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EDITORIAL

Contributions are invited on the Natural History, Antiquities, Archaeology or Geology of South-West Scotland or the Solway Basin and preference is always given to original work on local subjects. It may also be possible to provide space for Industrial Archaeology. Intending contributors should, in the first instance, apply to the Editors for "Instructions to Contributors". Each contributor has seen a proof of his paper and neither the Editors nor the Society hold themselves responsible for the accuracy of scientific, historical or personal information.

A copy of the Rules passed at the Special General Meeting on 4th May, 1977 appeared in Volume 52 and a list of members appeared in volume 56.

Presentations and Exhibitions should be sent to the Hon. Secretary, Mr R. H. McEwen, 13 Douglas Terrace, Lockerbie (Tel. Lockerbie 2101), and exchanges to the Hon. Librarian, Tranzay Villa, Maxwell Street, Dumfries. Enquiries regarding purchase of Transactions should also be made to the Hon. Librarian. New members are invited to purchase back numbers — see rear cover — which, and also offprints of individual articles may be available from the Hon. Librarian. As many of the back numbers are out of stock, members can greatly assist the finances of the Society by arranging for any volumes which are not required, whether of their own or those of deceased members, to be handed in. It follows that volumes out of print may nevertheless be available from time to time.

Payment of subscriptions should be made to the Hon. Treasurer, Miss Morag Donald, 7 Oakfield Drive, Dumfries (Tel. 64796) who will be pleased to arrange Bonds of Covenant, which can materially increase the income of the Society without, generally, any additional cost to the member. The attention of Members and friends is drawn to the important Capital Transfer Tax and Capital Gains Tax concessions which are conferred on individuals by the Finance Act 1972, in as much as bequests or transfers of shares or cash gifts to the Society are exempt from these taxes.

Limited grants may be available for excavations or other research; applications should be made prior to 28th February in each year to the Secretary. Researchers are also reminded of the existence of the Mouswald Trust founded by our late President Dr. R. C. Reid. Applications for grants from the Trust, which are confined to work on the Early Iron Age, Roman, Romano-British and Early Christian periods should be made to Primrose and Gordon, Solicitors, Irish Street, Dumfries.

This Volume is made with the assistance of a generous Carnegie Grant. The Council is also indebted to the Scottish Development Department for grants towards the publication costs of Mr John Barber's, Mr George Haggarty's and Mr Chris Tabraham's Reports and Mr Tabraham's and Miss Crone's Notes in the *Addenda Antiquaria*, and to the Scottish Office for a grant towards Mr Stell's paper.

PLEISTOCENE ICE MOVEMENTS IN THE RHINS OF GALLOWAY

by
W. B. Kerr

Summary

Field work in the Rhins of Galloway suggests that two glacial tills have been deposited. These are both considered to date to late in the last glaciation. The relationships between Highland Ice and Southern Upland ice masses are discussed with evidence from till fabrics, erratics, striae and drumlin orientations. The late Pleistocene events as chronicled for the coast of Northern Ireland are considered when there are links with events in Galloway.

Introduction

The influence of the last glaciation is visible throughout the Rhins of Galloway, as elsewhere in Scotland. Despite the importance of this period for soils, land use, agriculture, gravel extraction and the landscape, little detailed study has been devoted to the Pleistocene geology of the area. This paper discusses the ice movements which deposited the boulder clay or till. As there was no source of ice accumulation within the study area, (Figure 1), it was important to establish the origin of ice movements.

The geology of the area is dominated by the great province of Palaeozoic rocks which extends from the Southern Uplands to County Down in Northern Ireland. The Ordovician/Silurian boundary, crosses the area from Stoneykirk to the western coast but has no topographic expression. In the south-west a small granite outcrop covers an area of about 6.5 km². This is known as the Barncorkie granite. A belt of New Red sandstone outcrops along the western shore of Loch Ryan and extends southeastwards to Stoneykirk. West of this sandstone band and parallel to it is a narrow outcrop of Carboniferous sandstone and shale. These rocks disappear below the spreads of Quaternary sands and gravels associated with the late-glacial and post glacial invasions of the sea into the Stranraer isthmus. Gravity measurements by Bott (1964), revealed a gravity anomaly in Luce Bay and Loch Ryan, which has been used to support the suggestion of a continuation of Stranraer Permo-Triassic basin into the Solway Firth. This has some influence on the characteristics of the tills on the peninsula.

The landscape of the area is dominated by drumlins, which produce a distinctive landscape. This contrasts sharply with the flat land of the isthmus which is broken in the north by a belt of kame and kettle moraine around Castle Kennedy.

The Palaeozoic rocks outcrop in a few places but generally there is a thick drift cover either of till, beach material or fluvio-glacial sands and gravels.

The glacial geomorphology of the Rhins of Galloway has never been studied in detail but only as a part of larger areas such as Galloway or the entire south of Scotland. Moore (1850), records marine shells in glacial drift, on the western shore of Loch Ryan. The most detailed information is found in the Memoirs of the Geological Survey published in 1872 and 1873. Only one 'fawn coloured' clay is noted, which is described as sandy in texture. However fragments of shells are recorded from 'stiff'

parts of the till and this may correspond to what will be referred to as Lower till in following sections of this paper.

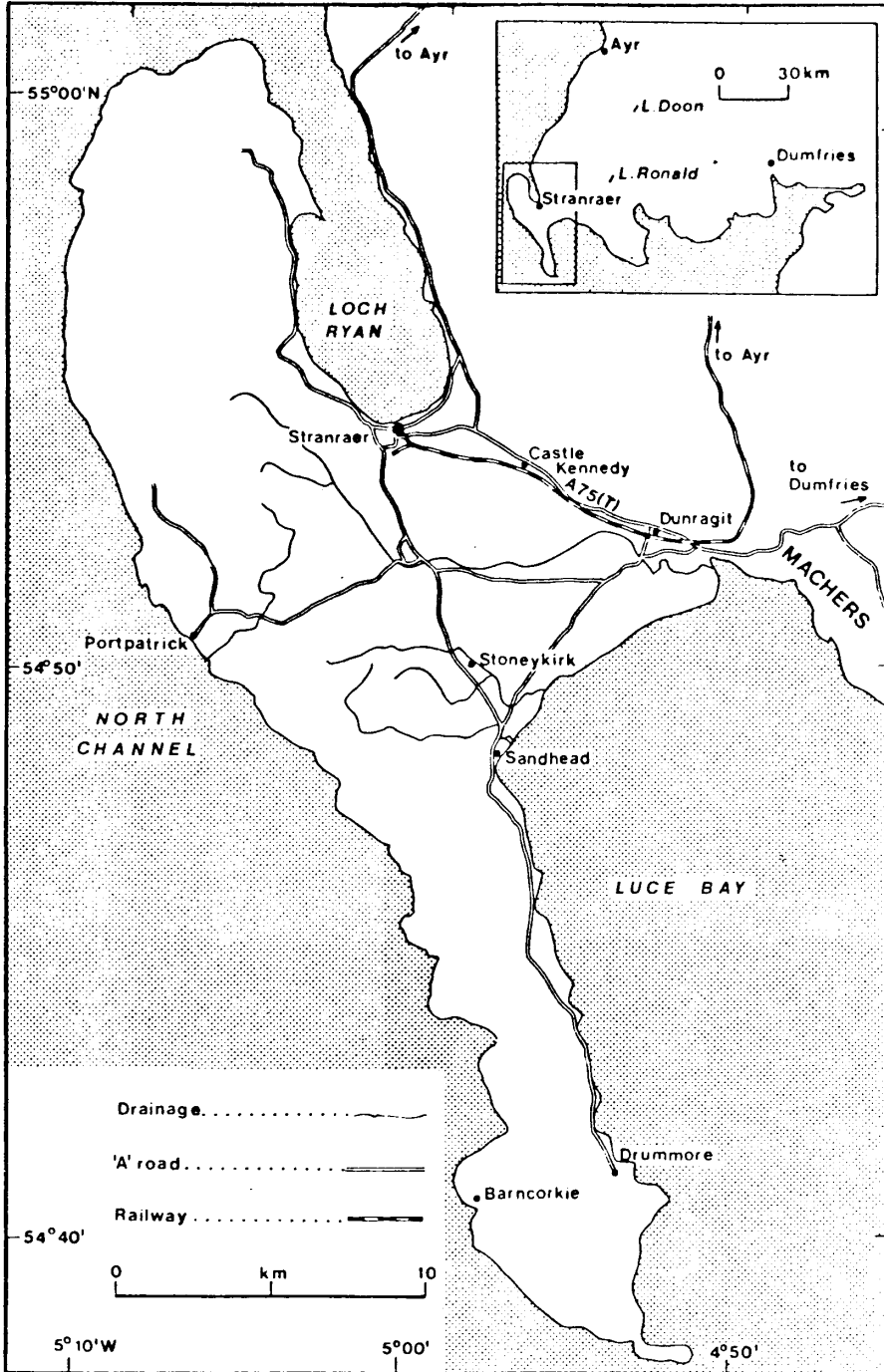


Fig. 1. Place names and location of the study area

Charlesworth (1926 a) made a serious attempt to distinguish differing ice movements and explained the glacial deposits of the Rhins in terms of the action of two ice bodies. Highland Ice flowing from north to south almost parallel to the western coast became confluent with ice flowing in a southwesterly direction across the Machers of Wigtownshire from the Merrick Hills. In a further paper, Charlesworth (1926 b) dealt with the retreat of the ice-front from Galloway. He described a moraine called the Lammermuir - Stranraer moraine crossing the area. The direction of ice movement as described by Pringle (1947) is illustrated in Figure 2 a and this concept was slightly revised by Greig (1971), Figure 2 b, who mentioned the presence of two tills but concluded there was no clear chronology. Sissons (1967) produced a map showing the distribution of shelly till which occurred throughout the Rhins.

Methodology

The investigation was primarily a field exercise with some laboratory analysis of till samples. Using 1:25000 maps as field sheets, the glacial landforms of the area were recorded systematically. Twenty-six till sections were examined where it was unlikely that the till had been disturbed. In order to minimize the possibility of soil creep or cryoturbation the fabric sample point was always at least 1.5 metres below the surface. The standard procedure for till fabric analysis described by Andrews (1971) was followed and the orientation data grouped into 10° classes.

The drumlins of the area were recorded in the field and on air photographs by a measurement of the long axis. The glacial striae of the area as mapped by the geological survey were abstracted from the geology maps and the orientations compared to drumlin and till fabric directional indicators.

Differentiation of Two Tills

There is no evidence to suggest that glacial deposits older than the last glaciation are present in the area. Various workers have suggested readvances which were indications of phases in the decay of the last ice sheet. Field evidence however suggests that two tills appear to be present and these can be differentiated by colour, consistence, particle size, erratic content, till fabric, presence or absence of carbonates, presence or absence of shells. The tills have been provisionally named 'Upper' and 'Lower'. This not only indicates the stratigraphic relationships but assists correlation with Irish Tills. Two sites were located where both Upper and Lower till were found in the same section. The junction between the tills is marked by a layer of sand which penetrates into the Lower till in wedges.

The Upper till is generally red or light brown in colour, friable and ranges from sandy loam to sandy clay loam with a much lower silt content than the Lower till. Erratic material is much less than for Lower till the majority of stones being of local origin. All erratic material removed from the till were examined by Dr. J. Preston of the Department of Geology, Queens Univeristy, Belfast who concluded that locations near Loch Doon and Loch Ronald, (Figure 1) were likely sources. This would be in accordance with the southwest movement of Southern Uplands ice. The most consistent feature of the till is the pattern of northeast to southwest fabric analyses. This strong orientation was recorded from all sites and supports the traditional theory of ice moving southwestwards across the area.

The Lower till is much more patchy in distribution than the Upper till. It

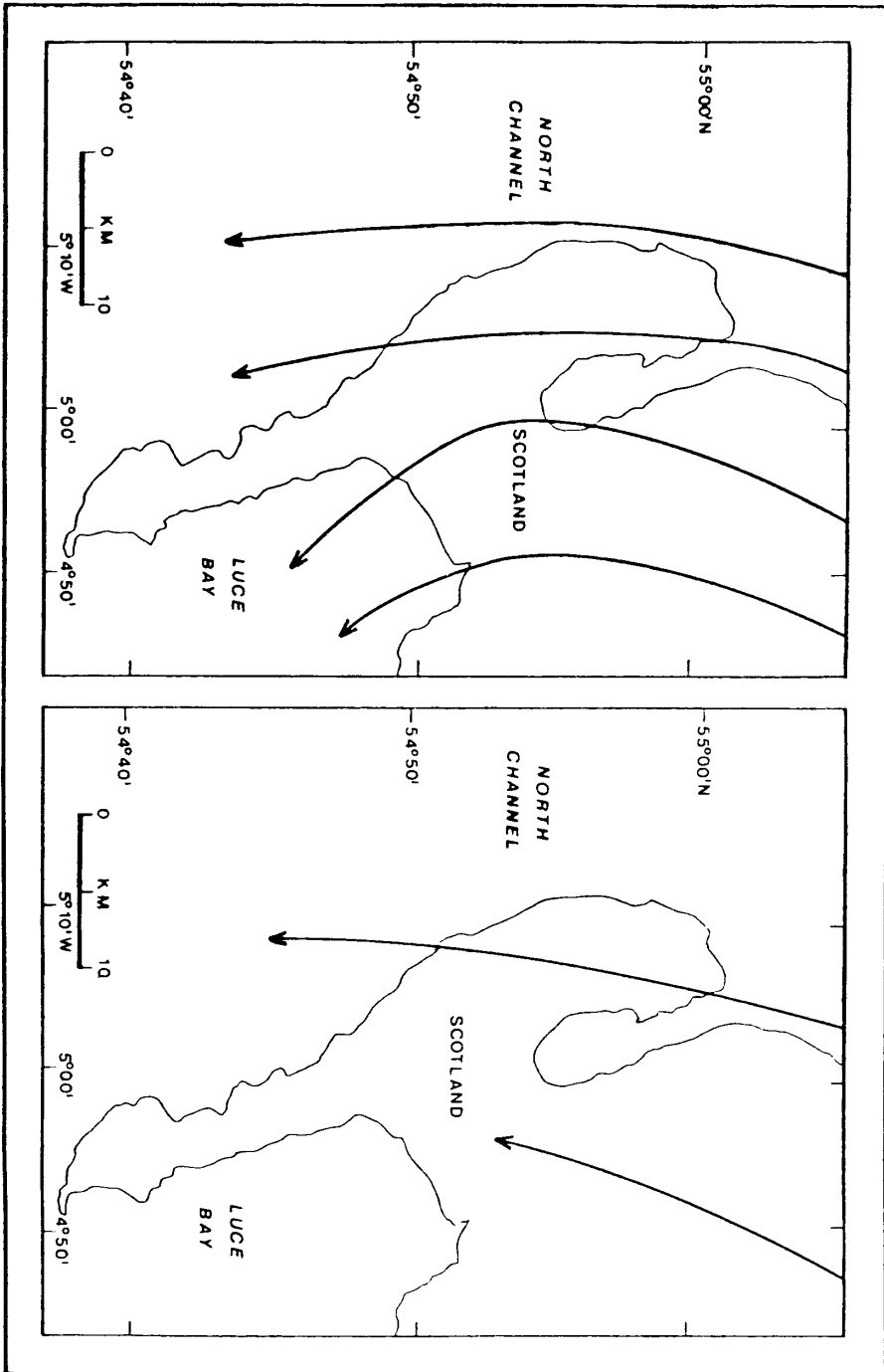


Fig. 2a. Ice movement after Pringle (1947).

Fig. 2b. Ice movement after Greig (1971)

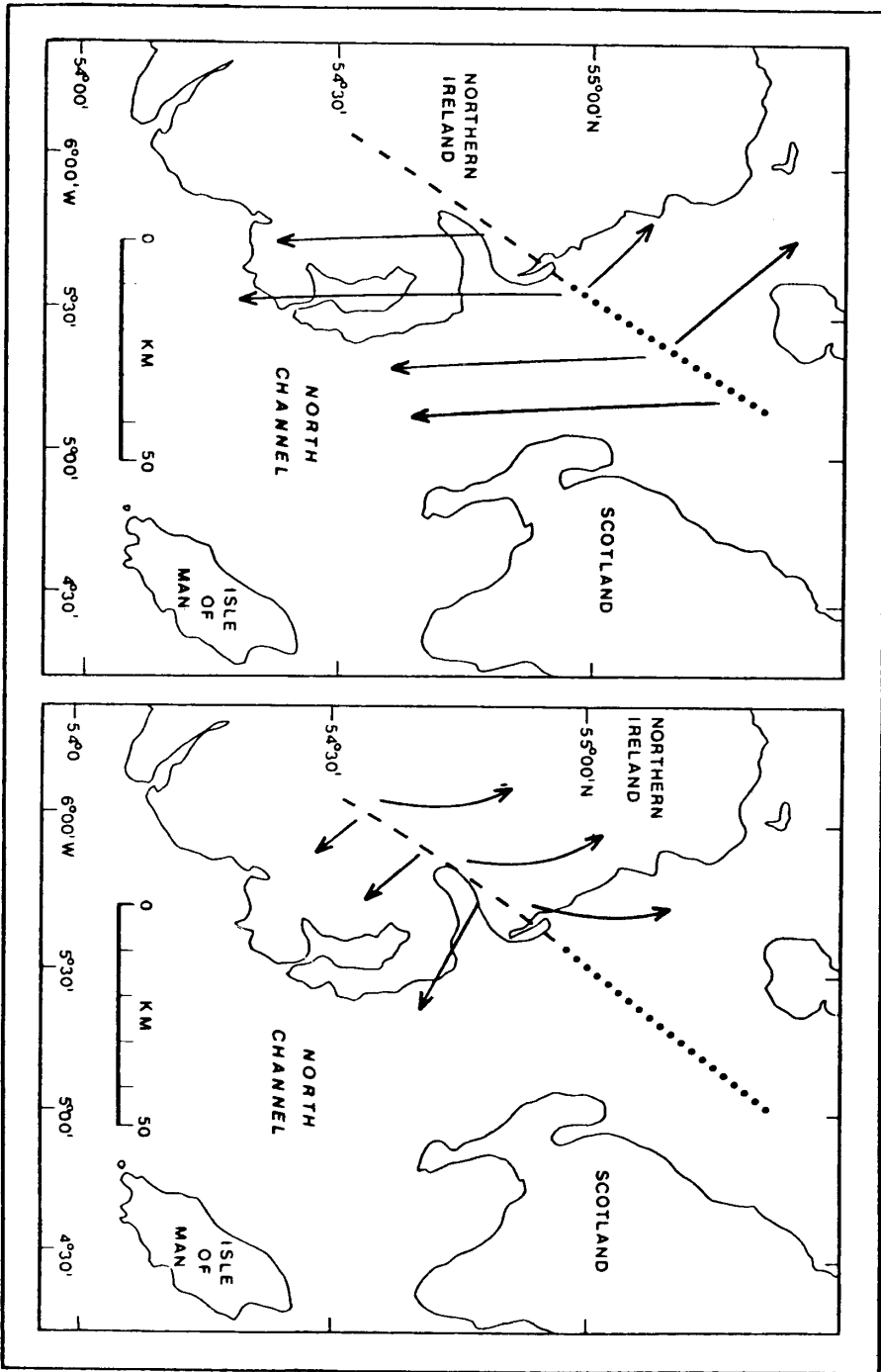


Fig. 3. Ice movements in eastern Ulster from Hill and Prior. (1968).

appears darker than the Upper till and when wet is usually dark brown but occasionally appears purple or blue grey. Usually massive and compact it presents a formidable obstacle in cutting a shelf for till fabric analysis. The stone content of the till is low and the matrix is clay loam in texture. The combined silt and clay fractions always exceeded 40% of the whole. Marine shells were recovered from two sites. The erratic content of the till is mostly sandstone and at all sites the proportion of erratic to non-erratic material is high. There is clear evidence of north to south or northwest to southwest directions from the fabric analysis in contrast with the northeast to southwest orientations in the Upper till.

Perhaps the diagnostic characteristic of the Lower till is the notably strong reaction to acid in the field. Vigorous effervescence occurs on addition of dilute hydrochloric acid; in contrast the Upper till fails to react to acid.

As it is important to consider the Rhins in the Irish Sea context, it is appropriate to consider the findings of Hill and Prior (1968), in County Down. The Upper till here is regarded as originating locally from the interior of Ulster and is described as red brown with little erratic material and non-calcareous. The Lower till, which is envisaged as of Scottish or northern origin moving in from North Channel is described as, "chocolate brown or grey brown, calcareous and containing shells". The patterns of ice movement suggested by Hill and Prior (1968) are illustrated in Figure 3.

The Drumlins

Drumlins occur throughout the Rhins area and the axial orientations, Figure 4, illustrate the dominant northeast - southwest trend certainly in the west. There is however, a swing in the trend of the drumlins in the eastern area, especially in the parish of Stoneykirk, in the north around Kirkbryde and along the shore of Loch Ryan. This trend is so persistent that the drumlins of the area have been divided into two zones (Figure 4). The majority (Zone I) conform to the dominant ice movement direction as determined by fabric analysis and are aligned northeast-southwest. The dominant direction in Zone II is at right angles to this with drumlin axes aligned northwest to southeast. Charlesworth, (1926 a) noted this change in drumlin orientation and explained the swing in terms of a readvance of the ice, which he called the 'Kirkcowan Readvance'. In County Down, Hill (1968) noted a similar change in drumlin orientation and explained this by an ice sheet overriding the drumlins in the northeast of the Ards Peninsula without altering the earlier north-south trend. The possibility that drumlins can be overridden by a later ice sheet without destruction has been previously mentioned by Hollingworth, (1931).

Discussion

There is clear evidence of two distinct ice movements across the area. What is not clear is the relationship in space and time between these different ice streams.

Evidence of ice movement from the north impinging on the Rhins is well established in the literature, (Pringle 1947, Charlesworth 1926 b, Sissons 1967 and 1976). The last mentioned author writes, (Sissons 1976, page 77):

"The shelly drift has also been found in a narrow strip along the coast of southern Ayrshire and more widely over the Stranraer peninsula, erratics from the island of Ailsa Craig being common around this town".

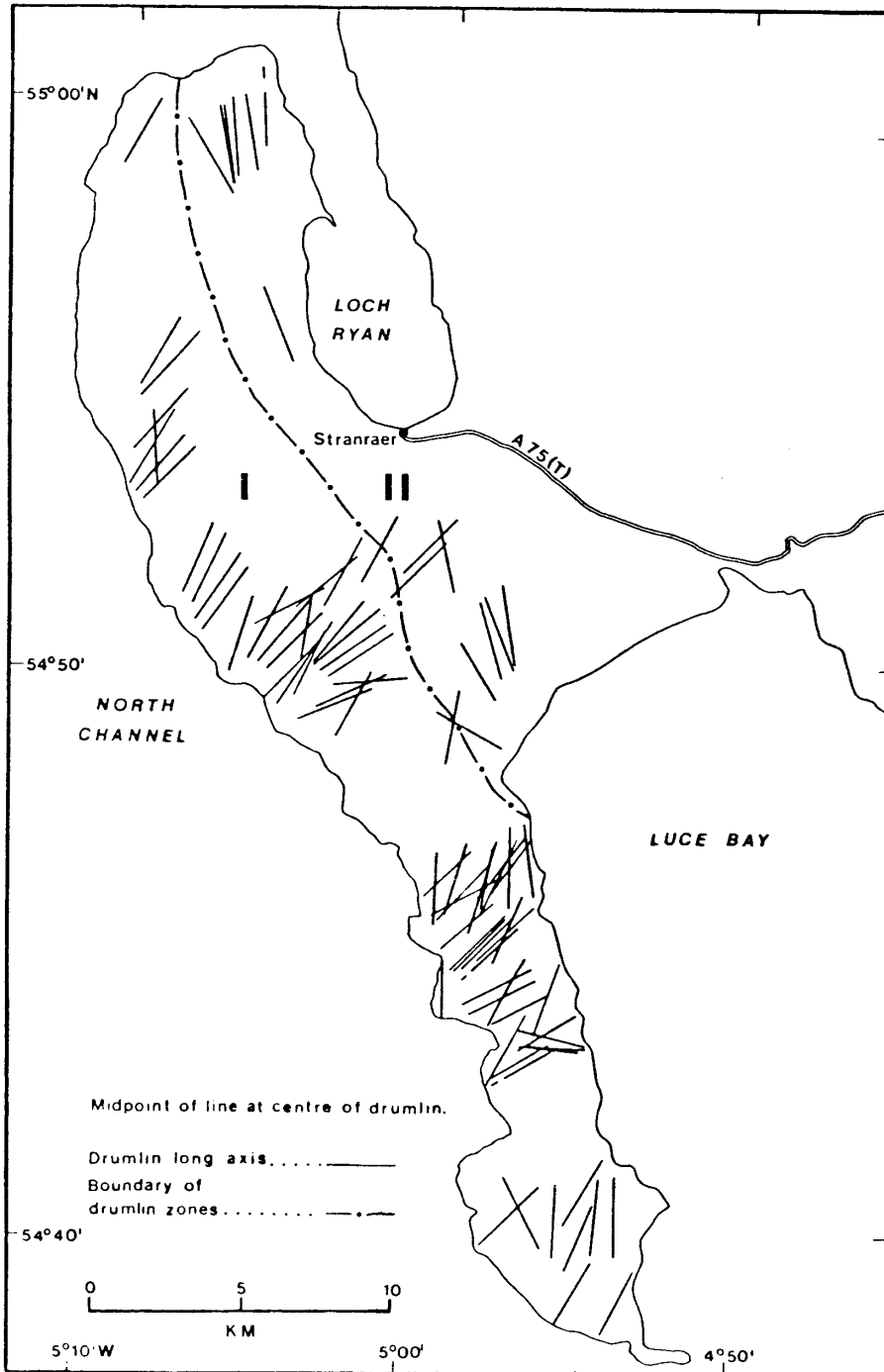


Fig. 4. Drumlin orientations and zones from field recordings

The north-south component of the ice movement also accounts for the persistent north-south drumlin trend and a similar orientation of many striae. The Lower till as described above could be associated with this component of ice flow. Admittedly

the distribution of Lower till is patchy but there is a substantial body of evidence for ice flow from the north.

There is also much evidence for ice moving northeast to southwest across the area from a Southern Uplands ice dome. This accounts for the presence of igneous erratics from the Loch Doon area and the dominant northeast to southwest drumlin and striae trends. The Upper till which has no marine characteristics and is non-calcareous could be a product of ice that moved in this direction.

There have been a few attempts in the literature to reconcile these concepts of differing directional flows. Charlesworth (1926 b) suggested that ice moving out from the Loch Doon area of Galloway in a northerly direction was deflected south to join with the dominant Highland Ice and move north to south across the area. This might account for the mixture of erratics but it only allows a north to south movement and ignores northeast to southwest trends.

Sissons (1976, page 77) presents a similar concept of contemporary ice masses in competition, stating that,

“It thus appears that over the western Southern Uplands there existed an ice dome which, aided by the bulk of the upland mass, was sufficiently powerful to fend off the great Highland ice stream”.

The difficulty here is demarcating an area influenced by Highland Ice and a separate area influenced by inland Southern Upland ice. The pattern of till distribution and other guidelines suggest no clear separation.

The key to both these concepts is the contemporaneous existence of both Highland and Southern Upland ice. The model of a shifting ice shed first developed by Stephens and Synge (1966) and repeated in Hill and Prior (1968), Stephens et. al. (1975), and Stephens and McCabe (1977), removes this need for the co-existence of Highland and Southern Upland ice. The tentative chronology of ice retreat in the Irish Sea basin suggested by Stephens and McCabe (1977) is illustrated in Figure 5. The authors separate events during the Midlandian Glaciation into ‘Early Movements’ and ‘Late Movements’. The early phase in County Down is thought responsible for the Lower till described by Hill (1968) and the late phase is associated with the Upper till and the formation of the majority of the drumlins. Beyond the Irish coast however the limit of the ‘Drumlin Stage’ ice is conjectural as noted by Stephens et. al. (1975) who stated:

“Projection of the Drumlin Stage limit across the Irish Sea and North Channel is still somewhat problematical, for the limit could extend to the northern part of the Isle of Man or to the morainic deposits of the Mull of Galloway, Stranraer area”.

As shown in Figure 4 the drumlins of the Rhins extends to the southern half of the peninsula. If the relationships established in Ireland and illustrated in Figure 5 are to extend into Scotland the southern limit of the ‘Drumlin Stage’ in the Isle of Man is preferred. Sissons (1976) has questioned the ‘moraine’ in Stranraer area and preferred to regard the area of kame and kettle in Wigtownshire as evidence of an ice sheet decaying *in situ* without significant movement.

It is therefore suggested that the ice movements in the Rhins of Galloway can be correlated with those of northeast Ireland. The Lower till of the Rhins is derived from ice moving southwards along the Firth of Clyde and inland from the North

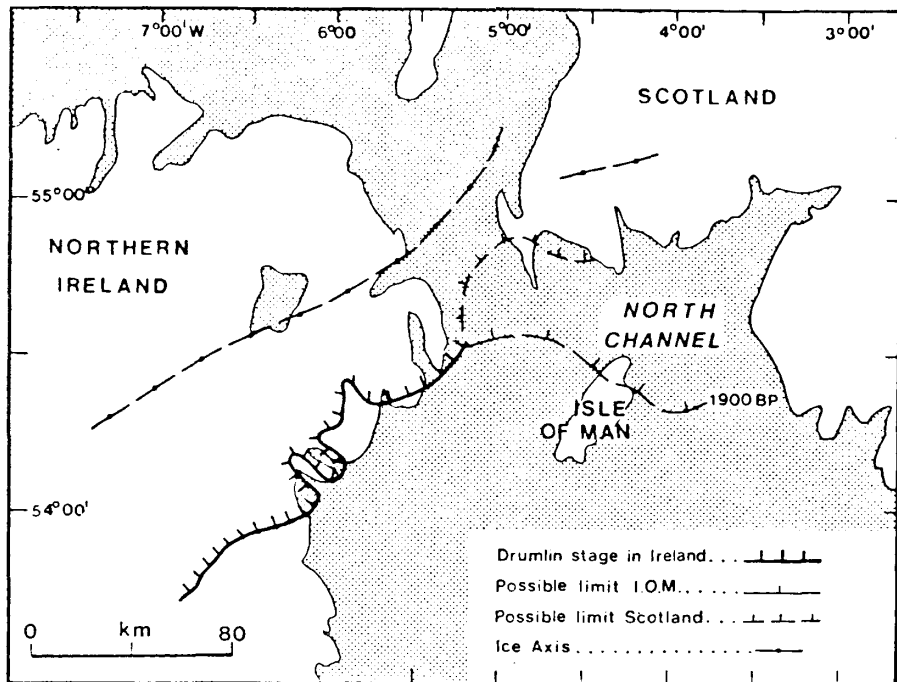


Fig. 5. Proposed correlation of moraines across the Irish Sea by Stephens and McCabe (1977).
 Note: the location of North Channel is incorrectly shown (see other figs.).

Channel. This is the Highland Ice of Scottish literature and is correlated tentatively with the Scottish Ice of the Irish literature which deposited the lower till of County Down as described by Hill and Prior (1968). This ice may have originated on the southern edge of an ice shed crossing the North Channel, Figure 5. It is difficult to find erratics distinctive enough to be used as tracers but the sandstones recovered from the Lower till could be either from the Permo-Triassic fringe on the west of Loch Ryan or from the submerged basin of the same material as postulated by Bott (1964). Charlesworth (1926 a) has also recorded Carboniferous sandstones and coal from Ayrshire.

Simple stratigraphic evidence makes it clear that the ice depositing the Upper till i.e. Southern Uplands Ice, appeared later than ice associated with the Lower till, i.e. Irish Sea or Highland Ice from the Firth of Clyde. Nowhere has any major unconformity been found between the tills; in a few places there is a rather sandy layer, which may penetrate into the Lower till in wedges or layers. An age determination of the shells from the Lower till might help with an understanding of chronology and allow correlation with County Down where shells have been dated $24,000 \pm 650$ years B.P. (Hill and Prior, 1968).

Conclusions

Field work suggests that two tills of late Pleistocene age are present in the Rhins of Galloway. The lower till was deposited by ice moving southwards from the Firth of

Clyde while the Upper till is associated with Southern Uplands ice. The exact time relationship between these ice movements is still problematical, but a chronology worked out in north-east Ireland can be extended to the area. It is reasonable to hope that further sections in Lower till could be located and shells dated to provide a time framework.

Acknowledgements

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HOW MANY ICE ADVANCES IN GALLOWAY?

by
W. B. Kerr

There now exist a number of detailed studies on the Pleistocene geology of Galloway. The works of Jardine (1975 and 1980) on raised beaches and Cutler (1979) on the Wigtownshire drumlins are notable contributions. However there is no regional synthesis which would place the area in the context of Quaternary events in Northern Britain, except for a review by Sissons (1974) which is largely concerned with northern and eastern Scotland. The absence of a study which correlates events in Galloway with adjacent regions is unfortunate as the area occupies a key location, linking the Highlands, Cumbria, Northeast Ireland and the Isle of Man. A chronology for the last or Devensian glaciation has been formulated in the other areas and Table A lists the relevant work.

Table A

Scotland

Price 1975 and 1977;
Mitchell et al 1973;

Sissons 1974, 1976 and 1981
Goodlet 1973

Cumbria

Letzer 1981;
Huddart 1971;

Pennington 1978
Huddart et al 1977

Isle of Man

Thomas 1977;

Northeast Ireland

Hill and Prior 1968;
Stephens et al 1977.

Stephens et al 1975

An examination of these contributions reveals a considerable difference in interpretation of events in the mid to late Devensian, centered on the number and timing of ice advances. The central location of Galloway makes a chronology for this area very important for correlation.

Previous Work in Galloway

The basis for any Quaternary study in Galloway is the early field recording and interpretation of Charlesworth (1926 a & b). The model created by Charlesworth was accepted for many years and his field recording has been the basis for subsequent revisions of overall glaciation. Charlesworth (1926 b) suggested a main glaciation and deglaciation followed by two separate readvances, called the Kirkcowan Stage and the Corrie Stage. The Perth Readvance mapped by Sissons (1963 and 1964) in Central Scotland was equated to the Kirkcowan Stage of Charlesworth, (Sissons 1967). A map therefore was produced which showed a line crossing Galloway at what was thought to have been a readvance limit. In effect this line only links areas where clear ice contact deposits are to be found. West (1965) disputed the concept of a major readvance and in an important review paper in 1974 (p.314), Sissons rejects all but the much later Loch Lomond Readvance.

“In summary there is at present no satisfactory evidence in Scotland that the decay of the last glaciation was interrupted by a significant readvance”.

Cutler (1979) working in the Machers carefully mapped the areas suspected of being a readvance moraine and concluded that these deposits were in fact the result of ice stand still during final deglaciation. The concept of a readvance therefore became unpopular as field evidence was found to be unsatisfactory.

The Loch Lomond Readvance is well documented in the Highlands but no large ice cap developed in Galloway. This readvance was termed the "Corrie Stage" by Charlesworth (1926 a) and moraines associated with these small corrie glaciers are interesting landscape features as they are fresh in appearance. (Fig. 1). There is general agreement that the cold conditions associated with this readvance occurred between 10800 BP and 10300 BP (Before Present), Sissons (1976).

Readvance in The Irish Sea Basin

The problems in correlation are not with this late readvance which had little effect in Galloway but with the interpretations of events in the mid and late Devensian. Evidence from beyond Galloway has been used by workers in Cumbria, Ireland and the Isle of Man to suggest a main glaciation followed by one or more readvances at this time.

In Northeast Ireland a readvance termed the 'Drumlin Readvance' because of its association with the distinctive drumlin topography in Ireland, is central to the interpretation of Hill and Prior (1968), Stephens *et al* (1975) and Stephens and McCabe (1977). A tentative chronology and correlation across the Irish Sea after Stephens and McCabe (1977, p.181) is shown in Kerr (1982). Fig. 5. The Devensian

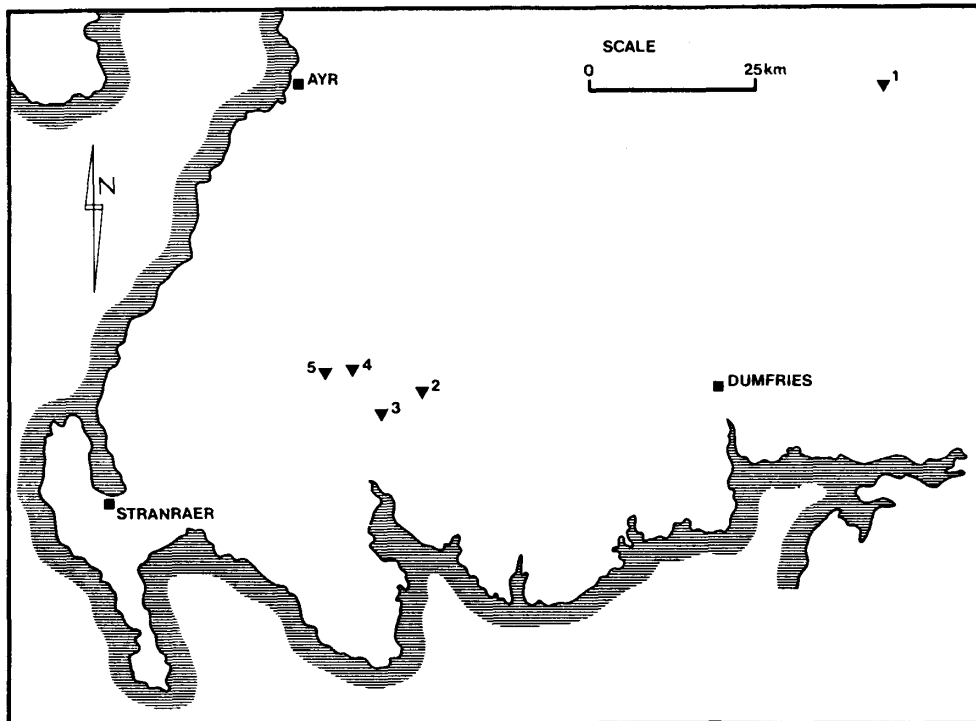


Fig. 1. Loch Lomond Moraines. 1 - Loch Skene, 2 - Loch Dungeon, 3 - Curleywee, 4 - Tauchers, 5 - Kirriereoch.

glaciation is called the Midlandian in Ireland and all the above workers agree on a main event which is tentatively dated circa 30,000 BP. Stephens and McCabe (p. 181) then suggest:

“The arrival of relatively ‘warm’ marine waters in the northern Irish Sea contributed to the break up of the extensive ice masses. But meanwhile the limited withdrawal of inland ice was interrupted by a widespread readvance to the coastlines probably reflecting a major climatic change”.

It is this readvance which at present has no equivalent in the chronology for Galloway, despite similarities in glacial deposition between the Rhins of Galloway and Northeast Ireland.

In Cumbria the importance of ice incursions from Scotland have long been recognised and the most recent synthesis by Huddart *et al* (1977) and by Letzer (1981) support the previous model. Table 8 from Letzer (p.60), clearly shows two invasions of Scottish Ice separated by a “local” ice expansion.

Table B

<i>Age</i>	<i>Stage</i>
Late Devensian	Scottish Readvance
	Main Lake District Glaciation
	Early Scottish Glaciation

However as previously maintained the present interpretation of chronology in Dumfries and Galloway does not accommodate three distinct stages or readvances.

The evidence for the Isle of Man is summarised in Thomas (1977) which explains the Bride Hills moraine as a readvance feature. It is therefore to be assumed the ice front retreated to the north of the island before readvancing.

In Southern Scotland there is a sharp difference in interpretation of the largely geomorphological evidence. Sissons (1974 and 1981), Price (1975 and 1977) and Cutler (1978), all dismiss the idea of any readvance of ice in the late Devensian. These authors conclude that the deglaciation which followed the main ice advance was rapid and much dead stagnant ice was left behind. Cutler (1978) describes fluvio-glacial features in the Moors of Wigtownshire as products of an ice stand still during deglaciation rather than a readvance ‘moraine’, as previously interpreted by Charlesworth (1926a). Authors of geological survey publications such as Greig (1971) and Goodlet (1970) continue to support a “Southern Uplands Readvance” which has readvance features in the Lammermuirs (Mitchell *et al* (1973). Greig (p.100) writes:

“The climate again deteriorated about 15000 BP and the south of Scotland once more became a dispersal area for ice which streamed out to the south over the Carlisle Plain where it is known as the Scottish Readvance”.

Jardine and Peacock in Mitchell (1973) produce a table which correlates Late Devensian events in Scotland. The most obvious feature is however the areas of disagreement which surround glacial readvances. For Galloway the comparisons are best made with areas beyond Scotland such as Northeast Ireland and Cumbria, where readvances are confidently distinguished. Trenhaile (1971) has pointed out that drumlin fields, which are well developed in Galloway are associated with the margins of former ice sheets; this is well illustrated in Ireland. If the drumlins of Galloway were shaped during the Devensian maximum the ice must have extended well

to the south of the Isle of Man. The drumlins then in Galloway are far from the ice margin and older than those of Ulster. If a readvance is allowed for in Galloway following the break up of ice in the Irish Sea, these difficulties are removed. It is therefore not unreasonable to assume that the moraine associated with the Galloway drumlins was deposited beyond the present coast line.

Discussion

The debate therefore is focused on the retreat of the ice front in the Irish Sea basin, during the arrival of the "relatively warm marine waters" proposed by Stephens and McCabe (1977). Did the ice limit retreat beyond the Northern Solway coast before a readvance? The evidence from Ireland, Cumbria and the Isle of Man seems to conclude that before the final Late Devensian Readvance the coasts became ice free and there is no evidence to suggest that the Solway coast was different. It is not implied that a major deglaciation occurred but it is a possibility that the coastal fringe of the Solway and the Rhins peninsula became ice free at some time between 22000BP and 19000BP. What is now required is stratigraphic evidence to support this.

In a recent speculative paper Sissons (1981), re-emphasises the rejection of all the readvances proposed in the older literature, such as Charlesworth (1926 a). However a minor 'readvance or halt stage' is admitted on evidence from Stirling, the Upper Clyde and Wester Ross. This, however is considered to be a very late Devensian occurrence around 13000 BP and would therefore not fit well with the advances of Ulster and Cumbria.

It must also be admitted that many workers now regard advances of ice, wastage and readvance as much more local events than was at one time thought. The ambitious schemes linking Alpine, Scandinavian and British glacials have been abandoned and perhaps the regional correlations across the British Isles are also in question.

However there does seem to be general agreement on a chronology across the Irish Sea. Huddart *et al* (1977, p. 125) suggest that:-

"It seems likely that the maximum glacial phase in the Devensian in Britain occurred between 25000 BP and 20000 BP."

This accords with dates from shell material in the Irish till of 24000 BP (Hill and Prior 1968). Several authors such as Penny *et al* (1969) and Price (1975) however prefer a later date of 18000 BP.

The final retreat of the ice front is also agreed. Jardine (1979) suggests by 13000 BP the Solway coast was ice free and Gemmell (1973) has given a date of 12500 BP for Arran. By 12000 BP peat was already forming in Dumfriesshire, Moar (1969).

The Drumlin Readvance in Ireland is dated 16000 - 15000 BP, Stephens and McCabe (1977) and Irish workers date the general break up of Irish Sea ice to between 18000 and 16000 BP. It is therefore between 18000 and 15000 BP that the Solway coasts may have been freed from ice and then subjected to a readvance of ice from the Galloway ice cap. The drumlins would then date from this readvance event.

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PTERIDOPHYTES IN V.C. 72 DUMFRIESSHIRE

by

Mary E. R. Martin

CLUBMOSES, HORSETAILS AND FERNS — we recognise in these three names the rather distinctive, though in some ways odd looking plants that grow in moist and wet places off the usual beaten tracks of comfortable walking. Although primitive they are a highly successful group, achieving what is required without the help of insects or other animals; wind and Britain's climate provide the necessary media.

They have no colourful flowers and only one will give a pleasant smell when crushed in the hand. There are no stamens producing pollen to fertilise their own kind, but a fine dust of spores is concerned with the life cycle. When these fall on wet ground they germinate, each giving rise to a tiny leaf-like plant called a prothallus on which grow antheridia and archegonia, the former producing motile spermatozoids, the latter, egg-cells. Resulting fertilised egg-cells develop into the plants we know. This alternation of generations, whereby the sexual and vegetative phases are separate, is characteristic of all Pteridophytes. In contrast, in flowering plants the sexual and vegetative phases are integrated.

The classification of plants, called the Systematic Order, is based on visible resemblances and differences, and on the detailed study of plant reproduction carried out by microbiologists. The resulting Taxonomy with a Generic and specific name for each plant is all important to a botanist, but to make this list have a more popular appeal I have decided to add to each an approved English name. These are taken from 'English Names of Wild Flowers, a Recommended List of the Botanical Society of the British Isles, by Dony, Rob and Perring', Butterworths. After his many years of B.S.B.I. Recording for the Watsonian Vice-counties of Dumfries, Kirkcudbright and Wigtown, referred to as v.c. 72, v.c. 73, v.c. 74 respectively, Dr. H. Milne-Redhead published his Plant List. It has been of tremendous value to me and has provided the incentive for this present article for v.c. 72.

The numbering and systematic names are used in the Atlas of Ferns of the British Isles, edited by A. C. Jermy (British Museum (N.H.)), H. R. Arnold, Lynne Farrell and F. H. Perring (Institute of Terrestrial Ecology), London 1978. A paragraph is added for each record to help with its recognition, commonness or otherwise, and habitat.

Clubmosses

These are low growing creeping plants with upright leafy fertile stems. The four Clubmosses known to occur in Dumfriesshire are rather nice to find. They grow in places where it is pleasant to be, such as hillsides and high moors with outcrops which provide damp rock ledges. The present day lack of reports makes one wonder if this means a genuine reduction due to changes in environment, or merely a paucity of botanists.

1.2. *Lycopodium clavatum*, Stag's-horn Clubmoss. Long creeping stems with upright paired 'clubs', yellow with spores. Dry banks on heaths. It favours heather at higher rather than lower altitudes. With only six scattered localities known it is probably under-recorded, - Raehills, Breconside near Moffat, Lochmaben, and upper Shinnel valley where trees have recently been planted.

3.1. *Huperzia selago*, Fir Clubmoss. Groups of upright stems of two to three inches, resembling the growing tips of fir trees. Only in certain areas along the northern edges of the county on moorland and rock ledges at higher altitudes.

4.1. *Diphasiastrum alpinum*, Alpine Clubmoss. Creeping with short upcurved leafy branches, some ending with paired spore clubs. On the barer hilltops and only recorded from Dalveen and Moffat.

5.1. *Selaginella selaginoides*, Lesser Clubmoss. Creeping stems but only single upright branches are noticeable near the ground. They have small pointed leaves with yellow spores at their bases. Rock ledges at Mennock, Garwald and Esk Linns.

6.1. *Isoetes lacustris*, Quillwort. Probably still extant, but not recently located. A shallow-water species of upland stony lochs.

Horsetails

This group is well named on account of a fleeting resemblance, by some of its members, to rather miserable tails. If not actually standing in water, their deep, persistent branching rhizomes will be wet. They have no grazing value and may be poisonous. The green jointed stems bear whorls of narrow branches in varying number. So far there are records for eight species in the county and naming them is a matter of recognising the combination of physical characters — smoothness or roughness to the touch, firmness or softness of the hollow stems, grooves on the stem, and teeth on the sheathing joints which may have black or white markings. If atypical plants are seen, hybridisation may have occurred.

In v.c. 72 coal measures there is confirmation of the long standing existence of Pteridophytes in the Calamites or fossil stems of the Giant Horsetails and Tree Ferns.

7.1. *Equisetum hyemale*, Rough Horsetail or Dutch Rush. Firm, rough to the touch and unbranched. Its pencil-slim stems have black and white bands at the joints. It might have eight to fourteen joints and be as tall as 40cm. Only one record, made in 1976, just north of Drumlanrig in the damp shade of a flushed river bank, but it was recorded from Penpont and Lockerbie in 1882. In lush growing herbage it is difficult to spot. The stems last through the winter.

7.2. *Equisetum variegatum*, Variegated Horsetail. Thin, ascending, firm stems which remain green in winter. This insignificant Horsetail can be regarded as rare in the county. There are only two reports, 1951 and 1972 on rocks at Penton Linns, possibly the same plant.

7.3. *Equisetum fluviatile*, Water Horsetail. The long smooth bright-green stems can be almost bare, with only uneven branching about the middle; nevertheless the plant can make quite a bushy stand. The stems are widely hollow and are squeezable to the touch. Rather common, all the records are from shallow lochsides or slow-moving drainage ditches.

7.4. *Equisetum arvense*, Field Horsetail. This is the commonest one in Britain and is known to grow in every 10km square in Dumfriesshire. Its rhizomes are deep. As in the case of many commonly occurring wild plants, the Recorder does not have notes of individual locations. No one would be excited by finding it except in April or beginning of May when the sporangiophores on the separate pinkish-buff fertile stems shed their cloud of yellow spores. The plant grows in damp waste places and is an unwelcome weed of gardens.

7.5. *Equisetum pratense*, Shady Horsetail. Pallid green in colour, finely branched and with a drooping tip. More common in Scotland than in England, it nears its southernmost limit here. It was reported by Dr. Davidson in 1882 from the Sanquhar area and bank of the River Nith, where it still grows.

7.6. *Equisetum sylvaticum*, Wood Horsetail. The distinctive feature is that the regular branches from each node are themselves branched. This gives a charming impression of miniature fir-trees when one sees a spread of young growth in May or June. By July it will all have become a thick bushy stand about 60cm. high. It has been found at Eweslees Burn by Dr. R. W. M. Corner, at St. Anne's Bridge on a Field Outing, near Annan by P. Henderson, and there are records from Craigneston, Lochmaben and Canonbie. In 1883 J. Fingland made a herbarium specimen from the Scaur.

7.7 *Equisetum palustre*, Marsh Horsetail. A very commonplace looking Horsetail with irregular-sized branches coming from the middle and upper part of a narrow, firm central stem. Found in marshy places in poor open situations. It has been found as an invader of water-logged disused railway cutting near Lochmaben, marshy field at Back Burn near Paddockhole, damp edge of Heithat Moor and wet fields at Caerlaverock. The fact that these places all lie towards the East side of the county shows that this common plant is under-recorded in Nithsdale.

7.8. *Equisetum telmateia*, Great Horsetail. This sturdy species reaches its northern limit in southern Scotland. The main stems attain an average length of one metre with cross-section diameter of a good centimetre. Each joint or node, with the exception of a few at the base, carries a full set of fine and almost pendulous branches. These green stems are all infertile, only the first pinkish-brown stems in Spring bear the sporangiophores, in this respect resembling *E. arvense* - Common or Field Horsetail. In 1968 Dr. R. W. M. Corner found this species as a new county record when he saw the striking spectacle it made on a base-rich hillside by the Tarras Water. It was found again in 1980 behind a roadside bank on the A7 north of Canonbie.

Ferns

Leaves of ferns are sometimes referred to as fronds because of their bearing on their underside spores in sporangia grouped in sori. Each sorus is usually protected by a membranous outgrowth called the indusium.

8.1. *Botrichium lunaria*, Moonwort. The single pinnate leaf is an infertile frond with a short thick stalk. The spores are borne on a fertile branched spike with rows of free sporangia shedding yellow spores. The plants are very small 3 to 10cm. in height, and are easily overlooked. There is evidence of many records last century but in the recent ten years only single plants have been recorded from Heithatpark, Rammerscales hills and Moffat hills, while at Wanlockhead there were several. They are known to like railway embankments, dry places and old pasture with a high basic content.

9.1. *Ophioglossum vulgatum*, Adder's Tongue. A small creeping fern found in similar though damper places than Moonwort. There is not a single known location to date although last century it was recorded from seven places, and A. Wightman, Lockerbie found it on Rammerscales hill in 1922. With a blade not much larger than a sorrel leaf and one fertile spike, has it disappeared? Is grazing or drainage to blame, or are we not looking?

11.1 *Cryptogramma crispera*, Parsley Fern. The fertile and infertile fronds are separate, the fertile on longer petioles in the centre of the tufted, bushy clump. There is a passing resemblance to parsley. The tufts grow from rhizomes on steep hillside screes of poor rock. Recorded by Dr. R. W. M. Corner from Etrick Pen screes, by N. Stewart from Mennock Pass screes, from upper Shinnel riverside rocks, and a herbarium specimen of 1882 from Cample Cleuch.

14.1 and 2. *Hymenophyllum tunbrigense* and *H. wilsonii*, the Tunbridge Filmy-fern and Wilson's Filmy-fern respectively. To the eye these two small ferns might be passed as damp and shade loving mosses, but the fronds have sori on them in small pocket-like indusia. They grow from creeping rhizomes in damp shady situations. Wilson's Filmy-fern, although not common, is the more frequent of the two and can be seen on the spray-wet rock face by the pool at the foot of the Tail Burn waterfall.

16.1. *Polypodium vulgare*, Common Polypody.

16.2. *Polypodium interjectum*, Intermediate Polypody.

16.3. *Polypodium australe* Southern Polypody. Many will agree that the fronds of this common fern vary. Inter-species hybridisation does occur, and if there should be a locus where the three parent species occur, all possible hybrids might be found. *P. australe* is the least common; it and the others were found on a Permian sandstone rock face to the east of Dumfries in 1972 by A. Rutherford and A. McG. Stirling.

17.1. *Pteridium aquilinum*, Bracken. Very common and very difficult to eradicate. The sori form a thin line below the rolled-under margins of each leaf segment.

19.1. *Phegopteris connectilis*, Beech Fern. These low-growing ferns have slender leaf stalks as long as their blades, the whole 30-40cm. The blade looks upwards, being bent at an angle to the petiole. They grow singly from rhizomes and one can sometimes trace a line of them along damp shady ground, their roots being in fresh water draining underground. Seen on the steep sandstone sides of Crichope Linn and in cleuchs at Beattock, Blackhope and Eweslees.

20.1. *Oreopteris limbosperma*, Lemon-scented or Mountain Fern. Superficially it may look like the ubiquitous Male Fern, but the pinnae decrease to small tabs at the base of the rachis. When the fronds are uncurling in Spring the clear scales give a distinctive silvery appearance. The colour is a yellowish green and on the underside there is a glistening yellow look of small glands, aromatic when rubbed. It is worth turning over the frond to see the arrangement of spores along the margins. There is an 1882 record from Enterkin. More recent records, i.e. from 1950 onwards, have been made from Langholm's Whita Hill, Devil's Beef Tub, Mennock Pass, Scour and Shinnel valleys, and Rammerscales.

21.1 *Asplenium scolopendrium*, Hart's-tongue Fern, (*Phyllitis scolopendrium*). The long narrow sori are sited along fertile veins. Being a calcicole, (lime lover), it is not a common fern, yet it occurs in most of the 10km squares on old walls, only occasionally in natural rock crevices. Its records are mostly from mansion house gardens where it may have been planted at one time.

21.2. *Asplenium adiantum-nigrum*, Black spleenwort. Not very big ferns with dark based stalks nearly as long as the blades. The irregularly divided fronds are glossy, dark green, leathery and winter green. Their undersides become covered with a dark mass of sporangia as they ripen from June to October. They grow in tufts of a few stems in the cracks of bridges and walls, on scree at Greenhillstairs, and on the ground at Lochmaben Castle.

21.7. *Asplenium trichomanes*, *sensu lato*, Maidenhair Spleenwort. The stalk is very short and only a fraction of the narrow pinnate blade which carries thirty or forty pairs of small roundish pinnae. When these fall away, the nearly black wiry rachis tufts are left. It is very common on walls in the county. It is very nice to come across an even neater little fern, probably a sub-species, on native rock not necessarily basic.

21.8. *Asplenium viride*, Green Spleenwort. Green except at the base; smaller and more delicate in all its parts than the previous fern. Almost rare in the county and confined to crevices in damp basic rocks at high altitudes.

21.9. *Asplenium ruta-muraria*, Wall-rue. These are small ferns, three to four inches, growing close to walls. The stalks are dark at the base and can be more than half the frond length. The irregularly pinnate blades are dark dingy green and last until the following year. As in other aspleniums the sori are linear; a hand lens will reveal the details of structure. The indusium over each sorus opens inwards and in this fern has a crenate edge. Although common it occurs patchily showing preference for certain walls and exposures. Being a more basic lover than *A. trichomanes* it may choose the mortar more carefully. The whinstone bridge at Blackston near Moniaive is covered with it on one parapet and not the other. On the now disused 'New Bridge' north of Moffat it will, presumably, be left to grow. It is a fern not likely to grow much on our native rock.

21.11. *Asplenium ceterach*, Rustyback. (*Ceterach officinarum*). The fronds, 3-16cm., are pinnatifid, i.e. they are not divided completely to the midrib, rick-rack binding might describe them. Distinctive yellowish green, thick and leathery, with a silvery edge of the undersurface showing, not dying down till new growth begins next year. Each sorus is linear and about five pairs sit on veins not quite at the edge nor yet touching the centre vein of each segment. The distinctive feature is that the whole underside is covered with silvery scales which turn a rusty colour later. This is a fern of limestone country so here it only grows on lime-mortared walls of the correct quality. There are only six places for it known to the writer who wonders if the same quarry supplied the mortar for these walls. In one place it has vanished, perhaps temporarily, because its habitat has been destroyed. It grew on the parapet of the bridge over the Black Esk near Bailiehill. This was pushed over when replaced by a new one a few years ago.

22.1. *Athyrium filix-femina*, Lady-fern. Occurs commonly in Dumfriesshire as it does over all Britain. It is one of those big ferns of our deciduous woodlands, and shady rocky places by streams whose shape and size of fronds are teasingly similar. There are about six ferns whose fronds grow in a basket or shuttlecock formation from perennial stocks at ground level. One has to look comparatively at the details until the eye perceives the different combination of features. In Lady-fern the blade is bi- or tri-pinnate giving a lacy appearance. The fronds are graceful and slightly drooping and wilt quickly when picked. They are susceptible to frost and are the first to collapse in winter. The sori are comma-shaped, and in some plants the rachis is reddish.

23.1. *Gymnocarpium dryopteris*, Oak-fern. The delicate fronds rise singly from rhizomes. They have long stalks, about 12 cm., jointed to the soft yellowish green triangular blades which tilt horizontally. The groups of sori are exposed as there are no indusia. It grows in places similar to those of the Beech-fern.

24.1. *Cystopteris fragilis*, Brittle Bladder-fern. Fronds can be about 40cm., but usually smaller, growing from a short rhizome in basic rock cracks and mortared walls. The stalk can be half as long as the blade, is thin, brittle and dark at the base. The bottom pair of pinnae are separated from the rest by a larger gap. The indusium shows up in the young frond as a pale pointed and hooded scale, hence the name Bladder. One could not call this a common fern in v.c. 72 because it is very choosy about the quality of its habitat. The Fern Atlas admits some twenty local occurrences but the writer has records for only eleven. Of these five are from shady rocks in cleuchs and the rest from old walls; the latter of course are liable to damage when pointing and repairs are carried out. A fern, not for picking, just for the pleasure of seeing.

25.1. *Woodsia ilvensis*, Oblong Woodsia. Dumfriesshire has one plant that is a national rarity. This fern is now protected by the Conservation of Wild Creatures and Wild Plants Act, 1975.

26.1. *Polystichum lonchitis*, Holly Fern. This arctic alpine fern has not been seen in the county by the writer whose only definite information is that herbarium specimens were made last century from a few base-rich substrates.

26.2 *Polystichum aculeatum*, Hard Shield-fern. Could be called one of the big ferns with a blade up to 75cm., narrow and shiny, not prickly though it may appear to be. The pinnae taper towards the bottom leaving quite a short stalk clothed with large mid-brown scales and hair-like scales. Each sorus is covered by a circular, peltate indusium. It should be possible for everyone who walks even a little to come across an example of this by shady streams in rocky places; quite often it may be seen when looking over bridges. Eweslees, Greenhillstairs, Paddockhole, Nith Linns and Scaur.

26.3. *Polystichum setiferum*, Soft Shield-fern. Not in the least common here but commoner further south and must be on the limit of its range just east of Dumfries. Three sites have been identified in ten years, one suspiciously near a hedge at Glencaple, so probably not truly wild. In shade and shelter at Rockhall, and on a rich riverbank by the Cairn Water. Compared with the previous species the stalk is longer and shaggier, the basal pinnae are less reduced and the colour is darker. It droops slightly and except at the top of the frond the pinnules are all stalked.

The *Dryopteris* ferns are the big common ones; mostly they have shuttlecock arrangement because the fronds grow spirally from their long lasting perennial stocks. The fronds of all ferns grow by unrolling from the bottom upwards and when nearly unrolled somewhat resemble a shepherd's crook; this is known as the crozier stage and is clearly shown in spring by the members of this genus.

27.1. *Dryopteris oreades*, Mountain Male-fern. Smaller and stiffer than its namesake and grows in tufts on rocky hillsides at higher altitudes. Not shade-seeking so afforestation may have reduced its numbers.

27.2. *Dryopteris filix-mas*, Male-fern. The fern used as the example in text-books. The fronds, up to 150cm. in length, die down in autumn. Short stalk, moderately clothed with pale brown variously shaped scales. Hedgebanks, woodlands and clearings.

27.3. *Dryopteris affinis*, Scaly Male-fern. This one has changed its name even since the Fern Atlas was published. It used to be *D.pseudomas* or *D.borreri*. More leathery, glossy and upright than the Male-fern and lasting longer into the winter. There is a small dark patch where each pinna joins the rachis. When opening in Spring the young fronds could almost be said to glow with their thick covering of brown and golden scales. Noticeable by roadsides and rocky places.

27.2×3. *Dryopteris* × *tavelli*, von Tavel's Male-fern. This hybrid must surely exist in the county. The experts cannot help unless the claim is substantiated by a specimen. Alas! hopes for a possible specimen found in 1980 at Waterhead of Dryfe were unfulfilled. A keen-eyed botanist will find one yet. A frond from the supposed hybrid, together with a frond from each of the parents will have to be submitted.

27.8. *Dryopteris carthusiana*, Narrow Buckler-fern. The plants do not form the basket tuft but grow scattered from a horizontal stock. The scales covering the immature fronds, and later on the stems are clear pale brown. All records mention shade and dampness. More records would be welcome from places in the county.

27.9. *Dryopteris austriaca*, Broad Buckler-fern. This handsome 'basket' forming *Dryopteris* thrives in the shade of deciduous woodland and ravines. The outline shape of the frond is more broadly triangular than that of the Narrow Buckler. The stalk end of the rachis is nearly as long as the blade and quite shaggy from the foot upwards with very dark brown to brown scales, always with a darker central stripe. The cold of winter causes the base of the stems to collapse and the whole aerial parts lie flat on the ground.

27.9×8. *Dryopteris* × *deweveri*, *D.austriaca* × *D.carthusiana*. Recently this hybrid has been found in two places. A. C. Jermy, the fern specialist, found it in a small peaty woodland on the Lochar Moss near Dumfries. It has also been confirmed from Stenhouse Wood at Tynron. The spores of the sori have been described as 'just rubbish' — quite infertile. This need not put an end to the hybrid's life because the stock is perennial and produces new growth vegetatively.

28.1. *Blechnum spicant*, Hard Fern. Occurs in every 10km. square but is localised. It grows on acid soils on the upper edges of mixed woodland drainage ditches, some roadside banks and heaths. The leaves make a rosette on the ground; they are simply pinnate, glossy, dark green and leathery, tapering to both top and base, and infertile. As summer advances several fertile fronds grow upright in the centre of the rosette. These leaves are longer, the pinnae are narrower and become noticeably covered on their backs with dark ripening spores. These die down in winter while the infertile ones with their dark petioles and midribs, remain green on the ground.

Matteuccia struthiopteris, Ostrich Fern. Not included in the Fern Atlas. It is an introduced ornamental and is a garden escape which has established itself among our wild vegetation by reproducing vegetatively. It has long rhizomes and covers quite an area of permanent shingle among rocks by the River Esk near Canonbie. It is dimorphic i.e. fertile and infertile fronds grow from a common stock. This record was made by R. C. L. and Mrs Howitt in 1980.

In addition to those experts mentioned in the text I am indebted to the works of Dr. D. A. Ratcliffe and Dr. H. J. B. Birks, and to Mr John Lyall, Thornhill, who read through my script and made valuable suggestions.

22nd May, 1982.

INVERTEBRATES CAUGHT ON A BOG WITHIN THE SILVER FLOWE NATIONAL NATURE RESERVE, GALLOWAY

by

J. M. Nelson and J. H. Theaker

The Nature Conservancy Council

1. Introduction

Silver Flowe is situated about ten miles NNE of Newton Stewart and extends almost 4 km along the floor of the valley of the Cooran Lane river. The plants have been studied by Ratcliffe & Walker (1958), the hydrology by Goode (1970), the aquatic invertebrates by Huxley (1968) and the spiders by Curtis (1979). However the majority of the terrestrial invertebrates have received scant attention and the present study aims to identify some of the species present.

2. The Study Area

The reserve consists of a linear series of seven bogs lying between 250 m and 280 m. To the north lies a low watershed, to the south the Cooran Lane joins the Black Water of Dee and flows into Clatteringshaws Reservoir. To the west is the precipitous granite range of Craignaw (645 m) while eastwards lie the more gently rounded slopes rising to the Rhinns of Kells (746 m).

The bogs within the reserve are characterised by a mosaic of pools and hummocks dominated by various species of *Sphagnum* in which a limited number of species of vascular plants are established. A small portion of Brishie Bog was selected for study as it was readily accessible. Observations were restricted to a small area 2 x 4 m of pool and hummock in order to reduce trampling which rapidly degrades fragile bog communities. At least half this area was part of a pool when the study began but it all became submerged in the autumn after prolonged rain.

Sphagnum grew in the bottom of the pool and either continued growing up the side of the hummock or in places there was an abrupt step of peat from the pool to the vegetated hummock. Bog bean stems grew from the pool while on the hummock heather, ling, cotton and deer grasses were frequent. Ratcliffe and Walker (1958) give an excellent illustrated account of the botany and other general information about the reserve.

3. Methods

Two methods were employed to collect invertebrate material. Firstly ten pitfall traps each 6.5 cm in diameter were sunk to their rims in the hummock surface. These were nearly three-quarters filled with water to which was added some wetting agent so that specimens coming into contact with the liquid surface sank. Secondly an orange washing-up bowl 30 cm in diameter filled about half full of water and wetting agent was placed on the hummock surface. The pitfall traps caught species active on the bog surface while the bowl mainly caught those flying over and possibly attracted by the colour of the bowl. These passive methods of collecting had to be used because time on the site was restricted. Both types of traps were employed for one week monthly from April to September 1980 after which the site was inundated.

Nomenclature follows Kloet and Hincks (1964-78) for insects and Locket, Millidge and Merrett (1974) for spiders.

4. Results

Ninety-nine species were caught in the traps with flies making the largest contribution, i.e. 38% of the species taken, other important components being spiders 23%, beetles 16% and bugs 10%. A complete list of the species captured is given as an appendix to this account.

Spiders

Since spiders were so abundant they must be important predators on other invertebrates on the bog. Lycosids (wolf spiders) are active hunters which makes them liable to fall into pitfall traps. The genus *Pirata* is interesting as Cloudsley-Thompson (1958) records that they are able to run on the surface of water which must be an advantage in the hummock/pool environment. The linyphiids, a large family of rather small spiders, contributed most of the species caught. They are usually found on the ground where they spin a sheet web under which they live. Some species such as *Perimones britteni* are associated with damp habitats but most are more catholic in their habitat requirements.

Insects

Most of the species caught in this survey were insects. Collembola (spring tails) were lost, being so small that they passed through the sieve used to separate the catch from the liquid in the traps. However they were clearly very abundant on the site, feeding on minute detritus, and appear to be an important source of food for larger animals.

Hemiptera (bugs), caught in small numbers with both plant feeders and predators represented, did not appear to have a significant role in the ecology of the bog. The same may be said of the butterflies and moths of which only two species were taken though some of these insects may have actively avoided the traps. Beetles on the other hand, especially the carabids (ground beetles), were frequently caught. These beetles, like the wolf spiders, are predatory and because they move rapidly are easily trapped.

Most Hymenoptera were scarce but the ant *Myrmica ruginodis* was the most frequently caught species. Being predatory this species must play an important role in the invertebrate community. The Flowe can have little attraction for nectar and pollen-gathering bees until the heather flowers in the summer.

The Diptera (flies) out-numbered all other groups of invertebrates in the catch. Tipulids (crane flies) were generally scarce though *Tipula subnodicornis* was abundant. This species is well known from upland heather moors and was studied in the Pennines by Coulson (1962) who suggests its larva, a leather jacket, feeds on liverworts.

Chironomids (midges) were abundant in the catch but being fragile were too badly damaged by sieving for identification. It appeared that there were comparatively few species in the catch. Empids and dolichopodids were not well represented, both families having carnivorous larvae and the adults of the latter being small shining flies with metallic coloration. The only abundant species were *Empis verralli* and *Hydrophorus albiceps*, the latter always being associated with fresh water surfaces.

Five species of phorids (scuttle flies) were taken, all in low numbers. They have a variety of larval habitats, being recorded for example from such diverse pabula as

rotting fungi, dead insects and even as predators on spiders eggs. Their status on the bog is not known but the capture of three specimens of the rare species *Phora artifrons* is interesting.

The sphaerocerid *Leptocera humida*, captured a number of times, is a species which according to Richards (1930) is always found on the edge or surface of water, being most typically associated with ponds and small streams. The most abundant species identified was the ephydrid *Hydrellia modesta* trapped in the basins. Its larvae mine the leaves of pondweed which, though not found on the bog, occurs in the drainage streams.

5. Discussion

There have been no systematic studies made in Britain of the invertebrates of the hummock/pool type of bog found at Silver Flowe. Studies in the northern Pennines however, summarized by Nelson (1971), show considerable similarities between the species frequenting the study area and Pennine blanket bog. The hummocks at Silver Flowe appear to have fewer species than the blanket bog partly due to the absence of sheep grazing and hence a reduction in the numbers of coprophagous species. On the other hand a richer and more interesting fauna was associated with the Silver Flowe pools.

A very comprehensive investigation of moorland arthropods in Scandinavia, Krogerus (1960), from 36 sites mainly in Finland provides an impressive amount of data. Many of the species, particularly northern ones, do not occur in Britain but most of the species recorded from Silver Flowe were found by Krogerus. However, a conspicuous fly *Empis verralli* which is abundant in northern Britain does not appear to have been found outside Britain.

By selecting only a small portion of the bog for study many species present on the bog as a whole were bound to be overlooked. This is clearly shown by Curtis (1979) who recorded 77 species of spider from the Silver Flowe bog system compared with only 21 taken in the present survey, all but three of which were taken in the larger survey. However, the number of species taken in the individual areas sampled by Curtis varied from 19-30 so our figure of 21 species is within his range. Since his account of the spiders from Silver Flowe is more detailed, those seeking further information should refer to Curtis (1979).

Another study by Huxley (1968) concerns the strictly aquatic invertebrates and like that on the spiders, ranges over the whole bog complex, giving an insight into the biological richness of the pools and other water bodies on the reserve. Perhaps the most interesting insect previously recorded from the reserve is the uncommon large blue dragonfly *Aeshna caerulea* (Stroem) a northern species not found in Britain south of Silver Flowe.

A number of the species caught in the present survey can walk on water surfaces, clearly an important attribute in a habitat with so much standing water. Species able to do this include wolf spiders in the genus *Pirata* of which two species were captured and several flies such as the empid *Clinocera stagnalis*, the sphaerocerid *Leptocera humida* and the dolichopodids *Hydrophorus albiceps* and *Campsicnemus* species.

Most of the species taken were probably resident on the bog surface but a few were clearly vagrants from other habitats. Thus the jumping plant louse *Psylla melanoneura*, which despite its English name can fly, feeds on hawthorn, the

nearest of which is perhaps 6 km distant in Glen Trool. A more frequently trapped example was a sawfly of the genus *Pristophora* which must have come from the nearby Forestry Commission plantations, while the abundantly trapped *Hydrellia modesta* must have reached the traps from pondweed in the drainage streams. Other perhaps less certain vagrants might include the two solitary bees *Andrena* spp and the wasp *Dolichovespula norwegica*. Aquatic species such as water beetles and water boatmen were on occasion taken in both types of traps and were probably engaged in aerial dispersal.

The invertebrate fauna of Silver Flowe includes species having distinct geographical distributions overlapping in Galloway. There is a southern element typified by species such as the leaf hopping bug *Palus panzeri* and the small beetle *Euconnus hirticollis* which are rarely found in Scotland. Perhaps best represented are the northern species which include the dragonfly *Aeshna caerulea* and the flies *Hydrophorus albiceps*, *Campsicnemus compeditus* and *Phaonia consobrina*.

It is an interesting feature observed by Collin (1961) that many insects which are common only in northern Britain may also be found in small numbers in suitable places in western Britain such as the mountains of Wales and even as far south as the New Forest. The bug *Salda muelleri* represents yet another type of distribution being found discontinuously in the fens and broads of SE England and the upland moorlands of Yorkshire, Wales, Lake District and Scotland. However, most of the species recorded are generally distributed in suitable habitats throughout Britain.

The studies so far carried out show that the Silver Flowe reserve has considerable invertebrate interest. Many more species undoubtedly remain to be found though care must be taken to protect the fragile communities on the reserve from excessive trampling.

Acknowledgements

It gives us pleasure to thank those who helped with the identification of some of the material: Dr. K. Bland, moths; Dr. C. A. Collingwood, ants; Dr. R. A. Crowson, some beetles; Dr. R. H. L. Disney, scuttle flies; Dr. G. N. Foster, water beetles; Dr. M. L. Luff, ground beetles; Mr J. Quinlan, sawflies and Dr. I. White, jumping plant lice.

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APPENDIX

List of species with the number caught in brackets.

Araneae

- | | |
|--|---|
| | Lycosidae |
| Pardosa pullata (Clerck) (13) | Pirata piraticus (Clerck) (3) |
| P. nigriceps (Thorell) (2) | P. uliginosus (Thorell) (15) |
| Trochosa terricola Thorell (15) | |
| | Agelenidae |
| | Antistea elegans (Blackwall) (5) |
| | Linyphiidae |
| Ceratinella brevipes (Westring) (12) | E. promiscua (O.P. - Cambridge) (1) |
| Oedothorax sp. (1) | Porrhomma pallidum Jackson (4) |
| Trichopterna thorelli (Westring) (4) | Centromerus expertus (O.P. - Cambridge) (1) |
| T. mengei (Simon) (4) | Centromerita concinna (Thorell) (1) |
| Silometopus elegans (O.P. - Cambridge) (4) | Bathyphanes gracilis (Blackwall) (1) |
| Perimones britteni (Jackson) (4) | Stemonyphanes lineatus (Linnaeus) (1) |
| Diplocephalus permixtus (O.P. - Cambridge) (5) | Lepthyphanes zimmermanni Bertkau (6) |
| Erigone atra (Blackwall) (1) | |

Insecta

- | | |
|--|---|
| | Odonata |
| | Libellula quadrimaculata Linnaeus (2) |
| | Plecoptera |
| | Chloroperla torrentium (Pictet) (2) |
| | Hemiptera |
| Gerris odontogaster (Zetterstedt) (1) | Palus panzeri (Flor) (3) |
| Salda muelleri (Gmelin) (1) | Macrosteles ossiannilssoni Lindberg (1) |
| Saldula saltatoria (Linnaeus) (2) | Aphalaroida ericae (Curtis) (1) |
| Notonecta glauca Linnaeus (1) | Psylla melanoneura Forster (2) |
| Ulopa reticulata (Fabricius) (3) | |
| | Neuroptera |
| Sialis fuliginosa Pictet (10) | S. lutaria (Linnaeus) (6) |
| | Lepidoptera |
| Elachista serricornis Stainton (4) | Agrochola circellaris (Hufnagel) (1) |
| | Coleoptera |
| Carabus granulatus Linnaeus (1) | Ilybius aenescens Thomson (4) |
| Loricera pilicornis (Fabricius) (1) | Helophorus brevipalpis Bedel (3) |
| Pterostichus diligens (Sturm) (5) | H. flavipes (Fabricius) (9) |
| P. nigrita (Paykull) (33) | Euconnus hirticollis (Illiger) (3) |
| Agonum ericeti (Panzer) (4) | Olophrum piceum (Gyllenhal) (3) |
| Hydroporus incognitus Sharp (1) | Lathrobium foveolum Stephens (1) |
| H. melanarius Sturm (2) | L. impressum Heer (1) |
| H. nigrita (Fabricius) (2) | Pselaphus heisei (Herbst) (1) |
| H. palustris (Linnaeus) (1) | Cantharid larva (2) |
| H. pubescens (Gyllenhal) (2) | Plateumaris discolor (Panzer) (1) |
| Agabus biguttatus (Olivier) (2) | |
| | Hymenoptera |
| Pristiphora sp. near amphibola (7) | A. hacmorrhoea (Fabricius) (1) |
| Myrmica ruginodis Nylander (81) | Bombus lucorum (Linnaeus) (5) |
| Dolichovespula norvegica (Fabricius) (3) | B. monticola Smith (1) |
| Andrena jacobae s. scotica Perkins (1) | |

Diptera

Tipula subnodicornis Zetterstedt (24)
Molophilus occultus de Meijere (3)

Trichina clavipes Meigen (1)
Empis verralli Collin (9)

Dolichopus discifer Stannius (3)
D. lepidus Staeger (2)
Hydrophorus albiceps Frey (51)
Syntormon pallipes (Fabricius) (1)

Megaselia dahli (Becker) (1)
M. pumila (Meigen) (1)
M. pulicaria (Fallen) (2)

Meliscaeva cinctella (Zetterstedt) (2)
Melanostoma mellinum (Linnaeus) (1)

Scathophaga stercoraria (Linnaeus) (1)

Orthellia viridis (Wiedemann) (1)
Phaonia consobrina (Zetterstedt) (1)
Helina laetifica (Robineau-Desvoidy) (1)

Tipulidae

Pedicia immaculata (Meigen) (2)

Ceratopogonidae (6)

Chironomidae Vast numbers

Mycetophilidae (6)**Empididae**

Dolichocephala guttata (Haliday) (1)
Clinocera stagnalis (Haliday) (1)

Dolichopodidae

Campsicnemus compeditus Loew (7)
C. loripes (Haliday) (1)
C. alpinus (Haliday) (2)

Phoridae

Phora artifrons Schmitz (3)
P. dubia (Zetterstedt) (1)

Syrphidae

Neoascia dispar (Meigen) (1)
Eristalis tenax (Linnaeus) (1)

Sepsidae

Sepsis flavimana Meigen (1)

Sphaeroceridae

Leptocera humida (Haliday) (7)

Ephydriidae

Hydrellia modesta Loew Very abundant

Chloropidae

Oscinella frit (Linnaeus) (1)

Scathophagidae

S. suilla (Fabricius) (3)

Anthomyidae

Nupedia aestiva (Meigen) (9)

Muscidae

Spilogona meadei (Schnabl) (1)
Coenosia perpusilla Meigen (3)

THE DEIL'S DYKE, NITHSDALE

by John Barber

with contributions by Ian D. Mate and Christopher J. Tabraham

I. THE EXCAVATIONS, 1981

The linear earthwork known as the Deil's Dyke has been traced over a distance of some 25.7 km (Graham and Feacham 1956, 139) from Burnmouth Farm (NS 839 051) to the Afton Water (NS 615 116). A 1.3 km length of the Dyke is scheduled for destruction by NCB open-cast mining at Cadgerhall near Kirkconnel (see fig. 1) and a series of excavations was therefore carried out on this length by the author on behalf of the SDD (AM).

The threatened length is divided into three sectors. The W sector some 400m long runs from the E lip of the sike of the Polmeur burn (NS 7086 1172) to the W side of the Rig Burn (NS 7122 1163). The central sector (C sector) is not detectable immediately E of Rig Burn but the OS maps and the line of the surviving portion suggest that it meets the burn's sike at a point somewhere between 60 and 100m S of the junction of the W sector and the sike (approximately at NS 7139 1156; see figs. 1 and 2). It is undetectable for *c* 200m E of this point but survives and is well preserved over the next 200m (to NS 7177 1152, approximately). The C sector is separated from the E sector by broken and boggy ground over a distance of some 250m. Only 125m of the E sector falls within the NCB area and that is contained within a dense plantation of young Sitka Spruce (*Picea sitchensis*) (see fig. 3).

The Geology and Soils of the area

by Ian D. Mate

The bedrock of the NCB area is composed of productive coal measures (Geological Survey 1951) which form a shallow syncline surrounded by Ordovician greywackes and shales. The stratigraphically higher coal measures are largely composed of sandstones, siltstones, mudstones, coals and seat clays. (Greig 1971 71).

Extensive deposits of glacial till cover the bedrock (Geological Survey 1937) and the composition of these tills relate to the underlying rocks (Greig 1971, 98). In areas of Carboniferous rocks the matrix of the till tends to be grey and clayey. The extensive Ordovician outcrops undoubtedly contribute something to the tills but alone would have produced brownish-grey tills which included greywacke and shale fragments.

The tills form the soil parent-material throughout. The soils which have developed are poorly drained brown forest soils which exhibit the usual A, B and C horizons in the natural profile. The A horizon is the uppermost and contains the organic material *ie* it is the humus. The B layer, lying beneath the A horizon, is chemically altered till, while the C layer is largely undisturbed till. In most of the profiles examined at the Deil's Dyke the B horizon is mottled as a result of intermittent waterlogging and partial reduction of the iron and aluminium oxides (*ie* gleying). A formal soil profile description can be found in appendix 1.

The tills of the E sector seem sandier than those of the W where clay soils predominate. The sandier soils are somewhat more free-draining and acidic than the clay soils. At the time of the Dyke's construction the soils of the E sector supported

DEIL'S DYKE location maps

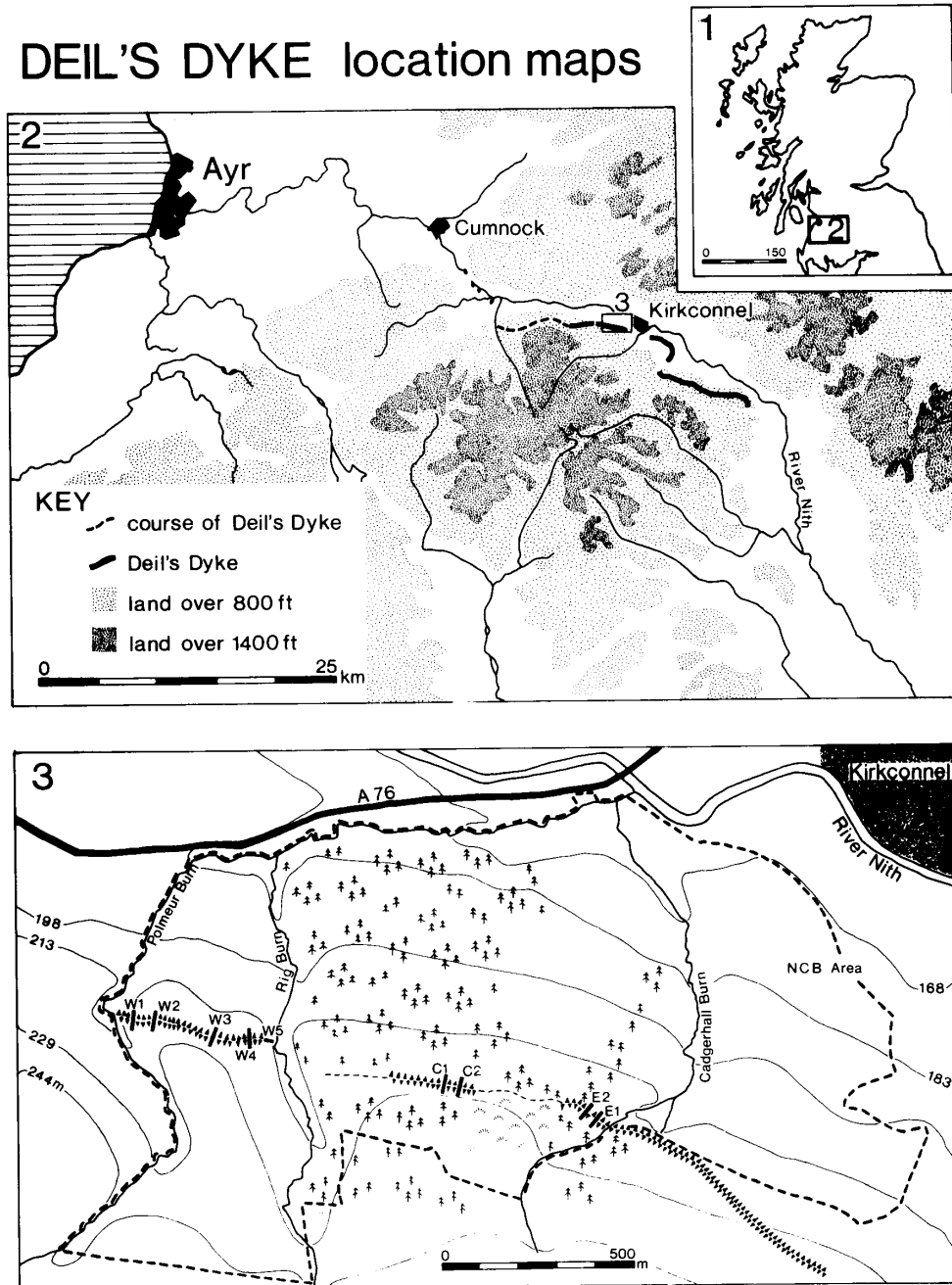


Fig. 1. Site Location

an A horizon of mor-humus, an organic layer comminuted rather by beetles and bacteria than earthworms. The present A horizon in the W sector is a mull-humus in which earthworms are still active and it is probable that it was of this type when the Dyke was constructed. Mor-humus is, in general, less fertile than mull-humus from

which it typically develops with the increasing age and deterioration of the mull-humus. (Aspects of the causes of this change are discussed in Anderson 1979, 59-73.) However, despite the apparent variations from W to E the pH of all the soil horizons (measured by BDH Soil Test Kit) lay in the range 5.5 to 6.0.

The hummocky nature of the surface of the tills and the poor drainage has allowed the development of semi-confined mires (*sensu* Hulme 1980, 46-50) in some areas of the site. Beneath these mires the only soil development seems to have been a slight ripening of the till by the acids of the overlying peat. This results in the development of a thin grey unmottled layer and such a layer can be seen beneath the Dyke in the C sector.

Lying over the till and under the Dyke's core in the W sector a layer has been noted, brown or grey in colour which seems to represent the remains of the A horizon of the old ground surface (OGS). This is rather different from the commonly found black greasy type of buried OGS which occurs in only one section of the Dyke, at W2E (fig. 4). Since the turves which were used in the construction of the Dyke have also been chemically altered in the same way as the buried OGS the mechanism of their alteration is of some importance.



Fig. 2. A view E. along the Deil's Dyke in the W sector. Note the angular join and the gap (foreground). The arrow indicates the probable position of the W end of the C sector.

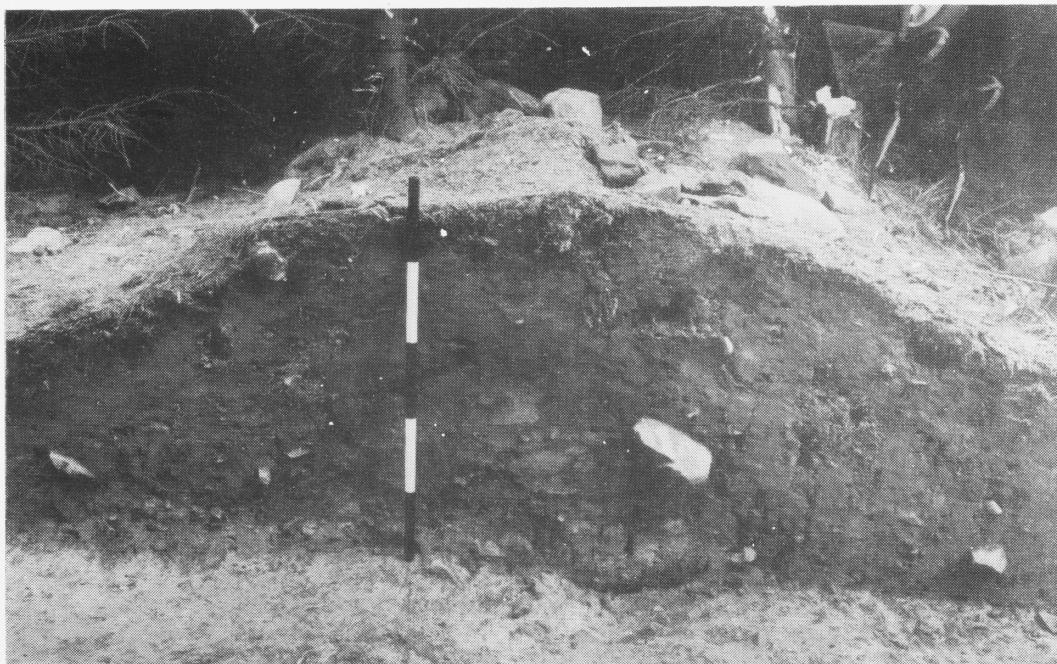


Fig. 3. The Dyke in the E sector (section E1E). Trees cover and obscure the earthwork.
Note the stacked turves beneath the projecting stone.

It seems that the humus and iron of the buried A horizon material formed organic complexes in the anaerobic, and thus reducing, conditions caused by their placement in the bank. When the clays of the buried A horizon are waterlogged relative to the bank material, these complexes which are in colloidal suspension diffuse up as well as down the soil body, because of the capillary action in the minute pore-spaces of the clay. The processes of diffusion seem cumulative and in the fully developed state the iron oxides form a continuous pan where they have been precipitated, surrounding and centred on the original turf. Humus is partially dispersed over the enclosed volume resulting in a brown colouration but this in turn may become partially gleyed and become greyer, or intermittently gleyed and develop brown speckles.

The S or uphill side of the Dyke seems to have been constantly waterlogged at the E end of the W sector and the gleyed version of altered OGS and turves are more common here than anywhere else. A shallow modern drain has been inserted to relieve this waterlogging and this appears in several of the sections.

THE EXCAVATIONS (Contd.)

Description

The W sector

The OS record the Dyke's W sector as beginning at the bank of the Polmeur Burn but it is not presently traceable beyond the lip of the sike (Fig. 4). A detailed survey of the W sector shows the Dyke rather spread and curving S and E from the lip to trace a markedly erratic course E to the Rig Burn. The wavy curves exist because the Dyke tends to consist of straight segments up to 40m long which are commonly misaligned

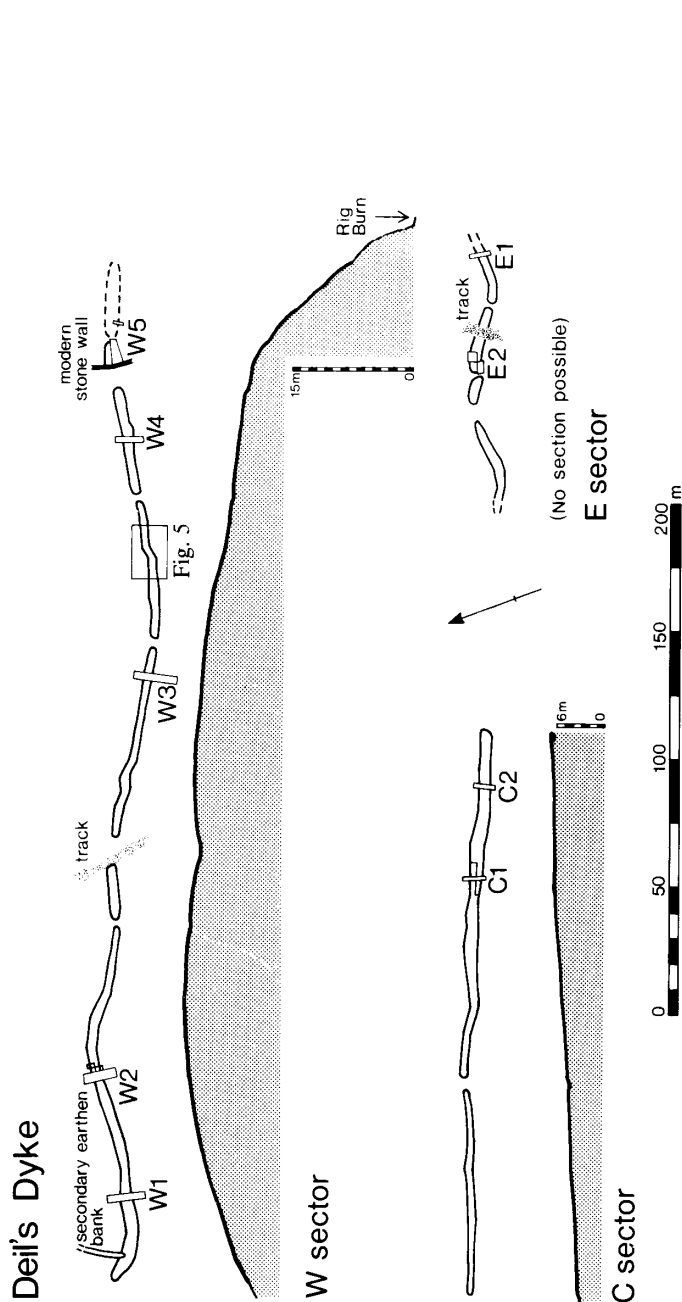


Fig. 4. Line and grade surveys of the Dyke in the three sectors. The vertical scale and the angularity of the junctions have been exaggerated to overcome the problems of scale reduction. It was not feasible to survey the gradients of the Dyke in the E sector because of the tree cover.

and are joined to each other by short curved sections forming distinct corners. An attempt has been made to convey the nature of a typical join in fig. 5. Low points on the Dyke, often amounting to actual gaps, occur preferentially at these corners.

The present ground level on the S or uphill side of the Dyke is commonly higher than that on the N side by an amount greater than that which may be attributed to the natural slope. This 'lynchetting' effect is most pronounced in the W sector. Variations in altitude over this length of the Dyke are minimal and, if the length which descends the sike of Rig Burn is omitted, amount to just less than 7m.

Deil's Dyke a typical junction

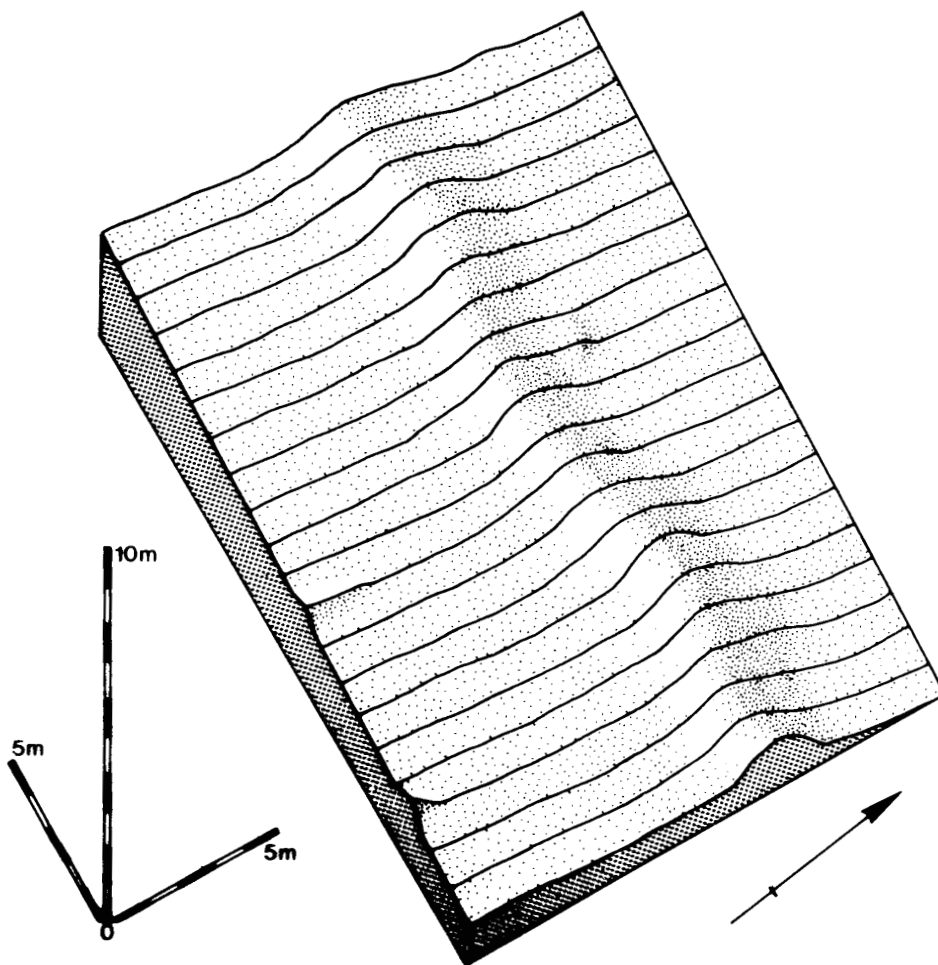
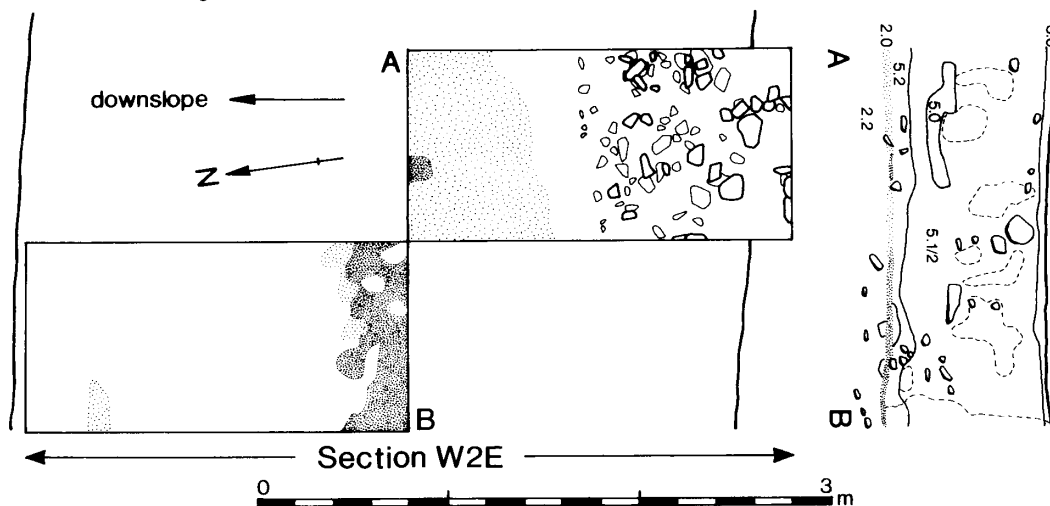


Fig. 5. Isometric drawing of profiles levelled at 1m intervals across the Dyke to reveal the structure of a typically curved junction between two rectilinear segments (surveyed with the assistance of Miss S. Barber and Mr D. Barber).

Deil's Dyke W2



KEY

● findspot	▨ tree roots	▨ turves	▨ buried O.G.S
▨ ironpan	▨ animal disturbance	▨ bank core	▨ altered O.G.S

Fig. 6.

The horizontally excavated cutting E of section W2 (see fig. 4 for location). The heavy stipple represents OGS surviving as a black greasy deposit, the lighter stipple is the altered form of OGS (see text p. 32, see also 'notes to the drawings' for a key to the numbering).

At its highest the Dyke in the W sector stands 1.75m above the ground level to the N but its average height is rather less than 1m. Its average width is approximately 3.5m.

The C Sector

Although the C sector is much straighter than the W sector it is also clearly constructed in a series of short straight sections which are often misaligned and form noticeably angular corners at their junctions. The surviving length is well preserved with dimensions similar to those in the W sector. However, a series of relatively recent drains cut close along its S edge and have in places removed the S skirts of the bank.

The E sector

The E sector is heavily planted with trees which greatly hindered the work of survey and excavation. Nonetheless it is clear that this also consists of straight-line segments with angular and often broken joins (fig. 4). Its course is generally NW from the E boundary of the NCB area but after a distance of c 100m it makes a distinct change to run slightly S of W for the remaining 25m or so of its length. In all other respects its form and dimensions are similar to those described above for the W sector.

The Excavation

The aims of the excavation were threefold; to record the form of this part of the Deil's Dyke; to discover the mode and date of its construction; to acquire evidence

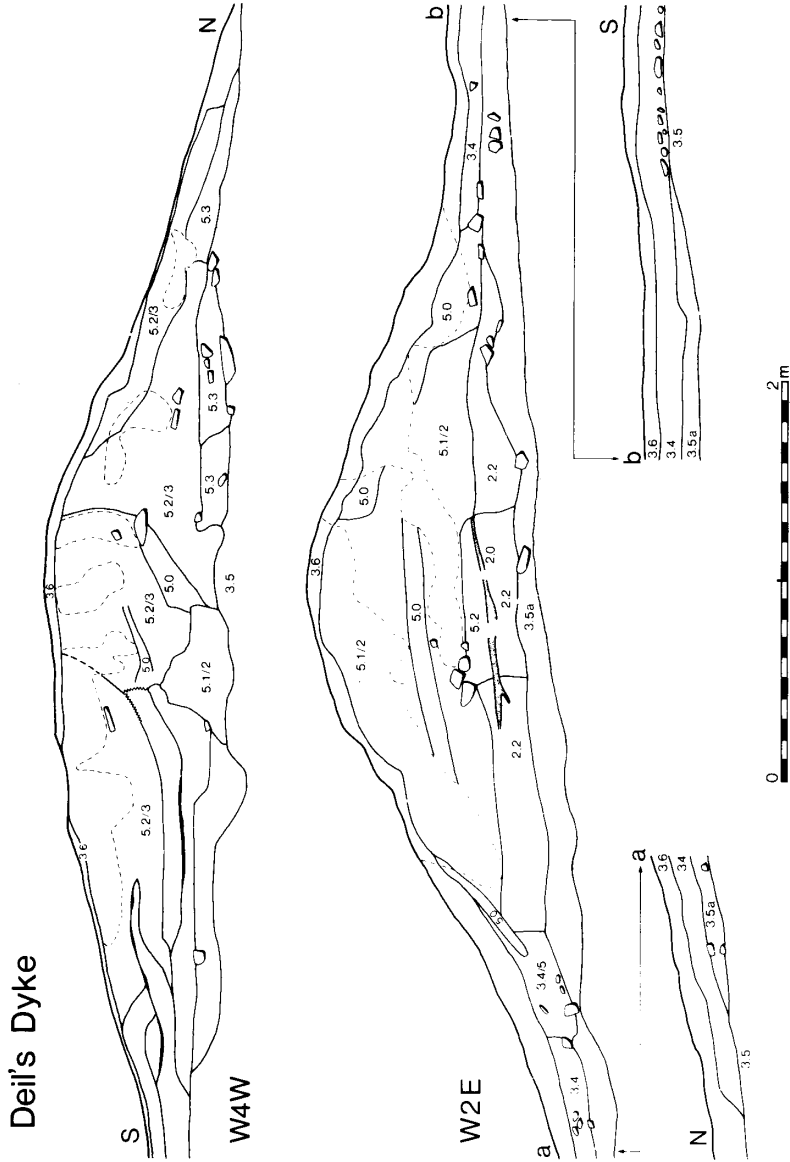


Fig. 7. The Dyke sections in the W sector (see 'notes to the drawings' and fig. 6 for a key to the numbering and to the conventions respectively).

which might contribute to the debate on its function and on the function of linear earthworks in general. Investigation of a monument 1300m long and effectively 15m wide clearly demanded sampling. It seemed desirable to examine all three sectors of the Dyke since field survey alone could not demonstrate that the sectors are contemporaneous or of the same construction.

To this end four 2m wide cuttings were made across the W sector by machine, two across the C and one across the E sectors by hand. Three horizontally excavated cuttings, one in each sector, were also investigated. These, it was hoped, would investigate possible facings to the bank and verify the stratification identified in the vertical profiles of the cuttings. Furthermore, those in the W and E areas (W5 and E2 in figs 8 and 11 respectively) were so located as to investigate joins in the Dyke. In the course of excavation small cuttings were opened beside one of the sections in the W sector (W2 on fig 6).

The W sector

Of this sector's four sections, the E and W profiles of three have been recorded, the last (W1) being omitted to save time since it conveyed essentially the same information as the others. Only the W face of W4 and the E face of W2 are reproduced here (W4W and W2E on fig 7).

The Dyke in all of the cuttings in this sector consists of redeposited clay and altered turves and the recorded sections are in consequence broadly similar. An attempt has been made to emphasise this in the drawings by the use of a coherent numbering system for the strata (see notes to the drawings p. 45). What follows therefore is a generalised description of the Dyke rather than individual descriptions of the separate sections.

The OGS beneath the Dyke was generally preserved in the altered form described above (p. 32), surviving as a black greasy deposit only in W2E (fig 7). In general the turves contained within the Dyke were also altered and often outlined by iron pan. Overlying the OGS, the core of the Dyke consisted of a prismatically structured clay mass within which, in some cases, altered turves could be seen.

On either side of the core, wash-down lines of clay were occasionally seen but much of this material was disturbed by moles. Outside the wash-down lines (*ie* N and S of the Dyke proper) the modern thin peaty humus rested directly on unaltered till without an intervening B horizon.

The natural processes of soil formation ensure that a B horizon would have evolved on the soils of the Dyke area and its absence immediately N and S of the Dyke must be attributed to human interference. It was hypothesised, during the excavation, that turves (the A horizon) and the top soil (the B horizon) of the strip of land on either side of the line of the Dyke were scraped up to form the Dyke itself. To test this hypothesis a series of small pits were dug at 5m intervals for 30m on either side of cuttings W2 and W3 and in extension of their E faces. The boundary between the area without B horizon and that with a normal profile, both N and S, lay between 15 and 20m from the centre line of the Dyke, at an average distance of 18.75m. However, there was no B horizon N of the Dyke at W3 for a distance of *c* 30m. This rather anomalous feature may reflect recent agricultural activity rather than ancient activity in this area or the steepness of the slope.

Deil's Dyke W5

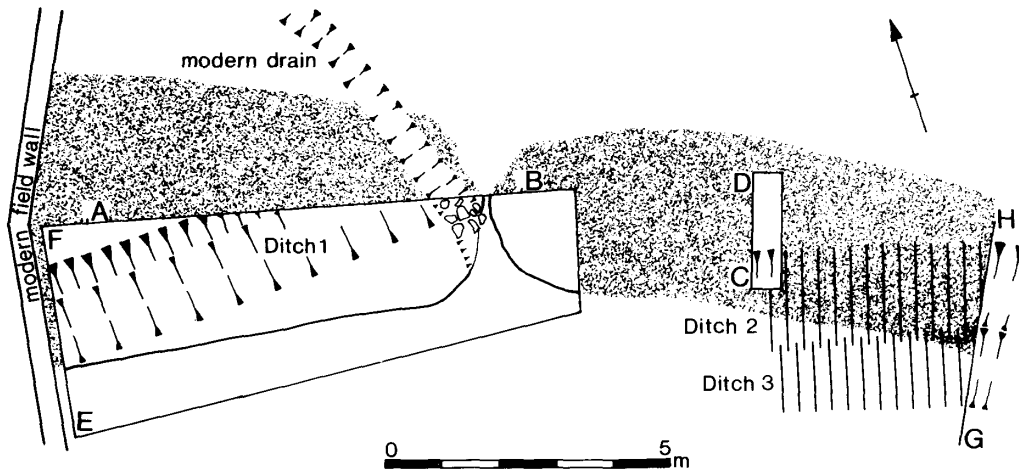


Fig. 8. Cutting W5, excavated and revealing the three pre-Dyke ditches.

S of the Dyke in sections W2 and W3 a scatter of small stones could be seen resting on the surface of the till beneath the wash-down layers of the Dyke. These were relatively fugitive features of the vertical sections but their reality as features of the monument was demonstrated in the horizontally excavated cutting E of W2 and S of the Dyke. This revealed a deposit of stones which lay at and below the level of the OGS. A clearly defined straight boundary on the N edge of the deposit suggested that these stones had weathered out of the exposed till and rolled downhill pitching up against the S face of the Dyke.

Excavation along the S face thus defined failed to reveal any evidence of palisading or of timber revetment. Indeed no evidence for a formal facing of any type was recovered.

The observations above suggest that a core of turves was first constructed by stripping the adjacent land surface and then the underlying soil was scraped up to supply the material for the capping.

At the E end of the W sector the Dyke runs partway down the precipitous W slope of the Rig Burn sike (see fig. 4). Its preservation on the slopes which ranged from 1 in 2.6 to 1 in 5.8 seemed excellent and it was unlikely that cultivation would have interfered with it to any extent. Accordingly it was decided to excavate a longitudinal half section of the Dyke near the top of this slope and to carry the excavated area across an apparent break.

Excavation revealed a total of three ditches beneath the Dyke in this cutting. Ditch 3 (see figs 8 and 9) replaced ditch 2 and is itself cut into by a modern drain. The relationship between these and ditch 1 could not be discovered. All three were partially silted up before the construction of the Dyke and the material of the Dyke completed their backfilling. The gap in the Dyke proved to contain a modern drain but it is likely that the gap determined the drain's position, rather than *vice versa*.

Deil's Dyke W5 sections

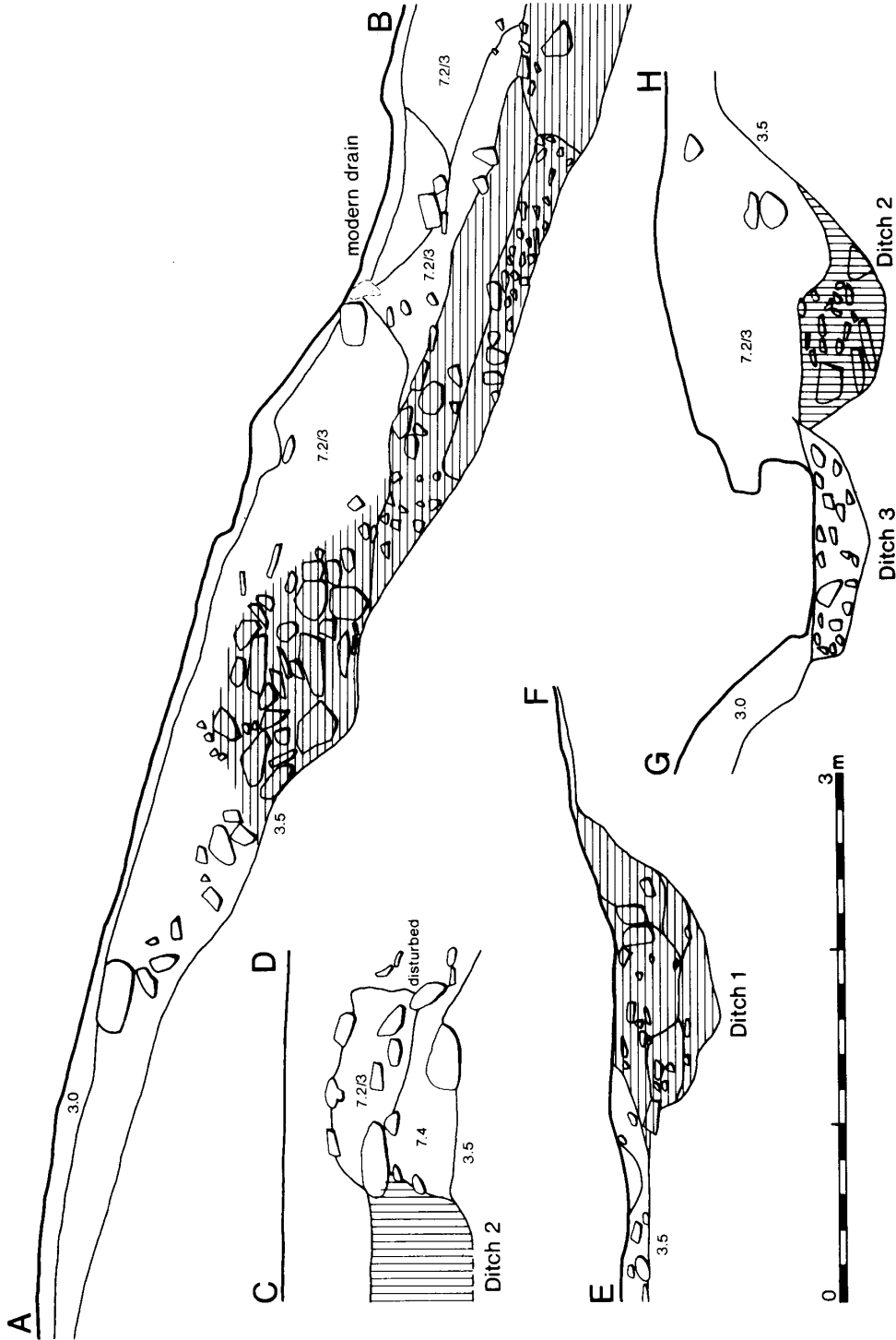


Fig. 9. Sections through the pre-Dyke ditches of W5. Section AB cuts across ditch 1 at an oblique angle (see fig. 8) thus its profile is considerably distorted.

The C sector

Both of the sections (C1 and C2) and the associated horizontally excavated cuttings in this sector reveal a local soil development markedly different from that of the W sector. A black greasy mor-humus layer underlies the Dyke here, and also in the E sector, and the core of the Dyke consists of turves derived from such a deposit. Beneath the OGS the top of the till has been ripened to a grey to white deposit (fig. 12), parts of which have been incorporated in the Dyke's core (fig. 10).

Over the core is a capping of soil which has been greatly disturbed by moles. The upper surface of the core seemed, on horizontal excavation, to constitute a continuous layer. Were this the case it would imply that turf had developed on the core and subsequently been preserved beneath the soil capping. Thus it would imply that the dyke was of two, possibly widely differing, periods.

However, the revealed surface layer was much segmented by mole runs and it was not possible to demonstrate with any confidence that it had developed *in situ*. Further, the absence of mor-humus turves from the soil capping rather militated against this interpretation since if humus had grown on the dyke it should also have become re-established in its environs and would inevitably have been incorporated in the material thrown up for the capping.

In this central sector the core of the Dyke stands on a platform composed of OGS, and both ripened and undisturbed till. This suggests that its mode of construction is analogous with that of the W sector, ie that by thus removing the surrounding A and B horizons the builders left the Dyke sitting on an apparent plinth.

Both of the published sections from this sector (C1E and C2W on fig. 10) show a darkly stained layer dropping steeply away to the S into an apparent ditch. The material in the 'ditch' differed from the surrounding till only in the degree to which waterlogging had caused staining and mottling with iron and manganese salts. It was therefore concluded that no ditch existed here and the horizontal excavation confirmed this conclusion. The horizontal excavations also revealed that two of the surface drains noted in the description (above) were in fact wheel ruts created by heavy plant, possibly that used in the course of ploughing the plantation.

An anomalous feature was noted on the N or downhill side of the dyke in the C2W profile. Here the OGS was finely divided into four separate bands by thin deposits of a grey clay (fig. 10). The downhill end of the C1 sections exhibit a similar feature in that the white clay from beneath the OGS curves up into the overlying material in fine filaments. Both these features may be explained as the result of run-off of clay from pre-dyke disturbance uphill of the site. However, in the absence of further investigation it must be conceded that this is no more than a guess.

The E sector

It proved so difficult to excavate in the dense spruce plantation covering the Dyke in this sector that only one cross section was cut (E1E on fig. 10). This revealed, beneath the Dyke, a grey to brown altered OGS overlying a white clay. Both the OGS and the white clay layer are cut by a pit in which a charcoal rich deposit was noted.

A discrete core of peaty turves overlay the OGS and, on the S side of E1E, these seemed stacked together forming an apparent facing to the core. In the process of clearing out this cutting a discontinuous spread of large stones was noted resting

Deil's Dyke

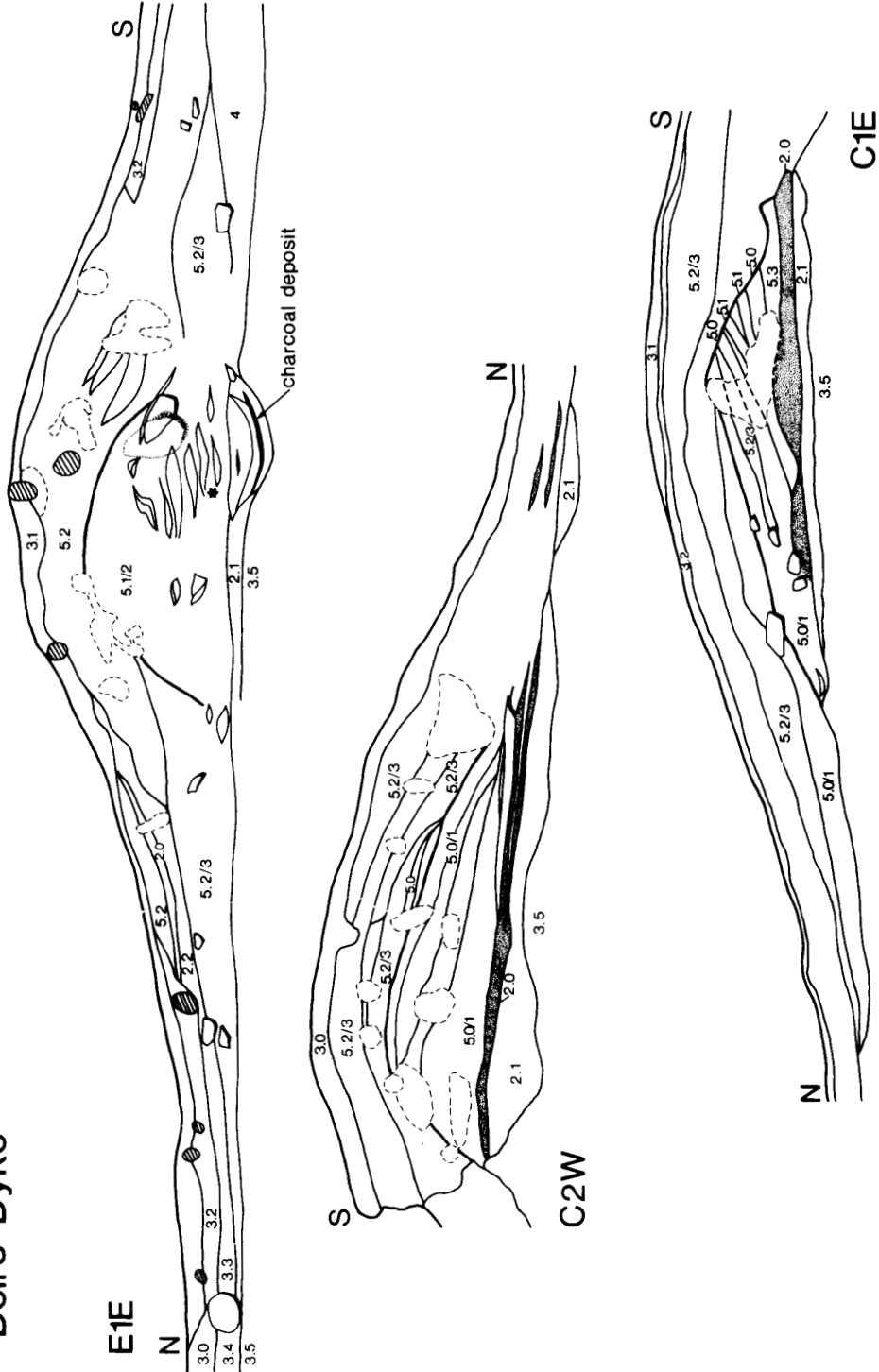


Fig. 10. The dyke sections of the E and C sectors (see 'notes to the drawings' and fig. 6 for a key to the numbering and the conventions, respectively).

against the stacked turves of the Dyke's S face. Some stones were also noted on the N face of the core.

Two sherds of green glazed medieval pottery were found in the cutting of E1E, both from within the core and one of them, a basal sherd, was located near the bottom of the stacked turves noted above.

It was clear from the horizontally excavated cutting (E2 of figs 4 and 11) that here also the Dyke had been built of turves and topsoil removed from the adjacent land surface. The Dyke sits on a distinct platform of buried turf, topsoil and till some 15 cms high. The width of the platform is 1.4m and this is, of course, the maximum width which the dyke can have attained, though it was probably slightly narrower.

Cutting E2 straddles an apparent gap at a join in the dyke. The OGS did not survive in the gap from which the turf core was also absent. Rather a stiff yellow clay lay directly onto the undisturbed till. However, the subsoil element of the platform was continuous across the gap (see fig 11).

A single artefact, a rusted metal object, was located at the top of the core in this cutting.

Discussion

Excavation has revealed that the Deil's Dyke consists of a single earthen bank without an associated ditch. It has shown that it was constructed by stripping turves and topsoil from a band of land c 18.5m wide on either side. In some areas the turves were used to construct a core, onto which the topsoil was added as a capping (the E and C sectors), whilst in others no evidence for such a core was found.

It proved possible to estimate the maximum width of the Dyke in the E sector on the basis of the surviving platform of OGS beneath it. This measured approximately 1.4m wide. The Dyke's width could be estimated, albeit with less precision, in the W sector also. Here the S face of the Dyke was indicated by the straight N boundary of the stone layer. Assuming that the surviving spread of OGS in the same section is symmetrical with the centre line of the Dyke — which it seems to be — the half width measured from the centre of the OGS to the N boundary of the stone spread is approximately 67cm. This suggests a width of 1.34m for the dyke in this sector.

The width of the OGS in the C sector is 2.3m but this measurement also includes the layers and lenses of humus and grey clay noted N of the Dyke proper. Examined in the light of the 1.4m width of the E and W sectors these anomalous features may in fact represent nothing more than the churning and ponding of the ground beside the dyke in the course of its construction.

Accepting, therefore, that the Dyke's width was a relatively uniform c 1.4m an attempt has been made to calculate the original height of the bank. This was done by calculating the area of the bank material, including its wash-down layers for each of the cross-sections with the exception of one in the C sector where drains and dykes associated with the plantation interfered with the section. The measured values cluster closely about 2.48 sq. m. Dividing the mean cross sectional area by the width, the height of the Dyke, assuming it to have been roughly rectangular in cross section, is calculated at 1.77m. It is probable that the faces of the Dyke were battered though it is not now possible to indicate how steeply. It is unlikely that the width of the top

Deil's Dyke E2

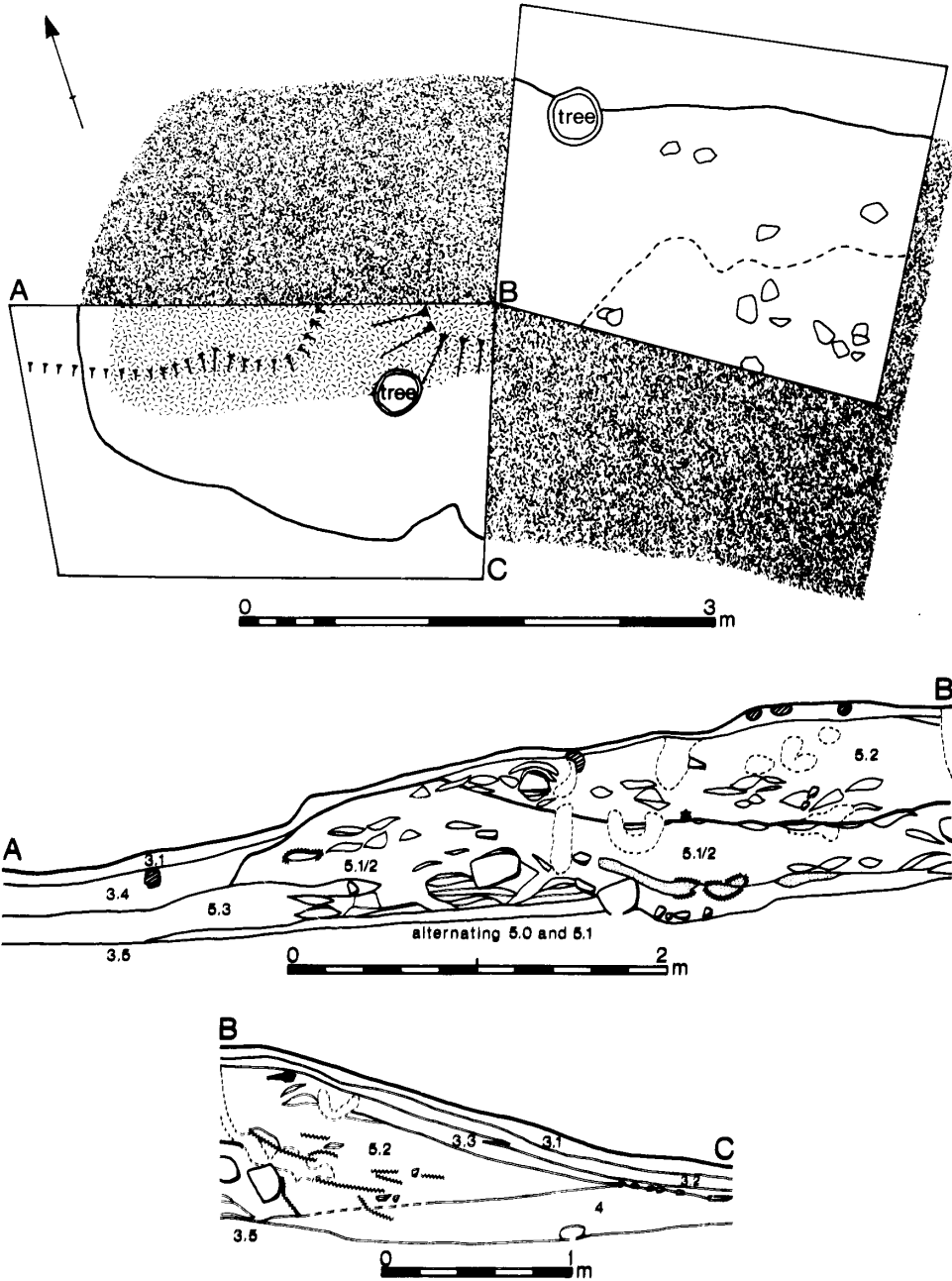


Fig. 11. The horizontally excavated cutting in the E sector. The shaded area - continued in heavy line - represents the present, spread outline of the bank. The broken line in the NE quadrant represents the limit of unaltered OGS while the hachured areas, in the SW quadrant, outline redeposited material which, together with the subsoil plinth it overlies, continues across the gap W of the illustrated bank segment.



Fig. 12. Section No. C2W showing the black greasy OGS and the white underlying clay of the C sector.
Note the fine divisions of the OGS on the N (right-hand) side.

would have been reduced to less than 0.5m, in which event the height would have increased to *c* 2.5m. The calculated heights define the limits of the likely range and it is probable that a figure of 2m is not much in error as an estimate of the original height.

Excavation in the W sector suggests that the width of the strip of land on either side of the Dyke from which material was taken for the dyke's construction is approximately 18.5m. Many of the sections reveal the Dyke sitting on a plinth of OGS and topsoil, and in some cases undisturbed till also. The heights of these plinths fall in the range of 10 to 15cm with a mean close to 12cm. However, were the material of the dyke spread evenly over the stripped area, it would replace a mere 7 to 9 cms of soil, depending on the underlying assumptions. However the nature of this calculation is fraught with imponderables such as the possibility that the greatest depth would naturally be removed nearest the Dyke and the fact that the dyke material has compacted (note the prismatic structuring of the clay). Thus the average discrepancy of roughly 20% is not entirely unexpected and could not be said to invalidate the observations of the width of the stripped area.

The two sherds of green glazed medieval pottery provide a *terminus post quem* date for the construction of the dyke at E1E in the thirteenth to the fifteenth centuries AD (Haggarty, *pers comm*). It is possible but extremely improbable that this pottery was incorporated into the dyke by mole or worm activity and the excavator is confident that the E sector, at least, is medieval in date.

The possibility that the core of the Dyke in the C sector was earlier than the capping has already been noted (page 40) and a sample of the OGS was submitted for radiocarbon dating to test this hypothesis. This sample returned a date of 280 ± 60 bc (2230 ± 60 bp. GU-1515), a date in the later Iron Age. This, of course, raises the possibility that the E and W sectors may also subsume Iron Age precursors and the pre-Dyke ditches at W5 (fig 8) might be reconsidered in this light. However, the banks excavated in the E and W sectors did not reveal any evidence for two phases of construction.

Mr Tabraham has kindly contributed a discussion on the date and function of the Deil's Dyke (see below) and thus relieves the author of the need to consider these matters here, but some comment on his conclusions is necessary. His observation of the many earthworks in this area which run on lines parallel to the Deil's Dyke is borne out by the author and in a recent survey of the linear earthworks of Scotland similar concentrations of earthworks have been noted flanking the mountainous masses of, for example, the Cheviots. The confusion which has arisen over the Catrail, to take another example, is in no small measure due to the very large number of earthworks which lie along or close to its course. Thus we need not be surprised by the fact that a medieval park boundary, the Deil's Dyke (*sensu* Tabraham), overlies an Iron Age linear earthwork for part of its course, nor that modern scholars have extended the course of the Dyke to include other isolated earthworks.

Notes to the Section Drawings

The various layers in the section drawings have been coded in decimal numbers to illustrate their pedogenesis. The more usual archaeological practice of shading (or otherwise coding) layers to illustrate their colours to textures has been eschewed here since their colouration owes more to the relatively random operations of soil hydrology than to human activities and their textures fall uniformly in the class

of clays, silty clays or clay loams. The generalised descriptions are listed here and individual differences are noted in the captions to the drawings.

1. PEAT

1.0 Fibrous peat; 1.1 Fibrous peat broken by rhizomes; 1.2 Basal peat — black, greasy amorphous peat; 1.3 Buried peat.

2. BURIED RANKER PROFILES

2.0 Ao horizon, a mor humus of black greasy organic material; 2.1 Gleyed horizon, white clay; 2.2 Iron-mottled B horizon; 2.3 Buried humose silty clays.

3. MODERN PEDOLOGY

3.0 Ao horizon where L, F and H layers are not well defined; 3.1 L Horizon — undecomposed plant litter; 3.2 F horizon, partially decomposed litter; 3.3 H horizon, decomposed organic matter, raw humus or thin peat; 3.4 B horizon 'sub-soil'; 3.5 C horizon, boulder clay 3.5a Upper c. 25cms of the C horizon which has been oxidised to a grey with orange mottle; 3.6 Mull humus Ao horizon.

4. GLEYED HORIZONS

These occurred commonly in the uphill side of the bank where ground water was trapped behind it. The layers affected were usually rendered more blue-grey than their neighbours and translocated iron and manganese added yellow/red and purple/black mottling.

5. REDEPOSITED SOILS

The Dyke is constructed from redeposited material and it is possible in some cases to indicate the source of the material concerned, thus;

5.0 Ao material often visible as individual turves though sometimes altered by colloidal diffusion (see p. 32 above); 5.1 Gleyed material (as 2.1 above) from ranker profiles; 5.2 B horizon material with iron (somewhat oxidised) and in consequence orange mottled; 5.3 C horizon material which may survive in the Dyke as either its blue-grey or grey with orange mottle.

Acknowledgements

This excavation was carried out on the property of the NCB and their co-operation is gratefully acknowledged. The site assistants, Mr P. Strong, Miss Jean Comrie, Miss Anne Crone and Mr D. Fulton deserve the author's best thanks for their persistence on a difficult and tiring site. The soils of the area were studied by Mr I. Mate with the help of Mr S. Buchan and their contribution was central to our understanding of the site. Dr D. J. Breeze (SDD AM) helped and advised at every stage of this project and in particular with the editing of the report and his assistance is gratefully acknowledged. The line drawings were prepared for publication by Miss Anne Crone and the half-tones are from photographs by Mr M. Brooks (CEU).

APPENDIX 1

A representative soil profile from the W sector (notation after Hodgson 1976)

Horizon	Depth in cm	Description
A1	0-15	Dark greyish brown (10YR 4/2) silty clay. No mottle no stones. Very fine to medium woody, fleshy and fibrous roots abundant. Crumb structure.
Mull horizon		Lower boundary irregular sharp.
B1g	15-30	Yellowish brown (10YR 5/4) silty clay. Common mottling and iron staining (strong brown 7.5YR 5/8). Roots are common, fine, fibrous. Structure fine to medium sub-angular to blocky. Abrupt irregular lower boundary.
Cg	30-	Light grey (5YR 6/1) stoney clay with 40 to 50% mottle (yellowish red, 5YR5/8) and iron staining. Large to small stones, subrounded to sub-angular. Roots few, fine fibrous. Structure, massive broken by stones.

II. OBSERVATIONS ON ITS DATE AND FUNCTION

by Christopher J. Tabraham

The dating of the Deil's Dyke has hitherto been a matter for conjecture. Graham and Feacham (1956, 153-4) cautiously argued against it being medieval in date, preferring to regard it as a product of the later first millenium A.D., a construction, perhaps, by the Britons from Strathclyde, asserting their rights in this region against the Northumbrian invaders from the S, a hypothesis taken up with less cautionary zeal more recently (Kirby 1975, 22). From this recent excavation has come the first, admittedly scanty, scrap of dating evidence which would suggest that the Dyke — or at least that part of it yielding the two medieval pot-sherds, namely E1E — is medieval in origin, and later rather than earlier.

Though there is likely to be continuing uncertainty as to the true function of the Dyke, the excavation has strengthened the argument against the earthwork having any defensive role (RCAHMS 1920, lvii). Certainly, there is no ready historical explanation for the construction of a work of this nature in Upper Nithsdale in the late medieval period. Likewise the notion that the Dyke is an unitary construction has been given a degree of support by the excavation, and, if these two surmises are correct, the Dyke must, therefore, be regarded as a boundary marker. The difficulty comes in ascertaining what precisely it bounded, or defined.

The Dyke has been traced from the Afton Water (in the parish of New Cumnock, Ayrshire) in the W to Burnmouth Farm (on the western limit of the parish of Durisdeer, Dumfriesshire) in the E (*supra* p. 29). By far the greatest length lies within the adjoining parishes of Kirkconnel and Sanquhar (both in Dumfriesshire); indeed, the writer, in recent field walking, could find no trace of the earthwork outwith these two parishes. The extents of the secular manorial estates were most likely coterminous with the ecclesiastical parishes that share their names (Cowan 1961, 43). The estate of *Senecastre* (1214) was held by Walter Steward at least as early as the second decade of the thirteenth century (Paisley Reg 1832, 90) and would appear to have been retained by him and his successors for the remainder of that century. By 1321, the *baronia de Seneschar* was jointly held by Richard Edgar and William Crichton (RMS 1912, I, no. 27) and, thereafter, the barony appears to have remained in the possession of the Crichtons until the seventeenth century (RMS 1882, II, no. 233; NSA 1845, IV, 306). The names of the lords of Kirkconnel in the medieval period are not known to us, though it must be considered a distinct possibility that the estate of Sanquhar incorporated the lands of that parish also.

Nowhere can the Dyke be seen as having defined the march between one estate and another for it passes through, and not around, the parochial (ie the estate) boundaries. The earthwork runs parallel to the waters of the River Nith on its southern (right) bank and, if it can be said to define anything, then it must mark the division between the mountainous country that dominates the S portions of the two parishes and the more fertile pastures of the Nith valley on the N. The Dyke generally follows the 250m contour, reaching as high as the 320m contour on the NE slope of Cairn Hill (NS770070) and as low as the 160m contour to the N of Old Barr (NS762088), and it is tempting, therefore, to regard it as a medieval head-dyke. Graham and Feacham (1956, 144 and 153) rejected the idea that it was a head-dyke associated with the eighteenth-century agrarian improvements on the grounds that

“... it does not appear to divide zones of land of markedly different qualities.”; this was written in the context of the now almost obliterated stretch between Old Barr and Kello Water — the only stretch where this maxim can reasonably be applied. Our present knowledge of medieval land management is such that we cannot yet be so forthright in rejecting the thought that it served as a head-dyke at this earlier period. In fact, what scanty information we have does suggest that this part of Upper Nithsdale was husbanded on a quite sophisticated scale from at least the days of Walter Steward.

By 1214 Walter Steward held three forests — Renfrew, Ayr and Sanquhar. They were no mere areas of woodland for the name had come to be applied to the vast hunting reserves that were established in Scotland from the twelfth century and which played an important part in the economic structure of the country. (Paisley Priory — as it then was — was granted liberties in the “forest of Senecuthir” during this century (Barrow 1957, 55). Within these forests formal rights were exercised over a number of activities, not only woodcutting, but hunting, hawking, grazing and so forth (Gilbert 1979). The boundaries of the *foresta de Senecastre* are now unknown for the forest grant has not survived, but it may well have been coterminous with the parish of Sanquhar and, quite possibly, Kirkconnel also. Part of the forest was offered to Sir Robert, Master of the Order of Sempringham, by Walter Steward in a letter written c. 1228, as part defrayment of the cost of establishing a religious house in the County of Ayr (Barrow 1957, 58-9). By analogy, we can infer that the forest of Sanquhar sustained a number of economic activities. Arable farming would by and large have been confined to the more fertile, better drained soils of the Nith valley, while the grazing of livestock would have alternated between these lower slopes and the upland pasture to N and S of the river, depending on the seasons. The landscape is now largely free of trees but tradition holds that this part of Upper Nithsdale was extensively afforested until the late eighteenth century when a certain Duke of Buccleuch and Queensberry caused to have felled much of the old woodlands (NSA 1845, IV, 305) and, in addition to a thriving woodland, there is material evidence for early coal-mining activity with the survival of bell-pits on the W (left) bank of the Polmeur Burn, right beside the Deil's Dyke (NS 694118).

The *raison d'être* of the forest grant was, however, the right to control hunting, more specifically, the hunting of greater game, ie. red deer and hind, boar and roe deer. Faced with the difficulty of maintaining a forest as a hunting reserve while at the same time permitting economic activity James Steward, in administering his forest at Renfrew, established c 1294 a ‘foresta prohibita’ within his reserve where no economic activity was permitted (Paisley Reg 1832, 92). Is it conceivable that a similar expedient was introduced within the forest at Sanquhar, either by James Steward or by one of his successors? And if this may be so, can the Deil's Dyke, perhaps, be regarded as the physical delineation of this restricted area? There is now no sign of the barrier referred to within the forest of Renfrew sufficient to enable a comparison to be drawn but the limited fieldwork carried out to date on forests and hunting reserves in Scotland has brought to light a few linear earthworks which have a similarity to the Deil's Dyke. The pale at the deer park close to Kincardine Castle (Kincardineshire), for example, stands about 1.5m high, comparable with the Deil's Dyke, with the observed difference that there would appear to have been no accompanying ditch at the latter (Gilbert 1979, 82-4, figs 16 and 17). The hunting

of game at Sanquhar seems to have continued throughout the medieval period; the parish minister, Thomas Montgomery, wrote, as late as 1845, that "close to it (Sanquhar Castle), was a large deer park;" (NSA 1845, IV, 305). This is clearly defined on the first edition Ordnance Survey 25-inch map, surveyed 1859.

The foregoing must inevitably be regarded as surmise, nothing more. The dating evidence is scanty and restricted to one small cutting. According to Graham and Feacham, there are some twenty-seven kilometres of Deil's Dyke and it must still remain questionable whether we have a unitary construction or an amalgamation of separate field earthworks. The concept of a dyke stretching from Loch Ryan to the Solway Firth, and thus encompassing the ancient province of Galloway, had been examined and found wanting by Graham (1949, 174-85) only a little over a century after this fantasy first appeared in print (Chalmers 1824, III, 237). Notwithstanding, Graham himself, and his co-author, Feacham, writing some seven years after the first explosion of the myth, were clearly unable, perhaps unwilling, to lay the ghost of the Deil's Dyke for ever (1956, 152-4). That part of the Dyke passing through Upper Nithsdale, which they preferred still to regard as a linear earthwork, they continued to view as a political boundary, whether it may have defined medieval demesne land or pre-feudal territorial limits. In walking along the Dyke, the writer was more than a little concerned at the number of similar, almost identical, linear earthworks that, upon a cursory examination, would appear to be not unconnected with the Deil's Dyke itself. This is too easily dismissed by Graham and Feacham, (1956, 141, 145) but a more detailed field survey requires to be undertaken before the proper relationship between these various earthworks and the dyke itself can be discerned. In the meantime, the writer offers the possibility that the Deil's Dyke and, perhaps, some of the other adjacent earthworks, may be a tangible sign of medieval forest management.

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EXCAVATION OF A MOTTE NEAR ROBERTON, CLYDESDALE, 1979

by George Haggarty
and Christopher Tabraham

Summary

A brief examination of this motte in 1976 raised the somewhat intriguing possibility that it was a construction dating not to the 12th century, as had previously been suspected, but rather to the 14th century. A more detailed excavation in 1979 confirmed this, although a more precise date was not forthcoming. The ensuing report describes the nature of the construction and puts forward evidence which may explain why a date in the early 14th century is a not unreasonable one.

Introduction

On the edge of a high terrace overlooking the W (left) bank of the River Clyde 1.6 km S of the village of Roberton stands a small grass grown motte (Figs. 1 and 2). It was first recognised as being of genuine antiquarian interest by Christison (1890, 286) towards the end of the 19th century when its date of construction was ascribed to the 10th century, possibly earlier. By the 1950s the motte, in common with the hundred or so others identified as such by that time, was being referred to as 'Anglo-Norman' and its origins firmly placed in the 11th and 12th centuries (Reid 1957, 141-2). Indeed, documentary evidence demonstrating the settlement of Flemish sheepfarmers in Upper Clydesdale prior to the 1150s suggested that this motte might have been the *caput* of 'Robert the brother of Lambin' (Ritchie 1954, 374).

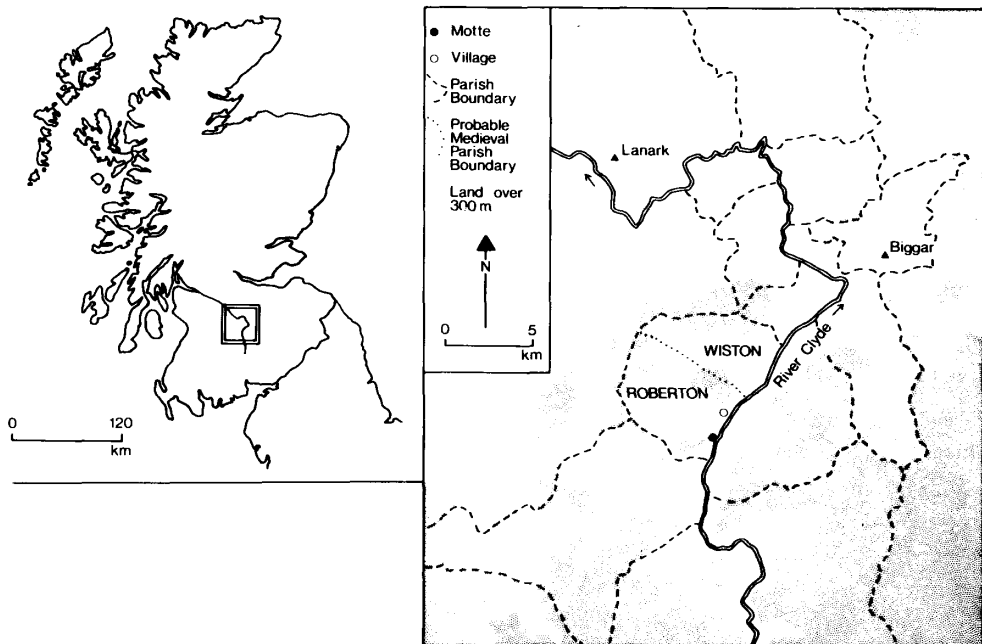


Fig. 1. Roberton Motte, Clydesdale: Location plan.



Fig. 2. Roberton Motte, Clydesdale: Aerial view from the NE. (Crown Copyright Reserved)

The motte (NGR:NS 9402 2705) lies immediately S of the farm buildings of Moat (formerly Mote, c 1858) at a height of 239m (768ft) above sea-level (Fig. 3). Its steep sides rise to a height of 3m above the terrace surrounding it on the N, W and S whilst the E side falls fully 20m to the River Clyde below. It is sub-circular in shape with an overall mean diameter of 24m and a reasonably flat summit measuring some 15m in diameter. Prior to excavation there were faint traces of an encircling ditch around the S flank, though a modern farm track disguised any evidence for such along the W and N.

The motte had been damaged prior to Christison's visit in the 1880s by the digging of a trench c 6m wide and 16m long into the heart of the mound from the N. The excavators were apparently after the river-gravels that made up the mound, possibly for use in the construction of a mill pond immediately to the N of the motte, since filled in. This mill-pond and the cutting into the mound are both shown on the First Edition 25 inch Ordnance Survey map, surveyed 1859. The ensuing void has been used as a clamp for silage till the present day.

In 1976 the writers briefly examined the E section within the clamp (Tabraham 1978, 116). This clearly showed that the mound had been artificially constructed with gravels from the locality. However, a date in the early 14th century for its

construction, suggested by a single pot-herd from one of the earliest construction levels, was at variance with the hitherto accepted notion that such constructions were part and parcel of the Anglo-Norman infeudation of Scotland. Rationalisation of the silage store arrangements gave the writers an opportunity of examining the motte in greater detail and this they did in March/April 1979.

The severely mutilated remains of the motte inevitably placed constraints on the excavation strategy. The absence of much of the summit area reduced the significance of this particular aspect of the earthwork even though the examination in 1976 had confirmed the existence of timber constructions there. Trench C covered much of the available summit area on the S and W. The reduced archaeological potential of the summit was considered to be more than compensated by the rare opportunity to dissect the mound itself. Trenches A and E and the combined Trench B/D examined the basal perimeter of the motte whilst the two sides of the silage clamp provided sections through almost the entire mound.

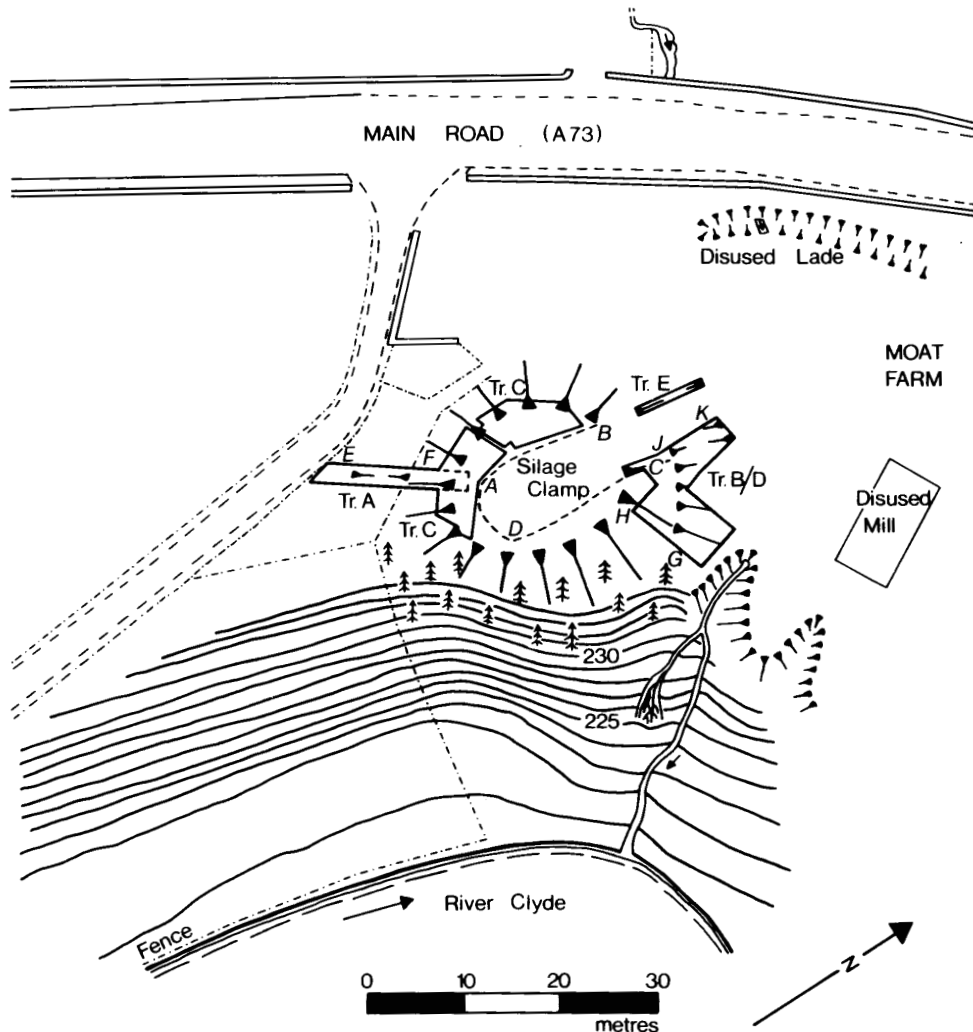


Fig. 3. Roberton Motte, Clydesdale: Site plan showing location of trenches and sections.

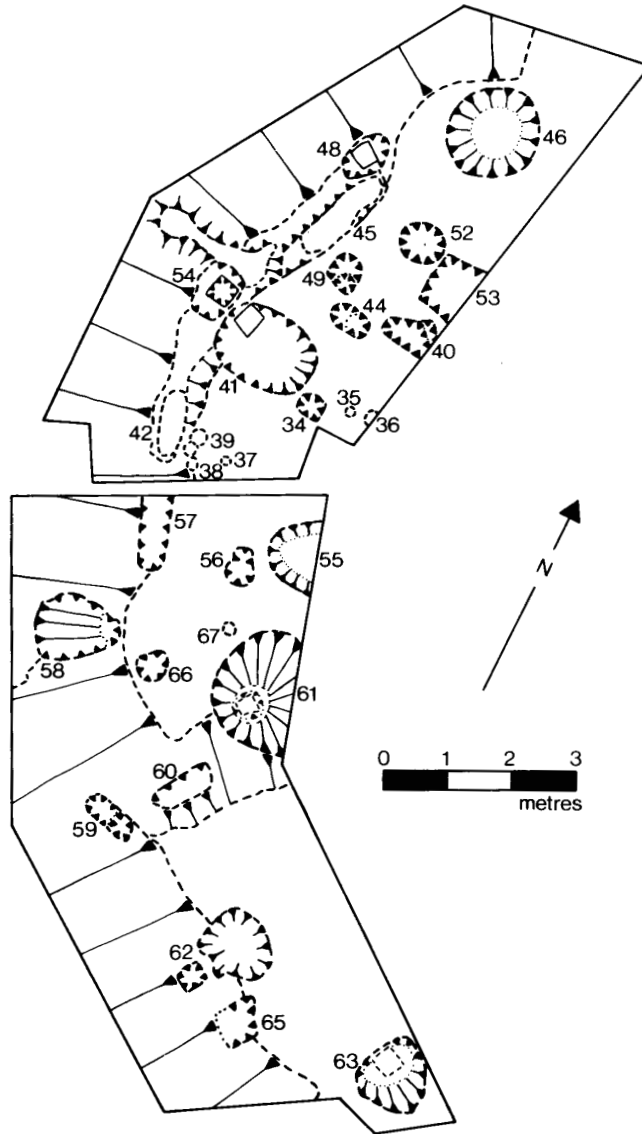


Fig. 4. Roberton Motte, Clydesdale: Plan of the summit area (Trench C).

Excavation

THE SUMMIT AREA (TRENCH C; FIG. 4)

Upon excavation the summit area was found to be not entirely level. Immediately to the SE of 59, 60 and 61 the surface was fully 600 mm lower than on the N, suggesting that the motte top was constructed on two planes of unequal proportions. Cut into the gravels that comprised the mound were a plethora of post-pits (some retaining evidence for their posts), smaller stake-holes and shallow slots. Some of the features were apparent immediately upon removal of the top-soil; others were sealed by localised deposits of heavily charred earth containing flecks of daub. Extensive rodent activity had so disturbed the gravels in places that positive

identification of some of the features was impossible and the restricted area of the excavation made interpretation difficult. Nevertheless it is reasonable to assume that these features pertained to a fairly solid wooden wall built around the top of the mound. The extremely large squared timbers and the depths to which they were bedded suggest that the wall was quite high and of sound construction. 48, 54, 41, 58, 59, 61, 62 and 63 had received posts measuring in the region of 300 mm square, all vertically set with the exception of that in 63 which was raked at an angle of 45° to the vertical E. 46 bore no trace of the post it is presumed to have held but, considering its relative depth and position, it too may be associated with this group. Evidence for the manner in which the wall was destroyed is conflicting. The posts in 41 and 48 were evidently pulled out whilst those in 54 and 63 were burnt *in situ*.

Unfortunately the abundance of features was offset by the paucity of artefacts. A mere handful of small pot-sherds can only indicate a date of abandonment in the 14th century. Further precision is impossible at present.

THE DITCH (Figs. 5, 6, 7)

Trench A on the SW of the mound proved the existence of a ditch encircling the motte. Excavation was hampered by the presence of a storm drainpipe at a high level within the ditch infill but the profile was that of a relatively flat-bottomed cutting 2.13m deep beneath the level of the counterscarp on the SW side. It was fully 7m across. The bottom of the ditch would appear to have been stepped. The primary fill



Fig. 5. Roberton Motte, Clydesdale: Section E-F through ditch in Trench A. (Crown Copyright Reserved)

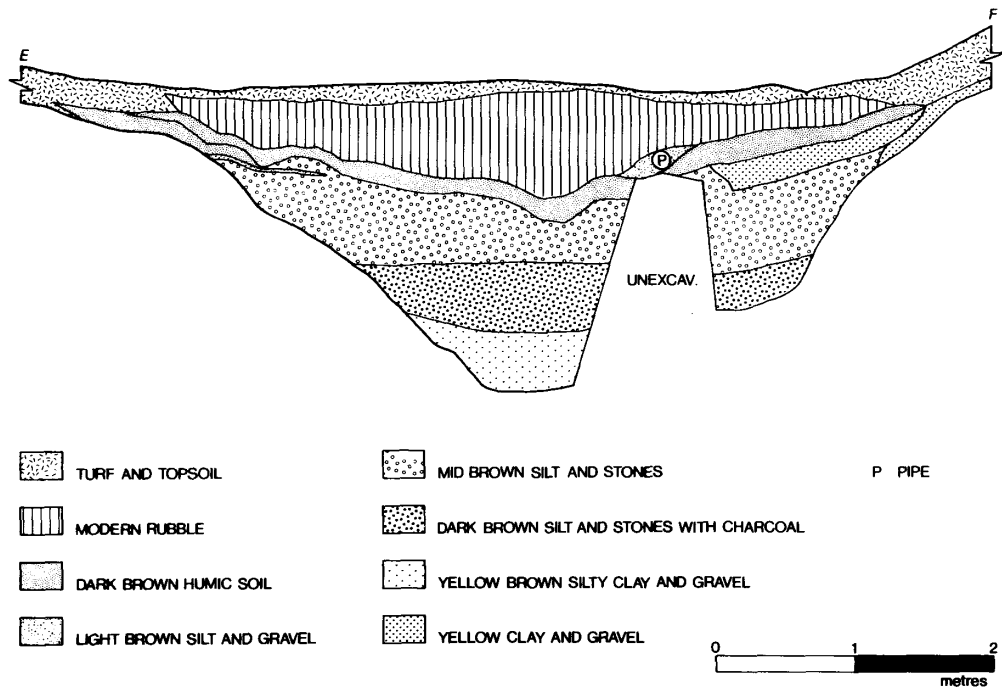


Fig. 6. Roberton Motte, Clydesdale: Section E-F through ditch (Trench A).

consisted of a deposit 450 mm thick of very wet yellow-to-brown organic silt intermingled with weathered bedrock and gravel slippage from the motte's side.

The nature of the ditch around the N side of the motte (Trench B/D) was largely obscured by the 19th century gravel quarrying operation. The massive cutting into the motte was found to have affected not only the mound itself but also the underlying natural gravel terrace, thereby disturbing the relationship between motte and ditch. The latter was a little over 6m wide and its flat bottom some 2m deep. As the course of the ditch progressed around to the E side of the motte it merged with the natural slope of the terrace. The topography of the area to the NE of the motte prior to excavation totally belied its original appearance for the flat terrace here transpired to have been artificially constructed in the 19th century. Prior to this radical alteration, which may be related in some way to the quarrying operation within the motte and the formation of a mill-pond on the N; this area had been a steep-sided natural gully cut by a small but fast-flowing burn draining the hill land to the NW of the motte into the River Clyde (Figs 3, 8 section G-H).

The primary fill within the ditch here was a blue-to-grey clay silt over 650 mm in thickness. Close to the junction of the ditch with the natural gully, a tongue of natural gravel projected out from the inner scarp and closely associated with this was a well-formed post-hole 68, 250 mm in diameter and 450 mm deep. It is just possible that these may be the vestiges of a sluice mechanism spanning the ditch for the purpose of retaining water.

Altogether, twenty two pot-sherds were recovered from the ditch silts and they can only confirm that the ditch silted up no earlier than the 14th century.

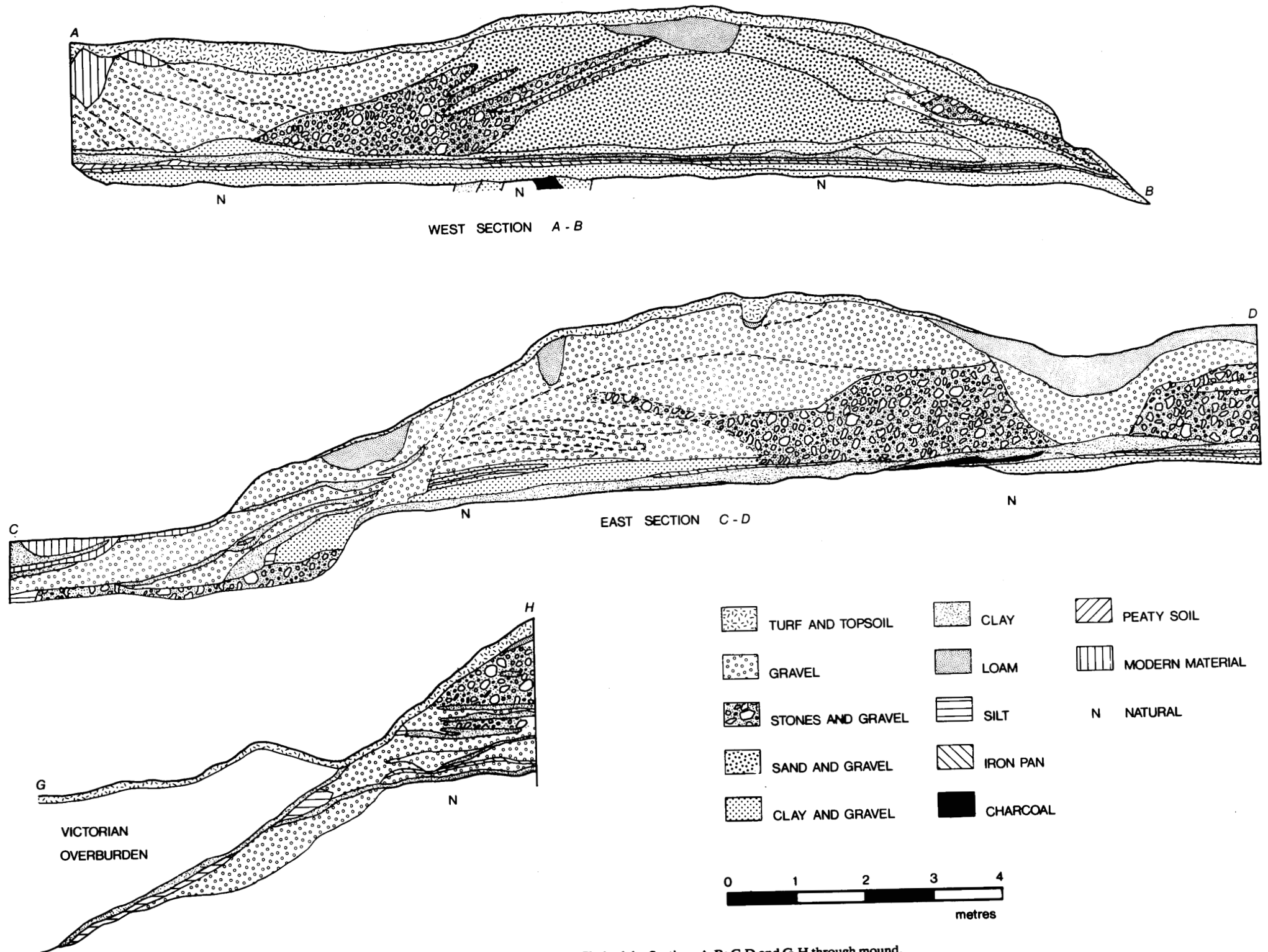


Fig. 8. Roberton Motte, Clydesdale: Sections A-B; C-D and G-H through mound.

CONSTRUCTION OF THE MOUND (FIGS. 8, 9)

The nature of the construction of the mound was obtained from the two sides of the silage clamp which gave, in effect, two sections through the heart of the mound each some 15m in length. A further segment of the mound was removed within Trench B/D. This more detailed examination proved that one of the suppositions made at the time of the first examination in 1976 had been wholly fallacious. The original interpretation of the near-vertical break towards the N end of the E section (section C-D) as the 'ghosting' of a timber shuttering built to contain the bulk of the gravels was erroneous; the very marked divide between the gravels that comprised the mound and the deposits within the ditch had been caused by the gravel quarriers of the 19th century, as excavation within Trench B/D clearly showed. Both sides of the clamp bore signs of further intrusive activities, perhaps likewise connected with these workings. The E section in particular showed a major intrusion towards its S end, 2m wide and seemingly cutting into the heart of the mound. The W section (section A-B) displayed signs that it too had suffered in the same way, though by no means so noticeably.

Two pits 59 and 70 were located below the iron-pan at the base of the mound and visible in the W section. Both were shallow and of indeterminate size, having largely been disturbed during the gravel quarrying. Neither produced other than a few flecks of charcoal and little further can be said except that they would appear to considerably predate the construction of the mound.

The motte itself was created from natural gravels readily obtainable from the vicinity. Some of the bulk would doubtless have come from the excavation of the encircling ditch. The W section shows how the gravels, heaped up to form the body of

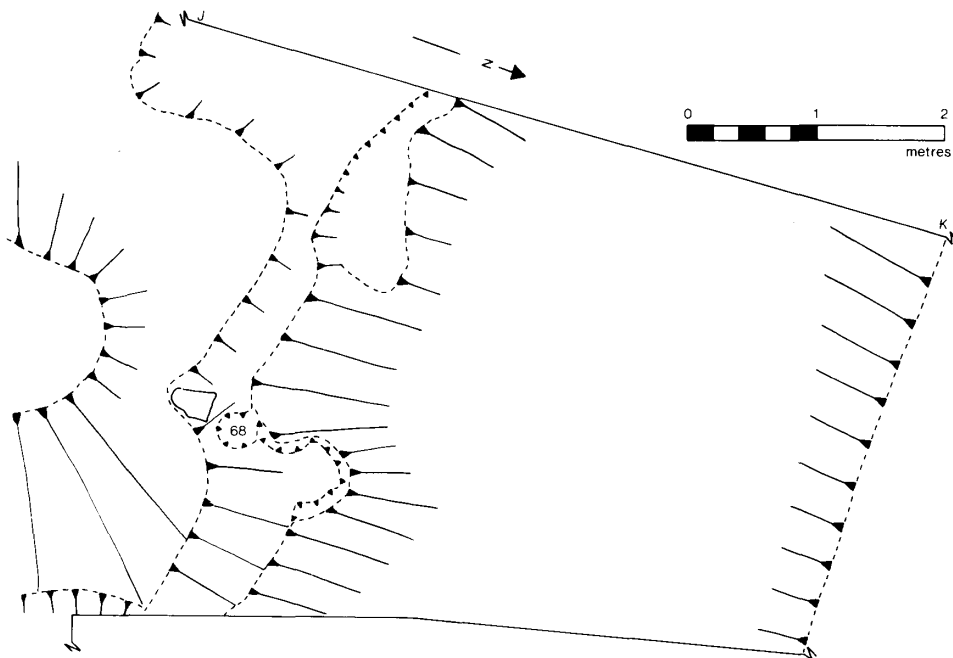


Fig. 7. Roberton Motte, Clydesdale: Plan of part of combined Trench B/D.

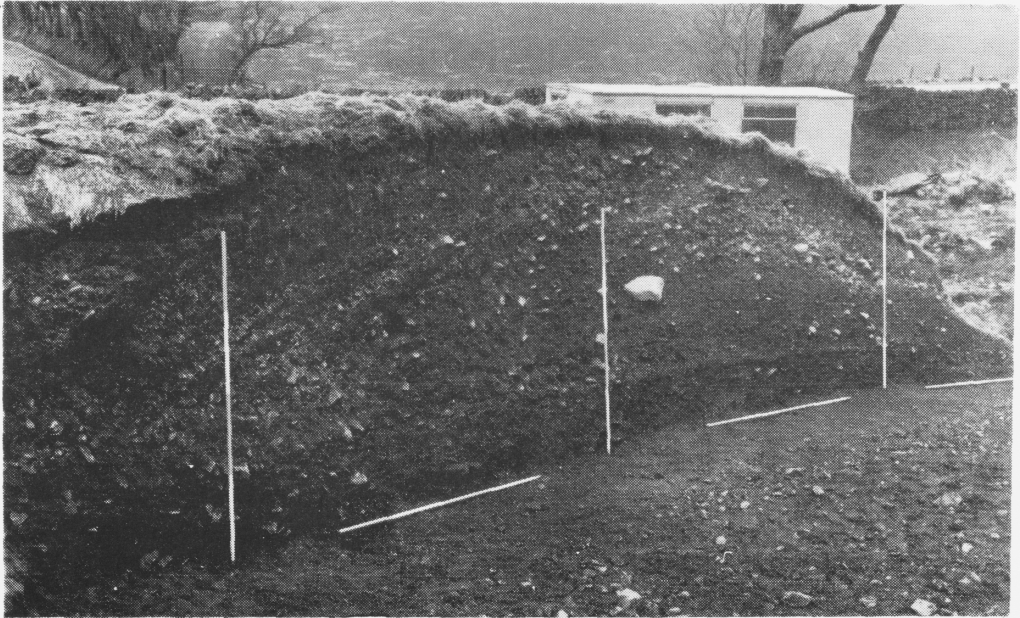


Fig. 9. Robertson Motte, Clydesdale: Section A-B through mound. (Crown Copyright Reserved)

the mound, sorted themselves out as the larger water-worn boulders, some measuring 800 mm across, slipped towards the bottom of the dump. Unfortunately neither of the two sides of the clamp provided a true diametrical section through the centre of the mound making further interpretation difficult. The W section, however, would seem to suggest that the complete mound had resulted from an amalgamation of two gravel dumps of unequal height and proportion, the larger and higher one on the N, the smaller, lower one on the S. This would tend to support the observation made during the excavation of Trench C that the summit of the mound was constructed on two levels.

From the segment of the mound excavated in Trench B/D came evidence to show that the relatively unstable gravel deposits had been 'stitched' with several layers of light grey clay laid horizontally (section G-H). The absence of such stitching at the N end of the W section within the silage clamp might suggest that the motte's builders were concerned only with the slippage of gravels down the precipitous natural slope to the burn on the E side. The E section within the clamp was likewise without such stitching. Nevertheless, there was a marked concentration of thin clay bands deposited horizontally at the base of the mound and it was from this horizon that the pot-*sherd* ascribed to the 14th century had been recovered in the investigation of 1976. In the excavation reported upon here only four further sherds were found from the make-up of the mound. They came from the clay stitching layers within Trench B/D and can likewise be ascribed with some confidence to the 14th century.

The Pottery (fig. 10 and table I)

The excavation produced a total of 61 sherds, after conjoining, which would appear to be mainly from jugs. No complete profiles could be built up. All the sherds were examined at X20 magnification and six fabric types identified. The number of sherds in each fabric type and their provenance are shown in Table I.

The geology of the Roberton area is essentially composed of drift products of the lower Old Red Sandstone and the Ashgill and Caradoc series within the Ordovician. Only the six sherds of fabric 4, with their graptolitic shale inclusions, could be local, but fine particles of coal would suggest a provenance nearer the coal-bearing measures of the Clyde basin.

Fabrics 2, 3 and 6 are all variations of the typical southern Scottish white quartz-tempered wares. Indeed, fabric 3 is similar to that of the straight-sided cooking pots generally found in urban excavations along the Scottish east coast (eg. no. 1; layer 63) (Tabraham forthcoming). The fabric of the basal sherd from a watering pot, published as an import and ascribed to the 14th century (Tabraham 1978, 116) turned out, on microscopic examination, to be indistinguishable from fabric 1, a relatively fine-grained oxidised reddish coloured iron rich paste with inclusions of sub-angular quartz, feldspar and rock fragments. Fabric 1, which is soft and friable, makes up approximately two thirds of the whole assemblage. Similar fabrics are common-place on many Scottish medieval sites which derive their ceramic material from carse clays.

Decoration on fabric 1 sherds is common, including square-notched rouletting, thumbed bases (eg No. 2; layer 18), applied strips and pellets (eg No 3; layer 41) and two examples of arm fragments from possible face-mask jugs (eg Nos. 4 and 5; layer 33). There is also one sherd from a bridge-spouted vessel (eg No. 6; layer 46). The three sherds of fabric 5 are similar to fabric 1 in paste but with slight vitrification and reduction. No mention has been made of glazing as it is very difficult on such abraded sherds to give any idea of colour or percentage, but it would seem that a fair proportion of sherds from fabrics 1 and 5 had traces of external green or brown lead glaze.

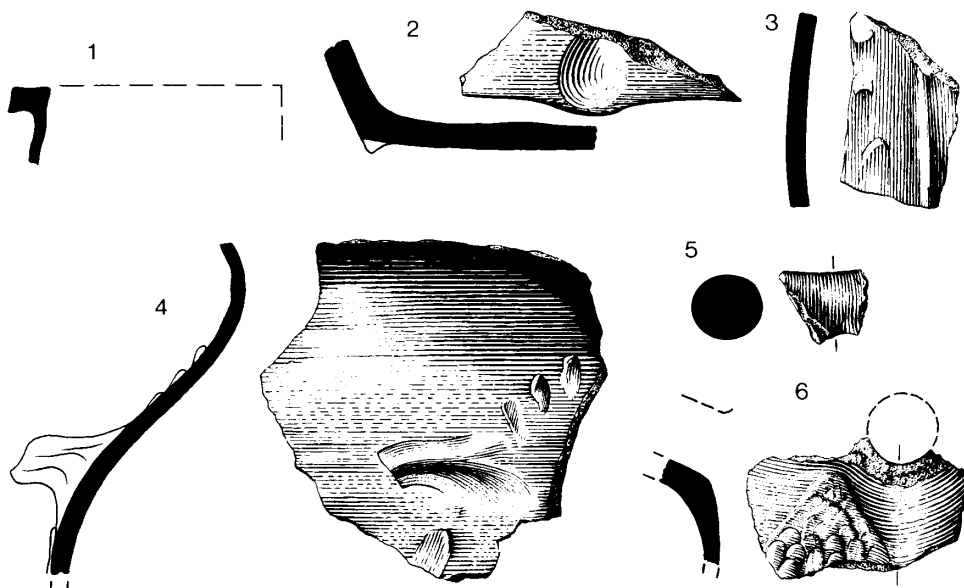


Fig. 10. Roberton Motte, Clydesdale: Selected pottery sherds (Scale $\frac{1}{2}$).

TABLE I
FABRIC TYPES

SITE LAYERS	1	2	3	4	5	6	Provenance
	8	1					ditch
	10			1			ditch
	11			1			ditch
	14		1				ditch
	17	2(1B)	1(1R)	1(1R)	1(1R)		summit
	18	4(2B)					construction
	21	1					ditch
	22				2		ditch
	24	1					ditch
31	1				1	1	ditch
32	2				2		ditch
33	3		1				ditch
41	3(1R)						summit (PH)
46	1	4(1R)		1			summit (PH)
50	1						summit
63			1(1R)				summit (PH)

B = BASAL SHERD; R = RIM SHERD; PH = POST-HOLE

Table 1. Robertson Motte, Clydesdale: Table showing number of sherds from site layers and their fabric types.

This small, mainly badly abraded, group of material can do little to elucidate the dating problem connected with this earthwork. Excavations over the past few years within Scotland's east coast medieval burghs (eg Perth, Aberdeen) would, where stratification allows, seem to indicate that the earlier the deposit, the larger the percentage of cooking pots represented. As only ten of the sherds here, most of which are in the white quartz-tempered fabrics, would seem to fall into this category, it is doubtful whether this assemblage could date from before the second half of the 13th century. Certain sherds (eg nos. 4 and 5) may represent fragments from Scottish copies of Scarborough Ware imports. There is much controversy surrounding the dating of Scarborough Ware and its local imitations (Murray 1982) but it would be highly unlikely, given the present state of our knowledge, that these wares could date from as early as the period of the Flemish occupation of Clydesdale.

Conclusions

It is an inescapable fact that the motte had been constructed no earlier than the late 13th century and that its previous identification as the *caput* of Robert the Fleming in the 12th century is mistaken. Such a late date for the construction of a castle form more commonly associated with the later 11th and 12th centuries is at first puzzling, though similar sites in both the Rhineland (Herrbrodt 1964, 83) and Denmark (Stiesdal 1967, 95) have been ascribed, albeit provisionally, to the 14th and 15th centuries.

In 1296 Stephen of Robertson swore fealty to Edward I of England at Berwick-upon-Tweed along with landowners from the neighbouring manors (Bain 1884, 198). Nothing further is heard of Stephen though it is assumed that he was a descendant of Robert the Fleming, the first lord of the barony. In 1346 the barony of Robertson appears once more in the record, with the granting of the barony to Sir William Douglas, the 'Knight of Liddesdale', by Mary of Stirling, Lady of Robertson (RHM 1853, 50-3). This lady's reasons for so resigning her lands are explained in the documents for having supported the Balliols in the aftermath of the 'Great Cause' of the Scottish succession, she was desirous of transferring her allegiance to Bruce and, to this end, was willing to part with a portion of her estate to secure the influence of Sir William Douglas, a close friend of David II. This she had achieved by the following year. Thereafter the lands of Robertson remained in the Douglasses' possession until the 17th century, despite an unsuccessful bid by William of Cresswell in the 1370s to wrest the barony from them (RMS 1912, 188, no 517).

A further reference to the 'lands of Robertstoun' in the reign of Robert I, granted by that monarch to John of Montfode together with the whole barony of Skirling (Robertson 1798, 24), has been dismissed for it has previously been demonstrated that the 'Robertstoun' to which the document refers, though located in the county of Lanark, was an estate within the parish of Dolphinton, a few miles to the NE (Irving and Murray 1864, 152-3).

This admittedly sketchy documentation helps perhaps to answer the riddle posed by the late date for the construction of the motte, the reference to Balliol being the key. Since the downfall of King John in 1296, the Scottish nation had been at war with England. The victory at Bannockburn in 1314, far from ending that war, scarcely marked the halfway stage. The victory of King John's son, Edward Balliol, at Dupplin Moor in 1332 brought him to the Scottish throne from which he was to



Fig. 11. Aerial view of Castledykes (centre foreground), Roberton, Clydesdale.
(Crown Copyright Reserved)

resign in 1356, though he was in effect a spent force by 1347, an outcast residing on the lonely Island of Hestan off the Stewartry coast. It is not unreasonable to surmise, therefore, that the building of a motte reflected the grave uncertainty that pervaded the minds of all Scots in those early years of the War of Independence.

The motte form was an ideal fortification in circumstances of urgency. It was a cheap, quick and effective way of providing a sound place of defence. Indeed, Davidson (1969, 43-6) has argued that the form evolved in the years immediately following Duke William's arrival at Hastings in 1066 when the need for quickly erected but effective places of strength was of paramount importance to the Conqueror. A parallel for the building of mottes during a period of unrest is best illustrated by the proliferation of such defences during the Anarchy of King Stephen of England's reign in the early 12th century (Hope-Taylor 1956, 223-249). Stiesdal (1967, 95) likewise suggests that the Danish mottes represent the measures taken by certain Danes to protect their own when that country was racked by internal unrest

throughout the 14th century. By the same token it is plausible to conjecture that the motte at Moat Farm was considered by Mary, an avowed supporter of Balliol, or perhaps her predecessor, as a suitable means of affording a measure of protection during the troubles of the day. Excavation has shown that the motte form was still in use at this date (Stewart and Tabraham 1974, 58-65) and castle mounds at Duffus, Morayshire (Cruden 1960, 125-6) and elsewhere have surviving architectural fragments showing that the motte was by no means obsolete.

What, then of the *caput* of Robert the Fleming? Only one other site within the parish can be considered a likely candidate — the fort at Castledykes (NGR: NS 9427 2871) immediately to the W of the present village of Robertson. This prominent earthwork (Fig. 11), situated on the N bank of the Robertson Burn, has utilised a natural knoll with steeply sloping sides and a flat top surrounded by vestiges of ramparts and other earthworks of indeterminate form. It has previously been ascribed to the sub-Roman or early Medieval period (Raleigh Radford 1953, 33) though Reid (1957, 141-2) considered the possibility that it may have been reused in the later Medieval period. It is a debate which only archaeological investigation may resolve.

Acknowledgements

The writers are indebted to Mr and Mrs Henderson of Moat Farm for so readily agreeing to our request to excavate and being so helpful throughout. John Lewis acted as assistant supervisor, Eoin Cox, Gordon Ewart, Alan Shedlock and David Carmichael-Stewart as site assistants. The site drawings were made presentable for publication by Alison Haggarty and the pottery sherds were drawn by Tom Borthwick. Hilary Murray gave much helpful advice regarding the interpretation of the timber structures and Eoin Cox examined the pottery. Our thanks to all.

Note

The field notebooks, drawings, photographs and other papers have been deposited with the National Monuments Record of Scotland, Edinburgh. The pottery sherds await disposal to a museum.

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CASTLES AND TOWERS IN SOUTH-WESTERN SCOTLAND SOME RECENT SURVEYS

Geoffrey Stell

Those who are familiar with the antiquities of this region will be well aware of the fact that the three South-western counties were among the first to be surveyed in detail by the Royal Commission on the Ancient and Historical Monuments of Scotland in the early decades of this century. All three volumes that resulted from this work had been published by 1920, and taken together they contain descriptions of the then known Prehistoric and Medieval monuments of Dumfriesshire and Galloway. By their very nature and purpose, however, the tasks of recording, research and interpretation necessarily remain continuous, and the Commission has since had occasion to return to this important area in several different capacities.¹

Since 1966 one of the Commission's principal duties has been to carry out *ad hoc* surveys of historic buildings for the archive of the National Monuments Record of Scotland, and this article presents a small selection from one of the many classes of structure that have been accorded this kind of detailed recording treatment.² Usually



Fig. 1. Barscobe House, from SW 1971.

1. R.C.A.H.M.S., *Inventory of Wigtown* (1911), *Kirkcudbright* (1914) and *Dumfries* (1920). For a summary of the survey of field monuments on marginal lands see *Ante*, 3rd series, 33 (1956), 58-65. Lists of the more important building surveys carried out between 1966 and 1974 are included in the two published (and now discontinued) *Reports* of the National Monuments Record of Scotland, 1966-71 (1972) and 1972-4 (1975). See also R.C.A.H.M.S., *Archaeological Sites and Monuments Series*, nos. 12 (Upper Eskdale, 1980), 13 (Ewesdale and Lower Eskdale, 1981) and 14 (South Carrick, 1981); and the annual *Catalogue of Aerial Photographs* (1976-).

2. For other building types recorded in this manner see eg *Ante*, 3rd series, 49 (1972), 39-48.



Fig. 2. Cassencary House, central block from NW 1958.

undertaken in advance of restoration, alteration, demolition or the increasingly common threat of structural collapse, these occasional surveys are intrinsically random, although they sometimes possess a significant thematic coherence reflecting either a historical pattern of redundancy or, say, a fashion for a particularly favoured subject for restoration. The coverage of recently-restored buildings in this category is known to be incomplete, however, and, the following ten case-studies are themselves intended to be no more than representative specimens of those that the Commission has actually dealt with.

In presenting summary digests of these findings, it is hoped to make the importance and results of this activity better known locally, and, among other things, to encourage recourse to the more detailed records that are available for public reference in the NMRS in Edinburgh.³ The notes appended here are mainly intended to draw attention to recently-revealed or freshly-observed evidence, which



Fig. 3. Castle Stewart, from SE 1978.

3. With the exception of Cassenary House each of the buildings described below has been the subject of detailed measured drawing, photography and a written report. This survey-material is now lodged in the National Monuments Record of Scotland, 54 Melville Street, Edinburgh EH3 7HF, where reference can also be made to supplementary records relating to other buildings not included in the present list, eg Hollows (Gilnockie) Tower and Sorbie Tower.

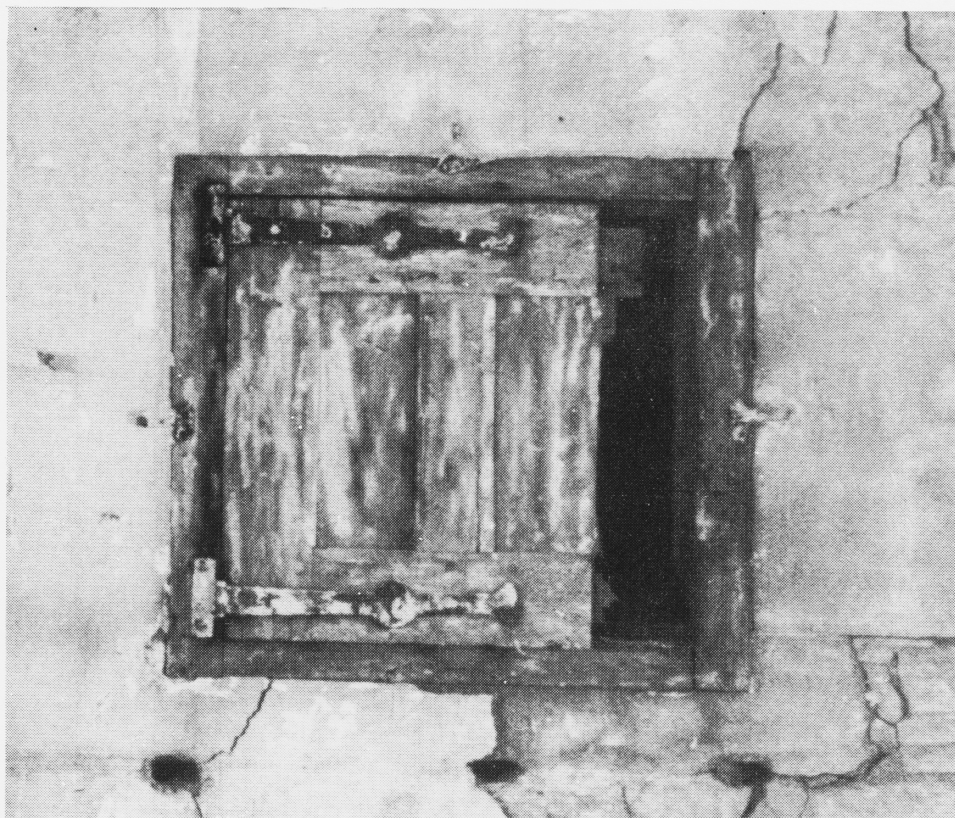


Fig. 4. Hoddom Castle, second-floor S wall, detail of cupboard 1978.

in some cases has led to provisional re-assessments of their building histories. This article is also being used to make good the omission of three entries from the earlier *Inventory* publications.⁴ And, although a geographical outlier, Mauchline Castle is included on the grounds that the most authoritative account of its architectural history was published in an earlier volume of these *Transactions*.⁵

The results of some of these and other surveys⁶ have wider-reaching implications for our understanding of the general nature and pattern of building activity among Galwegian lairds prior to the Act of Union in 1707. However, this is a very large subject that is being tackled from several different standpoints, and it would be premature to preface this select list with a more general account of the historical and architectural background. The raw fieldwork information is presented here on its own simply as a small contribution towards a much-needed synthesis of the medieval and post-medieval architecture of Dumfries and Galloway.

The buildings are listed in alphabetical order, and each entry is accompanied by a six-figure map reference and the date of survey.

4. Cassenary House (Kirkcudbright), Old Place of Monreith and Ravenstone Castle (Wigtown).

5. *Ante*, 3rd series, 16 (1929-30), 166-71.

6. E.g. I. Whyte, *Agriculture and Society in Seventeenth-Century Scotland*, (1979), *passim*, for the agricultural background, and especially 125-6 for the livestock parks in Galloway which deserve archaeological recognition.

Barscobe House (Fig. 1)

NX 659 806

May 1971

A compact L-plan tower of domestic character built by William MacLellan of Bombie in 1648.⁷ Re-surveyed prior to a scheme of restoration, the principal focus of attention being the original rafter roofs over the main block and stair-wing. The main roof was of double collar-rafter construction, ashlar at the wall-head, and comprised sixteen oak couples of 54° pitch bearing incised carpenters' assembly-marks in an unbroken sequence of Roman numerals.

Cassencary House (Fig. 2)

NX 476 576

July 1980

Middle-sized mansion on platformed site facing W over the Cree estuary. Interior now in a dangerous state of collapse and ivy growth limits the investigation of external wall-surfaces. The core is evidently a four-storeyed oblong or L-shaped tower dating from the later 16th or first half of the 17th century to judge from the surviving edge-roll mouldings. This tower was probably built by the Muirs, whose recorded possession of Cassencary also dates from the 1580s. It was purchased and considerably extended in the latter half of the 19th century by Sir James Caird, whose armorial, crest and monogram appear on the building.⁸



Fig. 5. Mauchline Castle, first-floor rib-vaulted ceiling, detail of N boss 1977.

7. D. MacGibbon and T. Ross, *The Castellated and Domestic Architecture of Scotland* (5 vols 1887-92, hereafter cited as *Cast. and Dom. Arch.*) iii, 523-5, and R.C.A.H.M.S., *Inventory of Kirkcudbright*, no. 35 (the accompanying ground-floor plan, fig. 26, bears an incorrect orientation, for 'N' read 'S').

8. P. H. McKerlie, *History of the Lands and their Owners in Galloway*, iv (1878), 270-5. See also Burke's *Landed Gentry*, s. n. 'Caird' and 'Henryson-Caird'. Cassencary is listed as a much-altered structure in N. Tranter, *The Fortified House in Scotland*, iii (1965), 179.



Fig. 6. Morton Castle, aerial view 1980.

Castle Stewart (Fig. 3)

NX 379 691

October 1978

Clearance of ivy from the ruins of this round-angled tower brought to light an interesting group of newly-exposed features, the most impressive and significant of which is a second-floor fireplace in the NW wall which has elaborately moulded jambs. The fresh evidence tends to suggest that the tower belongs to the mid-or even earlier 16th century (when it was apparently known as Culquhreach), almost a century older than the date tentatively suggested by previous surveys.⁹ The building fabric shows equally clearly that the tower has undergone subsequent alterations, particularly at first-floor level and in relation to the actual floor-structure between the third and fourth storeys.

Hoddom Castle

NY 156 730

August 1978

Removal of many of the courtyard buildings,¹⁰ except on the N side, and the partial gutting of the interior has given a clearer view of some original details and later modifications. Many more gun-ports of the characteristic wide-mouthed and

9. *Cast. and Dom. Arch.*, v, 246-8; R.C.A.H.M.S., *Inventory of Wigtown*, no. 388. See also *Ante*, 3rd series, 20 (1938), 186, and *Reg. Mag. Sig.*, ii (1424-1513), no. 2943.

10. Cf. the collection of architectural drawings by William Burn dated 1826-7 (copies in N.M.R.S., DFD/70/1-13), and the earlier views of the courtyard and ancillary buildings shown in the two engravings by Hooper and a watercolour by John Clerk of Eldin.

lintelled variety have come to light, bringing the total up to at least nine on the ground floor and five on the third, one of which is combined with a later window. The central transverse partitions that divide up the interior of the main block are 18th-century insertions, not original as described in earlier surveys;¹¹ they may follow the lines of earlier divisions on the ground and third floors, but single large halls with correspondingly large roll-moulded fireplaces occupied the first and second floors. Alterations to original mural garderobes, window-openings and embrasures are clearly evident, but the panelled cupboard door and its wooden surround in the S wall of the second-floor hall is a relatively rare and noteworthy survivor (Fig. 4). The trussed roof over the main block, if not original, is of early double collar construction, incorporating two-piece principal rafters, through purlins and ashlar pieces at the wall-heads.

Mauchline Castle

NS 497 273

August 1978

A programme of repairs and restoration provided an opportunity for a detailed re-examination of this building, which has in general confirmed the late Dr R. C. Reid's findings.¹² It was the centre of the Kylesmure lordship of Melrose Abbey, which in the 1520s (when it was apparently undergoing internal repairs)¹³ passed into



Fig. 7a. Old Place of Monreith from N 1980.

11. *Cast. and Dom. Arch.*, ii, 137-9; R.C.A.H.M.S., *Inventory of Dumfries*, no. 90.

12. *Ante*, 3rd series, 16 (1929-30), 166-71. See also *Cast. and Dom. Arch.*, iii, 202-4.

13. M.H.B. Sanderson (ed.) *The Mauchline Account Books of Melrose Abbey* (Ayrshire Coll., 1975), 90-1. See also the same writer's *Scottish Rural Society in the 16th century* (1982), 148.



Fig. 7b. Old Place of Monreith from S 1980.

the custody of Sir Hew Campbell of Loudon, and ultimately into the possession of his successors, Earls of Loudon.

Apart from its parapeted upperworks, which have been rebuilt, the tower appears to have been almost wholly domestic in character from the outset. It is of late medieval date, and can be assigned more precisely to the third quarter of the 15th century on the grounds that the northernmost carved boss (Fig. 5) of the fine two-bay quadripartite ribbed vault above the first floor contains a carved armorial of Abbot Andrew Hunter of Melrose (1444-71).¹⁴ The sculptural detailing and masonwork throughout is of a superior and refined quality, and the substantial timberwork on the ground floor may possibly be part of an early framed partition or screen, whose position coincides happily with a blocked-up service-entry in the W wall. A succession of out-buildings to the W is now evidenced mainly by a series of roof-raggles in the tower-wall. An original two-storeyed range also formerly abutted the S wall in a position now occupied by a late 17th- or early 18th-century forestair and the present house, which itself has famous historical associations with Gavin Hamilton, Robert Burns and Jean Armour.

14. Cf. the armorial on a buttress of the S nave-aisle of Melrose Abbey illustrated in R.C.A.H.M.S., *Inventory of Roxburgh*, ii, fig. 377.

Morton Castle (Fig. 6)

NX 891 992

July 1979

The recent transference into public custody of this splendid, much-discussed¹⁵ yet enigmatic 'hall house' was followed by a detailed re-examination of its masonry fabric and the site that it occupies. Contrary to the published descriptions and drawings, the castle is not of a homogenous medieval build; it exhibits a number of medieval and modern alterations and additions, and there are remains associated with its ditched promontory site that probably ante-date the upstanding structure. Its building has previously been ascribed to various dates ranging between the later 13th and the mid 15th centuries, but, whilst the castle is in many ways *sui generis*, the closest regional and social parallels for its layout and details suggest a balance of probabilities weighted in favour of a post-1350 date. The results of this most recent architectural and historical enquiry will be set out in detail in a forthcoming issue of these *Transactions*.

Old Place of Monreith (Fig. 7)

NX 381 430

October 1980

Variouly known as 'Dowies', 'Moure' or 'The Mower', this is one of the former residences of the Maxwells of Monreith, and is a three-storeyed late 16th-century tower of an unusual cross-wing plan. Re-modelled and re-fitted as a farmhouse and steading in the early 19th century, apparently after a period of dereliction and partial demolition, the building is again derelict, awaiting restoration.¹⁶

Original visible features include fireplaces associated with the (un-vaulted) ground-floor kitchen and the first-floor hall. The extruded stair-turret incorporates



Fig. 8. Ravenstone Castle, from SW N.d., 1940s.

15. *Cast. and Dom. Arch.*, i, 545-52; R.C.A.H.M.S., *Inventory of Dumfries*, no. 510; *Ante*, 3rd series, 22 (1943), 26-35; *Proc. Soc. Antiq. Scot.*, 92 (1958-9), 10-14; S. H. Cruden, *The Scottish Castle* (1963 revised edition), 95-6.

16. McKerlie, *op. cit.*, i, (1870 edition), 522-3; *ibid.*, ii (1906 edition), 518-20; Walter Macfarlane, *Geographical Collections relating to Scotland* (Scottish History Society 3 vols, 1906-8, hereafter cited as Macfarlane, *Geog. Coll.*), ii, 86. *Ante* 3rd series xxv (1948).



Fig. 9. Spedlins Tower, from SW 1967.

the remains of the original door-surround, a chequer-work panel-surround above and a pair of high-level pistol-loops close to the eaves. The opposite (S) 'jamb' or wing contains small arch-headed and formerly cusped window, which has been cut from a single stone; its slightly archaic character has given rise to the erroneous view that the building is of late 15th-century origin.¹⁷ A sculptured head is built into the W gable-wall of the main block.

Ravenstone Castle (Fig. 8)

NX 409 441

August 1978

The ivy-clad ruins of this substantial mansion-house stand in a forest plantation, largely obscured from distant view. The surviving and visible architecture shows that

17. R.C.A.H.M.S., *Inventory of Wigtown*, Introduction, xxii.

the house has grown up in at least four major phases from the later 16th century to the last quarter of the 19th century.¹⁸ Its nucleus is a four-storeyed L-plan tower, built by the MacLellan family following their acquisition of the lands of Ravenstone in the later 16th century. Although remodelled and extended a good deal, much of the layout and detailing of this tower is still discernible. On the ground floor there are two vaulted cellars associated with a roll-moulded slit-window and at least one wide-mouthed gun-port. The curved outline of the original newel stair is also in evidence, and the disposition of the original (roll-moulded) fireplaces and windows reflects the arrangement of a first-floor hall and paired chambers in the main block



Fig. 10. Stranraer Castle, from SW N.d., early 20th century.

18. For published notes on the history of the property see McKerlie, *op. cit.*, ii (1906 edition), 503-12; Macfarlane, *Geog. Coll.*, ii, 85; and *Stat. Acct.*, xvii (1796), 593. The building is described briefly (with incorrect orientations) by N. Tranter, *The Fortalices and Early Mansions of Southern Scotland* (1935), 187-8, and the early features were observed by the Ordnance Survey, Archaeology Division, O.S. Record Card NX 44 SW 10.

above. Accommodation in the wing appears to have consisted of one chamber on each floor, some of which were also equipped with close garderobes. The house came into the possession of a cadet of Stewart, earl of Galloway, and in the late 17th century the re-entrant of the 'L' was infilled and the building re-designed to form a double-pile mansion-block with a formal entrance to the *piano nobile*.¹⁹ The third stage in its architectural history, about a century later, involved the construction of a double bow-fronted lateral extension, very similar to later works at neighbouring Castle Wigg,²⁰ and, finally, after the acquisition of the property by Lord Borthwick in 1874, this was in turn linked to a large double-pile block constructed further to the E. The remains of a 19th-century horse-powered water-pump are situated nearby.

Spedlins Tower (Fig. 9)

NY 097 876

February 1967, October 1978

Late 15th-century oblong tower with reconstructed superstructure and handsome hall fireplace dating from around 1605;²¹ re-examined prior to proposed scheme of restoration. It stands on the summit of a steeply-scarped terrace above the right bank of the River Annan, and between the tower and the escarpment there are traces of a stone-walled enclosure or barmkin, incorporating the remains of a circular structure about 3 m in overall diameter. Earthen banks and mature trees demarcate rectilinear (field) divisions over the relatively level ground to the S and W, while a rather more substantial double bank and ditch, possibly of earlier origin, traverses the SE approach to the site.

Stranraer Castle (Fig. 10)

NX 061 608

July 1979

The restoration of this proto-urban tower ('Castle of Chapel') and the landscaping of its environs have drawn attention to its hitherto-concealed visual qualities and to its many features of archaeological interest.²² The building is of a cellular form of construction, containing as it does much medieval and modern stone vaulting and a network of intra-mural passages and chambers, one of which at the rear of the hall fireplace appears to have served as a pit-prison reached from a trap-door through the floor above. The lesser medieval vaults are of a distinctive slab-ceiled form with inward-inclining side-walls. A panel-surround above the original ground-floor entry bears a much-worn and encrusted inscription which appears to commemorate the Adairs of Kinhilt, builders of this tower in about 1500, almost a century before the formal creation of Stranraer as a burgh of barony in 1595.²³

The later uses of the building are reflected in numerous modifications, most notably by the introduction in about 1820 of a courtroom, three (criminal) cells on the second floor, two (debtors') cells on the third, and an exercise yard at parapet-level.²⁴ These vaulted late Georgian prison-cells possess their own special fittings and memorabilia, including much incised graffiti.

19. Tranter, loc. cit., records a carved pediment with the quartered arms of the Galloway Stewarts, now apparently obscured by the dense growth of ivy.

20. R.C.A.H.M.S., *Inventory of Wigtown*, no. 494. The equally ruinous condition of this building now shows more clearly the limited extent of the late 16th-century tower in relation to the 18th-century extension (cf. *ibid.*, fig. 114). The inscribed date is 1593, not 1595.

21. *Cast. and Dom. Arch.*, ii, 45-9; R.C.A.H.M.S., *Inventory of Dumfries*, no. 446.

22. *Cast. and Dom. Arch.*, iii, 511-3; R.C.A.H.M.S., *Inventory of Wigtown*, no. 461.

23. McKerlie, op. cit., i (1870 edition), 130-4; ii (1906 edition), 487-8; Macfarlane, *Geog. Coll.*, ii, 92; G. S. Pryde (A. A. M. Duncan, ed.), *Burghs of Scotland* (1965), no. 253 (see also no. 71).

24. J. S. Boyd, *Stranraer* (1969 edition), 39, summarises the 19th-century history of the building. He notes that the work of 1820 was designed and built by Kenneth Mathieson at a cost of £785; the stated provision for two criminal cells and three debtor's cells, however, is exactly the reverse of the numbers suggested by the architectural evidence.

Acknowledgements

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ALLAN RAMSAY
by the late W. A. J. Prevost
(with, appended, a Memoir of Major Prevost)

Allan Ramsay (1686-1758) was born at Leadhills, the son of the manager of Lord Hopetoun's leadmines in Crawford Moor. In 1701 he went to Edinburgh where he was apprenticed to a wig-maker and where some ten years later he first began to write.

Between 1716 and 1718 he became a bookseller,¹ an enterprise which must have facilitated the publication of his poetry, and when in 1725 he produced his pastoral drama "The Gentle Shepherd" his name as Scotland's "Doric Poet" was assured. Ramsay's life and merits have been amply recorded by his biographers who write of his enjoyment of a convivial life, of meeting and associating with others of like talents, and in particular of his friendship with many distinguished people whose company he sought and at whose houses he was a welcome guest. It is well known that he frequented Woodhouselee and Newhall not far from Edinburgh, and that it was in the immediate surroundings of Newhall that Ramsay staged "The Gentle Shepherd". He was no stranger at Penicuik and it is said that he spent much of his time during his latter years with Sir John Clerk who courted his company because he was delighted by his facetiousness.²

Sir John refers only once in his "Memoirs" to Ramsay when both men stayed at Dumcrieff in August and September 1754, but the poet's collected works include a poem to Sir John on the death of his eldest son John in 1722,³ and an epistle written to James Clerk very shortly before James became the third baronet of Penicuik.⁴

There is, however, ample evidence of the long association of Ramsay with the Clerk family to be found amongst Sir John's papers.⁵ Bills for antiquarian and other books supplied by Ramsay show that Sir John patronised the bookshop. In fact the poet wrote to Sir John in 1740, informing him that he was giving up his retailing business but that he would continue to supply his "best" customers.⁶ There are also several letters and unpublished poems, two of which refer to visits to Dumcrieff in 1743 and 1748. A scrap of dialogue, dated 24 October 1743⁷ in the Baron's handwriting, concurs the purchase of a mare by George Clerk, a business which had provided an excuse for some banter and leg-pulling. Ramsay had written . . . "then you'll readlie get her cheap enough, for Annandale Lairds in times past were not acquainted with giving too much for Horses. It used to be said of Annandale lads, Let them have bridles, they could easylie make out the rest."

The dialogue was an introduction to the following verses which were certainly not intended for publication though an improved and edited copy in a clerkly handwriting is in the same bundle. Their interest lies in Ramsay's use of the Doric and his reference to "The Goose-pie", a fantastic house of octagonal shape which he had built on the north side of the Castle Hill in Edinburgh.¹ The poet addressed this effusion "To the Lairds of Annandale conjunctly and severaly, A.R., not Greeting, wishes them all a good Bridle-Hand."

1. Oliver Smeaton, "Allan Ramsay", pub. 1896. Writes that Ramsay became a bookseller in 1719 and that the house was built in 1742.
2. "The Poems of Allan Ramsay", 1877 Edition. p. xxxvi.
3. MS of this poem. Box 143. 4313.
4. "The Poems of Allan Ramsay", op cit. Box 143. 4313, a poem to Lady Clerk and Box 143. 4320, a poem to Sir John Clerk.
5. See Appendix.
6. Box 143. 4345. It is said that he probably relinquished his shop in 1755. Ref. "The Poems . . ." op cit.
7. Box 143. 4346 and 4347/1 & 2. Letter and poem to George Clerk at Dumcrieff from Allan Ramsay in Edinburgh, dated 27 Aug 1743, together with a scrap of dialogue concerning the sale of a horse.

LET LAIRDS OF LOCKERBY⁸

Let Lairds of Lockerby take tent
 how they their Paughty shoarings vent
 against a Troop wha think nae mair
 on flieing Naigs to scowr throu Air.
 Then lads of Annan think to bratle
 round Cheviot Heights for English catle
 nor think to daunt them with your huffing,
 your witty Kicks and merry cuffing.
 Such fundamental reparties
 their Dowps will never brook with ease,
*but if they should, what then, they'll crack
 they were set on behind their back.*⁹

As for the auld gash Edinburgh Bard
 He fears not either Lord or Laird,
 If they'lli but fairly take the field
 and feight with weapons he can weild,
 for when Apollo lends him Quivers
 he'll bring them down as they do plivers.
 He owns the Dons of Annandale
 the walls of a Goose-pye can scale,
 tho on Rock Beeff and Hams its founded
 and with a Ditch of punch surrounded,
 yet hie upon the Castle Hill
 will try their valour, pith and skill,
 for being the fav'rite of Mons-Meg
 the Patrones will Lift her leg
 and shaw them a Confounding trick
 by farting Bullets twa foot thick,
 besides what further may be done
 by thunder-bowts brought frae the Moon.
 She too is on the Poet's side
 and ev'ry bonny lass and Bride
 frae Solway firth to Caithness Wick
*Nor sweeter supports can he seek.*¹⁰
 Sae Lairds even as ye like be bawlan
 your Ladys will take care of Allan.

The second poem, accompanied by a bread-and-butter letter dated 15 September 1748,¹¹ addressed to George and Dorothea Clerk at Dumcrieff where Ramsay had been staying for a month and whence he had just returned to Edinburgh. Full of pleasing sentiments and compliments, it is written in a similar vein

8. Glossary to "Let Lairds of Lockerby": - Bawlan . . . loud-voiced protest; Bratle . . . a clattering noise; Crack . . . to boast, to gossip; Dowps . . . buttocks; Gash . . . sagacious; Huffing . . . humbugging; Pith . . . energy, strength; Plivers . . . plovers; Scowr . . . to pass quickly in search something; Paughty . . . haughty; Shoarings . . . threatenings; Tent . . . care.

9. Box 143. 4347. These two lines have been altered in the copy wherein they read as follows:
 "Likewise they'll say the safe attack
 was on them made behind their back."

10. Box 143. 4347. This line reads as follows in the copy:
 "Nor better Guardians will he seek."

11. Box 143. 4353.

to other verses dedicated to his friends, amongst whom is included the Duchess of Queensberry. Indeed the last line in which the poet compares Dumcrieff with Drumlanrig indicates that Ramsay was on familiar terms with that very distinguished family. In this Ramsay was not unique for Gay had been entertained at Drumlanrig on the occasion of his visit to Scotland, an event which was of great interest both to the Scotch poet and to Sir John Clerk.¹²

John Gay (1685-1732) was the author of "The Beggars Opera" and also of the sequel "Polly", the representation of which was forbidden by the Lord Chamberlain, while the Duchess of Queensberry was dismissed from Court for enlisting subscribers in the palace. The Duke, who was one of Gay's numerous patrons, gave him a house and the Duchess continued her patronage until his death.¹³

The first 32 lines of Ramsay's poem are the poet's notions on how to enjoy life. The 28 lines which follow express the very genuine appreciation of a happy holiday, an appreciation which is in no way exaggerated unless this writer's study of the Clerk manuscripts has given him a false impression.

TO GEORGE AND DOROTHEA CLERK¹⁴

Blest is the Man whose happy fate
 has placed him 'twixt the small and great;
 Who Independant can make choice
 of life, both free of Toil and noise,
 and can, in leasure hours resort,
 to streams and moors for healthful sport,
 and for delight, and manly ends,
 enjoys his Gardens, Books and friends.
 O George, you have it in your power
 to sweeten life each wheeling hour,
 While in the virtuous life you stand
 and passions guide with steady hand,
 Indulgent Heaven has given you all
 that's needfull on this rolling Ball,
 with a fair mate, whose merits prove
 her well deserving of your Love,
 While Beauty, Sence and Virtue claim
 Stations in Rolls of worthy fame,
 Then to your lot your wishes bound,
 So shall your life with joys be crown'd,
 nor envy him whose wider fields
 than yours an higher rental yields,
 for 'tis content can only claim
 every estate to make the same,
 since happyness is then confined
 to the emotions of the mind,
 the odds will turn out very brief
 between Dumlanrig and Drumcrief.

12. Gay was at Drumlanrig at least once, in 1729, when it is said that he picked through the library and sent the best books down to England. Ref. Mark Girourd, "Country Life", 24 Aug; 1 Sept and 8 Sept, 1960, for "Drumlanrig".

This visit is referred to by either/both Sir John and Ramsay in their correspondence in the Record Office.

13. Dr Samuel Johnson. "The Works of the English Poets".

14. Box 143. 4353.

APPENDIX

Letters, poems etc. written by Allan Ramsay to Sir John Clerk. These are all in manuscript in the Scottish Record Office — Box 143.

4313. Poem: Allan Ramsay. Dedicated to John, Sir John Clerk's eldest son and heir who died in August 1722.
4315. Letter: Allan Ramsay, dated 9 Dec 1725, to Sir John Clerk at Penicuik. To meet Sir John at Newbigging next week.
4316. Poem: Bemoans the fate of some antiquarian vandalism. No doubt Arthur's O'on referred to in Sir John's "Memoirs". (Near Falkirk — the vandal being Sir Michael Bruce).
4320. Poem: In praise of Sir John, written at Newbigging, and dated 28 March 1728.
4343. Poem: To Lady Clerk, written at Penicuik and dated 28 March 1728, but sent to her 29 Sept 1739. The last verse reads -
 "But where, My friend, shall we in this bad Age
 the Original, of such outlines remark . . . ?
 Attend me then, nor doubt, while I engage
 to shew them all, and more in Sir John Clerk."
4345. Letter: Allan Ramsay, dated 23 May 1740 to Sir John. Ramsay writes that he had given up his retailing business "and am only with the addition of a small wholesale way intended to live virtuously and contended on my little annual income, wishing long and happy days to my Patron . . ." A P.S. refers to Sir John as his best customer and will continue to supply him.
4348. Letter: Allan Ramsay, dated 25 August 1744, and writing to Sir John at Dumcrieff, refers to employing a young man to engrave drawings.
4361. Letter, undated, to Sir John Clerk from Allan Ramsay who has heard that the Duke of Queensberry is at Drumlanrig and Mr Gay with him. "as we hope to see his Grace, so we expect the favour of a visit from the best of poets".

Major W. A. J. Prevost (1898-1980)

a Memoir

by

Athol Murray

Major William Augustin John Prevost, who died on 15 May 1980, had been one of the most regular contributors to these *Transactions* over the last 30 years. Like many other local historians his earlier work owed much to the encouragement of that exacting but kindly editor, the late Dr. R. C. Reid.

Despite his long connection with Dumfriesshire, Will Prevost was English by birth and upbringing, a native of Gloucestershire, where his father, Dr. Edward William Prevost F.I.C. (1851-1920), had taken up farming after a short but distinguished scientific career, which had brought him fellowship of the Royal Society of Edinburgh at the early age of 24. He was born at Newnham-on-Severn on 7 July 1898 and educated at Sherborne School, Dorset, where one of his contemporaries was the novelist, Alec Waugh (elder brother of Evelyn). He had a

great affection for Sherborne and late in life spoke to the present writer of the pleasure he had felt in watching a film which used the school as its setting. Sherborne encouraged his talent for rugby and cricket, which he continued to play after leaving school, but he was a natural sportsman, who also excelled at horseriding and polo.

The Prevost family had a long military tradition, beginning with Augustin Prevost (1723-1786), who left his native Switzerland to join the British army, in which he later became a major-general. Will Prevost's grandfather had been a colonel in the regular army, his father a major in the Volunteers. He himself might not have chosen to be a professional soldier, but, as with most public schoolboys of his generation, the path of duty led straight from the school O.T.C. to active service in the First World War. After training at the Royal Military Academy, Woolwich, he was commissioned in the Royal Horse Artillery, served in France, and was wounded in action. Peacetime soldiering did not appeal to him and in 1923 he resigned his commission in India, to which he had been posted, spending the next seven years tobacco-farming in Southern Rhodesia. In 1939 he again volunteered for service and later he returned to India as a major in the Royal Artillery, ending the war in command of an Indian unit at Colombo. A friend who knew him in India recalls his proficiency at playing bridge, which was to be a favourite pastime in his retirement.

In 1945 he came back to live at Craigieburn, near Moffat, which had been his home since returning from Rhodesia in 1930. He had inherited the property in 1933 from his mother, to whom it had come through her father, John Proudfoot, the youngest of four brothers who held it successively between 1830 and 1914. The Proudfoot brothers had played a prominent part in 19th century Moffat. Thomas (1818-49) was a local lawyer; James (1819-73) returned from Natal to become the burgh's first provost; William (1823-90), who remained in Natal until his death, left his estate to 'the working men of Moffat', providing the funds which were used to build and endow the Proudfoot Institute. Will Prevost played his part in local affairs too. He was elected to Moffat town council in 1939 and was later a bailie and magistrate. He was also a director of the Moffat Gas Light Company for some years prior to nationalisation. By the mid-1950s advancing age, his wife's ill-health and the general problems of hill-farming were making it difficult to remain at Craigieburn, so in 1956 he sold the estate and retired to Edinburgh. His first wife, whom he had married in 1935, died in 1964 and two years later he remarried. He is survived by his second wife and two daughters by his first marriage.

His interest in local history, though relatively late in developing, sprang from his years at Craigieburn, noted for its association with Burns and 'Chloris'. A few months after joining this Society he read his first paper to it, on 13 December 1946, the subject being, fittingly, 'The Proudfoots of Annandale'. In it he traced his mother's family from the early 17th century and showed his grandfather's relationship, through the Kirkpatricks of Conheath, to the French Empress Eugenie. To satisfy Dr Reid's editorial requirements the paper was printed in *Transactions* in an abridged form, but many years later (1976) the author produced an extended and updated version for private circulation. Genealogy, however, took second place to his interest in Moffat and its neighbourhood, which inspired a number of papers in the *Transactions*, contributions to the *Annandale Herald* and *Moffat News* and, most notably, his book *Annals of Three Dumfriesshire Dales*, published in 1954.

Not long after publishing the *Annals* Major Prevost discovered in the Scottish Record Office a major and largely untapped source for local history, the family papers of the Clerks of Penicuik. His initial interest stemmed from their ownership, in the eighteenth century, of an estate which bordered his own, which formed the subject of his paper on 'Dumcrieff and its owners' (TDGNHAS 3, xlv). As well as providing material for further papers on Moffat and Upper Annandale, the Clerk of Penicuik muniments drew his interest further afield, mainly through his fascination with the personality and writings of Sir John Clerk (1684-1755), landowner, lawyer and antiquarian. The first of several papers based on Clerk's travel journals was 'Sir John Clerk's journey to Carlisle and Penrith', the fruit of collaboration with Professor Eric Birley, who commented on the numerous references to Roman antiquities (TDGNHAS, 3, xxxviii). Despite its title, the paper dealt only with Dumfriesshire, the rest of the journal being published separately in the Cumberland and Westmorland Antiquarian and Archaeological Society's *Transactions*. By joining the CWAAS in 1966, he renewed a family link with the area, for Dr Edward Prevost had been a native of Carlisle and had devoted his later years to the study of the Cumberland dialect. Will Prevost's various contributions to the CWAAS included some relating to the 1745 Rebellion, which provided the subject for a further paper for the Architectural and Archaeological Society of Durham and Northumberland (1965). Here again he drew his source material from the Clerk papers, which he also used for 'A Scotch boy at Eton' in the College journal *Etoniana* (1971), based on Sir John's advice to his schoolboy son.

Important though the Clerk papers were to him, they in no way restricted Major Prevost's choice of subjects, which ranged from the 17th century to the 19th and took in such disparate matters as border reivers, irregular marriages, old roads, drystone dykes and Sir Walter Scott's novels. His material was drawn from a wide variety of printed and MS sources, for which he was careful to provide full and accurate references. It was typical of his care, and of his pride in his work, that not long before his death he arranged and revised his original notes so they would be fully usable by researchers in the Ewart Library, to which he had bequeathed them. This illustrates another of his strengths as a local historian, his awareness of the need to take account of fresh sources and evidence. Thus the brief treatment of Moffat Well in the *Annals* was expanded a dozen years later into a well-documented paper on 'Moffat Spa in the seventeenth and eighteenth centuries' (TDGNHAS 3, xliii), which was later supplemented by the text of a document of 1732 (TDGNHAS 3, 1) and a commentary on three attractive and informative views of the spa and village in 1795 (TDGNHAS 3, liii). Though we may regret that there was not to be a revised edition of the *Annals*, he would never have regarded his researches as complete. Even at the time of his death he was working on another local topic, the old tolbooth of Moffat. When the Society conferred honorary membership on Major Prevost in 1978, it gave fitting, and appreciated, recognition to the work of this essentially modest man, who had made a far from modest contribution to local history on both sides of the Border.

A ROUGH-OUT NEOLITHIC AXE FROM GLENLUCE, DUMFRIES AND GALLOWAY

by R. A. Adkins and T. Carlyle

In 1976 a rough-out for a neolithic stone axe was found by Mr T. Carlyle by a roadside trench approximately 1¼ miles due south of Glenluce (N.G.R.: -NX 199 553). The axe was on a heap of spoil (largely sand) from a trench which had been dug through the side of a road raised on an embankment to a depth of approximately 2 metres below the road surface.

The rough-out is 158 mm. long with a maximum width of 82 mm. and maximum thickness of 32 mm. (Fig. 1). It weighs 660 grams, and has been made from a large pebble of Ordovician/Silurian Southern Uplands greywacke.¹ The original smooth pebble surface accounts for 23% of one face and 86% of the other face. The rough-out is now on loan to Dumfries Museum.

The rough-out appears to have been abandoned before the initial roughing-out was complete, probably because a stage had been reached where it could no longer be shaped by flaking, and the work involved in finishing the axe by grinding was considered too great. A seam or flaw in the stone towards the butt may have been a contributory factor in its rejection.

Implements of this type of stone are unusual although the raw material is abundant in South West Scotland,² and it would seem that this type of stone was not usually considered very suitable as a raw material. Since pebbles of a similar shape and size to the one from which the rough-out was made are common in the area of the findspot, it seems likely that the rough-out represents an unsuccessful attempt to exploit the local raw material.

Acknowledgements

Grateful thanks are due to Dr. W. A. Cummins and Mr Malcolm Fenton for identification of the stone, and to Mrs F. E. S. Roe for arranging for the stone to be identified and for her helpful comments on the implement.

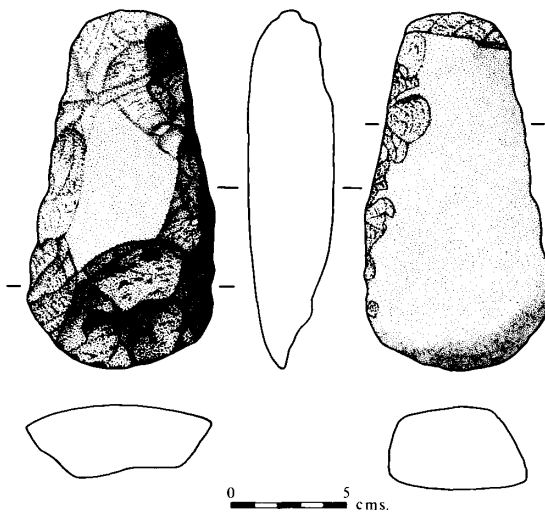


Fig. 1. A Rough-out Neolithic Axe from Glenluce.

1. Identified after macroscopic examination by Dr. W. A. Cummins and Mr Malcolm Fenton.
2. Personal communication from Mrs F. E. S. Roe.

DOON HILL HILLFORT, BALIG

by
B. A. Crone

Building operations at Doon Hill (Stewartry District) required the removal of part of the fort located on the hilltop (NX 7191 4694). The E chord of the hillfort had been destroyed at an earlier date and a further c.7m along this edge was to be removed (fig. 2). The author was commissioned to maintain a watching-brief on the site by SDD Ancient Monuments Branch, to whom she and the Society are indebted for a grant towards the cost of publishing this note.

In the course of the construction work a section through the defences was revealed and although its line diverged slightly from the radius of the hillfort it conveyed an informative picture of the two ramparts and ditches. A length of 34m was exposed but it was only possible to draw 25m of it in the time available. The unrecorded length extended into the interior of the hillfort and revealed a thin topsoil lying directly onto the stony subsoil with no other visible features.

The Defences

The defences comprised two denuded ramparts and two rock-cut ditches. The ditches were cut into the shale bedrock which fractures relatively easily and the quarried material had been thrown up to form the ramparts. The inner ditch had a 'U-shaped' profile, 2.2m wide and 1.3m deep. The outer ditch was roughly 'V-shaped', 1.8m wide at the top and 1.3m deep. The differences in profile may be merely an artefact of the fracture of the bedrock. The fills of the two ditches are dissimilar. Apart from two layers in the deepest corner, the material in the inner ditch is unsorted, vacuous rubble, suggestive of rapid backfill. The material in the outer ditch is more fully sorted, with the finer material at the bottom, suggestive of slow accumulation.

As noted above, very little now remains of the ramparts. The inner rampart is only 50cm high although the material is spread over a distance of 4.4m.

The outer rampart is rather more complex. It presents a near vertical outer face at points along its circuit but it is clear that this is the face of a step cut into the bedrock. At the section, however, material has slumped down in front of the step. Above the step is a distinct block of gravelly orange sand and beyond that, a further spread of angular stones. The topsoil is truncated just before the orange sand which is covered by a thin turf-line. 2m E of the section a lens of black soil was noted during stripping on the outer face of the outer rampart and a nail was found within it.

Under the inner rampart and under the slumped material of the outer rampart a lens of pink/white clayey sand was preserved, outlined by an ironpan. This is reminiscent of a turf-line chemically altered by colloidal diffusion (see Deil's Dyke report; elsewhere in this volume) and is here interpreted as an old ground surface (OGS).

The area between the inner ditch and outer rampart had a very thin topsoil over the bedrock. This may have resulted from the stripping of the original turf cover, possibly to provide material for the ramparts.

Discussion

The difference between the infills of the two ditches may represent two phases of activity. It was hoped that analysis of the pollen preserved in the OGS under the ramparts would test this hypothesis. However, the pollen counts were negligible (less than 10 grains per slide) and these were so badly crumpled as to be unidentifiable (B Moffat, pers. comm.).

Behind the step of the outer rampart the deposit of gravelly orange sand seems to have replaced the topsoil noted elsewhere on the site and may represent a modern disturbance.

The ramparts would almost certainly have needed revetting because of the scree-like nature of the flat, angular shale, yet no trace of any revetting structure was seen in section. This may be fortuitous or due to worm activity which penetrated to a depth of 1m over the ditches and would have blurred any timber staining, but no rock-cut postholes were noted during stripping of the topsoil. A turf revetment may have been built but no evidence of such was recorded.

The archive is to be deposited in the National Monuments Record, Edinburgh. There were no finds other than the nail mentioned above.

Doon Hill, Baig

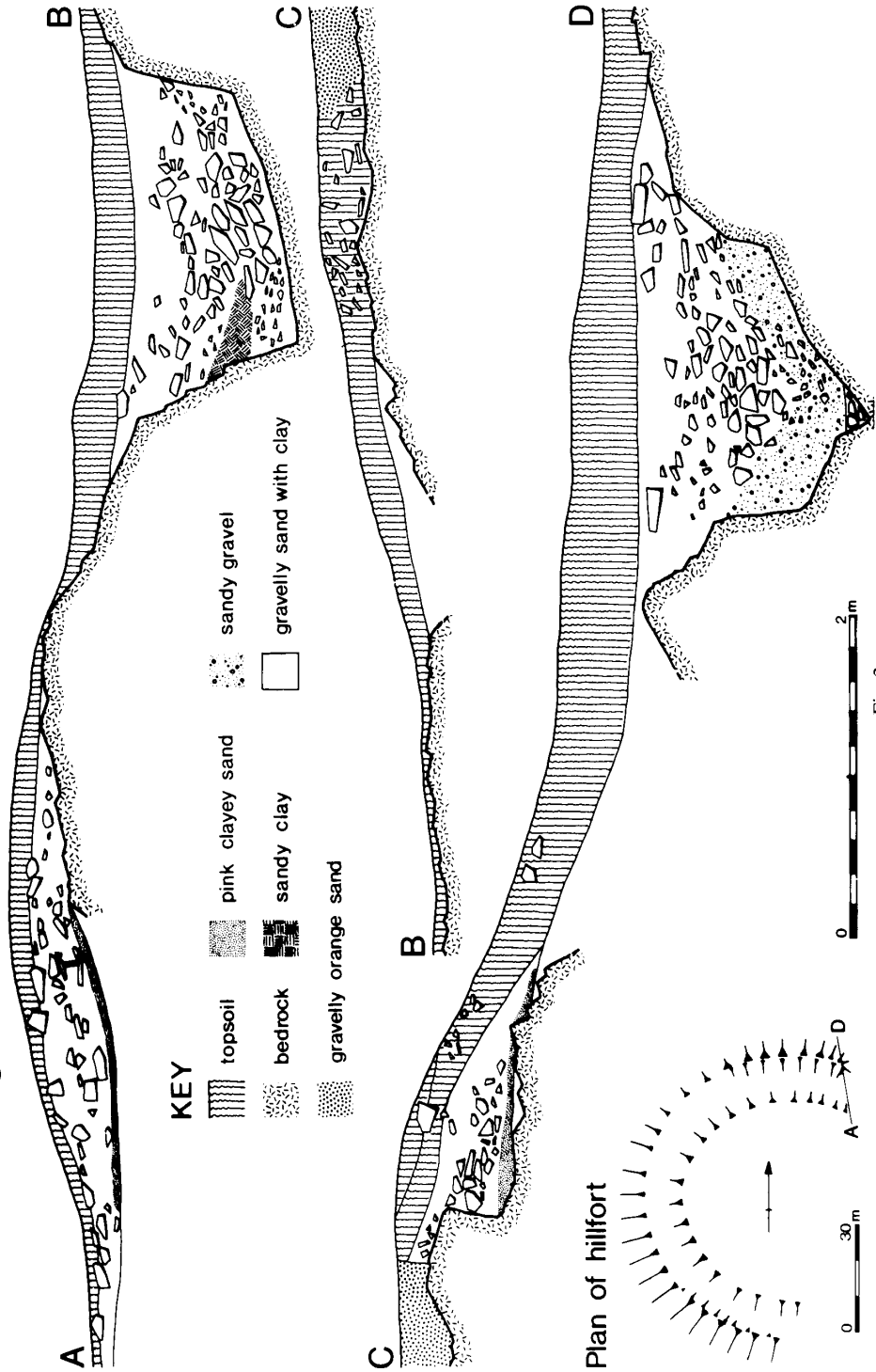


Fig. 2

THE MASONS' MARKS AT THREAVE CASTLE, STEWARTRY : A RIDDLE

by
Christopher Tabraham

There would appear to be nothing intrinsically interesting about the masons' marks visible on the fabric of this tower-house built for Archibald, 3rd Earl of Douglas, c 1370 (Cruden 1960, 115-9; Simpson 1967, 1). However, their locations may be of some significance when taken together with other strands of evidence.

The writer has recorded seventeen marks in all, comprising eleven separate forms.

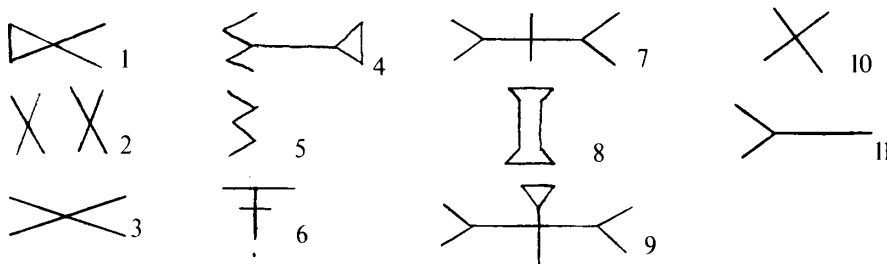


Fig. 3. Masons' Marks at Threave Castle

Of the seventeen marks, two identical marks (no. 1) are to be found on masonry associated with the prison inserted into the northern half of the basement — one on a quoin at the SE corner, the other in the garderobe formed in the W wall. Two similarly-executed marks (nos. 4 and 5) appear on the right and left jambs respectively of the slop-sink in the right-hand splay of the more northerly of the two W windows at the mezzanine, or kitchen, level. A single mark (no. 10) is to be found on the left jamb of the wall-press in the S wall of the Hall on the third storey. The remaining twelve marks (nos. 1-3, 6-9 and 11) all occur on masonry forming the solitary spiral stairwell in the NW corner of the tower-house that links the mezzanine floor with the three upper storeys and the wallhead. Of these marks, only one (no. 1) appears elsewhere — in the basement prison. Why there should be this marked concentration both in the stairwell and also on adjacent masonry is not readily apparent, but, together with other enigmatic features observed in the vicinity of the stairwell, it suggests, perhaps, that this stair is not original to the tower-house.

A detailed architectural record (AMDO 1975), carried out in association with the archaeological excavations conducted by the writer (Good and Tabraham 1981, 90-140), brought to light a discrepancy in the otherwise faultless symmetry of the tower's design, for, though the angles at the SW, SE and NE corners are true 90° throughout the full 22m height, that at the NW corner was distinctly contorted from the mezzanine level up to the wall head. No settlement of the fabric could be detected which might have accounted for such a distortion.

At wall head level a rectangular shaft, 500 x 400mm, runs around the four sides of the tower within the walls. Simpson (1967, 6) has properly suggested that such a shaft was designed "to carry bonding timbers, designed to resist the thrust of the heavy roof". For such timbers to perform their function of "stitching" the four walls together at this height (20m) above the ground, they would require to have been jointed together to form a continuous tie. Yet this is patently not the case at the NW corner where the link has been broken, apparently by the imposition of the stairwell.

Perhaps of more dubious significance is the predominance of freestone quarried from New Red Sandstone rocks of Permian age in masonry from the stairwell, compared to the coarse sandstone or grit, with pink feldspar, probably of Calciferous Sandstone age, found almost without exception throughout the remainder of the building. Within the stairwell, the corbelled support at the base, the side walls and the window rybats are of the former, though all door rybats at each of the five storeys are of the latter. Both features associated with the prison — the garderobe, noted above, and the narrow ventilation shaft — are executed in the former. Cruden (1960, 116) considers that the prison is a later insertion, presumably on the grounds that, had the prison been a primary feature, there would have been no sound structural reason for the stairwell to have been supported, in part, on continuous corbelling.

These observations suggest that the stairwell is not original to the tower-house. Quite when it was introduced neither the masons' marks nor the architectural details can answer, though it must continue to be regarded as predating the prison. What the stair may have replaced is likewise not known. Threave is, in many respects, a most unusual tower-house; this is just one further puzzle. Nevertheless, one remarkable feature, the continuous corbelling at the stair — “the first instance of corbelling employed in this way in an interior” (Cruden, 1960, 116) — may be marginally less remarkable if it should prove that it dates to a time subsequent to the first building operation *c* 1369.

The Society is indebted to the Scottish Development Department for a grant towards the publication of this note.

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THE CRANNOG IN THE CASTLE LOCH, LOCHMABEN

by John B. Wilson, M.D.

The advent, in 1957, of the Annandale Sailing Club, with sailing activity on the Castle Loch, brought attention to bear once more on the pile of stones and timber which stands midway between Lochmaben Castle and the Vendace Burn at approximate map reference NY 086 813. Though normally below water level, during dry summers some of the stones can be seen lapped by the waves.

The presence of this mound has been known, though largely forgotten, for many years. The Rev. John Gardiner, a native of Lochmaben described in *Arch. Scot.* in 1823 a small artificial island to the south-west of the Castle “With stakes of oak remaining to this day on either side of it which have been put as a fence against the dash of water.” On Monday 10th March 1862 Sir James Y. Simpson donated to the Society of Antiquaries of Scotland a portion of a squared tree or log, probably of alder. This measured 16” on the sides and came, he said, from a lake habitation or crannog in Lochmaben.¹ How Sir James came to own this Lochmaben relic can be guessed from the Rev. William Graham's account of the finding in 1849 or 50 of

“A variety of curious articles of antique workmanship in black native oak, evidently parts of a strong building, discovered in the Castle Loch. There is a tradition that when the old castle (Bruce's Motte) was taken down its materials were employed in the erection of the present castle.”²

Mr Graham, that worthy son of Lochmaben, was then minister of Trinity Church in Granton where Sir James owned a small house, to which he could escape for a few hours from his home at 52 Queen Street.³

Dr Robert Munro in his *Ancient Scottish Lake Dwellings or Crannogs*, published in 1882, comments on the presence of a small artificial island several feet below the surface of the Castle Loch from which oak mortised beams had been removed.

In 1907 E. B. Rae, town clerk of Lochmaben, showed at a meeting of this Society some articles made from black oak found in the Castle Loch while, at the same meeting, Bailie Lennox told how he had drawn stobs from the centre part of what was believed to be a straight way to the Castle.⁴ Robert Fraser too mentions the presence of a boat load of stones associated with a causeway to the castle — a passage known, he affirmed, to all Lochmaben boys!⁵

This underwater mound may represent a crannog or a boatload of stones sunk, either as already suggested, on its way to the Castle or alternatively as Turner showed, in his illustration of Lochmaben Castle for Scott's *Minstrelsy of the Scottish Border*, during the systematic removal of the ashlar freestone in the reverse direction to build the growing town of Lochmaben and the numerous farms springing up in the wake of the Enclosures. The latter suggestion seems improbable as no freestone is identifiable in the pile.

Three lengths of timber and one small more solid piece of timber were removed in 1965 from the mound and are illustrated in figure 4. The longer pieces are roughly shaped planks about 6cms thick, part of a wooden structure.

The ends of all three planks are shaped, presumably to fit other planks while two of the planks have holes 4 cm in diameter burned in them for the reception of pegs. One end of the smallest plank shows evidence of extensive charring.

J. G. Scott, relying on Munro's description of timbers recovered from the Castle Loch, dated them to the Roman period because they were mortised.⁷ The timbers in the illustration are tenoned but not mortised though they possess what appear to be peg holes of 4 cm. in diameter. Perhaps the main feature of these timbers is that the tenons have been shaped by a saw and this fact supports their dating to the Roman or post Roman period.

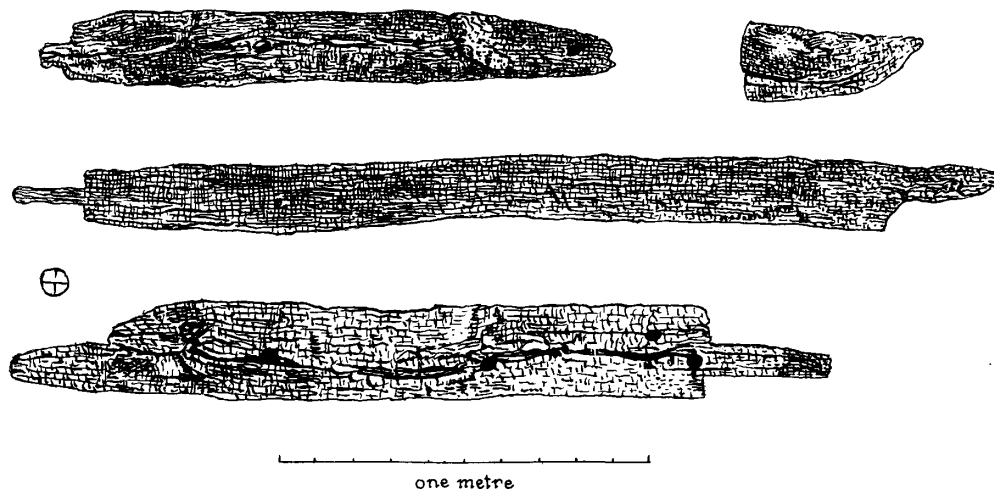


Fig. 4. Timber from Crannog in Castle Loch, Lochmaben. Drawn by J. K. Ebblewhite.

The advent of tree ring dating techniques gave promise that the date of origin of these timbers could be ascertained, so sections from the timbers were despatched to Dr. Michael Baillie in Belfast for examination. However, the tree ring dating pattern he has so far drawn up for the South West of Scotland extends back only to 1200⁶ and these timbers were thought by Dr. Baillie to probably originate before that date. This finding suggests that they were indeed part of a lake dwelling or crannog.

Unfortunately, such is the growth of weed in the Castle Loch and so poor the visibility under water that further investigation, even by *sub aqua* divers, will not be easy.

1. *Proceedings of the Society of Antiquaries of Scotland*, Vol. IV, p.417.
2. *Lochmaben 500 Years Ago* (1865) W. Graham, Nimmo, Edinburgh, p.73.
3. *Sir James Y. Simpson* (1896) Eve Blantyre Simpson, Oliphant, Anderson & Ferrier, Edinburgh and London, p.97.
4. "Extracts from the Records of the Burgh of Lochmaben" (1907), *These Transactions* Vol. XVIII, Part i, p.123.
5. "Sidelights of Lochmaben History" (1934) R. Fraser, *These Transactions*, Third Series, Vol. IV 1930, p.183.
6. "An Oak Chronology for South Central Scotland", M.G.L. Baillie, *Three Ring Bulletin* (1977), Vol. 37, p.33.
7. "The Roman Occupation of S.W. Scotland", J. G. Scott *Glasgow Arch. Journal*, (1976) 4, p.29.

AN EARLY SHERIFF OF DUMFRIES?

by
J. G. Scott

Since the appearance in 1914 in these *Transactions* of a classic paper by Dr. George Neilson it has been generally accepted that the burgh of Dumfries was founded by William the Lion, probably in 1186.¹ But the grant of burgh status may have been no more than the recognition of the importance of a community which had already grown up round a royal castle, for the 'old castle and church' at Dumfries — *uetus castellarium et ecclesiam* — are mentioned in the grant of a toft in Dumfries to Glasgow Cathedral Church in 1179 x 1185 (probably 1179).² Dr. Neilson equated the *uetus castellarium* with Castledykes.³

In the reign of David I Strathnith was the lordship of Dunegal, who was succeeded by his son Radulf, last recorded in 1165.⁴ Radulf is known to have had 'hereditary land' in Dumfries.⁵ It is therefore possible that the *uetus castellarium* belonged originally to Radulf, but if so there is evidence to suggest that it had been taken over by the crown between 1165 and 1186, perhaps in consequence of the crown's efforts to exercise control over Galloway in the later years of Malcolm IV and the earlier years of William the Lion.⁶

When Dumfries became a royal castle it would have been put in charge of a sheriff, and garrisoned by castleward, whereby rural tenants of knights' fees contributed service of forty days in garrison or paid a commuted amount in lieu.⁷ Dr. R. C. Reid suggests that the sheriffdom may at first have been confined to lower Nithsdale and the district between Nith and Urr.⁸ From 1160 to 1174 these lands to the west of the Nith belonged to Uhtred who, along with his brother Gilbert, shared the lordship of Galloway renounced by their father Fergus in 1160. Presumably, therefore, it would have been incumbent upon Uhtred to supply knights for castleward in Dumfries in respect of the district between Nith and Urr.

It cannot have been easy for Uhtred, from a domain largely unfeudalised, to supply knights trained for such service, and whose loyalty the crown would deem unquestionable. One such may have been Richard, son of Troite, of a Cumberland family, to whom, between 1161 and 1174, Uhtred granted Lochkindeloch, now New Abbey, for one knight's service.⁹ The terms upon which Uhtred, with the consent of his son Roland, during the same period granted Kirkgunzeon to the monks of Holm Cultram Abbey, in Cumberland, may also be of significance in this context. The monks were to pay Uhtred £6 yearly, £3 at Easter and £3 at Martinmas, whilst Uhtred for his part undertook to discharge the service owed to the king.¹⁰ The sum of £6 he might have viewed as the equivalent of knights' fees, and as a means of commuting castleward service for payment.

Uhtred's grant to Holm Cultram stated conditions under which the monks, if dissatisfied, might return the land to Uhtred after three years.¹¹ Oddly enough, it was Uhtred who, against the wishes of the monks, exercised an option and between 1165 and 1173 withdrew from them a large part of the land in order to grant it to Walter de Berkeley.¹² *Camerarius* or chamberlain of William the Lion between c. 1171 and c. 1193, Walter de Berkeley was obviously a magnate well placed to find suitable knights for castleward in Dumfries, and this is a feasible motive for Uhtred's action.

The monks of Holm Cultram, backed by Christian, Bishop of Whithorn, did not tamely surrender their claim, but through their abbot Everard complained to the king.¹³ William thereupon ordered Uhtred and Roger de Minto to convene the older men of the district to make a sworn perambulation of the marches at Kirkgunzeon, at a date between 1165 and 1173.¹⁴ The outcome of the perambulation is not recorded, but Walter de Berkeley remained in Kirkgunzeon, eventually to grant some land to Holm Cultram, a grant confirmed by Roland of Galloway and by the king between 1185 and 1190.¹⁵

1. G. Neilson, 'Dumfries: Its Burghal Origin', *TDGAS*, 3rd ser., II (1913-14), 157-76; *Regesta Regum Scottorum* II, The Acts of William I, ed. G. W. S. Barrow (1971), 14 (hereinafter cited as *RRS* II).

2. *RRS* II, 264-5.

3. *Op. cit.*, 168, footnote 11a.

4. *Regesta Regum Scottorum* I, The Acts of Malcolm IV, ed. G. W. S. Barrow (1960), 276-7, no. 265 (hereinafter cited as *RRS* I).

5. R. C. Reid, 'The Feudalisation of Lower Nithsdale', *TDGAS*, 3rd ser., XXXIV (1955-6), 103.

6. *Ibid.*

7. *Ibid.*, 104.

8. *Ibid.*, 105.

9. *RRS* I, 13, footnote 2; *TCWAAS*, New ser., XVII (1917), 218-19.

10. *The Register and Records of Holm Cultram*, edd. F. Grainger and W. G. Collingwood (CWAAS Record Series, 1929), 48-9.

11. *Ibid.*

12. *Ibid.*; for the date see *RRS* II, 474, no. 540.

13. Grainger and Collingwood, *op. cit.*, 49.

14. *RRS* II, 184-5; 291; 474, no. 540.

15. Grainger and Collingwood, *op. cit.*, 50; *RRS* II, 290-1, no. 256.

Who was Roger de Minto, and why was he delegated with Uhtred to carry out the perambulation? He was not a man of the highest rank, for he appears as witness in only two of William's charters.¹⁶ The only likely reason is that he was the sheriff of the royal castle of Dumfries, and therefore had a direct concern in, as well as knowledge of, the bounds of the sheriffdom. Perambulations of bounds were a recognised part of a sheriff's duties.¹⁷ There is no other direct evidence for this suggestion, which must therefore remain tentative, but it is pertinent to point out that one of the charters which Roger witnessed was the king's confirmation to Robert de Brus at Lochmaben, probably between 1165 and 1173, of his lands in Annandale. Among the other witnesses were Uhtred and Gilbert of Galloway, Roland son of Uhtred, and Robert son of Troite (clearly a brother or other close relative of Richard of New Abbey).¹⁸

It is usually considered that it was the death of Radulf about 1185 which enabled William the Lion to seize lower Nithsdale.¹⁹ But if Radulf had survived until 1185 he must have been a very old man, for possibly as early as 1136 he had witnessed a grant of David I in Glasgow.²⁰ Significantly, in William's confirmation charter to Robert de Brus at Lochmaben there is no mention of Radulf or of Nithsdale, at a time when the fixing of boundaries was clearly under discussion. Yet in David I's original grant of Annandale to an earlier Robert de Brus about 1124 Strathnith is specifically named as bordering Annandale.²¹ The implications are that, possibly as early as 1165, the crown was in possession of lower Nithsdale, whilst Roger de Minto, as king's sheriff in Dumfries, was already in his place and acting for Strathnith.

16. *RRS* II, 174, no. 74; 178-9, no. 80. The spellings of Roger's name — Munethoth, Munethou — suggest comparison with the name of Robert de Muntut, a tenant of the Honour of Huntingdon in Northants. under Earl Henry, son of David I: *RRS* I, 103.

17. *RRS* II, 41-2.

18. *Ibid.*, 178-9, no. 80; *RRS* I, 13, footnote 2.

19. *RRS* II, 14.

20. Sir A. C. Lawrie, *Early Scottish Charters* (1905), 85-6, no. CIX.

21. *Ibid.*, 48-9, no. LIV.

JOHN SCOTT'S ACCOUNT BOOK 1756-1769

by

K. H. Dobie, F.S.A.Scot.

During the first half of January 1982, I was loaned an account book written by John Scott. He was minister of Holywood, St. Michael's and ultimately the New Church. The book covers the period 1756-1769 and is divided into various parts dealing with income and expenditure, personal and household along with a section about letters to and from one of his sons.

Dumfries in the middle of the eighteenth century had two ministerial charges, St. Michael's and the New Church. John Scott became minister of the second charge, St. Michael's in 1732 after the death of Mr Patrick Sims, moving there from Holywood. Then after the death of Mr Patoun in 1738 he took the charge of the New Church.

He had three sources of income. His stipend which was £100 per year. Rent from five agricultural properties, which gave him more than £100 per year and he also borrowed money, in one case from Thomas Hamilton, minister in Holywood.

'1768 Nov. Interest for 4yrs 7 weeks on £50 £10.8. - and renewed my bill, the old bill being destroyed. Mr Hamilton paid to me as the price of some pieces of furniture in the manse of Holywood got from me £3.8.-'

On the expenditure side I found he was married, from the following entries:

'1764 Sept. To my wife 2gns to buy a gown'

'1768 9th Jan. To merchant for a black silk gown to my wife being 13yds £5.3.-'

There is only one mention of a daughter:

'1768 To Jos. Wilson for 1 plain gold ring and 1 gold hooped ring given to my daughter £1.5.-'

John Scott's two sons merit a number of entries, one, William (Willie) in 1760 went into partnership with John Corrie in a joint adventure to Charleston in South Carolina in which his father invested £340. In the account book there is a note of the letters received and sent to Willie, all numbered. Willie was not a regular correspondent, but he does mention the annual fever outbreaks and that he sent three mahogany logs to Liverpool. Then in 1764 his father received a letter dated September in which Willie's death from nervous fever is intimated. (The book states 'The Lord giveth, the Lord taketh away!') Eventually a proportion of his investment was returned.

The other son, John, seemed to be resident in Edinburgh, possibly at University. His father regularly sent him sums of money for his living expenses. For the period 1757 Jan. 3-March 15 he sent £9. 14-; then in June when John was in Keswick he received £1. 15.6. The year before his father paid for a suit of clothes, shoes and wig to the value of £4. 16. 1. for him.

In church matters there are few entries, mainly concerned with presbytery dinners costing 18/-. He does however mention the presbytery library in 1756-7, the sum of £2 received and still in his hands.

Entries on the personal items are much more numerous. Apart from the £10 for the rent of the manse, his new saddle in 1764 cost £1. 1. 11, while the repair of his watch by Alexander Wyllie, a well known watchmaker, cost 13/6. It cost 10/6 to have a tooth pulled at the dentist. He bought new wigs, hats and shoes regularly and in 1769 'a pair of spectacles for myself!'

Household items include bed linen and printed cotton for a bed curtain at £3. 10. -. This would be for a four poster bed.

Other items were:

'1759 April 4 Three silver tablespoons £1. 15.4.'

'1760 Sept. 16 Irish linen and other merchants accounts paid to Mr Scott £5. 11.7.'

'1764 July To napery bought at roup £3. 13.-'

'1766 Sept. 3 Paid to Clark for 6 tablespoons weighing 13 oz 18 dwt as per account discharged £4. 19.3.'

From this small account book, I have been able to add a large amount of detail to our knowledge of John Scott thus giving a greater insight into the times and conditions of the minister in the New Church.

THE MARIA RIDDELL COLLECTION

by

A. E. Truckell, M.A., F.S.A., F.S.A.Scot.

Among the mass of Burgh papers lying, half-rotted, on a wet earth floor in a bay off the Ewart Library basement between 1931 and 1948-56 was a 124-page volume of warrant sales,¹ by order of the Magistrates of Dumfries, of the goods and household furnishings of Dumfries residents, from 1791 to 1800, the years of the French Revolutionary War and the beginning of the Napoleonic wars, a time so far as the ordinary man was concerned of shortages, high prices and considerable social stress.

The people whose goods were being sold represent a very good cross-section of our community — lawyer, innkeeper, carpenter, saddler, nurseryman, bookseller and so on: and that so many solid citizens should be sold up for debt provides the reason for Robert Burns' fear of dying in debt — any possessions falling to his widow could have been poinded for anything he owed. Many of the sales in this volume are for quite small sums.

The volume is in poor condition, some pages at the end being fragmentary and very many faded to near-invisibility but, with application, it has been possible to recover the greater part of the text.

The lists give a vivid picture of what Dumfries people had in their houses and what stock Dumfries shopkeepers and tradesmen kept, at this time.

One list, however, on pages 105-114, dated 22nd May 1800, stands out as different in character from the rest: goods valued at £202.3. 10d, deposited in the house of John Clark, Esquire, of Nunland, in the parish of Lochrutton, and belonging to Walter Riddell, Esq., sometime residing at Halleaths, appraised for a debt of £300 and interest. These were offered for sale on 15th July 1800 at Nunland House but no offers were made for any of the articles. The goods were therefore allocated to Clark, he being directed to give credit to Riddell for the value of the material. Clark was a substantial country gentleman² and as these goods had been deposited in his house it seemed likely that they belonged to some friend in his own social group. Who could this be? One thought, of course, of the Riddells of Burns' acquaintance: Walter Riddell

1. Now lodged in the Archives of Nithsdale District Council.

2. He married in 1781 Anne, the only daughter of Alexander Kennedy of Knockgray in the parish of Carsphairn. (Their eldest son, Alexander, succeeded to both estates in 1815 on the occasion of his Father's death — taking the name Clark-Kennedy). It is interesting to note that John Clark's great-grandson, Alexander, had very strong antiquarian inclinations. His acquisition of the Kirkinner Early Christian Cross, and other archaeological items, from Wigtownshire, during the 1880's, has been described in these Transactions, IIIrd Series, Volume LI, pp. 32-9.

of Woodley Park and his young wife Maria, and Robert Riddell, Walter's brother, of Friars Carse, and his wife, that lady insulted by Burns after a drunken evening. Robert was a known antiquary: what of Walter? Walter had West Indian plantations and was, as Gladstone says in his Presidential Address on Maria in these Transactions (III, 3rd ser., pp. 16-56) "something of a wastrel": he seems to have spent money and property faster than he got it, and Maria and he had to move from house to house. He had had a military career, being made a prisoner of war by the Spaniards in February 1782. He does not seem to have been much of a scholar, or shared his brother's interests and, when in Britain, spent a good deal of his time in London. What then of his wife, Maria, married to Walter in St. Kitts in the West Indies?

Maria, friend of Burns, writer, keenly interested in natural history, correspondent of Smellie in Edinburgh, another natural history collector, writing often of her museum: an avid reader and bibliophile of wide and varied tastes and keen on music: once considered as Prince Charlotte's tutor: flamboyant, enjoying her public efforts to save the lives of the O'Neills, under sentence of death for defying the press gang at the Stoop, Dumfries. It fits: it fits very well: there seems little doubt that this is Maria's museum and library, or a considerable part of it.

At this time, 1800, Walter Riddell was in the West Indies, where he died two years later: Maria was in London, where she remarried in 1808, dying herself later that year, still only 32.

So here we have a window into the mind and character of this pretty, vivid, talented young woman, a friend of many of the leading people in high society, literature and science of her day: let the list speak for itself—

Pp. 105-114 — 22nd May 1800 —

Report of Apprising at instance of John Clark, Esq., of Nunland against Walter Riddell, Esq., sometime residing at Halleaths for a debt of £300 of items deposited in Clark's house with report of sale, 15th July 1800, stating that though sundry persons convened at the sale, none were desirous of purchasing and declined offering for any of the articles — so all were handed to John Clark.

1 Mahogany Case filled with schells valued at	£10. 0. 0
1 Mahogany Case filled with schells valued at	10. 0. 0
Shells of various kinds in case first	10. 0. 0
A large quantity of Fossils, Minerals, Spars, some preserved fishes in bottles, in the second case, Chrystals, an Indian Pipe, a stuffed fish, 2 deerhorns and a stuffed crocodile in the top thereof	12. 0. 0
A large Mahogany Bookcase	21. 0. 0
8 Glass Cases with Birds etc. and a Marble Vase	1. 11. 6
A Beaver Skin	0. 10. 6
A Parcel of Blow Pipes and a Box	0. 1. 6
A Highland Purse and cover	0. 7. 6
Gold weights	0. 3. 6
Unicorns horn, sword fish, sawfish and basket of corals	1. 1. 0
4 Swords	1. 0. 0
A Glass Frame containing specimens of crab fish etc.	0. 7. 6
A pair of Bellows, a box with Chrystal, a Bust and house bell	0. 10. 6
A sextant	4. 4. 0
A compass and box	2. 2. 0
A Telescope	10. 10. 0
Apparatus of the Humane Society	0. 10. 6
An Eolian Harp	0. 5. 0
A small Mahogany box, a Turkey stone, a Brass Chain and Pully for a lamp, a parcel of Cocoa nut shells, a Powder flask, a Hawking bag, a Snuff box, all in Turtle shell, and the shell itself	0. 12. 0
A large Punch bowl	3. 3. 0
A pair of Stilts, 3 Walking sticks, a parcel of poisoned arrows, a gun ramrod and an old whip	0. 10. 6
A Large Map of the World, on Mercators projection	1. 1. 0
Ainsley's Map of Scotland	0. 12. 0
A parcel of Drawing Paper	0. 10. 0
An old laced Hat	0. 2. 6
A short Gun and long Bayonet	0. 15. 0
17 Gold Coins and Medals weighing 5 oz. Troy at £4 per ounce	20. 0. 0

175 Silver Coins and medals weighing 44 oz. and 14 drops at 5/- per ..	11. 4. 6
142 Copper Coins and Medals weighing 1 lb. 15 oz. at 1d per oz.	0. 2. 7
A Medal Chest	1.11. 6
A Strong Box or Chest	2.12. 6
A pair of Persian Slippers	0. 5. 0
2 Medal Cases and a Stone Hammer	0. 1. 6
Roy's Military Antiquities	5. 5. 0
A Collection of Farces six vols.	0. 6. 0
Sternes Sermons — 4 volumes	0. 4. 0
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Letters on the Mind — 2 vol.	0. 2. 6
Raceing Callander from 1787 to 1794	0. 2. 0
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Lettres de Sévigné — 1 vol.	0. 2. 0
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REVIEW

Hakon the Old — Hakon Who?
by Magnus Magnusson

To most readers of Scottish history Hakon IV is known only as the King of Norway whose defeat at the battle of Largs in 1263 led to the annexation of the Western Isles by Scotland. It is welcome to have the story presented to us through Norwegian eyes — or perhaps we should say, Icelandic eyes, for the author is Magnus Magnusson, and his main source, the “Hakonar Saga” was written by the Icelander, Sturla Thoraldson.

Magnusson raises a number of questions to which there are no definitive answers. Who really won the Battle of Largs? The saga evidence is that the Norwegian army (which, of course, contained many from the Isles whom we would class as “Scots”) at least held its own in the fighting. It seems clear, however, that the Scots won the campaign. The doubt about the battle raises the question of reliability of sources — but here again there is no satisfaction to be found. Scottish sources are very sketchy for the period. Hakon’s saga, by contrast, is full of detail, but its author was literally writing for his life. His choice was to paint a flattering picture of Hakon or be executed by Hakon’s son, King Magnus. Another question raised by the author is whether Hakon was “a great King”. Neither Magnus Magnusson nor Norwegian historians are sure. The feature of his reign was the consolidation of royal power. Perhaps he was lucky in the time he lived. By and large it was a good time for kings. In Scotland, England and France as well as Norway, the century saw a strengthening of central government. You had to be pretty bad, like Henry III of England, to fail.

Magnusson takes the story up to the death of Hakon’s great granddaughter, Margaret, Maid of Norway, in 1290. He points out that had she lived, Margaret would have become queen of Scotland, England, and of Norway. It is an intriguing thought that these three countries might well have been united in the 14th century — although one may wonder whether the union could have lasted any more than, say, that between Norway and Denmark, or, for that matter, the “union” which actually took place between Scotland and England in 1296.

The 28 page booklet is published by the Largs and District Historical Society, Kirkgate House, Manse Court, Largs — price £1.15. It is well illustrated, and purchasers are helping a worthy cause — for the profits go to the Scottish Churches Architectural Trust. The principal reason for buying the pamphlet is, however, quite simply that it is a good read. D.A.

PROCEEDINGS 1981-82

9 October 1981

Annual General Meeting.

Mr Lionel Masters was elected a Fellow of the Society.

Speaker: Mr James Banks — Historic Andalusia.

23 October 1981

Speaker: Mr Derek Johnston — Local Workers and Bosses, 1851-1951.

6 November 1981

Speaker: Mr J. Andrews — The Valley of the Urr.

20 November 1981

Speaker: Mr Anthony Barber — Focus on Fungi.

4 December 1981

Members' Night

Speakers: Mr Gordon Robertson — Orkney.

Mr Noel Dinwiddie — The Dinwiddie Family Business.

15 January 1982

Speaker: Mr John Currie — American Indian Religion.

27 January 1982

Speaker: Mr Michael Long — Human Behaviour in Animals.

12 February 1982

Speaker: Mr Alfred Truckell — The Parishes of Kirkbean and Colvend.

26 February 1982

Speaker: Dr. Edmund Fellowes — Some Local Birds.

12 March 1982

Mr Robert McEwen succeeded Mr Anthony Tyers as Honorary Secretary.

Speaker: Mr Lionel Masters — Rebuilding the Past.

26 March 1982

Special General Meeting

It was decided that there would be no change in the rates of subscription for the coming year.

Speaker: Mr David Lockwood — Hadrian's Wall.

Publications of the Society

Transactions and Journal of Proceedings: 1st Series—(a) 1862-3*, (b) 1863-4*, (c) 1864-5*, (d) 1865-6*, (e) 1866-7*, (f) 1867-8*. New or 2nd Series—(1) 1876-8*, (2) 1878-80*, (3) 1880-3*, (4) 1883-6, (5) 1886-7, (6) 1887-90*, (7) 1890-1, (8) 1891-2*, (9) 1892-3*, (10) 1893-4*, (11) 1894-5*, (12) 1895-6*, (13) 1896-7*, (14) 1897-8*, (15) 1898-9*, (16) 1899-1900*, (17) 1900-5 (in 4 parts)*, (18) 1905-6*, (19) 1906-7, (20) 1907-8*, (21) 1908-9, (22) 1909-10*, (23) 1910-11*, (24) 1911-12*, 3rd Series — (i) 1912-3*, (ii) 1913-4*, (iii) 1914-5*, (iv) 1915-6*, (v) 1916-8*, (vi) 1918-9*, (vii) 1919-20*, (viii) 1920-1*, (ix) 1921-2*, (x) 1922-3*, (xi) 1923-4*, (xii) 1924-5, (xiii) 1925-6*, (xiv) 1926-8*, (xv) 1928-9, (xvi) 1929-30*, (xvii) 1930-31, (xviii) 1931-33*, (xix) 1933-35*, (xx) 1935-36*, (xxi) 1936-38*, (xxii) 1938-40*, (xxiii) 1940-4*, (xxiv) 1945-6*, (xxv) 1946-7, (xxvi) 1947-8, (xxvii) 1948-9* (Whithorn Vol. 1), (xxviii) 1949-50*, (xxix) 1950-1 (with Index of Vols. i to xxvi)*, (xxx) 1951-2*, (xxxi) 1952-3*, (Hoddam Vol.), (xxxii) 1953-4, (xxxiii) 1954-5, (xxxiv) 1955-6* (Whithorn Vol. 2), (xxxv) 1956-7, (xxxvi) 1957-8, (xxxvii) 1958-9, (xxxviii) 1959-60, (xxxix) 1960-1 (with Index of Vols. xxvii to xxxviii), (xl) 1961-2 (Centenary Vol.), (xli) 1962-3, (xlii) 1965 (new format), (xliii) 1966, (xliv) 1967, (xlv) 1968, (xlvi) 1969, (xlvii) 1970, (xlviii) 1971, (xlix) 1972 (with index of Vols. xxxix to xviii) (l) 1973, (li) 1975, (lii) 1976-77, (liii) 1977-8, (liv) 1979 (Wanlockhead Vol.), (lv) 1980, (lvi) 1981.

Prices : Single Volumes (to Members) — To Vol. 53, £3; Vol. 54 on, £5, all plus postages.

Runs of Volumes (and prices to non-members) — On application to Hon. Librarian.

A List of the Flowering Plants of Dumf. and Kirkcud. by James McAndrew, 1882.*

Birrens and its Antiquities, by Dr. J. Macdonald and James Barbour, 1897.*

Communion Tokens, with a Catalogue of these of Dumfriesshire, by Rev. H. A. Whitelaw, 1911.*

History of Dumfries Post Office, by J. M. Corrie, 1912.*

History of the Society, by H. S. Gladstone, 1913.*

The Ruthwell Cross, by W. G. Collingwood, 1917.*

Records of the Western Marches, vol. I, "Edgar's History of Dumfries, 1746," with illustrations and ten pedigree charts, edited by R. C. Reid, 1916.*

Records of the Western Marches, Vol. II, "The Bell Family in Dumfriesshire," by James Stuart, W.S., 1932.*

Records of the Western Marches, Vol. III, The Upper Nithsdale Coalworks from Pictish Times to 1925, by J. C. McConnel, 1962, £2.00 plus postage.

Notes on the Birds of Dumfriesshire, by Hugh S. Gladstone, 1923.*

A Bibliography of the Parish of Annan, by Frank Miller, F.S.A.Scot.*

Index to Transactions, Series 1 and 2. £2 plus postage and packing.

The Marine Fauna and Flora of the Solway Firth Area by Dr. E. J. Perkins, 1972, 112pp. £2 plus postage and packing.

Birrens (Blatobulgium) by Prof. A. S. Robertson (1975) 292pp. 88 figs., 12 pls. £5.50 post free to members £7.50 to non-members. Obtainable from Hon. Librarian.

*Indicates out of print, but see Editorial.

REPRINTS (Selection)

Food Vessels in S.W. Scotland, by D. D. A. Simpson (1965), 26pp., 76 vessels illustrated, described and fully discussed, 20p plus posts.

The Battle-Axes, Mace Heads and Axe-Hammers from S.W. Scotland, by Fiona E. S. Roe (1967), 23 pp., 8 figs., 2 pls., 206 implements inventoried and fully discussed. 35p plus posts.

Early Settlements in Eastern Dumfriesshire by George Jobey, 1972, 26 pp., 43 figs., 1 pl., 55p plus posts.

Fish Fauna of the Castle & Mill Lochs, Lochmaben with special reference to the Lochmaben Vendace, P. S. Maitland (1966) 17pp. 40p. plus posts.

Fossil Footprints from Dumfriesshire, with descriptions of new forms from Annandale, J. B. Delair, (1966) 16pp, 40p plus posts.

Additional Records of British Permian Footprints, J. B. Delair (1967) 5 pp. 25p. plus posts.

Roman Burial at High Torrs, Luce Sands, Wigtownshire by D. J. Breeze and J. N. G. Ritchie (1980) 9pp, 1 fig. 1 pl., 35p plus posts.