Katherine "Bankis," his spouse, and Robert "Hereis," his only lawful son, to be his executors, and left equally between them his third part of the goods. He nominated Robert Herries and Nichol Edgar,²

¹ William Herries's parentage has not been discovered. According to tradition (which is generally worthless), he was of the family of Herries of Maidenpaup, founded by Roger, youngest son of Herbert, 1st Lord Herries of Terregles. In the inventory of his property there appear among his debtors Robert Herries of Mabie and his son and heir Richard, while his great-grand-daughter Katherine (a daughter of William Herries, eldest son of the minister of Dryfesdale) was married to John Herries of Mabie, and her brother, Francis Herries, and his son, William, after him, became for a time owners of Mabie by purchase from the creditors of this John Herries. This points to continuous relations of some sort for some generations between the Edinburgh burghess and his descendants and successive lairds of Mabie, and suggests that he may have sprung from the Mabie family, an earlier branch from the Terregles stem than that of Maidenpaup. Another debtor of his was George Herries of "Daurachtie." If this last word was an error of the recording clerk for "Terraughtie" (then usually spelt "Tarrachtie") then, no doubt, George Herries of Maidenpaup was meant. He was sometimes styled "of Terraughtie," after acquiring lands in Over Terraughtie from John Cammok in 1591, as appears from a sasine of 29th August, 1592, in the Protocol Book of Herbert Cunyngham, notary, now among the Burgh Records of Dumfries. (I am indebted to Mr R. C. Reid for this information.) For the Maidenpaup and Mabie Families see *Miscellanea Genealogica et Heraldica*, 4th Ser., iv., p. 219; v., pp. 78, 114.

² The testament of Robert Herries, merchant burghess of Edinburgh, dated the 30th January, was confirmed at Edinburgh the 3rd July, 1604. He had, with other relations, a brother Roger, a burghess of Dumfries. For a conjecture as to his parentage, see *Miscellanea Genealogica et Heraldica*, 4th Ser., iv., p. 220. He was probably chosen as overseer and council giver as being the most important bearer of the name in Edinburgh. His colleague, Nichol Edgar, was perhaps selected as husband of Isobel Bankes, probably a relation of Katherine Bankes, wife of William Herries. This Isobel died in 1602, and her testament dative given up by her husband was confirmed at Edinburgh, 25th March, 1603. Edgar, like Herries, was once a well-known name in Dumfries and its neighbourhood.

merchant burgesses of Edinburgh, as overseers to his son, Robert (then considerably under age), and as council givers to his wife, Katherine. He left 100 merks to be distributed among the poor of Edinburgh by the ministers of the Burgh; 100 merks to Marion Moresoun, pupil, his friend; and £20 to John Kilt. The testament was confirmed at Edinburgh, the 24th January, 1598-9, and, according to the accompanying inventory, the property consisted of merchandise in his "merchand buythis" in Edinburgh and Dundee, comprising hats, bonnets, Dundee cloth, whingers, knives, Yorkshire cloth, plaids, wool, four barrels of soap, and twenty-five stone of brass. There were also household goods and personal clothing and £35 in cash. All this was valued at £1517 12s 6d Scots money, and sums due from numerous debtors brought the total value of the personal property to £4150 13s 9d.

Robert Herries, the minister, is next heard of in a complaint to the Privy Council from "Hew Craufurde," tenant of the "Quhytehouse beside Edinburgh," which belonged to "Katherine Bankis, relict of Williame Hereis, and James Weill,"³ then her husband, in life rent, "and to Robert Hereis, her son, in fee." In January, 1602, the plague, "being frequent within the burgh of Edinburgh," broke out in the Quhytehouse, and not only did five of the complainer's "puir bairnis" die of it, but he also lost all his goods by their being burnt in the cleansing of the house. The owners, alleging that he had "wrangouslie and maliciouslie" burnt the house, had cited him before the sheriff "to be decerned to rebuild" it. He sought to be "assoilzied simpliciter" from this action, contending rather inconsistently that the burning of the house had happened "at the gude pleasour of God be accident in the clengeing thair of," and that the King had ordered it to be burnt for "eschewing of greitar inconvenient." The Council having considered the matter on the

³ Katherine Bankes was married to James Weill, merchant, the 28th June, 1598 (*Edin. Marr. Reg.*, 1595-1700, Scottish Record Soc.) They were both living in February, 1628 (*Morison's Decisions of the Court of Session*, p. 6015).

13th January, 1603, remitted it to the judge ordinary,⁴ and I have not discovered what was the decree of that official.

About a month after the disaster of the Quhytehouse, Robert Herries, undeterred by the plague, graduated as Master of Arts at Edinburgh University, the 22nd February, 1602.⁵ He became a preacher in 1615, and was presented to the Vicarage of Dryfesdale by James VI., the 24th December, 1616.⁶

Annandale is now, I believe, as peaceful a district as any in the United Kingdom, but this was by no means the case in 1616, and some sixty years later its inhabitants still enjoyed such a reputation for their rough ways that even that redoubtable fanatic, Mr Richard Cameron, at first hesitated to venture among them, when told to try his hand at preaching there.⁷ In 1593, when Mr Herries was a boy, the feud between the Maxwells and Johnstones had culminated in the famous fight near Dryfesdale church, in which the Maxwells were disastrously beaten and their chief, Lord Maxwell, slain. Ministers enjoyed no immunity in Annandale. In 1596 William Johnstone, minister of Lochmaben, was murdered, various persons of his own name being accused of this "shameful, cruell and unmercifull" crime, arising apparently out of the same feud.⁸ On the 19th September, 1623, James VI. wrote from Theobalds to the Privy Council of Scotland that he had been informed of the "cruell and abhominable attempt of

⁴ *R.P.C.*, vi., p. 521. This volume of the Privy Council Register contains many references to the plague raging in Scotland from 1600 to 1602, and to the means adopted for staying its progress. The only order, I have found, for burning houses is a direction of the Council, 30th November, 1601, authorising Sir James Maxwell to burn infected houses in his barony of Calderwood, "without incurring any pain for so doing." In January, 1602, the Council ceased to sit in Edinburgh owing to the violence of the plague, and the "Cunyiehouse" or Mint was idle. In the following April, however, the town was considered safe again.

⁵ *Catalogue of Edin. Graduates* (Bannatyne Club), p. 19.

⁶ *Scott's Fasti*, i., pt. 2, p. 647.

⁷ *D. and G. N. H. and A. Soc. Transactions*, 3rd Ser., i., pp 80-81.

⁸ *Scott's Fasti*, i., pt. 2, p. 640.

burning the house, persone, and whole familie of Mr Thomas Chalmer," minister of Kirkpatrick-Fleming, an execrable thing " to haif bene done aganis a minister." He authorised the Council to threaten with the torture of the boot a certain Simon Graham in Logan, suspected of having had a hand in the matter, and if the threat did not " draw a cleir confessioun oute of him," to proceed to execution. Probably, by fair means or foul, a confession implicating others was forced from Graham, for in 1624 he was discharged from the tolbooth of Edinburgh after he and others had found surety that they would not molest Mr Chalmer and his family and that they would appear, when called upon, to answer for their alleged burning of his house.⁹

Soon after Mr Herries's arrival at Dryfesdale the state of his own church afforded an excellent pretext for a fight between two rival factions of the Johnstone clan. The Dryfe river had worn itself in under the church, and seemed likely in a " verie schorte space " of time to carry it away. Accordingly William Johnstone of Lockerbie and Gimmembie, with a party of relations and friends, set to work on the 25th April, 1617, to draw " bak agane the watter from oute undir the said Kirk " to its old course. Presently James Johnstone of Kirkcubright, with his sons, " Andro Jokie, William Francie, George, James, and Hercules," and others, all armed, arrived on the scene, and " efter a verie insolent maner " interrupted the work and " most feirsilie set upoun " the Lockerbie party. Lockerbie himself and some of his sons were hurt, and his brother Archibald received " ten deidlie woundis " in the face. Upon complaint being made to the Privy Council, it was held, the 7th May, 1617, that the charges against the Kirkcubright party were proved, and Kirkcubright and others were ordered to present themselves within the tolbooth of Edinburgh within six days and to remain there at their own expense during the Council's pleasure.

In a few months, however, the tables were turned, for on the 14th January, 1618, Lockerbie with his sons Mungo and Hercules, his brother Archibald, and others, were indicted as

⁹ *R.P.C.*, xiii., pp. 363, 601, 658.

being art and part of the slaughter of James Johnstone of Kirkcubright on the 25th April, 1617, by giving him divers cruel and deadly wounds. From a wound on the head " thre scoir and nyne banes " had been taken, and he had died on the 1st December, 1617. The accused persons said that he was a rebel at the horn and not entitled to legal protection, and that in any case he and his party had been the aggressors. They admitted that he had had a blow on the head from a spade, but from this, they said, he had completely recovered, and the real cause of his death was a fever. Eventually they were bound over on the 1st April, 1618, to appear on the third day of the next Justice Ayre of their district, or sooner upon 18 days' warning.

Three weeks later on, the 21st April, 1618, the two factions met again at the funeral of Thomas Johnstone, younger, of Fingland, at Tundergarth a parish adjoining Dryfesdale on the south-east, with the result that Francis, brother of William Johnstone of Lockerbie; John, brother of Andrew Johnstone of Kirkcubright; and Andrew, son of John Johnstone of Tundergarth, were slain then and there in the churchyard. This time the principal people (including some ladies) on both sides were bound over, the 18th November, 1618, to appear at the next Justice Ayre at Dumfries, but I have not discovered whether any of these trials ever took place.¹⁰

Mr Herries is never mentioned in these proceedings, so probably he was able to keep out of the quarrel. Possibly he

¹⁰ *R.P.C.*, xi., p. 124; Pitcairn's *Trials*, iii., pp. 432, 438, 439. The Laird of Lockerbie must have been one of Mr Herries's most interesting parishioners. He was accused of many "slaughters" and crimes, amongst others, in 1612, of attacking, wounding, stripping, and leaving "all naked" in the highway, near Dryfesdale Church, certain officers who were executing letters of poinding against some of the clan. This time he was in alliance with the Kirkcubright family. He was at the rout of the Maxwells at Dryfesdale in 1593, and in 1608 he was one of the five persons present at the fatal meeting where his chief, Sir James Johnstone, was shot by Lord Maxwell (*Book of Caerlaverock*, ii., p. 498; Pitcairn's *Trials*, iii., pp. 46, 436; *R.P.C.*, v., p. 456; ix., p. 448). The Dryfesdale church known to him and to Mr Herries was carried away by the Dryfe in 1670. The present parish church is in the town of Lockerbie.

was away at the time of the fight by his church on the 25th April, 1617. He was certainly at Edinburgh on the following 27th June, being one of the fifty-five ministers,¹¹ who on that day assembled in the Music School to sign a protest against certain proposals aimed at the powers of General Assemblies of the Kirk, laid before Parliament by James VI., who was then in Edinburgh. His conduct on this occasion and the fact that he signed the National League and Covenant in 1638¹² are the only indications I have found of his way of thinking in matters ecclesiastical and political.

We next hear of him in connection with some of his more disreputable parishioners. Thomas Harkness in Lockerbie, surety for "Andro Johnstoun, called Cristies Andro, in Milbank," as excuse for the latter's failure to appear before a court held in Jedburgh for the Border Shires in February, 1623, produced "ane testimoniall, subscrivit be Mr Robert Hereis, minister of Drysdail," to the effect that Johnstone had been "bedfast seik" for the last eight or nine weeks. At a court held in the following April Johnstone was not tried, but consented to be banished from Scotland never to return "without license of our Sowreane Lord," under the "pane of deid of his awin consent without farder tryell of law."¹³ Unfortunately the charges against him are not recorded.

In 1634 John Irving of Auchinstork (or Auchinsleitt), in the "parochine off Drysdail," complained to the Privy Council that he was like to starve in the tolbooth of Dumfries, where he was confined on a charge of sheep-stealing, of which he was most innocent. The Council ordered Robert Maxwell of Dinwiddie, Steward Principal of Annandale, to show cause why Irving should not be released. Maxwell, accordingly, wrote from "Dinvodie," on the 7th July, the following explanation. The Minister of Drysdail and sundry honest men, his neighbours, having lost a number of sheep, a party of them had gone to Irving's house, accompanied by the searchers

¹¹ Scot of Cupar's *Apologetical Narration* (Woodrow Soc.), p. 249.

¹² *D. and G. N. H. and A. Soc. Transactions*, 3rd Ser., i., p. 361.

¹³ *R.P.C.*, xiv., pp. 687, 694, 706.

appointed by the Commissioners of the Middle Shires. These officials having "ryped" the premises, found "hid privatlie thairin ane scheepe new slaine togiddir withe the skin quhilk Johnne Johnnestoun in Clewcheidis" recognised as his by its "mark and burne." Six more sheep skins were discovered "hid togiddir with twa pokefulles of wool and ane great number off scheepe bonnes" under a bed. Thereupon Irving had been arrested and sent to the "pledge challmer of Drumfreis" to await his trial. Maxwell finishes his letter with a warning that if the "very honorabill and nobill Lordis" of the Council were going to set at liberty before trial such like thieves, who were oppressing the country, it would be impossible for "honest men to preserve thair bestiall unstollin."¹⁴ The Privy Council Records have a provoking way of telling only a part of a story, and I cannot say whether the Lords set Irving free to return to his unsavoury bed over the remains of the sheep or whether they left him to his fate in the "pledge challmer."

On the 8th December, 1635, the Privy Council issued a commission to Mr Herries, and three other Annandale Ministers, to raise money for building a bridge over the Water of Milk in Annandale, where the "commoun hieway" passed southward towards London. The want of such a bridge had cost many people their lives "to the great discredite of the Kingdome," and the building of it was recommended to the liberality of the "noblemen, prelats, barons, burgesses," and others in the shire of Dumfries and "stewartrie of Annerdail," as well as of travellers passing by the ford which the bridge was to replace. The Commissioners were to report progress at the end of a year. This they did, but they had to own that, though they had been "very solicitous and careful in this matter," they had only collected "some small moneyes bot of no considerable quantitie." The Council renewed the commission for another year, and extended its recommendation to the Burghs of Edinburgh and Glasgow and to the Convention of Burghs to be held at Aberdeen.¹⁵ Again the Coun-

¹⁴ *Ibid.*, 2nd Ser., v., pp. 624, 636.

¹⁵ *R.P.C.*, 2nd Ser., vi., pp. 149, 349.

cil Records leave the tale half told, and I do not know whether or not the necessary money was raised. When himself approached for subscriptions on behalf of public objects, Mr Herries was ready to respond. In 1632 he gave "16 lib." towards the building of a new library for the University of Glasgow.¹⁶

"Mr Robert Hereis, minister of Goddis word at Drysdail, onlie lawfull sone to umquhile William Hereis, merchand," appeared the 17th June, 1629, before the Dean of Guild and his Council, at Edinburgh, "sufficientlie airmit with ane furnischt muskat," and was made burges of the Burgh "be richt of his said father, burges of the samen."¹⁷ He was later, the 8th January, 1642, served heir general to his father, who had died at the peace and faith of the late King James VI.¹⁸

Mr Herries saw the disappearance of King, Bishops, Parliament, and General Assembly. He lived to see the restoration of Monarchy in 1660, but died just before the renewal of Episcopacy by the Act of 27th May, 1662. His tomb in the Old Churchyard of Dryfesdale (on the right of the highroad from Lockerbie, just before it crosses the Dryfe northwards) was in fair preservation when I saw it in 1904. On a flat stone surmounting it are carved the following inscription in raised letters, two shields, and a skull and cross bones:—

¹⁶ *Munimenta Universitatis Glasguensis* (Maitland Club), iii., p. 447.

¹⁷ *Edin. Guild Regr.*

¹⁸ *Ing. Ret. Gen. in Publ. Arch.*, vol. xvi., folio 188; No. 2625 in the printed General Services.

hedgehogs occur on seals of the Lords Herries of the Maxwell family,²⁰ and possibly the carver of the stone was given a drawing of some such combination without being told to leave out the saltire.

Mr Herries married at South Leith, the 10th September, 1618, Janet Mackison.²¹ She was still living on the 4th November, 1670, when she went to the house and lands of Halldykes, and, in accordance with a disposition of that date in favour of Robert Herries, her lawful son, she gave him formal possession of her horses, nolt, and sheep in her barns or pasturing on the land, also of her corn and grain both in barn or sown on the ground, and of her insight and plenishing in the dwelling-house, and of other possessions.²²

Mr Herries and Janet Mackison had certainly four children, perhaps more. A daughter, Margaret, was married to William Herries of Corytoun before the 16th November, 1658, the date of a "discharge" granted, with her consent, by her husband to her father and mother acknowledging the receipt of her "tocher" of 2000 merks, Scots money.²³ Another daughter, Sarah, wife of Adam Newall, factor and chamber-

²⁰ Fraser's *Book of Caerlaverock*, i., pp. 396, 571. In the possession of my brother, Mr R. S. Herries, at St. Julians, Kent, is a square stone, formerly at Hoddom Castle, carved with a shield similar in shape to the central one on the tombstone, and charged like it with a "thin saltire," with an unmistakable hedgehog in each flank and one in base. In chief is what may be a "label point" (it is more like a hook), and this object is repeated below the lowest hedgehog. Over the shield is a coronet, and initials on either side of it show that it was carved for John Maxwell, 6th Lord Herries, who sold Hoddom to Sir Richard Murray in 1627. This stone was given to Robert Herries of St. Julians, the last descendant of the minister of Dryfesdale to own Halldykes, by his relation, General Matthew Kirkpatrick Sharpe of Hoddom Castle, who died in 1845.

²¹ *Fasti*, see footnote 6.

²² Notarial Instrument at St. Julians (see footnote 20) endorsed "Instrument off possessione in favours of Robert Herries, 1670."

²³ Document at St. Julians endorsed "Discharge William hereis of Corytoun To Mr Robert hereis, 1658." This shows that the tocher was paid by instalments, for each of which a receipt had been given. This discharge is a general receipt for the whole amount. Probably, therefore, the marriage had taken place some time before November, 1658.

lain on the Earl of Southesk's estates, was presumably married after her father's death, for the testament dative of her husband, who died in 1683, confirmed at Dumfries the 12th March, 1684, shows that her marriage had the consent of her mother, "Janet Makesoune," and of her brother, Robert Herries.²⁴

Mr Herries established two sons as landed proprietors. I have traced the fortunes of the younger son, Robert, and his descendants in a paper about their property of Halldykes, near Lockerbie, recently contributed to the Society's *Transactions*.²⁵ The elder son, William, had the estate of Harthat, or Harthwood, about which I have no particulars. It was, I believe, in the parish of Lochmaben, and was presumably acquired before the 18th April, 1648, the date of an Act of the Scots Parliament for putting the kingdom into a Posture of War, in which "Mr Wm. herreis of hairhatt" was nominated to serve on the Committee of War for Dumfriesshire.²⁶ William Herries, the Minister's son, in legal documents is always styled *Magister*, *Master*, or *Mr*,²⁷ titles then given in Scotland only to Masters of Arts. His identity therefore with the *Mr* William of 1648, and with *Gulielmus Herisius*, who became a Master of Arts of Edinburgh University in 1644,²⁸ seems certain. The object of the Act of 1648 was to raise forces, by means of the County Committees, in order to carry out the "Engagement" to rescue King Charles from the English

²⁴ For Adam Newall see *Scottish Hist. Soc.*, xlvi., pp. 223, 224, 230; *R.P.C.*, 3rd Ser., iv., p. 612; viii., pp. 301, 302.

²⁵ 3rd Ser., v., p. 115. For pedigrees of descendants of both sons, see *Miscellanea Genealogica et Heraldica*, 4th Ser., iv., pp. 272, 301, 378; v., pp. 40, 118-19.

²⁶ *Acta Parl. Scot.*, vi., p. 295; vi., pt. ii., p. 32, in later edition. The name of "Harthat" seems to have been a difficult one for scribes. Besides the varieties already mentioned, it appears as "Harquhat," "Garthat," and "Harthwood" in some Privy Council proceedings concerning Francis Herries, son of Mr William, in 1671 (*R.P.C.*, 3rd Ser., iii., pp. 695, 699, 701).

²⁷ In the confirmation of his testament for instance; see too *Ing. Ret. Gen.*, Nos., 4786, 8070.

²⁸ *Catalogue of Edin. Graduates* (Bannatyne Club), p. 62.

army in return for concessions in favour of Presbyterianism. a policy which ended in disaster.

Mr William Herries died in the lifetime of his father in September, 1658, as appears from the confirmation of his testament dative at Dumfries, the 3rd May, 1659. The Inventory was given up by his widow, Marion (or Mariot) M'Gill,²⁹ on behalf of his lawful daughters, Elizabeth, Janet, Katherine, Anna, and Isobell. These sisters are named again in the same order, together with their nephew, William Herries, son of their brother Francis (see footnotes 1 and 26), as heirs of their father, "Magistri" William Herries, described as eldest son of "Magistri" Robert Herries, minister at Dryfesdale, in a retour of 16th March, 1699.³⁰ According to a MS. Pedigree³¹ made in 1789, they all found husbands. It has been mentioned already (see footnote 1) that Katherine, the third sister, married John Herries of Mabie, who died before the 5th June, 1688 (see footnote 29). According to the Pedigree of 1789,

²⁹ As relict of "Magistri Willielmi Herreis de Harthat" she was served heir of her father, Mr Francis M'Gill, minister of Kirkmichael, in Dumfriesshire, 6th May, 1664 (*Ing. Ret. Gen.*, No. 4786). She was no doubt the Marion M'Gill, described as relict of Robert Douglas of Beatfoord, who granted a discharge to Katherine Herries (her daughter), relict of John Herries of Mabie, 5th June, 1688 (*Minute Book of the Register of Deeds*, Dumfries Commissariat, in the General Register House, Edinburgh). On 30th August, 1708, William Herries of Harthat was served heir special in certain property in Dumfriesshire to his "Great-Grandfather Francis M'Gill, Minister at Kirkmichael," who had died in February, 1664 (*Decennial Indices to Services*).

³⁰ *Ing. Ret. Gen.*, No. 8070.

³¹ At St. Julians, see footnote 20. I have found independent evidence of the marriages of these sisters given in this Pedigree, except of that of Anna Herries, there said to have married "Archibald Stewart, brother to Stewart of Shambilly, by whom she had a daughter, married to — Malcolm, father of Archibald Malcolm, writer in Dumfries, and other children." For Elizabeth Herries, the eldest sister, wife of John Dalrymple of Waterside, in Nithsdale, see the account of the Dalrymple family in Mr H. B. M'Call's *Some Old Families*. For Isobel Herries, the youngest sister, wife of William Graham of Mossknow, in Annandale, see the *Scottish Antiquary* (viii., p. 16), where she is said to have married in 1682 and to have died in 1737.

she married secondly "Maxwell of Carse,"³² but had no children by either "marriage. The most interesting, though probably not the most comfortable, marriage was made by Janet Herries, the second sister. Her husband was Colonel William Graham of Boquhapple (also spelt Balquhapple, Balwhaple, and Buchaple in Parliamentary proceedings against him in 1690), in Perthshire, the head of a branch of the family of the Earls of Menteith. His mother, also a Graham, was an aunt of the famous Claverhouse. He became a Cornet in Claverhouse's Troop of Horse in 1682, and as such was in 1683 and 1684 in commissions to try rebels in Dumfriesshire and Galloway. It was probably at this time that he met Janet Herries. He accompanied Claverhouse to England in October, 1688, and returned with him to Scotland in December, Claverhouse's patent as Viscount Dundee and his own commission as Major being among the last documents signed by King James before his flight from England. He was godfather to Dundee's son in April, and fought with him at Killiecrankie in July, 1689. In 1690 he was attainted by Parliament, and according to the Pedigree of 1789, "went abroad with King James." He must have eventually returned, being called in the confirmation of his testament dative at Edinburgh, 22nd September, 1736, Colonel William Graham of Boquhapple, indweller in the citadel of Leith. His daughter, Herries Graham, was served heir to her mother, "Janet Herries, wife of Col. William Grahame of Balwhapell," the 24th December, 1709.³³ According to the Pedigree of 1789, she was an only child and married Michael Malcolm, "son of Sir John Malcolm of Lochore."³⁴ Colonel Graham married

³² She was, no doubt, the "Catherine Herries of Mabie," married in 1689 to John Maxwell of Friars' Carse, who died in 1705, leaving two sons (presumably by another marriage), of whom the younger sold Friars' Carse to Robert Riddell in 1737, see the Pedigree of Maxwell of Tinwald, Monreith, etc., in the *Book of Caerlaverock*, i., p. 598.

³³ In the *Decennial Indices to Services (1710-19)* under *Grahame*, Herries Graham appears as a son, but this is corrected in the *Supplement to the same part (1710-19)* under *Herries*.

³⁴ See too Burke's *Peerage*, 1917, title Malcolm, where she is said to have been Malcolm's first wife and to have died in 1733.

secondly Catherine Lythgow of Drygrange, widow of James Thomson of Colmslie, and died in February, 1736, probably at a great age, for the marriage of his parents took place in 1648.³⁵

22nd November, 1918.

Chairman—Colonel R. DUDGEON, C.B., of Cargen.

With the Lowland Scottish Division in Palestine.

By Captain G. F. SCOTT ELLIOT, F.R.G.S., F.L.S.

[This most interesting popular lecture, with lime-light illustrations, was delivered in St. George's Hall, and was very well attended by the public. A verbatim report appeared in the local press. A silver collection was taken on entering, the proceeds going in aid of local War Work Associations.]

24th January, 1919.

Chairman—Mr G. M. STEWART, V.P.

Note on a Burial after Cremation.

By Mr A. HENDERSON BISHOP.

During the summer of 1913 road widening operations were being carried out on the Kirkbean-Newabbey road. This road, about one mile north of Kirkbean, near Nimbly Bridge, forms the western boundary of a small plantation, known locally as Wylie's Wood. Here the road surface is several feet below the original ground level. When cutting into the bank on the west side of the road, the roadman pared a further

³⁵ *Scots Peerage*, title Menteith, vi., pp. 150-51; ix., p. 136; Dalton's *Scots Army*, 1661-1688, pp. 111, 112 (note 12); Napier's *Life of Viscount Dundee*, *passim*; *R.P.C.*, 3rd Ser., viii., pp. 137, 318, 501; *Acta Parl. Scot.*, ix., *passim*.



TUMULUS AT WYLIE'S WOOD, KIRKBEAN.
The stick marks the place where the urn was found.

section from a tumulus which had already been cut into. At right angles to the road, and running towards the centre of the tumulus, was a rabbit burrow. The mouth of the burrow proved an irresistible target to some passing boys, who, throwing stones into it, broke a cinerary urn and exposed a heap of calcined bones. Within a few days I visited the site, and found that the tumulus was densely covered with bracken, rough grass, and bramble briars, making it very difficult to locate accurately the dimension of the mound; but the following figures are approximately correct:—Oval in shape, the longer axis runs roughly north and south, the extreme length being 25 feet. The shorter now measures 10 feet, but would be three to four feet more before the road was formed. The highest point is about 4 feet above the original surface. There was no appearance of any marginal setting, but a few large boulders were buried irregularly in the surface. The exposed section, 19 feet in length, showed the sub-soil to be stratified sand and gravel. Careful inquiry elicited the following particulars:—The urn was found inverted with a clay plug in the mouth. It was sunk into the original surface about 6 inches, and covered by soil to a depth of 3 ft. 3 in. There was no appearance of any structure or stones surrounding it. It was not placed centrally in the tumulus. It is highly probable that there are other burials in the tumulus.

The urn is of the truncated cone or flower-pot type, with a deep overhanging rim. The total depth is $11\frac{1}{2}$ inches; the greatest diameter, at the lower edge of overhanging rim, is $10\frac{3}{4}$ inches; across the mouth it is $8\frac{3}{4}$ inches; base, 3 inches. Measured over the surface, the rim is $2\frac{3}{4}$ inches deep, the almost parallel sides $3\frac{1}{4}$ inches deep, and the lower portion, consisting of the truncated cone, $6\frac{1}{2}$ inches deep. It has a capacity of 8 litres, measured in fine sand. The walls are about three-quarters of an inch thick. The paste is light in colour, well burnt, and has an admixture of broken stones to prevent it cracking in the fire.

The rim is ornamented with a band composed of almost vertically set lines, impressed with a stamp or small chisel-edged tool, placed at an obtuse angle to one another, forming a much expanded W, and placed so that all point in a uniform

direction. Above the band, and close to the top of the vessel, is a narrow line similar to, but narrower than, the lines composing the W.

The body, or mid-portion, is ornamented by lines such as would be drawn on soft clay with a pointed instrument. These cross each other obliquely, so as to form a lozenge-shaped space: there are three rows of lozenge with alternate half-lozenge at top and bottom. At the angle formed by the junction of the body with the base of the truncated cone is a series of bold dots placed from five-eighths to three-quarters of an inch apart.

The lower portion, as is usual, is unornamented. The upper surface of the rim, which is slightly bevelled inwards, has bands formed of short lines set roughly parallel to one another. The interior surface is quite plain.

The urn was filled to about three-quarters of its capacity with calcined bones. The longer bones showed in places a greenish staining, possibly of bronze, but there were no implement or fragments of bronze noticed. Professor Bryce, of Glasgow, reported that the anatomical characteristics show that the individual was of adult age, but of small stature, probably a female. Amongst the bones I found a fire-injured flint scraper and a bone pin or awl, also fire-injured. This measures 4 inches in length, is slightly curved, and has a chord of five-eighths of an inch.

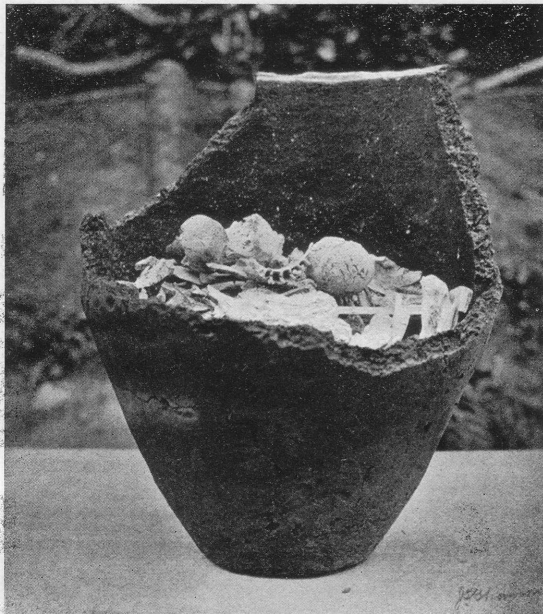
This type of urn belongs to the Bronze Age and to the latest period of that age. They are sometimes found set in circles or in a straight line at regular intervals apart. They are mostly inverted over the calcined bones, but sometimes sit upright, and rarely have any clay plug or stone cover. They are at times found to contain smaller urns, known as "incense cups;" two having been found at Eilchorn, Inverkeillor, in a somewhat large urn, which also contained a whitish glass bead and was associated with several bronze knives (*Proceed., S.A., Scot.*, Vol. xxv.).

One of these smaller urns was found by Mr Grierson, of Newabbey, some years ago in a mound near the corner of the field opposite and east of Bogrie Farm, in Lochrutton.

It contained burnt bones. It is light in colour, of a



Urn found at Wylie's Wood, Kirkbean.



Urn found at Wylie's Wood, Kirkbean,
showing calcined bones.

smooth paste, with no apparent stones in it. It has a capacity of 180 c.c. of fine sand. It measures across the mouth 3 inches; across base, $1\frac{1}{2}$ inches; greatest diameter, $3\frac{1}{2}$ inches; height, $2\frac{5}{8}$ inches. The lower part is a truncated cone, measuring $1\frac{3}{8}$ inches deep along surface. The cone base joins the body, whose walls are slightly convex and incline towards the mouth. The late Dr Joseph Anderson described a number of urns, among them some of the incense cup type. His remark on the purpose of these is so full of dry humour that I must quote it :—

“ The purpose of these tiny vessels has given rise to a variety of conjectures. It has been suggested that they have been censors or incense cups, or lamps, or salt cellars, or vessels for carrying the sacred fire that was to light the funeral pile, or cups for the strong drink required on the occasion of the funeral feast, or vessels destined to contain the ashes of the brain or heart, or for the bones of an infant sacrificed on the death of its mother. All these conjectures are equally probable, inasmuch as they are all equally unsupported by evidence. The only thing known in connection with their use is that in one or two instances they have contained the bones of a child; in all other instances they have contained nothing.” (*Proceed., S.A., Scot., Vol. xiii., page 107*).

Both these urns are exhibited in the Hunterian Museum, Glasgow University, the Kirkbean urn having been presented by Mr R. A. Oswald of Auchencruive, on whose estate it was found. It would be well if a careful investigation of the tumulus could be made, but this should on no account be attempted without expert assistance.

The bones were submitted to Mr Cecil H. Desch, D.Sc., Ph.D., F.I.C., of the Metallurgical Laboratory, Glasgow, who after submitting them to tests reported as follows :—“ The blue stain on the bone suggested the presence of copper, but I could not obtain a reaction for copper on scraping off a little of the stained portion and making the usual tests. I therefore applied micro-chemical tests, but without obtaining any definite indication of copper. The blue colour was so strong that a positive test would certainly have been obtained had the

coloration been due to that metal. Iron was also absent. The colour persisted until heated fairly strongly, so that it did not appear to be due to organic matter. I should have liked to make a full micro-chemical examination, but the material had been used up by these tests, and no more stained bone could be scaped off. I am sorry that the results are negative, but I do not think that the stain can be attributed to copper."

Insect Enemies in Mesopotamia.

By Rev. JAMES AIKEN, M.A.

[This most interesting paper, which deserves a wider publicity, was contributed by the late Entomologist to the Forces in Mesopotamia. The author gave a full account of parasites which were disease and fever carriers, and the measures taken for their extermination, which ultimately reduced by 75 per cent. the sickness amongst the troops in Mesopotamia. The paper has been printed *in extenso* in the local press.]

The Evolution of Firearms.

By Sergeant T. DYKES, Musketry Instructor, K.O.S.B.

[This short paper has had to be held over.]

Notes Regarding Bird Life in the Stewartry.

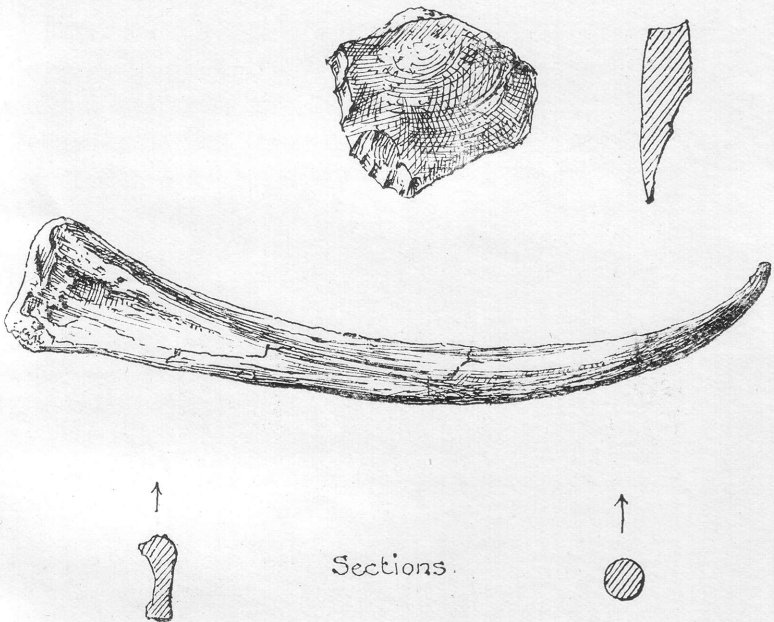
From the Manuscript of the late Mr T. B. HOUGH, compiled by Captain G. F. SCOTT ELLIOT, with an Obituary Notice by Dr COWAN, New-Galloway.

Mr T. B. Hough, from whose "Bird Notes" the following paper has been compiled, came to New-Galloway in the spring of 1901 for a few weeks' fishing. He was so much charmed with the district that the weeks passed into months, and eventually he settled there altogether.

From 1901-1916 with the exception of two years spent in the Crieff district of Perthshire, he made the Glenkens his home, living first at Kenbridge and latterly at Dalgowan.



“Incense Cup” found near Bogrie Farm, Lochrutton.
Exact size.



Flint Scraper and Bone Pin or Awl found in Urn from Wylie's Wood, Kirkbean.

He was an enthusiastic lover of birds, and most painstaking in observing their habits. His notes can be depended on as being absolutely accurate.

For the purpose of studying sea birds, he used frequently to visit Carsethorn, staying when there with Mr Robert M'Call, for whom he had the greatest esteem, and from whom he got much valuable information regarding shore birds.

A keen and successful fisherman, his idea of a happy day was to get away to a hill loch and there with his rod spend the time fishing, and at the same time noting whatever was of interest in the way of bird life.

After a long and painful illness, which he bore with the utmost fortitude, he died on August 7th, 1916, and now lies at rest in Kells Churchyard.

JOHN COWAN.

Owing to the kindness of Dr Cowan, I have been allowed to peruse the MSS. of the late Mr Hough regarding Galloway birds. These notes are of great value and most interesting; they are not only the work of an accurate and careful observer, but also of one who possessed a real sympathy for birds and understood their ways thoroughly.

The observations are entirely those of Mr Hough. I have as far as possible quoted them in his own words and added nothing.

G. F. SCOTT ELLIOT.

MISTLE-THRUSH (*Turdus viscivorus*, Linnæus).—In song, 1st January, 1912, and 7th December, 1914. Nest made of lichen, resting on the fork of a lichen covered oak tree. Feeds on holly berries. In flocks, 20th August, 1915.

SONG-THRUSH (*Turdus musicus clarkei*, Hartert).—In song, 6th November and 17th December, 1914; also in January and February, 1912, 1913, and 1914. On May 8th, 1914, a song-thrush was singing. "She suddenly gave about fifteen notes consecutively, all exactly the same (wheat, wheat, wheat). It sounded exactly like a man whistling to attract attention."

REDWING (*Turdus iliacus*, Linnæus).—Often observed at New-Galloway from 17th October to 4th April or later. Feeds on holly and rowan berries.

FIELDFARE (*Turdus pilaris*, Linnæus).—See notes of arrivals. 28th October, 1914. "Numerous large separate flocks kept dropping into the trees by the Brough Farm from very high up in the air. They appeared to drop in for a short rest in the trees and in the dead bracken on the hill. Then they got up, and in long straggling flocks flew S.-W. over the side of the hill. The migration—for such it must have been—lasted for two hours to my knowledge."

BLACKBIRD (*Turdus merula*, Linn.).—In song, 11th September, 1915; also 19th February, 1914; 20th February, 1913; 22nd February, 1905.

RING-OUZEL (*Turdus torquatus*, Linn.).—Nests at Dalwhat, April and May; also seen at Craigencallie.

WHEATEAR (*Saxicola œnanthe*, Linn.).—Observed at Carsethorn, 29th September, 1912. On the 2nd September, 1913, large numbers at Carsethorn, but hardly any on the 3rd September.

WHINCHAT (*Pratincola rubetra*, Linn.).—Observed near Carsethorn, 9th October, 1913.

STONECHAT (*Pratincola torquata hibernans*, Hartert).—Frequently observed, especially in January, February, March, and April.

REDSTART (*Ruticilla Phœnicurus*, Linn.).—On 20th April, 1905, Cairn Edward; also May, June, and July.

ROBIN (*Erithacus rubecula melophilus*, Hartert).—Common. In song, 6th August, 1915.

WHITETHROAT (*Sylvia cinerea*, Bechstein).—See list arrivals. At New-Galloway, 30th October, 1915.

GARDEN-WARBLER (*Sylvia hortensis*, Bechstein).—In song, 29th June, 1913.

GOLD-CRESTED WREN (*Regulus cristatus anglorum*,

Hartert).—September, October, January, and February, at Cairn Edward, Overton, etc.

WILLOW-WREN (*Phylloscopus trochilus*, *Linn.*).—See list arrivals. In song, 7th August, 1915.

SEDGE-WARBLER (*Acrocephalus phragmitis*, *Bechstein*).—See arrivals. 28th May, 1913. “Last night the sedge-warbler began to sing at 11 o’clock. . . I thought his opening notes were the creaking of a badly fitting window sash being lowered upstairs. Four or five notes only, and then a pause of five minutes or so, and not another pause of any sort until after 1 p.m.” Migration on 12th May, 1912.

GRASSHOPPER WARBLER (*Locustella naevia*, *Boddaert*).—See arrivals.

HEDGE-SPARROW (*Accentor modularis occidentalis*, *Hartert*).—In song, 13th February, 1913.

DIPPER (*Cinclus cinclus britannicus*, *Tschusi*).—In song, 27th March, 1903. Nested at Bogue Brig.

LONG-TAILED TITMOUSE (*Acredula caudata rosea*, *Blyth*).—Fairly common. Trochie Braes, etc., January, February, March, and April; also noted 16th September, 1913, and 5th November, 1912.

GREAT TITMOUSE (*Parus major newtoni*, *Prazak*).—April, May, 1905, and in winter. Caught in a mouse trap, 26th November, 1913.

COAL TITMOUSE (*Parus ater britannicus* (*Sharpe and Dresser*)).—16th April, 1913, nesting. “When he arrived with a bunch of moss almost as large as his head, he would perch on a twig near the nest, when the female would join him and make a tremendous fuss over him . . . giving quaint little pecks at his load of moss, perhaps congratulating him on its quality . . . when choosing the moss he seemed to be very particular.”

WILLOW TITMOUSE (*Parus atricapillus kleinschmidti*).—9th February, 1912, Loch Ken; 19th February, 1915, Living-

stone; April, Trochie Braes. This bird apparently is the Marsh Titmouse of most observers in the district.

BLUE TITMOUSE (*Parus cæruleus obscurus*, Prazak).—Common. Spring note heard 6th November, 1914. November 25th, 1913—"A Blue Tit in a mouse trap—quite unhurt. I let him out, and he flew away two yards and sat on a gooseberry bush and swore at me."

WREN (*Troglodytes parvulus*, K. L. Koch).—Common.

TREE-CREEPER (*Certhia familiaris britannica*, Ridgway).—Not common. "Searching bark of crabtree." 6th December, 1912, also Milldam, Trochie Braes, etc., chiefly in January, March, and April.

PIED WAGTAIL (*Motacilla alba lugubris*, Temminck).—See arrivals. Numerous on Fintloch Holm, 25th July, 1913; on 2nd September, 1913, at Southernness they were abundant, but very few were left on 3rd September; on 26th September, 1913, "a great noisy flight of perhaps 50 Pied Wagtails over Dalgowan at 5.30 p.m., wind South, . . . a second but much smaller flight about 15 minutes later. Both flights going South. Their twittering as they flew was very loud, and some of them were so high up as to be almost out of sight in the murk."

GREY WAGTAIL (*Motacilla melanope*, Pallas).—See arrivals. Also seen in numbers, 25th July, 1913; 17th November, 1914, Cairn Edward.

TREE-PIPIT (*Anthus trivialis*, Linn.).—From 1st to 16th April, Garple Foot, Newton-Stewart Road, and Milldam.

MEADOW-PIPIT (*Anthus pratensis*, Linn.).—See arrivals. Very abundant, 29th March, 1903; 10th April, 1914. Apparently again in flocks about August. Noted as late as 30th November, 1914; 7th October, 1913—"I repeatedly saw small flocks, of about 7-12 larks and pipits, fly from the land on the west out towards Annan way. They flew right on out of sight."

GREAT GREY SHRIKE (*Lanius excubitor*, Linn.).—Raiders' Brig, Mossdale, 9th March, 1915.

SPOTTED FLYCATCHER (*Muscicapa grisola*, Linn.).—See arrivals. Trochie Braes, etc., May.

PIED FLYCATCHER (*Muscicapa atricapilla*, Linn.).—29th April, 1905, Trochie Braes.

SWALLOW (*Hirundo rustica*, Linn.).—See arrivals. Departure, in 1909 left New-Galloway 20th September; on the 9th October, 1913, Swallows were seen actually crossing the Solway on their way south, but three were observed at Southernness as late as the 31st October. For several years a pair nested regularly in Mr Hough's toolhouse. In one season, after a battle royal, they drove out a second pair, which also tried to build there. The following data are given:—1909—Began nest May 29th; first egg, June 10th; hatched June 29th; flew July 16th. 1912 Began nest May 4th; first egg May 27th; hatched June 20th; flew July 4th. Building is nearly always done in the morning. "I think, perhaps, that after fixing a layer of about half an inch, they quit for the day to let that layer dry.

. . . They use quite a lot of hay to help to bind it together. Like the House Martins, they bring . . . even more than a beakfull; . . . they dab the mud on and dabble it about with their beaks, as if salivating it, picking it off, and dabbing it on again, till it is satisfactorily deposited in the correct position."

HOUSE MARTIN (*Chelidon urbica*, Linn.).—See arrivals. Observed as late as 31st October, 1913. This bird is becoming rare in the district. Mr Hough believed that this is chiefly due to sparrows, as suggested by the late Mr R. Service.

SAND-MARTIN (*Cotile riparia*, Linn.).—See arrivals. In 1913 the first bird was seen on 3rd April. They then left, and did not return till 17th April. A migration observed on 27th August, 1912.

GREENFINCH (*Ligurinus chloris*, Linn.).—Noticed 20th February, 1913, and 21st March, 1913, at New-Galloway. In song, 1st March, 1911. Near Carsethorn, 5th November, 1913.

GOLDFINCH (*Carduelis elegans britannicus*, Hartert).—

Feeding on knapweed, 3rd October; on seeds of alder, 10th December; on groundsel, 20th September; apparently common, January, April, May, etc.

SPARROW (*Passer domesticus*, Linn.).—Albino variety frequent at Carsethorn. In June, 1914, observed feeding on caterpillars of Gooseberry Saw Fly.

CHAFFINCH (*Fringilla cœlebs*, Linn.).—On 19th January, 1912, feeding on wrack by Loch Ken. In "hundreds" 20th February, 1913. In song, 1st March (1905, 1911), 3rd March (1903, 1913), 6th March (1912). Very big flock of males seen on 29th September, 1914.

BRAMBLING (*Fringilla montifringilla*, Linn.).—Observed 11th October, 1913, Carsethorn; also December, January, February, and 19th March, 1912, Fintloch, etc.

LINNET (*Linota cannabina*, Linn.).—Common. On wrack by Loch Ken, 19th January, 1912; by the shore, October and November.

LESSER REDPOLL (*Linota rufescens*, Vieillot).—Apparently abundant. Noticed January, February, March, April, May, September, October, November, and December. Feeding on wrack by loch side.

TWITE (*Linota flavirostris*, Linn.).—At Milldam, New-Galloway, 5th December, 1913.

BULLFINCH (*Pyrrhula pyrrhula pileata*, Macgillivray).—2nd October, 1913; also in November, December, January, March, and April. Feeds on sloe berries.

YELLOW HAMMER (*Emberiza citrinella*, Linn.).—In song, 9th February, 1914; 13th February, 1913; 24th and 28th February, 1912 and 1911; 1st and 5th March, 1905 and 1903; also in song, 7th and 17th August, 1915 and 1913.

REED-BUNTING (*Emberiza schœniclus*, Linn.).—Observed in January, March, April, and May—New-Galloway.

SNOW-BUNTING (*Plectrophenax nivalis*, Linn.).—Observed 15th February, 1915, at Ken Bridge.

STARLING (*Sturnus vulgaris*, Linn.).—Common. A number of them observed mobbing a large hawk, 4th September, 1917.

JAY (*Garrulus glandarius rufitergum*, Hartert).—New-abbey Road, 8th October, 1913.

MAGPIE (*Pica rustica Scopoli*).—Cairn Edward, 6th January, 1912; Powfoot, 6th October, 1913.

JACKDAW (*Corvus monedula*, Linn.).—Common.

RAVEN (*Corvus corax*, Linn.).—Frequently noticed flying North to South, and vice-versa. Nested at Dalwhat (6 eggs and "no two alike"), 1913 and 1914. 20th February, 1913. "Two pairs flying up the Ken Valley. . . In each case the cock was flirting around the hen as they flew; at times with wings almost touching, and again rising above her and coming past or in front of her with a swoop," and calling.

CARRION CROW (*Corvus corone*, Linn.).—"On 19th April, 1913, I saw a carrion crow . . . carrying an egg by means of its beak. I think the beak had pierced the egg, for the beak was closed, . . . probably a plover's egg. The puzzle is how does the crow carry the pierced egg on the point of its beak."

HOODED CROW (*Corvus cornix*, Linn.).—Common. Observed crossing the Solway from the Cumberland side.

ROOK (*Corvus frugilegus*, Linn.).—Building 23rd February, 1905; 5th March, 1903; 15th March, 1904. "September 6th I heard a tremendous 'cawing' out over the Firth, and presently a big lot of perhaps 50-60 rooks came over from the direction of Sillioth. They were high up, but when over Gillfoot Farmhouse they simply tumbled and spiraled down to the ground much as rooks do in windy weather. I saw three lots come over in this way."

SKYLARK (*Alauda arvensis*, Linn.).—Soaring and singing, 31st January, 1903; 9th, 21st, and 25th February, 1905, 1913, 1912. Migration observed at Carsethorn, 7th and 8th October, 1913, towards Annan; also on 12th October "in twos and threes and 60 feet up" towards Caerlaverock.

SWIFT (*Cypselus apus*, Linn.).—(See arrivals.) They had left on 10th August, 1915.

NIGHTJAR (*Caprimulgus europæus*, Linn.).—June, New-Galloway. "A nightjar pitched on road and began dusting itself, . . . trailed itself along the ground first on one side, then on the other, and then sat perfectly still for perhaps three or four minutes."

KINGFISHER (*Alcedo ispida*, Linn.).—Trochie Braes, 8th September, 1915, and 27th October, 1911; Grennan, 1st September; Fintloch, 25th November.

CUCKOO (*Cuculus canorus*, Linn.).—(See arrivals.) Three together on migration, 2nd August, 1912. 16th May, 1912—"A cuckoo savagely attacked by a meadow-pipit. Forty yards from me both came to the ground. She (the cuckoo) was on the ground on her breast with tail spread out uphill and one wing fully spread; the pipit was all over her, and was most certainly attacking her with the utmost vigour. The cuckoo rose first, followed at once by the pipit, which kept on worrying her so long as I could see them." 17th May—"Saw her pitch on the ground near the pipit's nest, . . . both pipits mobbing her on the ground. At last she flew, and three times over I saw one of the pipits seize her tail and hang on for two or three yards. This not more than twenty yards from me."

SHORT-EARED OWL (*Asio accipitrinus*, Pallas).—Eddleston, Shirmers Bridge, Ewanston. On 13th May, 1912, at Cairn Edward, 1.45 p.m. (bright sunshine).

TAWNY OWL (*Syrnium aluco*, Linn.).—Common. Noted that storms of heavy rain and wind followed the day after these birds had been unusually noisy, 1st May, 1911, and 23rd April, 1913.

BUZZARD (*Buteo vulgaris*, Leach).—Often observed Craigenbay, Craigenallie, Blackcraig, Dungeon of Kells, Knocknalling, etc.

ROUGH-LEGGED BUZZARD (*Buteo lagopus*, J. F. Gmelin).—Observed 29th October, 1913, Darsalloch, and 31st October, 1903, at Mossriddock.

SPARROW-HAWK (*Accipiter nisus*, Linn.).—Not common. Trochie Braes, Carsethorn, and at New-Galloway.

PEREGRINE FALCON (*Falco peregrinus*, Tunstall).—At Shawhill, Ben-y-Guinea, etc.

MERLIN (*Falco æsalon*, Tunstall).—October, New-Galloway.

KESTREL (*Falco tinnunculus*, Linn.).—Abundant October, 1911 (field mice and voles very numerous at same time); also Newton-Stewart Road, Brough, etc.

CORMORANT (*Phalacrocorax carbo*, Linn.).—Not uncommon on Loch Ken, Parton Bridge, and near New-Galloway. Also at Carsethorn. Builds at Port o' Warren. "13th May, 1912—I saw a cormorant on the Loch with such a big neckfull of fish that he could hardly get it down. I thought he was going to choke. It was curious to see that at times during his endeavours to swallow his fish he splashed his beak about in the water and then raised his head and had more gulps at it. When at last he got it down, he washed his beak and his feathers all over, took two or three more dives, and came ashore."

GREEN CORMORANT (*Phalacrocorax graculus*, Linn.).—Shore at Carsethorn.

GANNET (*Sula bassana*, Linn.).—Ken Bridge (broken its wing on the wires). Mull of Galloway, 11th June, 1912.

HERON (*Ardea cinerea*, Linn.).—Common. One pair built their nest in the Rookery at Kenmuir (Dr Cowan).

WHITE-FRONTED GOOSE (*Anser albifrons*, Scopoli).—Loch Ken, January and February, 1913; February, 1915; etc.

BEAN-GOOSE (*Anser fabalis*, Latham).—Balmaghie, 20th February, 1915; Parton, 23rd January, 1912.

BARNACLE-GOOSE (*Bernicla leucopsis*, Bechstein).—At Cubbox, 14th February, 1912; Loch Ken, 13th February, 1915; also at Southernness, in October.

WHOOPEE SWAN (*Cygnus musicus*, Bechstein).—At Carsethorn, 11th November, 1913.

MUTE SWAN (*Cygnus olor*, J. F. Gmelin).—(Tame.) Carsethorn, 11th November, 1913, and 12th March, 1914.

SHELD-DUCK (*Tadorna cornuta*, S. G. Gmelin).—Abundant, Drumburn, 19th March, 1914; Southernness, January and February; etc.

WILD DUCK (*Anas boschas*, Linn.).—White variety noted 11th February, 1911. Drake's plumage in eclipse on 7th May, 1915. Common.

SHOVELER (*Spatula clypeata*, Linn.).—Near Balmaghie Kirk, 20th February, 1915.

PINTAIL DUCK (*Dafila acuta*, Linn.).—Southernness, 29th January and 10th October, 1913; Pow, 12th March, 1914.

TEAL (*Nettion crecca*, Linn.).—Nested 13th May, 1915, by river Ken (9 eggs). Loch Ken during February, April, November, etc.

WIGEON (*Mareca penelope*, Linn.).—Lochinvar, February: Loch Ken, February, November, December; Southernness, September, October, February, and March. 4th April, 1913—Near Cairn Edward. "The bird in display looked exactly as if he found great difficulty in swallowing something. His crest was puffed out; his head thrown forward and then far back."

POCHARD (*Fuligula ferina*, Linn.).—Loch Ken, January, February, April, November, and December.

TUFTED DUCK (*Fuligula cristata*, Leach).—Loch Ken, January, February, April, and May. The call of this bird is "a twittering kind of whistle."

SCAUP (*Fuligula marila*, Linn.).—On 12th March, 1914, Powfoot, "in flocks up to 50 or more. As soon as the tide began to ebb, they drifted down with it, almost every bird having its head tucked away in its scapulars."

GOLDENEYE (*Clangula glaucion*, Linn.).—Loch Ken, January, February, March, April, and November.

BLACK SCOTER (*Edemia nigra*, Linn.).—Southernness

about January and February, also June, September, and October.

VELVET SCOTER (*Edemia fusca*, Linn.).—Carsethorn, 10th October, 1913.

GOOSANDER (*Mergus merganser*, Linn.).—River and Loch Ken, January, February, March, and December.

MERGANSER (*Mergus serrator*, Linn.).—Loch Ken, 5th January, 1912.

WOOD-PIGEON (*Columba palumbus*, Linn.).—Common, abundant on 5th March, 1913. On 2nd February, 1914—“Foreign birds small and very dark in colour.”

STOCK-DOVE (*Columba ænas*, Linn.).—Fintloch Holm. Nest at Troquhain (2nd April, 1914) in rabbit hole. The nest was made of heather tips and feathers.

ROCK-DOVE (*Columba livia*, J. F. Gmelin).—Logan, Wigtownshire, 13th June, 1912.

BLACK GROUSE (*Tetrao tetrix*, Linn.).—In display 21st April, 1913, “for the benefit of three grey hens which were sitting in an oak tree close at hand. His comb was so enlarged and spread out as to entirely hide the crown of his head. As he stumbled about with his wings trailing after the manner of a turkey cock, he seemed as if he was really trying to turn himself inside out. Later on I saw him again in the next field, and there he had seven grey hens round about him; he was strutting about in full display, while they apparently took not the slightest notice of him.” Feeds on buds of alder and birch, October. A chick unable to fly was seen as late as the 29th July, 1915.

RED GROUSE (*Lagopus scoticus*, Latham).—Paired on 12th January, 1915.

PHEASANT (*Phasianus colchicus*, Linn.).—Common.

PARTRIDGE (*Perdix cinerea*, Latham).—Newly hatched chick in charge of cock bird was observed on 29th July, 1915.

LAND-RAIL (*Crex pratensis*, Bechstein).—(See arrivals.)
“After a very wet morning, the hen bird led her chicks

through a gateway, . . . apparently to let them dry their down. They were the oddest little beasts, all covered with down and dark mouse or mole-coloured, and they run just like the old bird, with head well poked forward."

WATER-RAIL (*Rallus aquaticus*, Linn.).—At New-Galloway, May, June, and October. Peculiar "sharning" call is made by this bird.

MOOR-HEN (*Gallinula chloropus*, Linn.).—Common. On 19th April, 1914, "a moor-hen flew over the top of Dalarran Lodge Rookery." On 18th January, 1913, "saw a waterhen scramble up the perpendicular stem of an ash tree, using both wings and feet, perhaps 25 to 30 feet up."

COOT (*Fulica atra*, Linn.).—Abundant on Loch Ken, February and also November.

RING PLOVER (*Ægialitis hiaticola*, Linn.).—Observed near Carsethorn, January, February, March, June, July, September. Nest on shingle bank near Powfoot, 12th June, 1913. "The whole lot (of calves) galloped right over my nest; . . . a hoof had landed right in the nest and broken all the eggs. Returning to my seat, I watched to see what the owners of the nest would do. First of all the hen came up to within a foot of the nest, peered at it first with one eye, then with the other, never going up to it, but surveying it from all sides without a sound. Then the male came up, had a look at the nest, went up and seized a lump of hard-set egg, flew off a few yards, and ate the lot and came back for more. The hen followed him each time he came back and forward; that little bird ate every morsel of egg, shell and contents."

GOLDEN PLOVER (*Charadrius pluvialis*, Linn.).—Arrival of "trips" noted 5th, 24th, and 28th February, 1913; also 2nd April, 1913. "A trip of golden plover about 100 strong, I sat down to watch them, and in a very short time the whole flock sat down, with the exception of about half-a-dozen evidently on watch." Spring call ("one of the sweetest and wildest") heard on 7th April, 1912. Both winter and spring calls, 24th February, 1913. Observed on migration, 4th September, 1912.

GREY PLOVER (*Squatarola helvetica*, Linn.).—Observed 12th March, 1914, Borrow Point.

LAPWING (*Vanellus vulgaris*, Bechstein).—Flocks arrived on 29th January, 1904; 5th February, 1913; 28th February, 1915. Spring call first heard, 1st March, 1905; 25th February, 1912; 15th March, 1911. Flocks again noticed 1st June, 1912 and 8th August, 1915. On 25th June, 1914—“ Sheep too near the young or late eggs. . . The two old birds darting at and actually striking the sheep with their wings. . . They settled in front of the sheep and moved along in front of them simulating lameness.”

TURNSTONE (*Strepsilas interpres*, Linn.).—Southernness in June, August, and September, plentiful. “ I was watching these birds turning over stones. . . I gathered four which I saw them turn over; . . the largest measured 5 by 4 by $\frac{3}{4}$ inches, and weighed just over 6 ounces. The weight itself seems to make it a big job for the little bird; . . the stone when on its edge before falling over is about the full weight of the bird, one wonders at the skill and strength required. . . He seems to do it quite easily, just gets his beak under it, gives the stone a jerk, and over it goes.”

OYSTER-CATCHER (*Hæmatopus ostralegus*, Linn.).—(See arrivals.) Abundant at Southernness, January and February. One or two pairs nested regularly on the River Ken, where they seem to remain for March, April, May, and June. Abundant at Southernness in September. Observed courtship near Carsethorn (29th January and 1st February), “ two or three males kept running round a female with their wings partly open, tails fanned out and beaks pointing to the ground, . . making a fearful noise, chattering. At last the female appeared to get tired of the show and flew at one of them, knocked him over on his back and went for him with beak, and, I think, wings. . . The male bird was on his back and showed no fight, but when she let him up, walked away, looking very sorry for himself.”

WOODCOCK (*Scolopax rusticula*, Linn.).—Mentioned January, May, July, and September.

SNIFE (*Gallinago cœlestis*, Frenzel).—"Drumming" heard as early as 23rd March, 1915; 26th March, 1904; 30th March, 1913; 7th April, 1912; 14th April, 1912; 27th April, 1903 and 1914, 9.30 p.m. (bright moonlight); 18th May, 1914 (midnight). "During the drumming the female (presumably) kept calling 'chip, chip, chep, chip, chip,' and so on, from the rushes." "There is no doubt whatever that the feathers, the primaries of the wings, do vibrate in the rush downwards, . . . the tail feathers are fanned out, . . . the two outer feathers of the tail are stiffly fanned out apart from the rest of it."

JACK SNIFE (*Gallinago gallinula*, Linn.).—Observed New-abbey Pow, 25th October, 1913.

DUNLIN (*Tringa alpina*, Linn.).—Observed 27th April, Loch Ken; 26th May, Barscobe. Abundant Carsethorn and Southerness.

CURLEW-SANDPIPER (*Tringa subarquata*, Guldenstadt).—Powillimount, August, 1912.

PURPLE SANDPIPER (*Tringa maritima*, J. F. Gmelin).—Southerness, 4th November, 1913.

KNOT (*Tringa canutus*, Linn.).—Observed January, February, March, and September, Carsethorn and Southerness. "Quaint to see them hopping about on one leg, . . . shouldering the next bird out of the way."

SANDERLING (*Calidris arenaria*, Linn.).—2nd September, 1913, Merse, Carsethorn; 28th October, 1913, Southerness.

SANDPIPER (*Totanus hypoleucus*, Linn.).—Noticed River Ken, 31st March, 1910; April 7th, 1914 and 1915; April 12th, 1905 and 1913; April 19th, 1911; April 20th, 1903. "Nest near the open shingle, just inside the herbage under some dwarf briars." On June 6th the whole family were hatched out and running about. They all went for Mr Hough's terrier, mobbing him.

REDSHANK (*Totanus calidris*, Linn.).—Observed near New-Galloway in January, February, March, and summer;

also in October and December. Abundant January and February, Southernness. Nests inland. Courtship (January 29th-February 1st), Carsethorn. "The male (presumably) danced in front of the female with his wings stretched fully up over his back as when alighting from flight. Keeping them so, . . . he sprang up and down perhaps six inches or so, making a great noise all the time; . . . she . . . went on pecking at the mud."

GREENSHANK (*Totanus canescens*, J. F. Gmelin).—Southernness, August, September, and October.

BAR-TAILED GODWIT (*Limosa lapponica*, Linn.).—Carsethorn, 14th March, 1914; also Southernness, August, September, and October.

BLACK-TAILED GODWIT (*Limosa belgica*, J. F. Gmelin).—Southernness, 24th August, 1912.

CURLEW (*Numenius arquata*, Linn.).—(See List.) Albino variety, or rather "light Silurian grey" colour, seen at Fintloch, 5th March, 1913. Going South on 14th July and 23rd August, 1912.

WHIMBREL (*Numenius phæopus*, Linn.).—Observed 30th May, 1915, near New-Galloway.

SANDWICH TERN (*Sterna cantiaca*, F. J. Gmelin).—Observed 4th July, 1913, Loch Skerrow.

TERN (*Sterna fluviatilis*, Naumann).—At Carsethorn and Southernness, Luce Bay; 30th April, Loch Ken. Nests near Southernness. "Just clear of the gravel and shell banks—merely a hollow scooped out or perhaps paddled out with the feet in the turf, which is short and smooth, . . . nearly every nest in a dip or depression of the ground."

ARCTIC TERN (*Sterna macrura*, Naumann).—Southernness.

LITTLE TERN (*Sterna minuta*, Linnæus).—Carsethorn and Southernness, June, August, etc. "I think it is the most graceful bird I have ever seen. The cry . . . reminds one of a driver trying to clear a road for himself and calling Hay up, hay-y-ap." Nests in small hollows scooped out of the

beds of cockleshells washed up on to the turf. Lining of broken shells. Eggs, 2-3.

BLACK-HEADED GULL (*Larus ridibundus*, *Linnæus*).—Feeds on “ Lowran ” fly by Loch Ken; also on moths in the evening; was observed to act like a Skua, pursuing plover and making them drop the worm or whatever they had gathered. Mains, 12th December, 1912. Proceeding to nesting places, Loch Doon, 7th March, 1903; nests near Loch Stroan, 13th March, 1903. On 20th February, 1913, “ all the feathers of the ‘ head area ’ turn first of all black, and later on, towards the breeding season, the beautiful soft brown.”

COMMON GULL (*Larus canus*, *Linnæus*).—In thousands, feeding on black and blue gnats, 16th April, 1903. Courtship, 27th March, 1913. “ The male bird would run up from a distance in a crouching attitude, rather as a corncrake runs, until he came up to her, when both would straighten themselves up, facing each other, and apparently caress each other’s bill.”

HERRING GULL (*Larus argentatus*, *J. F. Gmelin*).—Carse-thorn, 15th October, 1914.

LESSER BLACK-BACKED GULL (*Larus fuscus*, *Linn.*).—Near Parton House, Loch Ken, and on the moors, March, April, and May.

GREAT BLACK-BACKED GULL (*Larus marinus*, *Linn.*).—Loch Ken, January; Southernness, June, October, etc.

RAZORBILL (*Alca torda*, *Linn.*).—Mull of Galloway, Carse-thorn, and Southernness, June, August, and October.

GUILLEMOT (*Uria troile*, *Linn.*).—Mull of Galloway, Southernness, June, August, October, 11th June, 1913. When diving “ he puts his head down under water rather deliberately, cocks up his tail, half opens his wings, gives them a sort of double flick, and at the same time kicks up with his feet, and down he goes.”

BLACK GUILLEMOT (*Uria grylle*, *Linn.*).—Mull of Galloway, 14th June, 1912.

LITTLE AUK (*Mergulus alle*, Linn.).—Loch Howie after a gale, 9th March, 1904.

PUFFIN (*Fratercula arctica*, Linn.).—Mull of Galloway, 11th June, 1912.

RED-THROATED DIVER (*Colymbus septentrionalis*, Linn.).—Loch Ken, October; Carsebreck, Carsethorn, and Southerness.

GREAT CRESTED GREBE (*Podiceps cristatus*, Linn.).—Milldam, 18th April, 1913; Loch Ken, 4th April, 1913.

LITTLE GREBE or DABCHICK (*Podiceps fluvialis*, Tunstall).—Often seen on Solway shore; Loch Ken, November, December, January, February. 13th July, 1912, at Milldam—“Feeding their three young ones . . . very tiny . . . when I showed myself one of the old ones dived at once; . . . the other swam a few yards and came up near the reeds; . . . the young ones were thirty-five yards away; . . . the old bird kept calling with a note like ‘hit, hit.’ The young one swam towards her, and as it approached she opened out her wing, much as a swan does when in display, but of course much less so; the young one went round to her flank and climbed up on her back. She took it to the reeds, and there got rid of it, and came out again calling to the other two.” These two were carried off together to the same place. “They appeared to me to climb up by the leg of the old bird.”

FULMAR PETREL (*Fulmarus glacialis*, Linn.).—At Southerness (no date given).

LIST OF ARRIVALS, Etc.

	1902.	1903.	1904.	1905.	1910.	1911.	1912.	1913.	1914.	1915.	1916.
Swallow	10 Apl.	14 Apl.	14 Apl.	13 Apl.	17 Apl.	18 Apl.	20 Apl.	16 Apl.	11 Apl.	20 Apl.	22 Apl.
Sandmartin	19 Apl.	20 Apl.	17 Apl.	7 Apl.	20 Apl.	28 Apl.	10 Apl.	3 Apl.	3 Apl.	18 Apl.	22 Apl.
Sandpiper	10 Apl.	20 Apl.	14 Apl.	12 Apl.	31 Mch.	19 Apl.	10 Apl.	12 Apl.	7 Apl.	7 Apl.	19 Apl.
Swift	...	18 May.	14 May.	12 May.	...	6 June.	10 May.	5 May.	5 May.	3 May.	26 Apl.
House Martin	...	28 Apl.	20 Apl.	25 Apl.	...	25 Apl.	17 May.	10 May.	10 May.	10 May.	7 May.
Corncrake	26 Apl.	4 May.	29 Apl.	...	25 Apl.	22 Apl.	27 Apl.	5 May.	17 Apl.	24 Apl.	27 Apl.
Cuckoo	15 Apl.	30 Apl.	30 Apl.	30 Apl.	25 Apl.	17 Apl.	17 Apl.	21 Apl.	26 Apl.	29 Apl.	26 Apl.
Willow-wren	19 Apl.	20 Apl.	14 Apl.	16 Apl.	...	4 May.	18 Apl.	17 Apl.	14 Apl.	22 Apl.	18 Apl.
Curlew (<i>Rippling</i> <i>Spring Cuck</i>)	...	...	4 Mch.	13 Mch.	...	1 Mch.	18 Feb.	31 Jan.	6 Feb.	10 Feb.	26 Jan.
Redshank	...	...	15 Mch.	13 Mch.	...	1 Mch.	20 Feb.	11 Feb.	18 Feb.	Dec., Ja.	Feb. all winter.
(<i>New-Galloway</i> , <i>Song</i>)	28 Mch.	27 Mch.	2 Apl.	30 Mch.	30 Mch.	1 Apl.	17 Mch.	26 Mch.	18 Mch.	1 Apl.	25 Mch.
Oyster Catcher	19 Apl.	17 Apl.	13 May.	13 Apl.	...	4 Mch.	2 Mch.	24 Feb.	23 Feb.	25 Feb.	3 Mch.
Wheatear	2 Apl.	25 Mch.	12 Apl.	2 Apl.	...	...	2 Apl.	28 Mch.	2 Apl.	5 Apl.	15 Apl.
Whinchat	25 Apl.	7 May.	18 May.	7 May.	...	...	2 Apl.	1 May.	15 Apl.	1 May.	6 Apl.
Redwing	...	...	...	...	...	...	17 Oct.	30 Oct.	25 Oct.	...	...
Sedge-warbler	...	...	...	...	...	...	12 May.	1 May.	4 May.	11 May.	13 May.
Whitethroat	...	...	...	...	...	...	12 May.	29 Apl.	3 May.	9 May.	...
Nighthawk	...	...	...	...	19 May.	5 May.	12 May.	29 Apl.	3 May.	...	...
Flycatcher	...	...	15 May.	...	7 May.	4 May.	6 May.	31 May.	19 May.	...	...
Grasshopper	...	...	...	...	...	...	...	14 May.	...	...	...
Warbler	...	...	...	...	21 May.	14 May.	8 May.	...	...	...	...
Redstart	...	...	...	22 Apl.	...	11 May.	6 May.	...	...	...	...
Grey Wagtail	...	7 Apl.	...	...	...	16 Apl.	9 Apl.	8 Apl.	3 Apl.	21 Mch.	29 Mch.
Pied Wagtail	...	...	...	...	15 Mch.	7 Mch.	29 Mch.	8 Mch.	20 Mch.	6 Mch.	13 Mch.
Fieldfare <i>First</i>	...	...	...	...	...	...	17 Oct.	29 Oct.	19 Oct.	...	...
" <i>Last</i>	...	13 May.	9 May.	2 May.	...	24 Apl.	3 May.	26 Apl.	8 May.	9 May.	28 Apl.

21st February, 1919.

Chairman—Mr M. H. M'KERROW.

Some Local Inventors.

By Mr J. MACFARLAN, of the Patents Office.

The following short list, ending in 1852, has been taken from the records of the Patent Office, London, where are kept what purport to be complete copies of Scottish Patents and Specifications lodged there from the records at the Register House, Edinburgh. On examination, however, these would appear to be far from complete. There are four more patentees in Dumfries and Galloway, two of them in Wigtownshire; but owing to the absence of addresses in the older patents, they cannot be identified with any certainty, and are therefore omitted.

I.

WILLIAM SYMINGTON, of Wanlockhead, in the Parish of Sanguhar, in the County of Dumfries, N.B., *Founder of Practical Steam Navigation and Marine Engineering.* (1763-1831).

- (1) Patent No. 1610 of 1787. (With drawings.) "A Steam Engine on principles entirely new."
- (2) Patent No. 2544 of 1801. (With drawings.) "A new mode of constructing Steam Engines, and applying their power to the purposes of producing Rotatory and other Motions, without the interposition of a Lever or Beam, and peculiarly adapted for Navigating Boats, Vessels, or Rafts in Canals or Rivers."

It is both good science and just common-sense that, in appraising the work of discoverers and pioneers, we should take into account the effects it has produced. On this retrospective principle there are few names among the Precursors and Inventors of Scotland that should stand higher than those of Patrick Miller, William Symington, and James Taylor. It was their enterprising and original experiments in 1788-89 that began the movement which led directly to the founding and

development of perhaps our greatest scientific achievement, the steamship. They had no interest in, or connection with, shipping or shipbuilding; they knew nothing of attempts earlier than their own; and they honestly thought they were doing something never before dreamt of.

Between Roger Bacon's day (1214-1294) and the end of the 18th century speculative or inventive minds, at long intervals, threw out suggestions for propelling vehicles and ships by mechanical means. One of the earliest projectors of steam power on record was David Ramsay, of the Dalhousie Ramsays, clockmaker, etc., to James I. In 1630 he obtained a patent "to raise water from lowe pitts" by fire (the steam engine) and "to make boats, ships, and barges to goe against the wind and tyde." In 1681 Denys Papin, one of the many brilliant philosopher-mechanics of France, outlined for the first time a steam engine to propel boats, and tried it in 1707; but angry German boatmen smashed his vessel, and he died in obscurity. In 1774 the Comte de Auxiron and M. Perier again tackled the problem, followed in 1780 by the Marquis de Jouffroy, who made several promising trips near Lyons with a steamboat 140 feet in length. But the French Revolution abruptly ended his efforts before he could attain any definite results. In England, Thomas Savery, a noted inventor of the steam engine before Watt, used these prophetic words about it:—"I believe it may be made very useful for ships," a unique anticipation that has been magnificently fulfilled. The first real proposal for, or attempt at, steam propulsion in Britain was made by Jonathan Hulls, of Gloucestershire. His machinery, however, while new and ingenious and superior to Papin's, was not practically useful, or likely to found steam navigation. About 1781 American inventors, Fitch, Rumsey, and others, began experimenting; but the results obtained were no more decisive than in Europe.

All these projects, although fine examples of inventive prescience generations ahead of performance, were foredoomed to failure. Propulsion of ships by steam was not practicable until Watt had re-invented the steam engine. In 1782 appeared his crowning improvement, the double-acting engine, with rotary

motion; and it now became possible to drive cotton and flour mills, or even to propel a ship at sea.

Our modern engineering era, founded by Watt's work, had begun to dawn faintly when Miller, Symington, and Taylor commenced the operations that struck public imagination and lighted the way to success. For this scientific and expert opinion has long ago awarded the major part of the credit to Symington; and if the excellence of his performance is to be measured by the greatness of its results, then, among Scotch inventors and engineers, he ranks easily next to James Watt. Symington's father was engineer in charge of the Watt pumping engine at the Wanlockhead Lead Mines, and his mechanical and inventive gifts were quickened by constantly seeing this engine at work. A born inventor and born engineer, he seems to have been among the first, if not the very first, to see that Watt's new engine might easily be adapted to marine purposes. About 1785 he brought out the engine "on principles entirely new," which is here represented by the patent of 1787. It was intended to drive a road carriage, then a daring proposal, and had the merit, in common with William Murdoch's little locomotive of 1784, of anticipating by about forty years, the road steam carriages of Gurney, Hancock, and others.

This engine was exhibited in Edinburgh in 1786, where it excited much interest and comment in scientific circles. Late in that year, or early in 1787, it was examined by Patrick Miller, who had been carrying on many experiments with the object of increasing the speed of sailing ships. During the first half of the 19th century Miller was popularly regarded as first in the field with the conception of steam navigation; but letters written by Symington in 1786, before meeting Miller, prove that he was then adapting his engine—to use his own words—"to work boats or ships." At their meeting he suggested the use of his engine to Miller, and when the latter ultimately determined to try the experiment, he employed Symington as his engineer. At Leadhills the inventor, with the able assistance of James Taylor, put his engine together, and it was then fixed into Miller's pleasure boat at Dalswinton. Two famous trials took place—the first on Dalswinton Loch,

in 1788; and the second on the Forth and Clyde Canal at Carron, in 1789, when speeds of five and seven miles an hour respectively were attained.

Seven miles an hour was a most promising start; but for a variety of reasons Miller lost patience or faith in the scheme, and he and Taylor dropped out. As regards Symington, it must be said that, far-reaching as the effects of the trials proved to be, they would not by themselves have established steam navigation. His engine, though better than that of Hull's, was not direct-acting, and had his labours ended then his position would have been that of Jouffroy, and Fitch and Rumsey in America, who made useful advances, but failed to solve the problem.

Luckily for his country, unfortunately for himself, Symington, with the passion of true creative talent, kept on working and improving; and his great advance is represented by his second patent, No. 2544 of 1801, which embodies the engine and equipment of his famous "Charlotte Dundas." This vessel was the outcome of the series of experiments he conducted in 1801-1803 for Lord Dundas of Kerse, who wished to introduce steam towage on canals. She was the first boat ever fitted with the essential features that constitute steam navigation, and most authorities agree in calling her "the first practical steamboat," and "the parent boat of paddle-wheel steamers." In her direct-acting engine steam acted on each side of the piston, which worked a connecting-rod and crank that was placed on the axis of the paddle-wheel. She was steered from the stem end like a modern liner, and to enable her to work in frozen canals she was equipped at the prow with stampers or beaters, actuated by the engine, to break the ice. It is more than doubtful if any other invention of that budding time reached quite so far into the future. So completely did Symington anticipate developments that so late as 1860 we find David Napier declaring that her machinery "was superior in construction to many steamers of the present day;" and the engines of the noble pleasure steamers on the Clyde to-day are only enlarged and better finished copies of that of the "Charlotte Dundas."

Notwithstanding this triumph of inventive genius, disas-

ter and poverty were the only rewards of poor Symington. The Duke of Bridgewater, an able and far-seeing Englishman, ordered eight similar boats for his canals; but, dying very soon afterwards, the order fell through. This was a national calamity. No one in Scotland or England had the wit to understand that Symington had presented his country with a power as potentially great as Watt's double-acting engine, or the spirit to follow the Duke's splendid lead; and the honour of introducing steam navigation on a commercial basis was allowed to go to America. It was a case, assuredly, where the hour did not bring forth the man.

II.

PATRICK MILLER, of Dalswinton, North Britain, *Projector of Steam Navigation.* (1731-1815.)

Patent, No. 2106 of 1796. (No drawings.) "A vessel of a new construction, which draws less water than any other vessel of the same dimensions, which cannot founder at sea, and which is put in motion in calms and light winds by a method never before practised."

Patrick Miller, though born in Glasgow, was a Stewartry man. He was the youngest of the three sons of William Miller, Esq. of Glenlee, a territorial name that was raised to high dignity and repute by the eldest son, Thomas, when he became Lord President of the Court of Session. Having made a fortune as a banker in Edinburgh, Miller, about 1785, settled at Dalswinton, and began to take an active part in the agricultural revolution that men of his class and type were promoting. It should be mentioned that the tenant of his farm, Ellisland, was no less a celebrity than Robert Burns, who, it is clear from a document in the Patent Office, was present at the great steamboat trial in 1788.

Part of Miller's youth had been spent in the Navy, which no doubt explains his lasting interest in naval and military matters. He spent much time, effort, and money in experimental work with the object of improving artillery and ship construction, and making both as efficient as the science of the time permitted. Shipbuilding especially had degenerated into mere rule-of-thumb hostility to new ideas. It was mostly in

the hands of men who were ignorant of the scientific principles of naval architecture, and consequently they built ships that were inferior to the fleets of France, and even to those of Italy and Spain. He constructed a number of boats to illustrate his reforming ideas; but it does not appear that his models produced any effect either then or afterwards. Their chief merit now is that they led him to take upon himself the honourable duty of Projector of Steam Navigation in Great Britain.

His vessels had double or triple hulls, which was not an original idea, and between these hulls he fitted a new and very serviceable paddle-wheel of his own design. His wheels were worked by men turning cranks, a device that was centuries old, and entailed very severe and exhausting exertions. His purpose was to propel vessels by this means in calms or light winds, or whenever the wind could not sail the ship at five miles an hour. In this work Miller was assisted by James Taylor, a native of Leadhills, tutor to Miller's sons, a clever young man of good education, with some knowledge of mechanics and science generally. Moved by the fatigue and distress of the men at the cranks, Taylor suggested the employment of a steam engine to turn the wheels, or else the invention (the wheels) would be useless. Miller, who was somewhat infatuated with his "wheels," and had probably forgotten or ignored Symington's earlier suggestion, objected that an engine was impracticable and dangerous, and for some time remained sceptical. Taylor prepared drawings shewing how the engine could be fitted to the wheels, and after persistent arguments induced Miller to try the effect of steam. Once convinced, however, the latter took the lead in the project with all the high-minded energy and zeal of his character. The boats for the experiments were engined by Symington, assisted by Taylor, and the memorable trials took place, with the results already mentioned.

In 1796 Miller took out the Patent quoted above. Interesting details of this boat, its construction at Kingholm in 1794, and its features are given in the *Cregan MS.* in the Woodcroft Collection, Patent Office Library, London. It was called the "Blessed Endeavour," and was intended to be

a kind of lifeboat, or to land troops on an open beach where no other boat could reach high-water mark in safety. It was altered from time to time until 1802, when Miller broke it up. The patent is curiously silent about steam propulsion, and many writers find in this a proof that the patentee had only considered it a toy of an amateur. The main reason for this silence, one suspects, was money. Miller had spent vast sums for those days on his various experiments—about £30,000—and was unable to risk more on trying attempts that might, like so many previous ones, end in fruitless failure.

Miller was not, as his family imagined, the first projector of steam propulsion for ships. Nor was the suggestion of its use by Taylor—the share in the invention now assigned to him by most authorities—a new and original conception. But their great merit and title to remembrance is that Taylor, with fine detachment and the eye of youth, had the imaginative insight to see that a steam engine was the only possible motive power at hand, and converted Miller to his view; and Miller shewed exceptional public spirit and enlightenment very unusual for his day and class in undertaking a costly experiment to prove that a scouted theory was right. In acting as he did, when he did, he builded better than he knew; and that action will preserve his name until aerial liners shall have made the latest Cunarder obsolete.

III.

JOHN BENNOCH, late of the Parish of Sanquhar, in the County of Dumfries, but now of Liverpool, in the County of Lancaster, Merchant.

Patent No. 2482, of 1801. (With drawings.) “New and Expeditious Methods or Machines for making Nails, Bolts, Rods, Watch Springs, Clock Springs, and Metal Plates.”

The earliest patents for nail-making machines were granted in 1790. Bennoch's is fifth in the order of priority; so he may, therefore, be considered a pioneer of the machine-made nail. He had to face the hostility of a powerful interest, the hand-made nail trade. In the Birmingham district alone fifty firms and 60,000 people were engaged in this old industry.

In 1820 the Admiralty used 640 tons per annum, and other consumers—shipbuilders, box and tea-chest makers, etc.—required enormous quantities. It was not until about 1830 that the new machinery began to make headway, spurred probably by American competition. In the United States, as early as 1810, they had a machine which cut and headed the nail at one operation, and turned out 100 nails per minute. The extensive scientific literature of this period in the Patent Office does not mention Bennoch, and the inference is that his machine did not meet with striking success.

IV.

JOSEPH HINCHSLIFFE, of Dumfries, Surgeons' Instrument Maker.

Patent No. 2922, of 1806. (No drawings.) "A New Method of manufacturing Elastic Spring Trusses for ruptures, or rupture Bandages."

His method was to make whalebone supple by heat, then fasten it round a block made to the shape the spring should receive, and when perfectly cold will remain so. The spring is then fixed to a head of sheet brass by brass pins, and, properly finished, is ready for use.

V.

JOHN GLADSTONE, Engineer and Millwright, of Castle-Douglas, in the Stewartry of Kirkcudbright, and County of Galloway, North Britain (1770-1825).

Patent No. 4629, of 1821. (With drawings.) "An Improvement or Improvements in the Construction of Steam Vessels by the application of steam or other powers." (Patented in Scotland, 1822.)

According to biographical details supplied by Mr Robert Gladstone, junior, of Liverpool, and Mr Herbert New, of Birmingham, this inventor was a son of David Gladstone, of Marchlands Farm, Wiston, near Biggar, who was also a millwright, and erected the first threshing mill in Lanarkshire. In 1801 the patentee married Elizabeth Muir, who died in 1841, and left eleven children, of whom the youngest was the late Thomas Gladstone of Birmingham, and of King's

Grange, near Castle-Douglas. It is agreeable to note that both the inventor and his father belonged to that splendid class of men in England and Scotland, the millwrights, who during the last quarter of the 18th century and the early decades of the 19th produced a high percentage of inventors, engineers, and mechanics of bold originality or resourcefulness, and earned no small share of the honour of making Britain the leading industrial nation of the world.

The improvements in Gladstone's patent consisted in floats or paddles fixed to endless chains moving round stud wheels or drums at the sides of the ship, and driven by a steam engine. This manner of propulsion is what would now be called the "caterpillar" wheel system; and it is curious to find a man of Gladstone's scientific ability adopting it, as by 1821 he must have become familiar with the main features of Symington's "Charlotte Dundas." The method, however, was neither original nor practicable. It had been tried in France by M. des Blancs in 1796, and still earlier in America by Fitch or Rumsey, and was abandoned as unsuitable. Some correspondence, it appears, took place between the inventor and Sir John Gladstone, Bart., about this steamboat, which is preserved at Fasque, Kincardineshire, the seat of Sir John R. Gladstone, Bart. I suggest it would be an interesting contribution to the marine engineering literature of that day if copies of those letters could be obtained and published by the Society.

Mr Gladstone brought out several other inventions, all of which, however, he did not patent. He was a rival of Andrew Meikle, generally reputed the inventor of the threshing machine, who may or may not have known of the machine invented much earlier by Michael Stirling of Glassingal, Perthshire. To avoid a lawsuit with Meikle, Gladstone introduced the upward stroke of the drum beaters, and this was generally adopted in Scotland. Meikle's machine became popular in England, and was known as the English one, while Gladstone's held the field at home and was called the Scottish threshing machine.

Gladstone was a pioneer of note in early reaping machines. In 1806 he produced one with an arrangement of

parts for gathering the cut corn and delivering it in small sheaves—the germ of the modern binder; and it was fitted with a small wooden wheel covered with emery in order to keep the cutter constantly sharp. This reaper is fully described and illustrated in the *Edinburgh Encyclopædia*, 1808, Vol. I., p. 262, and is referred to appreciatively by Mr Bennet Woodcroft, then the head of the Patent Office, in his Appendix to the Specifications of English Patents for Reaping Machines, 1853. The machine, it seems, was found imperfect upon trial, the gatherer proving its weak point, and it failed. A model of the reaper had been commended to the Highland Society by Sir Alexander Gordon, Bart., and that body seemed anxious at first that Mr Gladstone should construct a complete machine, but they subsequently withdrew their support. He was about to give up the design, when Sir Edward Crofton happened to see the model and ordered a machine on his own account. Undaunted by the general lack of interest, Gladstone next introduced a machine for reaping beans, and this, happily, was a complete success.

About 1820 Mr Gladstone tendered for the construction of a bridge over the Ken at New-Galloway, at a cost of £6000. This, and the fact that his bridge was to be of iron, shews the initiative possessed by his class at that time, and their practical readiness to undertake almost any kind of constructive work. He did not obtain the contract, but was awarded fifteen guineas for his trouble in preparing an iron model (then a novelty) of his proposed bridge (Records, County Buildings, Kirkcudbright).

In 1822 the Committee of the House of Commons, which dealt with certain problems in working the early steamboats, requested Mr Gladstone's opinion on various points, a compliment which indicates that he enjoyed a considerable standing throughout the country.

VI.

THOMAS AFFLECK, of Dumfries, in the County of Dumfries, Scotland, Merchant.

Patent No. 6522, of 1833. (With drawings.) "Certain Improvements in the Means and Machinery for deepen-

ing and excavating the beds of rivers, removing sand-banks, bars, and other obstructions to navigation." (Patented in Scotland, 1830.)

The nineteen contrivances described and illustrated here all depend for their effectiveness on the power of running water. It is difficult to say, short of a prolonged search, how many of them are Affleck's own invention, or adaptations of older expedients. One shews his method of sinking an old vessel to cause a scour round her bottom. This plan, reversed, was recently adopted by the Fleet when the "Vindictive" was sunk in the fairway at Zeebrugge to create a silt and lock in the German submarines. Another is a quaintly amusing picture of the state of most tidal rivers when Bell's "Comet" began to ply in 1812. A huge drum with spikes revolving on an axis, to the ends of which ropes are attached, is drawn along the bed of the stream by horses on the banks; and as the drum revolves the spikes disturb the sand and mud, which are then washed away by the current!

In 1833 Mr Affleck published a pamphlet—it is in the Patent Office Library—entitled "Patent Hydraulic Deepener: An Application of the Greatest Power in Nature," etc. This contains some fresh contrivances, with plates and explanations not in his patent. Paragraphs 15 and 16 (p. 17) are noteworthy, as he there outlines a method of deepening channels which seems to be an embryonic anticipation of the modern dredger.

Mr Affleck was a Trustee of the Nith Improvements, and his account in the pamphlet of the ideas and procedure of that body, and his comments thereon, make piquant reading. To push his inventions and devices he went on lecturing tours, which embraced the seaport towns of the East and West coasts, from Stirling round Land's End up to Carlisle! Such a programme proclaims him to have been a man of strong will and tireless energy.

The Galloway Dee: Its Floods in Relation to River Capture.

By Mr R. WALLACE.

There is no part of Scotland richer in romance than the wilds of Galloway. Their moors and streams haunt the imagination by their rugged grandeur and scenic beauty. Their glamour, too, receives power from the spell of the past. The uncouth place-names of its bennans and doachs, its lanes and glens, are associated with deeds of bravery, endurance, and warfare from story and legend. It is rich in history, but its romance reaches further back than any record in writing. While pre-historic men and women were struggling for bare existence, the complex record of river development and stream capture was being written upon the mountains and crags of our homeland by a Master Hand.

NAME.

The very names of this ancient Galloway stream are abnormal. The tributary, in fact, steals away the name from the parent stream. Perhaps the pioneers of discovery approached the river from that district now known as Balmaghie, and were unable or unwilling to ford the stream, and so named the large water in front the Dee, and the small swift tributary on their left the Black Dee.

Modern maps at least give the name Dee from the Kirkcudbright estuary upstream to the railway viaduct near Parton. At this point the water of the Black Dee steals silently and imperceptibly into the larger stream. North of the railway viaduct the stream name is changed to Loch Ken, and beyond that to the Water of Ken or River Ken.

PHYSICAL FEATURES.

The water of the Black Dee is of smaller volume than the Ken; it has also a smaller valley with a steeper gradient, and it therefore ranks only as a tributary in spite of the name. The Ken-Dee is the largest river west of the Nith, and is easily the principal stream in Galloway. Its whole course from source to estuary lies across the hard grits, greywackes, and

shales of the Ordovico-Silurian rocks. In front of its path to the south-east a long range of hills stretches from the Urr on the east to the Torrs on the south-west. The greatest heights of the range are Screele (1100 feet) and Bengairn (1200 feet). They are formed of extremely hard granite, or of rock metamorphosed by heat when in contact with the molten granite mass. The Dee leaves its south-eastern path at Castle-Douglas, turns at right angles to the south-west, gets round the granite ridge, and reaches the Solway at the end of the range. To accomplish this it escapes through a narrow gorge at Tongland, with hills of only 500 to 600 feet high.

STREAM-CUT VALLEYS.

Gorges, glens, and valleys are sometimes produced by faults, or landslips, but the Galloway tableland is of too firm a foundation to produce rift valleys or large faults, and therefore all its gaps have been cut by streams. A large gap would require a very large volume of water to accomplish the work in a short time, or if the stream were small, a long period of time would be necessary.

The nature of the underlying rock has also a great effect upon the shape and size of the valley. For instance, a stream travelling over hard rock would laboriously erode a V-shaped gorge with steep sides; but the same torrent encountering only soft sands and gravels would excavate a large basin-shaped hollow with gently sloping walls far apart.

We therefore expect to find a definite relationship between the size of the valley and the volume of the stream that cuts it. The actual proportions of valley excavation are determined (1) by the eroding power of the stream—that implies both volume and velocity; (2) by the age of the river, i.e., the length of time it has been working; and (3) by the durability of the rocks that it is cutting.

A true estimate of the proper amount of valley erosion that should be accomplished by a given stream can be arrived at by a careful comparison with other streams of similar size working under similar conditions. Thus a large stream-cut valley occupied only by a tiny rivulet is out of order. It is a misfit. On the other hand, a river with volume and with

velocity hurrying through a narrow gorge is equally a misfit. In either case there is a great disparity between the amount of excavation accomplished and the tool that did the carving. Possibly they are of different ages and linked together by accident. Many such misfits are revealed in the topography of Galloway.

THREE VALLEY TYPES.

The River Dee shows three distinct types of valley throughout its short course to the Solway. The first extends from the Ken junction at Parton to Threave Isle; the second from Threave Isle, Bridge of Dee, and Tongland Falls to the Tarff; and the third type contains the Dee-Tarff tidal waters enlarging into an estuary at Kirkcudbright. The first or upper sector which might be better known as the Balmaghie valley has much in common with the lower estuarine trough at Kirkcudbright. Both valleys are wide and deep. The Balmaghie Dee has cut its way down 500 feet below the general level of Livingston-Dornel Hills. The Kirkcudbright Dee occupies a trench at least 400 feet beneath the former level with the crests of its valley walls about $3\frac{1}{2}$ miles apart. Both valleys have the same trend of direction—towards the south-east. When the nature of the hard greywacke rock from which they are hewn is considered, they must both be of very great age because they lie across the grain or strike of the rocks.

On the other hand, the middle sector at Tongland connecting the upper and lower valleys differs in all the essential features. It bends round Lodge Isle and from that point trends to the south-west. This valley is parallel with the strike of the underlying rocks and thereby differs from all the leading Galloway river valleys in being a strike valley. As far as Mollance the Dee lies open, but towards Deeside a valley takes shape; but it is of small dimensions. The Argrennan hills are only about 250 feet above the level of the stream and the distance over the gorge to Culdoach is little over a mile. Between these heights the Tongland Dee surges through with difficulty. The cramped valley structure and presence of a waterfall of about 80 feet show that the river has not yet had

sufficient time to agrade its channel. This valley is young, only in its infancy, yet it connects two valleys of mature age by means of the very ancient Dee. Without doubt it is a grievous misfit.

THE ORIGINAL VALLEY.

It is evident that the Dee traverses three valleys of distinctly different ages, and the question naturally arises which of the three is the true type; which one is neither older nor younger than the stream, but just of the same age. Undoubtedly the upper or Balmaghie sector reveals the true excavation accomplished by the stream. It is simply a continuation of the Ken Valley, travelling in the same direction and showing the same general structure. They differ in nothing except in name, which is a trivial error due to man's lack of vision. From the High Brig of Ken near the Tinkler's Loup down to Threave Castle there is one continuous trough of the same age as the river which cut it. Its lower portion is wider with gently sloping sides and valley walls further apart but this represents the same amount of erosion, although in different shape, as that of the V-shaped Glenkens to the north.

THE GELSTON GAP.

In his paper on "The Rivers of South-West Scotland" published in the *Scottish Geographical Magazine*, Frederick Mort says:—"It is probable that before the formation of the Solway Firth the Dee extended much further to the south-east," and in an able manner he deals at length with details of River Development in South Ayrshire. His suggestion is very valuable and worthy of close examination.

If the Ken-Dee valley were continued in a straight line over the area now occupied by Castle-Douglas it would coincide with a remarkable gap through the granite hills near to Gelston Castle. It is known as the low road or the Doach. A very small stream, the Doach Burn, trickles through it straight into the Solway through Orchardton Bay. Gaps or valleys of this size may in some cases be produced by a fault or dislocation, but as a rule they are excavated by a stream cutting its way

downward. A careful examination of the map published by the Geographical Survey shows no evidence of fault in that neighbourhood. Any dislocation sufficiently powerful to produce such a cleft must necessarily dislocate one of the valley walls. The contour lines show that both ridges are approximately equal in height. The direction of the gap is not straight such as would be produced by a fracture. It has a slightly curved course in entire agreement with the sinuous winding of a river. The lower end gradually widens out seaward in estuarine fashion. As already pointed out it is in a direct line with the Ken Dee valley, and two important features show the gap to be of the same age as the valley. An equal amount of excavation has been accomplished in the ridge as at the Viaduct—nearly 500 feet. The gap sides are much steeper but that is due to the resisting power of the granite rock. The floor of the Doach about 150 feet above sea-level corresponds with the bed of the Dee about Parton. As the Tongland valley is of such recent date—a creature of yesterday—the Gelston Doach is the only possible alternative.

ICE-CHOKED VALLEYS.

Two points naturally arise at this stage:—(1) What diverted the Ken-Dee from its direct south-east path to the Solway and caused it to take a much longer route before it reached the sea at Torrs Point? (2) When may this diversion have taken place?

When we consider the large number and great variety of drums and mounds left by the glaciers of the Ice Age in their final passage along the Dee valley, the easiest conclusion is that these ridges of morainic rubbish blocked the progress of the river through the gap, and caused it to seek for escape towards the west. Doubtless the river has removed many of these moraines, but both banks along the flats of Balmaghie and Crossmichael still contain excellent specimens—some perfect, others truncated by the floods. Between Carlinwark Loch and the Doach a large mound lies right at the mouth of the valley. It is so pronounced that it acts as a watershed between the Doach Burn flowing south-east and the Gelston Burn travelling north to the Loch. This grouping of moraines

proves conclusively that the Dee has not changed its valley since the close of the Ice Age. The glaciers had the last word to say in the structure of Galloway topography, consequently the Doach has been an empty windgap since the day that primitive man watched, say, 50,000 years ago, the final retreat of the glacier to the uplands.

DATE OF CAPTURE.

Having conceded the post-glacial age of the present arrangement, we might erroneously infer that the diversion of the stream from one valley to another was caused by the great congestion of ice in these valleys. The whole of Scotland was covered with a massive ice sheet. In this district it was at least 1800 feet thick. It overrode the summits of Screele and Bengairn quite easily. Some of the moraines still remaining are 100 feet high and nearly one mile long. While the writer is of opinion that the Nith and other rivers have changed their valleys owing to the complete submergence of their original valley system beneath the ice sheet, yet evidence will be led to show that the change was effected in the case of the Dee by another agency than glaciers.

The small moraine mound, 50 feet high, at the mouth of the Doach was not sufficiently high to block the river. Four hundred feet would have been necessary in order to send the Dee over the Culdoach range. A wedge of ice of the necessary 400 feet would have been futile, because the lake produced by the dam would extend to Loch Skerrow on the west, and Corsock on the north. This, however, was impossible, because the impounded waters would have escaped eastward along the low-lying land into the Urr.

THE TONGLAND VALLEY.

Tongland valley is undoubtedly one of the most peculiar structures in the South of Scotland. The moraines lying athwart the stream are of the small round type—tumbled about in the greatest confusion and filling the little valley from end to end. The Dee works its way forward without floods, because it is also steadily lowering its channel. The waters gradually gather speed, tumble over the falls, and then steal quietly into

the sleepy Tarff. The profile of this Tongland portion is not that of maturity or of old age, but one of youth or rather infancy. Although these morainic mounds are packed into the valley without order, yet they all rest upon a common platform, intersected by the stream. This platform shelves away to the north-east, that is, against the stream; it also widens out in the same north-easterly direction. The misfit is so pronounced that a first visit gives the impression that the river is running up a hill. A gorge of this nature could only be formed by a tributary stream flowing north-eastward to join the master stream near Threave. As this valley contour underlies the rubble hills of the Ice Age, it is therefore a pre-glacial valley. This pre-glacial Argrennan tributary rose in the Culdoach-Argrennan range, flowed north-east along the strike of the rocks. It was of subsequent age, and unable to work until the Ken-Dee-Gelston river lowered its bed and gave it power. In other words, the Argrennan tributary could not lower its channel in the soft shales any quicker than the master stream could cut the hard granite of the Doach Gap.

While the little Argrennan was unable to cut vertically, it fretted from side to side, working laterally and producing a flood plane, which was eventually covered up with congested ice—a pre-glacial platform.

PLIOCENE UPLIFT.

Towards the close of the Pliocene Age the whole of Scotland was gradually elevated some hundreds of feet. Professor Gregory puts it at 800 feet. The uplift was greatest in the north-west, and as a result the consequent River Ken-Dee-Gelston received a new lease of life. The Solway was converted into a plain, and the rivers, renewing their youth, began to cut a new channel far below the present sea level.

To deepen the Doach Gap in the Gelston granite was slow work for the rejuvenated Dee with its increased velocity, and so it worked over the Threave Plain from side to side, forming a large flood plain, which destroyed the shape of the valley.

The ridge of high ground extending from Barstobric to Bar Hill and Culdoach formed a watershed between the consequent Dee valley and the consequent Tarff valley. This

gave rise to tributary or subsequent streams running along a line of weak rocks. The principal one on the eastern side was the Argrennan tributary, which quickly carved out a suitable valley in accordance with its own volume of water.

This small range of hills forming the watershed is composed of Parton slates, soft shales, and hard bands of grey-wacke alternately. These soft shales weather quickly, and give rise to tributary streams at right angles to the ridge, which have great power to cut vertically, especially in the torrent tracts.

As the strike or grain of the rock runs in a north-east and south-west direction, the grooves or runnels would take the same direction.

On the western side of the ridge a small burn trickled down through the weak shales. It attacked the ridge immediately opposite the Argrennan Burn, but with a far greater erosive power, for three reasons:—(1) The gradient of the western slope was much steeper than that of the eastern, and so the rill on the Carse side could outbid its rival on the other side on account of its increased velocity. (2) The Carse Burn was comparatively near the sea, while the Argrennan had a very long way to travel before reaching its base level. (3) The Tarff estuary, through which the Carse Burn reached the Solway, was open and easy, but the erosive power of the Argrennan was severely limited by the hard granite barrier in the Doach.

A DOUBLE CAPTURE.

The result was that the small Carse Burn worked quickly backwards and downwards through the Tongland-Culdoach divide until it captured the head waters of the Argrennan tributary. The captured floods formed a new and a sure weapon to fight with. To the three advantages of stream conquest on the western side was added a weighty fourth, namely, the acquisition of the whole of the Argrennan River. The pirate used its captive in two ways:—(1) To cut down the ridge of the divide in a vertical direction; and (2) by backward cutting to migrate the divide upstream. When at last the crest of the divide was slightly lower than the level of the master

stream, it was tapped by the pirate, the Dee was beheaded at Threave, and carried as a prisoner through the narrow gorge at Tongland.

RATE OF CAPTURE.

The highest point along the bottom of the Doach Gap is about 180 feet above sea level, after allowing 30 feet for the alluvium at present burying the original floor there remains a real gap cut down to about 150 feet above present sea level. It had just reached this level when it was captured. Surface of Carlinwark Loch is 142 feet, while the solum of the loch and the bed of the Dee at Threave cannot be over 130 feet.

Therefore the Carse-Argrennan pirate had produced an infant valley at least 30 feet lower than the beheaded portion at Doach. Thirty feet of vertical erosion by a swiftly-flowing stream excavated along the strike of the Silurian shales does not imply a very lengthy period of time, consequently the date of capture may be reckoned as just immediately preceding the advent of the Ice Age.

CAUSE OF DEE FLOODS.

As the history of the river is unfolded the cause of the destructive flood in that area is found to be of a three-fold nature :—(1) The primal reason was the inability of the young Tongland valley to accommodate all the captured water in such a narrow gorge. (2) The accumulations of glacial drift dropped by the retreating ice. The Ken valley glacier, unable in its latter days to climb the Screel, sent a lobe through the Tongueland gorge as well as the Doach Gap. Large quantities of morainic debris were dropped in the Castle-Douglas area. Large elliptical moraines still lie along the main valley as far north as Glenlochar. The point of capture near Threave was completely submerged by the glacial drift, consequently, as the Dee resumed its flow after the retreat of the glacier, its pre-glacial channel would be choked with boulder clay and gravel. Thus for the third time in its history the Dee had to cut a new path to the sea. Towards Argrennan and Deeside it is again into the channel of the pirate stream, but from Lodge Isle down to Mollance the river is running

over great deposits of glacial drift. Generally speaking, the pre-glacial bed of the pirate stream is a little to the west of the present-day right bank. This old channel may be found underlying the straight line from Threave to the west of Lodge Island, past the Station, to Mollance. Some of the course lies low, but glacial ridges obscure much of it. As the river has endeavoured to entrench itself along this small sector, it has encountered the hard rock of the old valley wall to the east. This is prominently seen at Threave Bridge and behind the village of Bridge-of-Dee. All along that section the rock is considerably higher on the left bank than on the right, showing that the river is here held up on this rock shelf of the old valley wall. The third cause of flooding is the result of the two factors already dealt with.

As the stream was hampered in the young Tongland valley by the accumulation of glacial drift and the rock shelf, the velocity of the stream would be greatly retarded thereby. This loss of velocity would cause the river to drop all the fine mud carried in suspension. Large flood plains began to form at the close of the Ice Age, and have been increasing ever since.

NO NATURAL CURE.

Two questions arise :—Will the river unaided remedy its own floods, and when?

The removal of the rock barrier at the Tongland falls is a sure process, and consequently the lowering of the rock shelf must follow; but without assistance the old Dee may take another thousand years to remove a few feet of rock. Meanwhile these small obstructions in the stream are retarding the free passage of the floods during a spate. Thousands of tons of silt are spread annually over the rich alluvium of the valley floor. The sediment was first caught at Bridge-of-Dee, and has been migrating upstream without pause. Every flood adds to the accumulation, and now the area of sedimentation approaches Glenlochar Bridge.

The river cannot rid itself of the growing silt barrier so long as man maintains and perpetuates the anomalies downstream.

The British Islands are small, the land is precious, our young men must emigrate to new countries to earn a living and create a home. Our hills are hard and unproductive, the valleys are rich but have not room for both floods and families, and so the men must go. The British Government has financed costly schemes in India, Egypt, and other Colonies, but it has not yet discovered its greatest assets in the homeland. A small scheme of irrigation, giving a navigable and floodless path up to Loch Ken, would modernise the valley, enable it to grapple with overseas competition, and enrich itself in men and money.

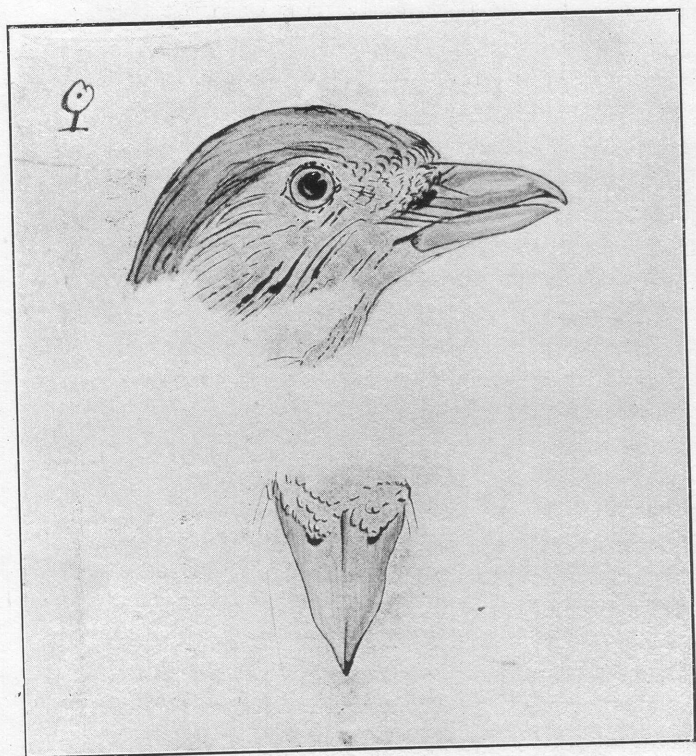
A Naturalist's Calendar, kept by Sir William Jardine, Bart., LL.D., F.R.S., F.R.S.E., etc., at Jardine Hall, Dumfriesshire, from 1st January to 31st May, 1829.

Edited by HUGH S. GLADSTONE, M.A., F.Z.S., F.R.S.E.

INTRODUCTION.

In 1910 my friend J. A. Harvie-Brown of Dunipace lent me a booklet in which Sir William Jardine had made a "Callendar" of natural history notes as recorded by him at Jardine Hall. I carefully transcribed these notes at the time and added such observations as appeared to be of interest. I then submitted my observations to several friends and incorporated the remarks with which they favoured me. It was my intention to publish Sir William's "Callendar" immediately, but for various reasons I was prohibited from so doing. Eight years are not a long span in the life of man, but the years 1910 to 1918 have, I regret to say, robbed me of many a valued friend and adviser. During this period there have been many changes in the nomenclature of plants and birds; I have, however, adhered in my notes to the nomenclature in vogue in 1910.

Sir William was a man of twenty-nine years of age at the time of writing his "Callendar," the idea of which may well have been inspired by the example of Gilbert White's



Sketch by Sir William Jardine, entitled—“*Psaris* Nov. Spec.—
Hab. Pernambuco;” presumably *Tityra inquisitor*, Lichtenstein.

Naturalist's Calendar first published in 1795. Jardine Hall, his home where the majority of his records were made, is in the parish of Applegarth and Sibbaldbie, in the county of Dumfries; lat., 55 deg. 10 min. 30 sec. N.; long., 3 deg. 25 min. W.; and situated at an altitude of 190 feet above sea level.

I presume that the "Callendar" was included in Dr Harvie-Brown's bequest to the Royal Scottish Museum in 1916, and that it is now safely treasured there. It forms part of a thin octavo volume ($7\frac{1}{2}$ by $4\frac{1}{2}$ ins.), in the preliminary pages of which Sir William has written an account of his trip to Holland, in August, 1825, to see the ornithological collection of C. J. Temminck. This account is of no local interest but the booklet contains one or two pencil sketches of birds' heads which testify to Sir William's ability as a draftsman. At the conclusion of the description of his Dutch tour several pages are utilised for recording various natural history observations made at Jardine Hall in 1826 and 1828; these, few though they are, I transcribed since they refer to Dumfriesshire. The remaining pages of the booklet are utilised for a "Naturalist's Calendar" for 1829, which it is to be regretted stops at the end of May of that year.

In my desire to copy Sir William's notes as near to the original as possible I have gone so far as to repeat many misspellings, or slips of the pen, such as "callendar," for calendar; "par," for parr; "plumb," for plum; "topp," for top; "rapidlye," for rapidly; etc. Spaces that have been left blank by Sir William I have indicated thus |—|; and each word that is indecipherable is shewn by —?—. Doubtful words are placed in square brackets and queried [—?].

The abbreviations that occur from time to time throughout the manuscript are Bar., barometer; Boist., boisterous; Br., breeze; cult., cultivated; Edinr., Edinburgh; fl., first opening of flower; H., hail; l., first opening of leaf; R., rain; Shs., showers; sl., slight; st. and str., strong; var., variety; and, of course, N., S., E., W. stand for the four points of the compass. The numerals occurring in the text refer to my notes, which are printed at the end of Sir William's "Callendar."

It must be remembered that the records of the arrival or departure of birds, the fl. or l. of flowers, trees, etc., when recorded as late, or early, are considered entirely from a Dumfriesshire standpoint. It seems unnecessary here to give any review of the whole but it is remarkable, as regards birds, that so few of the *Sylviidæ* are mentioned; there can be little doubt that we nowadays have a far larger number of these summer visitants than were met with in Sir William's time; this increase being in great measure brought about by the extended area now under afforestation.

SIR WILLIAM JARDINE'S NOTES IN 1826.⁰¹

- 28th Febr'y.—Lapwings (*Vanellus cristatus*)¹ at Perch Hall loch,² a few [scattered ?] individuals were also on the moors of Eskdale,³ and during the two following days, 1st and 2nd March, they were increasing, and were seen coming in in small flocks of 5 or six. Sometimes singly and in pairs.
- 28th March—Woodcocks⁴ have not yet left the country, when out to-day with the Stirling and Linlithgow foxhounds⁵ two or three were raised from the covers, and several have been seen during the last week.
- 4th April—White Rump⁶ first seen this season (1826). Most probably some would be arrived a few days earlier.
- 22nd April—Whinchat.⁷ Riverside⁸ opposite [Garvies ?]⁹ old house. Silvia Trochilus,¹⁰ I have heard it since the 18th, saw it to-day 22 April.
- 27th April—Hirundo Riparia,¹¹ Jardine Hall.
- 30th April—Hirundo Domestica¹² near Dumfries,¹³ at Jardine Hall 1st May. Mr Carruthers,¹⁴ Dormont, says he saw both about a week since.
- “On the 28th of March swallows¹² in numbers were seen flying about Dugaldston Loch.”¹⁵—*Dumfries Courier*, April, 1826.¹⁶
- Anthus Arboreus¹⁷ end of April, 1826, Jardine Hall, cannot fix the exact date.
- 2nd May—Totanus Hippoleucus.¹⁸ Jardine Hall.
- 5th May—Cuculus Canorus.¹⁹ Jardine Hall.
- 12th May—Hirundo urbica.²⁰ Jardine Hall.
- Cypselus Apus.²¹ Jardine Hall.
- 14th May—Sylvia [—], Sedge Bird.²² Jardine Hall.
- Rock Lark, Anthus petrosa.²³ Weight, 6½ Drs. male.²⁴
do. do. 7 Drams about 1 grain.²⁴
- 15th May—Whitethroat.²⁵ Jardine Hall.

- 17th May—Greater Petty Chaps.²⁶ Jardine Hall.
 18th May—*Ophioglossum vulgatum*.²⁷ on the seashore about $\frac{1}{2}$ mi'e
 above Southernness²⁸ among the whins²⁹ in hollows; not in per-
 fection.
 19th May—Spotted Flycatcher.³⁰ Dumfries.³³ Col. Grierson's³¹
 garden.

SIR WILLIAM JARDINE'S NOTES IN 1828.

List of seeds sown at Jardine Hall, May 24th, 1828.

The Tallies agree with the subjoined numbers.

1. a *Mespilus*³²Rae Hills³³ Shrubbery.
2. from a weeping ash³⁴Arbigland.³⁵
3. *Potentilla Nepaulensis*.³⁶
4. *Arenaria Marina*³⁷Southernness.²⁸
5. *Cochlearia* |—|³⁸Southernness.²⁸
6. *Saxifraga Granulatus*³⁹Southernness.²⁸
7. *Orobus*⁴⁰Rocks, Southernness.²⁸
8. Variegated columbine⁴¹Murraythwaite.⁴²
- 9 Bladder nut⁴³Jardine Hall Garden.
10. Broom with downy pods⁴Staffordshire.
11. A grasson the Barony of Ross.⁴⁵

SIR WILLIAM JARDINE'S "CALENDAR KEPT AT JARDINE HALL, 1829."

JAN.	Thermometer, exposure nearly North. Taken at 9 o'clock Morn- ing; Evening about 11. Morn. Even.	Barometer taken at 9 o'clock a.m. daily.	Remarks on Weather.	Winds Daily.	Calendar.
1.	40½ 30	29¼	During this winter there has only been one day when the pools have been frozen. For the last two months the wind has been nearly South, sometimes nearly calm generally rising at nights. Very thin Ice on the first. fine clear day.	N.W. Towards night a point to E. High all day.	Black Wagtail ⁴⁶ in small flocks on the ploughed land and fallows. Water Ouzel ⁴⁷ fishes regularly and has been on the rivers ⁸ for one or two months. Laurestinus ⁴⁸ already shedding their flowers. Potentilla Nepaulensis ³⁶ flowered open border in day or two time. Purple Azalea ⁴⁹ likewise. Salmon have now nearly completed spawning. ⁵⁰ Helleborus Niger ⁵¹ primula veris ⁵² in garden. Anemone ⁵³ Hepatica red ⁵⁴ various Polyanthi ⁵⁵ in flower. 4 Morillons ⁵⁶ in River ⁸ for first time this year, Polygala. Chancebuxis. ⁵⁷ Whin ²⁹ partially in flower.
2.	38 32½	29.4-½	Fine clear day calm, and rather overcast at night from the moisture and great evaporation. Very top of Hartfell ⁵⁸ slightly whitened with snow. Very thin ice.	Rather Calm direct N.	Nearly

Thermometer. Barometer.		Weather.	Winds.	Callendar.
JAN.	Morn. Even.			
3.	33 35	Queensberry ⁵⁹ on top slightly whitened. Very thin ice.	Nearly North very calm and close. Smoke of farmhouses in all directions.	
4.	39 37	Very fine clear day. High N. wind. Very slight frost during night.	N. High. Continues same all day	
5.	34 33½	Morning fine clear. Snow on the lower range of the Moffat ⁶⁰ and the highest Dinwoodie Hills. ⁶¹ Clear all day.	N. morning high fell by 3 o'clock.	
6.	33 29 12 o'clock	Morning fine. Snow extended further down the range. Clear and frosty during whole day, light wind, N.E., calm at night.	N. light breeze a point to E. in the evening.	Golden eyes ⁶² shot in river, Kingfisher ⁶³ seen. Salmon still spawn. ⁵⁰
7.	33½ 33	Morning dull. Strong Hoar frost. Day clear. At night a slight fall with the dew Night dull, at 11 o'clock Threatening a fall of fine snow. Rather fresh. Barometer fallen about 1½ since morning. ⁶⁴	N. light. By evening N.E. and at 11 o'clock N.E. by E.	

JAN.	Thermometer. Morn.	Barometer. Even.	Inches.	Weather.	Winds.	Calendar.
8.	32	28½	29½	Morning rather dull. Fine day fine.	Wind nearly N. Calm.	
9.	34	36½	29.4-½	Morning dull. Frost still continues dull during the day, and rather feeling fresh at night.	N. calm morning, rather higher by night.	Three Morillons ⁵⁶ shot. Snipes ⁶⁵ on the riverside ⁸ from the frost. Fieldfares ⁶⁶ about the House. ⁶⁷ Fieldfares ⁶⁶ have appeared about house. ⁶⁷ Creeper ⁶⁸ frequently heard. Chaffinches ⁶⁹ in large flocks. Males and females mixed. ⁷⁰ Some mountain finches ⁷¹ among them.
10.	35	35½	29.3	Dull during the whole day slight showers of snow. Many passing showers on the hills. On the 10th the lower hills were covered with snow. Gayfield hill ⁷² about 800 feet.	Morning S.E. Towards night nearly E. sharp breeze.	
11.	35	35	29.4	Morning dull fine. Day clear fine. Slight Breeze.	E. slight breezes.	Artichokes ⁷³ to supper to-night, & during last month.
12.	34	36	29.7-½	Morning dull, continuing so whole day. Towards night rather fresh, slight indication of showers.	N. slight breeze.	Dundiver ⁷⁴ in river. ⁸

Thermometer. Barometer.		Weather.	Winds.	Calendar.
Morn.	Even.				Inches.
JAN.				
13.	36	30½	29.8	Morning dull fine. Dull during day cloudy slight showers of small snow on the higher grounds. Cleared by dusk to frost. N. during the day slightly to the West
14.	30½	32	29.6-¾	Morning fine clear. Day fine; by 7 o'clock overcast and rather misty. Barometer falling. Dull and misty. Towards evening E. and by 7 o'clock nearly S. Barometer falling. Dull and misty. South E. varying. light breeze.
15.	33½	31	29.4	Morning and day dull but fine. Evening dull. Barometer still falling. Dull and cloudy during day. At night about 9 o'clock a slight snow shower. N. very light breeze. At night calm.
16.	30	32	29.2	Morning S.W. During day nearly N. Evening flower. N.E.
17.	32	31½	29.3-½	Dull during the whole day, slight shower of very small snow in morning. N. very light, evening and night perfectly calm.
18.	32	24½	29.5	Morning fine clear. Evening clear during day. Evening Beautiful. At night calm.
19.	21½	22½	29.6-½	Very calm. During day rather Southerly. At night N. calm. 3 little Grebes ⁷⁶ in river ⁸ one shot. Alnus canadensis Catkins ⁷⁷ bursting.

Vinca Minor⁷⁵ in

Murraythwaite⁴²

Evening flower.

JAN.	Thermometer. Morn.	Barometer. Even.	Inches.	Weather.	Winds.	Calendar.
20.	23	24	29.6- $\frac{1}{4}$	Whole day clear and Beautiful.	Calm wind following the sun. Night N.	Rivers ⁸ considerably frozen. Common wild ducks ⁷⁸ are now forced to resort to it and the ditches. Golden eye, ⁶² Morillons, ⁵⁶ Tufted Ducks ⁷⁹ seen. Larks ⁸⁰ in immense flocks. Wild duck ⁷⁸ in still greater numbers in River. ⁸ Golden eye, ⁶² Tufted Ducks. ⁷⁹ Teal ⁸¹ for the first time and Wigeon ⁸² of the latter two killed. Wild geese ⁸³ about in flocks. Wild fowl still in river. ⁸ The common gull ⁸⁴ now begins to frequent it. Mostly young of the first year, in the stead of ploughed fields. Fielders ⁶⁶ in flocks on the pastures still wild not to be approached in gun shot Wood pigeons ⁸⁵ in abundance in the turnip fields. Boys crossing river ⁸ on the ice. ^{86a}
21.	24 $\frac{1}{2}$	27	29.5	Whole day clear and Beautiful. Calm.	Calm Morning N. following the sun during day at night S. and continuing W.	
22.	25	25	29.3- $\frac{1}{2}$	Day fine clear. The wind rather high.	Rather high E.	
23.	31	20	29.3	Morning thick cloudy wind high frequent snow showers and every appearance of snow storm. By midday clear. Freezing very hard evening. rivers closed up except at streams.	E. rather high, Howling.	

JAN.	Thermometer. Morn. Even.	Barometer. Inches.	Weather.	Winds.	Calendar.
24.	27½ 23 Risen ½ during last hour	29.3	Cloudy with snow showers during the whole day from N.E. every appearance of storm.	N.E. sharp breeze.	Goosanders ^{66b} and Dundivers. ⁷⁴ little Grebe ⁷⁶ and Kingfishers. ⁶⁵ Fieldfares ⁶⁶ separating from flocks and becoming tame, Snipes ⁶⁵ by riverside. ⁸ Larks. ⁶⁰ in flocks.
25.	28 25¼	29.2	Fine, occasionally overcast with snow showers. Barometer fallen since morn. to 28.9-¾.	N. and N.E. slight Breeze, at night rather high.	
26.	32 36	28.5-½	Wind very boisterous from midnight from the East high. Snow commencing about 6 morning, continuing to 1 forenoon after that day dull, wind high from S.E. Morning fine but dull Thaw. Mid-day wind high violent rain. Evening fine dul Threatening rain. ¼ inch rain.	E. towards night S.E. high.	Snipes ⁶⁵ in abundance in ditches. Killed 5 couple. Water rail, ⁸⁷ Geese ⁶³ in Holms. ⁸⁸
27.	38 37	28.6		Wind E. Toward even.	
28.	40 34	29	Day fine mild slight showers midday at 5 o'clock inclining frost. Bar. rising.	N.E. morn. Even. W. nearly calm.	Golden eye, ⁶² Tufted Ducks ⁷⁹ in river. ⁸ Wildgeese ⁶³ in Holms. ⁸⁸
29.	36 35	29.1	Day fine mild rather dull Wind in morning high.	N. in morning sharp breeze.	

JAN.	Thermometer. Morn. Even.	Barometer. Inches.	Weather.	Winds.	Calendar.
30.	36½ 36	29.2	Day dull Showery in morning setting to gentle frost even.	N. light breeze.	Same birds still in river. ⁸ A few snow bunting ⁸⁹ on the Sandbeds feeding. A fresh fall of snow on hills had driven them down.
31.	36 30½	29.7	Day fine and clear. [Warm ?] partridges ⁹⁰ light. —P—.	Morn. E. at even N.	

February, 1829.

FEB.	Thermometer. 9 Morn. about 11 night. Even.	Barometer. 9 a.m. daily.	Winds Daily.	Calendar, Remarks, Weather, etc.
1.	31 30	29.9	Morn South and very raw [but ?] Rather round to E. E by N. in even. Very calm from N.	Very fine. Day dull and very calm Slight fine snow shower in morning. Calm mild dull day Towards evening very thick and misty, continuing so during night, and still on the morn. of the 4.
2.	31½ 33	29.9-½	Very calm from N.	
3.	32 35	29.9-½	Very calm from N.E.	
4.	37 46	29.7	Wind N.W. but calm during day. At night wind and boisterous. from N.W. Night cloudy clear.	Morn very thick mist, calm and mild. Slight drizzling rain. By 3 o'clock clearing but dull. Snowdrop ⁹¹ bursting one or two nearly out. Bittern ⁹² and Glaucous Gull ⁹³ sent me from Dumfries.
5.	45 42½	29.8	W. and N.W. but calm.	Cloudy mild and calm. Crows ⁹⁴ are here now for the last two mild days resorting in the morn and even. to the breeding places.

Thermometer. Barometer.	Winds daily.	Calendar, Remarks, Weather, etc.
FEB. Morn. Even.		
6. 46 41	W. calm.	Dull, calm and very mild, geese ⁸³ Have still passed up-wards. Partridges ⁹⁰ since the mild weather have begun to pair, ⁹⁵ a few coveys only remaining entire. Hares ⁹⁶ are bucking openly. This operation has been going on for a fortnight or three weeks, but since the tempera- ture became above 40 has been nearly at its height. Fine clear and mild with a sharp breeze. Goosanders ⁷⁴ flock of 7 in river, Fieldfares ⁹⁶ in flocks on the pastures Five swans ⁹⁷ at Castle Loch Lochmaben ⁹⁸ where they have remained for three weeks. Common wild duck ⁷⁸ are now paired and pairing. ⁹⁹ A few salmon still on the streams spawning. ⁵⁰ A few of the crows ⁹⁴ appear to remain all night and by morning are very busy about the nests. Many however apparently fixing situations etc. and other preliminaries. Carrion crows ¹⁰⁰ have now paired. Although these generally remain in pairs during winter, single birds about this period seek mates. Magpies ¹⁰¹ are also come to their old resorts for breeding places.
7. 47 39	N. and N.W. sharp breeze.	The day rather dull but fine and very mild Small birds commencing spring notes ¹⁰² particularly redbreast ¹⁰³ and the Titmice, ¹⁰⁴ Com. Bees ¹⁰⁵ on the heath edgings. Snowdrops ⁹¹ nearly out. During the night of 8 or morn- ing of 9th Hoar frost.
8. 40½ 39	N. very low breeze during night howling.	

FEB.	Thermometer. Morn.	Barometer. Even.	Inches.	Winds daily.	Calendar, Remarks, Weather, etc.
9.	36	42 $\frac{1}{4}$	29.8- $\frac{1}{2}$	N. very calm.	Day dull, calm and very mild, Blackbird ¹⁰⁶ singing. Early potatoes from the pit at table. ¹⁰⁷
10.	41	|—|	29.8- $\frac{3}{4}$	N.W. calm.	Dull but still mild. Flocks of fieldfares ⁶⁶ and red-wings ¹⁰⁸ Crows ⁹⁴ increase in numbers and remain all night. Partridges ⁹⁰ now seen all paired, ⁹⁵ male utters his peculiar cry when raised Winter aconites ¹⁰⁹ in flower.
11.	47	48 $\frac{1}{2}$	29.8- $\frac{1}{2}$	N.W. calm. At night increasing.	Dull slight showers in morn. Three o'clock thick and rain very mild. Thrush ¹¹⁰ singing.
12.	50	43 $\frac{1}{2}$	29.7	N.N.W. Breeze at night calm.	Dull very slight showers in morning Mild, Morrillons ⁵⁶ in river. ⁸ Fieldfares ⁶⁶ on pastures, Sap running pretty freely in the Maples. ¹¹¹ A. Tartaria ¹¹² and abrus canadensis in nearly full flower.—Catkins. ⁷⁷
13.	43	42	29.7	N.W. light breeze.	Very dull but fine, Lapwings ¹ in flocks on the fallows and pastures preparatory to pairing. Ranunculus aquatilis ¹³ in flower.
14.	44	46	29.5- $\frac{1}{2}$	Morning N. At even S. S.E.	Dull. Slight breeze, Mild. Fieldfares ⁶⁶ and Red-wings ¹⁰⁸ still on pastures. Chaffinches ⁶⁹ in flocks, ⁷⁰ perhaps the great migratory portion before they leave this. Black and White Wagtail ¹⁴⁶ pairing.
15.	48	46	29.4	W. S.W. Morning calm. At night slight breeze.	Dull and cloudy Showers, Rain for two hours from 2 to 4. Evening lowering. Chaffinches ⁶⁹ still in flocks mostly males but some females. ⁷⁰ Same place for several days before migration feeding on the ploughed land Same place for several years past.

at noon 52

FEB.	Thermometer. Morn. Even.	Barometer. Inches.	Winds daily.	Calendar, Remarks, Weather, etc.
16.	47½ 43	29.3-¼	Morning S.W. changing gradually to W.N.W and N. Morning dull and cloudy Heavy rain about 1 o'clock with N.W and N. wind.	Morning dull and cloudy. Threatening rain till one o'clock, then heavy wind Sharp breeze from N.W. and N. About 6 cleared and fair. Wind N. Magpies ¹⁰¹ paired and working about their nests. Water ouzel ⁴⁷ yesterday still about river. ⁸
17.	35 31	29.3-¼	Morn N. day N. and N.E. Fresh gale.	Day clear Slight frost during night Moffat and higher hills quite white the lower ranges ⁶⁰ partially covered with snow. Redwings ¹⁰⁸ driven in to the beeches.
18.	32½ 36	29.4	E and S.E. sharp breeze, at night loud and blowing hard.	Day fine and clear but remarkably cold from the S.E. wind. and from the change from the mild weather of the preceding week. At night (about 7 o'clock) overcast Wind high and threatening some fall Barometer falling .1 and ¼ since morning. Birds of all sorts are quite still and in a manner benumbed from the change and for a day have put on their winter habits.
19.	34 41	29.1	S and S.E. Moderate.	Morning raw and dull, milder as the day increased, at night overcast. Heavy rain about 6 or 7. Thick fog during night drizzling rain Helleborous viridis ¹¹⁴ in fl.
20.	43½ 41	29½	S. Morn. calm even slight breeze.	Day cloudy occasional gleams of sunshine, fine and mild Woodpigeons ⁸⁵ cooing, ¹¹⁵ Hepatica all in flower, fully. ¹¹⁶
21.	41 39	28.8-¼	N.E. sharp Breeze cold and piercing.	Day fine clear occasional clouds Sharp N.E. breeze. Yellow crocus ¹¹⁷ bursting. Black Headed gulls ¹¹⁸ are in small flocks on the fallows following plough. No appearance of black head. ¹¹⁹ Water Ouzel ⁴⁷ still in river. ⁸ Black Wagtails ⁴⁶ beginning to pair their note oftener

Thermometer. Barometer.		Winds daily.	Callendar, Remarks, Weather, etc.		
Morn.	Even.			Inches.	
22.	41	36	28.9	N.E. and E. in even. rather High cold piercing, blowing loud at night.	Day fine and clear Sharp N.E. Breeze. Alder ¹²³ in flower. Cochlearia ³⁸ from Southernness ²⁸ in fl.
23.	31½	28½	29.1	N.E. breeze At night nearly calm.	Day fine clear during night frost sharp. Sun possessing great power at noon. In Pigeon-cot one or two nests with eggs. ¹²⁴ Moles ¹²⁵ for last fortnight very busy, and now begin to throw up the large hillocks to contain the nests etc. Few crows ⁹⁴ yet remain all night, depart after a few circles, about 5 o'clock for some of the large fir woods, fly in bodies very regularly, the whole getting first to a certain height in the air, during day very busy debating.
24.	31	30½	29¼	Wind E. In the morn a point N. sharp breeze.	Morning fine and clear by 11 o'clock rather overcast from the evaporation of a strong Hoar frost. Good many woodcocks ⁴ in plantations, redwings ¹⁰⁸ feeding in flocks on the lawn. One or two crows ⁹⁴ carrying sticks Jack Snipes ¹²⁶ at Loch. ² Frost so hard in the morning as to stop ploughing. Thermometer probably a little lower than on [twenty-third ?] Daphne Mezereum ¹²⁷ in flower.

Heard. (in flying which they do by jerks the note is always uttered in the descent longer and shorter according to the undulation. See photographic reproduction of this page of Sir W. J.'s diary.)

lamb at Annan Hill.¹²⁰ Vanessa urtica¹²¹ in my room most probably a late chrysalis of last year Remaining in room.¹²²

FEB.	Thermometer. Morn. Even.	Barometer. Inches.	Winds daily.	Callendar, Remarks, Weather, etc.
25.	31½ 34	29.4-½	N. E. sharp breeze.	Day fine with sharp breeze clear. Frost rather hard during night. Ploughs stopped. Crows ⁸⁴ carrying sticks in morn. Snipes ⁶⁵ are not yet paired. ¹²⁸ . Geese ¹²⁹ laying.
26.	35½ 37	29.5-½	N. N. E. Blowing hard.	Dull and overcast. Blowing hard, about 12 threatening snow, which turned to heavy rain. At night thick mist and heavy drizzling rain.
27.	42 41	29.6-½	N. calm.	Morning dull few slight showers gradually clearing to fine clear and mild day by 10 o'clock. All spring again. by even mist rising in hollows, and rather sharp. Night thick and misty. Bees ¹⁰⁵ crowding on Heath border.
28.	42 36	29.7-½	S. W. slight breeze.	Day fine and mild but rather dull, yellow crocus ¹¹⁷ fully out. Crows ⁸⁴ now very busy in morning. Water ouzel ¹⁴⁷ still about rivers ⁸ not paired ¹³⁰ singing. Red-wings ¹⁰⁸ still in flocks. Missel Thrush ¹³¹ in pairs about plantations, all birds in full song. ¹³²

March, 1829.


MAR.	Thermometer. Morn. Even.	Barometer. Inches.	Winds daily.	Callendar, Remarks, Weather, etc.
1.	35½ 31	29.7-½	S. E. slight breeze.	Day fine, mild, clear, Curlew ¹³³ calling flying high in passing. Most probably now preparing to post to the muirs ¹³⁴ to breed. Individuals pass and re-pass for many days previous these small flocks, and they pass for probably 3 or four-weeks before fixing. ¹³⁵
2.	30 29½	29.9	S. and S. E. slight breeze.	Day fine clear, frost during night. Sun with considerable power, Bees ¹⁰⁵ out and very busy.

MAR.	Thermometer. Morn.	Barometer. Even.	Inches.	Winds daily.	Callendar, etc.
3.	35 36	29.9		S.E. by S. slight breeze.	Morning fine clear rather overcast in forenoon, from the Hoar frost. Trout ¹³⁶ feeding on minnow and cod bait ¹³⁷ killed one very well grown, took in middle of stream, but rather [yet ?] sluggish. Took minnow cod-bait ¹³⁷ and other minnows in stomach.
4.	43 39	29.8- $\frac{1}{4}$		N.N.E. morning slight breeze rising by 5 o'clock and at night nearly calm.	Day fine but dull feeling raw and cold. Lapwings ¹ in large flocks. Black headed gulls ¹¹⁸ just getting the Black cap, the indication perceptible when passing at 40 yards. ¹¹⁹
5.	43 41	|—|		N.E. slight Breeze.	Day dull but fine mild. Sparrows ¹³⁸ and missel thrush ¹³¹ carry building materials. At night the —? —? —?
6.	42 41	29.7		N. and N.E. morn. calm, even slight br.	Day as yesterday. In morn. few drops of rain. Pike ¹³⁹ in good season. Trout ¹³⁶ and par ¹⁴⁰ rising at natural flies. Par ¹⁴⁰ taking with fly. Very lank and in bad order. Kingfisher ⁶⁵ in river. ⁸
7.	44 42	29.6		N.E. slight breeze.	Day fine dull. Woodcocks ⁴ yet in plantations.
8.	45 $\frac{1}{2}$ 38	29.5- $\frac{1}{4}$		N.N.W. morn calm, Even sl. B.	Frogs ¹⁴¹ spawning and croaking, and most probably have been since commencement of month. Lapwings ¹ paired.
9.	45 $\frac{1}{2}$ 36 $\frac{1}{2}$	29.5		N.E. morn. calm even sl. B. Night calm clear.	Day fine, dull with occasional gleams of sunshine. Black Wagtail ¹⁴⁶ pairing about rivers. Tussock farfare ¹⁴² in flower.

Callendar denotes weather
 Feb 15 29

20 day cloudy occasional gleams
 of sun shine, pine & mita —
 Wood pigeon every — Hepatica
 all in flower — july —

21 day fine clear occasional clouds

Thrush N. E. hedge — Yellow
 crocus budding — Black headed
 gulls one in male black on the
 ballows fallow plough — hoop =
 = presence of black head - water
 ouzel still in river — Black
 swan tails begin to rain thin
 late often heard (in flying
 when they do by jerks the note
 is always uttered in the second
 long & shorter according to the
 undulation 
 Combs at common hills

Numerous trees in by river
 mostly of white birch & aspens
 being in flower

22 Day fine & clear Thrush N. E. hedge
 Alder in flower. Black headed
 green. Saw the nest in fl.

Thermometer. Barometer.		Winds daily.	Calendar, etc.
Morn.	Even.			Inches.
MAR.			
10.	38	29.4- $\frac{1}{2}$	N.E. morn calm. Midday and noon rather stormy Night calm.
11.	38	29.4	N.E. Nearly calm.
12.	---	38	S.W. morn but very calm. Even N.W. rather high.
13.	36	29.3- $\frac{1}{2}$	Nearly due N. sharp breeze.
14.	34	29.4	N.W. by W.
15.	33 $\frac{1}{2}$	29.4- $\frac{1}{2}$	S.W. and at even S.E. clear and cold except under influence of sun.
16.	37	33 $\frac{1}{2}$	S. blowing hard very cold S.S.W.
*17.	34 $\frac{1}{2}$	32	29.2 S.E.

Cold N.E. wind Gleams of sunshine, and showers with windy gusts. Grey Wagtails¹⁴³ on rivers still single. Curlews¹³³ passing.¹³⁵
 Day fine but cold. Cumberland hills¹⁴⁴ covered with snow. Black headed gulls¹¹⁸ on Loch² heads now black,¹¹⁹ Curlews¹³³ still passing up.¹³⁵ Drew Blacket Hole.¹⁴⁵ One sea trout¹⁴⁶ taken. Several common trout,¹³⁶ and many of them well grown. Bl H. Gull¹¹⁸ at Loch.²
 Morning fine clear and calm slight frost during night. Kingfisher⁸⁵ in river.⁸
 Day dull from the great smoke of the Moor burning.¹⁴⁷ Very raw and cold.
 Day as yesterday. A strong W.N.W. wind and very cold. Redwings¹⁰⁸ still in flocks, a single Mountain Finch⁷¹ seen. Black head gulls¹¹⁸ total B. head¹¹⁹ and their breeding scream.
 Fine clear, frost sharp during night. Long-tailed Tit-mouse¹⁴⁸ in plantations.
 Day dull and threatening snow very cold and strong S. or S.W. wind. Herons¹⁴⁹ fishing about ditches and loch.² At this season they generally are nearer their breeding places.¹⁵⁰
 Still cold, a considerable fall of snow this morning, changing to rain, in forenoon and evening. Left home for Edimr.¹⁵¹ and returned on 23rd.

Thermometer.		Barometer.		Winds daily.		Callendar, etc.
MAK.	Morn. Even.	Inches.				
*18.	37½	38	29.2	S.E.		
*19.	—	50	—	S.		
*20.	45	39	29.2	N.W.		
*21.	42½	38½	29.4	N.		
*22.	46	40	—	E.		
23.	46	33	29.5-½	—		
			at night			
24.	37	32	29.5	S.E. slight breeze.		
25.	39	37	29.5	S.W. very light.		
26.	44	—	29.5	—		
27.	—	—	—	—		
28.	—	35	29.1	N.E. strong B.		
			at night			
*29.	43	37	29	S.E. st. B.		
*30.	43½	37	28.9	S.E. st. B.		
31.	42	30	29.9	S.E. st. B.		

Absent for the last week On 17 Fieldfares⁶⁶ near Rae-hills³³ The weather fine clear but cold.

Remaining same until 30 with strong S. and N.E. gales evidently commencement of the Equinoctial.¹⁵² On 29 Fieldfares⁶⁶ near Church,¹⁵³ and on 28 several flocks of Starlings¹⁵⁴ feeding with the Lapwings.¹ Larch¹⁵⁵ in flower.

Morning cold with snow showers, continued through day by sleet. Evening rather milder, calm. Red-wings,¹⁰⁸ Large flocks of Chaffinches⁷⁰ mixed with Green linnet¹⁵⁶ and a few Mountain finch⁷¹ in sheltered places, the latter feeding on larch cones. A few Siskins.¹⁵⁷

* Kept by George Belliss in my absence.

April, 1829.

Thermometer.		Barometer.	Winds daily.		Calendar, etc.
APR.	Morn.	Even.	Inches.	S. E. st. B. at even	Morning snow with H. S. E. wind, by midday clear and snow gone, even fine and calm.
1.	37	33	28.9- $\frac{1}{2}$	S. E. st. B. at even calm.	Very boisterous with frequent snow and Hail showers. Barren Strawberry ¹⁵⁹ been in flower for some days.
2.	41 $\frac{1}{2}$	30	29	Nearly direct N. very boisterous.	As yesterday with little alteration.
3.	42	32	29 $\frac{1}{2}$	As on 2nd Showers of cold Rain.	Wind from the South and the day mild Morning dull by midday clear and shining. Crows ⁹⁴ have young, and are reckoned early this season. Caltha palustris ¹⁶⁰ in flower. Trout ¹⁵⁶ feeding greedily.
4.	42	39	29.1	Nearly south.	Milder and with heavy showers of rain.
5.	45 $\frac{1}{2}$	42	28.8- $\frac{1}{2}$	South gentle.	6. and 7. Mild with occasional heavy showers on 7 partial thunder White rump ⁶ in Lochar Moss ¹⁶¹ Red-wings ¹⁰⁸ in small flocks at home ⁶⁷ Queensberry ⁵⁸ and Moffat Hills ¹⁶² covered with snow.
6.	48	40	28.6- $\frac{3}{4}$	N. E. gentle.	Mild. Fieldfares ⁶⁶ in flocks and a few Mountain finches ⁷¹ on the larches with Chaffinches ⁶⁹ and Green linnets. ¹⁵⁶
7.	42	37	28.7	As yesterday.	As yesterday even more boisterous with showers.
8.	45	32 $\frac{1}{2}$	28.8- $\frac{1}{4}$	As yesterday Nearly calm.	Very boisterous with heavy showers Snow on Moffat ¹⁶² and Wampthray Hills. ¹⁶³
9.	46	37	28.9	N. E. and evening nearly E.	Windy but fair and mild. At night moon surrounded by very broad and wide halo. ¹⁶⁴ Barometer fallen suddenly during night.
10.	41	36 $\frac{1}{2}$	28.8	Nearly N.	
11.	45	39	29 $\frac{1}{4}$	S and S. F.	

APR.	Thermometer. Morn.	Barometer. Even.	Inches.	Winds daily.	Callendar, etc.
12.	46½	47½	28.6	N.E. Boist.	As yesterday. Rain in morn.
13.	47	41	28.3-¾ ¹⁶⁵	S.W. Boist. with heavy showers of R. and H.	Very high wind with tremendous blasts accompanied with heavy rain and Hail. Adoxa Mosch ¹⁶⁶ in fl.
14.	48	46	28.6-½	S and S.W Boist At night stormy with rain.	Morning windy with showers Midday fine, even very stormy with heavy rain. Trout ¹³⁶ rising well. Many entered the river ⁸ from the burns by late rains, few yet in perfect condition. Fieldfares ⁶⁶ passing in flocks.
15.	47	47	28.3 ¹⁶⁶	S.W. Blowing hard.	Dull and showery, much rain during night. Larch ¹⁵⁵ leaves half out Planes ¹⁶⁷ bursting. Missel thrush ¹³¹ about half built.
16.	49	38	28.7	S.W. Breeze.	Morning from 6 o'clock with heavy showers, on the Hills snow. Hartfell ⁵⁸ covered and Queensberry ⁵⁹ tipped, the latter free from snow by 12 o'clock. A single Hirundo Riparia ¹¹ by river, ⁸ first this year.
17.	47	42	29½	S.W. Morn. and Even calm. Mid-day Breeze.	Day fine slight breeze in forenoon, a few Hir. Riparia ¹¹ about river, ⁸ also a pair of R. Dotterels. ¹⁶⁸ Bat, ¹⁶⁹ at dusk. Common owl ¹⁷⁰ hooting much at dusk. Tussilago petasites ¹⁷¹ in full flower.
18.	47½	42½	29.2	S.W. after midday high.	Viola canina ¹⁷² in fl.
19.	48	43	29	Varying from S. to S.E. and nearly due North. The latter at night.	Fine, mild but with very heavy showers Plumb ¹⁷³ and cherry ¹⁷⁴ beginning to blossom on all exposures except N. Ribes peruviana ¹⁷⁵ also.

APR.	Thermometer. Morn.	Barometer. Even.	Inches.	Winds daily.	Callendar, etc.
20.	50	38	29.2- $\frac{1}{2}$	S. and S W. calm with occasional gusts.	Calm mild clear and fine but with heavy showers from the Hills accompanied with Gusts of wind At night Bat ¹⁶⁹ flying. Owl ¹⁷⁰ hooting. Green linnet ¹⁵⁶ has for ten days used his spring flight.
21.	50	43	29.3	S.E. sharp breeze.	Fine with a sharp br. during night Hoar frost.
22.	46	40	29.2	S.E. very stormy.	Fine but with very boisterous wind during night and day. Broadleaved poplar ¹⁷⁶ at side of garden door in flower. Norwegian maple. ¹⁷⁷
23.	47	38	29.3	S.E. moderate.	As yesterday wind not so high.
24.	44	46	29.4- $\frac{1}{2}$	S.E. moderate but in squalls.	Still windy and rather raw. Moffat Hills ¹⁶² white. Fieldfares ⁶⁶ passing in flocks in evening. ¹⁷⁸
25.	44 $\frac{1}{2}$	34	29.6	S.E. moderate by even nearly calm.	(25 to 29.) Weather nearly similar, on 28 very high wind with violent showers of rain and sleet. Fieldfares ⁶⁶ passing.
26.	48	42	29.6- $\frac{1}{2}$	Nearly S. at midday. Even S W. Night S.F.	
27.	51	41	29.1- $\frac{1}{2}$	Due North with heavy squalls and Hail shs.	
28.	41	36	28.7	Due N. with heavy squalls and rain. Mercury rising fast.	
29.	41	31	29.3	Due North very cold blowing hard.	During night considerable fall of snow on Moffat Hills ¹⁶² and Wamphray ¹⁶³ . Ice on Ponds $\frac{1}{2}$ inch thick. Day very cold and blowy. Totanus Hippoleucis ¹⁸ on river. ⁸ Winter birds very late Fieldfares ⁶⁶ yesterday

APR.	Thermometer. Morn. Even. Inches.	Winds daily.	Callendar, etc. Observer. ⁷⁹ regarding woodcocks. ⁴
1.	44	47	<p>passing. See note from Edinr. Observer.⁷⁹ regarding woodcocks.⁴</p> <p>“SPORTING UNUSUAL. As a proof of the lateness of the spring, and the prevalence of the strong easterly winds, a sporting gentleman of Glasgow states that, during the last fortnight, twenty-one woodcocks have been killed in the woods of Mr Wallace of Kelly.¹⁸⁰ These birds seem in fine condition, although evidently on the <i>qui vive</i> for their homeward flight, being very wary and not to be shot at after the first rise. The last were killed upon the 11th. making out a full eight months' shooting season, from August 12th to the same day of April.”¹⁸¹</p> <p>Very dull and showery cold and raw Common Swallow H. Urbical¹² flying about Lochmaben.⁹⁸ Probably has been there and about the Lochs¹⁸² where insects have more abounded for some days.</p>
30.	44	47	
	29.4	29.4	
		N. W.	
		Blowing hard.	
May, 1829.			
MAY.			
1.	50½	42	29½
			N. E
2.	48	40	28.8-4
			Nearly due North blowing hard.
			<p>Day mild but pretty sharp N.E. wind. Snow nearly off the Upper Moffat Hills.¹⁶² The melting during day very perceptible.</p> <p>Fine but still cold, during day blast of wind with hail. A fresh fall of snow on Hills during night, but which nearly disappeared during day.</p>

Thermometer. Barometer.
 Morn. Even. Inches.
 3. 54 38 28.9

Winds daily.
 Strong S.W.

Calendar, etc.

Morning dull strong S.W. wind Rained heavily from 11 o'clock till half past Four when suddenly cleared to pleasant sunshine. Went out then to walk, saw flock of fieldfares⁶⁶ passing and wheeling round young plantations as if in search of roosting place. A single Swift H. Apus²¹ and in front of house a pair of Window Swallows Martelets²⁰ playing around and alighting on the foundation of an old nest chirruping and as if congratulating each other on the revisit of an old and well known residence after a long journey. Had they just arrived? They certainly were not previously at this spot. Never before saw fieldfares⁶⁶ in flocks with the swallow¹² here before. Pairs have been known to remain longer¹⁸³ S. Trochilus¹⁰ by a letter from Twizel¹⁸⁴ is arrived there No other summer birds.¹⁸⁵ Day fine rather warm still a strong breeze, Snow nearly from hills, Sylvia Trochilus,¹⁰ yesterday not one was to be heard today the plantations are full. Cuckoo¹⁹ heard in evening for first time. Common swallow¹² seen. Many were seen previously at Lochmaben⁹⁸ but not here. Anemone nemorosa¹⁸⁶ in flower in woods, honeysuckle¹⁸⁷ now in full leaf, planes¹⁸⁷ bursting rapidlye.
 Heavy rain or very thick and damp all day. Strong Wind Several Swifts.²¹

N.W. Strong Breeze.

4. 50 44 29.1- $\frac{1}{4}$

S.S.W. blowing hard.

5. 47 49 29.2

Thermometer. Barometer.		Winds daily.	Callendar, etc.
MAY.	Even. Inches.		
6.	55 46	S.W. Blowing hard.	Dull but fine blowing hard. In evening very stormy.
7.	54 48	N.W. Blowing hard.	Fine clear but strong N.W. wind. Geum rivale ¹⁸⁸ in flower.
8.	52½ 51	S.W. blowing hard.	Morning rainy Day dull and threatening. Winchat ⁷ Horse-chestnut ¹⁸⁹ nearly in leaf. Larch ¹⁸⁵ commencing to burst.
9.	54½ 49	S W Blowing hard.	Morning dull, clearing about noon with [clear sun ?]
10.	60 52	S.W. calm and sultry.	very sultry and calm. Whitethroat. ²⁵
11.	57½ 47	N.E.	Day fine bright, slight breeze. Sylvia Sibatrix. ¹⁹⁰
12.	59 44	N.W.	Fine clear. Land rail ¹⁹¹ seen, probably a week earlier said to be seen by Nichol's ¹⁹² boys. Asparagus ¹⁹³ Sedge Warbler. ²²
13.	55 50	Nearly South.	Fine clear Black Italian Poplar ¹⁹⁴ in flower. Horse chestnut ¹⁸⁹ in leaf. Larch ¹⁵⁵ is now fully in leaf. Oak ¹⁹⁵ bursting peels well. Common white lily ¹⁹⁶ N. Poeticus ¹⁹⁷ coming into flower.
14.	51½ 46	Morning S. Even. nearly due N.	Dull close and mild Slight [rain ?] during day. Gulls ¹¹⁸ at Loch ² eggs. ¹¹⁹ Viola palustris ¹⁹⁸ in full flower.
15.	—| 48	N.W.	Morn as yesterday, clear and fine at even No rain.
16.	52 50	Nearly calm.	Day fine. Mild Land rail ¹⁹¹ calling. Spotted fly-catcher ⁶⁰ in garden. ⁶⁷ Anthus arboreus ¹⁷ and most probably a day or two earlier.

Thermometer.		Barometer. Inches.	Winds daily.	
MAY.	Morn. Even.		E.	Slight Breeze.
17.	57 |—|	29.6	E.	Slight Breeze.
18.	|—|	|—|	|—|	|—|
19.	65 |—| 50	29.4- $\frac{1}{2}$	|—|	|—|
at 12, 69				
20.	61 |—| 48	29.6	E.	Slight Breeze.
21.	|—| 45	|—|	Morn. North	Midday and Even E. slight breeze.
22.	55 |—| 47	29.6	S.	nearly calm during day.
23.	64 |—| 58	29.6	South.	at Night very High.
24.	53 |—| 47	29.6- $\frac{1}{2}$	N.W.	Sharp Breeze.
25.	57 |—| 47 $\frac{1}{2}$	30	E.	Strong Breeze Even calm.
26.	56 |—| 45 $\frac{1}{2}$	30 $\frac{1}{2}$	E.	St. Br.
27.	55 |—| 52	29.9	Nearly	west calm.
28.	61 |—| 55	29.8	Very	calm.
29.	68 |—| 52	29.7- $\frac{1}{4}$	Nearly N.	Day calm. Even sl. B.
30.	62 |—| 52	29.7- $\frac{1}{4}$	Nearly N.	calm.
31.	62 |—| 52	29.6	Nearly N.	calm even point West.

Callendar, etc.

NOTES ON SIR WILLIAM JARDINE'S MANUSCRIPT.

⁰¹ The year 1826 is famous locally as "the year of the short corn." There was no rain from May till harvest; the corn was so short that it could not be reaped but was pulled up by hand. The people washed and ground the roots of grass, etc., for fodder.

¹ *Vanellus Cristatus*. Resort to their breeding places in February; eggs in some seasons are found as early as the end of March.

² Perch-hall Loch, half mile east of Jardine Hall. Partially drained in 1814. Now (1909) completely drained, and planted.

³ About 10 miles N.-E. of Jardine Hall.

⁴ *Scolopax Rusticula*. At this season of the year (March) woodcock are nowadays (1910) especially numerous in Dumfriesshire. From subsequent entries in the "Callendar" it seems probable that (although Sir W. J. does not notice it) the species bred locally. (See Note 181.)

⁵ This pack, which was in existence in the eighteenth century, still flourishes. In 1826, James Johnston of Straiton and Champfleurie, and William D. Gillon of Wallhouse, were joint masters. Sir W. J. does not appear to have hunted regularly with the L. and S. (James H. Rutherford, *in litt.* 15, ix. 09.)

⁶ The Wheatear: *Saxicola Oenanthe*. "In 1907 this species was noticed near Dumfries on March 19th; but it is not until towards the end of that month, or in the early days of April, that the bird usually puts in an appearance." (Gladstone, Hugh S.: *Birds of Dumfriesshire*, 1910, p. 9.)

⁷ *Pratincola Rubetra*. A somewhat late date for the first appearance of this species.

⁸ The River Annan, which flows close to Jardine Hall.

⁹ I have been unable to trace this old house.

¹⁰ The Willow Wren: *Phylloscopus Trochilus*. "From ten years' observation, the date of the first arrival near Dumfries varies from the 14th to the 25th of April." (*Birds of Dumfriesshire*, p. 28.)

¹¹ The Sand-Martin: *Cotile Riparia*. A late date for the first appearance of this species, the "usual date of their arrival being between April 8th and 12th." (*Birds of Dumfriesshire*, p. 68.)

¹² The Swallow (*Hirundo Rustica*) is presumably here referred to in view of Sir W. J.'s distinct reference to the Martin on 3rd May, 1829 (q.v.). 30th April would be an exceptionally late date for the first appearance of the Swallow. "If an average date for their arrival is permissible, it would seem to lie between April 16th and 20th." (*Birds of Dumfriesshire*, p. 62.) (See Note 15.)

¹³ 10½ miles S.-W. of Jardine Hall.

¹⁴ William Thomas Carruthers of Dormont, a friend and correspondent of Sir W. J. Dormont is eight miles S. of Jardine Hall.

¹⁵ I know of no Dugaldston (*sic*) Loch. Dougalston Loch, in the parish of New Kilpatrick, Dumbartonshire, is "4½ furlongs by 1 furlong, contains an islet, and is noted for its rare aquatic plants." (*Cassell's Gazetteer of Great Britain and Ireland*, 1896.) If this is the place intended by Sir W. J., it would be some 64 miles N.-W. of Jardine Hall. In Dumfriesshire the earliest date of the arrival of the Swallow that I know of is 26th March in 1903.

¹⁶ Sir W. J. has here pasted in a newspaper cutting, which he states is from *Dumfries Courier*, April, 1826. I have, however, examined the files of this newspaper of that date without finding it.

¹⁷ The Tree-Pipit: arrives late in April or early in May.

¹⁸ The Common Sandpiper. Rather a late date for first appearance; usually arrives at its nesting haunts about the third week of April.

¹⁹ *Cuculus Canorus*. A very late date to hear this species for the first time in the year.

²⁰ The Martin: *Chelidon Urbica*. "The Martlet, or Window Swallow" of Sir W. J. (*Nat. Lib.*, 1839, vol. ix., p. 400). A late date for the first arrival of this species.

²¹ The Swift: *Cypselus Apus*. The 9th May is the average date for the arrival of this species.

²² The Sedge Warbler: *Acrocephalus Phragmitis*. A late date for first arrival.

²³ The Rock Pipit: *Anthus Obscurus*. Sir W. J. would meet with this species on the Solway, not at Jardine Hall.

²⁴ "About 7 drachms" is the weight given by Rev. F. O. Morris. (*Hist. Brit. Birds*, 1870, vol. II., p. 149.)

²⁵ *Sylvia Cinerea*. A late date for first arrival.

²⁶ The Garden Warbler: *Sylvia Hortensis*. A late date for the arrival of this species.

²⁷ Adder's Tongue. Mr R. Service wrote to me: "I saw the Adder's Tongue fern fairly plentiful at what must have been the identical place in May, 1908." (*In litt.* 18, ix., 1909.)

²⁸ In Kirkcudbrightshire, 24 miles S.S.-W. of Jardine Hall: one of Sir W. J.'s favourite hunting grounds, both botanical and ornithological.

²⁹ *Ulex Europæus*. Rather early.

³⁰ *Muscicapa Grisola*. An average date for first arrival. "First appearance within the last few years between 13th and 17th May." (J. Rutherford, *in litt.* 16, ix., 1909.)

³¹ Lt.-Col. William Grierson. "He resided in a house in St. Michael Street (Dumfries) very nearly opposite to St. Michael's Church. It was a very commodious house, with a nice productive and flower garden fronting to the Dock Park." . . . The house "was afterwards, along with the garden, split up and sold in portions." (Sir Alexander Grierson, *in litt.* 22 ix. 1909.) Lt.-Col. Grierson, second son of Sir Robert Grierson, 5th Bart. of

Lag, b. 7th August, 1778, m. Jane, daughter of Thomas Beattie, d. 30th November, 1865, and was buried in St. Mary's Churchyard, Dumfries, leaving his Dumfries house and property of Barn-dennoch, Glencairn, Dumfriesshire, to his daughter, Margaret Elizabeth, who m. firstly, 25th January, 1860, David Baird Hope-Johnstone; and secondly, 21st April, 1871, John Henry Gordon. "The Dumfries property was 'split up,' as above stated, in or about 1872, and Barndennoch sold to Major William McCall in 1897." (J. Henderson, *in litt.* 11. x. 09.)

³² Medlar: *Mespilus Germanica*.

³³ Five miles N.N.-W. of Jardine Hall. The residence in 1826 of John James Hope-Johnstone, which Sir W. J. would pass when driving to Edinburgh.

³⁴ *Fraxinus Excelsior*, var.

³⁵ 20 miles S.S.-W. of Jardine Hall. The residence in 1828 of Douglas Hamilton Craik.

³⁶ *Potentilla Nepalensis*. A red flowered East Indian species, frequently met with in gardens. An old-fashioned border plant. Rather an early date for fl.

³⁷ Now called *Buda Rubra* var. *Marina* or Sands mercury.

³⁸ Scurvy Grass: *Cochlearia Officinalis*. Rather early. "This might be *C. Danica*" (G. F. Scott-Elliot, *in litt.* 3, ix. 1909).

³⁹ *Saxifraga Granulata*.

⁴⁰ "Might be *Rathyrus Maritimus*, in which case a very interesting record; or it might be *Ononis Arvensis*: Rest-harrow." (G. F. Scott-Elliot *in litt.* 3, ix. 1909.)

⁴¹ *Aquilegia Vulgaris*, var.

⁴² 9½ miles S.S.-E. of Jardine Hall. The residence in 1828 of Sir W. J.'s friend, John Dalrymple Murray.

⁴³ *Staphyla Pinnata*.

⁴⁴ *Cytisus Scoparius*, var.?

⁴⁵ Roughly speaking, the Barony of Ross may be described as comprising two-thirds, and lying towards the south-east, of the parish of Kirkmichael, Dumfriesshire; it gives the title of "Viscount Ross" to the Duke of Buccleuch.

⁴⁶ Presumably the Pied Wagtail: *Motacilla Lugubris*.

⁴⁷ The Dipper: *Cinclus Aquaticus*. "I usually hear the song of this cheery bird on bright sunny days in January." (J. Rutherford *in litt.* 16, ix. 1909.) The Dipper sings far more frequently in December than in the other winter months.

⁴⁸ *Laurustinus*. "Naturally flowering hereabouts in late December, and in January. Regularly suffers from severe frosts, and the flowers are continually destroyed. The plant is, however, an evergreen and the foliage is consequently not shed. The foliage is, I think, very seldom, if ever, frosted." (R. Service, *in litt.* 11, x. 1909.)

⁴⁹ *Azalea Præcox*, early.

⁵⁰ "Salmon paccn in the River Annan from November to

March. I have seen them on the beds in October, but it is not usual." (P. A. Pasley-Dirom, *in litt.* 7, ix. 09.) The close-time for salmon (*Salmo Salar*) on the River Annan is now (1910) November 16th to February 24th.

51 Christmas Rose. "Rather an early date for the old form of *H. Niger*." (R. Service, *in litt.* 28, ix. 1909.)

52 Primrose; very early.

53 Early.

54 Common Hepatica; early.

55 Early.

56 A name commonly given by old-time fowlers and naturalists to the females and immature males of the Golden-Eye: *Clangula Glaucion*. "The mistake no doubt originated in, and is partly excused by, the facts that the birds called Morillons were often of opposite sexes, and differed greatly from the adult male Golden-Eye, whose full and beautiful plumage is not assumed until the second year." (Newton, Alfred: *Dict. Birds*, 1893-1896, p. 593.)

57 Bastard Box; early.

58 2651 feet. 16 miles N. of Jardine Hall.

59 2285 feet. 10 miles N.-W. of Jardine Hall.

60 About 1000 feet.

61 Dinwiddie Hill, 740 feet.

62 *Clangula Glaucion*. (See Note 56.)

63 *Alcedo Ispida*.

64 "An unusual marking of barometer." (J. Rutherford, *in litt.* 16, ix. 1909.)

65 *Gallinago Cœlestis*.

66 *Turdus Pilaris*. (See Notes 178 and 183.)

67 Jardine Hall. Lat., 55 deg. 10 min. 30 sec. N.; Long., 3 deg. 25 min. W.; Alt., 190 feet above sea level.

68 The Tree-Creeper (*Certhia Familiaris*) is heard irregularly during the winter months.

69 *Fringilla Cœlebs*.

70 "Owing to a partial and temporary separation of the sexes [in winter] the name Cœlebs, or bachelor, was used by Linnæus in reference to the deserted males." (Howard Saunders: *Man. Brit. Birds*, 1899, p. 183.) Sir W. J.'s observation is therefore of interest.

71 The Brambling: *Fringilla Montifringilla*.

72 5½ miles W.N.-W. of Jardine Hall. The highest point on the Applegirth Estate, overlooking the Vale of the Annan, and also part of the Dryfe Valley.

73 *Helianthus Tuberosus*: Jerusalem Artichoke, a winter vegetable.

74 Sir W. J. writes in 1843: "The Goosander, *Mergus Merganser* . . . Goosander male. Dun Diver, female, of British Authors. . . . The plumage of the sexes for the first year is nearly similar, but the males and females were long by

many considered distinct species, and were known under the names of Goosander and Dun Diver, *Mergus Merganser* and *Castor*. The fact of their identity has, however, been long since proved." (*Nat. Lib.*, 1843, vol. xiv., pp. 177, 178.)

75 Lesser Periwinkle; rather early.

76 *Podiceps Fluviatilis*.

77 Canadian Alder, early.

78 *Anas Boscas*.

79 *Fuligula Cristata*.

80 *Alauda Arvensis*. Skylarks do flock largely in winter; nevertheless "immense" flocks would nowadays be remarkable so far as this part of the county of Dumfriesshire is concerned.

81 *Querquedula Crecca*.

82 *Mareca Penelope*.

83 The Bean Goose: *Anser Segetum*. This is believed to have been the prevailing species of Goose visiting the Solway in Sir W. J.'s time.

84 *Larus Canus*, the Common Gull, may here be referred to, but it is not so common in Dumfriesshire as its name implies; the most common gull inland being the Black-headed Gull, *L. Ridi-bundus*.

85 The Ring Dove: *Columba Palumbus*.

86a "I should fancy this was more common in olden days than now." . . . "When I was a boy I seem to recollect the Annan much more often frozen across than now. . . . One year (I think spring of 1906) the Annan was frozen across for a considerable time. The curlers deserted the curling-pond, which was spoilt by snow, for the river." (P. A. Pasley-Dirom, *in litt.* 9, ix. 1909.)

86b *Mergus Merganser*. (See Note 74.)

87 *Rallus Aquaticus*.

88 The low lying fields on the banks of the Annan.

89 *Plectrophanes Nivalis*. As regards this species being seen at such a low altitude (i.e., *circa* 200 ft.), Mr R. Service wrote to me: "I have seen these birds down on the shore and along the Nith sides at end of September, and fairly often during the later months of winter in similar low altitudes, but I think only after violent northerly or north-easterly winds." (*In litt.* 11, x. 1909.)

90 *Perdix Cinerea*.

91 *Galanthus Nivalis*. Rather a late date for first flower.

92 *Botaurus Stellaris*. A notable rarity, even in 1829. "Formerly not uncommon; is now a rare accidental winter visitor. . . . Unfortunately there are no records of this species having nested in the county, and it is improbable that it has done so within at any rate the last hundred years." (*Birds of Dumfriesshire*, pp. 233, 237.)

93 *Larus Glaucus*. This was probably the specimen which passed into the Edinburgh Museum in 1876, labelled as "obtained on the Solway" and "from the Jardine Collection." The specimen

has since been destroyed. There are only five records of the occurrence of this species in Dumfriesshire. (*Birds of Dumfriesshire*, p. 439.)

94 The Rook: *Corvus Frugilegus*. There is an old saying that Rooks begin to build on the first Sunday of March. Mr R. Service wrote to me: "I can hardly exactly tabulate dates *re* Rooks, but let us say (1) Mid January for Rooks returning to nesting stations in mild seasons, of course not to remain continuously; (2) begin building, 15th February; (3) my first date for eggs is March 16th, but I think that is exceptional." (*In litt.* 11, x. 1909.)

95 In open winters they sometimes pair in January.

96 *Lepus Europæus*. March or April is the more usual time.

97 Probably the Whooper Swan: *Cygnus Musicus*.

98 3½ miles S. of Jardine Hall. (See Note 182.)

99 In some seasons, pair in January.

100 *Corvus Corone*. Early.

101 *Pica Rustica*. Early.

102 Early.

103 *Erithacus Rubecula*: A very pertinacious songster, except in severest weather.

104 The Paridae. Early.

105 *Apis Mellifica*. An average date to appear. "Heath borders, must mean the borders in the garden planted with species of Heather: or an *Ericarium*, as was the case in the old generation of gardens. Here the common hive bee must be intended." (R. Service, *in litt.* 28, ix. 1909.)

106 *Turdus Merula*. Rather early.

107 "There is some ambiguity about this remark. Does it mean new potatoes that have been forced in a pit; or an early variety of potatoes that have been stored in a pit, and some taken on that day for dinner?" (J. Rutherford, *in litt.* 16, ix. 1909.) But Mr R. Service wrote to me as regards Sir W. J.'s note: "'Forced' in a glass framed pit, as was the regular custom then." (*In litt.* 28, ix. 1909.)

108 *Turdus Iliacus*.

109 *Eranthis Hiemalis*. A fair average date.

110 *Turdus Musicus*. Heard irregularly during Winter on sunny days.

111 *Aceracia*. Average date.

112 Tartarian Maple: *Acer Tartaricum*. Average date of fl.

113 Water Crowfoot. "Extraordinarily early. I should expect some warm water in the place where it grew." (G. F. Scott-Elliot, *in litt.* 3, ix. 1909.)

114 Green Hellebore, or Bear's Foot. "Fl. early Spring." (Bentham & Hooker: *Handbook Brit. Flora*, 1904, p. 12.)

115 Heard irregularly during Winter on sunny days.

116 Nothing unusual.

117 *Crocus Satirus*. An average date.

118 *Larus Ridibundus*.

119 It is not till April that the "black" feathers of the head are in complete perfection. Eggs are laid towards the end of April or in May. Mr P. H. Bahr, in his paper "On the Supposed 'Colour-Change' and the Spring Moults of the Black-headed Gull," states: "The conclusions I have arrived at are as follows: (1) That individuals vary in the amount of black on the crown in the winter plumage, and that this variation has given rise to the belief that a 'colour-change' takes place. (2) That no 'colour-change' occurs. (3) That a moult takes place usually about the beginning of February, and under natural conditions takes about a week to complete, and that it not only embraces the head, but the breast and back as well. (4) That birds of the previous year occasionally assume the black hood of the breeding plumage, while retaining the immature dress on back and wings." (*Brit. Birds Mag.*, Vol. III., pp. 105-111.)

120 Early.

121 Lesser Tortoiseshell Butterfly.

122 Sir W. J. must have made a mistake here. The species hibernates in the imago state and emerges in Summer season. A very early date for its appearance.

123 *Alnus Glutinosa*. Rather early.

124 An average date.

125 *Talpa Europæus*. Early. Moles do not hibernate. They pair in March or April, and have young in May and June.

126 *Gallinago Gallinula*. Rather a late date; though the species has been seen in Dumfriesshire as late as March.

127 *Mezereon*; a late date for first fl.

128 Usually pair about a fortnight later.

129 Farm-yard geese. Early.

130 Hardly to be expected for another fortnight. Their song often heard even during Winter.

131 *Turdus Viscivorus*. As a nesting species this is one of our earliest. Sir William Jardine writes in 1832 as follows: "Fifteen years ago they were rarely to be seen, but in consequence of the increased extent of plantations, they are now frequently met with in pairs, or in parties of five or six." (*Birds of Dumfriesshire*, p. 1.)

132 Early.

133 *Numenius Arquata*.

134 Moors.

135 March 1st is an early date for such a concerted movement as these observations would seem to record. The average date during thirteen years, for the *first arrival* of this species at their breeding places in Eskdalemuir, was 27th February, according to the late Richard Bell of Castle O'er; but it should be remembered that this average was only for *first arrivals* there. "Curlews pass up at a much later date (say March 10th) in great numbers *en*

masse, probably going to Northern European haunts." (R. Service, *in litt.* 28, ix. 1909.)

¹³⁶ *Salmo Fario*. "It depends on the season. If an early season, it is quite likely that for half-an-hour, or an hour, on a sunny day with fly hatching out they would feed greedily. Whether they would be in good condition or not, is another question." (P. A. Pasley-Dirom, *in litt.* 7, ix. 1909.) The close-time for Burn-Trout on the River Annan is now (1910) November 16th to February 24th.

¹³⁷ "Cod-bait, caď-bait, or cadis-bait," *vide The Art of Angling* by Thomas Best (eleventh ed., 1822, p. 23). "Cod-bait may probably be the little bottom fish known locally as 'Bairdie,' but I never heard the name 'Cod-bait' before. 'Bairdie,' i.e., The Loach = *Nemachilus Barbatulus*, so called from the barbules on the chin." (R. Service, *in litt.* 11, x. 1909.)

¹³⁸ The House Sparrow: *Passer Domesticus*. Early.

¹³⁹ *Esox Lucius*. Early.

¹⁴⁰ The young of *Salmo Salar*. Early.

¹⁴¹ *Rana Temporaria*. An early date.

¹⁴² Common Colt's foot. A somewhat early date.

¹⁴³ *Motacilla Melanope*. They do not pair till about a week or ten days later.

¹⁴⁴ From about 1000 to 2500 ft. 30 to 40 miles S.S.-E. of Jardine Hall.

¹⁴⁵ Still (1910) a noted salmon and sea-trout pool in the Annan.

¹⁴⁶ *Salmo Trutta*. "We have never caught sea-trout in the R. Annan before April (Rod and Line), except Kelts: though once on 29th February, I forget which year, after I had returned a sea-trout to the river, I became almost certain it was a new-run one; but it was too late then to make sure. . . . I have seen a villager who said he got a fresh-run sea-trout on 25th February one year when some of the villagers had leave to use a Rake-net." (P. A. Pasley-Dirom, *in litt.* 7, ix. 1909.)

¹⁴⁷ "The legal period for making Muirburn or for setting fire to any Heath or Muir in Scotland, is now (1910) from 1st November to 11th April, but Proprietors of wet lands in their own occupation may burn heath between 11th and 25th April, or may authorise their Tenants of such wet lands to do so, provided that the Writing authorising such burning, when the lands are in the occupation of Tenants, shall, previous to such burning, have been recorded in the Sheriff Court Books of the County within which such lands are situated. The above Provisions are enacted in Sections 4, 6, and 7 of The Game (Scotland) Act, 1772." (13 Geo. III., Cap. 54.)

¹⁴⁸ *Acredula Caudata Rosea*. I am not aware of the occurrence of the Continental form, *Acredula Caudata Europaea*, in Dumfriesshire.

¹⁴⁹ *Ardea Cinerea*.

150 Usually resort to their breeding places in February.

151 62 miles by road from Jardine Hall.

152 *Vernal Equinox*, 21st March; *Autumnal Equinox*, 22nd September. The belief that there occurs an unusual frequency of gales and storms at these dates has been unsupported by the records of carefully conducted and long continued observations.

153 Applegirth Kirk. Built in 1760. The seating was renewed in 1808, and a private gallery built, by Sir Alexander Jardine. It was here Sir W. J. attended worship. He was buried in Applegirth Kirkyard, 27th November, 1874.

154 *Sturnus Vulgaris*. Sir William Jardine, writing in 1832, says: "It is found in flocks during Autumn and Spring, but few in number, having diminished much of late years. In 1819 and 1820 flocks of many hundreds frequented the holms on the Annan, but of late not more than from ten to twenty have been seen together." Again, he writes in 1839 from Newbie House, Annan: "A pair of Starlings bred in a hole in one of the large trees in front; the first time I have ever known any remain over Summer." (*Birds of Dumfriesshire*, p. 106.) The species may now (1910) be said to be excessively abundant.

155 *Larix Europæa*. An early date; fl. about 20th April; l. about 10 days earlier.

156 The Greenfinch: *Ligurinus Chloris*. They congregate in flocks in Autumn. "The breeding season of this species is very prolonged, nests being commonly found from April to September." (*Birds of Dumfriesshire*, p. 69.)

157 *Carduelis Spinus*.

158 Mr James Bell writes me: "My father, George Bell, entered the service of Sir William Jardine at Jardine Hall in 1827 or 1828. He transferred his services to the Marquis of Queensberry in 1837, and acted as factor on the Queensberry Estates of Kinmount, Thorwald, Tinwald, etc., under three Marquises: John, Archibald, and Sholto. He retired about 1869, and was (rather strange to say) succeeded by Sir W. J.'s son, the late Sir Alexander. He died 1873." (*In litt.* 28, ix. 1909.)

159 Strawberry-leaved Cinquefoil: *Potentilla Fragariastrum*. An early date.

160 Marsh Marigold. Rather a late date for first fl.

161 11 miles S.S.-W. of Jardine Hall.

162 About 1000 to 2500 feet.

163 About 1000 to 2000 feet.

164 A sign of unsettled weather, confirmed by the weather of following days. The atmosphere being heavily moisture-laden, the ring or halo is a circle of refracted moon-light.

165 Remarkably low.

166 *Adoxa Moschatellina*: Moscatel. Fl. about April.

167 ? Sycamore: *Acer Pseudo Platinus*. An average date.

168 The Ringed Plover: *Agialtis Hiaticola*. "The Ringed

Dotterel (*Charadrius Hiaticola*)" of Sir W. J. (*Nat. Lib.*, 1842, Vol. xii., p. 299.) " Ringed Plover are usually very conservative in returning to their breeding-haunts, where they may be looked for from April 17th to 23rd." (*Birds of Dumfriesshire*, p. 365.)

169 *Vespertilio Pipistrellus*. An average date.

170 Probably the Tawny Owl: *Syrnium Aluco*.

171 Giant's Colt's foot, or Butterbur: *Petasitis Vulgaris*. An average date.

172 Dog Violet. An average date.

173 Plum: *Prunus Domestica*. Cult. var., early.

174 *Cerasus Vulgaris*. Cult. var., early.

175 ? *Ribes Punctatum*: the dotted leaved Black Currant.

Rather early.

176 ? *Populus Balsamifera* var. *Candicans*.

177 *Acer Platanoides*.

178 " A familiar observation in April evenings when clear.

These are then going E. high in air, heading for Summer home." (R. Service, *in litt.* 28, ix. 1909.)

179 *Edinburgh Observer*, No. 839, of Tuesday, April 21st, 1829.

180 Kelly House is 85 miles N.-W. of Jardine Hall, in the Parish of Inverkip, Renfrewshire. The lands of Kelly were acquired from James III. prior to 1488 by a family of the name of Bannatyne, descended from the Bannatynes of Kames, Bute; they held it till 1792, when John Wallace acquired it. He built Kelly House in 1793, and Robert Wallace was the occupier in 1830. The latter was M.P. for Greenock 1831-1846, and was one of the champions, with Sir Rowland Hill, of penny postage. About 1890 the house was re-built by Mr Alexander Stephen, shipbuilder, Lint-house, at a cost of £30,000. It may be added that on 5th December, 1913, the house was totally destroyed by fire, which is believed to have been the work of Suffragettes. (*Daily Mail*, 6, xii., 1913.)

181 Woodcock are now (1911) "protected" between February 1st and October 1st, both dates exclusive, in Dumfriesshire. (See Note 4.)

182 The names of the Lochmaben Lochs are: (1) Castle Loch; (2) Kirk Loch; (3) Broomhill, or Halleaths Loch, drained away in 1906; (4) Mill Loch; (5) Ure Loch; (6) Hightae Loch; (7) Blind Lochs, now mere tarns and not worth mentioning. (See Note 98.)

183 Fieldfares would appear nowadays (1910) to often remain later with us than in Sir W. J.'s time. "It has been a not uncommon event during the last thirty years, and one that draws the attention of the most casual natural history observer." (R. Service, *in litt.* 28, ix. 1909.)

184 Twizell House, in Northumberland. 60 miles N.-E. of Jardine Hall. The residence in 1829 of Sir W. J.'s friend, correspondent, and collaborator, Prideaux John Selby.

185 "The various items recorded in the 'Callendar' for May 3rd show clearly that a 'migration rush' was occurring, but such

events were unknown by that name in Sir W. J.'s time." (R. Service, *in litt.* 28, ix. 1909.)

186 "Wood anemone. First flower—1907, 30th March; 1908, 2nd April; 1909, 11th April." (J. Rutherford, *in litt.* 16, ix. 1909.)

187 *Lonicera Periclymenum*. A late date for first l.

188 Water Avens. An early date.

189 *Aesculus Hippocastanum*. A very late date for first l.

190 The Wood-wren. A late date for first arrival.

191 *Crex Pratensis*. A late date for first appearance, which seldom deviates more than a couple of days on either side of April 29th.

192 James Nichol was what is locally termed "odd-man" at Jardine Hall. He worked in the gardens, looked after the fishing, carried the bag out shooting, etc., in fact did "odd jobs." "He was at one time gamekeeper to Sir Alexander, Sir W. J.'s father, and was a great character. Sir W. J. and he had many an expedition together." (A. Chapman, *in litt.* 22, xii. 1909.)

193 *Asparagus Officinalis*. This early date shows the vegetable had been "forced."

194 *Populus Nigra*; ? *var. Pyramidalis*. A late date for first fl.

195 *Quercus Robur*. Rather early.

196 ? Lily-of-the-valley: *Convallaria Majalis*. An average date.

197 *Narcissus Poeticus*: Pheasant's-Eye Narcissus. An average date for fl.

198 Marsh Violet. "Fl. Spring and early Summer; the petalless flowers in Summer." (Bentham & Hooker: *Handbook Brit. Flora*, 1904, pp. 53, 54.)

21st March, 1919.

Chairman—Mr JAMES DAVIDSON. F.S.A. (Scot.).

The Mines and Minerals of Leadhills.

By Mr ROBERT BROWN.

At first sight it seems an easy matter to write a paper on the mines and minerals of Wanlockhead and Leadhills, but when I think of what has already been said about them it makes me feel that anything that I might say on the subject might only be like an old story retold.

The past history of those two mines has made them famous—famous alike for their antiquity, for their rich deposits of lead and zinc ores, and for the large quantities of

rare mineral specimens they have produced. Some of these are to be found in almost every country in the world.

The Leadhills mines are situated in the south of Lanarkshire, at the head of Glengonar Water; the Wanlockhead mines near the head of the Wanlock Water, from which they take their name.

The mineral veins are found traversing the lower Silurian rocks round the two villages—the one running north-west and south-east; the other west-north-west and east-south-east. The mining field extends over ten square miles, within an area of four square miles. Upwards of forty veins have been found, and almost all of them are lead bearing. Some of them have carried ore varying from ten to fourteen feet wide, but when found like that they were more in the form of pockets—they never extended to any great length or depth. None of the older veins where so many rare mineral specimens were found are now working. They have been abandoned a good many years ago, mainly owing to pumping difficulties.

But the Wanlockhead Lead Mining Company has had a very important project in hand for a considerable time, which would, if carried out, give almost an unlimited new lease of life to the two villages. Their idea is to drive a tunnel from near Enterkinfoot that would cut the new Glencrieff vein at the hundred and sixty fathom level, and drive on right through the veins of Wanlockhead and Leadhills. They propose to sink two or three shafts between Wanlockhead and Enterkinfoot, and drive from both sides of the shafts. They would get the air for their rock-drilling machines from the present air compressors at the mines, and carry the air with a line of pipes over the hills to Enterkinfoot.

Sir Lionel Phillips, in his report on the mineral resources of the United Kingdom, speaks very favourably of the project. He says:—"Constant expense and difficulties are being experienced with the workings of those mines, owing to the increasing cost of pumping, and a suggestion has been made for draining the whole district by means of a tunnel seven miles in length. It would tap the workings of those two properties at a low level, and at the same time traverse a number of known lead veins. In addition to this, important dis-

coveries might be made in ground hitherto unexplored. It is estimated that an expenditure of £150,000 would be involved in carrying out this work, and it would take five or six years to complete it. It is one of those cases in which the State should certainly take a benevolent, and possibly a financial interest, if those directly concerned in the locality would incur the major risk."

Since the year 1856 those two mines have yielded together 92,932 tons of dressed lead ore, and 6982 tons of zinc concentrates, which produced in the first place 95½ per cent., and in the second 75 per cent., of the entire production of lead and zinc ores in Scotland during the last sixty years.

In 1915 Wanlockhead produced 3135 tons of lead and 1258 tons of zinc for 114 men employed underground and 78 on the surface. Leadhills produced in the same year 1943 tons of lead, for 94 men underground, 68 on the surface.

Documentary evidence traces their history back to the 13th century, but some authorities say that they were worked in pre-historic times. Those two villages, the mines, the rich ore deposits, and the people that work them, are so much alike that by outsiders they are generally spoken of as one and the same; only the Leadhills mines are worked by the Leadhills Mining Company and the Wanlockhead mines by the Wanlockhead Mining Company.

The late Dr Moir Porteous named those southern uplands "God's Treasure House of Scotland"—a name quite in keeping with the riches that have been found there. It is not only the rich lead deposits that have made these two mines so famous, but the finding of the more precious metal—gold, which carries us back to the reign of James IV. and his celebrated "bonnet pieces." About 1579 Sir Bevis Bulmer was able to present to Queen Elizabeth a porringer made of native Scottish gold, mostly from this locality. Some of the nuggets found then weighed five or six ounces of pure gold, and about 1603 George Bowes, in his search for gold in the Wanlock Water, found there or at Point Shields one piece thirty ounces and some of greater weight. Since that time the search for gold has gone on at intervals, with more or less success. The best examples we have of gold found in the district are the

“Martin Nugget,” found in Straitsteps flat, and the “Gimmel Specimen,” both now in the Royal Scottish Museum in Edinburgh. The Gimmel quartz weighed about ten pounds, and over it a great controversy took place at the time it was found. Some held that it was Australian gold quartz, and not a local specimen, as it was found loose near a road, where a barrow with Australian gold quartz had been wheeled over. It was said at the time that it would be necessary to find another gold-bearing quartz in the district to prove that it might belong to the locality. Several pieces of gold-bearing quartz have been found recently on the hills and in the burns surrounding the villages. Mr G. V. Wilson, of the Geological Survey of Great Britain (Edinburgh), found a piece last summer in the Shortcleuch burn, at the head of the Elvan Water, about the size of a man's head, with small specks of gold mixed throughout the whole lump, which should go a long way towards proving that a gold reef exists somewhere in the surrounding hills.

During last summer some very fine samples of alluvial gold were found in the Windgate burn, although not in sufficient quantities to make it a paying concern, but enough always to encourage the enthusiast to try again.

Since the Wanlockhead Mining Company took over the mines from the Duke of Buccleuch, about twelve years ago, the system of mining and ore-dressing has been completely revolutionised: the hammer and jumper and black powder are things of the past. The evolution of the rock-drilling machines has altered everything. Instead of three holes 18 inches deep for two men per shift, the rock-drilling machine will bore twenty holes four or five feet deep; so, when charged with 15 or 20 lbs. of gelignite and fired in quick succession, the difficulty of saving specimens can be easily understood; yet in recent years some very fine specimens have been found. Some of the private collections would grace any museum. For my own part I have been able to gather together a few thousand specimens, many of them perfect of their kind, and I am quite sure it would be difficult to find anything better in Scotland. But it is quite evident that the mines are now getting too deep to find any of the older and rarer minerals

such as *caledonite*, *linarite*, *leadhillite*, *susannite*, etc. In fact, they are not to be found now in any of the veins that are being worked at the present time. Still the old heaps offer a happy hunting ground for the seekers after them. Some very fine specimens have been picked up recently, but it takes a lot of hard work to get them. I have been able to obtain a fair sample of mostly all the minerals that are to be found in the district, and some that had never been found before in Wanlockhead, and one that had never been found in Scotland till now. That is *witherite*, the carbonate of barium, and I am glad to be able to show you the first and the best specimens that have been discovered, and try and give you some idea under what conditions they were found.

Witherite was found in the early months of 1918 in the west branch of the new Glencrieff mine, along with quartz, calcite, barytes, and galena, about 200 fathoms from the adit level, in a vug or cavity four fathoms deep, 15 feet long, and about 3 feet wide in the centre. Some of the quartz specimens were about four feet in diameter, and had slipped from the hanger wall. They were jammed with large coarse calcites and barytes, which apparently had slipped from the foot wall. Some of the smaller quartz specimens were of a spongy nature. As the most of the *witherite* specimens were found near the bottom of the vug, and barytes near the top, it appeared as if the change from the sulphate to the carbonate of barium was not so distinctly evident near the top of the vug as it was near the bottom. Most of the specimens found were of a pseudomorphous nature; some of them showing the barytes going away, and *witherite* forming up. Everything went to show that the flow of the thermal waters had been downwards. The two globular specimens shown were found about three feet apart on matrix of quartz, on the ledges or foot wall near the bottom of the vug. The larger specimen was damaged in the taking off. It measured about 7 inches in diameter; the smaller one about 5 inches. Both have a coating of minute crystals.

To see them hanging in the cavity gave you the impression that you were looking at two large fungi. Nearly all the specimens found were white or grey in colour, except one

large one, which was broken to pieces in the taking out. It was red, and resembled a Tam o' Shanter bonnet, both in size and shape. Another, about 4 inches in diameter, had four galena crystals embedded half-way into the witherite, having apparently dropped on to the witherite when it was in a plastic state. Another specimen I have shows both the sulphate white and the carbonate grey in the process of change. It is of a spongy nature, and if you strike the crystals with a pencil they sound like a musical instrument. Another was mixed up with calcite, quartz, and galena. It looked as if the witherite had run down amongst them and cemented them altogether. Without doubt a great many specimens were destroyed by the first blast. The miners said that when they were removing the *debris* after the blast it sounded as if they were shovelling china or bell metal. As witherite, with this one exception, had never been found in Scotland, I thought at first sight that the two globular specimens were *plumbo aragonite*, until I tried hydrochloric acid on them.

The ground has been worked up for about six fathoms from the top of the chamber, but no further discovery of witherite has been made, and since the galena is exhausted in that part of the mine, the working has now been abandoned.

A few years ago I found some very interesting specimens at the Smelting Mills when the old flues were undergoing repairs. The crystals were very like cerussite or aragonite in form, and snow white in colour, which had apparently resulted from the action of the fumes, and the heat from the fires and water from the surface, on the mortar between the bricks and stones. I have never had them properly tested, but I think that probably, for the most part, they may be carbonate of lime. I thought at the time that they were too fragile to last long, or I might have saved a good many of them.

The small specimen I have with me shows the crystals on a piece of brick.

It is not generally supposed that native copper or lead is to be found in the district. I have brought down a small piece of native copper that I thought might be of interest to you. I found it on an old heap along with a nice piece of

caledonite and vanadinite, probably from either the Belton Grain or Margaret vein. A friend of mine picked up a piece of native lead about $1\frac{1}{4}$ inches long by $\frac{1}{2}$ inch by $\frac{1}{2}$ inch on a heap from Lady Anne vein, Leadhills. It was covered with a thin coating of cerussite; it was so soft that it could be cut with the finger nail.

I found another interesting specimen near the old Smelting Mills. It turned out to be lead with a black iron-like coating.

I have often thought that it was a pity that some specialist could not find it convenient to go thoroughly over all the collections of minerals that have been got together within the last twenty years in the two villages. I am quite sure that some minerals would be found that had never been identified before as belonging to this locality. I have one specimen with me to show you. I call it hydrocerussite, with aragonite, but I have never seen anything like it in any of the museums, and it is just possible that it might be another new mineral.

The mineral world is a big one, more especially for the amateur, because many of the minerals are so much alike in crystal, form, and colour that it is well nigh impossible for him to say which is which.

The late Dr Heddle said in his *Mineralogy of Scotland* that Lanarkite was only found in the Susanna vein, Leadhills. I have found it on the old heaps from the Margaret vein, near the Old Toll, also, with Leadhillite, at the old dressing floors on the Crawford vein, on the top of the Dod, and in New Glencrieff in very fine crystals. It has also been supposed that vanadinite was only found in the Belton vein at one spot, about six fathoms in length. I have found it in the Belton vein at the head of White's cleuch, at the high pirn mine, on the Crawford vein, the Margaret vein, and on New vein, or a stringer that intersects the Belton vein at the head of the Camsheugh. This stringer seems to be rich in vanadinite, for only last summer I picked up twenty specimens in a short time, some of which were fairly good, mostly all of them on hemimorphite. Further, on the same vein I have found plattnerite on vanadinite with hemimorphite, and also vanadinite with calcium-vanado-pyromorphite on quartz.

None of the old veins in the district offer so much inducement to the seeker as the veins on the top of the Dod. If you go there with a pick, a shovel, and a hammer, you will not return empty-handed, more especially for cerussite, anglesite, vanadinite, pyromorphite, and pyrolusite. I have seen some fine crystals of cerussite there, but they are generally in the heart of a lump of quartz, and when breaking the quartz the crystals are apt to go to pieces.

I was much surprised in digging up the old heaps on the Margaret vein. The vein was rich in zinc blend, the use of which was not so well known then as now. It appeared as if they had only taken the galena out and allowed the blend to go to the waste heaps with other vein stuff. It is well known that zinc blend lends itself readily to alteration, even under atmospheric conditions, so when I had cleared away the soft decayed soil from a lot of large rotten calcites, they were almost completely covered with a network of calamine. On this vein I have found caledonite, linarite, Leadhillite, Lanarkite, Anglesite, cerussite, pyromorphite, vanadinite, hemimorphite, etc.

Since I took up the hobby of collecting minerals, I have examined almost all the veins in the district, and one of the most disappointing is the Susanna vein at Leadhills. One day, however, I found a piece of Leadhillite with pyromorphite and a piece of pyromorphite with mimetite. Possibly with a lot of work others might be found.

The only piece of Susannite I have seen that was found in recent years came out of an old working on Lady Anne vein, Leadhills. Some nice specimens of Leadhillite and pyromorphite were found at the same time. They have now abandoned that part of the vein, but I understand that they may tap the vein at a lower level.

For a number of years the Leadhills mines have been rich in galena, but few specimens of any value have been found. Although the miners come across a cavity occasionally it is seldom that a crystal is to be seen, while in Wanlockhead within the last twelve years hundreds of fine specimens have been found.

For rich ore deposits and for the large variety of mineral

specimens that the new Glencrieff mine has produced, it would be a good mine that could show a better record.

In the early history of those mines it was thought that they only carried galena to the depth of 100 to 120 fathoms, but, like a good many other suppositions, it has been found to be incorrect. As the above mine is sunk 240 fathoms below the adit level, good ore deposits have still been found. The finding of specimens from the adit level to the 240 level has almost been continuous, but the varieties found have gradually changed as the mine gets deeper.

The new conditions of mining make it more difficult to save specimens, yet, in spite of the difficulty, I have been able to pick up some fine pseudomorphs, a few of which are : Pyromorphite after calcite, " dog tooth variety," a fine rich yellow colour, the edges of the crystal almost as sharp as the edges of the calcite; and pyromorphite after calcite, " nail-head variety;" pyromorphite and hemimorphite after calcite, both the " dog tooth " and " nail-head " variety, with the outside shell pyromorphite and the inside almost filled with hemimorphite; hemimorphite after calcite; hemimorphite after zinc blend; hemimorphite after galena; pyromorphite after galena, aragonite after calcite; aragonite after barytes, calcite after barytes, quartz after barytes, pyrites after barytes, pyrites after calcite; and several others.

The richest working I ever saw in the mine for specimens was between the 80 and the 120 fathom levels. Had care been taken, hundreds of valuable specimens might have been saved that were simply blown to pieces, but of course the miner is there, not to find specimens, but to raise lead and cut the ground. Still, some fine samples were preserved of hemimorphite, aragonite, cerussite, hydrocerussite, pyromorphite—pseudomorphous. In this working the mode of occurrence was quite different from what is usually found. In most cases the specimens are found in distinct cavities, but in one part of this working they were found in almost every lump of vein stuff that you chose to break up—every firing presenting new opportunities. In another working between the same levels, when a vug was opened up about six feet long, six feet deep, and two feet wide in the centre, the walls were

simply covered with aragonite and cerussite. All that the miners did was simply to pick up a few specimens that were lying loose, and then fire their remaining shots, thus destroying the whole lot.

In another case I know of near the hundred fathom level a cavity was opened up that was simply full of a rich yellow pyromorphite after calcite. The miners thought that it was only a rotten yellow stone of no value, and made no attempt to save it. All the pyromorphite specimens I have seen from the lower workings of this vein are pseudomorphous and mostly after calcite, and quite unlike anything found in the upper workings of the other veins. A remarkably fine variety of hemimorphite has been found in this vein, both in colour and crystal formation. Some of them are rich yellow, and I think they get their colour from cadmium, although I have never been able to find Greenockite in crystal form.

I have three specimens of hemimorphite with me, which I consider a fair sample of some of the varieties found.

I might mention a few other minerals I have been able to collect from this vein. From 120 to 160 fathom level I got some good specimens of barytes—rich amber colour variety. While the upper workings of this vein were very productive in barytes, in the lower workings it is seldom if ever seen. I also got two specimens of barytes on calcite. The calcite crystals had partly been eaten away, and the barytes crystals had formed on the top of the calcite. The crystals measured about half-an-inch long, and were very fine; also some iridescent pyrites coating calcite, some of the crystals being completely covered, and others showing the points quite clear; also galena crystals on zinc blend. Some of the galena crystals had a thin, brown coating of what appeared to be hemimorphite, and the inside was completely eaten out, while others were quite solid. I got one specimen of aurichalcite on hydrocerussite, another with aurichalcite and cerussite after galena. Some of the hydrocerussite specimens found at the 40 fathom level looked as if a thin sheet of silver paper had been spread over the galena; others found at the 120 level showed the thin, silvery crystals, while

others were of a massive form with cerussite. One specimen I got measures 10 inches in diameter.

Some good specimens of polished zinc blend, very black in colour, I got; one good specimen of chalcopryite on zinc blend. It measures about 9 inches by 5 inches—the best specimen of its kind that I have seen. Some good specimens of spongy galena were found; some of them had quite the appearance of smelted lead; others were covered with cerussite and anglesite. In another specimen, the galena crystals had been partly covered with quartz. Some of the galena had been eaten away from underneath the quartz and left the quartz hanging over like a curved canopy. Others seemed as if they had been half roasted. As for calcites, it has produced a fine lot—one specimen measured about 24 inches by 18 inches. It had knife-like, edged crystals about 4 inches by 3 inches, with small crystals of galena and zinc blend between the crystals; others with dark centres showing the “nail-head” enclosing the “dog tooth” varieties, and some of them capped and showed as if there was a space between the two forms of crystals. Upwards of 30 varieties of calcite have been found in this district.

Above the 160 fathom level some fine specimens of quartz were found. The best were lying loose in the bottom of the vug; some of the crystals being fully two inches in diameter.

Time will not permit to give a detailed account of all the minerals found in this vein, only to mention a few others: Lanarkite, Leadhillite, Jamesonite, chrysocolla, chalcopryite, calamine, pearl-spar, magnesite, niccolite, mountain leather etc.

Before leaving this vein, I might say that the company has cut a level from it 284 fathoms in length at 160 fathom level, and tapped several of the veins, which show favourable signs for further prosecution. For a considerable time they have been driving north on this vein, and have made an important discovery in lead. It will be some time before they get the full advantage of their perseverance, but the lead is there, and it does the present manager credit, because all the mining engineers and geologists that had seen the ground

believed that no further lead was to be found in that direction, as they thought that the black schist would cut it out.

There is a saying "Never venture, never win." This company has ventured. Since they took over the mines they have done much, and I understand that if the labour trouble in the country should ease off they will do a lot more. They have a splendid ore-dressing plant; it can treat something like 70 tons per day of 10 hours. The stuff comes directly from the mine to the dressing floors.

In my search after minerals there is no variety which has interested me so much as the pseudomorphs that are to be found in the district, but I can see that a knowledge of chemistry is necessary fully to understand them. I have mentioned some of them already, but before I close this paper I might give you some idea under what conditions they were found and also mention a few other things which came under my notice. In cutting a drain some time ago, at the old Smelting Mills, I came across some pieces of hard lead from the calcining furnace, which had been buried in sand for the last fifty years. All of them were covered, more or less, with caledonite and linarite. It was wonderful to see such a display of rich green and blue colours. In breaking up some slags from the smelting hearths I found fine crystals in some of them. They greatly resembled carborundum in crystal form, and showed the same rich iridescent colour, but not so hard; and a slag from Leadhills showed several crystals of Leadhillite in tabular form. On an old heap I found a piece of minium; it was too good a specimen to be native. My idea for it being there is that in breaking up the old furnaces it might form in one of them and be tipped over the heaps with other rubbish. I have found minium near the same place, but only a thin dull red coating on cerussite. From the old heaps I have been able to pick up a few good pseudomorphs mostly of quartz after anglesite, showing the crystals from $1\frac{1}{4}$ inches to 2 inches long. They are not so attractive as those from the mines.

In one part of the mine where the pseudomorphs of hemimorphite and pyromorphite were found it very much resembled a waste slag heap: it showed that some great

chemical change had occurred. There was a runner of soft black substance like wad about 8 inches wide and 2 inches broad, mixed with clear slender crystals, and in cavities filled with the same black stuff, the pseudomorphs were found. To see them before they were washed they had the appearance of a black cinder. The calcite had been completely dissolved, leaving the hemimorphite and pyromorphite in calcite form, and where the pyrites after barytes was found the conditions were much the same, only the stuff they were found in was white instead of black. The first formation had been barytes and then pyrites. The barytes had been dissolved into a soft clay, which could be easily washed out with water and a syringe. In another case the barytes was joined to the calcite between the walls of the cavity, and pyrites had formed on the top of the barytes, then the barytes had been dissolved, leaving the pyrites sticking on the top of the calcite.

Another case—the barytes had formed first, then a coating of calcite on the barytes, and another coating of pyrites on the calcite. The barytes had dissolved, leaving a thin coating of calcite in the pyrites shells. Another pseudomorph of pyromorphite after calcite shows the calcite going away, leaving the thin shell of pyromorphite hanging loosely over the calcite crystal.

At the 80 fathom level a very interesting process is going on from a small hole in the roof of the drift. A clay-like substance is slowly oozing out, mixed with clear crystals from $\frac{1}{4}$ inch to 1 inch long, like Lanarkite. In the same line at the 160 fathom level I have been able to procure a specimen of magnesite in massive form and yellowish-white in colour. I have never heard or seen it named as one of the minerals found in the district. On the Belton vein I have found quartz in almost every colour, probably due to atmospheric conditions, in the association with iron and chrysocolla.

In conclusion, I will give you as complete a list as possible of the minerals found in the locality.

LIST OF MINERALS FOUND IN WANLOCKHEAD AND LEADHILLS.

Azurite	Galena	Mimetite
Anglesite	Graphite	Meteoric iron
Aragonite	Gypsum	Mountain wood
Asholane	Gold	Mountain leather
Aurichalcite	Greenockite	Niccolite
Barytes	Hematite	Olivenite
Calamine	Hemimorphite	Plattnerite
Caledonite	Hydrocerussite	Plumbo-calcite
Chalcedony	Jamesonite	Plumbo-aragonite
Chrysocolla	Jasper	Psilomelane
Cerussite	Kupfernickel	Pyrites (iron)
Chalcopyrite	Lanarkite	Pyrolusite
Chlorite	Laumontite	Pyromorphite
Chalybite	Leadhillite	Quartz
Calcium-Vanado- Pyromorphite	Lead (native)	Susannite
Copper (native)	Limnite	Stroutianite
Dolomite	Linarite	Tile ore
Dechenite	Limonite	Vanadinite
Erythrine (Cobalt Bloom)	Lydianstone	Vanquelinite
Erinite	Malachite	Wad
Fluor Spar	Melaconite	Witherite
	Minium	Zinc Blende

The Early Annandale Charters and their Strange Resting Place.

By ROBERT GLADSTONE, B.C.L., M.A.

The manner in which the early charters of Annandale came to be included in the records of the Duchy of Lancaster is somewhat curious, and is probably little known. The following sketch of the history of the superiority or lordship over Annandale, which it is hoped to amplify at a later date, and for which a very considerable collection of materials has been made by the writer, will explain how the Annandale charters reached their present strange destination.

The earliest extant evidence regarding the lordship of Annandale is an undated grant by David I., King of Scots,¹

¹ A facsimile of this Charter accompanies the present paper. It is copied from the reproduction in the "National MSS. of Scotland." See note 25, and the translation given below. The present resting-place of the Charter is accounted for in the concluding portion of this paper.

probably made soon after his accession to the throne on 27th April, 1124, to his old friend Robert de Brus, an Englishman, with extensive estates in Yorkshire.² They had been brought up together at the court of Henry I. of England. Early in the year 1136, when hostilities broke out between England and Scotland, Bruce (as I shall call him, in deference to modern usage) preferred to retain his English estates, and transferred Annandale to his second son, Robert Bruce (II. of Annandale), who died in 1194, and was succeeded by his second son, William, who died in 1215, and was succeeded by his son, Robert Bruce (III. of Annandale), who died in 1245, and was succeeded by his son, Robert Bruce (IV. of Annandale), well known as a competitor in 1286 for the crown of Scotland, deriving his claim from his mother. On her death in 1251 he had inherited her share in the estates of the Earldom of Huntingdon, and became even a more important man in England than he was in Scotland, being actually Chief Justice of England. On 17th November, 1292, Edward I., to whom the matter had been referred, decided, after a full inquiry, against Bruce and in favour of Balliol in regard to the Scottish throne. In disgust at this decision, it is said, and prompted by a determination never to do homage to Balliol, he resigned Annandale to his son, Robert Bruce (V. of Annandale), and lived in retirement until his death in the spring of 1294.³

Robert Bruce V. of Annandale, aforesaid, was Earl of

² In the following summary of the history of the Annandale branch of the Bruce family, the account given by Sir James Balfour Paul in his *Scots Peerage*, vol. 2 (1905), pp. 428-437, has been generally adopted. A splendid collection of documents relating to the Bruce family will be found in W. Farrer's *Early Yorkshire Charters*, vol. 2 (1915), pp. 1-112. I have not thought it necessary to give throughout this paper constant references to Bain's *Calendars*, as his work is so well known.

³ Sir J. B. Paul (*loc. cit.*) says that he died before 3 May, 1294. The *Chronicle of Lanercost* (Bannatyne Club, 1839), p. 159, states that he died on "Coena Domini," *i.e.*, on 15 April, the Thursday before Good Friday, though the clerk, by a slip presumably, appears to have placed the event in 1295 instead of 1294. The editor of the *Chronicle* (J. Stevenson) has wrongly interpreted "Coena Domini" as "12 May," an error followed by Sir Herbert Maxwell in his translation (1913), p. 111, note 5.

Carrick in right of his wife. Sharing, no doubt, his father's hostility to Balliol, in 1292, on the death of his wife, he resigned the Earldom of Carrick to his son, Robert Bruce (VI. of Annandale), and attached himself to the King of England. On 6th October, 1295, he was appointed Governor of Carlisle by Edward I., and Balliol in retaliation seized Annandale and Lochmaben Castle and gave them to John Comyn, Earl of Buchan. The English Warden (Clifford), however, retook them in the same year.⁴ On 24th August, 1296, Bruce and his son did homage to Edward I. at Berwick. It seems that he understood Edward I. to have promised to make him King of Scotland, but being disappointed in this expectation, he retired to his English estates and died there shortly before 4th April, 1304.

Robert Bruce VI. of Annandale, aforesaid, Earl of Carrick, on his father's death in 1304 got sasine of Annandale from Edward I. But on 10th February, 1305/6,⁵ he killed Comyn at Dumfries, and in consequence Annandale and Lochmaben Castle were forfeited to Edward I., who on 10th April, 1306, granted them to Humphrey de Bohun, Earl of Hereford. It is rather amusing to find that in the same year, on 15th December, Sir Roger Kirkpatrick of Auchencas called on the English Earl at Lochmaben Castle and succeeded in borrowing £1000 (sterling) from him, which was never repaid, judging by the undischarged bond still preserved among the Duchy of Lancaster records.

Eight years later, on 24th June, 1314, the battle of Bannockburn restored Bruce's fortunes, and the Earl of Hereford was taken prisoner, but was exchanged soon after for Bruce's wife, who had long been a captive in England. Annandale was given by Bruce, as King Robert I., probably in the same year, to Thomas Randolph or Ranulf, Earl of Moray.⁶

⁴ On 14 May, 1296, Edward I. gave Bruce authority to receive the allegiance of the inhabitants, both English and Scots, of Annandale and the neighbourhood (*Botuli Scotiae*, vol. 1, p. 23, col. 1).

⁵ For the benefit of the uninitiated it may be explained that in the double year-date, as given here, 1305 means the Old Style (under which New Year's Day was on 25 March), and 1306 the New Style (under which New Year's Day is on 1 January).

⁶ The original charter does not appear to be extant. That in

Meanwhile, during his eight years' enjoyment of Annandale, the charters and documents relating to Annandale were, no doubt, carried off by the Earl of Hereford to England, where they would naturally be much more secure than at that storm-centre, Lochmaben Castle. On 16th March, 1321/2, he was killed at Borroughbridge, in rebellion against Edward II., and consequently must have forfeited his rights to Annandale.

A number of documents are extant showing Thomas, Earl of Moray (aforesaid), in actual possession and enjoyment of Annandale for about eighteen years. On 20th July, 1332, he died, and was succeeded by his son, Thomas, who, however, was killed at the battle of Dupplin on 12th August in the same year.

Edward Balliol, with the help of the English, having secured the Scottish crown (24th September, 1332), granted Annandale to Henry de Percy, who, however, was ordered by Edward III., on 21st November, 1333, to deliver up Lochmaben Castle and Annandale to two persons (whose names do not concern us) until the disputes as to Annandale between Percy himself and Edward de Bohun (brother of John, Earl of Hereford), both claiming it, were settled by the English King and his Council. The King expresses his annoyance at Percy's disregard of a previous order to the same effect. Evidently Edward III. had promised Annandale to Edward de Bohun—a promise which he fulfilled very shortly afterwards. On 20th September, 1334, Henry de Percy resigned all his rights to Lochmaben Castle and Annandale to Edward III.⁷ who, by way of compensation, gave Percy the castle, town, and forest of Jedworth.⁸ On 23rd September, 1334, Edward III., with consent of Parliament, granted to Edward de Bohun in return for his good services (as Lord High Constable) the castle and peel (pelum) of Lochmaben and the Vale

the *Register of the Great Seal*, vol. 1 (8vo.) (1306-1424), p. 447, No. 34. is evidently a confirmation (undated).

⁷ Bain's *Calendar of Documents*, vol. 3, p. 205, No. 1133. See also *Calendar of Close Rolls* (1333-7), p. 327.

⁸ Percy got this compensation on 23 September (*Rotuli Scotiae*, vol. 1, p. 280).

of Annan, including "Moffetesdale," as fully and entirely as Thomas Ranulf, late Earl of Moray, held them, the only service to be rendered being one "falcon gentle" annually at Michaelmas.⁹

Edward de Bohun must have died soon afterwards, say, in 1335, for on 27th January, 1335/6, Edward III. issued a charter reciting that Edward de Bohun was dead, and that he had been succeeded by his elder brother (an invalid), John de Bohun, Earl of Hereford, who had also died on 20th January, 1335/6, and that the latter, shortly before his death, had resigned Annandale into the King's hands in order to get a fresh grant to himself for life, with remainder to his brother, William de Bohun. Edward III. accordingly grants Annandale to the said William de Bohun,¹⁰ and later, on 16th March, 1336/7, created him Earl of Northampton.¹¹

The Earl of Northampton's enjoyment of Annandale was by no means free from disturbance, for, on the one hand, we find him complaining bitterly of the devastation of Annandale caused by English raiders, and, on the other, the Scottish King showed an ever-increasing inclination to occupy the whole district.

The pressure exerted by the Scottish King at this time upon the English holder of Annandale is clearly shown by a strange arrangement which was made on 1st May, 1360, between John Steward (senior) of Dalswyndone, Warden of the West March of Scotland, acting for the King of Scotland, and Sir Thomas de Roos, Warden of Lochmaben Castle and Annandale, acting for the Earl of Northampton. The agreement provided that Lochmaben Castle and certain lands, including the Park of Wodecokheir, should remain in the Earl's possession solely; but that the rents and profits of Annandale as a whole should be divided equally between the Earl and the King of Scotland. The bargain was to hold good for a year only, but was probably renewed annually.¹²

⁹ *Rotuli Scotiæ*, vol. 1, pp. 280-1. It is a great pity that Bain was not allowed to include the *Rotuli Scotiæ* in his *Calendar*.

¹⁰ *Rotuli Scotiæ*, vol. 1, p. 399.

¹¹ *Complete Peerage*, under *Northampton*.

¹² *Bain's Calendar*, vol. 4, pp. 11-12, No. 47, where, however,

On 16th September, 1360, the Earl of Northampton died, and was succeeded by his son, Humphrey de Bohun, who, on the death of his uncle on 15th October, 1361, became also Earl of Hereford, by which name he will be called hereinafter.

On 13th December, 1366, the arrangement mentioned above for the division of the rents of Annandale was renewed, and it was agreed that it should stand as long as the "Great Truce" between England and Scotland lasted, and that Annandale should be regarded as neutral ground and be subject to the Laws of the Marches, and that two good men of the district should be chosen to collect the rents and divide them equally between the Earl and the King of Scotland, as before.

On 16th January, 1372/3, Humphrey de Bohun, Earl of Hereford, died, leaving only two daughters, Eleanor and Mary, in the wardship of King Edward III.,¹³ who henceforward held Lochmaben Castle himself, and took half of the rents of Annandale, as described above. Meanwhile the raiding of Annandale by the English borderers was as bad as ever. On 1st May, 1376, the Chamberlain of Lochmaben Castle rendered his account to Edward III. of half of the rents of Annandale, but apparently could only hand over the trifling sum of £3 18s 2½d, owing to the devastation of the district by both English and Scottish raiders. In 1379 the state of Annandale was so dangerous that the Warden of Lochmaben Castle, Sir Thomas Ughtred, refused (on 2nd April) to stay there any longer,¹⁴ and a new Warden, Amand de Mounceux, an esquire of Cumberland, had to be hastily appointed.¹⁵ New Wardens succeeded one another rapidly, and presumably either came to an untimely end, or, like Sir Thomas Ughtred, thought discretion the better part of valour, and retired.

he wrongly prints Earl of *Hereford* instead of Earl of *Northampton*. I have had the original document verified; it is—Duchy of Lancaster Records, Cartæ Miscellanæ, vol. III., No. 284—the number having been changed since Bain wrote.

¹³ *Complete Peerage*, under *Hereford*. See also *Rotuli Scotiæ*, vol. 1, p. 956.

¹⁴ Bain's *Calendar*, vol. 4, pp. 401-2, where, however, the year is wrongly given as 1378.

¹⁵ *Rotuli Scotiæ*, vol. 2, p. 14.

A few years later the end came. On 2nd February, 1383/4, the "Great Truce" between England and Scotland expired,¹⁶ and accordingly the bargain regarding Annandale terminated at the same time. An immediate attack upon Annandale was made by Scottish forces under George de Dunbar, Earl of March and titular Lord of Annandale, assisted by the Warden of the Western Marches (Sir Archibald Douglas) and the Earl of Douglas. Lochmaben Castle was promptly besieged, and on 4th February the Warden, Alexander de Fetherstonhalgh, agreed to surrender in eight days if not relieved. The Scots were content to wait; no help came, and the Castle was delivered up on 12th February, 1383/4.¹⁷ Thus the long-established English rule in Annandale came to an end. On 5th March, 1383/4, the English King ordered the late Warden of Lochmaben Castle, Fetherstonhalgh, to be brought to Windsor as a prisoner by the Sheriff of Cumberland, to answer for his conduct.¹⁸

Meanwhile, of course, the charters and other documents of title relating to Annandale were in the possession of the King of England, in virtue of his wardship of the two heiresses of Humphrey de Bohun, Earl of Hereford, as stated above. Mary de Bohun, one of the co-heiresses, to whose share the titular rights to Annandale evidently belonged, married Henry IV., King of England, and her rights to Annandale, for what they were worth, were inherited by her son, King Henry V. On 19th November, 1414, with the

¹⁶ See Rymer's *Foedera*, vol. 6, pp. 632-3 and 635-7, and *Rotuli Scotie*, vol. 1, pp. 934-5.

¹⁷ The accepted date for the surrender of the Castle is 4 February, 1383/4; but as the Great Truce did not expire until 2 February, and as 8 days were allowed for the chance of relief, it seems certain that on 4 February a *conditional* surrender was given, which became *absolute* on 12 February. For the authorities, see Dunbar's *Scottish Kings*, 2nd ed., p. 162, where, however, he gives the date a year too late; see also Bain's *Calendar*, vol. 4, *Intro.*, p. xviii. In any case, the attack on the Castle was after 4th January, 1383/4, when a consignment of malt was received at the Castle from Carlisle, and is noted as having arrived before the Scots took the Castle (Bain's *Calendar*, vol. 4, p. 73, No. 331).

¹⁸ Bain's *Calendar*, vol. 4, p. 73, No. 331 (a). This fixes the year.

consent of Parliament, he incorporated into the Duchy of Lancaster all the lands and rights which he had inherited from his mother,¹⁹ and on 7th December of the same year issued letters patent proclaiming the fact.²⁰ As a natural consequence of this arrangement, all the charters and documents relating to Annandale were placed among the records of the Duchy of Lancaster, which are now kept in the Public Record Office in London.²¹

The most important and most ancient of all the early Annandale Charters has, however, long been missing from the records of the Duchy of Lancaster, namely, the grant by King David I. to Robert de Brus, mentioned at the commencement of this paper. How it escaped from the Duchy Record Office is not known; but it is certain that it was *acquired* in some way by the famous English antiquary, Sir Robert Bruce Cotton (1571-1631). The circumstances are highly suspicious, to say the least of them. In the first place, he was extremely proud of his Bruce ancestry, and would naturally covet the charter; next, he was very rich; further, he was on the most familiar terms with the keepers of the records, who were badly paid; lastly, he had a perfect passion for collecting manuscripts and charters generally. It must also be remembered that Cotton was actually charged in his lifetime with obtaining possession improperly of important public records, and that on 12th July, 1630, a Commission was appointed to examine and search his library for public records which had no business to be there.²²

¹⁹ *Parliament Rolls (England)*, vol. 4, pp. 46-9.

²⁰ W. Hardy's *Charters of the Duchy of Lancaster* (1845), pp. 151-67.

²¹ For a collected Calendar (very brief) of the old Annandale Charters contained in the Duchy of Lancaster Records, see the 35th Report of the Deputy Keeper of the Records, p. 12 (No. 115) to p. 15 (No. 153). It would be a graceful and popular act on the part of His Majesty if directions were given for the transfer of the Annandale Records to the Register House in Edinburgh, especially as the Royal title to the Lordship of Annandale was permanently attached to the Scottish Crown by the Scottish Parliament on 13th October, 1487 (*Act. Parl. Scot.*, vol. 2, p. 179 b., p. 361 a., and p. 405 b.).

²² *Dictionary of National Biography*, under Cotton.

8. Si ep̄a b̄ge sec̄. In me baronib. suis. ⁊ hoib. amicis.
 francis. Angl. fit. Sciatis me. dedisse. ⁊ concessisse. Rob̄ de
 Brus. Arabanenc. ⁊ totā ep̄a d. Suisa. Dunegal. de Sente.
 usq. ad Suisa. Band. Meschia. Et volo. ⁊ concedo. ut illam
 ep̄a. ⁊ suū castell. h̄n. ⁊ honore fac. cū omib. consuetudinibus.
 suis. teneat. ⁊ h̄o. videt. cū omib. illis consuetudinibus. quas
 Band. Meschin. unq. h̄n. In Carduit. ⁊ In ep̄a sua de Tubey.
 Band. illo die. ⁊ unq. meliofos. ⁊ litiofos h̄n. ⁊ Custas fit
 tot. ⁊ hus. de. Gopvult. ⁊ Alan. ⁊ Witt. de. Sumvult. ⁊ Beyens.
 Anno. ⁊ Band. de. Sales. ⁊ Witt. de. Gopvult. ⁊ herus fit. Witt.
 Admund. Comoy. 148. Soma.

Charter of David I. granting Annandale to Robert de Brus (undated). (Brit. Mus., Cotton Charter, xviii. 45.)

The Commissioners commenced their search, but, being probably overwhelmed by the difficulty and huge extent of their task, never completed it, nor are any details extant of the results of their labours. Anyhow, at the present time the charter in question reposes, with the rest of Cotton's library, in the British Museum, where it is catalogued as "Cotton Charter, xviii., 45." A reproduction of it, with a correct reference to its location, accompanies this paper²³—a somewhat necessary precaution, as the location is wrongly given as "The Archives of the Duchy of Lancaster" in the series of facsimiles entitled "The National Manuscripts of Scotland,"²⁴ in which a reproduction of this charter is included.

TRANSLATION OF THE CHARTER OF KING DAVID I. (UNDATED, BUT NO DOUBT ISSUED ON OR SOON AFTER HIS SUCCESSION ON 27TH APRIL, 1124) GRANTING ANNANDALE (STRATH-ANNAN) TO ROBERT DE BRUS.²⁵

David by the Grace of God King of Scots, to all his Barons and men and friends, French and English, greeting. Know ye that I have given and granted to Robert de Brus, Estrahanent,²⁶ and all the land from the march of Dunegal

²³ The reproduction accompanying the present paper is taken from the photo-zincographic facsimile in the *National Manuscripts of Scotland*, Part I., No. xix.

²⁴ *National MSS. of Scotland*, Part I., p. xviii.

²⁵ A Latin text is not printed here, as all who require such a text should be able to read the facsimile accompanying this paper. Latin texts will be found in the *National MSS. of Scotland*, Part I., No. xix., with an incorrect reference (p. xviii.) to the Duchy of Lancaster Records; also in *Act. Parl. Scot.*, vol. 1, p. 82, with an incorrect reference (p. 47, note 12) to the British Museum collections; J. Stevenson's *Illustrations of Scottish History* (Maitland Club, 1834), pp. 12-13; Sir William Fraser's *Annandale Family Book*, vol. 1 (1894), p. 129; Dr J. E. Prescott's edition (1897) of the Register of Wetherall Priory, p. 398; Sir A. C. Lawrie's *Early Scottish Charters* (1905), pp. 48-9. and notes on pp. 307-10, with the same wrong reference as the *National MSS. of Scotland* has.

²⁶ That is, Strath-Annan or Annandale. The unnecessary addition of the letter "e" before an initial "s" is a common linguistic phenomenon.

de Stranit²⁷ even to the march of Randulf Meschin.²⁸ And I will and grant that he hold and have that land and its castle well and honourably, with all its customs; to wit, with whatever customs Randulf Meschin had in Cardvill²⁹ and in his land of Cumberland, on whatever day he had them best and most freely.³⁰ Witnesses, Eustace FitzJohn and Hugh de Morville, and Alan de Perci,³¹ and William de Sumerville, and Berengar Engaine, and Randulf de Sules and William de Morville, and Hervi FitzWarin, and Aedmund the Chamberlain. At Scone.

Johnstone Family Records.

By Mr F. A. JOHNSTON.

(1) EXTRACTS FROM THE REGISTERS OF LANGHOLM.

The following extracts include all the references to the name of Johnstone that occur down to 1800 in the Parish Registers of Langholm, formerly named Staplegorton. The Registers commence on 11th June, 1668, but contain several hiatus. The Register of Baptisms for 1668-1681 has been published in detail in Hyslop's *Langholm As It Was*, pp. 879-894. The existence of Staplegorton as a separate parish came to an end in 1703, when it was divided, part being assigned to Westerkirk, and the remainder, together with Wauchope and half of the parish of Morton, being united in the new parish of Langholm.

BAPTISMS.

1671, July 13—Margaret, d. l. to James Johnston in Lang-

²⁷ That is, Strath-Nith or Nithsdale.

²⁸ Randulf le Meschin, subsequently Earl of Chester. See the life of him by Dr Round in the *Dictionary of National Biography* under *Randulf*; also Appendix "A" in Dr Prescott's edition of the *Wetherall Register*.

²⁹ That is, Carlisle.

³⁰ In 1120, on the death of his cousin, Randulf obtained the Earldom of Chester and surrendered Cumberland to the Crown (Dr Prescott's *Wetherall Register*, pp. 385 and 470).

³¹ This name is not legible in the facsimile, but can be read in the original when the parchment is flattened out.

- holme. Wit., James Oliver in Langholme and David Reid there.
- 1673, Oct. 15—Francis, s. l. to James Johnston in Lon. Wit., John Johnston in Longholme and David Reid there.
- 1677, June 12—Susanna, d. l. to James Johnston in Longh. Wit., Robert Wright in Longh. and James Oliver there.
- 1679, Aug. 4—Patrick, s. l. to James Johnston in Longh. Wit., William Forsythes in Longh, and James Johnston there.
- 1682, April 30—John, s. l. to James Johnston in Burn-foot in the parish of Hutton; Jean, d. l. to William Johnston in Fentown, in the said parish.
- 1682, Sept. 25—Helen, d. l. to Archbald Johnston, portioner of Knock-Mains, in the parish of Wester[kirk].
- 1686, May 4—Janet, d. l. to James Johnston in Long-holme. Wit., William Forsyths in Long-holme and David Dixson there.
- 1730, Sept. 17—Jean, d. to James Johnstone in Meikleholm and Mary Scott, his spouse.
- 1732, April 22—Gideon, s. to James Johnstone in Meikleholm and Mary Scott, his spouse.
- 1733, Feb. 9—Isobel, d. to John Johnstone, shoemaker in Langholm, and Esther Graham, his spouse.
- 1735, July 18—Margaret, d. to John Johnstone in Langholm and Esther Graham, his spouse.
- 1736, Feb. 19—Robert, s. to James Johnstone in Meikleholm and Mary Scott, his spouse.
- 1742, Jan. 10—Charles, s. to Mr James Johnstone in Meikleholm and Mrs Mary Scott, his spouse.
- 1742, Dec. 26—James, s. to James Johnstone in Meikleholm and Mary Scott, his spouse.
- 1745, July 31—Christian and Violet, twin d. to Mr James Johnstone in Meikleholm and Mary Scott, his spouse.
- 1749, Jan. 29—Ellizabeth, d. n. to David Johnstone, merchant in Langholm, and Janet Hinshelwood, his spouse. James Hinshelwood, sponsor; b. Jan. 11.
- 1751, June 16—Euphemia, d. to David Johnstone, merchant in Langholm, and Janet Hinshelwood, his spouse; b. June 4.

- 1753, March 4—Ninian, s. to John Johnstone, shepherd in Kerr, and Janet Deans, his spouse; b. March 1.
- 1754, June 26 Janet, d. to James Johnstone, shepherd in Westwater, and Mary Bell, his spouse; b. June 13.
- 1754, July 7—Robert, s. to David Johnstone, merchant in Langholm, and Janet Hinshelwood, his spouse; b. July 3.
- 1764, Aug. 8—John, s. l. to James Johnston, Broadnidlingside, Cannobie, and Eliz. Armstrong, spouse; b. July 31 last.
- 1770, April 5—George, s. n. to Geo. Johnson, late Excise officer in Langholm, and Margaret Dryden, d. to Wm. Dryden, baker in Langholm; b. March 6.
- 1770, April 15—Robert, s. l. to Alexander Johnson, wright in Meikleholm, and Janet Kirk, his spouse; b. 9th.
- 1772, Sept. 20—Elsa, d. l. to Alexander Johnston, wright in Langholm, and Janet Park, his spouse; b. 13th.
- 1774, June 5—Walter, s. l. to Alexander Johnstone, wright in Langholm, and (Janet Park) his spouse; b. 4th.
- 1779, July 6—John, s. to Charles Johnstone, mason in Newtown, and Margaret Elliot, his spouse; b. 30th ult.
- 1780, Aug. 6—Mary, d. l. to Charles Johnstone, mason of Langholm-Newtown, and Margaret Elliot, his spouse; b. 4th.
- 1780, Oct. 15—Elizabeth, d. l. to Andrew Johnstone, labourer in Stubholm, and Margt. Armstrong, his spouse; b. 12th.
- 1781, Sept. 30—Janet, d. to James Johnstone, journeyman tanner in Dumfries, and Grizel Nicol, his spouse; b. 22nd.
- 1782, Jan. 27—Margaret, d. l. to John Johnstone, labourer in New Langholm, and ————
- 1782, April 19—Mary, d. l. to Charles Johnstone, mason in New Langholm, and Margaret Elliot, his spouse; b. 17th.
- 1783, Jan. 13—Isabell, d. l. to Andrew Johnstone, labourer in Mirbeholm (? Meikleholm), and Margaret Armstrong, his spouse; b. 10th.
- 1783, June 9—Janet, d. l. to Charles Johnstone, mason in Meikleholm, and Margaret Elliot, his spouse; b. 1st.
- 1783, Oct. 17—Grizel and Mary, twin children to John Johnson, labourer in Westwater, and Grizel Little, his spouse; b. 16th.

- 1784, Feb. 16th—Mary, d. to William Johnstone in Milntown and Janet Farish, his spouse; b. 1st curt.
- 1785, Jan. 16—Mary, d. to David Johnstone, taylor in Loginmains, and Elizabeth Foster, his spouse; b. 12th.
- 1785, Jan. 18—William, s. to William Johnstone, labourer in Peall-walls, and Margaret Armstrong, his spouse; b. 5th Nov. last.
- 1785, April 10—George, s. to Ninian Johnstone, labourer in Stonylee, and Janet Harrison, his spouse; b. 5th.
- 1785, Aug. 18—Janet, d. l. to Charles Johnstone, mason in New Langholm, and Margaret Elliot, his spouse; b. 12th.
- 1785, Dec. 14—William, s. n. to Archibald Johnston in Milntown of Half-Morton, and Janet, d. to Walter Beaty in Peelwalls there; b. Sept. 29.
- 1786, April 27—John, s. to John Johnstone, labourer in Milnbankhead, and Grizel Little, his spouse; b. 25.
- 1786, May 21—James, s. to Joseph Johnstone, singing master from Kendal, and Agnes Simson, his spouse.
- 1786, Sept. 3—Euphemia, d. to Alexander Johnston, weaver in New Langholm, and Mary Cowan, his spouse; b. Aug. 13.
- 1786, Oct. 19—Allexander, s. n. to Allexander Johnstone, weaver in New Langholm, and Jean, d. to Alexander Borthwick, weaver in Langholm.
- 1787, July 1—Robert, s. to Charles Johnstone, mason in N. Langholm, and Margaret Elliot, his spouse.
- 1787, July 29—Mary, d. to Ninian Johnstone, labourer in Stonielee, and Janet Harrison, his spouse; b. July 8.
- E.D.—Walter, s. to William Johnstone, labourer in Peelwalls, and Margaret Armstrong, his spouse; b. May 14.
- 1787, Nov. 18—John, s. to David Johnstone in Oakwoodhill, and Ellizabeth Foster, his spouse; b. Nov. 3.
- 1788, March 5—Allexander, s. to Allexander Johnstone, weaver in New Langholm, and Mary Cowan, his spouse; b. March 4.
- 1788, July 1—Charles, s. to Charles Johnstone, mason in New Langholm, and Margaret Elliot, his spouse; b. June 26 last.

- 1788; July 13—William, s. to William Johnstone in Campingholm, and Janet Farish, his spouse; b. July 7.
- 1788, Aug. 3—William, s. to James Johnstone in Crowsknow, and Ellizabeth Wright, his spouse; born Aug. 3.
- 1789, Oct. 25—Walter, s. to William Johnstone in Peelwalls, and Margaret Armstrong, his spouse; b. Oct. 23.
- 1790, Feb. 6—Euphemia, d. to Alexander Johnstone, weaver in New Langholm, and Mary Cowan, his spouse; b. Feb. 5.
- 1790, April 11—James, s. to David Johnstone in Oakwoodhill, and Elizabeth Foster, his spouse; b. March 29.
- 1790, May 9—Ann, d. to Thomas Johnstone, in Milntown, and Ann Hearnkness, his spouse; b. May 7.
- 1790, June 8—Christian, d. to Charles Johnstone, mason in New Langholm, and Margaret Elliot, his spouse; b. May 31.
- 1790, Aug. 1—Elsbeth, d. to James Johnstone, taylor in Crowsknow, and Elspeth Wright, his spouse; b. July 4.
- 1791, Jan. 7—Janet, d. to Alexander Johnstone and Mary Cowan, his spouse.
- 1791, June 16—Alexander, s. to William Johnson and Jean Pattison, his spouse; b. June 12.
- 1792, Jan. 8—Alexander, s. to Alexander Johnson and Mary Cowan, his spouse.
- 1792, Feb. 26—James Ormiston (sic), s. to William Johnson and Helen Renwick, his spouse; b. Jan. 13.
- 1792, June 8—Margaret, d. to Charles Johnson, mason, and Margaret Elliot, his spouse.
- 1792, Nov. 26—Walter, s. to William Johnson and Jean Pattison; b. Nov. 21.
- 1793, Nov. 3—James, s. to Alexander Johnson and Mary Cowan; b. Oct. 27.
- 1794, Feb. 23—Michael, s. to William Johnson and Helen Renwick; b. Feb. 20.
- 1795, March 17—Elizabeth, d. to Alexander Johnson and Mary Cowan; b. March 17.
- 1795, June 7—Robert, s. to Charles Johnson and Margaret Elliot; b. May 30.

- 1795, Oct. 18—Elsbeth, d. to Wm. Johnston and Jean Pattison; b. Oct. 16.
- 1797, Sept. 17—Euphemia, d. to Alex. Johnston and Mary Cowan; b. Sept. 7.
- 1798, Jan. 7—James, s. to Wm. Johnston and Jean Pattison; b. Jan. 1.
- 1799, Nov. 31 (sic)—Mary, d. to Alex. Johnston and Mary Cowan; b. Nov. 7.
- 1800—Jan. 26—Janet, d. to William Johnston and Jean Pattison; b. Jan. 24.

MARRIAGES.

- 1669, Feb. 11—Andrew Johnston, in the parish of Tundergarth, to Janet Scot, in Johnston, in the parish of Westerkirk. W., Sir James Johnston of Wester-hall and Thomas Maccala in Glendining.
- 1670, Dec. 15—James Johnston, in Longholme, to Helen Scoon, at Longholme Castle. W., John Hope at Castle and William Glendining.
- 1680, Nov. 25—James Johnston, in Longholme, to Janet Brown there. W., William Forsyths in Longholme and Robert Pasley there.
- 1681, Nov. 17—William Johnstoun, in the parish of Tundergarth, to Margaret Hellyday, in St. Mungo.
- 1682, Dec. 19—Archbald Bellie, in Woodend, in the parish of Ews (sic), to Margaret Johnston in Glendiffen, in the fore-said parish. W., Archibald Goodfellow in Erkletoyn and James Henderson.
- 1683, June 27—William Gowenloke, in Longholme, to Janet Johnstone there. W., James Johnstone in Longholme and John Lyttle there.
- 1685, April 28—James Johnstone, in Longholme, to Margaret Grahame, in Garshaw, in the parish of Wauchope. W., Robert Pasley, in Longholme, and Robert Macgill there.
- 1686, June 8—William Black to Nicolas Johnston, being both in the parish of Westerkirk. W., Thomas Armstrong of Nether Craige and John Irving there.
- 1707, Dec. 7—Mr Nicol Mein*, in this parish, being proclaimed

* There is another marriage of a Mr Nicol Mein, 11th May, 1717.

- with Agnes Johnston, in the parish of Westerkirk, were married at Westerkirk the 26th of that moneth.
- 1709, May 14—John Johnston, wright in Langholme, with Jennet Bell there, proclaimed; m. the 23rd June.
- 1715, July 8—Adam Armstrong, in this parish, and Jane Johnston, in the parish of Tundergarth, proclaimed; m. 31st inst.
- 1717, May 13—John Rae, in this parish, proclaimed with Bessie Johnston, in Tundergarth parish; m. the 8th day of June.
- 1718, Jan. 11—Matthew Dickson and Jennet Johnston, in this parish, proclaimed; m. the 29th ditto.
- 1718, April 30—Christopher Johnston, in Half-Morton parish, and Helen Murray, in this parish, proclaimed; m. 2nd day of June.
- 1718, Dec. 6—James Maxwell and Barbara Johnston, in this parish, proclaimed; m. the 16th ditto.
- 1719, May 2—John Johnston and Isabel Gowanlock, in this parish, proclaimed; m. the 2nd day of June.
- 1720, May 28—John Dalglish and Isabel Johnston, in this parish, proclaimed; m. the 7th June.
- 1720, Oct. 8—James Johnston, in the parish of Westerkirk, proclaimed with Isabel Brown, in this parish; m. 1st of November.
- 1721, May 27—Andrew Hounam, in this parish, proclaimed with Euphon Johnston, also in this parish; m. the 7th of June.
- 1721, Sept. 23—John Johnston of Pearsbiehall, in the parish of Tundergarth, with Mrs Katharin Melvil, d. to Mr John Melvil of Carskerds, in this parish; m. at Langholme-castle on Friday, the 20th of October.
- 1722, Sept. 23—Mr Jas. Dun, schoolmaster at Langholm, and Martha Johnston, sister to Pircebiehall, in the parish of Tundergarth, proclaimed; m. Oct. 9th, 1722.
- 1724, May 3—Cristopher Johnston and Janet Brown, in Midlimes, proclaimed; m. May 25th.
- 1725, Nov. 13—William Murray, in this paroch, and Janet Johnston, in the paroch of Cannabie, proclaimed; m. Nov. 30th.

- 1729, Jan. 4—John Slomman and Grizel Johnston, both in this paroch, proclaimed; m. Feb. 4th.
- 1731, Jan. 19—John Johnston and Esther Grame proclaimed; m. Jan. 20th.
- 1735, April 5—John Little, in Breiryshaw, in the parish of Euis, and Jean Johnston, in this parish, proclaimed; m. 25th of Aprile.
- 1736, July 15—James Leishman and Mary Johnston, both in this parish, proclaimed; m.
- 1737, March 11—George Olifer, in this parish, and Margaret Johnston, in the parish of Lochmaben, proclaimed; m. March 22nd.
- 1740, March 17—George Johnstoun, in the parish of Tundergarth, and Helen Stranger, in this parish, proclaimed; m. 1st of April inst.
- 1742, May 29—Hugh Newy and Jean Johnston, both in this parish, proclaimed; m. 8th of June inst.
- 1748, Oct. 30—David Johnston, merchant in Langholm, and Janet Hinshelwood, d. to the dec. Alexander H., declared they were irregularly married upon the 29th day of Sept., 1748, and adhered before the Session this day.
- 1761, Feb. 3—Robert Halliwol, wright in Langholm, and Mary Johnston, relict of John J., wright there.
- 1775, Jan. 7—Adhered to their clandestine marriage in Nov. last, Thomas Dalglish and Elizabeth Johnstone.
- 1779, April 21—Charles Johnston, mason in Langholm, and Margaret Elliot, from Ewis, adhered to their clandestine marriage in May last.
- 1780, Feb. 9—Andrew Johnstone, labourer, and Margaret Armstrong, d. to Robert A., tennent in Stubholm.
- 1780, March 5—Adhered to their clandestine marriage on 18th of Feb. last, John Philip, in Half-Morton, and Margaret Johnston, in the parish of Tundergarth.
- 1783, Dec. 2—David Hill, servant at Stobbie Know, and Mary Johnstone, d. to the dec. John J., some time tenant there.
- 1790, July 16—William Johnstone, wright in Langholm, and Jean Pattison, d. to Walter P., in Meikleholm.
- 1794, Feb. 9—Marriage declared and adhered to before the

Session, Robert Currie, in Holls, and Jean Johnston, in Langholm.

BURIALS.

- 1674—Ewphan Johnston, in Longholme, departed the 28th of May, being 45 years.
- 1719—John, s. to John Johnston, wright in Langholm, d. 26th Feb. ; a child.
- 1719—Bessy Johnston, in Langholm, d. 4th July.
- 1722, Sept. 10—Margaret Johnston, d. to John Johnston, shoemaker in Langholm.
- 1722, Nov. 3— — Johnston, aunt to John Huggan's wife, in Westwater.
- 1723, Dec. 18—Christopher Johnstone's wife died and had the Mortcloth and paid 14d.
- 1724, Jan. 29—Grizel Johnston, spouse to William Ker, in Langholm, died, had the Mortcloth, and pay'd 1 lb.
- 1726, Jan. 30—James Johnston, in Langholm, died; mortcloth gratis.
- 1726, April 26—Jane Johnston, spouse to William Alexander, died; mortcloth gratis.
- 1728, April 5—Died James, a child of John Johnston, shoemaker in Langholm, and had not mort.
- 1728, May 29—Jane, a d. of said John Johnston, was buried. 14d.
- 1730, March 24—James Johnston, s. to James Johnstone and Jean Armstrang, sister of Sorbie, died, had the mortcloth, payed 14d.
- 1730, July 16—Isabel Gowanlock, spouse to John Johnston, in Langom, died, had the mortcloth, and payed 14.
- 1732, Nov. 25—Jane Johnston died in Langholm.
- 1734, August 13—Isabel, a child of John Johnston, died.
- 1736, June 19—A still born child of Christifor Johnston's, in Middleholms.
- 1736, June 20—Jenet Brown, spouse to the foresaid Christifor J., died, had the new mortcloth—18d.
- 1737, Feb. 21—Walter, s. to John Johnstoun, in Langholme, died, had the new mortcloth, paid 18d.
- 1738, Oct. 11—Janet Johnstoun, in Langholme, died; old mortcloth gratis.

- 1745, Aug. 2—A child of James Johnston's died, had the little mortcloth, paid 4d.
- 1746, Nov. 25—Nicholas Johnston, spouse to Walter Grahame, died; old mortcloth gratis.
- 1749, July 29—Hendred, d. to James Johnston, in Meikleholm, died, and burried in Cannobie Churchyard.
- 1750, May 12—Janet Bell, spouse to John Johnston, wright in Langholm, died and burried in Langholm Churchyard.
- 1754, Feb. 1—Jannate Johnston, relict of John Reid, in Cleughfoots, had the new mortcloth.
- 1754, April 10—Christiphor Johnston, in Middleholms, died, had the mortcloth.
- 1756, Jan. 4—John Johnston, shoemaker, died, had the new mortcloth.
- 1756, March 20—Esther Graham, relict of John Johnston shoemaker in Langholm, died, had the new mortcloth, paid 18d.
- 1759, Dec. 29—Eupheme Johnston, spouse to Andrew Houname, in Langholm, died.
- 1760, June 12—John Johnston, wright in Langholm, in the Churchyard there; died the 10th currt.
- 1763, Jan. 23—Helen Johnston, relict of ——— Penlaw, in Langm. Churchyard; died 20th inst.
- 1763, June 12—Margaret Johnston, d. to John J., shoemaker in Langholm, deceased, in Langm. Churchyard; died the 10th inst.
- 1772, Oct. 3—In this churchyard Euphemia Johnston, a child to Alexr. J., wright in Langholm.
- 1778, June 4—Jean Johnstone, spouse to David Scott, in Breakenrea, in Stablegordon.
- 1779, Oct. 18—Mary Johnstone, spinster widow, Hallywood, in this parish, in this Church Yard.
- 1781, July 12—Mary Johnstone, a child of Charles Johnstone, in New Langholm, and was buried 13th.
- 1786, Nov. 17—In Langholm Churchyard, Euphemia Johnstone, a child dr. Alexr. J., weaver in N. Langholm; died Nov. 16.
- 1787, July 26—In Langholm Churchyard, Robert Johnstone,

- a child, son to Charles J., mason in New Langholm; died July 24.
- 1789, Jan. 18—In Langholm Churchyard, Helen Stranger, relict of the deceased George Johnstone, labourer in Langholm; died Jan. 16.
- 1790, Jan. 30—In Langholm Churchyard, Mary Johnstone, relict of the deceased James Carruthers, late farmer in Bankhead, Middleby parish; died Jan. 28, 1790.
- 1790, May 19—In Wauchop Churchyard, Margaret Johnstone, relict of the deceased John Brown, late in Stubholm; died May 17.
- 1790, August 29—In Langholm Churchyard, Helen Williamson, spouse to Andrew Johnstone, slater in New Langholm; died Aug. 27.
- 1790, Sept. 20—In Langholm Churchyard, James, son to Andrew Johnstone, labourer in Craig, parish of Westerkirk; died Sept. 18.
- 1794, Feb. 11—A child of Alexr. Johnson's.
- 1794, Aug. 12—Christian Johnson.
- 1794, Sept. 13—Michael Johnson.
- 1794, Oct. 8—Andrew Johnson.
- 1795, Jan. 28—Jean Johnson.
- 1796, March 23—A child of Charles Johnston's.
- 1796,—March 28—Euphemia Johnston.

25th April, 1919.

Chairman—G. M. STEWART.

The Lepidoptera of Wigtownshire.

By J. G. M. GORDON, F.E.S.

PART II.

This includes the Geometræ, Deltoides, and Pyralides, and completes the Macro Lepidoptera of the county begun by my brother, R. S. M. Gordon, in a former volume of the *Transactions*. It will be seen that there are a good many

blanks, some of which should readily be found when the county, especially the coast line and moorland borders of Ayrshire, has been more thoroughly worked. Most of the records in the list come from Corsemalzie and the shores of Luce Bay.

The following contractions occur throughout the list :— C., Corsemalzie; e.d., earliest date; com., common; uncom., uncommon; abd., abundant; freq., frequent; gen. dist., generally distributed.

GEOMETRAE.

1. *Ourapteryx sambucaria*, L., not uncommon flying at dusk along woodsides near C., and Alticry, Luce Bay, etc.; e.d., 4/7/95, 24/6/96, 8/7/98, 9/7/99, 8/7/01, 4/7/05, 23/7/06. The larvæ are common, feeding after dark, on ivy. 48 were taken one night in October, 1906, on ivy, Alticry House.
2. *Rumia cratagata*, L., very com. and gen. dist. Our specimens are large, often measuring over 1½ inch in expanse. Flies along hedge sides and near woods. e.d., 22/5/97, 10/5/98, 1/6/99, 28/5/01, 30/5/05, 24/5/06, 23/5/11. Took 34 larvæ on sloe clump, C., 24/4/06.
3. *Venilia macularia*, L. Ser., woods near Cairn Ryan, Loch Ryan, June 12, and woods, Castle-Kennedy, June, 1914.
4. *Meteocampa margaritaria*, L., very com. and gen. dist. in woods and along hedge sides. e.d., 27/6/97, 3/7/99, 25/6/05, 3/7/06, 15/6/11.
5. *Ellopia fasciaria*, L., seems local, scarce at C., one 10/7/06; two at light, 11 and 20/6/77. Mr W. S. Brocklehurst took it commonly at light in 7/10 at Craigenveoch, Glenluce.
6. *Eurymene dolobraria*, L., not uncom. at light in woods, C. The first was taken flying after midnight, Malzie Burn, 6/6/06. Seven others were taken at light from 14/5/11 to 30/5/11. They are large handsome specimens. Four full fed larvæ were beaten from a young oak on 4/9/10.
7. *Selenia bilunaria*, Esp., com. flying along hedge sides, etc., at dusk, C. e.d., 2/5/97, 11/5/01, 6/5/06, 29/4/11, 15/4/12.
var. *Juliaria*, Haw. The summer brood is rare. One taken by Miss Wright at Alticry, 14/8/02; another, Newton-Stewart, 1/8/05. Three at C., 8/8/05, 8/8/10, 16/8/10.
8. *Selenia lunaria*, Schiff, not uncom. at light, C. Took a fine series at light, 16 to 26/5/11. e.d., 25/5/97, 20/5/98, 16/5/11, 17/5/12.
9. *Odonoptera bidentata*, Clerck, com. and gen. dist. at light and

- sides of woods at dusk. Very variable. e.d., 19/5/97, 10/5/99, 1/5/06, 14/5/11, 21/4/12.
10. *Crocallis elinguaris*, L., not uncom. Seems scarce at C. Mr W. S. Brocklehurst took it commonly at light at Craigenveoch, Glenluce, 8/10. e.d., 12/8/97, 7/8/99, 6/8/06, 11/8/10, 7/8/11.
 11. *Ennomos tiliaria*, Bork, com. at light, C. Took a fine series from the 18 to 26/9/10.
 12. *Ennomus angularis*, Bork. The only record seems to be six specimens taken flying at dusk in the end of 8/95 at Monreith by Lieutenant-Colonel A. E. Maxwell.
 13. *Himera pennaria*, L. Common at light, C., Alticry, etc. 25 taken at light, C., 9 and 10/10/10. e.d., 8/11/98, 25/10/99, 24/10/02, 31/10/05, 10/10/06, 9/10/10.
 14. *Phigalia pedia*, Fb., common on tree trunks, etc., C.; variable; 12 on tree trunks, C., 14 to 29/2/12. e.d., 3/2/06, 25/2/07, 12/2/09, 19/2/10, 24/1/11, 14/2/12. Larvæ abd. on elms, woods, C., 6/06.
 15. *Amphydasis betularia*, L., seems scarcer than formerly. Not uncom., C., in woods. On the 18/6/96 took a very large female while fishing. It was sitting on a stone in the Malzie Burn, C., quite a foot below the surface of the water, alive, and in good condition. e.d., 9/5/96, 13/5/97, 1/5/98, 25/5/11, 27/5/12.
- var. *Doubledayaria*, Mill, in May, 1892, bred a small male rather paler and browner than this form from a C. larva.
16. *Cleopa lichenaria*, Hufn. Locally com., C., Monreith, Alticry, etc. Handsome specimens both light and dark. Flies in open spaces in woods at dusk. e.d., 8/7/98, 5/7/99, 3/9/01, 1/7/05, 1/7/06, 12/7/11. One taken at light, C., 26/9/10. Larvæ com. on lichen-covered thorns or sloes. Took 48 near front drive, 2/4/06.
 17. *Boarmia repandata*, L., seems scarce at C., not uncom. Monreith, Alticry, Portpatrick, etc., on tree trunks and flying at dusk; variable, leaden forms commonest. e.d., 3/7/05, 10/7/06, 14/7/11, 2/7/12. Larvæ taken on heather, roadside, Alticry, 1/5/06.
 18. *Boarmia gemmaria*, Brahm. Two taken on tree trunks below Alticry Lodge by Mr J. Garraway in 7/03.
 19. *Tephrosia biundularia*, Bork. Scarce, a fine male (pale race) or a sycamore trunk, tennis court, C., 18/4/12.
 20. *Grophos obscuraria*, Hb. Fairly com., C. and round coast,

- Kirkmaiden, Garheugh, Sinniness Head, Monreith Village, etc. Flying at dusk and at rest in crevices of rocks. e.d., 8/7/98, 15/7/99, 14/7/05, 10/7/06, 6/7/11.
21. *Pseudoptera cytisaria*, Schiff. Scarce C., not uncom. coasts. Garheugh Rocks, Monreith Village, Balcarray, etc., among whins, sloes, etc. e.d., 26/6/05, 1/7/06, 10/7/10, 18/7/11.
 22. *Geometra papillonaria*, L., scarce, along woodsides at late dusk, C. One 18/6/96; another, garden, 1/7/97; one, 25/7/98; three, front drive, 14/7/02.
 23. *Geometra vernaria*, Hb., two taken at light at Craigenveoch, Glenluce, by W. S. Brocklehurst, 31/7/09.
 24. *Phorodesma bajularia*, Hufn. Two taken at dusk on roadside below Alticry Lodge by Mr J. Garraway during 7/04.
 25. *Venusia cambricaria*, Curt., common on tree trunks; also at dusk along woodsides. e.d., 15/7/05, 5/7/06, 11/7/11, 12/7/12,
 26. *Acidalia scutulata*, Bork., com. along woodsides, etc., C. at dusk. e.d., 3/7/98, 25/7/99, 2/7/05, 5/7/06, 19/6/11.
 27. *Acidalia bisetata*, Hufn., abundant C., etc., along woodsides, etc., at dusk. e.d., 3/7/98, 25/7/99, 15/7/05, 15/7/06.
 28. *Acidalia margini punctata*, Goze. One (a dark specimen) taken by Mr K. J. Morton near Monreith Village in 7/99.
 29. *Acidalia fumata*, St. Locally com.; moorlands all over dist. where bog myrtle occurs. e.d., 26/6/97, 4/7/98, 20/6/99, 7/7/01, 27/6/05, 28/6/06, 14/6/11.
 30. *Acidalia aversata*, L., com., woodsides dusk, and rough herbage, etc., in daytime. e.d., 3/7/05, 2/7/06, 7/7/10, 1/7/11.
var. *Spoilata* also occurs not uncommonly.
 31. *Cabara pusaria*, L. Abd. and gen. dist. e.d., 23/6/98, 1/6/99, 5/6/05, 6/6/06, 7/6/12.
 32. *Cabera exanthemaria*, Scop. Seems rather scarce, woodsides at dusk, C. e.d., 12/6/06, 30/5/11, 7/6/12.
 33. *Bapta temerata*, Hb. One taken at dusk in front drive, C., end of May, 1895. Mr Barret says in his "British Lepidoptera":—"In Scotland I know of but a single capture, a specimen—which I have seen—taken at C. in Wigtownshire by the Messrs Gordon."
 34. *Macaria liturata*, Clerck. A single specimen taken at rest on a spruce fir branch at dusk, front drive, C., 16/6/11.
 35. *Halia wavsaria*, Fb. Seems curiously scarce. I only know of a worn specimen taken at dusk, garden, C., 10/8/98.

36. *Panagra petraria*, Hb. Abd. among bracken and at light. Hundreds among bracken, dusk, Kennel Wood, C., 13/5/06. e.d., 13/5/97, 9/5/99, 11/5/01, 4/5/02, 10/5/06, 8/5/11, 1/5/12.
37. *Scodonia belgiaria*, Hb., freq. on all moors. e.d., 1/6/97, 19/6/98, 14/5/01, 28/5/06, 17/5/11. Two taken on Crailoch Moor, C., 16/8/98, in fine order. Larvæ com. on heather. Five larvæ, Low Moor, C., 4/3/06, and 10 on Whitedyke Moor, C., 28/5/06.
38. *Fidonia atomaria*, L., abd. on all the moors; very variable. e.d., 9/5/97, 1/5/98, 2/5/01, 4/5/02, 7/5/06, 1/5/07, 12/5/11, 28/4/12.
39. *Bupalus siniiaria*, L., gen. scarce, some years absent; in fir woods, not uncom., C.; saw 10, firs beyond garden, C., 17/6/11. e.d., 19/6/95, 18/6/98, 15/6/11, 15/6/12.
40. *Crocota strigillaria*, Hb., a single specimen, a female, beaten from heather, Low Moor, C., 27/6/04.
41. *Abraxas grossulariata*, L. Com. locally, gardens, etc., especially some year. e.d., 12/7/98, 4/7/99, 9/7/05, 10/7/06, 3/7/11.
42. *Abraxas ulmata*, Fb., only two specimens have been taken that I am aware of—one by Mr J. Garraway on bank, foot of Carheugh road, June, 1903; the other at Portpatrick by Captain J. N. Kennedy, R.G.A., while dusking, 2/7/10.
43. *Lomaspiles marginata*, L., one or two only. Dowalton Loch, 4/6/13; Castle-Kennedy, 10/7/14.
44. *Hybernia rupicaprararia*, Hb. Com. at rest birch twigs, hedges, etc. e.d., 25/1/06, 23/1/06, 15/2/07, 16/2/11, 18/2/12.
45. *Hybernia leucophœsia*, Schiff. Several bred from larvæ taken by Mr J. Garraway near the Cock Inn, Luce Bay, 6/02.
46. *Hybernia aurantiaria*, Esp. Not uncom. at light, and along sides of woods at dusk, and at rest on hedges. Took 15 between 26/11/10 and 11/12/10 at C.
47. *Hybernia progemmaaria*, Hb. Com. and very variable from large light to small very dark almost unicolorous specimens. At light and at rest on tree trunks. e.d., 10/3/02, 1/3/06, 5/3/07, 5/3/10, 28/3/11, 18/2/12.
48. *Hybernia defoliaria*, Clerck. Com. on hedges and on tree trunks after dark, also at light. e.d., 15/10/98, 23/11/06, 20/10/11, 23/10/12. One on tree trunk, C., 4/1/12.
49. *Anisopteryx acscularia*, Schiff. Com. at light, and on tree trunks during day. e.d., 27/3/95, 11/3/02, 1/4/06, 24/3/11, 14/3/12.

50. *Chematobia brumata*, L. Abd. at light and on tree trunks and twigs after dark. e.d., 15/11/98, 20/11/06, 31/10/10, 26/10/11.
51. *Chematobia boreata*, Hb. Seems scarce, have only taken a few at C., 20/11/95, 5/1/06.
52. *Oporabia dilutata*, Bork. Com. and gen. dist.; very variable. Flying after dark in woods and along hedge sides. e.d., 28/9/97, 27/9/98, 26/9/05, 1/10/06, 23/9/10. Late specimens 12/11/98, 18/11/93.
53. *Larentia didymata*, L. Com. and gen. dist. e.d., 23/7/05, 24/7/06, 17/7/11.
54. *Larentia multisstrigaria*, Haw. Abd. among bracken at light, etc. Swarming Kennel Wood, C., 20/3/06. e.d., 25/3/97, 19/3/98, 16/3/99, 1/3/06, 24/3/11, 17/3/12. A female, Kennel Wood, C., 4/5/11.
55. *Larentia caesiata*, Lang. Scarce on rocks on the moors, probably more numerous on the moors bordering Ayrshire, 23/7/05, 29/7/10.
56. *Larentia salicata*, Hb. Not uncommon at light and on moor shallows and at rest on rocks. e.d., 8/5/11, 15/5/12, 14/5/14.
57. *Larentia olivata*, Bork. Several bred from larvæ taken by Mr J. Garraway, Alticry Glen, Luce Bay, 4/03.
58. *Larentia pectinaria*, Fues. Abd. woods and moorlands, among bracken and on walls. e.d., 5/7/99, 29/6/05, 17/6/06, 14/6/11.
59. *Emmalesia affinitata*, St., fairly com. on the coast. Taken by Mr K. J. Morton near Monreith Village, 7/99, and by Captain J. N. Kennedy, R.G.A., at Portpatrick, 15/5/11.
60. *Emmalesia alchemillata*, L. Com. and gen. dist. e.d., 28/6/97, 3/7/98, 20/6/99, 7/7/01, 29/6/05, 21/6/06, 15/6/11.
61. *Emmalesia albulata*, Schiff. Com. and gen. dist.; very numerous in meadows, Drumwalt, C., etc. e.d., 21/6/06, 10/7/07, 14/6/11.
62. *Emmalesia decolorata*, Hb. Com. and gen. dist., coasts especially. e.d., 1/6/05, 6/6/06, 4/6/11.
63. *Emmalesia unifasciaria*, Haw. One taken near the farm of Culgarrie, Monreith, by Mr J. Garraway, 6/04.
64. *Eupithecia venosata*, Fb. Eleven larvæ taken in seed heads of *Silene maritima* along Alticry shore, Luce Bay, 18/7/06.
65. *Eupithecia puchellata*, St. One taken in garden, C., 6/7/98.

66. *Eupithecia centaureata*, Fb. Rather com. Kirkmaiden shore. 7/99. Not uncom. on flowers of ragwort at dusk near golf course, Glenluce, 18/7/05.
67. *Eupithecia subfulvata*, Haw. Scarce at C. Taken commonly by Mr W. S. Brocklehurst at light, Craigenveoch, Glenluce, 8/09.
- var. *Cognata*? One taken at C., 31/7/98. The late Mr Charles Barrett thought this might prove a local form.
68. *Eupithecia subumbrata*, Gn. Not uncom. at C., 18/6/97. 29/6/98.
69. *Eupithecia pygmeata*, Hb. Several specimens taken in water meadow, C., early July, 1899.
70. *Eupithecia sairyrata*, Hb. Com. on the moors, variable.
- var. *Callunaria*. Our commonest form. 17/6/98, 14/6/99. 15/6/05.
71. *Eupithecia castigata*, Hb. Not uncom. at rest on tree trunks and flying at dusk, C., 11/6/98, 14/6/99.
72. *Eupithecia vigaureata*, Dbl. One taken at dusk, C., 2/7/98.
73. *Eupithecia laricata*, Frr. Not uncom. in fir woods, several larch trunks, C., June, 1905.
74. *Eupithecia indigata*, Hb. Not uncom. at rest on tree trunks and rocks, and flying at dusk, C.
75. *Eupithecia constrictata*, Gn. One taken flying at dusk near Malzie Burn, C., 4/8/95. Rather com., Monreith Village, 7/99.
76. *Eupithecia nanata*, Hb. Very com. on all moors, 7/6/97, 27/6/06, 18/6/10.
77. *Eupithecia vulgata*, Haw. Com. and gen. dist., abundant on hops, C. e.d.; 9/6/97, 18/6/98, 12/6/99, 24/6/06, 17/5/11.
78. *Eupithecia absinthiata*, Clerck. Several taken by Mr J. Garraway near Culgarie farm, Monreith.
79. *Eupithecia minutata*, Gn. Scarce, at rest on rocks, Whitedyke Moor, C.
80. *Eupithecia assimilata*, Gn. Two taken at dusk near Malzie Burn, C., 7 and 9/6/10.
81. *Eupithecia teniciata*, Hb. Larvæ common in willow catkins in wood, C., bred from 1/7/06.
82. *Eupithecia abbreviata*, St. Com. round C., flying at dusk on

- moor shallows, and at light. Nine on sallow, 7 and 10/5/11. e.d., 5/5/11, 21/4/12.
83. *Eupithecia togata*, Hb. A number taken at light by Mr W. S. Brocklehurst at Craigenveoch, Glenluce, 1909.
84. *Eupithecia pumilata*, Hb. Two taken flying at dusk near house, C., 10/5/98.
85. *Eupithecia rectangulata*, L. Not uncom. on tree trunks and rocks, and in gardens at dusk; variable, black forms occur. e.d., 29/6/98, 26/6/99, 19/7/05, 5/7/06.
86. *Lobophora sexualisata*, Hb. Three taken at sallow bushes at dusk, Kennel Wood, C., 7/10.
87. *Lobophora lobulata*, Hb. Not uncom., at rest on tree trunks and at light, C. e.d., 2/4/11, 14/4/12.
88. *Thera variata*, Schiff. Com. in fir woods, C., etc.; variable. e.d., 12/6/97, 17/6/99, 17/6/06, 16/6/11. Latest dates, 16/10/97, 12/10/98.
89. *Thera firmata*, Hb. Rather scarce in woods, C.; variable. 23/8/98, 1/9/99.
90. *Hypspetes elutata*, Hb. Abundant among shallows at dusk, C.; very variable. e.d., 14/7/98, 17/7/99, 28/7/01, 10/7/05, 28/7/06, 12/7/11.
91. *Hypspetes impluviata*, Hb. Scarce, on tree trunks and by beating, C., 3/7/05, 10/7/10, 4/7/11.
92. *Melanthia bicolorata*, Hufn. Abd. among alders, C. Both typical and dark forms occur. e.d., 30/7/99, 15/7/05, 25/7/06, 16/7/10, 14/7/11, 10/7/12. One at light, 26/9/10.
93. *Melanthia ocellata*, L. Com. and gen. dist. in gardens and on moors among bracken, etc. 3/7/98, 23/7/99, 3/7/05, 6/7/06.
94. *Melanthia albicillata*, L. Freq. in open spaces in woods and in gardens. e.d., 18/6/96, 21/6/97, 17/6/98, 15/6/05, 20/6/06, 12/6/11.
95. *Melanippa hastata*, L. Com. and gen. dist., scarcer recently. On moors, flying along stone dykes where bracken occurs. e.d., 7/6/98, 14/6/99, 5/6/01, 16/6/05, 20/6/06, 9/6/11.
96. *Melanippa tristata*, L. One or two taken by Mr J. Garraway near Garheugh Cottage, Luce Bay, 1909.
97. *Melanippa rivata*, Hb. One taken by Mr J. Garraway near Culgarie farm, Monreith, 7/04.

98. *Melanippe sociata*, Bork. Abd. everywhere. e.d., 28/5/01, 20/5/05, 5/5/06, 23/5/11, 3/5/12. Latest, 6/8/98.
99. *Melanippe montanata*, Bork. Abd. and gen. dist. e.d., 14/6/04, 25/6/05, 10/6/06, 11/6/11, 9/6/12.
100. *Melanippe galiata*, Hb. Scarce, taken singly at C. Garheugh, Luce Bay, etc. 5/7/95, 10/7/96, 6/7/05, 19/7/06, 1/7/08.
101. *Melanippe fluctuata*, L. Com. and gen. dist., in gardens, woodsides, etc. e.d., 18/5/97, 22/5/98, 1/5/99, 15/5/05, 12/5/06, 14/5/08, 29/5/11, 15/5/12. Latest, 7/9/98, 23/8/06.
102. *Anticlea badiata*, Hb. Scarce at C., along woodsides at dusk and after dark. 12/4/96, 18/4/06, 25/4/11, 15/4/12.
103. *Anticlea derivata*, Bork. A single specimen, side of Malzie Burn, C., at dusk, 2/6/10; another, 29/4/12.
104. *Coremia munitata*, Hb. Not uncom. on walls, on moors, and occasionally by beating trees, C. e.d., 28/6/96, 10/7/05, 8/7/06, 12/7/11.
105. *Coremia propugnata*, Fb. Com. at light and by dusking, C. 24/7/05, 24/5/06, 15/6/11, 1/5/12. Latest, 10/8/06.
106. *Coremia ferrugata*, Clerck. Freq. at light, and occasionally by beating. e.d., 9/6/98, 7/6/05, 31/5/06, 14/5/11, 23/5/12.
107. *Coremia unidentata*, Haw. Com. at light, C. e.d., 20/6/98, 16/5/05, 28/5/06, 14/5/11, 15/5/12.
108. *Camptogramma bilneata*, L. Very com. and gen. dist.; banded forms com. among fern and bracken, etc. e.d., 4/7/98, 30/6/99, 27/6/05, 22/6/06, 20/6/11.
109. *Phibalapteryx lignata*, Hb. Abd. in meadows and damp places. e.d., 4/7/99, 25/6/06, 11/6/11, 26/6/12.
110. *Phibalapteryx lapidata*, Hb. Mentioned by T. Salvage as occurring on the hills north of Stranraer.
111. *Scotosia dubitata*. Only two specimens have been taken—one in the garden, C., 1/10/97; and one at light, C., 7/4/12.
112. *Cidaria psittacata*, Schiff. Scarce, one taken on window, C., 5/11/05; two, side of Kennel Wood, C., 28/9/98, 26/10/99.
113. *Cidaria miata*, L. Not uncom. flying at dusk, and on sallows in spring. 27/9/97, 10/10/10. Hyb., 22/4/06, 21/4/11, 22/4/12.
114. *Cidaria picata*, Hb. Scarcer, but taken in the same way. 29/9/97, 11/11/06. Hyb., 14/5/06.

115. *Cidaria russata*, Bork. Com. at C.; very variable. e.d., 14/6/98, 17/6/99, 18/6/06, 17/6/07. Late, 26/8/06.
116. *Cidaria immannata*, Haw. Abd. on moors, C., and on tree trunks; very variable; melanic forms occur. e.d., 25/7/98, 23/7/05, 14/6/06, 21/7/08. Late, 1/10/97, 9/9/06.
117. *Cidaria suffumata*, Hb. Very com., C., flying along wood-sides, in damp places, and at light. e.d., 14/5/97, 9/5/99, 20/5/01, 5/5/02, 11/5/06, 8/5/11, 26/4/12. Latest, 9/8/06.
118. *Cidaria silaccata*, Hb. Have only taken three at dusk near front drive, C. 12/6/10, 18/6/11, 14/6/12.
119. *Cidaria prunata*, L. Seemingly scarce. One beaten from an oak, C., 28/9/97; one in house, C., 16/7/05; and one at Newton-Stewart Station, 30/7/05.
120. *Cidaria testata*, L. Abd. on most moors, and especially after dark on heather blossom; variable. e.d., 15/7/96, 23/8/98, 13/7/05, 19/8/06, 1/8/10, 31/7/11.
121. *Cidaria populata*, L. Seems scarce, have taken a few near Kennel Wood, C., or on the moors among bog myrtle. e.d., 28/7/97, 28/7/05, 28/7/10.
122. *Cidaria fulvata*, L. Com. at Alticry, Kirkmaiden, Stairhaven, etc., in rose bushes, etc. e.d., 20/7/01, 2/7/05, 23/7/06, 13/7/07, 10/7/11.
123. *Cidaria associata*, Bork. Two taken at C.; one near garden, 22/7/06; the other in the garden, 14/7/10.
124. *Cidaria pyraliata*, Fb. Occurs not uncommonly on the moors in the north of the county; several, Polbae, 29/7/12.
125. *Pelurga comitata*, L. Not uncom., C. and Alticry, on ragwort and in the garden. 12/7/98, 19/7/05.
126. *Eubolia cervinata*, Schiff. One taken at C., near the garden, 11/8/10. Twenty-one larvæ were taken by Dr W. Selby on hollyhock in his garden at Port-William, 24/6/06.
127. *Eubolia mensuraria*, Schiff. Not uncom. on the moors among bracken, and near the sea, Garheugh and Stairhaven. e.d., 7/8/98, 30/7/99, 12/7/05, 2/7/11.
128. *Eubolia plumbaria*, Fb. Not uncom. on the moors, among bracken-covered slopes by the sea, Garheugh, Kirkmaiden, etc. 25/6/97, 26/6/05, 27/6/06, 20/6/10, 21/6/11.
129. *Carsia paludata*, Thorb. Not uncom. moors and Garheugh, etc., Luce Bay. e.d., 6/7/98, 28/7/99, 12/7/05, 27/6/06, 18/7/07, 9/7/11.

130. *Anaites plagiata*, L. Freq. on the moors, C., Garheugh, and Alticry Glen, etc. e.d., 12/7/05, 27/7/06, 14/7/10, 17/7/11.
131. *Chesias spartiata*, Fues. Seems rare, several taken by Mr J. Garraway below Alticry Glen. 9/03. One taken at light, C., 10/10/10.
132. *Tanagra atrata*, L. Widely dist. and locally abd. in meadows and among bracken on moors. e.d., 25/6/95, 20/6/97, 14/6/98, 12/6/99, 27/6/06, 11/6/10, 14/6/11.

DELTOIDES.

1. *Hypena proboscidalis*, L. Com. or gen. dist. among beds of nettles. e.d., 26/6/97, 25/6/98, 1/7/99, 28/6/06, 1/7/05, 24/6/11.
2. *Rivula sericealis*, Scop. One taken among rushes, side of Kennel Wood, C., 9/7/06; another near Malzie Burn, C., 26/7/06.
3. *Herminia tarsipennalis*, Tr. Com. locally, Alticry, Luce Bay, and at C. on ivy, etc., at dusk. e.d., 2/7/05, 10/7/06, 16/6/11, 7/7/11.
4. *Herminia grisealis*, Hb. Rather scarce, but widely distributed, C., Alticry, Portpatrick, etc., at dusk in woods and on ivy. e.d., 20/6/95, 5/7/06, 14/6/11, 19/6/12.

PYRALIDES.

1. *Pyralis farinalis*, L. Local, in stables and outhouses, Stranraer, Newton-Stewart, etc., 26/6/02, 29/5/04, 24/6/07.
2. *Aglossa pinguinalis*, L. Very com. near Monreith Village. Mr K. J. Morton end 7/99.
3. *Pyraustia purpuralis*, L. Com. on slopes by the sea, or on moors all over the county. e.d., 6/6/97, 28/5/98, 15/5/99, 12/5/01, 8/5/02, 26/5/05, 15/5/06, 24/5/11.
4. *Herbula cespitalis*, Schiff. Com. and gen. dist. on slopes by the sea and on all the moors. e.d., 6/5/97, 22/5/98, 15/5/99, 12/5/01, 8/5/02, 26/5/05, 18/4/06, 14/5/11.
5. *Ennychia cingulatis*, L. Locally com., Whitedyke Moor, C., and on heathery slopes above Garheugh Rocks, Luce Bay, etc. e.d., 27/6/98, 11/6/99, 26/6/05, 16/6/06, 18/6/11.
6. *Endotricha flammealis*, Schiff. One taken flying at dusk near lawn, C., 27/6/95.
7. *Hydrocampa nymphaelis*, L. Not uncom. in wet places and sides of streams, C., Monreith Village, Mochrum Lochs, etc. e.d., 12/7/98, 15/7/99, 30/6/05, 11/7/06.

8. *Hydrocampa stagnalis*, Don. Several taken on water plants. pools up Malzie Burn, C., 6/7/97, 3/7/98, 10/7/05, 2/7/11.
9. *Botys verticalis*, Schiff. Only two have been met with. One in Quhillart Meadow, Malzie Burn, C., 19/6/95; the other at dusk in the front drive, C., 27/7/06.
10. *Botys fuscalis*, Schiff. Locally abd. and gen. dist., C., Mochrum Castle, Kirkmaiden, Portpatrick, etc. e.d., 10/6/98, 14/6/99, 1/7/05, 10/6/06, 26/5/11.
11. *Botys urticalis*, L. Com. and gen. dist. e.d., 15/6/95, 16/6/97, 1/7/05, 14/6/06, 15/6/11.
12. *Pionia forficalis*, L. Com. and widely dist. in gardens. e.d., 29/6/97, 1/7/99, 28/6/05, 13/6/06, 16/6/11.
13. *Scopula lutealis*, Hb. Com. and widely dist., C., Garheugh, Monreith Village, Stairhaven, etc. e.d., 5/7/98, 8/7/99, 14/7/05, 19/7/06, 11/7/11.
14. *Scopula prunalis*, Hb. Not uncom. among rough herbage, Stairhaven, Luce Bay, Malzie Burn, C., etc. e.d., 28/7/05, 25/7/06, 20/7/11.
15. *Scopula ferrugalis*, Schiff. Scarce, Sinniness Head and Kirkmaiden, Luce Bay, 29/5/99, 25/5/05.
16. *Stenopteryx hybridalis*, Hb. Local, very com., Monreith Village, 7/99, Mr K. J. Morton. A few Malzie Burn, C.; one or two, Whitedyke Low Moor, C., 14/8/05.
17. *Scoparia anbigualis*, Tr. Abd. on walls on moors, tree trunks, etc., all over county. e.d., 14/6/97, 19/6/99, 21/6/05, 2/6/06, 5/6/11.
18. *Scoparia cembrae*, Haw. Seems scarce; two taken on moor, C., 24/7/99.
19. *Scoparia dubitalis*, Hb. Com., Alticry, Monreith Village, etc. e.d., 20/7/99, 15/6/01, 14/6/04, 10/6/06, 17/6/11.
20. *Scoparia murana*, Curt. Two on Whitedyke Moor, C., 13/6/99; one on wall, Alticry Barn, 23/7/05.
21. *Scoparia cratægella*, Hb. Two among bracken, stony slope above Garheugh Rocks, 5/7/06.
22. *Scoparia resinea*, Haw. Two taken on lichen-covered tree trunks, woods, C., 6/7/98.
23. *Scoparia truncicolalla*, Sta. One taken flying on lawns, C., 2/6/06.

Some Documents Relating to Holywood.

By Sir PHILIP J. HAMILTON-GRIERSON.

By the kind permission of Mr Denholm Young, the abstracts contained in the present paper have been made from documents belonging to him which relate to certain lands situated in the parish of Holywood, between the Cluden and the Nith, near the junction of those rivers; and it seems not inappropriate to offer by way of introduction a brief sketch of the early history of the Abbey to which these lands originally belonged. The materials for such a sketch are supplied by two papers communicated to our Society in 1888-89¹ and 1890-91,² and by a report by Sir William Fraser on the MSS. belonging to the Duke of Buccleuch and Queensberry, preserved in Drumlanrig Castle.³ The second paper is of special value, as it gives reference to the authorities upon which it is based; and the report not only deals with the history of the Abbey of Holywood, but gives some account of its abbots and commendators.

Not far from the parish church of Holywood there are eleven—there were formerly twelve—standing stones, which on the ordnance survey map are designated “The Twelve Apostles.” The stones are said to mark the site of a Druidical place of worship, and it was here that about the beginning of the eleventh century the hermit St. Congal had his cell and gave his name to the neighbouring oak wood—Dercongal—the oak wood of Congal. The name became attached to the surrounding district, and is found in documents of the thirteenth century. It was this sacred grove which gave its name (“sacrum nemus,” Haliwod) to the abbey built in later times. When or by whom the Abbey was founded we cannot

¹ “Some Notes on the Abbey of Holywood and on the Welshes of Colliestown and Craigenputtock,” by John Carlyle Aiken, *Transactions of the Dumfries and Galloway Natural History and Antiquarian Society*, Session 1888-89, pp. 110 ff.

² “Holywood Abbey,” by George F. Black, Ph.D., *ib.*, Session 1890-91, pp. 126 ff.

³ XV. Report of the Historical MSS. Commission, Appendix, Part viii., pp. 69 ff.

say with certainty. According to Fraser, the approximate date is "between 1120, when the order of the Premonstratensian monks, whose residence it became, was instituted, and 1154, when one of the bells of the Abbey, which now does service in the parish church, according to an inscription⁴ on it, was consecrated by the abbot, John Wriah." This inscription, however, has been read differently by James Barbour^{4a} as + I WELCH ABBAS SACR[INEMORE] ME FIERI FECIT A.D. [MILLESIMO] QUI[N]GE[NTESIM]O V., a more likely transcription.

In the reign of King Robert the Bruce, Edward Bruce, his brother, founded a hospital and chapel within the precincts of the Abbey; and, in 1372, Archibald, Earl of Douglas, by a charter of confirmation⁵ gave his lands of Corsmychelle and Trequere for the support of the institution. He ordained that a resident chaplain should be appointed at a salary of twenty merks, and prescribed his duties, and directed that the rest of his provision should be devoted to the use of the old, the feeble, the infirm, and the poor of Christ who had been received and who had no other means of sustenance. As soon, however, as these weaklings recovered strength sufficient to enable them to work, they were bound to give place to others who had greater need of assistance.

Of the early abbots little is known. Mr Carlyle Aitken includes among them Johannes de Sacro Bosco, the author of the "De Sphera," and presumes that "this famous abbot was buried at his own abbey of Holywood." What are the grounds for this statement I have not discovered. Dempster⁶ says that John "fuit canonicus in monasterio Nithisdalie vulgo Haliwod," and Keith⁷ makes the guarded statement that "he is thought by several persons of learning to have been a pro-

⁴ Reproduced in Riddell's MS. vii. 211.

^{4a} *Transactions of the Dumfries and Galloway Natural History and Antiquarian Society*, Session 1897-8. p. 85.

⁵ *Reg. Magn. Sig.*, i., No. 483.

⁶ *Historia Ecclesiastica Gentis Scotorum* (Bannatyne Club), Edinburgh, 1829, ii. 579.

⁷ *A Large New Catalogue of the Bishops of the Several Sees within Scotland*, Edinburgh, 1755, p. 244.

fessed religious of Holywood.' It seems to be matter of general agreement that he died and was buried at Paris.

In 1296 Dungall, Abbot of Holywood, appears in the Ragman's Roll. In the fifteenth century unnamed abbots of Holywood are mentioned as being present in Parliament;⁸ and, according to Mr Carlyle Aitken, Nicolas Welsh was abbot in 1480. In 1522 John, Abbot of Holywood, granted to Robert, Lord Maxwell, a charter of the £16 land of Keyr and other lands in the lordship and barony of Holywood,⁹ and in 1541 William, Abbot of Crossraguell and commendator of Holywood, granted a lease of the 40s land of Bracoch.¹⁰ In 1555 Thomas Campbell was commendator of Holywood.¹¹ He adhered to the cause of Queen Mary after her escape from Loch Leven. For this he was found guilty of treason, and sentence of forfeiture was passed upon him. But this sentence must have been relaxed to some extent at least, as he is afterwards found disposing of the teind sheaves of the abbey.¹² He is referred to as deceased in a document dated 28th April, 1580.¹³ Fraser mentions two later commendators—James Johnstone, the hero of Dryffe Sands, and John Johnstone, advocate, and states that the latter was the last commendator of Holywood.¹⁴ But in an instrument dated 9th April, 1617,¹⁵ we find the fact noted that Sir Francis Forrester of Carden resigned the post.

It is with Thomas Campbell, however, that we are here concerned, as it was during his tenure of office that the lands to which the abstracts refer were alienated from the Abbey.

No chartulary of the Abbey is known to exist, but the documents referred to in Fraser's Report, in the M.S. Abbreviates of the charters of Kirklands in the Register House, Edinburgh, and in the Register of the Great Seal, show that the Abbey possessed many lands in the parishes of Dunscore

⁸ Fraser's Report, p. 70; Dr Black's Paper, p. 127.

⁹ Fraser's Report, p. 71.

¹⁰ Dalgoner Charter Chest.

¹¹ Precept of Sasine, dated 31st August, 1555 (Dalgoner Charter Chest).

¹² Fraser's Report, pp. 70, 75. See Folio Acts, iii., 54.

¹³ Fraser's Report, p. 70.

¹⁴ Fraser's Report, p. 70.

¹⁵ *Registrum Magni Sigilli*, No. 1817.

and Holywood. It is to be kept in view that it was not until the early years of the seventeenth century that a portion of Holywood was erected into the parish of Keir. It was in that portion that the first dispersal of the Abbey lands began. The documents here abstracted, which were granted by the commendator and convent of the Abbey, are later in date.

The Edgars seem to have been a numerous clan in this part of Dumfriesshire. We hear of Edgars as landholders in Glencairn and as tenants and feuars of the Abbey of Melrose in Dunscore; and we find charters by the commendator of Holywood of lands in Holywood to many members of the family—of the lands of Dowblochhillis to Andrew Edgar, burgess of Dumfries, in 1559; of Barnhill and Makwatterik to Robert Edgar in Holme and Catherine Watsoun, his spouse, in 1557; of a £1 land of the Mainis, &c., to Robert Edgar in Cristinhill, in 1569; and of 20s of the 40s lands of Gullihill and 10s of the 20s lands of Aischieholm to Sir William Edgar, chaplain, David Edgar, his brother, and James Edgar, their cousin, in 1556.¹⁶ With regard to the lands last mentioned, it may be observed that Sir William Edgar and James Edgar had died before 1580, and apparently David Edgar had become sole proprietor.¹⁷ They passed from him to his son Andrew, and from him to his son David, who disposed them to John Young¹⁸ The other 20s lands of Guilliehill were in 1577 the subject of a charter by the commendator in favour of Robert Maxwell of Cowhill and Elizabeth Maxwell of Tynwald, his spouse, on the resignation of John Maxwell, brother of umquhile William Maxwell of Gulliehill, with consent of Beatrix Maxwell, his spouse,¹⁹ and in 1614 they passed from the Maxwell family to the above mentioned John Young.²⁰ It would take up too much space to trace the devolution of the other lands from the Abbey to the Young

¹⁶ *MS. Abbreviate of the Charters of Kirklands*, i. 116, 117; ii. 101, 105.

¹⁷ See Charter of Confirmation, dated 30th May, 1581 (*Reg. Mag. Sig.*, No. 194).

¹⁸ Abstract 24.

¹⁹ See Charter of Confirmation, dated 18th November, 1580 (*Reg. Mag. Sig.*, No. 43).

²⁰ Abstract 34.

family; but it may be noted that the two half-merklands of Bromerig and Spaird, which were acquired by John Young from John Thomsoun in 1612,²¹ had passed to Thomsoun from John Carnis in 1609, and that they had been granted to Robert Carnis, presumably John's predecessor, by the commendator.

1.

Charter by Thomas, perpetual commendator of the Monastery of Holyvod (" Sancti Nemoris ") and the convent thereof, of the Premonstratensian order, diocese of Glasgow, granting to George Narnis, son of John Narnis, residing in Bromerig, his heirs and assignees, the forty penny land of old extent of Over Bromerig with the pertinents, which lands the said John Narnis occupied at the time of the making of the charter in portions, i.e., in rundaill among the lands of Adam Narnis of Bromerig, lying in the barony of Halyvod in the sheriffdom of Drumfres, bounded on the north by certain of the monastery's lands of Bromerig occupied by Thomas Welche in Bromerig, on the east by the stanks (" stagna ") of Nith, on the south by the lands of Henry Edzer of Nether Bromerig, and on the west by " nostram magnam labinam " (marsh), of all of which the annual rental amounted to five shillings and seven pence of Scots money, to be held of the granters and their successors for an annual payment of five shillings and seven pence with twelve pence augmentation and duplication on entry of successors, under reservation of miltures, mills and their sequels, courts and their issues. Signed and sealed at the Monastery, 9th February, 1557-58, by Thomas, commendator sancti nemoris. Witnesses: John Welche, sub-prior sancti nemoris; William Hanying, John Logan, David Welche, John Carrele, and Thomas Roxburgh.

2.

Instrument of sasine in favour of Henry Edzer of Brwnrig of a merkland of Brwnrig and of a five shillingland of Langmyreside with the fishings on the water of Nith lying next the lands on a precept of sasine by the commendator and convent

²¹ Abstract 20.

of the Abbey of Holywood, dated 1555. The instrument of sasine is dated 1st September, 1557, and is much defaced.

3.

Charter by Thomas, perpetual commendator of the Monastery of Halyvod and the convent thereof of the Premonstratensian order, diocese of Glasgow, granting to Adain Narnis, residing in the toun of Terreglis, in free tenement for his life, and Thomas Narnis, his son and heir apparent, his heirs and assignees, a half mark of the land of Brwnrig, with the pertinents, lying in the parish of Halyvod and sheriffdom of Drumfres, which formerly belonged to David Welche in Brwnrig, and which the said David with consent of Cristina Browne, his wife, resigned into the granter's hands as superior at Lincloude in favour of the said Adam Narnis and Thomas, his son and heir apparent, as above, on payment to the granters of ten shillings and five pence at two terms—the feasts of Pentecost and S. Martin in winter—with an annual augmentation of twelve pence and duplication on the entry of the heirs of the said Adam. Signed and sealed at the said Monastery on 20th May, 1559, by John Welche, sub-prior; William Hanyng, Arthur Hamilton, John Carrele, Thomas Roxburgh, John Logane, and David Welche.

4.

Precept of sasine by Thomas, perpetual commendator of the Monastery of Halivod, with consent of the convent thereof, to infest Adam Narnis, his heirs and assignees, in a forty pennyland of Bromerig of O.E., with its pertinents lying in the barony of Halivod and sheriffdom of Drumfres. Signed and sealed at the Monastery, 20th May, 1559, by John Welche, sub-prior. Witnesses: William Hanyng, Arthur Hamilton, John Logane, David Welche, and Thomas Roxburgh.

5.

Instrument of sasine on a precept by Thomas, perpetual commendator of the Monastery of Halivod of the Premonstratensian order and the convent thereof, to Andrew Branzane to give sasine to Adam Narnis and his heirs of a forty penny land

of Bromerig lying in the barony of Halivod and sheriffdom of Drumfres. Dated at the Monastery, 20th May, 1559. Signed by Thomas, commendator. Witnesses: John Welche, sub-prior; Thomas Roxburgh, William Hanyng, John Logane, Arthur Hamiltone, David Welche, and John Carrele. The instrument of sasine done on the ground, 23rd May, 1559. Witnesses: Robert Carnis, John Narnis, Robert Hynd, and Sir Patrick Loche, chaplain.

6.

Instrument of sasine on a precept of clare constat addressed by Thomas Campbell, perpetual commendator of the Monastery of Halivod and the convent thereof, to David Edzer in Guliehill, attorney in that part, to give sasine to Robert Edzer, son of umquhile Henry Edzer, and his heirs, of one merk of the lands of Brwnrig and a five shilling land of Langmyresyde with the fishings on the water of Nyth lying next the lands in the parish of Halivod and sheriffdom of Drumfres. Dated at the Monastery, 24th May, 1565. Witnesses: Robert Carnis in Brwnrig, Sir John Bryce, vicar of Drumfres, and Harbert Andersone, notary public. The instrument of sasine dated 11th April, 1570. Witnesses: David Maxwell, Nicholas Jackson in Guliehill, and John Edzer. Much defaced.

7.

Instrument of sasine on a precept of clare constat addressed by Thomas, perpetual commendator of the Monastery of Halivod, to David Hynd, to give sasine to David Welche, son of umquhile Thomas Welche in Brwnerig, of a half merk-land of Brwnerig now occupied by the said David lying in the barony of Halivod and sheriffdom of Drumfres. Signed and sealed at the said Monastery, 20th June, 1570, by Thomas, commendator. The instrument of sasine dated 15th June, 1571. Witnesses: John Welche, Robert Turing, John Edzar, John Carnis, and William Ctery.

8.

Procuratory granted by David Welche in Bromerig with consent of Cristina Browne, his spouse, to John Brice, vicar

of Drumfres, and William Heris in Bochanland (?), to resign into the hands of Thomas, commendator of the Abbey of Halywode, as lord superior, the half merkland of Brwnerig of O.E. with the pertinents lying within the parish and barony of Halywode and sheriffdom of Drumfres in favour of Adam Narnis, in free tenement and liferent, and Thomas, his son, and his heirs and assignees. Dated 19th June, 1576. Witnesses: William Edgar, George Cunyghame, chaplain, and William Heris in Barnyhill.

9.

Instrument of sasine by David Welche in Brownerig to Adam Narnis, residing in Terreglis, and Thomas Narnis, his son and heir apparent, of a forty penny land of O.E. of his half merkland of Brwnerig in warrandice of the disposition of the other forty penny land of the said half merkland to the said Adam in liferent and the said Thomas in fee. Dated 15th April, 1575. Witnesses: Gilbert Heres in Barnyhill, John Nairnis, senior, and John Nairnis, junior, in Brwnerig.

10.

Charter by Thomas, perpetual commendator of the Monastery of Haliwode and the convent thereof, granting to Adam Nairnis residing in the toun (villa) of Terreglis, in liferent, and Thomas Nairnis, his son, his heir apparent, and his heirs and assignees in fee, the half of a merkland of O.E. of Bromerig with the pertinents, lying in the parish of Haliwode and sheriffdom of Drumfres, which half merk David Welche had possessed in fee, and had with the consent of Cristina Browne, his spouse, resigned into the hands of the said commendator in favour of the said Adam and Thomas. Reddendo to the granters and their successors the same as before the said resignation, with precept of sasine directed to Gilbert Heres in Barnyhill to infest the said Adam and Thomas. Dated at the Monastery, 1576. Signed: Thomas, commendator. Witness: Quentigern M'Gee.

11.

Obligation by Thomas Edzer in Fuirid in which he grants

that he has received 100 merks from David Stot, and binds himself to infest the said David in an annual rent of 9 merks to be uplifted at two terms—Whitsunday and Martinmas—out of the five shilling land of Nether Bromerig. Dated 4th July, 1577. Witnesses: Thomas Edzer of Holme, John Welche in Burnefute, and Chirstie Cunynghame, burges of Drumfres.

12.

Tack by Thomas, commendator of the Abbey of Haliwod and the convent thereof, to Adam Narnis in the towne of Terreglis, and his heirs and assignees, of the parsonage and vicarage teinds of a merkland of Brwmerig with the pertinents, occupied by the said Adam Narnis, David Welche, and George Narnis, within the barony of Haliwod and sheriffdom of Drumfres, for five years from Lammas next, and after the ish for another five years, and so on from five years to five years, until nineteen years complete, for payment of twenty shillings yearly. Signed and sealed at the Abbey, 17th June, 1577, by Thomas Campbell, commendator. Witnesses: John Schortrig in ane holme, John Dowgane in Langabir, Sir John Brice, vicar of Drumfres, David M'Ghie, notary, and Hew Campbell.

13.

Tack by Thomas, abbot of Haliwod and the convent thereof, to Adam Narnis and Robert and Thomas, his sons, of a forty penny land of Bromrig, of O.E., lying in the barony of Haliwod and sheriffdom of Drumfres, for nineteen years from the next Whitsunday for payment of forty pennies by equal portions, with tilling, harrowing, garsome, fowls, duties, and due services. At Haliwod, 24th February, 1554-55. Signed, Thomas, commendator. Witnesses: Thomas Roxburgh, sub-prior; John Logan, John Litile, John Welche, William Hanyng.

14.

Precept furth of the Chancery to infest Robert Edzer, son of umquhile Robert Edzer of Bromerig, in the one merkland of Bromerig and the five shilling land of Langmyresyde of O.E. with the pertinents, together with the fishings of the water of Nyth, adjacent thereto, lying in the barony of Haly-

wode and sheriffdom of Drumfres, as nearest heir of the said Robert Edzar, his father. Dated 25th November, 1621.

15.

Instrument of sasine by Thomas Edzar in Fuir, feuer of the lands underwritten. In consideration of the discharge of certain sums and duties intromitted with by him and uplifted out of a forty penny land pertaining to Jonet, Bessie, and Katherine Nairnis, daughters of umquhile John Nairnis, some time in Over Brumerig, which forty pennyland lies within the parish of Halywod and sheriffdom of Nythisdaill, and likewise of the friendly love which he bore to the said Jonet, the said Thomas passed to the said forty penny land and there gave sasine thereof *propriis manibus* to the said Jonet, her heirs and assignees. Done on the ground, 10th March, 1608. Witnesses: Thomas Edzar in Holme, Herbert Edzar in Castianhill (Cristinhill), John Cairnis in Brumerig, Richard Edzar, son of the granter, and John Welshe in Burnefutt.

16.

Instrument of sasine on a precept under the Great Seal directed to Thomas Edgar in Holme to give sasine to Thomas Edgar in Fuir, in conjunct fee and to his heirs procreated and to be procreated and assignees whomsoever, of the forty penny lands of Over Bromerig O.E. with the pertinents, bounded by certain lands of Bromerig, formerly occupied by umquhile Thomas Welshe in Bromerig on the north, by the water of Nith on the east, by the lands of Henry Edzar of Nether Bromerig on the south [], "nostram magnam labinam" on the west, lying in the barony of Haliwode and sheriffdom of Drumfres. Precept dated at Edinburgh, 30th March, 1594. Instrument of sasine dated 10th March, 1608. Witnesses: Herbert Edzar in Christinhill, John Cairnis in Bromerig, Richard Edzar in Furd, and John Welshe in Burnefuitt.

17.

Obligation by which John Carnis of Brumrig in consideration of certain sums paid by John Thomsone, natural son of umquhile John Thomsone in Milheid, binds and obliges him-

self, his heirs, and assignees to infeft the said John Thomsone, his heirs and assignees, without any kind of reversion, in his merkland of Brumrig and specially in his half merkland in Brumerig and half merkland in Speird, presently occupied by Hew Callane and Thomas Edzar, lying in the parish and barony of Holywod and sheriffdom of Drumfreis, and constitutes procurators to resign the lands in favour of the said John Thomsone, his heirs and assignees. Dated at Drumfreis, 20th June, 1609. Witnesses: John Maxwell, son of John Maxwell of Kirkconhel; John Wallace in Carzeild; John Gledstanis, merchant, burges of Drumfreis; and Nicol Thomsone.

18.

Disposition by John Nairnis in Bromerig with consent of Elizabeth Makynnell, his spouse, to John Wilsoun in Bromerig, his heirs and assignees. In consideration of a sum paid he dispones to the said John Wilsoun a forty penny land of his lands of Bromerig, presently occupied by the said John Wilsoun, lying in rundaill with another forty penny land, pertaining to Jonet Nairnis tocher, together with the house wherein the said John Wilsoun presently dwells, &c., &c., held in feu farm of the commendator and convent of Haliewode, lying in the parish and barony of Haliewod and sheriffdom of Drumfreis, to be held of the granter, his heirs and assignees, in blench farm on payment of a penny Scots, and relieving him of feu maills, &c., due to the superior. The granter appoints procurators for resigning the lands in favour of the disponee. Dated at Bromerig, 7th November, 1610. Witnesses: James Raa in Drumfreis; Thomas Edzar in Bromerig; James Wilsoun, brother to the said John Wilsoun; and Edward Callane, son of umquhile John Callane.

19.

Instrument of sasine by John Nairnis in favour of John Wilsoun of the lands specified in No. 18. Date and witnesses the same as in No. 18.

20.

Charter by John Thomsone in Mylneheid, natural son of umquhile John Thomsone in Mylneheid, feuer of the lands

specified below, in implement of a letter of alienation to John Zoung of Guliehill, his heirs male and assignees, granting to the said John Zoung and the heirs male of his body, whom failing to John Zoung, second son of Patrick Zoung, chirurgion, burgess of Drumfreis, and the heirs male of his body, whom failing to the nearest male heirs of the said John Zoung of Guliehill, bearing the surname of Zoung, and his assignees whomsoever, heritably and without reversion, the two half merklands of Bromerig and Speird of O.E. lying in the barony of Halywod and sheriffdom of Drumfreis, formerly occupied by umquhile Robert and John Cairnis, and now by Hew Callane, Thomas Edzer, and Elizabeth Grahame, widow, with the salmon fishing thereto belonging, to be held of the granter and his heirs and assignees for payment of one penny Scots in name of blench farm, with precept of sasine. Dated at Bromerig, 16th December, 1612. Witnesses: Thomas Edzare of Fuirid; Richard Edzare there; Patrick Zoung, chirurgion; Clement Edzar in Guliehill; David Edzare, son of umquhile Andrew Edzare of Guliehill; Thomas Edzer and Hew Callane in Bromerig.

21.

Charter by the same granter granting to the same grantee with the same destination the same lands on the same date before the same witnesses. Presumably the holding is of the superior. The document is partly obliterated.

22.

Charter by Thomas Edzare of Fuirid, son and heir of umquhile George Edzare of Fuirid, proprietor of the lands under specified, with consent of Isabella Thomesoun, his spouse, in implement of a contract between him and Patrick Young, chirurgion, burgess of Drumfreis, dated at Drumfries, 16th (month omitted), 1612, granting to the said Patrick Young and John, his second son and the heirs male of his body, whom failing to the male heirs whomsoever of the said Patrick and his assignees, an annual rent of 100 merks to be uplifted at the feasts of Pentecost and S. Martin in winter, out of the merkland of Nether Bromerig, for payment of a silver penny in name of blench farm, with precept of sasine.

At Drumfreis, 19th December, 1612. Witnesses: John Ranyng, burgess of Drumfreis; John Maxwell in Carinselloch; George Maxwell, writer; and Davil Neilsoon in Drumfreis.

23.

Charter under the Great Seal of the two half merklands of Bromerig and Speird of O.E. with the salmon fishing belonging thereto, lying in the parish of Halliwod and sheriffdom of Drumfreis, occupied formerly by Robert and John Carnis and now by Hew Callane and Thomas Edzar there, in favour of John Thomsoun, natural son of umquhile John Thomsoun in Mylneheid, his heirs and assignees, for payment of thirty-two shillings and four pence together with six shillings and eight pence for the said salmon fishing, with duplicand on the entry of successors. At Edinburgh, 7th December, 1612. Witnesses: James, Marquis of Hamiltoun; [] George, Earl Marishall, lord Keyth, [], Marshall, Alexander, Earl of Dunfermling, lord Fyvie and Urquhart, Chancellor [], Hamilton of Bynis, secretary, [] do Cokburne, junior of Clerkingtoun, keeper of the Privy Seal, Alexander Hay [] of Ormistoun, clerk of Justiciary, knights, and Master John Scott of Scottistarvit, director of Chancery.

24.

Disposition of David Edzar of Gulliehill, son and heir of umquhile Andrew Edzar of Gulliehill, feuer of the lands under specified, in consideration of certain sums of money paid, without reversion, to John Young, notary, burgess of Drumfreis, and to the heirs male of his body, whom failing to John Young, second son of Patrick Young, chirurgion, burgess of the said burgh, the elder brother of the said John Young, notary, and to the heirs male of the body of the said John Young, younger, whom failing to the heirs and assignees whomsoever of the said John Young, notary, his twenty shilling land of the forty shilling land of Gulliehill, of his ten shilling land of the twenty shilling land of Eschieholme, and his six shilling and eight penny land of Stellintre *alias* Napartoun, lying in the parish, barony, and lordship of Haliewod and sheriffdom of Drumfreis, to be held of the granter, his heirs and assignees, for

payment of one penny, if asked for only, and of the feu farms and duties to the superior, excepting always an annual rent to David Welshe of Stepfuir, burges of Drumfries, out of the lands of Gulliehill, under reversion of twelve score merks and a five years' tack of Gulliehill and Eschieholme to Clement Edzar. Dated at Drumfreis, 20th August, 1612. Witnesses : Robert Maxwell, Patrick Young, James Newall, smith, John Newall, and John Mortoune.

25.

Contract of wadset between Thomas Edzer of Fuir, son and heir of umquhile George Edzar of Fuir, heritable proprietor of the lands under specified, with consent of Issobell Thomsons, his spouse, and Patrick Young, chirurgion, burges of Drumfreis, by which Edzar and his spouse granted them to have borrowed one thousand merks from Young. They disponded to Patrick Young and John Young, his second son, and to the heirs male of the body of the said John Young, whom failing to the said Patrick Young's heirs male and assignees whomsoever, an annual rent of one hundred merks to be uplifted at Whitsunday and Martinmas out of the lands of Nether Bromerig, the five shilling land of Eschieholme and the half of the Isle called Kentis Isle, lying in the barony and parish of Halywod and sheriffdom of Drumfreis. The disponees bind themselves to grant a letter of reversion. At Drumfreis, 16th November, 1612. Witnesses : John Carutheris of Rammerscallis ; David Arnote of Chapell ; Thomas Carrock, messenger ; and Clement Edzar in Gulyhill.

26.

Contract between David Edzar of Gulliehill, son and heir of umquhile Andrew Edzar of Gulliehill, heritable proprietor of the lands under specified, and John Young, notary, burges of Drumfreis, by which the former disponded, without reversion, in consideration of certain sums paid, a twenty shilling land of the forty shilling lands of Gulliehill, a ten shilling land of the twenty shilling lands of Eschieholme, and the six shilling and eight penny land of Stellingtrie *alias* Napertoun, lying within the parish, barony, and lordship of Halywod and sheriffdom of

Drumfreis, to the said John Young and the heirs male of his body, whom failing to John Young, second son of Patrick Young, chirurgeon, burgess of Drumfreis, the elder brother of the said John Young, notary, and to the heirs male of the body of the said John Young, junior, whom failing to the heirs and assignees of John Young, notary, to be held of Edzar, his heirs, assignees, and successors, for payment of three pounds and twenty pence for the lands of Gulliehill and Eschiholm, of twelve shillings for the lands of Stellingtrie, to be paid at two terms, Whitsunday and Martinmas. Edzar binds himself to resign the lands in favour of the disponees. Reservation to the heirs of umquhile William Cunynghame in Lincludene of an acre of land of the lands of Eschieholme, which they presently possess, until they be repaid the sum of eighteen pounds; and reservation of the reversion and redemption of the lands of Gulliehill from David Welshe, and of the tack of Gulliehill and Eschieholme to Clement Edzar. At Drumfreis, 20th August, 1612. Witnesses: Robert Maxwell, brother of John Maxwell of Conhaithe; Patrick Young, chirurgeon; Cuthbert Cunynghame, notary; Cuthbert Cunynghame, his son; John Mortoun, writer; James Newall, smith; and John Newall and William Hanyng, notaries.

27.

Precept under the Privy Seal to infest John Thomsone in Mylneheid, natural son of John Thomsone in Mylneheid, in two half merklands in Bromerig and Speird, with the pertinents, together with the salmon fishing in the water of Nyth called Carnisskar, lying in the barony of Halywod and sheriffdom of Drumfreis, formerly occupied by umquhile Robert and John Cairnis, and now by Hew Kalane and Thomas Edzar. At Edinburgh, 4th December, 1612.

28.

Instrument of sasine by John Nairnis in Terreglis, proprietor of the half merkland of Bromerig, lying within the barony and parish of Halywod and sheriffdom of Drumfreis (which formerly belonged to umquhile Thomas M'Sche, "officiarius," and afterwards to umquhile David M'Sche, his

son, and by his disposition to umquhile Adam Nairnis, and then to umquhile Thomas Nairnis, his son, father of the said John, and then to the said John himself), in favour of James Wilsone in Beoquhane in liferent and Andrew Wilsone, his son, his heirs and assignees. Dated 13th November, 1612. Witnesses : William Thomsone in Drumfreis; John Makynnell there; James Wilsone in Bromerig; and George Maxwell, writer.

29.

Thomas Edzar of Mertingtoun, with consent of Jonet Edzar, his spouse, having borrowed three hundred merks from Gilbert Makquhane, burgess of Drumfreis, and Marie Thomsoun, his spouse, dispones to the said Gilbert and Marie and the heirs of their bodies, whom failing to the nearest heirs of the said Gilbert and his assignees an annual rent of four score pounds to be uplifted at Whitsunday and Martinmas out of his merkland of the lands of Mertingtoun of O.E. lying in the barony and parish of Halywode and sherifffdom of Drumfreis. The disponer binds himself to infest his disponees, and they on their part bind themselves to grant to him a letter of reversion. Dated at Drumfreis, 9th January, 1613. Witnesses : Thomas Edzer of Holme; John Maxwell in Carnselloch; William Makynnell in Auchinacht; Padli Raa, burgess in Drumfreis; and George Maxwell, writer.

30.

Thomas Edzar in Mertingtoun, with consent of Jonet Edzar, his spouse, having borrowed twelve hundred merks from Gilbert Makquhane, burgess of Drumfreis and Marie Thomsone, his spouse, dispones an annual rent of four score pounds as in No. 29. Same date and witnesses.

31.

William Thomsoun, sometime in Terreglis, and now in Drumfreis, on the narrative that he was infest in a half merkland of the lands of Bromerig, lying in the parish of Haliwod and sherifffdom of Drumfreis, upon the reversion of two hundred merks, in terms of his sasine thereof, under the subscription of Cuthbert Cunynghame notary, dated 3rd

February, 1606, and that umquhile Thomas Nairnis and John, his son, and James Wilsoun in Beoquhan, had assigned to him and his son their rights in the said merkland, for sundry causes renounces his infeftment in favour of the said James Wilsoun and Andrew Wilsoun, his son. Dated 6th January, 1613. Witnesses: John Nairnis in Terreglistoun; George Maxwell, writer; Herbert Cunynghame and David Neilsoun in Drumfreis.

32.

Disposition by Thomas Edzar of Fuirid, proprietor of the lands under specified, with consent of Issobell Thomsone, his spouse, in favour of Patrick Young, chirurgion, burgess of Drumfreis, and Helene Newall, his spouse, and the survivor, and to John Young, their second son, in fee, and the heirs male of his body, whom failing to the said Patrick Young, his nearest male heirs whomsoever bearing the surname of Young, without reversion, in consideration of certain sums paid to him of his five shilling land of Eschieholme and his merkland of Nether Brumerig, together with three roods of land commonly called Kentischree, sometime occupied by George Edzar in Nether Brumerig, lying in the parish of Haliwod and sheriffdom of Drumfreis, containing procuratory of resignation. At Dumfreis, 26th March, 1614. Witnesses: John Thomsone, servant to John Young, notary; John Newall, servant to William Young; John Curror, minister at Lochrutene; and John Wair.

33.

Disposition by Archibald Maxwell of Cowhill, proprietor of the lands under specified, in favour of John Young, notary, burgess of Drumfreis, his heirs male and assignees, in consideration of certain sums paid to him, without reversion, of his lands of Andro's Isle of O.E., with the tenement, extending to [] roods or thereby that is part and pertinent of the Mains of Linclowdene, lying on the north side of the water of Clowden, within the regality of Linclowdene and sheriffdom of Drumfreis, containing procuratory of resignation. At Drumfreis, 13th June, 1614. Witnesses: John Maxwell of Conhaith (?); Robert and Charles Maxwell, his brother; and John Thomsone, servant to the said John Young.

34.

Disposition by Archibald Maxwell of Cowhill, proprietor of the lands under specified, in favour of John Young, notary, burghess of Drumfreis, his heirs male and assignees whomsoever, without reversion, for a certain sum paid of his twenty shilling land of Gullyhill of O.E., lying within the parish of Halywode and sheriffdom of Drumfreis, containing procuratory of resignation. Dated 13th June, 1614. Witnesses: John Maxwell of Conhaith (?); Robert and Charles Maxwell, his brother; and John Thomsone and Robert Maxwell.

35.

John Mureheid in Gullihill, bailie of John Young, notary, burghess of Drumfreis, having in his hands a charter of sale containing a precept of sasine, dated 8th June, 1615, gave sasine to James Young, senior, chirurgeon, burghess of Drumfreis, his heirs and assignees, of forty shillings of the lands of Gullihill, ten shillings of the lands of Eschieholme, and one merkland of Bromerig, with the land called Cairnis Skar and Androis Isle, lying in the parish of Haliwod and sheriffdom of Drumfreis. Dated 5th October, 1616. Witnesses: Patrick Young, chirurgeon, burghess of Drumfreis; John Craik, merchant, burghess of the said burgh; Walter (?) Harper in Gullihill; Thomas Edzer in Fuirid; and Thomas Edzer in Bromerig.

36.

(a)

Submission by John Young, notary, burghess of Drumfreis, and Agnes Cairnis, relict of umquhile William Maxwell, natural son of umquhile Thomas Maxwell of Carnsalloch, to Herbert Maxwell of Kilbane and Adam Corsane, burghess of Drumfreis, arbiters chosen by the said John Young, and Maxwell of Carnsalloch and Robert Cunynghame, notary, burghess of Drumfreis, arbiters chosen by the said Agnes Cairnis, and Thomas Ramsay, minister of Drumfreis, oversman chosen by both parties, anent the right and title to the third part of the two half merklands of Bromerig and Speird claimed by both parties and certain other questions

between them. Dated at Drumfreis, 18th March, 1616. Witnesses: John Kennedie of Hallath; John Jardine of Huke; Patrick Thomsoun, servant to the said Maxwell of Carnsalloch.

(b)

Decreet arbitral following upon the above submission pronounced by the oversman to the effect that the said Agnes should, as heir of umquhile Robert Cairnis, her father, her mother being Bessie Grahame, dispone to the said John Young, his heirs and assignees, the said lands, and John should pay two hundred and fifty pounds to her in liferent and to her sons, John and William Maxwell, their heirs and assignees, Adam Corson, burgess of Drumfreis, to be his cautioner for payment. Dated 26th March, 1616. Witnesses: Robert Phillope, notary, and John Thomsoun, his servant.

37.

Disposition by David Edzar, grandson and heir apparent of umquhile David Edzar in Gullihill, in consideration of certain sums paid to him by John Young, sheriff clerk of Edinburgh, in favour of the said John Young, his heirs and assignees, of an annual rent of ten pounds, which was to have been uplifted by the granter's grandfather out of the seven shilling land of the land of Newtoun, called Morranisland, belonging to umquhile Robert Maxwell of Cowhill, and lying within the parish of Halywod and sheriffdom of Drumfreis. Edzar binds himself to obtain infetment as heir of his grandfather by precept of clare constat to be granted by [?] Maxwell of Cowhill, brother son and heir of the said umquhile Robert Maxwell, and now superior of the said lands. Dated at Drumfreis, 2nd August, 1616. Witnesses: William Glendoning of Laggane; Patrick Young, chirurgion, burgess of Drumfreis; Stephen Young, messenger; and William Fareis.

38.

Instrument of sasine on a precept of the chancery in favour of Robert Edzar of Bromerig as heir of umquhile Robert Edzar of Bromerig, his father, in the one merkland of Bromerig and five shilling land of Langmyresyde, together with the

fishing of the water of Nith adjacent to the said lands, in the parish of Halywod and sheriffdom of Drumfreis. Dated 5th February, 1616. Witnesses : James Douglas of Mouswald; John Douglas, servant to the lord of Drumlangrig; James Douglas in Ersmortoun (Desmortoun ?); William Maxwell in Cargane; and Thomas Macburnie, notary public, burges of Drumfreis.

39.

Charter under the Great Seal by which the King granted *de novo* to John Young, notary, burges of Drumfreis, his heirs male and assignees, a twenty shilling land of the forty shilling land of Gullihill, formerly belonging to David Edzar, and occupied by him and Richard Edzar, his tenant, a ten shilling land of the twenty shilling land of Aschieholme, formerly belonging to the said David, and occupied by him and the said Richard, the six shilling and eight penny land of Stellingtrie *alias* Napertoun, the two half merklands of Bromerig and Speird, formerly occupied by umquhile Robert Cairnis and John Cairnis, his son, and afterwards by Hew Cannan, Thomas Edzar, and umquhile Elizabeth Grahame, together with the fishings of the water of Nith adjacent thereto, commonly called Cairnis Skar, which formerly belonged to John Thomesoune in Mylneheid, natural son of umquhile John Thomesoune in Mylneheid, and another twenty shilling land of the forty shilling of Gullihill, which formerly belonged to Archibald Maxwell, now of Cowhill, previously occupied by umquhile John Maxwell of Gullihill, and thereafter by John Mureheid and the said John Young, lying within the barony of Haliwod and sheriffdom of Drumfreis, all of which the said David Edzar, John Thomesoune, and Archibald Maxwell resigned into the King's hands as immediate superior, being part of the property and temporality of the Abbey of Haliwod annexed to the Crown, in favour of the said John Young, his heirs male and assignees. Reddendo, for the first portion of Gullihill and for Aschieholme, £3 12d; for Stellingtrie, 12s; for Bromerig and Speird, 32s 4d; for Cairnis Skar, 6s 8d with an augmentation of 3s 4d; for the other portion of Gullihill, 44s 8d with an augmentation of 3s 4d—in all £8 4s 2d, to be paid to the

King in place of the Abbey, with duplication on the entry of heirs and the keeping of ("observando") three courts of the said Abbey. Dated at Edinburgh, 4th April, 1617. Witnesses: James, Marquis of Annandale, earl of Arran, lord Evane, George, earl Marischall, Marshall of the kingdom, Alexander, earl of Dunfermling, lord Fyvie and Urquhart, chancellor, Thomas, lord Binning, secretary, Sir Richard Cokburne, younger of Clerkingtoun, keeper of the Privy Seal, Sir George Hay of Nether Liff, clerk of the Rolls and Council, Sir John Cokburne of Ormestoune, clerk of Justiciary, knights, and Master John Scott of Scottistarvit, director of chancery.

40.

Ratification by John Cairnis, son and heir of umquhile Robert Cairnis in Bromerig, of a disposition of his half merkland of Brumerig and Speird, lying in the parish of Halywod and sheriffdom of Drumfreis, in favour of John Thomsoun, natural son of John Thomsoun of Milnheid, his heirs male and assignees. Dated at Gulihill, 25th May, 1617. Witnesses: John Mureheid and William Fareis, William Edzar in Holme, and David Mureheid, younger.

41.

Instrument of Renunciation and upgiving by John Mureheid in Gulyhill, tenant and possessor "in halff manure"* with John Young of Gulyhill of the twenty shilling land thereof, lying within the parish of Halywod and sheriffdom of Drumfreis, and of the lands anent Androis Ile, lying within the parish of Terreglis and Stewartry of Kirkcudbright, in favour of the said John Young, his heirs and assignees, as from Whitsunday next to come. Dated at Drumfreis, 11th April, 1618. Witnesses: Edward Maxwell in Burnefit, Robert Hutcheon in Holme, Adam Newall, writer; and Patrick Young, chirurgeon.

42.

Gilbert M'Quhen, merchant and burges of Dumfries, with consent of Marie Thomsone, his spouse, on the narrative that he and his said spouse had lent a thousand pounds to

* "Manure" means "management."

Thomas Edzear of Mertingtoun, and Janet Edzear, his spouse, on security of the lands of Mertingtoun, as set forth in a contract of wadset, dated at Dumfries, 27th May, 1617 (see No. 49 below), and that Edzear and his spouse had assigned their rights under the contract, including their rights of reversion, to George Sharpe, merchant, burges of Edinburgh, his heirs and assignees, and that the said George Sharpe had redeemed the lands, disposed the said lands to the said George Sharpe and his foresaids. Dated at Dumfries, 25th September, 1619. Witnesses: Nicoll Wollis, bakster; Harbert Moresone and James Sharpe, burgesses of Dumfries; and David Mureheid.

43.

Disposition by Edward Maxwell of Hillis of the merkland of Stellingtrie with half of the house presently possessed by Thomas Jaksone and [] Hanyng, relict of umquhile Edward Jaksone, his mother, in favour of John Young of Guliehill and the heirs male of his body, whom failing to John Young, his brother's son, and his heirs male, whom failing to the heirs and assignees whomsoever of the said John Young of Guliehill, with obligation to infest and procuratory of resignation. Dated 11th November, 1622. Witnesses: Edward Maxwell of Drumcoltrane; Robert Geillis, brother of John Geillis, []; John Maxwell, the granter's natural son; and [] Walter Young.

44.

Disposition by Patrick Young, chirurgeon, burges of Drumfries, with consent of James Young, his eldest son, and Robert and Patrick, his sons, for their interest, the said Patrick taking burden upon him for them, of the two merkland of Martingtoun, the five shilling land of Eschieholm, the merkland of Nether Bromerigfuird, and three roods of land called Kentisch eyle, in favour of John Young, second son of the disponer, his heirs and assignees. Dated at Drumfries, [] November, 1623. Witnesses: John Dowglas of Killiewarren; James Maxwell [], writer; Mr John Corsane, Provost of Drumfries; Mr [] Young, notary; John

Maxwell; James Scott (?), writer; Patrick Young; James Young []. Much defaced and partially obliterated.

45.

Instrument of sasine by James Wilsone in Beoquhen of his forty penny land of the lands of Bromerig, lying within the parish of Haliewod and sheriffdom of Drumfreis, in favour of John Wilsone, his son. Dated 19th April, 1624. Witnesses: John Makcorrie in Bromerig; George Welshe in Langmyrside; and James Burges, son of John Burges in Haliewod.

46.

Disposition by Jonet Nairnis, eldest daughter of umquhile John Nairnis, sometime in Ovir Bromerig, now spouse of Hew [] in Bromerig, of the forty penny land of Ovir Bromerig, lying in the barony and parish of Halywod and sheriffdom of Drumfreis, in favour of John Young, second son of Patrick Young, chirurgeon, in Drumfreis, and the heirs male of his body, whom failing, in favour of his own nearest heirs whomsoever, with obligation to infest and procuratory of resignation. Dated, 12th February, 1625. Witnesses: Mr Adam Raa, []; Thomas Jaksoun in Stewartoun; and David Baxter [].

47.

Discharge by George Sharpe, burges of Drumfreis, of the sum of two thousand merks, received from John Young, sheriff-clerk of Drumfreis, on behalf of Patrick Young, his brother, being the first term's payment of the sum of five thousand merks owed by the said Patrick for the disposition of the two merkland of Mairtingtoun. At Drumfreis, 1st June, 1625. Witnesses: John Geillis and John Spens, merchant burgeses of Drumfreis; John Gledstanis, notary; and Matthew Lockie.

48.

Discharge by George Sharpe of the balance of the five thousand merks for the disposition of the two merkland of Martingtoun (see No. 47), together with the tack of salmon fishing of the water of Nith set by Archibald Maxwell of Cow-

hill, and a tack of the teinds of the said lands, parsonage, and vicarage, set by John, earl of Annandale. At Drumfreis, 9th November, 1625. Witnesses : Homer Maxwell of Speddoch; John Craik, merchant; John Spens and Thomas Mychelstone, merchant burgesses; George Sharpe, and John Gledstanis notary.

49.

Contract of wadset in terms of which Thomas Edzar of Martingtoun, with consent of Jonet Edzar, his spouse, having borrowed one thousand pounds from Gilbert M'quhen, merchant burges of Drumfreis, and Marie Thomstone, his spouse, dispone to the said Gilbert and Marie and the survivor of them conjointly, and the heirs of their bodies, without reversion, his merkland of the lands of Martingtoun, with obligation to infeft, and an obligation by M'quhen to grant a letter of reversion and a tack for the space of the redemption for the payment of a hundred pounds yearly. At Drumfreis, 27th May, 1617. Witnesses : Adam Corsane, merchant burges in Drumfreis; Hew Ruill, John Craufuird, and Robert Murdoche in Drumfreis.

50.

Disposition by Catherine Welsche, spouse of Robert Maxwell of Corslayes, and one of the heirs portioners " on Lyffe " of umquhile David Welsche, burges of Drumfreis, sometime styled chamberlain of Lyncluden, and the said Robert Maxwell for his interest, and both taking burden for Sarra Welsche, the said Catharine's sister, and another of the said heirs portioners,, and William Calender, her spouse, in Newtoun in Ireland, for his interest, and David Welsche of Collistoun, of their half merkland of Candies Croft, lying in the parish and barony of Halywod and sheriffdom of Drumfries, in favour of John Maxwell, eldest son and heir apparent of Archibald Maxwell of Cowhill, his heirs and assignees and successors, in consideration of certain sums paid by him to them, to be held from the disponers, their heirs and successors of their immediate superior, with obligation to infeft and procuratory of resignation. At the Brigend of Drumfreis, 2nd November, 1636. Witnesses : William Maxwell of Killielong;

John Stewert, his servant; Edward Hamiltoun, son of William Hamiltoun, and John Henstie.

Considerable discussion followed the reading of this paper. Mr Michie mentioned that a number of most interesting relics had been found in the vicinity of Holywood during recent excavations. Mr Davidson intimated that on various occasions coins of the reign of Henry II. had been found in the churchyard; whilst Mr J. C. R. Macdonald contributed some new facts relating to the lands of Holywood and the feu duties thereof, all of which it is to be hoped may become the subject of future papers.

**The Authorship of the Second Volume of
"Nisbet's Heraldry."**

By ROBERT GLADSTONE, B.C.L., M.A.

It is, of course, well known that the second volume of Alexander Nisbet's famous *System of Heraldry*, which appeared in 1742, long after Nisbet's death (5th December, 1725), was not entirely his own.¹ The preface by the printer, Robert Fleming of Edinburgh, expressly states that the tract on Funeral Escutcheons was contributed by Robert Chalmers, and that subsequent treatises were taken (vaguely enough) from manuscripts in the Advocates' Library and from the writings of Sir George Mackenzie, and that the Commentary on the Ragman Roll, which concludes the volume, was the work of "a learned antiquarian," who, as internal evidence clearly suggests, was George Crawford, the author of the *Peerage of Scotland*.

A careful study of the whole matter was published by Mr Andrew Ross, Marchmont Herald, in 1892, in the beautiful

¹ The references throughout this paper are to the original edition of 1742. The date of Nisbet's death is taken from the Greyfriars Register (Edinburgh), cited on p. xlvi. of Mr Ross's work cited below. The date is wrongly given as 7th December in the *Dictionary of National Biography*.

book entitled *Alexander Nisbet's Heraldic Plates*.² Mr Ross complains that even the parts of the volume which are Nisbet's had been tampered with by some other person acting as editor. It is curious, however, that Mr Ross made no attempt to discover the identity of the "editor."³ He can hardly have been Robert Fleming, the printer, who signs the preface—though printers in those days, especially in Scotland, were often such learned men that ordinary editing would have been well within their powers. Heraldry and genealogy are, however, such essentially "specialist" subjects that it is most unlikely that Fleming was really the editor, and in part author, of the volume in question.

The object of the present paper is to draw attention to the great probability, if not certainty, that the editor-author was, in fact, Walter MacFarlan, the well-known genealogist and antiquary.

Shortly before the outbreak of the war the present writer was engaged upon the history of the Riddells of Riddell, and had, of course, studied the article on that family which, with a number of similar articles on Scottish families, forms a considerable portion of the second volume of *Nisbet's Heraldry*. We are informed by Fleming in the preface that these articles, or "Memorials" as they are called, were sent in by representatives of the various families, and internal evidence shows that they were either printed as they stood or were re-cast and edited, no doubt after due permission had been obtained. The question of the authorship of the "Memorial" on the Riddell family was answered by a manuscript, kindly lent to the pre-

² "Alexander Nisbet's Heraldic Plates," originally intended for his "System of Heraldry," lately found in the library of William Elliott Lockhart, Esq. of Cleghorn, now reproduced with introduction and notes, genealogical and heraldic, by Andrew Ross, *Marchmont Herald*, and Francis J. Grant, *Carrick Pursuivant*; 4to., Edinburgh (Waterston), 1892.

³ Mr Ross (now *Ross Herald*), in a letter to the present writer, dated 12th July, 1919, says:—"The deductions you make from the facts you have brought to light, with so much time and trouble, appear to me to be sound."

sent writer by the head of that family,⁴ consisting of twenty pages, written by George Crawford, already referred to. It was given in April, 1853, to Sir Walter Buchanan-Riddell by his kinsman and friend, John Riddell, the noted Scottish peerage lawyer, and a prefatory note states that it was found "*among the papers formerly belonging to the Laird of Macfarlane, a learned antiquary of the 18th century.*" That this manuscript article was written for the second volume of *Nisbet's Heraldry* is beyond question, as on page 12 of the manuscript Crawford writes as follows:—"Having shown the lustre and the greatness of this exceeding antient familie, we might proceed to deduce the line and descent of the succession of Riddle from those great men, their ancestors, down to the present times. But the brevity of this work, an Appendix to a System of Heraldry, would not weel admit such a long historical account of any one familie, however antient and great."

On comparing Crawford's manuscript article with the "Memorial" on the Riddell family printed in the volume in question, we find clear indications that it has been made use of; but it has been edited, no doubt by MacFarlan, almost beyond recognition, and, to tell the truth, immensely improved.

Some of these articles on Scottish families contain incontestable proof that they were written by Nisbet himself, for example:—"I have given the arms of these families in the first Part of this System" (page 15); "Notwithstanding what I have said of the ancient family of Moubray in the first volume of this work" (page 22); "In the first Part of the System of Heraldry I have given the arms of Sprewel of Couden" (page 25); "Whose coat of arms I have given in my first volume," and on the same page:—"In the first volume I gave the arms and alliances of the house of Whitefoord" (page 26)—"an account of which I here subjoin, having omitted it accidentally in the first Part of the System of Heraldry" (page 29); "which arms I gave before in the first volume" (page 31);

⁴ Sir John Walter Buchanan-Riddell, Bart., of Hepple, Rothbury, Northumberland.

“ in my former volume of this System ” (page 32); “ in my first volume of this System ” (page 33); “ In the first Part of this System, I brought the first of the name and family ” (page 38); “ In the first Part of this System of Heraldry I gave the arms ” (page 42); “ In the first volume I treated of the pearl ” (page 43); “ The arms of many of those cadets I have blazoned in the first volume (page 45); “ In the first volume of this treatise I gave a brief account ” (page 46); “ In the first volume of this System I gave a short account ” (page 49); “ In my first volume in the System of Heraldry ” (page 52); “ In my former volume of this System ” (page 53); “ In the first volume of this System of Heraldry I gave the arms ” (page 57); “ I have given before the arms of Inglis ” (page 60).

From this tedious list of extracts it is evident that as far as page 60 the articles on Scottish families were edited by Nisbet himself. From page 60 onwards (except for two articles on page 97, which were commenced by Nisbet and finished by another hand) the writing or editing of the articles appears to have been carried out by Walter MacFarlan. He was, as is well known, extremely proud of being the head of his family,⁵ and it was therefore natural enough that he should make a start (on page 61) with an elaborate article on “ M'Farlan of that Ilk,” ending up with “ Walter M'Farlan now of that Ilk.” He also clearly wrote the article on “ M'Farlane of Kirkcoun ” (pages 85-86), in which he refers to “ my account of the family of M'Farlane in this Appendix.”

Walter MacFarlan was also exceedingly proud of being

⁵ Boswell's *Tour to the Hebrides* (1st ed., 1785, p. 175, note):—
 “ The chief of a clan is denominated by his *surname* alone; . . . to prefix *Mr* to it would be a degradation. . . . My old friend, the Laird of M'Farlane, the great antiquary, took it highly amiss when General Wade called him *Mr* M'Farlane.” Possibly Dr Johnson gives MacFarlan's exact words in his *Journey to the Western Islands of Scotland* (1st ed., 1775, p. 358):—“ The late Laird of Macfarlane, an eminent genealogist, considered himself as disrespectfully treated if the common addition (*Mr*) was applied to him. ‘ Mr Macfarlane,’ said he, ‘ may with equal propriety be said to many; but I, and I only, am *Macfarlane*.’ ”

the representative in the male line of the Earls of Lennox, and we find accordingly that he has inserted in Crawford's Commentary on the Ragman Roll (at the end of the volume) a long and fully documented article on the Lennox family, drawing attention (on page 7) to his own particular ancestor, and deploring the fact that Donald, Earl of Lennox (died 1372), had settled the honour and estates on his daughter, and had not allowed them "to go in the ancient channel to his cousin and nearest heir-male, Malcolm MacFarlane of Arrochar, the ancestor of the Laird of MacFarlane." He concludes thus: "So the heir-male, of the most ancient race of the Earls of Lennox, is Walter MacFarlane of that Ilk; and as such, wears the principal arms of the family the *cross ingrailed* betwixt the *four roses*."

Not content with the foregoing effusion, MacFarlan returns (pages 36-37 of the Commentary on the Ragman Roll) to the subject at still greater length. Commenting on the name "Duncan MacGilchrist de Levenax," he says:—"This is the predecessor of the Laird of MacFarlane of the Arrochar, or MacFarlane of that Ilk," and, after going into details, concludes thus:—"So, from these authorities, the line of the family of MacFarlane is authentically run up to the Earl of Lennox's son, Gilchrist, their ancestor, which is a very illustrious descent and a very high antiquity. From this Malcolm MacFarlane of Arrochar, the family have a well vouched pedigree, with their alliances, intermarriages, and their numerous cadets and descendents, as any I have seen, to Walter MacFarlane of that Ilk, now the Head of the Family."

In the notes to the various family histories frequent reference is made to monastic chartularies of which MacFarlan is known to have possessed excellent copies, made for him by an able transcriber named Alexander Tait; for example, the chartularies of Arbroath, Balmerino, Dryburgh, Dunfermline, Kelso, Melrose, Moray, and Scone, the original of which last was lent to him by "the late Viscount of Stormont."⁶ In one place (page 179, note) he refers to the *Liber Episcopatus Dunblanensis* as being in the possession of "Mr Ker," that is,

⁶ Nisbet's *Heraldry*, vol. 2 (1742), p. 176, note (c).

Professor John Ker of Edinburgh University; but subsequently (page 259, note) cites it as being in his own possession. Ker died in November, 1741, and no doubt MacFarlan acquired the manuscript while the second volume of *Nisbet's Heraldry* was passing through the press.

In the notes there are many references to manuscripts in the editor's possession—"penes me"—but in two instances (page 269, note, and Ragman Roll, page 7, note) he drops anonymity and cites documents as "penes Walterum MacFarlane de eodem." This argument could, of course, be turned the other way, to prove that MacFarlan was not the editor, but in view of the accumulation of evidence adduced in this paper, the two instances quoted seem clearly cases in which MacFarlan was temporarily "off his guard," or in which he considered that anonymity was unnecessary. If it be asked why MacFarlan should have adopted anonymity at all, the answer probably is that he considered that "hack-work," such as this, for which most likely he was paid, was not altogether worthy of "The MacFarlan."

Two further small pieces of evidence are found in the editor's references to the antiquary, William Hamilton of Wishaw, and to Dr Patrick Abercromby, the historian. The former he terms (on page 259, note) "my most worthy friend William Hamilton of Wishaw," and (Ragman Roll, p. 3) "a very worthy ingenious gentleman, Mr Hamilton of Wishaw." That MacFarlan knew Hamilton is a legitimate inference from his *Genealogical Collections* (Scot. Hist. Soc., ii., 303, note), where he speaks of "the old rolls I have seen in Mr Hamilton of Wishaw's hands." Dr Abercromby is called by the anonymous editor (page 260, note), "my worthy learned friend," an expression which is exactly matched in MacFarlan's *Genealogical Collections* (ii., 313-314)—"my worthy learned friend Dr Patrick Abercrombie."

Finally, it seems extremely likely that a search among MacFarlan's manuscripts, preserved in the Advocates' Library, would prove conclusively that the theory here advanced is correct. This search the present writer hopes to be able to make at a later date, and to communicate the result to the Society.

Rainfall Records for the South-Western Counties for the Year 1917.

Compiled by Mr ANDREW WATT, Secretary to the Scottish Meteorological Society.

	Hght. Ft.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	tot.
		DUMFRIES												
Langholm, Burnfoot ..	541	2.75	.90	1.95	2.30	3.49	2.51	1.87	8.88	9.88	8.82	5.70	3.52	45.52
" Ewes School ..	445	2.75	.92	2.38	2.82	3.72	2.65	2.40	8.96	9.88	8.70	5.44	3.32	49.72
" Craig ..	450	2.75	.98	2.08	2.44	3.59	2.63	1.92	8.89	9.88	8.73	5.00	3.40	48.70
" Drove Road ..	270	4.27	1.17	2.45	3.31	3.58	2.16	1.87	8.92	9.88	8.50	5.75	3.40	51.05
Canobie, Ryburnfoot ..	160	3.25	.87	1.56	2.50	3.13	2.08	1.87	7.59	9.24	6.90	4.13	3.00	41.75
" Irvine House ..	200	3.26	.96	2.02	2.82	3.38	2.92	2.90	7.59	9.24	7.87	4.22	3.49	45.07
Eskdalemuir Observatory ..	794	4.59	1.16	2.76	4.37	4.03	3.20	2.69	8.72	9.95	7.63	6.45	3.70	55.42
Moffat, Auchin Castle ..	500	2.72	1.12	2.27	3.69	3.30	3.63	1.84	7.47	9.45	7.74	5.37	3.33	45.91
" Craighlands ..	331	5.04	1.00	2.31	2.48	3.08	4.37	1.78	7.95	3.97	7.92	5.76	1.08	43.72
Beattock, Kimmelhead ..	820	2.77	1.27	2.17	2.46	3.04	4.37	1.78	7.95	3.97	7.92	5.76	1.08	43.72
Locherbie, Castle Milk ..	199	3.00	1.17	2.43	2.89	3.48	2.97	1.95	7.11	4.56	5.62	3.73	3.01	41.55
Locherbie, Castle Milk ..	165	2.34	1.24	2.23	2.98	2.95	2.65	2.94	7.30	4.39	5.84	4.01	2.63	39.98
Amisfield, Glenae ..	300	1.91	1.20	2.24	1.79	2.68	2.66	2.07	7.52	3.21	5.27	3.41	2.41	36.08
Dalton, Kirkwood ..	245	2.68	1.28	2.70	2.65	2.79	2.10	2.11	7.36	3.70	5.64	4.11	3.13	43.71
" Schoolhouse ..	175	2.32	1.04	2.35	4.40	3.60	3.40	1.61	7.53	3.91	5.59	3.39	3.29	41.59
Ecclelathcan, Knockhill ..	150	2.57	1.10	1.93	2.25	2.94	2.27	1.65	6.80	4.46	6.14	3.26	2.56	38.26
Hoddon Castle, Burnfoot ..	150	2.42	1.26	1.93	2.12	3.19	2.39	1.96	6.89	4.50	6.02	4.07	2.66	40.66
Dalton, Whitecroft ..	240	2.74	.90	2.19	2.09	3.34	2.30	1.49	6.94	4.51	6.02	4.11	2.72	38.46
Comlongon Castle ..	67	1.77	1.04	2.15	1.82	3.00	2.30	1.01	7.31	3.70	5.71	2.98	2.43	43.89
Dumfries, Crichton Inst. ..	160	1.41	1.05	2.08	1.79	3.60	2.47	1.19	6.18	3.70	5.71	2.98	2.43	35.25
Drumlanrig Castle ..	191	3.34	1.31	2.86	2.63	3.12	2.44	1.84	7.22	4.69	7.80	2.84	1.94	32.36
Moniaive, Glencrosh ..	350	2.97	1.51	2.66	2.36	3.36	2.01	1.91	7.91	4.78	9.04	5.72	2.76	43.40
" Maxwelton House ..	400	2.43	1.51	3.05	2.56	3.49	2.00	1.53	6.12	3.63	7.69	3.80	3.49	50.06
" Jarbruck ..	350	2.53	1.87	3.67	2.48	4.39	3.00	1.78	7.99	4.75	10.11	5.89	3.39	51.91

RAINFALL RECORDS FOR SOUTH-WESTERN COUNTIES. 199

Name	H. Ft.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		KIRKCUDBRIGHT.												
Jardington	70	1.58	1.10	2.76	2.76	3.53	2.57	2.93	5.91	3.51	6.35	4.07	2.60	39.07
Linchden House	60	1.71	1.13	2.92	3.05	3.53	2.53	2.10	6.23	3.56	6.23	4.12	2.52	39.63
Cargen	96	1.93	1.29	3.10	2.76	4.58	2.94	2.48	5.94	3.84	7.05	4.38	2.85	43.14
Lochnuton	273	2.01	1.45	3.18	1.95	4.33	2.62	2.09	5.61	4.30	7.37	4.32	2.84	42.07
Auchencairn, Torr	250	2.77	1.39	2.47	2.18	3.79	2.46	2.30	6.09	4.06	9.60	5.23	3.84	46.18
Glenlair	260	2.83	1.30	3.01	2.80	4.73	2.54	1.85	7.28	3.64	8.95	4.82	3.93	47.68
Dalbeattie, Kirkennan	150	2.30	2.43	2.60	2.36	4.22	2.34	2.17	6.10	3.79	8.57	4.46	3.81	44.26
Kirkcudbright, Balmac	160	2.82	2.43	4.48	1.23	3.17	1.87	1.87	6.87	2.66	6.30	4.30	2.50	40.85
Gatehouse, Gally	120	3.00	1.21	2.79	1.97	3.66	2.66	1.63	7.17	4.17	9.09	5.09	3.28	46.32
Crestown, Cassencyary	50	2.40	1.12	2.64	2.18	3.65	2.03	1.14	5.28	3.21	7.36	4.40	4.16	39.57
Palmer, Bregally	282	2.82	1.89	3.06	3.36	4.26	2.34	1.28	4.79	5.11	10.33	6.34	5.36	50.14
Dairy, Glenloch	192	2.91	1.54	3.46	2.77	5.36	2.72	1.40	6.11	3.24	11.16	6.01	4.02	50.70
Carsphairn, Shiel	850	4.04	1.76	4.23	3.18	5.43	3.59	1.58	7.65	4.56	15.78	11.94	4.71	68.47
Knockgray	641	2.73	1.22	2.49	2.39	4.47	3.30	.87	6.82	3.02	10.19	6.88	3.32	47.70
Bargennan	2.95	1.05	2.15	2.78	2.78	3.56	..	..	..	..	..	..	..	..
WIGTOWN.														
Loch Ryan Lighthouse	46	2.88	.88	1.20	1.59	3.61	1.87	.91	2.39	1.79	5.63	4.59	3.64	31.08
Corswall	112	4.12	1.06	2.67	1.36	5.22	.94	2.43	5.36	2.54	3.61	4.23	3.92	37.06
Mull of Galloway Lighthouse	327	1.92	1.46	.97	.68	2.60	1.25	1.64	3.04	1.85	4.82	2.78	2.50	25.51
Galloway House	20	2.12	1.33	1.16	1.05	3.26	1.05	1.34	3.68	2.80	6.48	2.69	2.15	30.26
Whithorn House	207	2.66	2.77	3.11	2.07	4.31	2.26	2.20	5.61	2.96	8.95	6.19	4.62	47.70
Whithorn Cutreach	130	2.39	2.17	1.98	1.98	3.77	1.87	2.44	4.40	2.55	6.28	5.15	3.19	38.17
Loch House	340	3.24	1.83	2.43	2.28	3.31	1.72	1.87	3.60	3.01	7.19	4.40	3.96	38.84
Ardwell House	68	3.18	2.02	1.93	1.63	3.34	1.75	1.84	2.78	3.19	6.66	4.35	3.77	36.44
Glenluce, Crews	218	2.63	1.84	2.08	1.39	4.60	1.95	1.36	3.43	2.88	8.61	5.83	3.45	40.05

Rainfall Records for the South-Western Counties for the Year 1918.

Compiled by Mr ANDREW WATT, Secretary to the Scottish Meteorological Society.

DUMFRIES.	Height Ft.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		Langholm, Burnfoot	541	3'65	4'83	1'45	'80	2'45	1'19	3'71	3'32	7'25	6'94	3'10	4'78	43'47
" " Ewes School	445	6'04	5'76	1'61	'90	2'81	1'05	4'78	1'90	8'30	7'96	3'80	5'77	54'18
" " Craie Road	450	4'59	6'91	1'60	1'07	2'62	1'18	5'02	4'21	7'88	8'37	3'66	6'06	53'12
Canobie, Byreburnfoot	270	6'81	6'25	1'75	1'90	2'90	1'08	5'90	5'41	8'81	6'51	3'63	5'32	55'47
Canobie, Irvine House	160	5'38	5'25	1'25	'62	1'50	'87	3'62	3'63	7'13	6'88	2'87	5'50	44'00
Estleleuir Observatory	204	5'51	5'59	1'56	'82	2'25	1'04	3'96	4'44	7'07	7'07	2'79	5'56	48'26
Moffat, Auchin Castle	704	8'04	8'38	1'96	'74	3'15	1'94	4'00	4'21	9'51	9'44	4'27	6'77	62'54
Moffat, Craiglands	500	7'11	8'25	1'56	'13	2'36	1'49	3'95	3'42	7'30	8'56	6'17	6'47	57'38
Locherbie, Castlemilk	331	6'32	9'63	1'50	'13	2'51	1'40	4'56	3'92	7'30	7'50	3'68	7'23	56'08
Lochmaben, Esthwaite	168	5'15	5'01	1'53	'54	2'34	1'02	4'63	3'75	6'64	6'53	3'56	4'41	46'16
Amisfield, Glense	300	4'88	4'44	1'51	'60	2'55	1'35	3'86	4'00	6'53	5'95	3'24	4'57	44'11
Dalton, Kirkrwood	245	4'83	5'63	1'96	'67	2'79	1'60	4'89	4'46	6'48	4'32	3'51	4'00	40'23
Dalton, Schoolhouse	175	4'42	4'56	1'33	'80	2'79	1'60	4'35	4'68	6'48	6'48	3'05	5'82	50'68
Ecclefechan, Burnfoot	160	5'14	5'15	1'33	'89	4'10	1'92	3'91	4'35	7'23	6'16	2'54	5'07	44'26
Hoddam Castle	150	4'95	4'65	1'48	'86	2'77	1'75	3'79	3'71	7'08	5'62	2'77	5'48	48'20
Dalton, Whitecote	240	6'40	4'91	1'92	'88	1'71	1'37	3'99	4'23	7'25	6'63	2'69	5'28	45'61
Compton Castle	67	5'42	4'24	1'59	'58	1'80	1'32	3'38	3'43	6'22	5'17	3'01	4'58	41'12
Compton Institution	140	4'63	3'91	1'54	'50	1'03	1'32	3'06	4'30	5'41	5'05	3'26	4'24	39'30
Drumfries, Church	191	7'10	6'68	1'59	'63	3'00	1'12	4'08	4'13	7'29	8'51	6'16	5'58	57'35
Drumlanrig Castle	350	7'52	6'29	1'80	'63	2'96	1'38	4'13	4'13	6'46	8'36	7'15	6'82	58'26
Monnave, Glenesh	400	6'70	5'31	1'80	'61	2'41	1'53	3'12	3'35	5'75	5'96	5'87	4'91	47'32
" " Jarbrack	350	8'63	7'63	2'60	'79	2'91	1'48	4'26	4'24	7'50	8'18	8'67	7'21	64'24

Station	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
KIRKCUDBRIGHT.													
Livingston	70	4.92	1.70	.78	2.07	1.82	3.33	3.71	6.47	5.51	4.03	4.91	43.91
Unctuden House	..	4.96	1.61	.62	2.10	1.35	3.05	4.50	7.22	5.85	4.09	4.94	45.64
Cargen	..	5.33	1.91	.60	2.53	1.42	3.94	6.05	7.29	6.58	4.62	5.41	51.75
Southwick	..	1.50	2.33	.28	2.67	1.62	3.43	5.45	6.39	5.98	3.36	6.14	48.44
Lochnuton	..	2.73	2.00	.73	2.72	2.10	3.02	5.11	7.49	6.36	4.76	5.63	51.45
Archiepcaim, Torr	..	30	0.80	.05	2.65	2.04	4.23	7.84	6.54	4.54	4.54	8.44	57.89
Gleinan	..	2.90	0.33	.87	2.16	1.46	4.36	5.05	5.33	7.42	5.64	6.47	55.28
Dalbeattie, Richorn Wood	..	34	5.70	5.46	2.15	2.64	4.04	4.44	6.50	6.37	3.73	6.35	49.45
Kirkcudbright, Kirkennan	..	30	0.69	.92	2.22	1.64	4.49	4.19	7.01	6.92	4.31	7.24	54.80
Catchouse, Balmac	..	150	3.80	1.50	2.35	2.92	1.97	3.75	5.50	7.68	3.50	5.20	38.87
Catchouse, Cally	..	120	0.89	.60	2.23	1.97	1.97	4.68	6.85	5.77	5.56	8.72	57.17
Patecown, Cassenary	..	50	3.52	2.01	2.2	1.53	3.15	3.31	6.63	5.56	5.79	7.42	50.07
Palnure, Bargaly	..	50	6.52	1.57	3.37	2.56	4.07	4.17	6.44	6.72	5.98	8.12	58.15
Dairy, Glendurroch	..	192	8.72	2.08	3.2	1.47	4.54	4.19	7.30	7.37	7.26	7.35	62.60
Carsphadm, Shiel	..	830	11.01	1.88	2.94	2.85	5.37	6.88	10.63	11.66	9.37	9.57	85.99
"	..	641	8.73	1.07	2.58	2.30	5.03	4.13	8.24	8.10	8.00	7.84	66.36
WIGTOWN.													
Loch Ryan Lighthouse	..	3.93	4.96	.89	2.37	1.42	2.33	3.96	2.49	3.61	3.64	4.63	34.85
Corsewall	..	132	4.51	3.98	.31	1.95	3.15	1.57	5.28	4.52	2.60	6.34	36.13
Wulf of Galloway Lighthouse	..	327	3.16	1.02	.81	2.87	1.19	2.34	4.10	3.33	2.61	5.28	30.87
Whithorn, Cartvoach	..	120	4.86	1.54	.69	2.40	2.48	3.22	5.35	4.80	3.08	6.87	41.14
Logan House	..	80	3.99	4.01	1.28	3.63	2.59	3.63	6.46	4.30	3.76	6.94	44.06
Aradwell House	..	65	4.07	3.92	1.24	3.55	1.95	2.34	5.92	4.24	3.72	7.50	43.07
Glentluc, Crews	..	218	4.63	3.84	1.34	2.94	3.37	3.54	5.13	5.84	2.44	7.36	42.16
Luree Bay Air Station	..	50	4.64	4.98	1.44	1.42	2.64	3.50	5.00	5.08	3.88	7.12	45.08

Meteorological Observations taken at Jardington, near Dumfries, in 1918.

Lat., 55° 4' N.; Long., 3° 36' W.; Elevation, about 50 feet above sea level.

	SELF. R. THERMOMETERS. IN SCREEN, 4 FEET ABOVE GRASS.										BAROMETER.			RAINFALL.					
	MAXIMUM.					MINIMUM.					Daily Mean Temperature of the Month.	Number of Days at or below 32 deg. in the shade.	Number of Days at or below 32 deg. on the grass.	Lowest Temperature on the Grass.	Highest.	Lowest.	Total Depth.	Greatest Fall in 24 Hours.	Number of Days with 0.1 or more inches recorded.
	Highest in the Month.	Lowest in the Month.	Daily Mean.	Deg. in the Month.	Deg. in the Month.	Deg. in the Month.	Lowest in the Month.	Deg. in the Month.	Deg. in the Month.	Deg. in the Month.									
Jan.	53	28	42.48	44	-2	29.00	35.74	17	23	-2	30.5	29.3	5.16	.75	22				
Feb.	55	38	47.85	46	30	38.5	43.17	4	8	25	30.35	29.55	4.92	.56	27				
Mar.	57	38	49.5	42	27	36.1	42.8	9	14	21	30.5	29.2	1.70	.35	11				
April	70	45	55.00	42	27	34.88	44.94	9	10	27	30.35	29.7	.78	.36	6				
May	81	49	64.03	57	36	44.35	54.22	..	..	34	30.35	29.6	2.87	.32	14		
June	81	57	65.9	51	38	45.57	53.73	..	..	37	30.45	29.8	1.32	.32	14		
July	77	60	67.00	58	37	49.80	59.40	..	..	38	30.45	29.6	3.33	.70	17		
Aug.	77	60	66.0	57	42	52.13	59.06	..	..	41	30.3	29.65	3.71	1.19	17		
Sept.	70	48	59.27	50	33	42.60	50.91	..	1	32	30.1	29.15	6.47	1.50	25				
Oct.	59	48	54.28	52	28	41.93	48.10	3	3	28	30.35	29.4	5.51	.91	21				
Nov.	55	37	47.67	44	22	31.60	39.33	18	19	19	30.45	29.1	4.03	.97	17				
Dec.	55	35	46.61	50	23	36.03	41.32	13	17	20	30.2	29.2	4.91	.76	22				
													43.91		213				

43.91 in. of Rain is 4.35 in. above the Mean recorded here during the last 25 years.

Field Meeting.

11th September, 1919.

Mouswald District.

About thirty members of the Society motored to Mouswald. Mr R. C. Reid of Mouswald Place acted as cicerone. Burronhill, or Burnhill as it is called locally, was the first place visited. The name means "the Hill of the Town or Camp," and it is the site of an early British Camp. The remnants of the defensive earthworks and the outlines of the camp were pointed out. The church and churchyard of Mouswald were next visited, and the interesting features of the burial ground of the Griersons were shown, and some details were given regarding the effigy of Sir Simon de Carruthers which stands in the churchyard. After inspecting the Gillespie Memorial Hall, the tour was continued to Mouswald Place, where the ruined tower, the stronghold of the Carruthers family, and subsequently of the family of Douglas of Mouswald, was pointed out and its features explained. The company also enjoyed a stroll through the gardens.

Rockhallhead farm was next visited. The farmhouse and steading stand on the site of a Saxon camp or village, and the earthworks and outlines, very similar to those at Burronhill, were pointed out. On the same farm the mote with bailie court was visited. This is ascribable to Norman times, and the distinguishing features of Saxon and Norman dwelling-places were graphically described.

The last place of call was Rockhall, which the Society was permitted to inspect by the courtesy of Mr and Mrs Morgan, who also sumptuously entertained the company to tea in the old vaulted dining-room.

Mr G. M. Stewart conveyed the thanks of the company to Mr and Mrs Morgan for their kindness and hospitality, and Mr R. C. Reid was also cordially thanked for his graphic and luminous descriptions and for the great pains he had taken to ensure the success of the excursion.

Obituary.

We have this year to record the deaths of the following members :—D. M. MacRae of Stenhouse; Colonel William Bell of Stirling; Major Corrie of Oswestry; Rev. F. M' Cormick, F.S.A.(Scot.); David Paterson, solicitor, Thornhill; Miss Hannay, Dumfries; William Dickie, Maxwelltown; J. P. Shannon, Maxwelltown; and W. J. Maxwell of Terregles Banks.



MR WILLIAM DICKIE.



MR W. J. MAXWELL.

MR WILLIAM DICKIE, editor of the *Dumfries and Galloway Standard*, one of our Vice-Presidents, died on 12th August, 1919, aged 62. He became a member of the Society in 1882, and, as anyone who knew him would expect, vigorously supported it from that time onwards. His influence

was frequently felt at its Council meetings, and he contributed generously to its *Transactions*. Much of his work, however, as embodied in the many and fascinating records of excursions, which originally appeared in the *Standard*, is unacknowledged. Mr Dickie was one of our principal authorities on the history of the county, and his wonderful memory, his intimate knowledge of the district, and his long and extensive acquaintance with its inhabitants were always at the service of the Society and its correspondents. Reference to him did not often fail. His little book, "Dumfries and Round About," is a modest but exceptional work of its class.

Mr Dickie had many other interests. He was President for a term of the Dumfries Burns Club, and took a prominent part in various controversies regarding the poet and his work; he was Chairman of the Books Committee of the Ewart Public Library for many years, and a strong advocate of similar educational activities. His interest in Carlyle was recognised by his appointment as a member of the Carlyle Trust, which he held till his death. He was as prominent in church and temperance as in political work, and during the war he acted as President of the local branch of the Y.M.C.A., organising entertainments for the men, intercessory services on Sundays, and arranging for the distribution of comforts to our Territorials on active service.

His contributions to the Society are as follows:—

- Notice of a Pamphlet by the late Mr John Anderson on the Riding of the Marches. (15th Jan., 1897.)
- Scottish Burghal Life in the 16th and 17th Centuries, Illustrated by Extracts from Kirkcudbright Records. (10th May, 1901.)
- Scottish Life of the 17th Century. (20th March, 1903.)
- The Incorporated Trades of Dumfries, with Special Reference to the Weavers. (24th March, 1905.)
- The Birthplace of Annie Laurie. (4th May, 1906.)
- Kirkcudbright in the 16th Century. (23rd March, 1907.)
- The Late Rev. William Andson. (19th March, 1909.)
- Craigdarroch (Sanquhar) Tumuli and Others. (6th July, 1912.)

MR W. J. MAXWELL of Terregles Banks joined the Society in 1879, and his active interest in it extended over a long period. In that respect he followed his father, Mr Francis Maxwell of Breoch, whose name appears frequently in the records of the earliest years of its existence. Mr Maxwell was factor on the estates of Terregles and Caerlaverock for about forty-five years, succeeding his brother, Mr Robert Maxwell of Breoch, and his father. He was also factor for shorter periods on Auchenskeoch estate and Carradale, in Kintyre. He gave much public service on the County Council, Terregles Parish Council and School Board, Caerlaverock School Board, and as a governor of the Hutton Trust. He was also a member of the Nith Navigation Commission and a director of the Crichton Royal Institution. In his earlier years he was a keen sportsman, and followed the Dumfriesshire Foxhounds. Belonging to a family consistently Catholic for many generations, he was a devoted member of St. Andrew's Pro-Cathedral.

Mr Maxwell was a close student of natural history, and was specially interested in Alpine Plants. To the Society he contributed the following papers:—

The Destruction of Beasts and Birds of Prey. (7th March, 1887.)

The Old Cornkilns at Barclosh, Kirkgunzeon. (6th April, 1888.)

Natural History Notes. (14th January, 1898.)

Notes on Trees. (7th December, 1906.)

MISS HANNAY, Langlands, joined the Society in 1888. and served on the Council for many years. Her chief interest was botanical, and she and her sister prepared most of the specimens of plants now in the Society's Herbarium, and rendered great assistance to Mr G. F. Scott Elliot in the preparation of his "Flora." Miss Hannay took great interest in the local branch of Queen Victoria Jubilee Nurses, and occupied the Vice-Presidency for a period. She died on 28th March, 1919.

Abstract of Accounts.

For Year ending 30th September, 1918.

I. ON ACCOUNT OF CAPITAL.

Sum Invested at Close of Account £268 17 6

II. ON ACCOUNT OF REVENUE.

CHARGE.

Balance brought forward	£68 9 11
Annual Subscriptions	70 7 6
Interest	12 1 6
Transactions sold	11 19 9
	<hr/>
	£162 18 8

DISCHARGE.

Rents, Insurance, etc.	£19 0 0
Books bought, including Cost of	
Transactions	111 11 0
Stationery and Advertising	9 16 7
Miscellaneous	9 17 1
	<hr/>
	150 4 8
Cash on hand	£12 14 0

For Year ending 30th September, 1919.

I. ON ACCOUNT OF CAPITAL.

Sum Invested at Close of Account £273 17 6

II. ON ACCOUNT OF REVENUE.

CHARGE.

Balance from last Account	£12 14 0
Annual Subscriptions	61 15 0
Interest on Investments	12 15 0
Transactions sold	5 4 0
	<hr/>
	£92 8 0

DISCHARGE.

Rent and Insurance	£13 6 0
Books bought	3 11 6
Stationery and Advertising	12 15 0
Miscellaneous	11 19 4
	<hr/>
	41 11 10
Cash on hand	£50 16 2

III. DONATIONS TOWARDS PUBLICATION OF TRANSACTIONS.

Sum received £99 2 0

Exchanges.

- Aberdeen: University Library.
- Aberystwith, Wales: National Library.
- Banff: Banffshire Field Club.
- Belfast: Belfast Naturalists' Club, The Museum, College Square.
- Berwick-on-Tweed: Berwickshire Naturalists' Club (Secretary, Rev. J. J. M. L. Aiken, Manse of Ayton).
- Buenos Ayres: Museo Nacional, Buenos Ayres, Argentine.
- Cambridge: University Library.
- Cardiff: Cardiff Naturalists' Society, 32 West Bute Street.
- Carlisle: Cumberland and Westmorland Antiquarian and Archaeological Society, Tullie House.
- Dublin: National Library.
- Edinburgh: Advocates' Library.
- Botanical Society of Edinburgh, 5 St. Andrew Square.
- Edinburgh Geological Society, India Buildings, Victoria Street.
- Society of Antiquaries of Scotland, Queen Street.
- Edinburgh Field Naturalists' and Microscopic Society, 1 Hampton Place.
- Gateshead: The Vale of Derwent Naturalists' Field Club.
- Glasgow: Andersonian Naturalists' Society, Technical College, George Street.
- Glasgow Archæological Society, 207 Bath Street.
- Geological Society of Glasgow, 207 Bath Street.
- Glasgow Natural History Society, 207 Bath Street.
- Guildford, Surrey: Surrey Archæological Society, Castle Arch.
- Halifax, Nova Scotia: Nova Scotian Institute of Science.
- Hawick: Hawick Archæological Society.
- Hull: Hull Scientific and Field Naturalists' Club, The Museum, Hull.
- London: British Association for the Advancement of Science, Burlington House.
- British Museum, Bloomsbury Square.
- British Museum (Natural History), South Kensington.
- Marlborough: Marlborough College of Natural History, The College.
- Oxford: Bodleian Library.
- Perth: Perthshire Society of Natural Science, Natural History Museum.
- Reigate: Holmesdale Natural History Club.
- Sheffield: Sheffield Naturalists' Club, The Museum.
- Stirling: Natural History and Archæological Society, Smith Institute.
- Stratford: Essex Field Club, Essex Museum of Natural History, Romford Road.

- Stockholm, Sweden: Kung Vetterhets Historie och Antikvitets Akademien.
- Sydney, Australia: Australian Association for the Advancement of Science, 5 Elizabeth Street.
- Toronto, Canada: The Canadian Institute, Provincial Museum, St. James' Square.
- Torquay: Torquay Natural History Society, The Museum.
- United States:—
- Brooklyn, N.Y.: Brooklyn Institute of Arts and Sciences.
- Chapelhill, N.C.: Elisha Mitchell Scientific Society.
- Cambridge, Mass.: Harvard College Museum of Comparative Anatomy.
- Peabody Museum of American Archæology and Ethnology
- Chicago: Field Museum of Natural History
- Madison, Wis.: Wisconsin Academy of Sciences, Arts, and Letters.
- Minneapolis, Minn.: Minnesota Academy of Natural Science
- New Brighton, N.Y.: Staten Island Association of Arts and Sciences.
- New Orleans, La.: Louisiana State Museum.
- New York: New York Academy of Sciences.
- Notre Dame, Ind.: University of Notre Dame.
- Philadelphia: Academy of Natural Sciences.
- Pittsburg: Carnegie Institute and Museum.
- St. Louis, Mo.; Missouri Botanical Gardens.
- Washington: Smithsonian Institute, U.S. National Museum.
United States Bureau of Ethnology.
- Upsala, Sweden: Geological Institute of the University of Upsala.

Purchases.

BOOKS.

Mitchell, Sir Arthur, & Cash, C.G.—A Contribution to the Bibliography of Scottish Topography. (Publications of the Scottish History Society, Second Series, Vols. XIV. and XV.) Edinburgh; 1917; 2 Vols.

Presentations.

25th October, 1918.—Lady Collie—The Holy Bible, with Introduction. etc., by Rev. John Brown, of Haddington. Durham. 1812. On front flyleaf is:—"Elizabeth Edgar was born on 22nd day of June, A.D. 1772."

R. C. Reid, Esq., Ayrshire and Wigtonshire Archæological Association.—Collections, Vols. 1-6; Charters of the Royal Burgh of Ayr; Charters of the Friars Preachers of Ayr; Muniments of the Royal Burgh of Irvine, 2 Vols.; Charters of the Abbey of Crosraguel, 2 Vols.—12 Vols.

John Lennox, Esq.—Films and Lantern Slides, mainly of Ancient Monuments in Dumfriesshire and Galloway, taken by the late James Lennox, F.S.A. (Scot.).

Tom Wilson, Esq.—Copies of Letters by James Hyslop, the Poet.

21st February, 1919.—Wm. Dickie, Esq.—Fetterlock or Leg Shackle found near Locharbriggs.

Loan.

25th April, 1919.—Mrs E. M'Culloch, Lochanhead—Large Spinning Wheel. "This belonged to Sandy Davidson, Scarerig Toll Cottage, Eddleston, Co. Peebles, who died about 20 years ago, well over 80, and who stated that the wheel had belonged to his grandmother." Mrs M'Culloch, *in litt.* 2, ix., 1919.

LIST OF MEMBERS OF THE SOCIETY.

Revised to 1st October, 1919.

Those who joined the Society on its reorganisation on 3rd November, 1876, are indicated by an asterisk.

LIFE MEMBERS.

Bedford, Her Grace the Duchess of, Woburn Abbey, Woburn, Bedfordshire	24/1/19
Brook, E. J., of Hoddom	12/6/09
Carruthers, Dr G. J. R., 4 Melville Street, Edinburgh.	
Easterbrook, Dr C. C., Crichton Royal Institution	20/3/08
Fraser, Thomas, Maxwell Knowe, Dalbeattie	2/3/88
Gladstone, H. S., of Capenoch, Thornhill	15/7/05
Gladstone, Robert, M.A., B.C.L., Woolton Vale, Liver- pool	12/4/12
Herries, Alexander Young, Spottes, Dalbeattie	2/5/85
Irving, William, 73 English Street, Dumfries	25/10/18
Keswick, Henry, of Cowhill Tower, Holywood	12/4/12
Lang, John, of Lannhall, Tynron, Thornhill	12/4/12
M'Kie, Mrs, 81 Moray Place, Edinburgh	25/10/18
Mansfield, Earl of, Scone Palace, Perth	18/11/07
Maxwell, Wm. J. Herries, of Munches	1/10/86
Nivison, Sir Robert, Branch Hill Lodge, Hampstead ...	25/10/18
Pickering, R. Y., of Conheath, Dumfries	22/3/18
Pickering, Mrs, Conheath, Dumfries	22/3/18
Robinson-Douglas, Wm. D., F.L.S., Orchardton, Wig- townshire	11/11/81
Stewart, Sir Mark J. M'Taggart, Bart., Southwick	7/6/84
Weir, James, of Over Courance, Dumfriesshire	25/10/18
Younger, Sir Wm., Bart., of Auchencastle	26/4/12

HONORARY MEMBERS.

Arnott, S., F.R.H.S., Sunnymead, Maxwelltown	5/2/93
Baker, J. G., F.R.S., F.L.S., V.M.H., 3 Cumberland Road, Kew	2/5/90
Carruthers, Wm., F.R.S., 14 Vermont Road, Norwood, S.E.	
M'Pherson, Wm., 37 Warrender Park Road, Edinburgh ..	7/8/09
Sharp, Dr David, F.R.S., Lawnside, Brokenhurst	3/11/76
Shirley, G. W., Ewart Public Library, Dumfries	28/10/04
Shirley, Mrs, 18 Carnegie Street, Dumfries	23/11/17
Wilson, Jos., Liverpool	29/6/88

CORRESPONDING MEMBERS.

- Bryce, Professor Thomas H., M.A., M.D., F.R.S.E., F.S.A.Scot.,
2 The College, Glasgow (Member of Royal Commission on
Ancient and Historical Monuments).
- Borthwick, Dr A. W., B.Sc., Royal Botanic Gardens, Edinburgh.
- 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., Professor of Geology, Glasgow University.
- Holmes, Professor E. M., F.L.S., F.R.B.S., Edinburgh and Lon-
don, F.R.H.S., 17 Bloomsbury Square, London, W.C.
- Johnstone, R. B., Hon. Secretary and Editor, Andersonian
Naturalists' Society, 17 Cambridge Drive, Glasgow.
- Lewis, F. J., F.L.S., Department of Biology, University of
Alberta, Edmonton, Alberta, Canada.
- Macdonald, Dr George, M.A., LL.D., 17 Learmonth Gardens,
Edinburgh.
- Reid, Clement, F.R.S., F.L.S., F.G.S., One Acre, Milford-on-
Sea, Hants.
- Scott-Keltie, J., LL.D., F.S.A.Scot., Secretary Royal Geographi-
cal Society, Hon. Member Royal Scottish Geographical
Society, 1 Saville Row, Burlington Gardens, London, W.
- Smith, Miss Annie Lorraine, B.Sc., F.L.S., Botanical Depart-
ment, British Museum, 20 Talgarth Road, West Kensing-
ton, London, W.
- Watt, Andrew, M.A., F.R.S.E., Secretary Scottish Meteorolo-
gical Society, 122 George Street, Edinburgh.

ORDINARY MEMBERS.

- | | | |
|----|--|----------|
| | Adams, Percy, Woore Manor, Crewe | 22/2/18 |
| | Adamson, Robert, W.S., Dumfries | 21/10/11 |
| | Agnew, Sir A. N., Bart. of Lochnaw, Stranraer | 9/1/91 |
| | Agnew, Colonel Quentin, D.S.O., House of Knock, Port-
patrick | 12/4/12 |
| 5 | Aitken, Miss M. Carlyle, 2 Dunbar Terrace, Dumfries ... | 1/6/83 |
| | Anderson, John, "The County Times," Welshpool | 26/4/12 |
| | Armistead, W. H., Kippford, Dalbeattie. | |
| | Armstrong, T. G., 24 Rae Street, Dumfries | 9/9/05 |
| | Barker, John, Uplands, Dumfries | 23/9/05 |
| 10 | Barr, D., Nurseryman, Buccleuch Street, Dumfries | 17/10/13 |
| | Bartholomew, J., Glenorchard, Torrance, Glasgow | 21/10/10 |
| | Barton, Sir Geoffry, K.C.B., Craigs, Dumfries | 12/4/12 |
| | Bedford, His Grace the Duke of, Woburn Abbey | 7/2/08 |
| | Bell, Arthur, Hillside, Langholm | 16/2/12 |
| 15 | Blacklock, J. E., Broombank, Annan Road, Dumfries ... | 8/5/96 |
| | Borland, John, Auchencairn, Closeburn | 7/9/95 |

	Bowie, J. M., The Hain, Dalbeattie Road, Maxwelltown	15/12/05
	Brook, Charles, of Kinmount, Annan	12/4/12
	Brown, H. J., 4 Trafalgar Square, London	9/6/13
20	Brown, Thomas, 89 Holland Road, Kensington, W. 14	12/4/12
	Brown, Stephen, Borland, Lockerbie	10/6/99
	Brown, T. M., Closeburn, Thornhill	6/8/91
	Browne, Sir James Crichton, Crindau, Dumfries	3/9/92
	Bryson, Alex., Irish Street, Dumfries	5/2/91
25	Buccleuch, His Grace the Duke of, Dalkeith House	12/4/12
	Cairns, Rev. John, Rotchell Park, Dumfries	6/2/91
	Calvert, A. G., Postmaster, Dumfries	22/2/18
	Campbell, Rev. J. Marjoribanks, Torthorwald	21/11/08
	Campbell, Rev. J. M., St Michael's Manse, Dumfries	15/12/07
30	Carmont, James, Castledykes, Dumfries	6/2/91
	Carruthers, J. B., Annandale, Kingston, Ontario	21/3/19
	Carruthers, J. J., Park House, Southwick-on-Weir, Sunderland	10/09
	Carruthers, Colonel F. J., Dormont, Lockerbie	29/11/12
	Cassillis, The Earl of, Culzean Castle, Ayr	12/4/12
35	Chalmers, Dr A., Crockettford	4/11/10
	Chapman, A., Dinwoodie Lodge, Lockerbie	14/9/07
	Clarke, Dr, Charlotte Street, Dumfries	6/6/89
	Coats, W. A., Dalscairth, Dumfries	18/9/96
	Cochrane, Rev. J. D., The Manse, Kirkbean	26/4/12
40	Collie, Lady, 25 Porchester Terrace, Hyde Park, London	25/1/18
	Colt, H. D., Drumpark Mains, Dumfries	11/2/16
	Cormack, David, Solicitor, Lockerbie	21/2/13
	Corrie, John, F.S.A.Scot., Burnbank, Moniaive	6/8/87
	Corrie, John M., Post Office, Newton St. Boswells	4/10/07
45	Cossar, Thomas, Craignea, Maxwelltown	14/5/14
	Crabbe, Colonel J., Duncow, Dumfries	1/12/11
	Crockett, Rev. W. S., The Manse, Tweedsmuir	12/4/12
	Crozel, Mons. G., 17 Chemin des Celestin, Oullens, France	22/2/18
	Cruickshank, Dr, Dirlton, Maxwelltown	12/12/13
50	Dalrymple, The Hon. Hew, Lochinch, Castle-Kennedy	12/4/12
	*Davidson, James, F.S.A.Scot., Summerville, Maxwell- town	3/11/76
	Dick, Rev. James, Blackwood, Auldgirth	12/4/12
	Dickson, C. W., Friars' Carse, Auldgirth	12/4/12
	Dickson, T., Court Haw, Woodmansterne	25/10/18
55	Dickson, W. E. G. C., Station Hotel, Dumfries	25/10/18
	Dinwiddie, Rev. J. L., Ruthwell Manse	18/5/08
	Dinwiddie, R., Overton, Moffat Road, Dumfries	9/3/83
	Dods, J. W., St. Mary's Place, Dumfries	2/3/83
	Drummond, Bernard, Plumber, Dumfries	7/12/88
60	Drummond, J. G., Bank House, Maxwelltown	17/11/05
	Drysdale, A. D., 2 Cathedral Square, Glasgow	23/4/09
	Dudgeon, Colonel R. F., C.B., of Cargen, Dumfries	19/1/12
	Dudgeon, Randolph C., of Cargenholm, Dumfries	19/1/12

	Dudgeon, Miss, Lincluden House, Dumfries	1/12/11
65	Duncan, John Bryce, of Newlands, Dumfries	20/12/07
	Duncan, Mrs, Newlands, Dumfries	20/12/07
	Dunlop, Rev. S., B.D., Bright's Crescent, Edinburgh ...	10/6/05
	Dyer, Henry, Rosebank Lodge, Bankend Road, Dumfries	23/11/17
	Dykes, T., Dentist, Annan	28/11/13
70	Elliot, G. F. Scott, F.R.G.S., Drumwhill, Mossdale	4/3/87
	Fergusson, D., Southdean, Rotchell Park, Dumfries ...	29/3/12
	Fergusson, Mrs, Southdean, Rotchell Park, Dumfries ...	29/3/12
	Fleming, D. Hay, LL.D., 41 Chamberlain Road, Edinburgh	13/2/14
	Flett, James, Hillhead, Bankend Road, Dumfries	19/1/12
75	Foster, William, Nunholm, Dumfries	20/10/08
	Fraser, Dr John, 54 Great King Street, Edinburgh	12/4/12
	Galbraith, Charles E., Terregles, Dumfries	12/4/12
	Geddes, R., Brooke Street, Dumfries	20/10/09
	Gibson, John, Elliceville, Lovers' Walk, Dumfries ...	23/11/17
80	Gibson, J. Ewing, writer, 156 St Vincent Street, Glasgow	12/4/12
	Gillespie, Wm., Solicitor, Castle-Douglas	14/5/92
	Gladstone, Mrs, of Capenoch, Thornhill	13/7/07
	Gladstone, Miss Joan, The Lodge, Parkstone, Dorset...	3/11/11
	Glaister, Professor John, M.D., F.R.S.E., D.Ph. (Camb.), Glasgow University	12/4/12
85	Glover, John, W.S., 1 Hill Street, Edinburgh	23/11/06
	Goldie-Scot, Arch., of Craigmuaie, Moniaive	12/4/12
	Goldie-Scot, Mrs, Craigmuaie, Moniaive	12/4/12
	Gordon, Miss, Kenmure Terrace, Dumfries	14/9/07
	Gordon, Henry Sharpe, Glenæ, Dumfries	26/4/12
90	Gordon, J. G., F.E.S., Corsemalzie, Whauphill, Wigtownshire	20/1/11
	Gordon, Roger S., F.E.S., Corsemalzie, Whauphill, Wigtownshire	3/9/11
	Gordon, William, Victoria Road, Dumfries	12/4/12
	Graham, W. F., Mossknow, Ecclefechan	12/4/12
	Graham, Mrs, Springburn Cottage, Kilbarchan, Renfrewshire	28/7/06
95	Grierson, R. A., Town Clerk, Dumfries	15/3/07
	Greaves, A. R., Dalmakerran, Thornhill	12/4/12
	Grieve, David G., Castle-Douglas Road, Maxwelltown...	17/11/11
	Grieve, Mrs David, Castle-Douglas Road, Maxwelltown	15/12/11
	Grove, W. M., Dalawoodie, Dumfries	25/10/18
100	Gulland, John W., 23 Summer Place, South Kensington, S.W. 7	12/4/12
	Halliday, T. A., Parkhurst, Dumfries,	26/1/06
	Halliday, Mrs, Parkhurst, Dumfries	26/1/06
	Halliday, W. J., Esthwaite, Lochmaben	6/4/96
	Hall, Charles Johnstone, 143 Bekley Road, Northumberland Heath, Erith, Kent	24/10/19

- 105 Hamilton, W. Malcolm, Craighlaw, Kirkeowan 12/4/12
 Hamilton-Grierson, Sir Philip J., 7 Palmerston Place,
 Edinburgh 12/4/12
 Hannay, Miss, Langlands, Dumfries 6/4/88
 Hastie, D. H., Victoria Terrace, Dumfries 24/2/06
 Henderson, Miss E. L., Westbank, Drummore, Wigtown-
 shire 12/6/09
- 110 Henderson, James, Solicitor, Dumfries 9/8/05
 Henderson, Thomas, Solicitor, Lockerbie 17/10/02
 Heriot, W. Maitland, Whitecroft, Ruthwell 14/9/08
 Herries, D. C., St. Julian's, Seven Oaks, Kent 23/4/15
 Hewison, Rev. James King, D.D., The Manse, Rothesay 12/4/12
- 115 Hill, W., Rosebank, Irongray, Dumfries 12/4/12
 Hope, Captain Thomas, Summerhill, Dumfries 25/10/13
 Houston, Mrs, Brownrigg, Dumfries 12/6/09
 Hunter-Arundell, Hugh W. F., Barjarg, Dumfries 29/11/12
 Hunter, David, 3 Braehead Terrace, Maxwelltown ... 17/10/13
- 120 Hunter, Dr Joseph, Castle Street, Dumfries 24/6/05
 Hunter, Dr, St Catherine's, Linlithgow 12/4/12
 Hunter, Thomas S., Woodford, Dumfries 12/4/12
 Inskip, Lady Agusta, Dunskey, Portpatrick 12/4/12
 Irving, Colonel J. B., of Bonshaw, Annan 18/1/01
- 125 Irving, John, Galloway Street, Maxwelltown 14/5/14
 Irving, H. C., of Burnfoot, Ecclefechan /07
 Irving, John A., West Fell, Corbridge-on-Tyne 7/12/06
 Irvine, William Ferguson, F.S.A., 56 Park Road S.,
 Birkenhead 7/2/08
- Jamieson, Rev. J. Bryce, Greyfriars' Manse, Dumfries... 25/10/12
- 130 Jardine, Provost, Ednam Cottage, Annan 29/11/12
 Jardine, D. J., of Jardine Hall, Lockerbie 12/4/12
 Jardine, Wm., Wauchope, Klipdam, Kimberley 17/6/11
 Jardine, Major William, Tamboors, Kloof, Capetown... 17/6/11
 Jenkins, Ross T., National Bank of Scotland, Edinburgh 12/4/12
- 135 Johnson-Ferguson, Sir J. E., Bart., of Springkell,
 Ecclefechan 30/5/96
 Johnson-Ferguson, A., Knockhill, Ecclefechan 9/9/05
 Johnston, Dr S. E., Burnbank, Penpont 12/4/12
 Johnstone, F. A., 56 Queen's Gate, London, S.W. 11/4/11
 Johnstone, John T., Millbank, Moffat 4/4/90
- 140 Johnstone, Mrs, Victoria Terrace, Dumfries 17/2/96
 Johnstone, T. S., Victoria Terrace, Dumfries 19/2/09
 Johnstone, W. S., Victoria Terrace, Dumfries 11/2/98
 Johnstone, T. Humphreys, Palazzi Contarini del Zaffo,
 Madonna Del'Orto, Venice 24/10/19
 Kennedy, Colonel J. Murray, M.V.O., of Knocknalling,
 Dalry 12/4/12
- 145 Kennedy, Robert, Bank House, Thornhill 12/4/12
 Kennan, T. L., 732 First National Bank Buildings, Mil-
 waukee, U.S.A. 25/10/18

	Kidd, Mrs, 12 Murrayfield Avenue, Edinburgh	14/11/13
	Kirkpatrick, John George, 32 Morningside Park, Edinburgh	12/4/12
	Kirkpatrick, Rev. R. S., The Manse, Yarrow	17/2/96
150	Kissock, James, P.-F., Banff	19/2/09
	Laurie, Colonel Sir C. E. R., Maxwelton House, Thornhill	20/1/11
	Lebour, Mrs Nona, Radcliffe House, Corbridge-on-Tyne	25/10/12
	Lennox, John, Whitethorn, Dumfries	10/1/13
	Lepper, R. S., Elsinore, Crawfordburn, Co. Down	25/10/18
155	Little, James, Commercial Bank, Dalbeattie	12/4/12
	Little, Murray, Town Clerk, Annan	12/4/12
	Lupton, Thomas, Solicitor, Stirling	12/4/12
	Lusk, Hugh D., Larch Villa, Annan	25/4/08
	Lyon, J. Stewart, Jessfield, Kirkmichael	12/4/12
160	M'Alister, A. W., Ashgrove Villas, Dumfries	1/12/11
	Macaulay, Miss, Matron, C.R.I., Dumfries	25/2/13
	M'Burnie, John, The Garth, Dumfries	21/11/08
	M'Burnie, Mrs, The Garth, Dumfries	29/11/12
	M'Call, Wm., of Caitloch, Moniaive	20/1/11
165	M'Cargo, James, Kirkpatrick-Durham	24/4/96
	M'Caskie, Dr, 14 Onslow Square, London, S.W.	24/9/17
	M'Clure, James, Clydesdale Bank, Lockerbie	12/4/12
	M'Combie, Rev. John, The Manse, Holywood	26/4/12
	M'Connel, J. I., of Elioek, Sanquhar	26/4/12
170	M'Cormick, Andrew, Solicitor, Newton-Stewart	3/11/05
	Macdonald, J. C. R., W.S., 1 Newall Terrace, Dumfries	6/11/85
	Macdonald, Major W. B., of Rammerscales, Lockerbie ...	12/4/12
	M'Douall, Kenneth, of Logan, Stranraer	12/4/12
	M'Dowall, Rev. W., U.F. Manse, Kirkmahoe	20/3/08
175	M'George, J. C., Nunfield, Dumfries	12/4/12
	M'Gowan, B., Solicitor, Dumfries	26/10/00
	Macharg, W. S., 9 Fleurs Avenue, Dumbrell, Glasgow...	16/10/14
	M'Jarrow, D., Town Clerk, Lockerbie	22/2/06
	Mackenzie, Colonel Ed. Philippe, 14 Sussex Square, Brighton	25/8/95
180	M'Kerlie, Miss E. M., 5 Albany Place, Dumfries	23/11/17
	M'Kerrow, M. H., Solicitor, Dumfries	19/1/00
	M'Kerrow, Matt. S., Burnock, Dumfries	9/1/90
	M'Kie, Dr Norman J., 14 Arthur Street, Newton-Stewart	12/4/12
	M'Kinley, Hugh, 1 Queensberry Terrace, Maxwelltown	23/11/17
185	MacKinnel, W. A., The Sheiling, Maxwelltown	22/2/06
	M'Lean, C. A., Wigtown	26/4/12
	MacLeod, John, sen., Montpelier Park, Edinburgh	25/10/12
	M'Micking, Gilbert, M.P., 9 Cheyne Place, London, S.W.	12/4/12
	M'Millan, Rev. William, Hallside, Glasgow	16/10/14
	M'Queen, James, of Crofts, Dalbeattie	12/4/12
190	Manson, D., Netherlea, Dumfries	16/6/06

LIST OF MEMBERS.

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	Manson, Mrs, Netherlea, Dumfries	16/6/06
	Marriott, C. H., 128 Byres Road, Glasgow	27/6/07
	Matthews, Mrs, Drungans Lodge, Cargenbridge, Dumfries	12/1/17
195	Maxwell, Benjamin Bell, Springkell, Netherby Road, Edinburgh	16/2/12
	Maxwell, Sir Herbert, Bart., LL.D., D.C.L., of Monreith, Wigtownshire	7/10/92
	Maxwell, John, Tarquah, Maxwelltown	20/1/05
	Maxwell, Robert, Terregles Banks, Dumfries	3/11/11
	Maxwell, Sir Wm., of Cardoness, Gatehouse	17/6/11
200	Maxwell, Lady, of Cardoness, Gatehouse	17/6/11
	Maxwell, Wellwood, of Kirkennan, Dalbeattie	5/11/86
	Menzies, N. F. D., of Newtonairds	25/10/12
	Michie, F. W., Westgrove, Dumfries	21/10/10
	Middleton, Rev. John, LL.B., The Manse, Irongray ...	21/3/19
205	Millar, R. Pairman, S.S.C., 50 Queen Street, Edinburgh	14/9/08
	Miller, F., Cumberland House, Annan	3/9/86
	Miller, James, Beaumont, Edinburgh Road, Dumfries ...	23/11/17
	Milligan, James, W.S., 15 York Place, Edinburgh	12/4/12
	Milligan, J. P., Aldouran, Maxwelltown	17/10/05
210	Milne-Home, J. H., Irving House, Canonbie	19/1/12
	Milroy, Alexander, Solicitor, Dalry	3/11/11
	Molteno, P. A., 10 Palace Court, London, W. 2	12/4/12
	Moir, John D., Burgh Surveyor, Lockerbie	9/3/17
	Mond, Miss, Aberdour House, Dumfries	9/9/05
215	Morton, A. S., Solicitor, Newton-Stewart	23/4/15
	Muir, James, Glenturk, Wigtownshire	16/1/14
	Murray, John, Rector, Annan Academy	17/10/13
	Murray, William, Albert Road, Maxwelltown	20/10/11
	Murray, Mrs, Albert Road, Maxwelltown	17/11/11
220	Murray, William, M.P., of Murraythwaite, Ecclefechan	8/2/95
	Murray, Mrs, of Murraythwaite, Ecclefechan	29/7/05
	Neilson, Geo., LL.D., Wellfield, Partickhill Road, Glasgow	13/12/95
	Neilson, J., of Mollance, Castle-Douglas	13/3/96
	Nicholson, J. H., Airlie, Maxwelltown	9/8/04
225	Orr, David, County Asylum, Prestwich, Manchester	12/4/12
	Ovens, Walter, of Torr, Auchencairn	13/3/96
	Paterson, D., 52 Eldon Street, Greenock	12/4/12
	Paterson, James J., of Brocklehurst, Dumfries	26/4/12
	Paton, Rev. Henry, Elmswood, Peebles	21/11/08
230	Pattie, R., Buccleuch Street, Dumfries	23/10/08
	Penfold, Harry, Brampton, Cumberland	30/12/16
	Penman, A. C., Mile Ash, Dumfries.....	18/6/01
	Penman, Mrs, Mile Ash, Dumfries	17/10/05
	Primrose, John, Solicitor, Dumfries	5/12/89

235	Ragg, Rev. F. W., M.A., The Manor House, Byfleet, R.S.O.	22/3/18
	Ralston, C. W., Dabton, Thornhill	20/1/11
	Ranken, L., Dalswinton, Dumfries	1/12/11
	Reid, Robert C., Cleuchbrae, Ruthwell	18/11/07
	Ritchie, Dr, County Buildings, Dumfries	26/4/12
240	Robson, John, County Buildings, Dumfries	25/5/95
	Robson, George H., National Bank House, Dumfries ...	17/11/11
	Robertson, Rev. G. Philip, Sandhead U.F. Manse, Wig- townshire	20/3/08
	Robison, J., Journalist, The Museum, Kirkcudbright ...	12/6/09
	Romanes, Charles S., 3 Abbotsford Crescent, Edinburgh	25/1/18
245	Ross, Dr J. Maxwell, Duntrune, Castle-Douglas Road, Dumfries	11/7/91
	Russell, George, of Newton, Dumfries	12/4/12
	*Rutherford, J., Jardington, Dumfries	3/11/76
	Saffley, Dr, Park House, Annan	29/11/12
	Salmon, Thomas J., solicitor, Bank of Scotland Buildings, Bo'ness	12/4/12
250	Saunders, Mrs, Rosebank, Lockerbie.	
	Scott, Captain William, R.A.M.C., 15 Claremont Crescent, Edinburgh	23/11/17
	Scott, Alexander, Solicitor, Annan	7/11/90
	Scott, Harry, Millhouse, Moffat	16/2/12
	Scott, R., 8 Upper Coltbridge Terrace, Murrayfield, Mid- lothian	12/4/12
255	Scott, S. H., Glebe Terrace, Dumfries	4/7/08
	Scott, W. S., Redcastle, Dalbeattie	14/1/98
	Scott, Dr W., Clarencefield, Dumfries	4/7/08
	Selby, Dr W. M'D., Portwilliam, Wigtownshire	12/4/12
	Semple, Dr, D.Sc., Mile Ash, Dumfries	12/6/01
260	Simmie, R. C., 2 Nelson Street, Maxwelltown	14/5/14
	Slessor, Miss, 25 Catherine Street, Dumfries	23/11/17
	Smart, J. T. W., Catherine Street, Dumfries	18/12/08
	Smellie, James, C.E., Waterworks, Dumfries	21/12/17
	Smith, Arthur Cameron, Brookville, Uddingston	24/1/19
265	Stewart, Edward O., of Ardwell, Wigtownshire	12/4/12
	Stewart, G. MacLeod, 1 Catherine Street, Dumfries ...	4/11/10
	Stewart, Mrs, Bargaly, Palnure	22/3/18
	Stewart, William, of Shambellie, Newabbey	21/12/06
	Spence, Mrs, Thornwood, Edinburgh Road, Dumfries...	23/11/17
270	Stair, The Earl of, Lochinch, Castle-Kennedy	12/4/12
	Stark, W. J., Solicitor, Dumfries	17/10/13
	*Stobie, P., Beechwood Bank, Dumfries	3/11/76
	Stobie, Mrs, Beechwood Bank, Dumfries	17/2/11
	Stirling, Mrs, Gargunnoch, Stirling	25/10/18
275	Stuart, Sir Thomas Anderson, M.D., LL.D., Lincluden, Double Bay, Sydney	12/4/12
	Swan, J., Stationer, High Street, Dumfries	23/4/09
	Symons, John, Solicitor, Manoa, Irish Street, Dumfries	6/11/85

- Thompson, Mrs H. A., Inveresk, Castle Street, Dumfries 25/11/04
 Thomson, Miss, c/o Miss Dunbar, Langlands, Dumfries.
- 280 Thorburn, Colonel Charles James, Abbeybank, Newabbey 12/4/12
 Turner, Alexander, Chemist, Buccleuch Street, Dumfries 17/10/05
 Walker, Captain G. L., of Crawfordton, Moniaive 21/10/10
 Wallace, Sir Matthew G., Terreglestown, Dumfries 11/3/98
 Wallace, Robert, Durham Villa, Dumfries 6/11/08
- 285 Wallace, Professor Robert, 45 East Claremont Street,
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 Wallace, W. Williamson, Kelton, Dumfries 26/4/12
 Watt, Miss, Crawford Villa, Johnstone Park, Dumfries ... 6/10/05
 Watson, George, Corsbie West, Newton-Stewart 26/4/12
 Waugh, Joseph Laing, 3 Coniston Terrace, Edinburgh 25/10/18
- 290 Weatherstone, Andw., Bank of Scotland House, Dumfries 1/12/05
 White, John, Aldworth, Noblehill, Dumfries 28/7/06
 White, Mrs, Aldworth, Noblehill, Dumfries 28/7/06
 Whitelaw, J. W., Solicitor, Dumfries 6/11/85
 Wightman, J., 2 Franklin Place, Troqueer Road, Max-
 welltown 18/12/07
- 295 Will, George, Farm Manager, C.R.I., Dumfries 28/7/06
 Williamson, Rev. A. Wallace, D.D., 44 Palmerston Place,
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 Willison, R. G. E., 25 Catherine Street, Dumfries 23/11/17
 Wilson, Miss M. A., Schoolhouse, Mossdale 12/1/17
 Wilson, Robert, Solicitor, Sanquhar 15/6/12
- 300 Wilson, Tom, 28 Quarmby Road, Gorton, Manchester ... 25/10/12
 Wilson, Rev. J. Y., South U.F. Manse, Dumfries 21/2/13
 Wilson, Rev. John, M.A., Manse, Troqueer Dumfries... 25/10/18
 Wilsore, Charles R. Davidson, Clonyard, Dalbeattie 12/4/12
 Wright, Robert, Nelson Street, Maxwelltown 14/5/14
- 305 Young, Miss Patricia, Lincluden House, Dumfries 25/1/18
 Young, E. Denholm, W.S., 15 Rutland Street, Edin-
 burgh 12/4/12
 Younger, Colonel John, Langshawbush, Moffat 12/4/12

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