

Transactions
of the
Dumfriesshire and Galloway
Natural History
and
Antiquarian Society

WANLOCKHEAD & LEADHILLS VOLUME



LIV 1979

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WANLOCKHEAD & LEADHILLS VOLUME

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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 in Volume 53.

Presentations and Exhibitions should be sent to the Hon. Secretary Mr A. Tyers, 9 Gillbrae Court, Dumfries, 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 Assistant 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. For Prof. Robertson's "Birrens", also see rear cover. Payment of subscriptions should be made to the Hon. Treasurer, Miss Morag Donald, 26 Mossbank Avenue, 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 to or transfers of shares 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 a grant towards the cost of Mr Tabraham's article on Excavations at Whithorn Priory.

The Council is also grateful to the Mouswald Trust for a substantial grant towards the cost of Dr. Henderson's article on the Silver Chain from Whitecleugh, Crawfordjohn.

WADERS IN THE OUTER SOLWAY

by

R. C. Dickson

Introduction

The waders at the three estuaries, Wigtown Merse, Piltanton and Luce Estuaries and Loch Ryan (now part of Wigtown District, Dumfries and Galloway) were censused as part of the B.T.O./R.S.P.B./W.T. Estuaries Enquiry between 1969-75. This note presents data on the nine species of wader most commonly counted.

For the purpose of these counts the areas were defined thus: Wigtown Merse (west bank only) — the area between the Rivers Bladnoch and Cree;¹ Piltanton and Luce Estuaries — the area between Ringdoo Point and the River Luce;² and Loch Ryan — the area between Leffnol Point and The Wig.³ The waders were usually counted at high water roosts between August and April. Some roosts were regularly used depending on the weather and state of tide; the usual roosting places were on saltmarshes, mudflats, shingle and sandy beaches, and pebble beaches, but on some high tides the waders sometimes roosted in the fields immediately behind the high water mark.

The most striking feature of the results was the variability in numbers counted. The numbers recorded, therefore, probably depend on a number of factors, such as weather and tidal conditions, breeding success, migration patterns, and numbers inland.

Results

Table 1 gives the total counts of the 9 species of waders regularly counted at all three estuaries. Table 2 gives the total counts for the three estuaries and broadly shows the build up of numbers in autumn, the winter count and Spring numbers. The results for each species is discussed below.

Table 1. Maximum seasonal counts of 9 species at Wigtown Merse, Luce Bay and Loch Ryan 1969-75

Year	Autumn (Aug. to Oct.)	Winter (Nov. to Feb.)	Spring (Mar. to Apr.)
1969/70	7,821 (Oct.)	7,313 (Jan.)	5,512 (Mar.)
1970/71	12,542 (Oct.)	10,034 (Dec.)	2,764 (Mar.)
1971/72	4,290 (Oct.)	5,071 (Nov.)	1,649 (Mar.)
1972/73	6,328 (Oct.)	8,505 (Dec.)	2,509 (Mar.)
1973/74	4,293 (Oct.)	7,731 (Jan.)	3,378 (Mar.)
1974/75	3,941 (Oct.)	10,205 (Feb.)	2,577 (Mar.)

1. Principal roosts being noted at the following Nat. Grid. Refs :— NX442546, 441552, 456580 and 447560.

2. Principal roosts being noted at the following Nat. Grid. Refs :— NX195559, 187556, 167566, 167564 and 171556.

3. Principal roosts being noted at the following Nat. Grid. Refs :— NX044678, 037643, 080617, 077615, 083623 and 074651.

Oystercatcher

Small non-breeding numbers (up to 400) summered showing traces of immature plumage but an influx occurred in the autumn commencing in July/August and lasting till October (with a peak count of 4,170 in Oct. 1969) suggesting a passage movement. The winter counts varied from 400-6,297 for all three estuaries possibly depending on the number of birds inland. The departure of birds in the Spring was not so marked, and if there was an influx it was difficult to distinguish.

Lapwing

This species is not usually considered an intertidal feeding one but in the Outer Solway some large roosting flocks occurred. At some high tides, lapwings were forced to move to adjacent fields and these counts are included. Like the oystercatcher, lapwings also fed and rested in low lying fields inland and numbers fluctuated accordingly. Post breeding flocks began to build up from the middle of June and as autumn passage began numbers increased in July and August reaching some large flocks in September and October (peak of 3,087 in October 1970). Numbers apparently remain high during the winter with a peak of 4,900 in December 1972. Departure of the wintering population occurred in March and April when numbers fell quickly in these months.

Ringed Plover

An influx of Ringed Plovers occurred in autumn with peaks of 121 in August 1970 and 1973. Some birds remain to winter but there are some gaps in the counts in some years. The Spring passage was not so marked in March (peak of 49 in 1974) or April. Some counts that have been made in May suggests a later passage with, for example, 150 birds in May 1972 and 200 in May 1975 at Luce Bay.

Golden Plover

Like the lapwing, the Golden Plover occurred at all three estuaries and also inland. This species too is not considered an intertidal feeding one but large flocks are sometimes counted. They also rested and fed inland and this probably accounts for the fluctuations in the counts. For instance, the large passage flocks of 5-10,000 which sometime occur inland are not always included in Table 1. The first influx usually occurred in July and August and reached peaks of 6,950 in October 1970 for all three estuaries. Some fairly large flocks remain to winter at the estuaries and a peak of 4,570 occurred in December 1970. After February numbers begin to decrease through March and April.

Turnstone

There was an apparent influx of Turnstones in the autumn with peaks of 144-189 in October. The January midwinter counts varied between 34-112. There is an apparent movement in Spring with a peak of 112 in March 1973. Non-breeding birds remain in small numbers during the summer.

Curlew

Curlews were counted at all three estuaries but the largest flocks occurred at Wigtown Merse. Numbers varied and many fled inland but only those counts at

high tide roosts or adjacent fields are included. An influx began in July/August but peak autumn numbers were not reached until September and October. Although numbers in winter are variable between 167-1159, probably depending on the numbers feeding inland, they sometimes reached the autumn peaks. There was apparently no marked Spring passage and a gradual decrease occurred until April.

Redshank

The Redshank was counted at all three estuaries. It also fed inland in varying numbers depending probably on weather conditions. All counts in Table 2 refer to high tide roosts or when birds were driven to fields behind the high water mark. There was an apparent influx of birds in August and peak counts of 700-800 for all three estuaries were usually made in September and October. Midwinter counts fluctuated between 100-800 for the three estuaries depending on the numbers inland. In the Spring there was apparently a small influx in March and April although numbers vary and the influx difficult to distinguish.

Knot

The data for Knots is incomplete and there are many gaps in the counts. The first Knots (in red plumage) were usually seen in July in small numbers and became more regular in September and October suggesting an influx. The largest flock of 4,000 occurred in October 1972 at Wigtown Merse but this was probably exceptional as there was no regular passage of these numbers there. Numbers are variable from year to year but on occasions up to 800 (in Jan. 1971) have wintered.

Dunlin

The first influx of Dunlins usually occurred in July increasing to an autumn peak of 1,012 in October 1974. Numbers remain high in winter with a midwinter peak of 3,100 in December 1973. There is some indication of an influx in Spring and 1,000 have occurred in March 1974. Numbers were variable from year to year and 1971/72 for instance had lower counts. Dunlins sometimes occurred inland in winter during gales.

TABLE 2—SEASONAL COUNTS OF WADERS AT WIGTOWN MERSE, PILTANTON AND LUCE ESTUARIES AND LOCH RYAN 1969-75

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WADERS IN THE OUTER SOLWAY

Oystercatcher :

	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
1969/70	1501	2170	4170	3550	1800	6297	3460	3500	1673
1970/71	1221	860	741	850	680	1161	580	499	424
1971/72	929	1012	2456	1350	939	696	645	352	405
1972/73	2077	980	880	600	393	No Count	618	709	666
1973/74	1879	1313	851	1800	1031	1865	1820	1050	457
1974/75	1240	525	975	1730	1525	1525	2470	1400	495

Lapwing :

	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
1969/70	211	218	262	240	490	103	630	288	16
1970/71	136	132	3087	380	3600	2060	980	231	6
1971/72	246	1264	112	695	243	242	53	23	22
1972/73	77	68	9	16	4900	No Count	155	119	—
1973/74	354	1038	242	1177	148	2160	2180	300	16
1974/75	60	160	156	935	2460	1770	3300	125	20

R Plover :

	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
1969/70	72	82	75	—	20	—	1	30	11
1970/71	121	70	20	22	73	5	8	30	15
1971/72	5	45	—	21	—	11	19	19	31
1972/73	54	7	58	33	—	No Count	34	23	—
1973/74	121	27	14	35	18	21	88	49	18
1974/75	27	25	45	32	29	60	65	40	40

G Plover :

	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
1969/70	532	154	1276	858	225	—	80	431	452
1970/71	7	—	6950	734	4570	2730	514	84	110
1971/72	435	1217	910	1210	426	2181	206	375	216
1972/73	127	382	31	29	1070	No Count	224	791	—
1973/74	386	850	1761	3092	1050	1770	460	7	1
1974/75	2	1	360	1200	2130	3200	2300	350	42

WADERS IN THE OUTER SOLWAY

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Turnstone :

	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
1969/70	118	46	144	—	59	89	—	—	1
1970/71	83	64	109	37	22	34	19	19	—
1971/72	5	58	130	72	78	56	61	54	36
1972/73	128	29	189	86	45	62	100	112	—
1973/74	103	78	42	121	11	34	68	97	33
1974/75	47	66	68	120	104	85	79	24	64

Curlew :

1969/70	297	187	673	549	305	167	434	233	89
1970/71	265	815	361	455	326	305	153	503	33
1971/72	256	174	165	635	243	510	346	153	7
1972/73	407	517	341	127	173	No Count	305	137	—
1973/74	306	645	571	531	181	880	922	525	98
1974/75	550	1048	925	549	802	1199	715	290	15

Redshank :

1969/70	424	705	746	390	240	108	348	345	432
1970/71	397	493	802	532	179	161	167	277	214
1971/72	276	384	469	385	278	275	111	280	195
1972/73	289	712	430	122	99	No Count	354	296	—
1973/74	339	353	683	432	431	347	801	350	368
1974/75	119	836	397	293	515	321	291	229	73

Knot :

1969/70	—	300	81	—	290	119	56	257	40
1970/71	290	62	150	17	150	855	256	219	4
1971/72	15	15	38	498	610	96	169	250	19
1972/73	21	2	4060	71	2	No Count	119	—	—
1973/74	8	2	2	—	8	64	—	—	—
1974/75	—	35	3	25	2	—	18	—	—

	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Dunlin :									
1969/70	327	194	394	872	840	430	533	428	55
1970/71	917	198	322	679	434	635	478	902	97
1971/72	348	42	10	205	375	225	360	143	32
1972/73	31	50	330	390	1823	No Count	488	272	—
1973/74	54	26	127	364	3100	590	518	1000	52
1974/75	155	81	1012	1760	1230	437	967	119	252

DUMFRIESSHIRE BIRD REPORT 1977

Compiled by R. T. Smith assisted by D. Skilling and J. Williams

The following report represents an account of the ornithological observations made by our Dumfriesshire contributors during the period January-December 1977. The sequence of species follows that used by Professor K. A. Voous in his current (1977) *List of Recent Holarctic Bird Species* and where possible identifiable changes in status have been noted. The continued production of reports of this unabridged nature should greatly facilitate the future identification of both short and long-term changes in status. Some such changes are already evident and the more significant of these, as currently believed, have been expanded upon below.

Changes in bird populations are normally detected in one of two ways : The more usual method is the realisation — sometimes little more than an impression — that there are, for example, fewer House Sparrows to be seen. The alternative method of actually counting individual birds, or nests, gives a much more rapid appreciation of change and has the additional advantage of being subject to precise analysis. Changes in the breeding Sparrowhawk population are currently being monitored by the latter method¹ and this has shown that the breeding population has gradually declined since the peak year of 1971. The decline has reached the stage where, in the same study area, the 1977 breeding population has fallen to approximately 55% of the 1971 level. However first year birds are more plentiful and it is to be hoped that this will check, or even reverse, the current downward trend. Mistle Thrushes have become much more numerous, perhaps in the last six or seven years — and this is an example of a changing situation which develops slowly and is not readily seen in the early stages. Mistle Thrushes are now a common breeding species, with widespread small flocks, both in autumn and in winter. By the latter end of 1977 this was particularly noticeable. Coincidentally, Song Thrushes have declined in numbers. No connection is being suggested between this and the increase in the Mistle Thrush numbers. There is no doubt however that the species is much less numerous than a decade ago. During early 1977 Cross-bills were exceptionally numerous in the Ae Forest and were breeding during March and April. Siskins were also present in large numbers in the same locality. In both cases this coincided with an unusually large cone crop on the Sitka Spruce trees.²

Acknowledgements and List of Contributors

The Writers must once again extend their sincere thanks to all their correspondents and contributors : There is no doubt that without their continuing support this article would not have reached an adequate conclusion. Particular mention should be made of Mrs N. E. Armstrong's work in the compilation of the species list from contributor's letters and notes.

T. Allan, TA; H. Amos, HA; T. Armstead, TAR; Mrs N. E. Armstrong, NEA; I. Cameron, IC; M. F. Carrier, MFC; L. T. Colley, LTC; Sir Arthur B. Duncan,

1. M. Marquiss; Nature Conservancy Council : Personal Communication.

2. M. Marquiss; Nature Conservancy Council : Personal Communication.

ABD; J. E. Forrest, JEF; Mrs A. R. Harding, ARH; R. H. Hogg, RHH; P. Hogg, PH; D. Irving, DI; T. Irving, TI; M. Johnstone, MJ; M. Marquiss, MM; J. Maxwell, JM; R. Murray, RM; D. Purdie, DP; T. Nisbet, TN; R. Roxburgh, RR; D. Skilling, DS; Mrs S. Skilling, SS; D. L. Sowerbutts, DLS; R. T. Smith, RTS; R. Stevens, RS; R. J. Tingley, RJT; and B. S. Turner, BST.

Slavonian Grebe. A bird of this species spent the summer at Lochmaben. NEA/RTS.

Black Stork. A bird seen near the Grange Farm, Tundergarth, was identified as belonging to this species : It flew off East and was later seen near Langholm. (recorded subject to confirmation by the **Rarities Committee**). HA/MJ/TAr.

White Stork. One in a water meadow at Marr Farm, near Marrburn on 1/5/77. Remained until 5/5/77 and was later seen near Penpont. ARH.

Bewick Swan. The last four birds of the 76/77 winter left East Park on 29/3/77. LTC.

First winter arrivals 22/10/77 : By 16/11/77 30 were present, which was the peak for the winter.

Whooper Swan. First arrival of the winter at East Park, 18/9/77. 13 arrived 2/10/77; 29 arrived 12/10/77. Maximum of winter being 59. LTC.

Bean Goose. Two with Pinkfeet at East Park. LTC.

Pink-footed Goose. As usual some lingered on until May. First arrivals of the winter were on 16/9/77. LTC. 1500 + wintering inland in the Spring and roosting on Castle Loch, Lochmaben. NEA/RTS.

White-fronted Goose. One juvenile with Greylag at Smallholmburn, Hightae, 9/1/77. NEA/RTS.

A single Greenland White-front was with Pink-feet at East Park, 7/3/77. LTC.

A European White-front was with Pink-feet at East Park. LTC.

Greylag Goose. Following the pattern of recent years, Greylags have been very late in building up their numbers though apparently plentiful further west. In November only a party of 30 frequenting Lochmaben area. Numbers in February/March were 2000 + NEA/RTS.

Snow Goose. A Snow Goose, wintering on the Solway with Pink-feet was at East Park 7/1/77. LTC.

Canada Goose. A Yorkshire ringed bird continues to be present with the Kinmount flock. The Kinmount flock of 90 was checked on 9/1/77. NEA/RTS.

Barnacle Goose. Last of the wintering Barnacle left 15-18/5/77 when flocks of 48 and 23 were present. A Greenland bird was with this flock, and it had been ringed on Inishkey Island (Co. Mayo).

The first of the returning Barnacles began arriving on 23/9/77 when 10 were seen.

300+ on 24/9/77.

800+ on 25/9/77.

1400+ by the morning of 26/9/77 (including the first white bird).

2500 by 29/9/77.

3000 by 2/10/77.

6800 by 2/11/77 (including three white birds).

Visible Migration

LTC.

Large numbers of Barnacles were observed flying South along the Norwegian coast on 24/9/77 and these included a white bird. A white bird was seen with a flock at Aberdeen on the next day and the first white Barnacle arrived at Caerlaverock on 26/9/77. LTC.

Also on 26/9/77 71 Barnacle were observed flying SW. over Applegarthtown, Lockerbie — the wind was from the NE. and had been so for several days. RTS.

1240 Barnacle were ringed at Spitzbergen and of these 194 were recaptured at Caerlaverock on 4/10/77. LTC.

Brent Goose. One with the East Park Pinkfeet, 17/3/77. LTC. A juvenile Light-breasted was with the Barnacle, 2/11/77. LTC.

Shelduck. Two inland on the River Esk at Canonbie. TI.

Wigeon. 500 at East Park 15/1/77. LTC.

Earliest inland winter arrival. One at Dalton on 18/9/77. NEA/RTS.

Gadwall. Seven at East Park, 5/3/77. A maximum of nine on 28/3/77.

Nine on 4/11/77. LTC.

Mallard. Duck with early young on River Esk at Langholm, 30/4/77. TI.

Pintail. The first winter arrivals, 13, were at East Park on 16/8/77. By 18/9/77 numbers had built up to 2000 which was the winter peak. LTC.

After one of the biggest floods Annandale has ever experienced Pintail came inland in large numbers : A maximum of 700 was recorded at Hightae on 16/11/77 and stayed until the flooded land was frozen over. NEA/RTS.

Garganey. A male at East Park 11/5/77. LTC.

Shoveler. Recorded in small numbers only. NEA/RTS.

Pochard. 67 on the Kirk Loch, Lochmaben, on 28/11/77 — a high number for this area. NEA.

Goldeneye. 100+ on the same flooded field as Pintail (q.v.) on 16/11/77. NEA/RTS.

Goosander. Continues to breed successfully. Up to 70 on Castle Loch, Lochmaben, in the spring.

[Honey Buzzard] A record requiring clarification.

Hen Harrier. Widespread winter records. No breeding reported.

Goshawk. Sightings appear to be more numerous. A pair were seen displaying in the county on 1/5/77, RHH; One flying over moorland in Langholm area, 27/3/77, NEA/RTS; One in different part of county, 11/6/77, IC; and an adult male seen on 8/10/77, RHH.

Sparrowhawk. The decline in the breeding population noted in recent years continues. MM.

Buzzard. Reasonably common and a successful nester : Six at Crairieshill on 8/10/77. ARH.

Rough Legged Buzzard. A wintering bird was seen at Coshogle on 25/1/77. PH. It is noteworthy that a bird of this species wintered in the same area in 1976 and that a dead specimen was picked up that spring.

Golden Eagle. One seen over forest ground near Langholm, 28/3/77, TI.

An immature bird was regularly seen feeding in the Menzies area during the summer. NEA.

Osprey. One at Raehills, 1/6/77, ABD; and an adult at Carnsalloch, 28/8/77, MM.

Merlin. Most of the regular breeding sites were occupied. One at East Park, 31/8/77, LTC.

One female at Caerlaverock, 16/1/77, RHH.

Peregrine. Has taken over one or two breeding sites which have not been occupied for many years, and generally shows signs of recovery. Some nestlings were unlawfully taken from their eyries.

An immature bird seen at East Park on 31/8/77. Regular sightings throughout the winter. LTC. One flying over at Kinnel Bridge, Lochmaben, 13/11/77. RTS.

Red Grouse. Appears to be some increase. TI.

Black Grouse. Fairly common in suitable areas.

[Red Legged partridge] All records are introduced birds : Some show characteristics of the Rock Partridge.

Partridge. Continues to show signs of increase.

Quail. One at Moniaive, 29/5/77, DLS; and one at East Park on 25/5/77, LTC.

Golden Plover. Numerous winter visitors — flocks of 1000 birds not uncommon. Many northern birds evident in the spring.

Grey Plover. 200 at East Park, Caerlaverock, wader roost on 30/8/77.

Lapwing. Sharp decrease in some breeding areas. Autumn maximum of 2000 seen at Heathhall Airfield, Dumfries. DS.

Sanderling. Uncommon on north side of Solway : A few late spring records.

Ruff. One at East Park on 9/8/77 and six on 16/9/77. LTC.

Black Tailed Godwit. Five at East Park on 29/4/77 and seven on 1/10/77. LTC.

Whimbrel. One flew over Locharbriggs, 9/5/77. MM.

One flew over Ae, 10/5/77. MM.

One flew over East Park, 27/8/77. MM.

Spotted Redshank. One at Caerlaverock, 30/10/77. RHH.

Greenshank. Reasonably common autumn migrant : Also a few overwintering.

One by river at Bellholm, 4/2/77. MM.

Two by river at Hightae, 15/3/77. MM.

Two in flooded field near Hightae, 16/11/77. NEA/RTS.

Green Sandpiper. Single observations at East Park during July and August. LTC/MM.

One at Bellholm, 23/8/77. MM.

One wintered at Kingholm Quay (again). TN.

Wood Sandpiper. One at East Park, 26/9/77. LTC.

Common Sandpiper. The following are the earliest reported arrivals :—

Canonbie, 18/4/77. TI.

East Park, 29/4/77. LTC.

Arkland Bridge, 30/4/77. ARH.

Great Skua. One at Browhouses, 4/9/77. MFC.

Kittiwake. First winter bird at East Park by 4/9/77. LTC.

Common Tern

Arctic Tern

The usual inland records refer mainly to the Common Tern.

Black Tern. Three at Castle Loch, Lochmaben, 25/8/77, and a single bird on 26/8/77. NEA/RTS.

Cuckoo. First heard at East Park on 24/4/77, LTC, and at Langholm on 26/4/77, TI.

Barn Owl. Reasonably common throughout most of the county. (breeding).

Long-eared Owl. Breeding in suitable areas.

Short-eared Owl. Less plentiful but still frequently seen where there are good vole numbers.

Swift. Arrival dates :—

Glencartholm, Langholm, 30/4/77. TI.

Eaglesfield, 1/5/77. TI.

Dumfries, 3/5/77. DS.

Lochmaben, 6/5/77. NEA/RTS.

Kingfisher. Regular winter sightings : Breeding success continues.

Roller. A Roller feather was found on a path in Ae Forest — freshly moulted. (Identified by comparison with museum skins). MM/RR.

Green Woodpecker. Some indications of a slight increase.

Sand Martin A single bird at Canonbie, 17/4/77, was the earliest record. TI.

Swallow. Arrival dates. Lochmaben, 15/4/77, (TA, and 17/4/77, NEA : Widespread by 20/4/77.

Departures — Four from East Park on 16/10/77. LTC.

House Martin. Arrival date — One at Langholm on 20/4/77, TI; widespread by 1/5/77.

Tree Pipit. First summer record was at Woodside, Scaur Glen, on 28/4/77. ARH.

Observed passing over daily 26-31/8/77. MM.

Yellow Wagtail. One at Canonbie, 17/4/77, RM.

Two at East Park, 1/5/77. LTC.

Blue-headed Wagtail. A female at East Park, 7/5/77, LTC.

A male at East Park, 8/5/77, LTC.

White Wagtail. Four at Canonbie, 17/4/77, RM.

Waxwing. Unusually only one record at Lockerbie on 29/11/77, RS.

Black Redstart. One at Carronbridge. 6/2/77, JM.

One at Glencaple, 27-29/10/77, DI.

Redstart. Appears to have been a slight increase over previous years.

A late bird seen at Applegarthtown, 21/10/77, RTS.

Whinchat. First summer record at Langholm, 8/5/77, TI.

Stonechat. Increase maintained.

Wheatear. First recorded at Wamphray Glen on 12/3/77, NEA/RTS.

Additional records at Keir, 17/3/77, BST; Dalveen Pass, 20/3/77, BST; and East Park, 20/3/77, LTC. Thirty observed at Arresgill, Langholm, on 31/7/77. TI.

Ring Ouzel. Appears less common.

Earliest record at Tarras on 26/3/77. TI.

Fieldfare/Redwing. After rain all day on 12/10/77, with wind from the South-east, large numbers arrived overnight 13-14th October.

Song Thrush. Has notably declined in recent years.

Mistle Thrush. A marked increase in numbers continues — particularly obvious by end of year.

Grasshopper Warbler. More scarce than usual.

Sedge Warbler. Earliest record — 1/5/77 at East Park. LTC.

Whitethroat. Slight increase in some areas.

Blackcap. Earliest record at Jardinehall on 26/4/77. NEA/RTS.

Appears more numerous — many singing males.

Wood Warbler. Met with in usual habitat.

Chiffchaff. First recorded at East Park on 18/3/77. LTC.

Additional records at :—

Dalton & Dormont, 25/3/77, NEA/RTS.

Canonbie, 29/3/77, TI.

One singing at Georgetown, Dumfries, on 27/9/77, TN.

One wintering at Heathhall, 20/12/77, SS.

Willow Warbler. First recorded at Jardinehall on 24/4/77. NEA/RTS.

First recorded in the Scaur Glen on 24/4/77. ARH.

Pied Flycatcher. First seen in the Scaur Glen on 28/4/77. ARH.

One male and two females at Glencarholm on 28/4/77. TI.

Willow Tit. 15-20, a large number for this species, by the Nith at Enterkinfoot, 25/2/77. PH.

Great Grey Shrike. One at Ae Forest, 6/2/77. JEF.

One at East Park, 12/2/77. LTC.

One at Eskdalemuir, 12/10/77. MM.

One at Ae Forest, 20/10/77. MM.

Magpie. Scarce but with some breeding success — extremely local.

Raven. Showing some signs of recovery.

Brambling. A male at Applegarthtown, 18/10/77. RTS : Numerous by 16/11/77.

300+ at Gretna on 31/12/77. TI.

Goldfinch. Remarkable increase in numbers.

Siskin. Extraordinarily large numbers in Ae Forest during March and the first half of April.

MM.

Twite. 70 on the merse at Caerlaverock on 20/1/77. LTC.

50 at East Park. 6/3/77. LTC.

Crossbill. Large numbers in Ae Forest : Some breeding in March/April. MM.

Hawfinch. One at St. Anns, 1/10/77. DP.

Snow Bunting. White Coombe, 26/2/77. RJT.

One at Arresgill, Langholm, 18/9/77. TI/RTS.

Corn Bunting. A wintering peak of 21 at East Park on 24/1/77. LTC.

THE GOLD LUNULA OF AUCHENTAGGART

by

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One of the more interesting of the international Provincial groups of lunulae, the Auchentaggart collar portrays all of the typical characteristics in its shape, application and use of motifs, while displaying an independent attitude in its overall composition of its decoration. It has the added fascination of imperfection, displaying human error and the struggle to correct it in the lower zone of its left horn decoration.

Found while ploughing, apparently folded together and rolled in a ball, it was restored to its present condition before its depiction in Anderson (1866, 223). All possibility of recovering its archaeological context was obliterated by the circumstances of its early discovery. Only Anderson's account remains as our primary source. Additional information, however, from a study of the collar itself and with lunulae as they are understood at present will assist in the interpretation of Early Bronze Age society in Scotland.

The General Setting :

Provincial lunulae comprise one of three lunulae groups : Classical, Unaccomplished and Provincial (Taylor, 1970). Found only outside Ireland, the apparent homeland of the Classical gold collars, the Provincial lunulae are typified in their construction by heavy sheet, hooked terminals and a preference for simple Beaker motifs hammered boldly into the sheet's surface, regardless of whether the collars were discovered in Scotland, Cornwall or Brittany. The Auchentaggart lunula displays all three features, but has an independence of its own displayed within the confines of the general art style practised by the Provincial group.

For all gold lunulae, the associated evidence usually requisite to place an artefact within its archaeological context is largely absent or indeed so sparse that other methods of placing these ornaments within their social setting must be applied such as art historical techniques. Presumably this difficulty of direct archaeological association results from the social use of these collars. Lunulae are not found in funeral contexts, in fact, direct avoidance seems to have been practised. Of the seventy-two instances where either location or some mention of the condition of discovery is known, only *seven* are tentatively attributed to burial mounds or their environs and *not one* has been established with any degree of certainty as having been associated with or in a grave. Therefore, their precise use in society continues to elude us, but two interpretations seem more plausible than any other. The first is that some form of communal ownership either by the society at large or by a smaller group within it such as a ruling family or central religious group was practised. This would place an individual as the wearer of the collar, but not as the personal owner. It would symbolize a rank or badge of office held within the society presumably by an elite member of the group. If the group was

small within the society, the person's successor would receive or have bestowed upon them the collar when their predecessor vacated the office either at death (inheritance) or by retirement. The other interpretation would again involve communal ownership but the recipient would be a statue or merely an object held as a badge but never bestowed. The support for this latter 'model' is the general pristine condition of the collars, and the less than precise decorative quality and workmanship of more than two-thirds of these collars, all of which lie outside the Classical group. All of the Unaccomplished group fall into this poorer class and some Provincial can be placed there too, but *all* from the two groups in general terms and presumably with a physical distance imposed upon the audience would give the same reflective qualities and impression as that produced by the more precisely crafted Classical collars. One can therefore presume that these collars performed their function effectively in their prehistoric setting, whether perfect or not, as the greatest volume of gold remaining for us to study today, is composed of this less spectacular group, having escaped from earlier melting down and re-use. It is the author's opinion, however, that the former model is to be preferred because the full reflective power of the collar would be enhanced by an individual's movement as he processed through whatever ceremony accompanied the wearing of the collars.

The dating of complex-bored spacer-plate necklaces will be discussed later, but the possible sequential development from gold collar to necklace has implications here. If the necklace did derive from the collar, the inclusion of jet and amber complex-bored spacer-plate necklaces in graves implies the gold collars would also be worn by individuals. The exaggerated care with which a ceremonial collar might be kept in a prehistoric society might account for its pristine condition, but on the other hand, the necklaces may be the less valued material awarded to a deity's representative on earth while only the deity (or his idol) would be entitled to the collar. This latter suggestion does not, however, fit the chronological development of these crescentic ornaments.

The art historical evidence quite firmly places the lunulae within the Beaker period of the indigenous British Early Bronze Age. By tracing the frequency of lunulae motifs in relation to the popularity of the motifs displayed by them on other objects, for example, the funerary pottery of the British Late Neolithic and Early Bronze Age, there is little doubt that the majority of the motifs decorating all three groups of collars had appeared prior to or during the earliest phases of D. L. Clarke's British Beaker period. After their initial appearance in earlier Clarke phases, many of which were pre-indigenous according to his scheme, most of the motifs among the Irish Classical group correspond to what one might consider to be their period of greatest popularity on the Beakers, which was during the first three phases of Clarke's indigenous Northern group. This may provide a relative dating scheme for the Classical group of lunulae, but it forms a different pattern to that found for the Provincial. Perhaps the international distribution of the Provincial lunulae across several regional Beaker groups gives it a conserving simplicity more suitable to international tastes. The selection from the

Beaker 'motif library' of Provincial motifs not only represents phases established in the earliest of Beaker contexts and well prior to regional groups, but it also shows a conscious choice of motifs enjoying a long lived popularity over a broad geographical area suggesting the constraint and simplicity shown was intentionally aimed at universal usage within the pan-European area at any time. This simplicity of ornament motifs as well as the common shape shows a continuity between the highland zones of Britain and the Continent and in particular, with Brittany, which may not indicate an earlier date for the Provincial group over that for the Classical, but rather a de-centralized preference for simple dot-line or linear ornament outside of Ireland. Although fierce attacks have been launched against D. L. Clarke's Beaker typology, there is little doubt, despite the still too few radiocarbon dates, that the chronological sequence for the funerary wares of the Late Neolithic and Early Bronze Age still observes the sequence of Beaker pottery before that of Food Vessel, biconical urns or collared urns. Until this sequence alters, the lunulae belong to the Beaker period.

The specific associations which support this Beaker connection are an early form of copper or bronze flat axe found with the two Harlyn Bay lunulae (one Provincial and the other Classical in type). Stuart Needham believes the Harlyn Bay axe to be one of the earliest types, which supports the pre-Wessex and Food Vessel date placed on lunulae and the association of Provincial with Classical demonstrates that there was overlap of the two types of lunulae. The connection of the Orbliston, Morayshire, lunula with the basket earring burial is much more tenuous. There is no obvious connection with the earrings to that of the lunula as the latter was found while tipping railway ballast into place. The ballast did come from the make-up of the mound which contained the Beaker burial with the basket-earrings, but as stated earlier, it is unlikely that any lunulae would be found used as grave goods. The prominence of the mound as a focal point in the landscape makes it equally likely that it would be chosen for remaining through time if a temporary deposition needed reclaiming at some future time rather than permanently committing it to a grave within the mound. These two instances, Harlyn Bay and Orbliston, are the only associations which might provide a means for contemporary cross dating. Apart from one lunula from Newton, Co. Cavan found in an oak box, every other association has been with gold either as other lunulae, or with scrap (as in the Kerivoa, Côtes-du-Nord hoard) or in an extreme case, as a small fragment of scrap lunula found with ribbon torcs at Largatreany, Co. Down. This latter instance was so obviously scrapping of an object that had outlived its use that no relative dating should be implied from this association.

The Craw typology of 1929, where he suggested that jet necklaces with complex-bored spacer-plates gave rise to the lunulae, needs to be turned around on art historical grounds. The elaborate motifs found on many spacer-plates, such as those found at Torr Scriobhaidh, Balblair, Edderton, Ross; Mountstuart, Bute-shire; or Archcheargary Burn, to name but a few, all show very developed late motifs more common to D. L. Clarke's 'final' Beaker phases or are even more at home among the Food Vessel pottery. This twilight area between 'final' Beaker

and Food Vessel is at present being examined by the author and D. D. A. Simpson, and it is hoped will shortly be completed. It is, however, possible to state on the evidence of presently well known associated finds that jet complex spacer-plate necklaces and those of amber from Wessex graves are post-Beaker in its purest usage. These necklaces could extend into the 14th century B.C., or even into the 13th century B.C., on the grounds that the Knowes of Trotty, Orkney, discs associated with a re-used amber spacer-plate cut into triangular beads represents a re-use of a spacer-plate that post-dates its usefulness and thereby would post-date the traditional 1500 B.C. placed on the Wessex *rich* graves. The Knowes of Trotty discs also tightly group on the basis of their metal analyses with the hilt bands from Skateraw, East Lothian; Newton of Collessie, Fife; Blackwaterfoot, Arran; and Topped Mountain, Co. Fermanagh. The hilt band from the Topped Mountain cairn was associated with an Irish Food Vessel vase. These interlinked associations all point to a much more cohesive interaction among regions within the British Isles in this Food Vessel/Wessex period than previous attention admits, but which are discernable as in existence as early as the pure Beaker period.

The Auchentaggart lunula and its manufacture :

This beautiful example of the international Provincial type with its heavy sheet, hooked terminals and bold decoration gives an almost circular impression in its overall measurements. (*Plates XIII, XIV and XV*). It is externally 22.4 cms across by 22.9 cms in length including the terminals and internally 15.2 cms across by 14 cms from its right terminal or 12.6 cms from its left, damaged terminal to the inside of the collar. The asymmetrical nature of its dimensions do *not* seemingly result from modern damage. The join on the right horn of the crescent by a modern goldsmith appears not to alter its original shape or any of its decoration. The lapped perforations on the damaged left terminal, however, are suggestive of perforations found on the Castle Treasure, Co. Cork Beaker disc, where it was secured around its edge presumably during its ancient use. (More than one Beaker disc shows evidence of attachment by stitching around its edge, and one can but assume that the discs were permanently fixed to a backing, perhaps on the pectoral area of a leather jerkin or some similar article of clothing). In the case of the Castle Treasure disc, the lapping around the holes is not consistently in one direction as they are on the Auchentaggart terminal. This suggests that a bronze needle may have been used on the disc, although no such evidence survives, but in the case of the terminal,^a a bronze awl would have needed to punch through the heavy sheet with considerable force.

The decoration, too, would have needed substantial force to have impressed it as cleanly as we find it today. Engraving is unknown from this period, so all lines and dots would have been hammered or punched into place. The hammer strokes can be seen along the outer collar border by the faulty motif panel on the right horn (see arrows), but more clearly the staccato effect within this panel and the one directly above, belies the fact that the technique was not engraving, but one of hammering a chisel along the sheet to form the grooves. This chisel has yet to be recovered from a metal working assemblage of the Early Bronze Age, but the

Orbliston lunula and others demonstrate even more clearly that such a technique was standard practise in decorating these gold collars.

The awl or punch which produced the dots and lop-sided diamond impressions would not have been the same tool that produced the grooved lines. But there is probably a third tool, if not possibly even a fourth, involved in the actual decoration of the horizontal panels and infill decoration around the collar's border. The tool which produced the cross lines on the collar's outer border, creating an extended chequer board pattern, appears to give a thinner, narrower impression than the one that produced the dentition (VVVV) motif in the panels across the horns. Yet it could be a factor of the hardness of the blow that was struck upon the same tool; the collar border receiving a series of lighter blows than those used on the angled tool producing the dentition on the panels. The impression of the tool that produced the slanted dentition strokes suggests it was capable of shorter strokes when held at a more upright angle, which can be seen in the lowest zone of the badly executed panel. Although one might postulate that these short strokes were an attempt at well-controlled cross-hatch, which then deteriorated into dentition, the use of cross-hatch on Provincial lunulae is uncommon. However, the great variety of motifs, making the Auchentaggart unique among the Provincial group, does not exclude the use of cross-hatch. Nevertheless, it is appropriate to consider the relative ease of executing some of these motifs, where a misplaced chisel stroke can confuse the interpretation of an entire motif, before discussing this uncommon expression of individuality. More than once, especially on Auchentaggart's left horn, the inaccurate registration of the dentition to the horizontal guide lines, immediately causes confusion over what combination of lines goes with what dentition, and ultimately what motif the craftsman intended.

In D. L. Clarke's scheme of Beaker motifs and on those correspondingly found on lunulae, the relation between dentition and line is critical for discerning four quite discrete motifs, and when studying a piece in the hope of arriving at some form of relative dating through art historical methods, the perfect registration of the various components of a motif zone are necessary. Here, on the left horn, this goes awry, and one must avoid the danger of reading too much significance into the unintended variations. It is the author's opinion that the lack of control and error on the left horn may be as much a product of the craftsman suffering from a right handed dominance, which inhibits his decorative technique as one of intentional cerebral over-exertion in the elaboration of motifs. Upon examination of the overall composition and execution of the right horn, which is in keeping with the well established constraints and symmetry dictated by the Beaker art style, it seems likely that his ambitious use of multiple motifs caused him to over reach his ability to execute the left panel. This thereby led him to violate the symmetry he needed to achieve on this, the opposing horn, for the mirror imagery required to be in keeping with this principle adhered to in Beaker art.

The composition and sequence of execution on the entire Auchentaggart lunula supports this view of human error. The border outline of the collar was executed first, at least sufficiently for the lines to form the limits of the horizontal

panels. The right horn was first executed, presumably because it was the most comfortable for the craftsman to decorate. As stated, it shows great care in its composition, conforming to all aspects of the Beaker art style. The left horn was then decorated from top to bottom. It was here that trouble began. By the second panel, the craftsman appears in difficulty, probably because he was awkwardly working with his tools. The tilt of this panel suggests he was not correctly positioned to align it with that on the opposing horn. The third or bottom panel magnifies the wrong angle and he tried to correct his exaggerated slope by incorporating extra 'levelling' lines around the portion in error that was indelibly in place. Lines were also added to the middle panel, but this is less obvious, the result, however, was the loss of symmetry with twelve lines in the left mid-panel to nine in the right and thirteen in the lower left panel to eleven in the right. His choice of motif was then altered to disguise the errors; and registration within the two principal panels of the left fails, causing the result more commonly found on Unaccomplished than on Provincial lunulae. That is to have two opposing horns failing to correspond within themselves and to each other. Perhaps his mental control and patience was weakening as he continued to work the left horn as the correlation between the two horns lessens as he progresses, and he finishes with little of the careful planning he demonstrated he could produce on the right horn.

The cerebral side of this craftsman's work is amply represented in his adventurous use of many motifs not common to other lunulae, and in some cases not common to British, but present on Continental beakers. (In no way do I wish to suggest that the artist was *not* British because he employed many non-British designs. Many of these Beaker motifs may have been carried on work now lost to us, and which were originally made from leather, wood or other types of perishable material). The use of the elongated chequer-board motif around the outer border of the collar is present in the Beaker motif group of the Pyrenees but not often found on British beakers. The cross-hatch, if indeed it was attempted on the right horn in the two major panels and again on the middle panel of the left horn, is not commonly found on Provincial lunulae. It is, however, a very common motif internationally among Beaker groups and is to be found on Classical lunulae. The artisan's efforts extend to three different motifs using dentition on the right horn and two additional ones on the left (Taylor, 1970, Pls. XIII : 14a, 16a&b; XIV : 4a, 5d). Double horizontal lines are employed to create voids within the panels as though simulating the border outlines, a further extension of enforcing the Beaker preference for symmetry. The short vertical lines on the lower panel on the right horn are presumably yet another motif, and throughout the entire collar the effective use of dot-in-line motif occurs. Again whether this derives from the barbed-wire motif found on late Rhineland beakers is a debatable, but possible origin. In all, one finds at least eight motifs common to beakers and other lunulae worked into the panels and collar border of this lunula. The result is a lunula with the same reflecting areas common to other Provincial, Classical and Unaccomplished collars, but which has been achieved by a more ingenious use of multiple designs than found on other Provincial lunula and at no expense to its general

effectiveness but at cost to its perfection. If anything, the use of the dot-on-line motif has served to define the panels and make them more pronounced from a distance.

Conclusion

The Auchentaggart lunula is unique to the international Provincial group, displaying all the traits of heavy sheet, hooked terminals, bold decoration in the usual dentition, punched dot-on-line and linear motifs, but it goes beyond that by displaying unusual compositions of motifs uncommonly found on Provincial lunulae but still in keeping with the Beaker 'motif library'. The adventurous experimentation of the craftsman may have been stimulated by error but in part his composition of the right horn belies an ability for thinking that out-weighs his skill as demonstrated by an awkward handling of his tools through the impressions found on the left horn. If he had limited his choice of motif to the more conservative Provincial group, he might have achieved a more perfect lunula, but one far less interesting and informative for the prehistorian.

The placement of the Auchentaggart lunula within the Early Bronze Age is, along with other lunulae, properly in the pure Beaker period. Lunulae in general were probably the result of integrated contact between broader regions within the British Isles than previously recognized, but linked by the Hiberno/Scottish axe trade. Presumably the earlier standardization of 10% tin in bronze, which was perfected by British Beaker metal workers ? initiated this linkage, and the lunulae may be earlier in the pure Beaker period than at present one is able to say. The quantity of little more than one hundred lunulae remaining today suggests a relatively short duration for their popularity unless communal ownership extended their usefulness through time by making them treasured heirlooms for several hundred years. Nevertheless, these lunulae by their volume greatly tip the scales to make the British Isles the centre of the Golden Age of the Beaker world, and to this study of early technology, the Auchentaggart lunula makes a substantial contribution.

Acknowledgements

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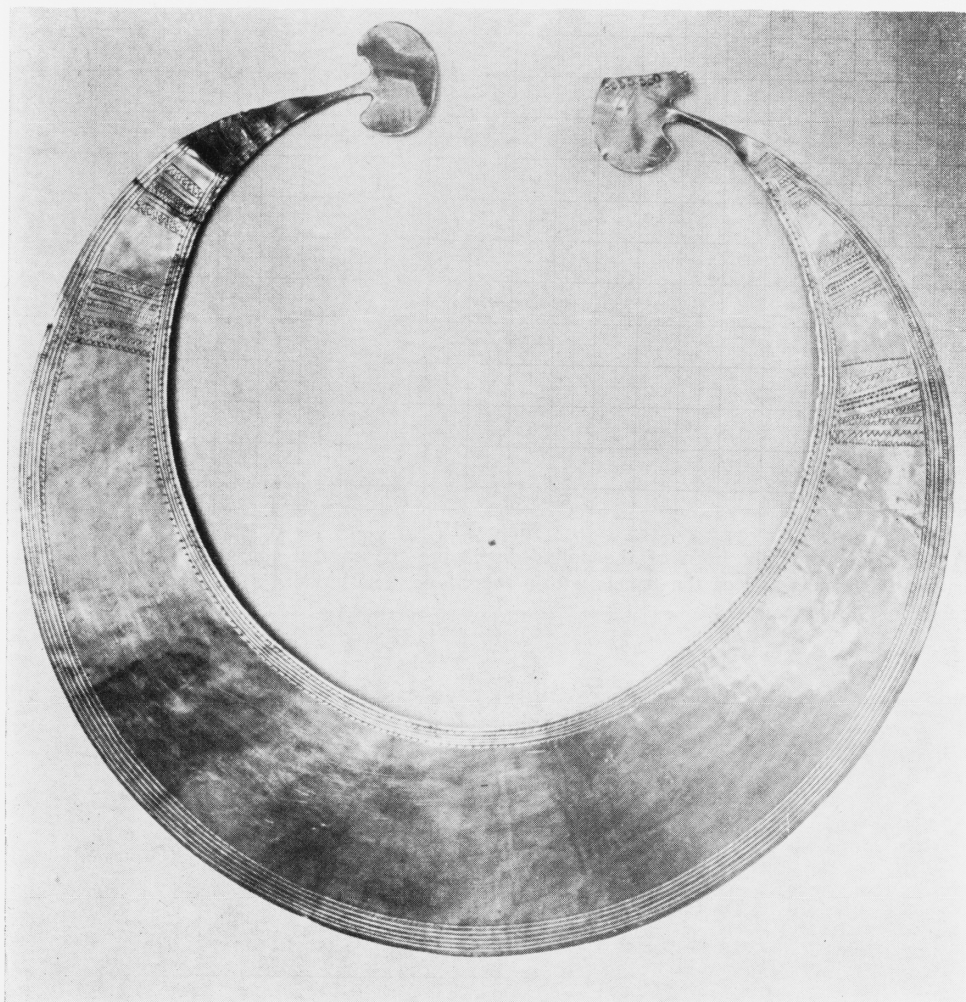


Plate XIII

General view of the Auchentaggart lunula, (NMAF FE3), displaying the international Provincial traits of heavy sheet, hooked terminal and bold ornament. The impression of a reflective surface on the central collar with the cross panels on the horn, giving a different texture, is similar to all other lunula and to the spacer-plate necklaces of jet and amber.

Photograph by J. J. Taylor

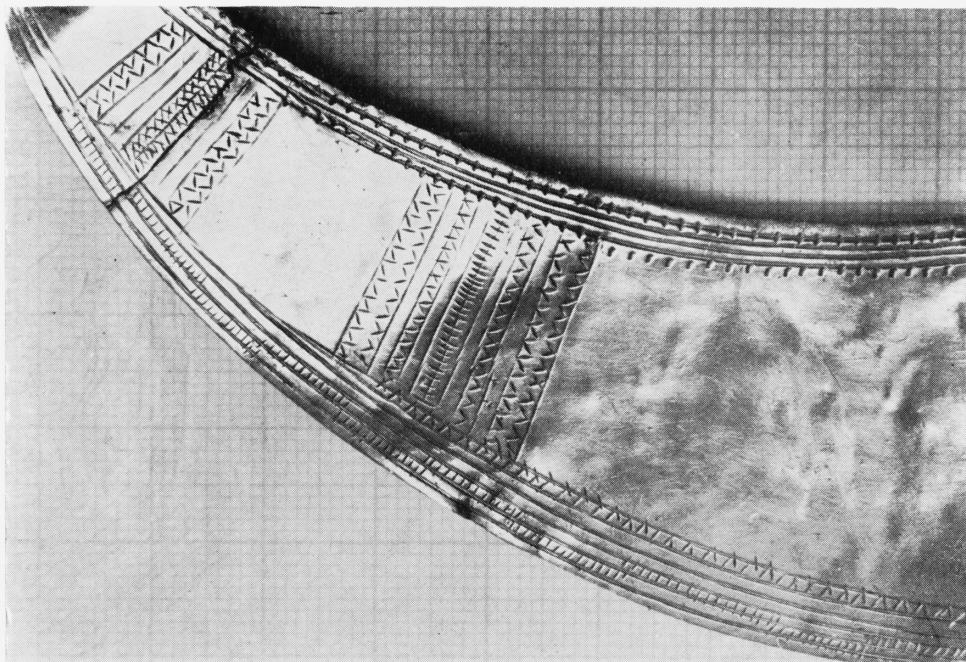


Plate XIV

A detail of the right horn of the collar displaying the careful composition of the motifs within the panels and of the panels within the whole. The modern mend can be seen in the centre of the upper panel.

Photograph by J. J. Taylor

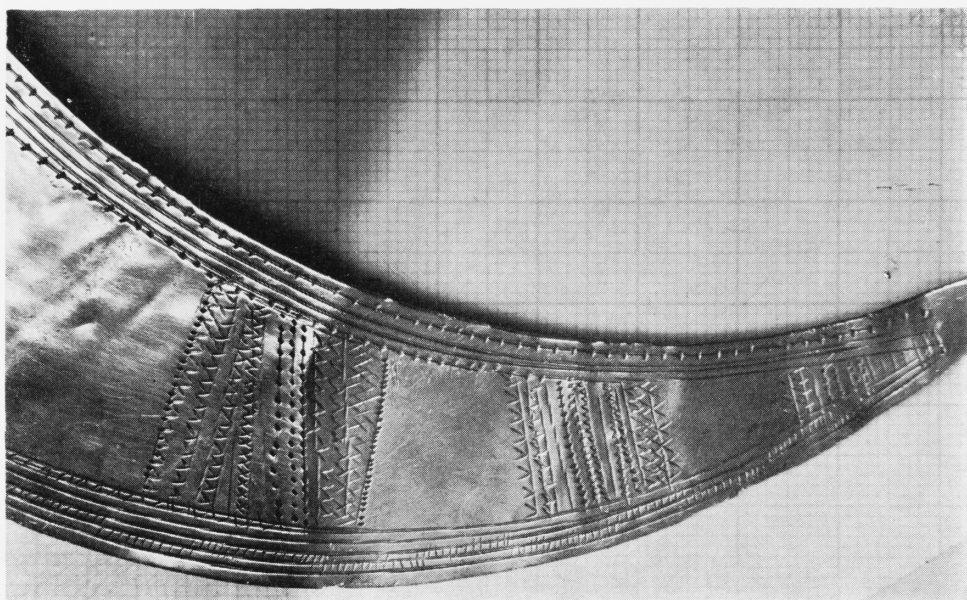


Plate XV

A detail of the left horn showing the progression of decoration and how it ran into difficulty in the mid-panel, culminating in total error in the bottom panel. Arrows indicate the hammer impression.

Photograph by J. J. Taylor

THE SILVER CHAIN FROM WHITECLEUGH, SHIELDHOLM, CRAWFORDJOHN, LANARKSHIRE

by

Isabel Henderson

The massive double-linked silver chain from Whitecleugh is an object of unique significance for Pictish studies (Pl. I). It is one of a group of ten recorded chains of a type found only in Scotland, and is one of the two examples that have terminal rings on which are engraved and red enamelled characteristic Pictish symbols.¹ Because of these symbols the chains have generally been regarded as



Fig. 1 Double-linked Silver Chains

Caledonian Canal, Inverness-shire; Parkhill, Newmachar, Aberdeenshire; Nigg, Kincardineshire; Whitecleugh, Crawfordjohn, Lanarkshire; Walston, Lanarkshire; Traprain, East Lothian; Haddington, East Lothian; Hordwheel, Berwickshire; Lauder, Berwickshire; Greenlaw, Berwickshire (lost)

1. The chains are fully described in a series of articles in *Proc. Soc. Ant. Scot.* : X (1872-74) 327-35; XIV (1879-80) 174, 222-4; XV (1880-81) 64-70; XXIX (1894-95) 209-10; LXXIII (1938-39) 326-7; LXXXVIII (1954-6) 228-30.

being Pictish in manufacture. As Pictish remains go, one might suppose the chains to be comparatively straightforward but this is not so. Indeed the chains are typically Pictish in having many obscurities and ambiguities associated with them. The purpose of this note is to point out what sort of information the chains provide and where the difficulties of interpretation lie. In these matters the Whitecleugh chain plays a central role.

The first and most glaring difficulty is the geographical distribution of the chains (fig. 1). The map shows that all but three were found to the south of the Forth-Clyde line, the political boundary of the historical Picts which was certainly in force by 600 A.D. It is usually said that the chains must have been taken from the north as loot by invaders, or that Picts left them behind when raiding in the south. Probability perhaps favours the first explanation. It would only have been on very special occasions that the Pictish army donned precious insignia and of course it is perfectly possible that the chains, which all seem to have been somewhat short, were worn by women, or employed in some ceremonial quite unconnected with military personal adornment.² On the other hand whatever their exact use heavy silver chains would always be attractive to looting invaders. Other explanations for the nature of the distribution of the chains are possible. Six of the seven southern chains are found within the lands between the estuary of the Forth and the River Tweed. The most natural interpretation of the map would be that this area of concentration represents the area of manufacture, and that the other four chains, including the Whitecleugh chain, were outliers. The question would then have to be put whether the chains were truly Pictish at all. We know that not all chains had symbols on their terminal rings. Three chains, Hordwheel and Whitlaw Farm, Lauder, in Berwickshire, and Walston in Lanarkshire, have plain terminal rings.³ Could the chains then be British or English and the Picts be the looters who later placed their marks of ownership on them? The Whitecleugh chain is important here for it is patently a southern chain that was in the hands of Picts at some point. Are its symbols as exotic as the symbols on the rock face at Anwoth in Kirkcudbrightshire?

Yet another explanation for the distribution could be that the southern chains belong to Picts settled on the other side of the Forth. That there were mixed British and Pictish tribes on either side of the Forth is very probable, particularly in the sixth century or earlier, and some writers accept this as a possible date for the chains.⁴ If the purpose of the chains was not only to display symbols then the symbol-bearing terminal rings may belong to chains of a later date. Putting symbols on terminal rings may have been as innovatory as putting them on stones.

At present, given the small number of chains and the even smaller number of terminal rings it is probably wisest to assume that the chains are Pictish. The lack

2. One suitable military occasion would have been the epic attack made by the King of Gododdin against the English about the year 600. The contemporary poem devoted to the expedition reveals that Picts joined the British force and one of them is described there as 'wearing a gold torque'. K. Jackson, *The Gododdin* (Edin., 1969) 103. The evidence for the use of chains as a sign of nobility in a British context has been brought together in J. A. Smith, *Proc. Soc. Ant. Scot.* X (1872-74) 335-338.

3. The magnificent chain found in digging the Caledonian Canal had a terminal ring that failed to reach the National Museum with the chain. It is not recorded whether or not it had symbols on it. *Proc. Soc. Ant. Scot.* X (1872-74) 328-30.

4. Charles Thomas, 'The Animal Art of the Scottish Iron Age and its origins', *Arch. J.* CXVIII (1961) 44.

of chains in other British or English contexts, the aesthetic excellence of the chain symbols, which give no sense of being secondary features, and above all the relationship of the Whitecleugh symbols to designs on the important silver pieces found buried in Norrie's Law in Pictish Fife, support this traditional view. The number of chains found in the south-east of Scotland, so far without symbols, remains a puzzle, however, and if more were to be found there one might have to reconsider seriously the Pictish provenance for the chains. My own speculation is that the distribution of the chains could reflect the political situation in the second half of the seventh century when the English invaded and occupied southern Pictland. The occupation, which lasted for a generation, would certainly have provided ample opportunity for the wholesale removal of precious Pictish regalia by forces based to the immediate south of the Forth estuary. This troubled time for southern Pictland would also provide a context for the hiding of the silver in Norrie's Law.⁵

Since all the chains lack specific archaeological settings they have to take their date from the symbol stone series. At best, this could not be very precise for the symbol stones were erected over a long period. Nor is there yet a generally accepted date for the start of the symbols. Some writers believe that the developed Hiberno-Saxon style, typified by the illuminated pages of the Gospel Book of Durrow, preceded the creation of the symbols. If this is so, then the earliest possible date for the erection of the stones is the late seventh century. Others, including the present writer, believe that the art of the symbols is independent, and indeed an early component of that style, and if this is one's view, then a date any time before the mid-seventh century is possible for the erection of the stones.⁶

It is well known that the double disk and Z-rod symbol on the Whitecleugh terminal ring closely resembles the version of that symbol on the two leaf-shaped silver plaques which form part of the Norrie's Law hoard (Pl. I and II). The date of the assemblage and deposition of the hoard has always been an important factor in arguments concerning the date of the Pictish symbols. Crucial is the dating of two handsome hand-pins in the hoard, one of which has a single disk and Z-rod engraved on its reverse. Unfortunately just as there is disagreement about the relationship of the Pictish symbols to the *Book of Durrow* so there is disagreement about the date of these pins. Robert Stevenson, who has made the closest studies of Pictish metalwork, has pointed out that the symbol on the pin was engraved on the back of the head before the pin was attached. This is a curious fact but one which links the symbol firmly with the date of the manufacture of the pin. Superficially the pin with the symbol looks like a twin of the other large pin in the hoard but Stevenson has shown that it is much less worn, and that there are significant decorative differences that suggest that the symbol-bearing pin is an inferior and

5. For the circumstances of the discovery of the hoard see J. Anderson, *Scotland in Early Christian Times (Second Series)* (Edin. 1881) 34-42.

6. For the late dating of the symbols see most recently, R. B. K. Stevenson, 'The Earlier Metalwork of Pictland in *To Illustrate the Monuments* (London, 1976). For an earlier date, see I. Henderson, *The Picts* (London, 1967) 115-127. For a very early date, see Charles Thomas, 'The Interpretation of the Pictish Symbols' *Arch. J.* CXX (1963). In my Rhind Lectures for 1976-77 I suggested that the symbol stones were erected on analogy with the Christian grave-marker, though not necessarily for the same purpose, from the first quarter of the seventh century. That the symbols existed on some other media before going on stones seems highly probable. In the Rhind Lectures I suggested that some features of the designs looked like two dimensional renderings of repousse metalwork appliques.

possibly therefore late copy.⁷ He points to devices on the edge of the superior pin which can be related to those on escutcheon edgings on the large hanging-bowl in the Sutton Hoo treasure and on this basis dates it to the early seventh century. The imitation he feels could then belong to the late seventh century.⁸ Other writers however, date the pin with the symbol to the sixth century, taking the date of the symbols in general with it to that early date, and also, by implication, the silver plaques with the double disk symbols so close in design to those on the Whitecleugh chain.⁹ It is clear that a great deal depends on the imitation theory. Such an assertion — particularly the length of time involved — can never be proved but the unevenness of wear and the decorative differences certainly suggest that the pins are not a pair and were not made at exactly the same time. The necessary similarity in date for the symbol-bearing pin and the plaques is less acceptable. As will be demonstrated later, it is likely that the pin symbol is considerably later than the symbols on the plaques and the Whitecleugh chain. However, Stevenson's view that the symbol-bearing pin is an imitation releases it from the normal hand-pin chronology and the probable date for the deposition of the hoard can provide the only terminus for the date of its manufacture. Professor Thomas feels that a deposition before 600 A.D. accounts most satisfactorily for the nature of all the pieces in the hoard.¹⁰ Stevenson, endorsing Anderson's view that the art of the plaques is comparable to the art of the Lindisfarne Gospels, argues for a date around 700 which fits with his date for the imitation pin. Stevenson sees the beast's head symbol as 'typologically very close to the Lindisfarne dogs' and most probably derived from them.¹¹ The present writer, however, accepts his 'less likely alternative' that the Lindisfarne dogs are in part due to Pictish influence. It seems much more probable that the naturalistic features of the vigorous animal art of Pictland contributed to this aspect of the Lindisfarne repertoire than that the Picts extracted animal heads from a Hiberno-Saxon manuscript and proceeded to turn them into symbols of widespread social significance.

In an important early study Mr Stevenson showed clearly that the internal decoration of the Pictish crescent symbol had an early complex design which later was simplified, misunderstood or abandoned.¹² That the deviations came after and not before the standard design is proved by the nature of the internal enhancement of the crescent on the later symbol-bearing cross slabs. Following Mr Stevenson's principle I showed that the same move away from a standard design could be traced in other symbols.¹³ With this in mind it is at once possible to say that there is high probability that the Whitecleugh terminal ring was engraved at a time when the symbol designs were fully established and indeed were beginning to depart from the classic forms. The late symptoms are as follows : spiral infillings for the double

7. R. B. K. Stevenson and John Emery, 'The Gaulcross Hoard of Pictish Silver' *Proc. Soc. Ant. Scot.* XCVII (1963-64) 206-11.

8. 'Earlier Metalwork of Pictland', 248. This date would fit with the conjecture above that the period of the English occupation of southern Pictland affords a context for the burial of the silver, the late pin being virtually unused at the time of concealment.

9. Elizabeth Fowler, 'Celtic Metalwork of the Fifth and Sixth Centuries A.D.' *Arch.J.* CXX (1963) 129.

10. 'Animal Art of the Scottish Iron Age' 44.

11. R. B. K. Stevenson, 'Pictish Art' in *The Problem of the Picts* (Edin., 1955) 110.

12. 'Pictish Art', 101-106.

13. Isabel Henderson, 'The Origin Centre of the Pictish Symbol Stones', *Proc. Soc. Ant. Scot.* XCI (1957-8) 44-60.

disk symbol are exceptional on Class I stones; the Z-rod is sharp at both ends, the plain end terminating in a version of the V-rod terminal, whereas in the standard design the floriated end is the point and the plain section is finished off with a blunt lyre-shaped terminal; the angles of the Z-rod are much less acute than is normal — the central section crossing the junction of the disks at virtually right angles; the classic form of the Z-rod flows from top right and ends at bottom left, whereas Whitecleugh starts at top left and ends at bottom right. All these deviant features are shared by the Norrie's Law plaques. The plaque double disk symbol has a more complicated spiral decoration than Whitecleugh and the junction of the disks is treated as two crescentic shapes attached to them — an arrangement which in a miniature design accommodates the crossing of the rod more satisfactorily. The anomaly of the extended Z-rod, achieved by the wider angles, can be explained by the elongated form of the plaques, although this strategem was not employed by say, the sculptor of the Aberlemo Class I symbol stone when he had to place his double disk symbol vertically.¹⁴ The close similarities might make one think that the Whitecleugh engraver was merely copying and simplifying the Norrie's Law design but in fact he had as good an aesthetic reason for using an extended rod, for had the disks been parallel to the flanges of the ring the outer sections of the rod would have been lost visually. By placing the double disk diagonally and extending the rod the symbol was displayed to its best advantage. Both ring and plaques show a sensitive awareness of the problem of fitting the symbol to the space available in a way that is entirely typical of the symbol stones.

The plaques and the ring are probably of the same date. The symbol on the back of the hand pin, on the other hand, suggests later manufacture. Robert Stevenson has pointed out that the centre section of the Z-rod has been omitted in the frequently reproduced engraving of the reverse of the pin. He has also noticed that there is a trace of red enamel in it.¹⁵ This perhaps rules out a first thought that the back was made of a piece of scrap silver that happened to have some trial symbols on it. The floriated section of the rod is boldly placed but the other terminal is awkwardly cramped and does not lie parallel to the floriations. The hiding away of the symbol is surprising for symbols seem to have been intended to be seen. The pin is the only piece of standard dress ornament engraved with a symbol known so far. None of the Pictish brooches incorporate symbol designs, and what was suitable for a pin one would have thought would have been appropriate for a brooch. A single disk and Z-rod is unprecedented but there is a single disk symbol, so that the symbol on the pin cannot be dismissed as a misunderstood version of the double disk and Z-rod. One terminal of the Z-rod is exactly the same as one terminal on the plaques and ring (and it is not a common one) but the floriated end has the anomaly of reversed floriations, a variant which is found on poor-looking Class I stones. It seems unlikely, therefore, that the hand-pin symbol was engraved at the same time as the plaques and if the pin itself is an inferior imitation of the earlier pin one explanation of the peculiarities of the symbol could simply be that it is an inferior version of the plaque symbol and is being used in an in-

14. J. Romilly Allen and J. Anderson, *The Early Christian Monuments of Scotland* (Edin., 1903) Pt. III, fig. 221.

15. 'The Gaulcross Hoard' 207. For good photographs of the pins see pl. XI.

appropriate context. What seems certain is that the hand-pin symbol was not engraved at the same time as the plaques, unless it represents a classic version of an unknown symbol which was used on dress ornaments.

We have seen that for Mr Stevenson the Lindisfarne-like beast's head on the plaques means a date of around 700. However, what has been said of the double disk symbol can also be applied to the beast's head. The finest portrayal of this symbol is at Rhynie, Aberdeenshire, (Pl. III) where it is placed adjacent to a double disk symbol in a strikingly similar fashion to the plaques. At Rhynie the beast has a clearly defined neck and shoulders, a naturalistic ear, and two well shaped flippers. The Norrie's Law plaque is a decorative sophistication of this creature.¹⁶ The naturalistic ear has become a spiral, shoulders and neck have become a single curve, the single flipper has an elegantly lobed spiral, and the body is decorated with a motif reminiscent of a rod terminal which matches the decorative style of the double disk. Such matching of decorative detail is one of the most pleasing aspects of later Pictish sculpture. The plaque beast exhibits a decorative treatment of a basically, though not of course entirely, naturalistic design, which can be compared to the way in which the artist of the *Book of Durrow* treated the Pictish wolf when he used it as the basis for his Lion evangelist symbol.¹⁷ Compare, for example, the treatment of the ears : an expressive curvilinear rendering of the Pictish wolf's ear becomes a merely decorative coiled spiral in *Durrow*.¹⁸ What we have in the plaques is evidence for the interplay of styles which is appropriate for this period. The Pictish artist has chosen to draw his fundamentally naturalistic beast, and his spiral filled double disk symbol, in a style similar to the art of *Durrow* and its antecedents such as the *Cathach of St. Columba*. The hybrid nature of the plaques suggests a date of early to mid-seventh century.

Stevenson was the first to draw attention to similarities between the art of the *Cathach* and the art of the symbols.¹⁹ That metalwork decorative mannerisms influenced the art of early insular manuscripts is well known, and metalwork prototypes could lie behind the Pictish symbols. The decoration of an initial q in the *Cathach* with what looks like an imitation of beading recalls the design on the edges of the Norrie's Law pins.²⁰ These edges we have seen have been compared to the escutcheon edgings of the large Sutton Hoo hanging-bowl. Features of the bowl's spiral ornament have been compared to the *Cathach* by Professor David Wright, who now dates that manuscript to the first quarter of the seventh century.²¹ These similarities cannot provide exact dates, but the context of the Norrie's Law pin is certainly the early seventh century and the plaques need only be a very little later with the symbol-bearing pin latest of all. On the more general question of the date of the symbols, the symbol designs on the plaques clearly belong to a phase when artists were beginning to depart from the classic forms, although not yet

16. *The Picts* fig. 21.

17. For an alternative view of the relationship of the two designs see R. B. K. Stevenson, 'Sculpture in Scotland in the 6th to 9th centuries' in *Kolloquium über spätantike und frühmittelalterliche Skulptur, Heidelberg 1970* (Mainz, 1972) 65-74.

18. *The Picts* fig. 23.

19. 'Pictish Art' 104.

20. Françoise Henry, *Irish Art in the Early Christian Period to A.D. 800* (London, 1963) pl. 12.

21. 'Irish' Evidence for the date of Sutton Hoo'. An unpublished lecture delivered to the Society of Antiquaries of London.

blatantly, as in the lost bronze plaque from Monifieth where the grouping of beast's head and double disk and Z-rod is also found. This implies a starting date for the symbols of around 600.

We have seen that on formal and stylistic grounds the date of the plaques carries with it the date of the Whitecleugh chain. A further link between the art of the plaques and the chains is found in the Fife cave art.²² In the Doo cave we again find the grouping of the double disk and Z rod with the beast's head symbol. This was clearly a combination of particular significance. As on the plaques and the ring the Z rod is pointed at both ends, has wide angles, and runs from left to right. The upper section of the rod is floriated, but the stalks appear to be opposite not alternate as on the metalwork. The terminal of the lower section is identical in shape to the metalwork examples. In the same cave there is a fine example of a S-curve symbol which is one of the symbols on the terminal ring of the chain from Parkhill, Newmachar, Aberdeenshire.²³ Close to the S-curve is a pair of small crosses very similar to those on the Norrie's Law pins. Many of the cave symbols are neatly and fluently incised. The graceful flower symbol in the Doo cave resembles closely the forms out of which the beast's head symbol on the plaques is composed. There has yet to be a proper analysis of the many interesting forms found in Pictish cave art. F. C. Diack and Professor Thomas considered it early and embryonic. Some of it may well be, but there are certainly late elements in it also. That it should contain at least two symbols found on the symbol-bearing chains is a striking coincidence and might justify the speculation that the silver was worked and decorated at East Wemyss, eight miles away from Norrie's Law. A hasty retreat inland following a coastal attack or military advance along the coast would then account for the concealment of silver in an obvious landmark.

The other two symbols on the Whitecleugh chain are less susceptible to analysis but are both of interest. The panel of zig-zag ornament alongside the double disk has been treated by Professor Thomas as a symbol²⁴. Since there is no other hint of the engraver wishing to enhance the ring with generalised ornament this is probably correct. A possible repetition of this symbolic pattern is on the lost Monifieth plaque where on the left edge of the crescent there is a small panel of curved T-fret pattern. This Monifieth pattern, and plain zig-zag, appear also on sandstone disks. A similar disk from Jarlshof is incised with a double disk and wide-angled Z-rod.²⁵

The notched rectangle symbol, placed on its side on the terminal ring, with the notches cut in from right and left alternately, is one found predominantly on Class I stones with fine quality designs. Later, the notches tend to be placed opposite each other or are ignored altogether. Until recently there was no example of a notched rectangle symbol without an accompanying Z-rod on the sculptured monuments. A few years ago two cut-down symbol stones were found forming part of a trough in the byre of Westfield Farm, Falkland, Fife. They were reported in *Discovery and Excavation* for 1971 where one was described as having a 'tuning

22. F. C. Diack, *The Inscriptions of Pictland* (Aberdeen, 1944) pl. 6 (1-4).

23. *The Picts* fig. 14 b.

24. 'Interpretation of the Pictish Symbols' 45.

25. *Ibid.* fig. 3.

fork' symbol. This is a notched rectangle (to use Romilly Allen's terminology) in its correct form exactly as it is found on the Whitecleugh chain but for the reversal of the positions of the notches (Pl. IV). This is a most interesting find for it is a unique symbol for the corpus of stones, adds to the increasing number of Class I stones found in Fife, and further strengthens the view that the Whitecleugh chain like the other metalwork has associations with Fife. In Jonathan's Cave at East Wemyss there is a plain rectangle with legs, which looks like a simplified version of the notched rectangle. If it is this symbol it shares with the new Falkland stone the mannerism of having no closure to the legs. This curious feature recurs in the bull symbol from East Lomond Hill fort, a mile away from the Falkland stone.²⁶

How the Whitecleugh chain manufactured perhaps in Fife came to Lanarkshire can only be guessed at. Perhaps most probably it came via Berwickshire where so many of the other chains ended up. Whitecleugh is only about thirty miles away from Walston near the eastern boundary of Lanarkshire where another chain was found. Whitecleugh is linked to Walston by a line of valleys formed by the Duneaton Water, the Clyde and the South Medwin. What we can say with reasonable certainty is that the chain is not evidence for Pictish settlement in Lanarkshire, and that it was made at a time when the symbols were well established in design. It is likely to have been made long before the symbols were cut on the rock at Anwoth and if one wished to connect that event with the chain then one would have to suppose, what is indeed likely, that the Picts concerned were wearing ornaments of an earlier period. On the whole there seems no reason to connect these two Pictish traces in south-west Scotland.

The unique importance of the chain lies in the presence of fine quality symbols on what appears to be a personal object — one of the few facts we have to bring to bear on the problem of the meaning of the Pictish symbols — and in its closeness in style to other silver pieces in Fife that demonstrate early Pictish awareness of the art styles of their neighbours. Moreover the representation of the large scale symbols found on stones in remote corners of Pictland on miniature silverwork brings the symbolism into the world of portable art which makes claims for its relationships with the manuscripts and metalwork of other areas realistic. Taken simply as it stands the chain is a powerful evocation of a wealthy aristocracy which had at its command artists who were able to produce work of the highest technical and aesthetic quality and in fashionable styles but whose inspirational base remained the native visual language.

Editorial Note

The finding of the Whitecleugh Silver Chain has been described in the earlier volumes of the *Proceedings of the Society of Antiquaries of Scotland*, but the following entry from the MS notebook by Dr. T. B. Grierson of Thornhill may not be without interest. Ed.

"Large Silver Chain.

I was told by a lad from Wanlockhead that one John Murray shepherd at Shieldholm parish of Crawfordjohn had found a large silver chain 4½ lb. in weight and 18

26. *Proc. Soc. Ant. Scot.* LX (1925-26) 32 and fig. 2.

inches in length. I at once wrote to Mr Clarke, Factor, who was at the time from home that he might enquire after it Which I understand he did and obtained possession of it. From a party who examined the chain I learn the following. it is composed of double links in all their (sic) are 46 single links or rings. $1\frac{1}{2}$ inches round and each link $\frac{1}{4}$ inch thick. the weight of the whole is $4\frac{1}{4}$ lb. two links are longer than the others they are 2 inches in diameter $\frac{3}{4}$ inch thick. A silver chain very similar is mentioned by Daniel Wilson in his Archaeology and there figured, as having been found in cutting for the Caledonian canal, it is preserved in the Antiquarian Museum Edinburgh.

July 1869."

The Society is indebted to the Mouswald Trust for a grant towards the publication costs of this paper.

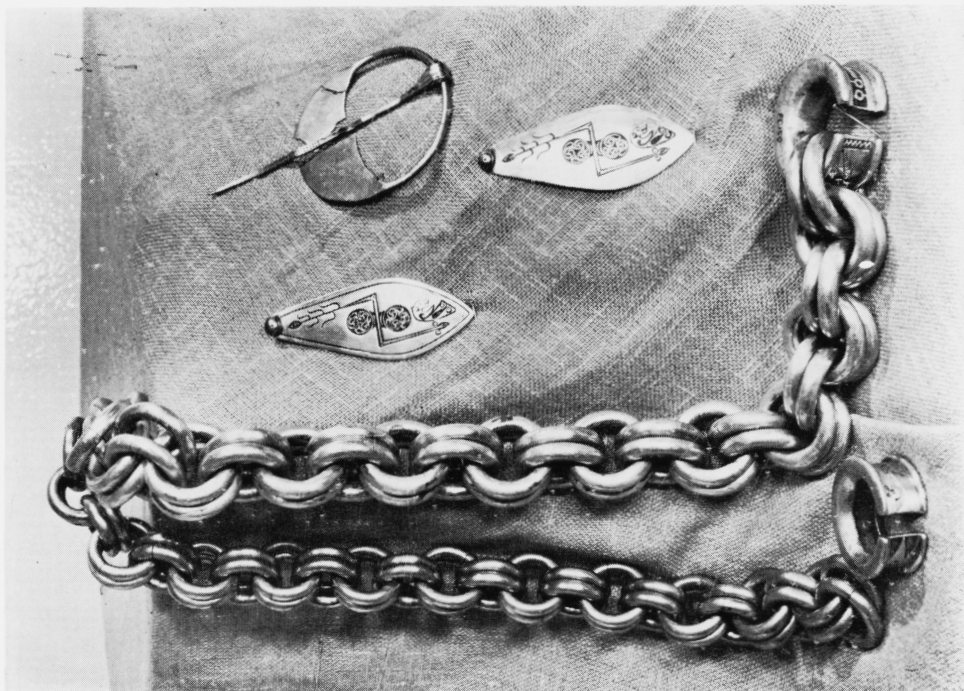


Plate I — Silver chains with symbol-bearing terminal rings from Parkhill and Whitecleugh, the plaques from Norrie's Law and a silver brooch from Perthshire.
(Photo. National Museum of Antiquities of Scotland)



Plate II — Whitecleugh terminal ring. (Photo. National Museum of Antiquities of Scotland)



Plate III — The symbol stone at the gate of the churchyard, Rhynie, Aberdeenshire. (Photo G.H.)



Plate IV. — Cut down symbol stone from Westfield Farm, Fife, now at Falkland Palace.
(Photo. Royal Commission on Ancient Monuments, Scotland)

EXCAVATIONS AT WHITHORN PRIORY, WIGTOWN DISTRICT 1972 and 1975

by Christopher Tabraham

Inspectorate of Ancient Monuments, Scottish Development Department

Introduction

The historical importance of Whithorn as a religious centre from the fifth to the seventeenth centuries is widely known and has been examined at length elsewhere (Radford and Donaldson 1953). However, our ignorance of the physical remains, both of the Celtic monastery and of the medieval cathedral-priory, is equally well-known. When the opportunity to excavate in advance of possible land redevelopments arose in 1972 and 1975 the Inspectorate of Ancient Monuments readily accepted the invitations in the hope that further material evidence might be forthcoming (Fig. 1).

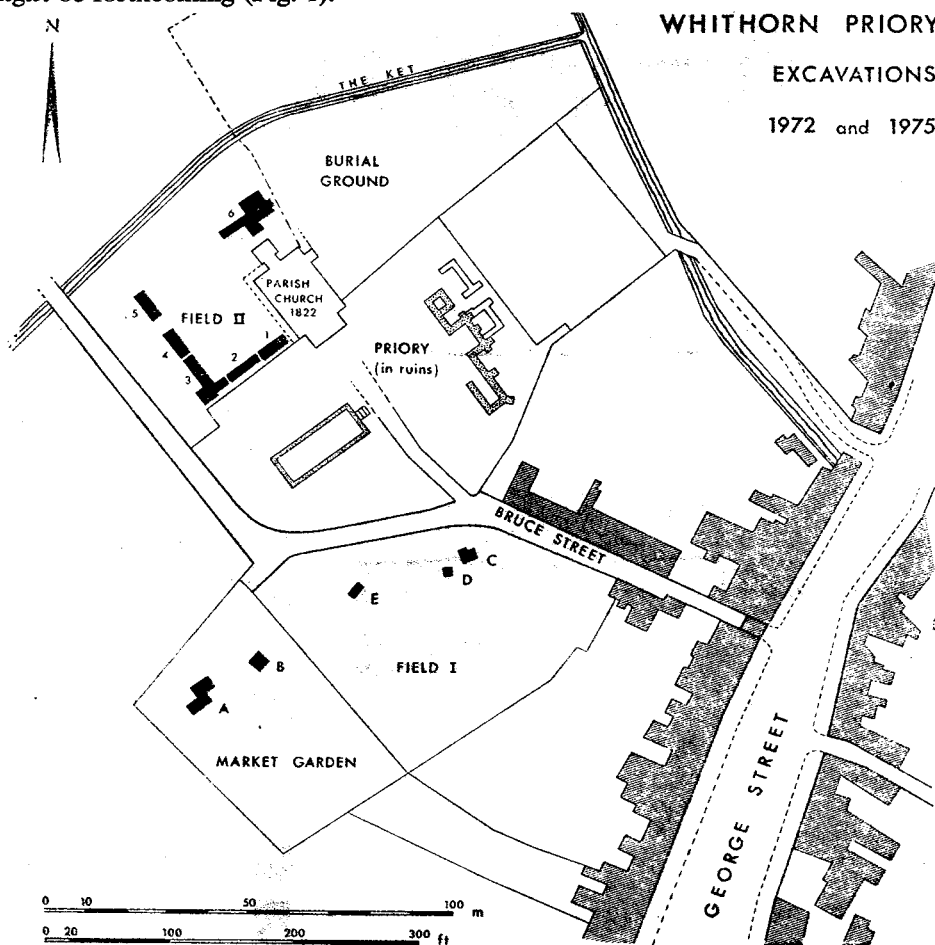


Fig 1 : Whithorn Priory showing areas excavated in 1972 and 1975

At the beginning of 1972 five small exploratory trenches were excavated to the S. of the existing priory buildings. Two were placed within the market garden (NGR NX 44424023) and three in the adjacent field to the NE (NGR NX 44464-025). In the spring of 1975 further trenching was carried out in the field to the

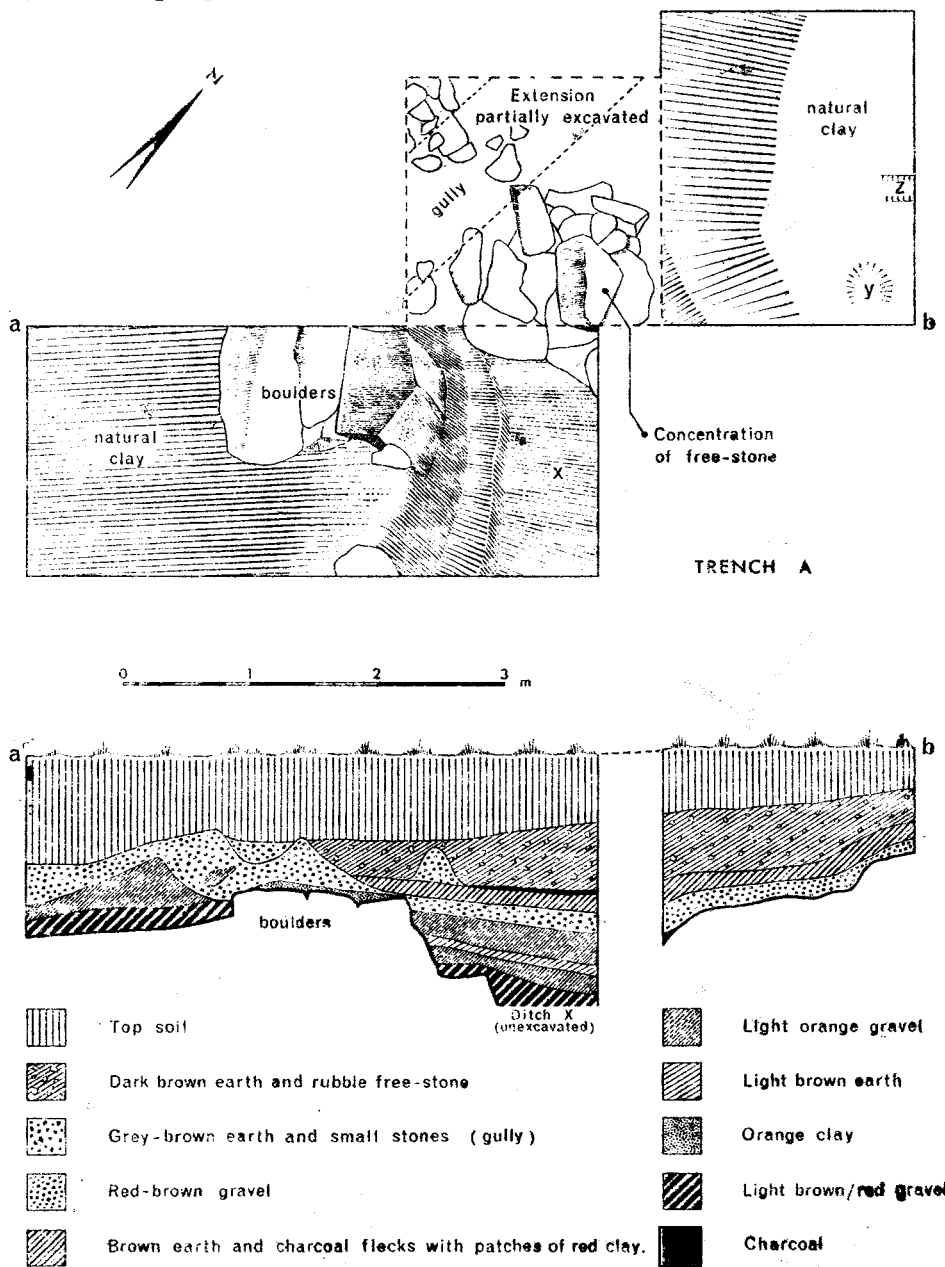


Fig. 2 : Whithorn Priory 1972 — trench A

NW of the priory (NGR NX 44424033) in advance of a possible extension to the burial-ground. In all a total of 234 sq m was investigated by hand, though not all the trenches were completely excavated.

The excavations 1972

Market-garden

Initially two trenches, each measuring 3 m by 2 m, were opened up though both were subsequently extended. Trench A (Fig. 2) was 18 sq m in extent though 4 sq m was only partially excavated. The overlying garden-soil varied in depth from 0.33 m on the NE to 0.86 m on the SW. Beneath lay a composition of earths and gravels sitting upon the natural orange-brown boulder clay which sloped downward from the NE where it was 0.83 m below the existing ground-level, to the SW where it attained a depth of 1.45 m. Several features were noted. A shallow gully, varying in width from 0.6 to 0.8 m and 0.22 m in depth, crossed the trench from N to S. It was probably a field-drain associated with the garden. The gully had cut through a concentration of free-stone occupying the centre of the trench and aligned E-W. The stones had been purposefully laid and are perhaps the remnants of a dry-stone dyke. The lowest course of stones rested directly on a thin band of charcoal.

The other features were all cut into the natural clay, the most obvious being a ditch X aligned NW-SE. Its width was 2.25 m at the lips but its depth could not be ascertained, though it was certainly in excess of 0.92 m. Its fill contained a number of tip-lines. Cut into the natural clay to the NE of the ditch were two minor features, one a small pit (Y) 0.14 m in depth, the other a rectangular intrusion (Z) 0.12 m deep and disappearing into the NE section of the trench.

Trench B (Fig. 3) was situated c 10 m to the NE of trench A and became

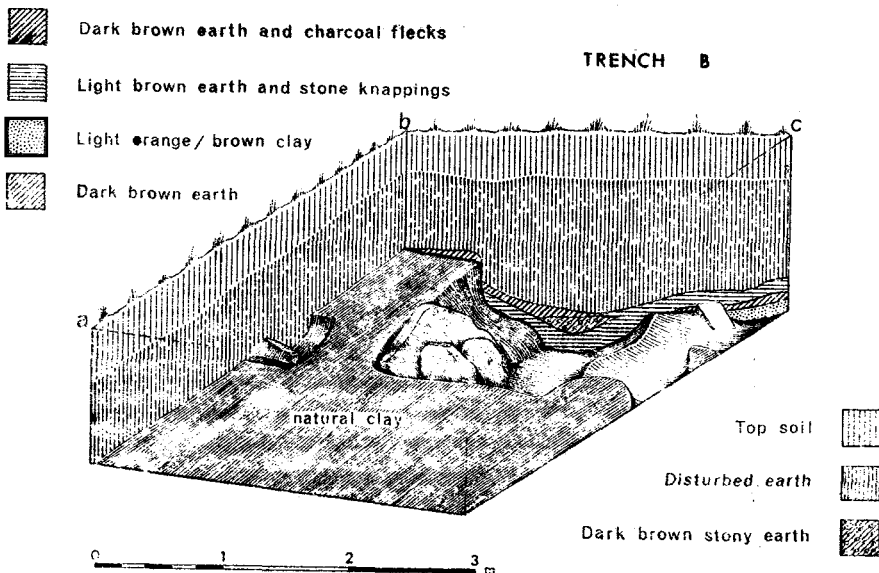


Fig 3 : Whithorn Priory 1972 — trench B

9 sq m in extent. The natural clay was found at a depth varying from 0.93 to 1.1 m, the intervening material being all heavily-disturbed garden-soil. Two features were found cut into the natural clay, one being a rectangular intrusion 0.7 m wide

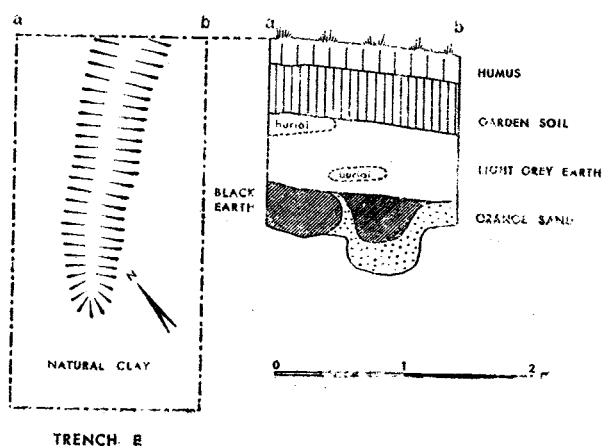
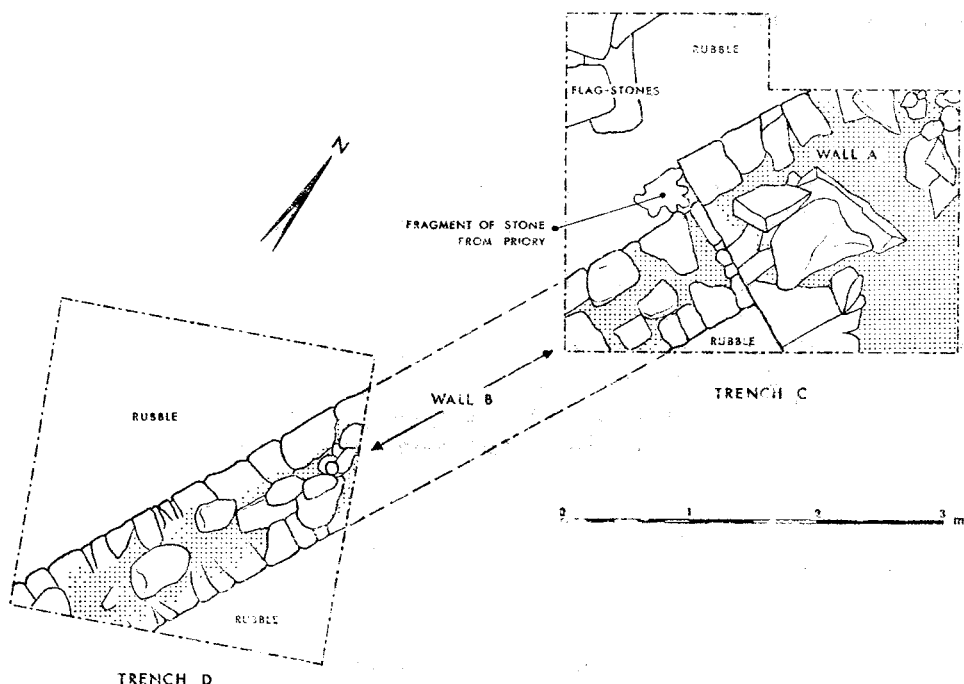


Fig 4 : Whithorn Priory 1972 — trenches C and D (above) and trench E (below)

by 0.8 m deep protruding from the SW section (a-b). The other was of greater proportions though the sections of the trench forbade accurate dimensions from being obtained. The feature was 0.68 m deep and was filled with a mixture of earth and clay.

Field I

Three trenches (C, D and E) were excavated within this field, totalling 18.20 sq m (Fig. 4). The two eastern trenches were only partially excavated to a depth not in excess of 0.6 m owing to the presence of well-constructed walls with associated paving which it was decided should be left untouched. Trench C contained two walls of differing construction. Wall A was lime-mortared while Wall B had its stones set into a yellow clay. Wall B was located in trench D also. The paving-stones were situated to the NW of the walls in trench C, crudely set into the underlying earth.

Trench E to the W bore no trace of the walling located in trenches C and D and was fully excavated. The natural clay was similar to that within the market-garden and was found at a depth of 1.5 m. The soil typically associated with garden activity was far shallower here than in the market-garden being no more than 0.6 m deep. Below this were traces of a number of human burials though the high acidity of the soil had destroyed much of this evidence. At a depth of 1.1 m the light grey earth into which these burials had been set gave way to a light orange sand containing large inclusions of black earth. Below this and cut into the natural clay was a feature 0.6 m wide and 0.28 m deep. It was over 2.28 m long and was filled at the bottom with grey-black earth containing flecks of charcoal.

Conclusions

Little can usefully be written about the nature of the remains from the foregoing evidence. Even less can be written about their age because of the almost total absence of artefacts. A few scraps of human bone were recovered from the burials within trench E whilst a fragment of vaulting rib (presumably from the priory building) was found in trench C in the debris associated with Walls A and B. No other finds were recorded either from Field I or the market-garden.

Trenches A, B and E were similar in their make-up. The depth of material in each was comparable though the intensity of gardening activity within the market-garden had resulted in a greater disturbance of the soil, particularly within trench B. Trenches A and E produced two clearly distinct horizons. In the latter, the upper horizon was represented by the human burials, aligned E-W and probably to be associated with the medieval burial-ground which, at Whithorn, always lay to the SE of the kirk. Similar burials were found in the 1940's during electricity cable laying along the S side of Bruce Street. In trench A the upper horizon may or may not have been an enclosure wall for the burial-ground.

All three trenches contained features cut into the natural clay. Their respective functions are open to speculation except perhaps the partially-excavated ditch in trench A. If the burials in trench E and the dry-stone dyke in trench A belong to the medieval period then it is reasonable to assume that whatever is

sealed below them is earlier in date and possibly associated with the Celtic monastery which would have been more extensive than the medieval monastery (Thomas 1971, 10ff). The ditch in trench A may therefore be a part of the vallum that would have surrounded the early monastic enclosure.

Trenches C and D contained wall-foundations of the parish school that was demolished sometime in the early nineteenth century. Over the entrance to the Priory Museum in Bruce Street is an eighteenth century stone tablet that originally stood above the door of the school. The inscription in Latin and English reads :

SEDES MUSARUM CANDIDAE CASAE
DONIS PAROCHIAE ET URBIS STRUCTA.
QUI STUDENT OPTATAM CURSU CONTINGERE METAM
MULTA TULIT FECITQUE PUER — SUDAVIT ET ALSIT
TRAIN UP A CHILD IN THE WAY HE SHOULD GO

It is dated AD 1730. Within the Museum itself is a watercolour (c 1820) showing the school still in existence.

The excavations 1975

Field II

A total of six irregular-shaped trenches were excavated (some only partially) within the area (Fig. 1). Prior to excavation the natural bed-rock could be seen protruding through the grass particularly in the S quarter of the field where the rock outcrop formed a raised shelf running parallel with, and some 10 m N of, the boundary wall of the field. It was upon this plateau that a long rectangular building had been observed earlier, with the suggestion that the walls pertained to the sub-vault below the monastery's refectory (Radford 1956, 134). Three of the trenches (1, 2 and 3) were sited here in an attempt to define the structure more clearly. Two further trenches (4 and 5) were positioned to the N of, and at 90° to, trench 3 in the hope of locating monastic structures outwith the cloister. A sixth trench was sited in the very NE corner of the field where local tradition indicated the presence of another building.

Trenches 1, 2, 3, 4 and 5

As was to be expected the natural rock was located at a shallow level in the first three trenches (Fig 5). Trench 2 possessed nothing relating to the medieval period, the two layers lying upon the rock containing only debris of 19th and 20th century date. Trench 1 had traces of two wall footings both very badly denuded. Both stretches of wall ran parallel to the S boundary wall of the field, though each differed in thickness. The wall in the NE half of the trench was 1.4 m in width, the other, in the SW half of the trench, was little more than 0.6 m wide. However, their NW faces were in alignment and it is likely that the two walls are one and the same, the difference in the thickness being occasioned by the vagaries in the level of the bed-rock which varied in depth considerably upon the plateau. There was no medieval stratification in this trench either.

Trench 3 (Plate V) was slightly less disturbed by post-medieval activity and a number of features were recovered. In the NE extension were the footings of a wall 1.4 m in width and aligned NE-SW. The similarity of alignment and con-

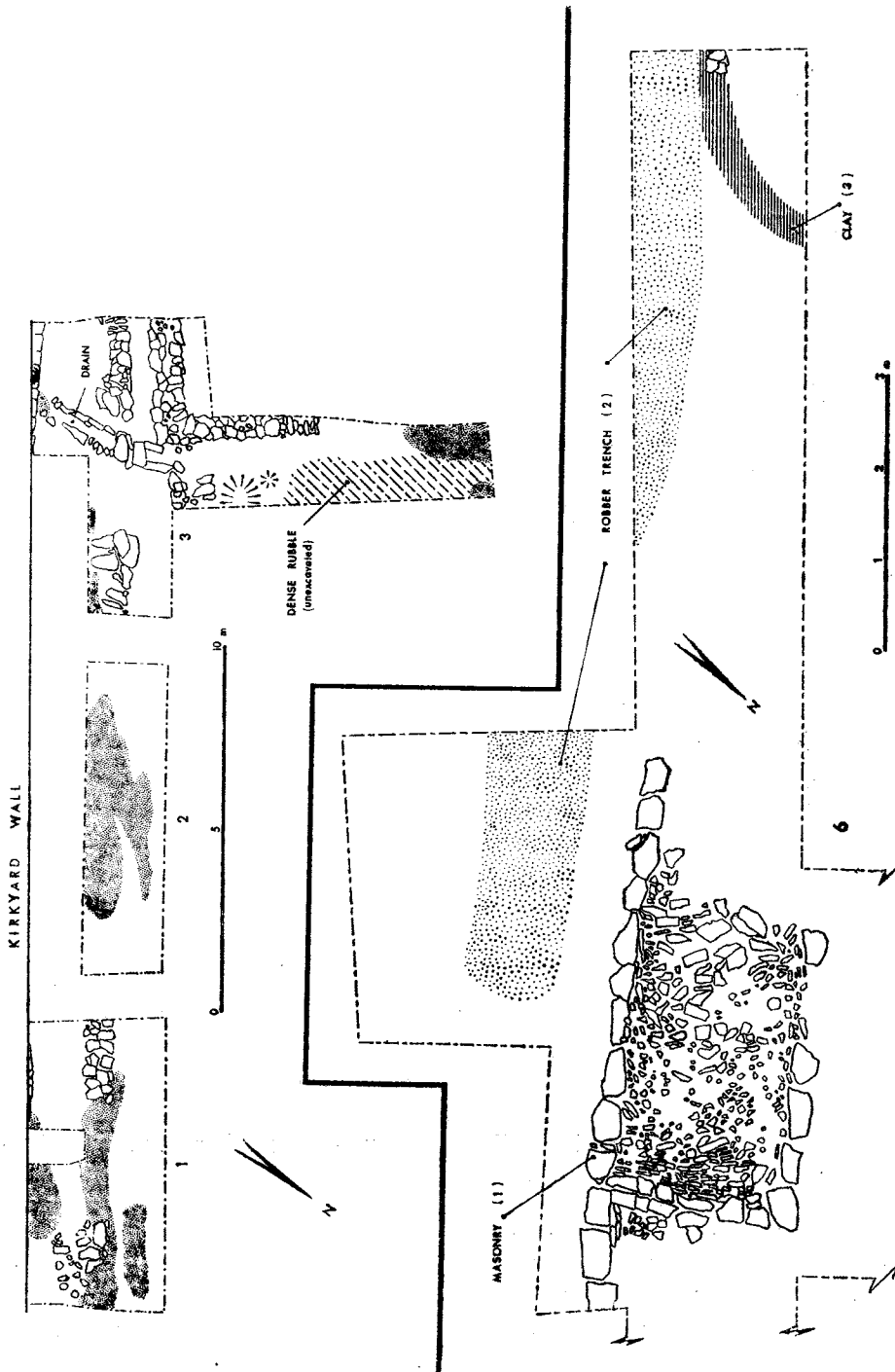


Fig 5 : Whithorn Priory 1975 — trenches 1, 2 and 3 (upper) and trench 6 (below)

struction of this wall (roughly-dressed blocks of greywacke dry-stone built) to that discovered in trench 1 perhaps indicate that they are portions of the same wall. To the SW of this wall was a drain, aligned N-S, with the side walls three courses in height and with two large flat capstones still in position. To its SW was a second wall, again running parallel with the S boundary wall. It had been partially robbed but its full width of 0.9 m survived at the point where it butted against the drain. To the NW of this wall was a third, similarly 0.9 m in width and of the same construction (undressed greywacke bonded in a weak mortar mix). It was bonded into a further wall running at right angles from it towards the edge of the plateau. This stretch of wall was 4.4 m long before it returned into the section. Elsewhere in the NW extension of trench 3 were traces of other badly-disturbed walls. Two shallow pits were also recorded in this extension. Of the few artefacts recovered most were of 19th century date though fragments of medieval pottery were also found.

Trench 4 proved sterile following as it did the slope of the natural rock downwards to the NW.

Trench 5 was only partially excavated. Its position some 14 m NW of the summit of the plateau meant that the natural bedrock was much deeper here and that consequently there is a far greater survival of medieval stratigraphy in this area. Traces of several walls were recorded together with some particularly dense layers of burning.

Trench 6

The trench was sited well away from the preceding five on nearly level ground at the foot of the slope N of the present parish church. Excavation showed the ground to have been much disturbed in the post-medieval period. The trench, 54 sq m in extent, was excavated down to the bedrock on the E where it was 1.10 m and more below the ground surface. The western part of the trench was not completed (Fig. 5).

The main feature was a masonry structure (1) in the eastern half of the trench. It took the form of a low ridge of masonry with its long axis almost E-W, 2.2 m wide and over 5 m long. The humped body of the mass was constructed of many small slabs set on edge and slanted towards the centre so that they wedged one another tightly. The masonry was bounded on both N and S by well-defined kerbs of large stones slanting outward, and the E boundary took the form of a gully or gutter draining to the S. The compacted nature of the sub-stratum, together with the presence of two or three displaced southern kerb-stones, might indicate that the masonry was formerly continued E of the gutter. The S kerb continued in a straight line for 4.6 m westward of the gutter but the N kerb was broken and the body of the "causeys" had been cut away at 3.2 m so that there was nothing to define the original westward extent of the masonry. To the N of the masonry was an area of rough paving, incorporating medium-sized stone slabs and roofing slates of blue-grey schist set in brown soil.

A second feature within the trench was a 'robber' trench (2) which ran irregularly WNW-ESE, roughly parallel to the S kerb of the masonry and strati-

graphically below it. Its fill was composed of angular rubble, and slate debris, though the N edge of the trench contained several lenses of clay and tilted slabs. Their presence seemed to indicate that some clay-bonded walling had here been broken up.

Finds from the upper part of the 'robber' trench included a few fragments of china, a silver coin of William III (II of Scotland), two clay-pipe stems, some nails and two sherds of late-medieval pottery. Much of the deposit comprised animal bone, provisionally identified as ox (predominant), sheep, pig (?), horse (teeth) and large fish (eg salmon). Animal bone was also abundant at the lower level also but the balance of the other finds shifted to roofing-slates, iron waste, coal and occasional pieces of medieval pottery.

In the NW corner of the trench, which had partly escaped robbing, the traces of a curving portion of clay-bonded wall (3) remained. The slight clay bank was clearly defined on its N side but blurred on the S where it had been shaved by the edge of the 'robber' trench. It was probably the clay footing for a wall which had been robbed but not dug into. The clay bank ran into both the N and W sections but three courses of stones did survive at the western extremity.

Conclusions

The denuded nature of much of the remains together with the almost total lack of stratigraphy, with the possible exception of trench 6, combine to make it both difficult and dangerous for the writer to draw many conclusions. It is obvious from the evidence in trenches 1 and 3 that there were buildings situated on the top of the rocky plateau which would appear to have been occupied at some stage in the medieval period. It can therefore be assumed that they pertained to the N range of the cloister but their function is still a matter for speculation.

The evidence from trench 6 was a little more meaningful. A clue to the nature of the masonry is given in the early nineteenth century watercolour in the Priory Museum (see *supra* p. 34) which shows a small building roughly in this area. It was said to have been a stable for the parish minister's pony and the obvious conclusion is that the masonry represents part of the floor of this stable, built prior to the erection of the parish church in 1822.

Judging by the artefacts recovered it is impossible to surmise whether there was any occupation here earlier than the late medieval period. That there were clay-bonded walls in existence at one time is held to have been demonstrated from the remains in and adjacent to the 'robber' trench. They appear to have had foundations about 0.9 m below the present ground-level, and the character of the pottery suggests that they were part of a building/s in use in the late medieval period. The predominance of food bone suggests a domestic use and the position of the walls in relation to the priory church could indicate that we have here a part of the Infirmary range. It would seem that these walls, when in a ruinous condition, became partly buried in domestic refuse which, when the stones were later dug out, became spread around and fell or were thrown into the 'robber' trench. Some, if not all, of this stone-robbing was immediately prior to the construction of the masonry feature.

Acknowledgements

I wish to record here my indebtedness and gratitude to the late Tom Robertson who served as Assistant Supervisor in 1975 and who died in tragic circumstances on the last day of the excavation. My illness throughout much of the three-week excavation meant that Tom, whose high spirits and dedication never failed him, had to take over much of the direction. His was a sad loss to Scottish archaeology. In addition my thanks must also go to Miss Helen Nisbet, also Assistant Supervisor in 1975, who was responsible for the section of the report on Trench 6. To all those who worked in atrocious conditions, both in 1972 and 1975, I thank them sincerely. The drawings were made presentable for publication by Mr Tom Borthwick of the Ancient Monuments Inspectorate.

Note

The drawings, site-books and photographs are to be deposited in the National Monuments Record, Edinburgh. In the confusion that followed Tom Robertson's death at the end of the excavation, certain items were misplaced and as yet not recovered. Regrettably the box containing the animal bone and artefacts was amongst them.

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Plate V : Whithorn Priory 1975 — view of western end of trench 3 showing wall-footings and the drain

SOME OLD HARBOURS IN WIGTOWNSHIRE

by Angus Graham

Introduction

This study is intended to continue the review of old harbours on the Solway Firth that was begun in a joint paper by the present author and Mr A. E. Truckell¹ in 1977. The stretches of coast now to be considered extend from the head of the Cree estuary to the boundary of Ayrshire on Loch Ryan; but whereas the former study was based, as far as possible, on surviving structural remains, this one has had to place rather more reliance on published records, though all the major sites were in fact visited. As a result, the study may seem to bear an historical rather than an archaeological colour. Again, as the records show that many of the sites were no more than small fishing-villages or smugglers' resorts, possessing few features of interest, the notes on these have been reduced to the smallest possible proportions; and it may be safely assumed that many other customary landing-places of the same kind have gone unmentioned merely because they lack mention in available documents. As before, 1850 has been chosen as a convenient terminal date, as the first Ordnance survey of the region was begun in 1846. The descriptive notes

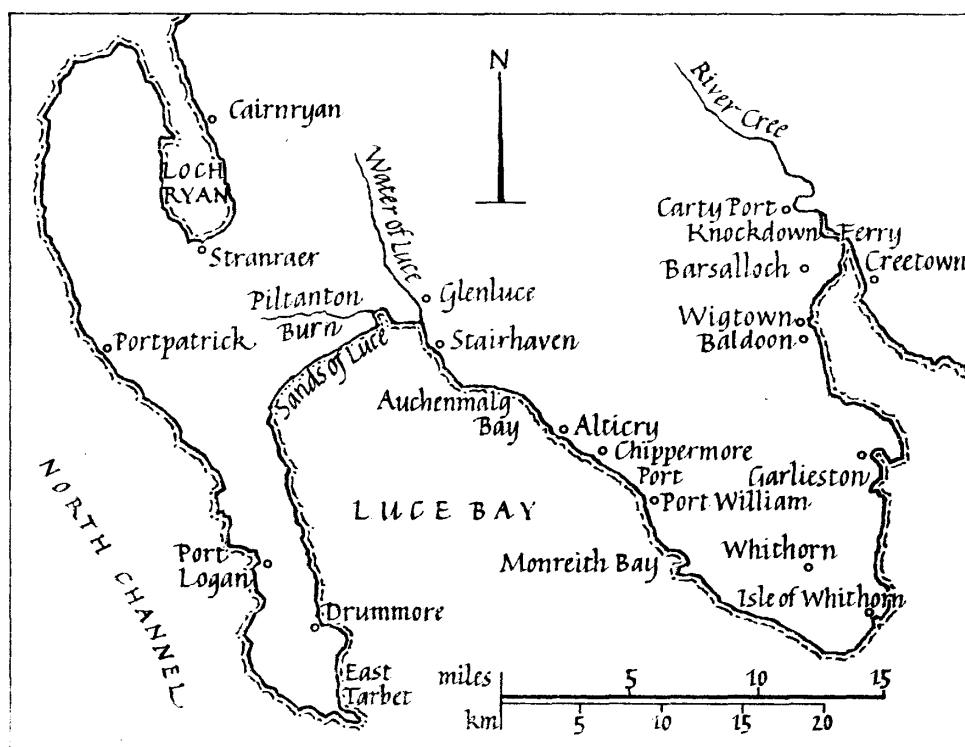


Fig. 1 Map of principal sites

1. TDGNHAS, lii, 109ff.

are arranged in alphabetical order, with National Grid references; and as the great majority of sites fall within the 100km. square NX, these letters have been omitted throughout and are to be assumed unless other letters, e.g. NW, are given. A list in topographical order, corresponding with Fig. 1, is added in Appendix B. Dimensions have been taken from the large-scale O.S. sheets.

The paper of 1977 embodies in its introduction some general considerations which apply equally to the western as to the eastern part of the Firth, and these will be taken as read to avoid needless duplication. It will be enough to resume a few of the more important points, and to add some others which relate more particularly to the western coasts. Their position, in the first place, ensured to the Wigtownshire harbours their share of the general trade with the neighbouring English ports, the Isle of Man, Dublin and the Clyde, sailing times from Garlieston, for example, being given as three hours to Man, four to Whitehaven, twenty-four each to Liverpool and Dublin and thirty to Greenock². A document of 1729 even recorded³ that the Isle of Whithorn was convenient 'for accommodating ships coming and going to the West Indies'. For communication with Ireland, particularly in respect of cattle imports and the official packet-service, Portpatrick was of great importance, as being the E. terminal of the shortest sea-crossing, from Donaghadee, and this in spite of most serious natural drawbacks. The story of this harbour's deficiencies is long and complicated, and Port Logan is likewise involved as its use as a possible alternative to Portpatrick seems to have been ventilated as early as 1682. Stranraer superseded Portpatrick as the packets' terminal in 1849.

Like local ports elsewhere, the Wigtownshire harbours performed the function, when roads were still unimproved, of providing for the transport of farm produce to market; Pococke notes, for example, that the large number of convenient seaports in Galloway saved most districts from expensive inland carriage, and thereby lowered grain prices by up to ten per cent as compared with the east of Scotland. These same facilities likewise naturally benefited the operations of the contraband trade, which flourished here, as elsewhere on the Solway seaboard, in the 18th century and the early years of the 19th. Frequent references to the smugglers will be met with below, not the least remarkable of their exploits being the maintenance by a smuggling company of a local headquarters near Port William.

Coastal navigation, both licit and illicit, was naturally governed by the physical character of the coast, which for much of its length offered a choice of rocks, broken by occasional inlets, and stretches of tidal sand, shingle or pebbles; and these conditions in turn called for the use of craft which could take the ground at low water. In fact, none of the piers or quays in this area extend below low-water mark, the harbours that they served being all completely tidal; but the tidal range seems to have been fairly generous, Garlieston and Port William, for example, both recording a depth of 17 feet at high springs. Special conditions, however, existed at the head of Wigtown Bay, where the estuary of the River Cree was bedevilled by sandbanks, saltings and currents. These factors complicated the working of the

2. *Stat. Acc.*, i, 242.

3. *CRB.*, v, 493.

ferries and fords necessary for the crossing of the estuary, and especially, in the Middle Ages, for access by pilgrims to St. Ninian's shrine at Whithorn; but as this latter subject outruns topographical treatment it has been discussed separately in Appendix A.

As evidence for bygone methods of harbour-construction the Wigtownshire material is disappointing, as any works which may have existed before the turn of 18th and 19th centuries have been transformed by additions and improvements if not entirely demolished. Wigtown, for example, though a Royal Burgh and the chief local town, has no story to tell, as its mediaeval harbour lay in the mouth of the Bladenoch and had to be abandoned when the river changed its course. At the Isle of Whithorn, again, the port of the county's only other Royal Burgh, works of a kind have no doubt existed for centuries, but no visible traces of early construction appear.

In the work that may be classed as modern, in which the influence of John Rennie was evidently of much importance, quays and piers show masonry of squared blocks, well coursed and generally faced with vertical timbers widely spaced. The outer faces of some works exposed to violent wave-action have been given appropriate profiles and are carefully pitched; examples in point are Port Logan and Stairhaven piers, and Garlieston breakwater. Less sophisticated works, of the kind found in sheltered backwaters in the Stewartry, built of rough drystone masonry and depending considerably on the support of frontal timbers, are not commonly found, and would in fact have been useless in the exposed situations presented by the Wigtownshire coasts; Carty and Kelly Ports and Baldoon Quay are certainly exceptions, but the two former are in well-sheltered positions far up the Cree estuary and the last in a quiet meander of the lower Bladenoch. Some interesting landing-places for boats, no doubt primarily for fishing-boats, can be seen on certain tidal beaches which are heavily obstructed by boulders; at these landings lanes have been cleared, with the boulders piled up alongside, to give access to the upper beaches where the boats could be pulled up to safety. A good example can be seen at Alticry.

The modernisation and new work of the late 18th and early 19th centuries falls into place among the other estate improvements then being effected by the larger and more progressive lairds; an early example is McDouall of Logan's initiative of 1692 in Port Nessock Bay, and a late one the building, by the 8th Earl of Stair, of Stairhaven pier in 1845. Communal action, however, is recorded at Wigtown, where the burgh built its own new harbour in 1818; and at Port William, where a subscription was organised, no doubt among the local people most immediately interested. Both Wigtown and the Isle of Whithorn were frequently helped by the Convention of Royal Burghs.

It remains, in conclusion, to record an abiding impression gained by seeing these harbours with one's own eyes — one, that is, of the formidable power of the sea. Much more, and more spectacular, evidence of this appears on the Wigtownshire coasts than in inner parts of the Firth. Particularly striking examples of the action of violent storms can be seen at Port Logan, where huge blocks of stone and un-

broken segments of masonry have been tossed up like common jetsam; at Garlieston, where again great blocks have been torn from a breakwater in the zone where the waves break, and left lying like a massive rampart; or at Stairhaven, where the pier has been breached in the same manner and the rest of the structure overwhelmed by the heaviest of debris. It is well to recall that this was the natural framework within which the western harbours had to be built and the lesser landings maintained.

My best thanks are due to Mrs G. McKenzie, who typed the script; to Miss J. Gordon, who collaborated at every stage of the study; to Miss J. M. Wilkes and the staff of the National Library Map Room, for help with cartographical matters; to Mr S. Pilling and Mr A. E. Truckell, for advice on local questions; and to Mr I. G. Scott, who drew fig. 1.

Descriptive Notes

ALTICRY, 271497.

As at several other sites on this part of the coast, e.g. Chang Port or Chipermore Port, the foreshore consists of a wide tidal belt of formidable boulders; and from these a landing-beach of sand and shells has been cleared at the mouth of a small rivulet. Down from this beach, through the boulder belt, a muddy channel has likewise been cleared to afford access to boats, the boulders removed from it being piled along its sides in rickles. It is about 35ft. wide at the top, runs straight for some 50 yds., and at its lower end is slightly sinuous. Nothing is on record regarding its origin, or that of other similar examples found at neighbouring sites (q.v.), but the sinuous lowermost portion is known to have been cleared within living memory.

At about the half-tide point a pocket has similarly been cleared of boulders on the S. side of the channel, perhaps to serve as a fish trap. Remains of a row of widely-spaced iron uprights run through the boulder belt on either side of the channel in a manner which suggests that they acted as guides at high or medium tides; a group of three at the lower end of the N. row may represent a tripod beacon, while the uppermost in the same row, which has been firmly bolted down on to a squared stone block, may possibly have carried a light.

A modern road (B7005) which runs inland past Alticry may represent a natural route found convenient by the smugglers. A similar possibility was noted in the case of Auchenmalg Bay. (Visited 1978)

AUCHENMALG BAY. 2351.

This bay was an important landing-place for smugglers, perhaps partly in virtue of a route leading inland, to Kirkcowan and beyond, by the Gillespie Burn.⁴ There was an observation point 'on the landward side of Synniness', which was used by the smugglers' accomplices. The former coastguard barracks, illustrated as a large two-storeyed cottage (230519),⁵ has now been enlarged and converted to domestic use.

⁴. *Smuggling*, 86, 126.

⁵. *Ibid.*, 199.

ARDWELL BAY. 069450.

Mentioned as a smugglers landing-place.⁶

BACK BAY. 3639.

The shore of Glasserton parish, mentioned as being used by smugglers, no doubt includes this bay, particularly as Cairndoon Farm, near by to the south-east, was a well-known smugglers' resort. Contraband from Holland and the Isle of Man was received there, and there were 'built vaults in the ground on the heugh head'.⁸

BALDOON QUAY. 428538.

This place is mentioned in 1838 as a small harbour, very useful to the parish for the handling of grain and coals.⁹ The name appears on the 6-inch O.S. map of 1846-8 but no construction is indicated. The site, at the junction of the small Lane Burn with the River Bladenoch, is now derelict and largely covered with grassed-over mounds of debris from the adjacent airfield. Few details can be seen apart from a quay-face flanking the E. side of the burn-mouth, and the much-eroded N. end of the work, which fronts on the Bladenoch. The former shows masonry with broken-down timber uprights, and at the latter likewise the tops of stakes appeared through the rising tide. The length of the quay may have been about 70ft. (Visited 1978).

BARSALLOCH. 4558.

This place comes to notice in connection with the Wigtown-Creetown ferry; but the shore-line has been greatly modified by drainage works, no significant remains are known, and Barsalloch's place in the ferry's history can consequently best be dealt with along with the rest of the evidence, discussed in the note on Wigtown (q.v.).

BRANDY PORT. 4650.

This was a landing-place 'well known and much frequented by smugglers'.¹⁰

BURNFOOT. See Stairhaven.

CAIRNRYAN. 061685.

The bay at this site was described as safe and commodious, with good anchorage in depths of from three to eight fathoms. It provided a place of refuge for Clyde shipping, and vessels from the West Indies are mentioned. It was used by the fleet of William III in 1689.¹¹

CARTY PORT. 431625.

The following note is reproduced from the paper of 1977,¹² mentioned above, in order to complete the account of the series of sites now under review.

Carty Port may be regarded, for practical purposes, as the head of navigation

6. *Ibid.*, 81.

8. Fraser, G., *Lowland Lore*, 127.

9. *N.S.A.*, iv (W), 19.

10. *Smuggling*, 87.

11. *Stat. Accr.*, i, 357, iii, 137, *N.S.A.*, iv. (W), 92.

12. *TDGNHAS*, lii, 119.

on the Cree estuary, irrespective, that is to say, of Symson's statement (1684) that 'little barks' could reach the upper limit of the tide at the ford of Machirmore, about a mile below Minnigaff. The port's history is obscured by the existence of two separate quays. The 6-inch O.S. map surveyed in 1848 marks the present one as 'New Quay', and in addition an 'Old Quay' some 550 yds. upstream; and here comparison may be made with a record of 1844¹³ that 'an old landing-place or port' then disused, had once existed a short distance upstream. To which of these ports other records should be thought to refer is not always clear. Ainslie's map of the Stewartry of Kirkcudbright (1797), which marks Carty Port with buildings and an access road, seems to refer to the older site but the scale is too small for certainty; the parish minister of Penninghame, who noted in 1792 that small vessels could safely be brought to Carty,¹⁴ does not provide any evidence one way or the other; but by 1838, the date of his successor's account,¹⁵ the 'New Quay' must almost certainly have been built. In 1838 the usual size of vessels trading to the port was 35 to 40 tons or up to 80 tons at springs, when a depth of 12 feet was obtainable; the Liverpool steamer of the time, however, was said to have been 'delayed' by the winding of the river.

At the site of the Old Quay, the map of 1848 marks an indentation in the coast-line which, though very small, is of a significantly artificial shape. Some buildings are also shown, and place-name Shell Acre. The New Quay is shown as possessing a frontage of about 100 feet, and as projecting about 70 feet; today its projection is slight, as the ground on either side of it seems to have built up, with the result that it now appears as little more than a stretch of rough masonry, with frontal uprights of timber, facing the steep river-bank. Mr King-Webster notes¹⁶ that the quay might have taken schooners up to 80 feet in length, and that a two-knot current keeps its face clear of silt. (Visited 1974)

CASTLE FEATHER. 448341.

This place is marked on the plans included in *Smuggling* and *Hist. Gall.*

CHANG PORT. 297474.

The description of this place as a 'pebble foreshore where sloops once beached',¹⁷ may be misleading, as the principal local feature is a wide tidal belt of boulders, some of them massive. Through this belt there has been cleared a channel 20 ft. wide, to permit boats to approach a sandy and pebbly beach at and close to high-water mark. On the north at least two pond-like areas have also been cleared of boulders, probably to serve as fish-traps. Cf. Garheugh Port and Alticry. (Visited 1978)

CHIPPERMORE PORT. 287481

This place is marked on the map included in *NSA.*, iv (W), of 1839, but is not mentioned in the text. It has been described as a 'pebble foreshore where sloops

13. *Tidal Harbours*, 596.

14. *Stat. Acct.*, iii, 342.

15. *NSA.*, iv (W), 187.

16. Personal communication.

17. *Old Galloway*, 122.

once beached';¹⁸ but in fact it is fronted by a tidal belt of boulders similar to that noted at Chang Port (q.v.), and through this a channel of access for boats has been cleared in the same manner. Here, however, the channel is somewhat shorter, as the general slope of the foreshore is rather more abrupt. (Visited 1978).

CLANYARD BAY. 100380

Mentioned as a smugglers' landing-place¹⁹.

CORWALL PORT. 277489

At half-tide nothing could be seen to show that this site had ever been used as a landing-place, but it has been described as a 'pebble foreshore where sloops once beached'.²⁰ (Visited 1978).

DALLY BAY. NW 964689

Mentioned as a smugglers' landing-place²¹

DRUMMORE. 138368

As long ago as 1791 Drummole Bay ranked as an easily accessible anchorage sheltered from westerly winds, where ships of burden frequently put in.²² In 1839 a village and harbour are mentioned, and it is noted that four small sloops were then owned in the place and that the usual coasting trade was carried on in farm produce, lime and coal.²³ The harbour of that date was presumably a simple landing-place in front of the village, where 'Shore Street' is marked on the O.S. map of 1848; but the same map also marks a 'quay' in the position of the existing pier at the SE. horn of the bay, running out north-westwards for some 350 feet. It was built by the proprietor, the 8th Earl of Stair, no doubt very shortly before the survey was made, to accommodate coastal craft supplying the district.²⁴

The pier as it now stands is some 440 ft. long by 30 ft. broad, the date of its extension perhaps being 1889, as this date appears on a stone inserted in the superstructure at a point near the original end. The work has been thoroughly modernised, and possesses few features of interest apart from the wall, about 9 ft. high, that runs along its seaward side and points to the violence of the waves from which protection is needed. The inner face of the pier shows large mortared blocks poorly coursed, with frontal uprights which are more closely set on the extension than on the older part of the work. The extension further differs from the older portion in possessing neatly rounded bollards, in contrast to the older unshaped blocks; its lip is also differently finished. A short breakwater runs out northwards from its N. corner.

The mound of pebbles and debris that lies to landward of the pier-head has no significance in connection with the harbour's navigation, as it was only built

18. *Ibid.*

19. *Smuggling*, 81.

20. *Old Galloway*, 122.

21. *Smuggling*, 81.

22. *Stat. Acc.*, 1, 153.

23. *NSA.*, iv (W), 201, 214.

24. *Tidal Harbours*, lviii.

in 1977 for the purpose of creating a scour in the tidal currents to clear out unwanted seaweed. (Visited 1978).

EAST TARBET. 145309

The 6-in. O.S. map of 1848 marks a curving quay about 270 ft. long, covering the NW. side of a rocky pocket at the SE. end of a sandy bay. No other evidence has been found of harbour construction here, nor any record of the transport of boats across the isthmus to West Tarbet, such as is suggested by the place-names. The record of a smugglers' landing-place at the Mull,²⁵ however, presumably refers to E. or W. Tarbet.

FLOAT BAY. 064472

Mentioned as a smugglers' landing-place conveniently situated for the running of salt from Carrickfergus.²⁶

FRONT BAY. 3639

Front Bay is a stretch of beach immediately below the Kirkmaiden burial-ground, which is mentioned as a landing-place used by smugglers.²⁷ It adjoins Monreith Bay (q.v.).

GALDENOCH. NW 964615

This name, applied to a smugglers' landing-place (*Smuggling*, 80), may perhaps have been used as an alternative for Saltpans Bay (q.v.).

GARHEUGH PORT. 269499

This place is marked on the map included in *Hist. Gall.*, ii, and has been described as a 'pebble foreshore where sloops once beached'.²⁸ In fact, however, the foreshore is now covered with a belt of boulders, as elsewhere on this section of the coast, and through this an access channel has been cleared for boats as at the neighbouring site of Alticry (q.v.). Cf. also Chang Port and Chippermore Port. (Visited 1978)

GARLIESTON. 481462

Garlieston Bay is a bag-shaped inlet opening towards the south-east, and measuring about 700 yards both in depth and across its mouth. The small Pouton Burn debouches into its SW. corner, and most probably the Kilfillan Burn, which is now led by an artificial channel to Garlieston village, on the inlet's W. shore, originally joined up with the Pouton Burn, also now canalized in part, and shared a common mouth. Evidence of this is given by the course of a parish boundary which crosses about 130 yards of dry ground between the two burns at 46584609, above the canalization, apparently perpetuating the line of a former waterway as such boundaries frequently do. These considerations point to an early harbour or landing based on a pool where the combined burns ran out into the tidal shingle

25. *Smuggling*, 81.

26. *Ibid.*, 82.

27. *Ibid.*, 87.

28. *Old Galloway*, 122.

and mud. On this showing the existing village possesses no significance for the harbour's history, and it is preferable to associate it with the organisation or improvement of Garlieston Park, by the removal from the latter's northern confines of a possibly somewhat sordid seafaring community. Such a move would have been entirely in keeping with 18th-century methods, and parallel instances may be quoted, for instance, at Ayton (Berwickshire) or Fochabers (Moray); while in 1790, the date given by Donnachie and MacLeod for the 'foundation' of Garlieston,²⁹ the crescentic lay-out of the frontage might well have ranked as a fashionable novelty.

The existing harbour is in the S. sector of the inlet, the pier forming the SW. horn of its entrance. The date at which work on this site first began is not definitely recorded, but may not have been before the later 1790s as the Old Statistical Account suggests,³⁰ in 1791, that although Garlieston's position was favourable for trade with the west of England, Wales, Ireland and the Isle of Man, no good harbour existed at the time, with consequent prejudice to the run between Whitehaven and Dublin. Some vessels were owned in the place, and grain and potatoes were exported. The same authority throws a startling side-light on contemporary maritime practise, by stating that two ships, recently stranded in this parish, were helped and refloated by the inhabitants, as if implying that they might have been looted by wreckers. A contraband trade was carried on, and some houses had cellars for the storage of smuggled goods.³¹

By the beginning of the 19th century, at any rate, some works must have existed, as it is on record that the harbour was enlarged and improved about 1808.³² It then gave a depth of 18 ft. to 20 ft. at high springs and could hold thirty vessels. Fifteen were owned in the port, and shipbuilding had recently begun. A slightly different account is given by the Parliamentary Report of 1847, which states that the pier and quays were built by subscription and were finished in 1838, the pier being 300 ft. long and the depth of water at its head 17 ft.³³ Groome records improvement in 1855, though without stating an authority;³⁴ he remarks on the good anchorage provided by a soft clay bottom, and on the trade with Whitehaven and Dublin.

In view of the extent to which the pier has been worked over at these various periods, it is natural that it should retain few traces of its original condition. Its landward end rests on a quay set among industrial buildings some 200 yards east of the SE. corner of the village, and comprises three sections arranged on a zig-zag plan which allows the Pouton Burn to scour mud and sand from its inner side. The first section runs north-north-east for some 250 feet, evidently corresponding with the whole pier marked on the 6-inch O.S. map of 1846-8; the central section then runs eastwards for 210 feet, and the pier-head returns north for 45 feet. The quay face and the first section of the pier are actually washed by the burn, with the further curving course of which the outer sections conform to a modified extent.

29. *Ibid.*, 152.

30. *Stat. Acct.*, i, 242.

31. *Smuggling*, 25.

32. *NSA.*, iv (W), 33.

33. *Tidal Harbours*, lviii.

34. *Gazetteer*, s.v.; no authority quoted.

The seaward side of the pier has a well-flared base, and carries a protective wall eight feet or more in height. Masonry, stairs and fittings are modern in appearance and call for no remark, apart, perhaps, from two tree-butt bollards.

An interesting subsidiary feature of Garlieston harbour is the breakwater that gives external protection to its entrance. This structure, now partially ruinous, is based on the shore at a point some 250 yds. south of the pier, its alignment being easterly, more or less at right angles to the shore. Its landward part has been reduced to an irregular rampart of huge boulders and debris, but its outer end still stands as a massive masonry whaleback. Its development and present condition can best be understood by a comparison of successive editions of the O.S. maps. In the first place, the 6-inch sheet surveyed in 1848-9 shows, in the position of today's boulder rampart, a work which the map's system of symbols suggests was not of masonry but simply of heaped-up material; its length was about 350ft., and beyond it there extended for a further 500 ft. a slighter work, perhaps only a palisade. This latter was aligned approximately east-north-east, and so formed an obtuse angle with the east-going landward work. The shore end of the latter was approached by a road which had diverged, a short distance back, from the public road along the shore-line, and was barely above high-water mark. This breakwater was described as 'new' in 1845.³⁵ Secondly, the 25-inch edition 'resurveyed' in 1849 shows, as superseding these works, a single continuous masonry breakwater, laid out to a 'boomerang' plan which perpetuates the differing alignments of the two earlier structures; its W. and E. parts are about 270 ft. and 140 ft. in length respectively, and its breadth varies from 35 ft. to 45 ft. The approach-road is no longer marked, but its presence can be inferred from a narrow avenue left blank for 100 ft. between two belts of coastal revetment. Finally we have the 1975 edition of the 25-inch survey, and this is definitely misleading as it marks a detached breakwater 270 ft. long and comprising the angled section of the 'boomerang' structure, and to landward of this, in place of the great boulder rampart, a gap of 100 ft. to the high-water line containing the word 'Boulders' only. It thus seems certain that the breakwater was once a continuous structure of masonry, as shown in 1894, and that this has either been totally ruined and only repaired at its outer end or that its shoreward end has suffered much more heavily than the rest by reason of the particularly destructive effect of waves breaking on a foreshore. Damage of this kind can be paralleled at many sites. The rounded angle between the boulder rampart and the shore is heavily revetted with neat masonry pitching, and a ledge, representing the low-level roadway just mentioned, runs out along the base of the breakwater's N. side, being perhaps intended to serve for maintenance purposes or for access to a beacon beyond.

At a point some 200 yds. south of this main breakwater, a much slighter one (not examined) is marked on the map as projecting, again eastwards, from a stretch of coastal revetment. In 1894 a second jetty existed about 80 yds. to the north of it. (Visited 1978)

35. *Tidal Harbours*, 595.

INNERWELL PORT. 478493.

This sheltered cove with a sandy beach at its head is mentioned in terms of a fishery³⁶ rather than of a landing-place, but it also provided a refuge for ships in storms.³⁷ (Visited 1978)

ISLE OF WHITHORN. 476363.

The Isle of Whithorn, now joined artificially to the mainland at its N. end, forms the E. side of a sleeve-like inlet some 750 yds. long by 350 yds. wide at its entrance. The harbour consists of a tidal basin at the head of this inlet, measuring about 350 by 250 yds., and in its natural state it possessed a shallow passage of egress towards the east, now blocked by the mole that carries Main Street and gives access to the island. With its obvious natural advantages, the inlet must have served as a harbour from the earliest days of navigation, and no doubt from long before the building of the fort at the island's S. end. It is unnecessary to speculate on a possible connection with St. Ninian, but it is worth noting that C.A.R. Radford, whose excavations established that the island chapel did not originate earlier than the 13th century, allowed for the bare possibility of its having occupied the site of some vanished earlier foundation, which could have marked the Saint's landing-place and the earliest seat of his mission.³⁸

On the history of the harbour at a rather less early period a hint is contained in St. Ailred's Life of St. Ninian, which records that the latter selected a place called Witeria for the founding of his mission, and there built the first stone church in Britain.³⁹ This record, as it stands, is, of course, mistaken, but the same passage describes the place as 'situated on the shore, while it runs far into the sea on the east, west and south, [and] is closed in thereby. From the north side alone it is approached from the land'; and this description corresponds so closely with the existing conditions as to suggest that the harbour was frequented by travellers and seamen in the 13th century and that St. Ailred had his information from someone to whom it was familiar.

In the Middle Ages and later, Isle of Whithorn was the port of the Royal Burgh of Whithorn; a charter of 1641, confirming earlier ones by James IV, David II and Robert I, mentions the customs of the 'port and Ile of Whithorn' and recognises the place as the 'port and statione of shipes' belonging to the burgh.⁴⁰ Notwithstanding regulations designed to make pilgrims to St. Ninian's shrine at Whithorn approach that place by land (cf. p. 70), Isle of Whithorn appears to have shared in the pilgrim traffic until pilgrimages were made punishable in 1581.⁴¹ Symson, writing in 1684, describes the place as a 'very advantageous port . . . in which ships of great burthen' were safe in any storm.⁴² However, complaints of the familiar kind about decay and ruin had been reaching the ears of authority since 1595 at least, when an impost for repairs was granted on ships

36. *NSA.*, iv (W), 32.

37. *Geogr. Coll.*, ii, 81, 115.

38. *TDGNHAS.*, 3rd ser., xxvii, 123.

39. Forbes, Bp. A. P., *Kalendars of Scottish Saints*, 422.

40. *APS.*, v, 489 b.

41. Agnew, Sir A., *Wigtownshire*, 83.

42. *Geogr. Coll.*, ii, 82.

entering to anchor;⁴³ and further grants were made, or voluntary contributions authorised, by the Convention of Royal Burghs in 1655, 1660, 1677, 1678, 1720, 1729, and 1735.⁴⁴ In 1661 a measure of relief was taken by Parliament, in ordaining a voluntary contribution in all the churches of Galloway, Nithsdale, Teviotdale and 'Lanerick',⁴⁵ the burgh being then too poor to provide for the repairs itself owing to the quartering of English troops. The harbour was then described as 'most commodious', and useful for all local craft; and indeed the large size of the area to which the order applied may indicate that the harbour's utility was correspondingly widely recognised, in spite of whatever competition would have come from less distant ports, such as Annan, Dumfries, Kirkcudbright or Ayr.

Conditions at the Isle of Whithorn in the middle of the 18th Century are described by Pococke in a letter dated 6 May 1760.⁴⁶ He writes of 'a little harbour formed by a pier', which gave a depth of 18 ft. at high water and was accessible by ships of up to 300 tons. The place possessed grain-stores and warehouses, exported barley, and imported 'plank and iron from Gottenburgh in Sweden, and sent it by boats to Wigtown, as the entrance and harbour there are not good'. He continues 'There is a bridge over to the island, under which the sea passes at high water. The principal houses are on the west side of it, and on the Isle near the bridge is a row of poor houses'. With this account Roy's map of Scotland, surveyed a few years earlier, is in full agreement. It shows a jetty with a slightly returned end projecting from the NW. sector of the Isle much as does the existing pier, and, like it, giving shelter to the SE. corner of the basin; the break between the island and the mainland is still open, though the scale is too small for Pococke's bridge to appear. Apart from a few isolated buildings, perhaps Pococke's 'poor houses', it marks nothing to suggest habitation or harbour-works east or south-east of the basin; the settlement that it does mark corresponds in position with Pococke's 'principal houses' and consists of a row of houses with gardens behind them strung out along the harbour's N. margin in general correspondence with the existing Main Street.

The construction of the mole does not seem to be firmly dated, but it is natural to regard it as part of a large-scale operation undertaken, apparently, in the decade of the 1790's, and to connect it with the formation of Harbour Row and of the pier that exists today. Thus it was stated in 1839 that a quay or pier was built more than forty years earlier, with help from the Convention of Royal Burghs;⁴⁷ and in 1847 the place was described as a small 'bay with a pier built about 1790 by the Convention'.⁴⁸ The former passage calls the harbour safe and commodious, and mentions weekly sailings to Whitehaven and elsewhere as well as calls by a Liverpool steamer; the latter mentions only small coasters. That the harbour was a busy one in the heyday of small-scale navigation is suggested by the possession of individual names by certain subsidiary inlets in the harbour area, as recorded

43. *CRB.*, i, 471.

44. *CRB.*, iii, 415, 515; iv, 5, 11, 78; v, 236, 493, 598.

45. *APS.*, vii, 28f.

46. *Tours*, 17 f.

47. *NSA.*, iv (W), 57.

48. *Tidal Harbours*, lviii. This may be merely a copy of the statement in *NSA.*, and so lack individual authority.

on the 6-in. O.S. map of 1846-8 — for example Stinking Port east of the Main Street causeway, Chapel Port East and West forming the 'waist' of the Isle, and Watering Port on the W. side of the entrance.

The existing pier seems to occupy the same position as the one marked by Roy, but it possesses no feature suggesting a date earlier than the developments of the 1790's and has in fact very clearly been modernised in the more recent past. It projects north-westwards from the SW. end of Harbour Row for about 220 ft. as measured along its inner side, including a short terminal section lying 5 ft. lower than the rest. The breadth is 40 ft. throughout. The masonry is largely disguised by cement rendering, and the facing timbers are recent. Two stone bollards and a stump appear centrally through the modern concrete surface; one of them takes the form of a dwarf column, with base and cap, like those observed at Port William (q.v.). Harbour Row, which forms the SE. side of the basin, is some 150 yds. long from its junction with Main Street to the base of the pier, and evidently represents the kind of 'Shore', or street with a quay frontage, that is so often seen at old ports, but it has undergone much reconstruction. The mole connecting the island with the mainland may be thought of as underlying the portion of Main Street immediately south-east of the church, the head of Stinking Port now reaching the backs of the gardens of Number 76 and the adjoining houses. Chapel Ports, East and West, show no features of interest, but Watering Port justifies its name by possessing a small burn with a dammed-up dipping pool, above the old lifeboat-shed.

With the ubiquitous contraband trade the port was closely associated, as the Castle was occupied at the turn of the 18th and 19th centuries by Sir John Reid, who commanded the local Revenue cutters and altered the building, originally a tower-house of 1674, for use as the headquarters of the Preventive Service.⁴⁹ Plain signs of the alterations appear on the outside of the structure. (Visited 1978).

KELLY PORT. 447612.

Kelly Port resembles Carty Port (q.v.), situated about a mile and one third further upstream, in that it consists of a stretch of tidal quay flanking the bank of the River Cree at a point where a very small rivulet, debouching beside its downstream end, may have helped to lessen the accumulation of mud in front of it. The 6-inch O.S. map of 1846-8 marks what appears to be a rectangular work rather more elaborate than anything suggested by the surviving remains or, for that matter, by the 1959 edition of the same map. The quay, originally perhaps some 45 ft. in length along its face, which is aligned approximately from north to south, by 20 ft. transversely, is of rough masonry construction with footings of larger material in front; it has timber uprights on the face, which is not battered, and it is tied together internally with horizontal timber members. The whole is in a ruinous condition; the original upper surface has no doubt been washed away, and the ground lying immediately behind the quay to a depth of some 25 yards may well likewise have been subject to flooding from time to time. The N. (up-

49. Agnew, Sir A., *Wigtownshire*, 94.

stream) end of the quay returns obliquely, from a rounded corner, to join the natural riverbank, and the S. end, which is heavily washed, fades out among debris and some remains of better masonry into the outfall of the rivulet, which today issues from a large field-drainage pipe. The rather light posts that flank the outfall itself and run down to the mud of the river are probably no more than the remains of a boundary fence, having no connection with the quay; though it is possible that they may represent an attempt to minimize erosion by the rivulet. (Visited 1978).

KNOCKDOWN FERRY. 462603.

This ferry crossed the Cree about $3\frac{1}{2}$ miles upstream from Wigtown, and well above the point where the river's channel widens out into the estuary. It is thus substantially free of the saltings and tidal sands that make crossing difficult lower down. The ferry is no longer in use, but it is marked, with a 'Ferry Bell' on the right bank, on the 6-inch O.S. map of 1846-8; Roy's map 1747-55, however, marks a ferry not here but near Barsalloch (q.v.), about a mile to the south. The straight roadway that runs down from Grange of Cree farm to the ferry site clearly forms part of the agricultural complex, and is not to be regarded as an access-road designed for the service of the ferry. (Visited 1978)

McKEAND'S LOUP. ?237516.

An important landing-place for smugglers bearing this name was evidently situated somewhere in Auchenmalg Bay (q.v.).⁵⁰

MONREITH BAY. 3540/3640.

This bay, which adjoins Front Bay (q.v.), is mentioned as a landing-place much used by smugglers.⁵¹ It is marked, without comment in the letterpress, on the maps included in NSA. iv (W), and *Hist. Gall.* ii.

ORCHARDTON BAY. 4649.

This is on record as a favourite landing-place for smugglers,⁵² and is marked on the plan included in *Hist. Gall.* ii.

PILTANTON BURN. 1756.

No record has been found of navigation in the mouth of the Piltanton Burn, but as the tide runs up to a point near both Droughdool Motte and the site of whatever still more ancient settlement may lie behind the name Dunragit, it is tempting to speculate on the former use of this waterway by small vessels of shallow draught. The adjacent Sands of Luce are likewise well known as an area of early habitation.

PORT ALLEN. 477410.

This place was mentioned cursorily in 1791,⁵³ and is marked without comment on 19th century maps.⁵⁴ The adjoining coast-line to the south is of interest for its

50. *Smuggling*, 86.

51. *Ibid.*, 87.

52. *Ibid.*

53. *Stat. Acct.*, i, 247.

54. NSA., iv (W); *Hist. Gall.*, ii; *Smuggling*.

rock-bound inlets and coves, which seem to be very well suited for use as landing-places by boats. In one inlet, for example, the rocky floor has been smoothed, whether naturally or otherwise, in a way which would have greatly facilitated the dragging-up of boats; and just above high-water mark there appear traces of a settlement, the principal unit of which is straight-sided while the subsidiary ones are less regular and smaller. Again, immediately south of the more northerly of a pair of promontory forts (479480), there is a precipitous cove which contains, in its floor, rock ridges very markedly smoothed, though whether artificially or by the action of wave-rolled stones does not immediately appear. (Visited 1978)

PORT CASTLE. 425357.

The 6-inch O.S. map marks Port Castle Bay as an area of tidal sand and rocks which contrasts with the continuous range of littoral rocks that adjoins it on the south-east. Into it there debouches Physgill Glen, with St. Ninian's cave about 300 yds. north-west of the burn's mouth. It is shown without comment on the plans in *NSA*, iv (W) and *Hist. Gall.*, ii, and it no doubt formed part of the Glasserton parish shore, where it is noted that smugglers were active.⁵⁵

PORT OF COUNAN. 417361.

This place is marked on the plans included in *NSA*, iv (W) and *Hist. Gall.*, ii, though without comment in the text. No doubt it formed part of the Glasserton parish shore, on which smugglers were active.⁵⁶

PORT GILL. 078430.

The 6-in. O.S. map of 1847 marks a small pier here on the N. side of the inlet, but no other record of harbour works has been found.

PORT LOGAN. 094405.

Port Nessock, or Port Logan, Bay is a stretch of tidal sand about a mile in length and facing west, the harbour works lying at its S. horn. By contrast with the difficulties and dangers attaching to other possible harbour-sites on this exposed and inhospitable coast, this bay possesses some attractions, and the development of Port Logan harbour has been largely due to the defects of Portpatrick as a terminal for traffic from Ireland. The idea of superseding Portpatrick has evidently lain behind all measures of improvement from their outset, as appears clearly from the language of Robert McDouall's 'supplication' to the Privy Council in 1682 for help in the building of a harbour on his land.⁵⁷ Of Portpatrick he writes '... it being impossible to make or have a harbour there, so that that passage, albeit there runs many impetuous tyds from the Mule of Galloway betwixt Scotland and Ireland, can only be served by small boats that must be drawn up to high water, which has occasioned the loss of many lives and obstructs trade and commerce betwixt the kingdoms'. This same idea, of making Port Logan the chief terminal for the Irish traffic, and in particular the station for the official cross-Channel packets, evidently underlay all the later planning; and in 1820 a still more

55. *Smuggling*, 87.

56. *Ibid.*

57. *RPC.*, 3rd ser., vii, 345.

ambitious scheme was ventilated, for the construction of an offshore breakwater covering the whole of the bay, on the lines of the one at Plymouth, though this seems never to have gone beyond the stage of Parliamentary petitions.⁵⁸

A number of records exist which bear on the harbour's history, and these may be considered first. To go back to 1682, McDouall was duly authorised to receive voluntary contributions to the building of his harbour, but whether he actually secured any funds in this way, or whether, if he did, he spent them on building a harbour, nowhere appears. Symson, writing two years later, describes the place as 'very convenient for a harbour'⁵⁹ but gives no further information. Roy's map of Scotland, prepared between 1747 and 1755, marks a projection from the land at the S. horn of the bay which, in spite of the small scale of the map, may be taken with considerable confidence to represent a pier, as it compares well enough with the same map's marking of the pier at the Isle of Whithorn (q.v.). In 1791 it was noted that there had once been a harbour in Port Nessock Bay, but that at that date it was in ruins.⁶⁰ In 1813 there comes a report by the engineer John Rennie, entitled 'On forming a small harbour on McFerrand's Isles';⁶¹ this supplies a great deal of information but it contains proposals only, not a record of action taken, and it is clear that by no means all these proposals were actually carried out. One of them, for example, was that a tidal sluice should be provided in the new pier, and this was certainly not done as, in 1840, another adviser, J. Linn, was still recommending it;⁶² while another suggestion, the building of a 'breastwall', seems likewise to have been passed over. Rennie had himself pointed out that both these items could be dropped from his scheme, along with a 'parapet' and some excavation of the foreshore, as measures of economy, if the harbour was only to be used for local coastwise trade and not as a station for packets. In 1847 Port Logan had a pier 'extending 180 yards offshore in an easterly direction, built by the proprietors of the adjoining estate, under an Act of Parliament obtained in 1818';⁶³ and with this record the Third Statistical Account agrees,⁶⁴ giving 1820 as the date when the 'quay' was built by Col. McDouall of Logan.

Conspicuous remains of structure survive at the S. horn of the Bay, and if these are considered in the light of Rennie's report they are seen at once to correspond with at least the chief of his proposals. They consist, roughly speaking, of a feature which projects from the shore north-north-eastwards, forming as it were a long and wide jetty, largely covered up with boulders and debris from the sea, with the pier proper, or perhaps more accurately a pier-head, attached to its outer end. It seems safe to conclude that McFerrand's Isles, which appear nowhere on the maps, have simply been overbuilt by the jetty and pier in the manner suggested by Rennie, who moreover locates them by stating that the Great McFerrand's Isle lies 300 yards from the head of the bay at low springs and about 30 yards from the shore opposite to it. On this showing they were probably formations

58. *Tidal Harbours*, 587 ff.

59. *Geogr. Coll.*, ii, 97.

60. *Stat. Acct.*, i, 153.

61. *Tidal Harbours*, 585.

62. *Ibid.*, 591.

63. *Ibid.*, lviii.

64. Vol. *Wigtownshire*, 502.

similar to the Manxman's Rock, which lies just offshore a short distance to the west.

Examination of the pier-head was prevented by a rising tide, but the 25-inch O.S. map shows it as rectangular in shape, about 120 feet and 150 feet in length on its NW. and SE. sides respectively, and bounded on the north-east by a wall 55 feet long which overlaps the NW. face. A stair descends to the water on the SE. side, and another is shown at the SW. end apparently making connection with the outer end of the jetty. The N. corner carries a remarkable light-tower with a decorative stone lantern, which recalls, on a larger scale, a type of bell-cote common on country churches of the early 19th century and may well perpetuate their tradition. Details regarding the size and appearance of the jetty are difficult to state with confidence, on account of the heavy accumulation of upcast boulders; but its length may have been approximately 300 feet, while the breadth of the boulder-strewn strip above the level of low water, which must greatly exceed that of the original structure, was shown in 1894 as varying from about 80 feet to 150 feet. A stretch of the inner face, however, preserves the aspect of a quay, being composed of large squared blocks, well coursed, and supported by sawn timber up-rights, widely spaced. The feet of these timbers have been fitted into stone blocks cut out to serve as sockets, and of the five of these blocks that were not hidden by debris two still retained their timbers. At least one round stone bollard survives on the top of the quay. The area of the pocket protected by the jetty and pier might have been in the order of three acres. The seaward slope of the block of dry land adjoining the root of the jetty has a flared base which is carefully profiled and pitched, a precaution most necessary in view of the prevailing scale of storm-damage; huge blocks lie piled up close by, and among them there even appears a lump of masonry still held together by its mortar.

In addition to the pier and jetty, however, the bay contains another set of ruins of a much less obvious character. At a point about 100 yards east-south-east of the pier-head, there may be seen, at low tide, a massive block of weed-covered masonry, largely engulfed in the sand, but showing, on close examination, an area of level surface, now tiled seawards, together with 26 yards of unbroken arris. This can hardly be other than part of the ruin of a pier, and evidence for its landward end may be seen in an accumulation of large tumbled stones at and above high-water mark, faced on the west by a row of closely-set vertical timbers, twenty-five in number. The gap between these stones and the tilted block of masonry may be due to the fact that works in this kind of position regularly suffer most damage in the zone where the waves break; and it is also possible that an older pier might have been robbed of material for the new one. The function of this pier would presumably have been to enclose a more or less triangular tidal pocket with a northerly exposure, extending perhaps to something over an acre. These remains can be identified, with much confidence, as those of the 'old pier' that Rennie mentions more than once in the course of his report. The mere fact that he does so shows that the passage from the Old Statistical Account quoted above must not be taken to mean that no harbour-works of any kind existed in 1791, but only that they

were no longer fit for use. Nor should the identification be questioned on the ground that Rennie twice alludes to the new harbour being 'near' the old one, whereas a critic might maintain that the pier was not near the ruins in the sand but in fact well clear of them; this criticism collapses if Rennie's field of choice is thought of covering the whole of the mile-long beach, as was probably the case, and not simply its S. extremity. No doubt the end of the old pier was shortened, as Rennie advised, to secure a sufficient width for the new harbour's entrance, and its W. face suitably profiled to receive any seas which entered from the west-north-west; but no evidence exists for any further work having been done, and in particular no connection should be seen with the supposed 'breastwall' for the reason, already suggested, that this latter was in fact never built.

No basis exists for any theory regarding the old harbour's origin — whether, for example, it was built by Robert McDouall in 1682 or was an ordinary piece of estate improvement, dating from early enough in the 18th century to have gone to ruin by 1791. That such an episode should have escaped mention in any published record need cause no particular surprise. In this case no account can be given of McDouall's harbour, supposing always that he built one; but if it was on Roy's site at the horn of the bay its remains would no doubt have disappeared, along with McFerrand's Isles, in the operations of 1820.

The new harbour does not seem to have been a successful venture. In 1839 the village and harbour receive only cursory mention,⁶⁵ and the **Third Statistical Account** (1965) states that 'the boats that were to repay the laird's investment never tied up at that quay, and only a handful of rowing boats now shelter behind it'.⁶⁶ (Visited 1978)

PORT NESSOCK BAY. 0940, 0941.

See Port Logan.

PORTPATRICK. NW 9954.

In virtue of a tradition preserved in the Book of Leinster, W. J. Watson identifies the place named in it as Port Rig (Portree) with the later Portpatrick, connecting 'Rig' with Reregonium, which he regards as the royal town of the Novantae and places in this region.⁶⁷ He would thus carry Portpatrick's history back to the first century of our era, while he dates a rather later reference to about A.D. 250.⁶⁸ To come down to more recent times, the port was described in evidence given to the Tidal Harbours Commissioners in 1846 as a very old and favourite packet-station, to which mails had been brought from Ireland in smacks 'from a very remote period';⁶⁹ and in the 16th and 17th centuries several allusions are made to the port and its affairs in the Registers of the Great Seal and of the Privy Council. For example, in 1573/4 it was described as the port of Dunskey Castle,⁷⁰ and in 1624 it was included in a list of the 'most frequented portis' for the trans-

65. *NSA.*, iv (W), 201.

66. *Loc. cit.*

67. *Celtic Place-names of Scotland*, 34, 157 f.

68. *Ibid.*, 158.

69. *Tidal Harbours*, 559.

70. *RMS.*, iv, no. 2182.

port of goods to Ireland.⁷¹ Sir W. Brereton, again, describes how he crossed to Ireland, with his horses, in a chartered boat in 1636,⁷² while W. Symson, writing in 1684, calls Portpatrick 'the ordinary port where barks come in with passengers from Ireland'.⁷³ In respect of the mid-18th century Roy's map tells a similar story, as it marks the course and distance to Donaghadee, the corresponding Irish terminal.

In addition to the ordinary functions of a local harbour, Portpatrick, in its heyday, performed two others, of wider general importance, as it became the base for the official packet-service to Ireland and the principal place of entry for Irish cattle. In respect of the former, a regular mail by Portpatrick had been started in 1662;⁷⁴ details of its history do not call for analysis here, but 1825 should be noted as a crucial date as it was then that the Post Office first introduced steamboats.⁷⁵

Portpatrick's connection with the mail-service ended soon after this study's terminal date, but a note on some later developments will be added below. As regards the importation of Irish cattle, permission to land cattle at Portpatrick was granted as early as 1627, and the trade was carried on in later years in spite of restrictions designed to protect the interests of the local Galloway farmers. The ban on importation was finally withdrawn in 1765, at which date Portpatrick possessed six vessels mainly engaged in the importation of cattle; between 1786 and 1790 over 55,000 head came in, and in 1812 alone no less than 20,000.⁷⁶ An end, however, was shortly put to this boom when steamers began to carry cattle from Ireland direct to Liverpool and Glasgow; and by 1837 Portpatrick's figure had decreased to 1,080 only.⁷⁷

The defects of Portpatrick as a harbour had already been recognised by 1682, when Robert McDouall of Logan, in applying to the Privy Council for help in the development of a harbour of his own at Port Logan (q.v.), alluded to Portpatrick's 'insufficiency', stating that it was 'naturally impossible to make or have a harbour there so that that passadge', i.e. from Ireland, 'can only be served by small boats that must be drawn up to a high water'.⁷⁸ The parish minister of 1791 likewise stressed the labour and dangers entailed by this operation.⁷⁹ The harbour's shortcomings, particularly for use by steam packets, are strongly enforced by the Parliamentary Report of 1847, the language of which deserves reproduction in full.⁸⁰ 'Portpatrick Cove' it states, 'which has no claim to be called a harbour, affords an area of half an acre so far sheltered as by means of frigates' cables two small mail steamers can generally be held at their moorings. The entrance is open to the heaviest and most prevalent gales, and in consequence of this exposure, and of the position of the old pier which lies in the very worst possible direction, the run of the sea which sweeps round even the inner cove is fearful'. One of the witnesses

71. *RPC.* xiii, 553.

72. *Early Travellers*, 158.

73. *Geogr. Coll.*, ii, 116.

74. *RPC.*, 3rd ser., i, 263.

75. *Portpatrick*, 9.

76. Haldane, A. R. B., *The Drove Roads of Scotland*, 163.

77. *Ibid.*, 219.

78. *RPC.*, 3rd ser., vii, 345.

79. *Stat. Acct.*, i, 38. For a parallel case, in Moray, see *ibid.*, xiii, 408.

80. *Tidal Harbours*, lvii.

opined that 'of all the harbours in Great Britain, Portpatrick offers the minimum amount of shelter for the large amount of money that has been laid out upon it'.

These and other similar strictures derive from unfavourable natural conditions combined with an unfortunate history.⁸¹ In its natural state the harbour must have consisted of a rock-bound inlet, fully exposed to the prevailing south-westerly winds and customary storms, and complicated by a treacherous bar. Its head was formed by a more or less kidney-shaped bay, with its shore-line curving from north-north-west to south and its NW. portion enclosing a rocky islet known as McCook's Craig. The bar and rocks at the entrance did nothing to modify the headlong inrush of the seas, and in fact the site possessed no virtues to make up for its inherent defects. These defects are clearly shown up by the ruinous remains of the works designed to overcome them.

Serious attempts at betterment seem to have begun with an inspection carried out by J. Smeaton in 1770. He found no works in existence apart from a small platform for disembarkation, and on the strength, presumably, of his advice the Post Office built what was later called the Old Pier. Of this the Resident Engineer, J. Finlay, said in evidence to the Tidal Harbours Commissioners in 1846: 'Prior to 1820 the only work here was the old stone pier, extending 200 feet in a NE. direction, built in 1777; it is a nearly upright wall having only 5 feet of batter and faced with ashlar freestone; it had a landing-slip to seaward which has been washed away. A lighthouse 50 feet high was also built'. The Old Pier thus cut off a small protected pocket, the South Harbour, from the exposed harbour-entrance; the lighthouse stood at its S. end. Finlay's description corresponds with a coloured print by W. Daniell, executed in 1816 and thus antedating the alterations that began in 1820 (*infra*). The main features of the site as depicted by Daniell are:

1. A quay enclosing the S. end of the pocket, its concavity not appearing in the picture on account of an optical effect.
2. A light-tower, apparently octagonal, rising from its S. end.
3. The pier, with a nearly vertical W. face, a rounded N. end, a parapet-wall, perhaps about 9 feet high, running along its centre, and a quay or walkway on either side of the wall and turning round its N. end. The W. face of the pier shows damage near its S. end, and the parapet-wall is breached at a corresponding point. The pier is at a lower level than the quay (1). The picture represents conditions as at low tide, and shows a tongue of rock running southwards from the S. end of the pier, and a beach beyond it towards the south-east.

These arrangements having proved unsatisfactory, T. Telford was commissioned to investigate the whole subject of suitable harbours on both sides of the North Channel. Visiting Portpatrick in 1802, he made an unfavourable report, noting the lack of landmarks visible from the offing, the presence of rocks which made entry to the harbour difficult, and the heavy swell set up by winds blowing from most directions. J. Rennie was next called in; he likewise surveyed the possible sites between 1814 and 1818, and recommended the adoption of the route from Portpatrick to Donaghadee. Something has been said above in the note

81. The account that follows is based on *Tidal Harbours*, lvii and 559 ff., and on *Portpatrick*, 4 and 7 ff. Separate references to individual points not given.

on Port Logan (q.v.) about the use of Port Nessock Bay as an alternative packet-station; but Portpatrick was duly chosen, and work started there in 1820. The subsequent course of events is again described by J. Finlay in his evidence.⁸² 'In 1820', he states, 'the new works were begun by running out the south pier in a SW½W. direction, with a jetty projecting at right angles to the NW. 75 feet. The sea-slope of the south pier extends up to the top of the parapet-wall and was built at first with a slope of less than 1 in 1; all that part most exposed at the pier-head was washed away to the southward and filled up the angle. Till within the last 2 years a constant breaching of the glacis has been going on, from the outer point where the circular head springs, but the sea now appears to have formed its own slope. The stones laid down in the angle of the south pier were lifted by the sea, and served as battering-rams to breach the pier. The inner quay-walls have a batter of 10 feet in a height of 30 feet. . . . The light-house was built in 1834, and lighted till the heavy gale of 7th of January 1839, since when it has remained unlighted, owing to the difficulty of access to it in heavy weather'. In further evidence he states 'The works of the north pier were carried on at the same time The foundations on the circular head of the north pier . . . were brought up to within 10 feet of the level of low water and the jetty that projects at right angles to the same level, and so they now remain. The south pier jetty was finished in October 1831, the south pier in 1832 and was breached by the hurricane of 7th January 1839; the width between the pier-heads is 270 feet; if the works were completed the width of the entrance between the jetty-ends would be 170 feet.' In addition, the plan of 1835 shows a breakwater closing the channel between McCook's Craig and the land immediately to the west, which, with the Craig, protected another small pocket, the North Harbour. The plan of 1839 shows the North Pier with its outer end unfinished; the Old Pier with a rounded end partially encircled by a wall and with a quay on its inner side; a light-house, as today, at the root of the Old Pier; the South Pier with its jetty, a rounded end deflected slightly southwards and carrying a light-house, and a parapet-wall flanking the SE. side and encircling the rounded portion. Outside the pier on the south-east there is a flared basal belt, the rest of the angular space between this belt and the adjoining rocks being filled with the large stones mentioned in Finlay's evidence. Work on the North Pier stopped for financial reasons after the exceptional storm-damage of 1839, and its unfinished remains, together with uncleared debris from a coffer-dam on the inner side of the South Pier, created additional hazards. The evidence given in 1846 leaves one deeply impressed by the destructive power of the sea — perhaps underestimated by those in charge of these works. A particularly remarkable instance was provided by a block of whinstone weighing 17 tons, which was set in the sea-face of the South Pier and moved when the pier was breached in 1839.

It may be mentioned in passing that the stone used in this construction was quarried from coastal rock about 300 yards south of the Old Harbour, but had to be finished in workshops situated north-west of the town; a tramway was built for its transport along the harbour frontage.

82. Well illustrated by the 6-in. O.S. map surveyed in 1842, and also by a plan included in the *Tidal Harbours* volume.

The foregoing passages may probably present a fair picture of the harbour at the terminal date of this study, but in order to tie history to physical remains a few words are needed on the later course of events. The major points have been noted by R. R. Cunningham,⁸³ and his account may be summarised as follows.

In 1848 the Admiralty, which had taken over the ferry-service from the Post Office in 1837, withdrew the mail-steamers, for which, as they increased in size, the harbour had become increasingly unsuitable, and let the mail contract to a firm which worked between Glasgow and Belfast. The ferry continued to be operated by local craft. In 1857, however, a railway company was formed to serve Portpatrick, on the understanding that the mail service should be restarted and an entirely new dock built to accommodate the steamers. Work on dock and railway was started in 1859, but the new basin was not finished until 1865, and by that time the Stranraer-Larne route had come into use, with the collaboration of the railway, and the service from Portpatrick was consequently not restored. In 1868 Government support for the ferry service was withdrawn, and in 1873 the Harbour Acts were repealed and the harbour abandoned. Meanwhile, in 1871, the light-house had been removed from the end of the South Pier, to be re-erected on the breakwater at Colombo; after its removal the one on the inner end of the pier was relighted and continued in use until 1900, when its seaward side was shuttered and the landward light used to illuminate the harbour and adjoining streets.

Progressive decay and storm-damage, together with periodical alterations and bouts of fresh work, make it hard to identify structures attributable with confidence to dates before 1850, but the following few items were observed. 1. The N. part of the North Pier, elsewhere breached and ending in ruins. 2. The boulder-heaped breakwater joining the North Pier to McCook's Craig. 3. The NE. part of the South Pier, likewise ending in ruins but flanked on the south-east by a parapet-wall; this latter is now mounded up externally by material washed in by the sea, as reported by Finlay in his evidence (*supra*). A rounded pilaster is set against the wall-face at a point where it forms an angle. 4. Lying on the pier, part of a large stone slab, worked to a segment of a circle and with its edge moulded; this has probably come from the base of a circular building. 5. An area of quay which is presumably the same as that from which both the South Pier and the Old Pier sprang, with some ruins of the latter diverging in a northerly direction. 6. A particularly tall fragment of these, with a string-course some feet below its ragged top, the precise relationship of which with other features of the site was not satisfactorily established. 7. Footings of other structures near these same ruins, for which no explanation is suggested. (Visited 1978)

PORT WHAPPLE. 349409

This place is mentioned cursorily in 1791,⁸⁴ and may probably be covered by the allusion to smuggling in Monreith Bay (q.v.).

83. *Portpatrick*, 11 ff.

84. *Stat. Acct.*, i, 247.

PORT WILLIAM. 336436.

Port William harbour originated as the mouth of the Killantrae Burn, now diverted to discharge across the pebble beach a short distance to the south. Before its diversion, the burn skirted the rocky bluff now adapted as a public park, crossed the area of made ground occupied by The Square, and ran out into the narrow, curving and sharp-ended tidal inlet that now forms the harbour. The point of diversion, behind the Monreith Arms Hotel, appears quite clearly on the ground as well as on the large-scale O.S. map.

A good deal of information is available regarding the harbour's development, but some important points go unmentioned, and consequently the following outline cannot be more than tentative. About 1776, a 'neat small village' was founded by Sir William Maxwell of Monreith, consisting of a row of low houses fronting on the sea.⁸⁵ This was probably the forerunner of Main Street. The same authority states that in 1796 a small but commodious and safe harbour existed, sheltered by the land on west, north and east but apparently open to the south and south-west, as the writer goes on to mention 'a strong wall or rampart, which has some time been begun to defend the south'. This language implies that the harbour, to the writer's mind, consisted only of the innermost portion of the inlet, and that natural protection from the south extended no further than the area of slightly elevated ground now occupied by warehouses and other harbour-buildings. At the same time, it indicates that a work was then under construction to the west or north-west of this area, designed to increase the length of the protected stretch of the inlet and no doubt the same as the breakwater which will be mentioned shortly.

So far so good, but it would be rash to assume that Sir William Maxwell's village was the first habitation on the site. The convenient natural harbour provided by the mouth of the Killantrae Burn contrasts sharply with the inhospitable boulder-strewn foreshore that hems in so much of this coast; and it would hardly have been neglected by a local population in any way dependent on the sea. Again, the name Killantrae, if it means 'the church by the shore', may well point to a vanished church in a position analogous with that of the neighbouring Kirkmaiden (365399), and on that showing to a fishing or seafaring community of very ancient standing. Sir William Maxwell's initiative should therefore perhaps be regarded as a measure of reorganisation rather than as a completely new venture.

The next piece of evidence comes from a report of 1812, by R. Buchanan,⁸⁶ prepared at Sir William's instance. From this we learn that the burn had by now been diverted, though the date of this operation is not mentioned, and that the breakwater intended to protect the harbour-entrance from south-westerly seas, as noted in 1796, was still in existence. The reasons for deflecting the burn had been that it brought down alluvial gravel, which tended to block up the harbour, and that it undermined the inner part of the quay; but Buchanan points out that the inflow of gravel could have been checked by a suitable system of 'cascades', that the new burn-mouth was increasing the erosion of the beach and causing more

85. *Ibid.*, xvii, 561.

86. *Tidal Harbours*, 592 f.

loose material to drift towards the end of the breakwater, and that this latter was wrongly sited and thus helped the shifting gravel to accumulate in the harbour's entrance. He proposed the construction of a new pier with a head which curved inwards, apparently to supersede the offending breakwater; but his drawings are not published, and consequently the relationship of his pier to the 'strong wall or rampart' of 1796 remains uncertain. A small point of some interest emerges in his proposal that masonry blocks in the faces of the work should be laid obliquely, in order to minimize the lifting effect of the waves; a peculiarity observed at many sites of the early 19th century in other parts of the country.

Buchanan's report is followed by a blank of nearly thirty years, but in 1841⁸⁷ there appears an estimate, with specifications, by J. Linn for 'constructing the proposed Pier of Port William Harbour'. This report is not fully informative as again the drawings are not reproduced, but at least it proves that the 'proposal' for building a pier had still not been realised. It may, however, be compared with a plan of 1845 by Commr. C. G. Robinson, R.N.,⁸⁸ which marks a 'proposed extension' of the pier about 300 feet long with a circular head, this last feature corresponding with one mentioned by Linn. Nor was this the end of the period of delays, as the Parliamentary Report of 1847⁸⁹ still speaks of 'proposals' to extend the 'jetty', then 360 feet long but falling 300 feet short of low-water mark. By 1848, however, when the survey was made for the earliest edition of the 6-inch O.S. map, an extension had been built which is generally comparable with the one shown by Robinson, though its outer end is not circular but cut off somewhat obliquely, and is also slightly inturned. (Dimensions cannot usefully be compared, on account of the small scale of Robinson's plan.) The plan further marks a warping-buoy in the deeper water outside. The harbour of 1847 gave 17 feet of water at high springs and had an entrance 100 feet wide; it was built by subscription and did a considerable local trade.

The modern harbour perpetuates, with the addition of the extended pier, the general arrangements that preceded it, consisting, as before, of a curving, finger-like inlet ending in a small and sharply pointed pocket. The concave N. face of the combined pier and quay now measures about 740 feet in length, of which the pier accounts for some 230 feet, being itself 45 feet wide except for a short extension turning north at its outer end. From the inner end of the pier, the quay widens out to coalesce with the area occupied by the harbour buildings, the SW. side of which is revetted where it abuts on the beach outside. The strip of quay that forms the harbour frontage north of the buildings leads to a monumental entrance opening into The Square, balancing another into South Street south of the buildings.

Alterations and improvements effected at various dates have disguised most structural details, but a few conspicuous features remain for comment — for example the wall, about 7 feet high, that runs along the pier's S. side and end; a pair of ornamental finials that rise above the wall at the outer corners; and a remarkable series of stone bollards carved to represent dwarf columns with bases and capitals.

87. *Ibid.*, 593.

88. *Ibid.*, 518.

89. *Ibid.*, lviii.

One example of this type was found at the Isle of Whithorn, but none at any other site. One of the wooden bollards is also unusual, in consisting of part of a log and not the butt of a trunk.

A final noteworthy point in this harbour's history is its connection with what was evidently a flourishing contraband trade. Clone farm, for example, about a mile north of Port William (339457), was the local headquarters of the Manx smuggling firm of Morrison, Gault and Co., probably in the 1770s,⁹⁰ and had cellars for concealing its goods. A similar arrangement was in force at Balcary, in the Stewartry, though there the company (Clark, Grain and Quirk) built the headquarters itself.⁹¹ Again, in 1777, the crews of two armed luggers forced a party of twenty-five soldiers to allow them to land their cargo, rewarding them duly with thirty-six casks of spirits.⁹² A military and customs post was established at Port William in 1788, and smuggling was believed to have been 'largely' put down by 1796.⁹³ The barracks of the Customs force served for many years as the stables of the Monreith Hotel.⁹⁴ and its shell was only demolished in 1978. (Visited 1978.)

PORTYERROCK. 477390.

The sandy inlet at Portyerrock shows no traces of any harbour works, but an inlet and village are marked there on Roy's map (1747-55) and the place is also mentioned as a smugglers' haven.⁹⁵ The maps included in NSA., iv (W) and *Hist. Gall.* mark it but makes no comment in their letterpress. (Visited 1978).

Other 'Ports'

The following sites are not identified as landing-places but bear 'Port' names on the maps :

Boak Port, 014737.	Port Mora, NW 991551.
Marian Port, 032670.	Port of Spittal, 019521.
Maryport, 141343.	Portacree, 118432.
Port Gavrillan, NW 968704.	Portankill, 140325.
Port Kamin, 121314.	Portavaddie, NW 964558.
Port Kate, NW 989551.	Portayew, 038502.
Port Lochan, 078432.	Portdown Bay, 099331.
Port McGean, 491485.	Portencorkrie, 090353.
Port Maggie, NW 981563.	Portnaughtan Bay, NW 967698.
Port Mona, 104325.	Portobello, NW 960662.

RUE OF DOURIE. 338430.

This site was described in 1796 as 'a small natural bason', difficult of access, with shallow water, and insecure anchorage except in certain winds;⁹⁶ but the most recent edition of the 6-inch O.S. map simply marks the name among tidal rocks and sands south of Port William, while the first edition (1846-8) shows what seems to

90. *Smuggling*, 20, 22.

91. *Ibid.*, 20.

92. McIlwraith, W., *Visitors' Guide to Wigtownshire*, 72.

93. *Stat. Acct.*, xvii, 561.

94. *Smuggling*, 201.

95. *Ibid.*, 87.

96. *Stat. Acct.*, xvii, 561.

be a complex of sandy channels in the same general region. Possibly the 'bason' of 1796 has been filled up by movements of the sand.

SALTPANS BAY. NW 964615.

This is probably the 'Pans Bay' mentioned⁹⁷ as one of the smugglers' landings that were conveniently situated for the running of salt from Carrickfergus. Another Saltpans Bay appears on the O.S. map at NW 964674.

SANDHEAD. 099500.

No works are shown here either by Roy or by the 6-inch O.S. map of 1847, but in 1839 the bay provided anchorage for sloops carrying lime and coal.⁹⁸

STAIRHAVEN. 209536.

Long before the formation of Stairhaven harbour by the 8th Earl of Stair, the bay of Crow's Nest, with its wide stretch of tidal sand breaking into the zone of coastal boulders, was a well-known beaching-space for boats, much used by smugglers.⁹⁹ The name Burnfoot¹⁰⁰ seems to apply to the same site. The history of the harbour as such, however, is short, and for the following facts regarding it I am indebted to Mr S. Pilling, of the Stranraer Museum, who procured them from the files of the *Wigtownshire Free Press*. 'The proposal to build a pier', he writes, 'was reported in the issue of 18.4.1844, and a contractor was required on 29.5.1845. In an advertisement for the sale of Kirkchrist Mill on 16.10.1845, it was stated to be within half a mile of the newly erected harbour. The harbour seems to have prospered, and there were proposals to establish a steamship service in July 1848. In April 1852, it was decided to enlarge the harbour, and these improvements were completed by October of the same year. The port continued in use until the coming of the railways in the 1870's, after which it was only used by the occasional fishing vessel.' This account is in full agreement with the evidence of the O.S. maps, as the 6-inch edition of 1846-8 shows a straight pier, on an east-west axis and measuring some 275 feet along its N. side, in the position of the existing ruin, while by 1894, when the 25-inch edition was surveyed, the addition made in 1852 had evidently lengthened the work to 330 feet and given it an outer end deflected north-westwards, thus providing shelter to a tidal pocket in the SE. part of the bay. Within the angle between the two parts of the pier there was a stair. The width of the top was 25 feet, and against the SW. face of the pier-head and the adjacent S. side of the pier there was a great apron of heavily battered revetment, up to 60 feet in thickness and finished with pitching. Today most of this construction is completely ruinous, with its upper surface overwhelmed by boulders and tumbled debris. Where visible, however, as at the outermost end of the pier-head, the masonry has an unfamiliar 'cyclopean' appearance, brought about by the use in its construction of the local boulders, very roughly coursed on account of their irregular shapes but worked to an even face. Much of the flared seaward face is also 'cyclo-

97. *Smuggling*, 80.

98. *NSA.*, iv (W), 162.

99. *Smuggling*, 86.

100. *NSA.*, iv (W), 67.

pean' in character. Where the pier joins the land a small quay survives, carrying one bollard of granite and three contrived from tree-butts.

Apart from the ruins of the pier, the site shows other features of considerable interest, but these seem to be associated with its use for fishery purposes rather than as a harbour in the strict sense of the word. Thus the lowermost edge of the tidal sand is closed off, at or near low-water mark, by a straight rickle of boulders about 100 yards in length, evidently a yair of unexampled size. In its centre there is a gap through which a tractor was seen dragging fishing-boats up towards the beach above the sands. An inward branch of this structure, near its N. end, seemed to be designed to create a tidal pond, presumably for trapping fish, such as was noted above at Alticry (q.v.); while a similar cleared area, with a channel of access and a flanking rickle of boulders, lies close to the pier on the south. The traces of a small building overlooking the head of a cove south of the pier, whatever its original purpose, do not immediately suggest association with a harbour establishment. (Visited 1978).

STRANRAER. 058610.

Before the building in 1820 of a pier to plans by Rennie,¹⁰¹ Stranraer provided a safe anchorage and roadstead, with a village fronting on the beach. The village is marked on Roy's map of Scotland (1747-55). The beach must have been subject to major natural changes over the centuries, as Symson, writing in 1684, records the excavation of a 'pretty large' ship from a kailyard well above the high-tide mark as known in his day;¹⁰² he notes that its 'boards were not joyned together after the fashion of our present ships' and that copper nails had been used in it, but although these features point to clinker construction they do not serve to identify its country of origin. In 1791 no artificial works existed, but ships of 300 tons could use the road-stead, and smaller ones, of 60 to 100 tons, could anchor close to the sea-front. Some 1200 tons of shipping were then owned in the place, and in addition to craft engaged in a herring fishery and the coastal trade some larger vessels had lately gone to Norway, Gothenburg and the Baltic.¹⁰³ The place was created a burgh of barony and a free port in 1595.¹⁰⁴

The PARLIAMENTARY report of 1847¹⁰⁵ describes the pier as running out north-north-east for 200 yards with a pier-head returned eastwards, an arrangement corresponding with the inner portion of the pier existing today. This is built of squared masonry blocks faced with timber uprights, more closely set on the returned pier-head than elsewhere. The outer portion, which is wholly of timber, was evidently under construction as a project in 1847. At that date the steamer traffic had recently increased considerably, sailings to Glasgow, Belfast and Whitehaven receiving particular mention. In the 1860s the route from Stranraer to Larne came into use for the official mail-packet service, in place of the one from Portpatrick (q.v.) to Donaghadee.

The pier and the adjoining sea-front have been so completely modernised that

101. *Tidal Harbours*, lvii.

102. *Geogr. Coll.*, ii, 93.

103. *Stat. Acc.*, i, 339.

104. *RMS.*, vi, no. 366.

105. *Loc. cit.*

they now retain few features of interest, but some distinctive bollards may be seen on the outer portion of the pier, where they are shown to be recent insertions by the concrete settings of their bases. They are of wood, are bound at the top with iron bands, and have iron pins driven through them to keep ropes from slipping off. They may well have been removed from the older part of the pier, or from somewhere on the sea-front, in the course of its reconstruction. (Visited 1978).

WIGTOWN. 438546.

Placed as it is behind a barrier of tidal sands, Wigtown must always have depended for its access to the sea on the lowermost reaches and mouth of the River Bladenoch; but as these have not remained stable over the centuries, the existing harbour occupies a site quite different from that of its mediaeval precursor. Again, there is reason to suppose that in an indefinitely distant past the town itself occupied a different site, as the Rev. A. Symson stated (1684), on the strength of local tradition, that 'of old [it] stood more than a mile Eastward, but the place is now covered with the sea at every tide'.¹⁰⁶ The position thus indicated would presumably fall somewhere in square 4555, an area now occupied by the Wigtown or Baldoon Sands, and it is easy to imagine that whatever landing-place served this early settlement would likewise have been in the then mouth of the Bladenoch, wherever it debouched into the Cree.

References to the harbour begin to appear in the records of the 17th century, imposts for its repair being granted by the Convention of Royal Burghs in 1606 and 1613.¹⁰⁷ In 1692 it was noted that the burgh made use of 'ther own foot of ther water for ther harbour',¹⁰⁸ in clear allusion to the Bladenoch which, at that time, was accessible from a harbour near the NE. end of the town, close to the present position of a house called Croft-an-Righ (43635559).¹⁰⁹ Symson records that it could be approached at high springs by ships of 200 tons if they were well piloted,¹¹⁰ and another 17th century note describes it as 'good';¹¹¹ but in 1655 T. Tucker had reported only that 'there comes sometimes a small boate from England with salt and coales',¹¹² and in 1692 no ships were owned in the burgh and no foreign trade was done.¹¹³ Nor does Bishop Pococke present a much brighter picture in 1760, in stating that imports of iron and sawn lumber from Sweden had to be landed at Isle of Whithorn and forwarded to Wigtown by boat, 'as the entrance and harbour there are not good'.¹¹⁴ Nothing can be said regarding the size or construction of this harbour, as the area was reclaimed for farmland after its closure,¹¹⁵ but the PARLIAMENTARY report describes it as a creek.¹¹⁶ No mention is made of it in the Old Statistical Account.

Regarding the supersession of the old harbour by the new, the PARLIAMENTARY report states that the former became unusable in 1818, when the Bladenoch al-

106. *Geogr. Coll.*, ii, 72.

107. *CRB.*, ii., 221, 419.

108. *Ibid.*, iv, 618.

109. Robinson, S., *Reminiscences of Wigtownshire*, 68.

110. *Geogr. Coll.*, ii, 73.

111. *Ibid.*, iii, 129.

112. *Early Travellers*, 180.

113. *CRB.*, iv, 618.

114. *Tours*, 17.

115. Robinson, S., *op. cit.*, 69.

116. p. lviii.

tered its course, and that the latter was built by the burgh shortly afterwards. Read cursorily, this statement is puzzling as Roy's map of Scotland (1747-55), again if cursorily viewed, seems to show the river debouching very much where it does today, that is to say some two-thirds of a mile from the Croft-an-Righ position. This impression, however, is mistaken, as it relates only to the river above high-water mark; and careful inspection of some details, which appear only dimly on a photostat copy of the map, reveals that, after passing below high-water mark and entering an area of saltings, the channel turned to the north, skirted the E. side of the town-site, and then curved eastwards towards the Cree, still through saltings and sands. This eastward turn is made off the NE. end of the town, and some obscure markings shown here on the left bank pretty certainly represent the harbour on its original site. It is easy to imagine that if this curving section of the Bladenoch's course shifted a certain distance towards the south-east, communication with the harbour's creek would have been broken or rendered very difficult, and that a completely new harbour would have had to be built elsewhere. Nor is it impossible that the change came about gradually, and that 1818 was simply the date at which increasing difficulties were finally rated as intolerable.

The new harbour is said to have accommodated ships of up to 300 tons¹¹⁷ and to have served a local trade in agricultural produce. In 1839 steamers from Liverpool and Whitehaven were making fortnightly calls.¹¹⁸ Again, however, no detailed description is possible, as, after a period of abandonment, the harbour is now undergoing a fundamental reconstruction which has disguised the original features. All that appears on the 1970 edition of the 25-inch O.S. map, which antedates the reconstruction, is a square-ended tidal inlet about 100 ft. deep by 60 ft. wide, opening into marshland on the left bank of the Bladenoch, together with a disconnected pool of irregular shape which extends inland for some 200 ft. on much the same axis as the inlet, most probably perpetuating the line taken by the Bladenoch before it changed its course. The features could still be identified in 1978 among the new works then in progress, and a pile of what had evidently been facing-timbers from the quays of 1818, the stoutest 1ft. 2ins. square, indicated the type of construction employed. Some traces of masonry could also be seen in the banks of the pool.

In addition to its normal activities as a coastal burgh, Wigtown served as the terminal of a ferry and ford for the crossing of the Cree estuary. This aspect of its history possesses especial interest in relation to the pilgrim traffic to St. Ninian's sanctuary at Whithorn, and its assessment calls for a review of some relevant facts.

The earliest reference to the subject may be dated to 1305, when the monks of Dundrennan were granted a hospital at Crithe.¹¹⁹ This grant is likely to have been made primarily in the interests of pilgrims bound for Whithorn. Most probably to be associated with the hospital is 'ane old chapel at the ferrietoun' mentioned by Symson in 1684,¹²⁰ as it suggests comparison with churches or chapels provided at other ferry-landings, such as Earlsferry, North Berwick or Queens-

117. *Gazetteer*, s.v.; no authority quoted.

118. *NSA.*, iv (W), 6; *Tidal Harbours*, lviii.

119. *Cal. of Docs.*, ii, no. 1702.

120. *Geogr. Coll.*, ii, 67.

ferry.¹²¹ Symson goes on to record that the old parish-church of Kirkmabreck was demolished in the 1650's and that a parish-church 'was then built at the said Chapel, and therefore the parish is sometimes called the Ferrietoun, which Ferritoun is a little clachan on the east side of the Cree, where there used to be a boat for the ferrying of passengers over the water of Cree in their passage to Vigton, which is just opposite thereto and in view thereof though three or four miles distant'. The 'little clachan' was thus evidently Creetown, sited as it is today, and moreover the place is consistently called 'the Ferry' or 'Ferrytown' in the **Session Book Wigtown: 1701-1745**.¹²² No conflict with this conclusion need be raised by the occurrence of the farm-name Spittal about a mile and a half to the north, and close to Knock-down Ferry; this name might, of course, suggest that the monks' hospital and, with it, the 14th-century chapel, were here rather than at Creetown, but Symson's account of the Ferritoun, as just quoted, with its facts about the church and the chapel, can hardly be explained away, and an alternative derivation for 'Spittal' should accordingly be looked for. For example, it might point to lands devoted to the hospital's maintenance. Symson's phrase 'used to be a boat' suggests that in his day no ferry was actually functioning, but the interruption of the service may have been more or less temporary, as by 1795 a 'passage boat' was constantly available.¹²³

At this stage, however, account should be taken of the ferry terminal listed above under Barsalloch, discussion of which has been postponed from p. 43. This area has, of course, been greatly modified by drainage and land-reclamation, but when allowance has been made for these it still remains clear that the estuary must always have narrowed considerably here, leaving Wigtown Sands, to the south, as a wide tidal expanse. The point on the river's course at which sands and saltings might have ceased to cause serious difficulties would thus have coincided approximately, on the E. bank, with the inflow of the Moneypool, or Ferry, Burn at Creetown, and on the W. bank with the ground lying generally east of Barsalloch. That a ferry serving Wigtown worked at this narrow point in the middle of the 18th century is proved by Roy's map of Scotland, as this marks a road leading north-eastwards out of the town, passing Borrowmoss and Barsalloch, and ending blind on the bank of the Cree at about 458588. Similarly Taylor and Skinner, in 1776, mark (Pl. 8) the beginning of what must be the same road though its end is cut off by the edge of the plate, and title it 'Road from Creetown'. Pococke's testimony, too, seems to tell in the same direction, as he writes, in 1760, 'Near three miles from here [Wigtown] is a ferry to Ferrytown, and a ford at low water';¹²⁴ though his allusion to the ford is puzzling as Roy's map ties this securely to Wigtown itself. The note of 1795, just quoted, regarding the 'passage boat' at Creetown says nothing about its western terminal. P. H. McKerlie, writing in 1891, places the ferry 'higher up' than Creetown,¹²⁵ but at that date he may well have had Knock-down Ferry in mind. Donnachie and Macleod, again, draw attention, though with-

121. *PSAS.*, ci (1968-9), 238, 257, 276.

122. Paton, H., *passim*.

123. *Stat. Acc.*, xv, 554.

124. *Tours*, 18.

125. *Galloway in Ancient and Modern Times*, 295.

out quoting authority,¹²⁶ to Knockdown and Barsalloch as among 'several points' between Kelly Port and Wigtown 'where ferries plying from the Kirkmabreck shore used to land passengers; and this statement may go far to explain the conflicts in the earlier evidence, by suggesting the existence of subsidiary or alternative routes favoured by individual ferrymen. There is nothing impossible in the notion of various landing-places having come into or passed out of use as the river's current altered from time to time, cutting away stretches of bank which had earlier been solid ground and leaving other areas to dry out to saltings and meadow. At Knockdown, at any rate, no ferry seems to have existed in Roy's day, as he marks nothing there nor in the neighbourhood of Grange of Cree.

It remains to consider the ford. Of this Symson writes¹²⁷ that at low water the Cree narrowed to a fordable breadth from 'the East bank of the Ferriton towards the sands of Wigton'; but he continues 'I would advise any that comes there not to ride it, unless he have an expert guide to wade before him, it being very dangerous not only in the foord of the River, but also on the banks thereof, as also in the sands betwixt and Wigton. For even on the sands about half way betwixt the foord and Wigton there is a bourn called the Bishop bourn . . . empties itself into those sands, may occasion prejudice to a stranger unless he have a good guide'. In view of this unfavourable account, one may suppose that the ford did not carry much traffic; but it is tempting to wonder whether, perhaps, James IV may not have used it in 1503, seeing that 'the man that gydit the King our the water of Cree' was paid the rather large sum of fourteen shillings¹²⁸ — the same, in fact, as was paid in 1507 to a guide who accompanied the same king 'before day' from Wigton to Whithorn,¹²⁹ i.e. for a whole day's duty, much of it performed in the dark. Roy's map, in full agreement with Pococke as quoted above, marks the line of the ford as running from the mouth of the Moneypool Burn to the NE. end of Wigtown, presumed to be the harbour site, and titles it 'Ford at low water'; much of its course lies through sands and saltings, among which it crosses the lowermost tidal reaches of the Bishop and Borrowmoss Burns in the manner indicated by Symson. The 6-inch O.S. map of 1846-8 shows the words 'Ferry Ford' about a mile south-west of Creetown, in an area now marked as tidal sand with the Cree's main current traversing it somewhat further to the west than at present. (Visited 1978).

APPENDIX A

Pilgrimage Routes to Whithorn

The function of certain landing-places on the Cree estuary as terminals of ferries or fords has been discussed above in the notes on the places in question; but as these crossings were evidently tied up with the pilgrimage routes to Whithorn, and also, for that matter, with the itineraries of ordinary travellers, the subject seemed to outrun the scope of a footnote, and its discussion has accordingly been consigned to the following Appendix.

126. *Old Galloway*, 121.

127. *Geogr. Coll.*, ii, 112.

128. *Accis. L.H.T.*, ii, 371.

129. *Ibid.*, iii, 374.

A first question, however, which may well be asked relates to why pilgrims should have found it necessary to cross the Cree at all, or at any rate in significant numbers, seeing that a safe harbour existed at the Isle of Whithorn only three miles distant from the sanctuary for which they were heading. This harbour might be thought of as providing a convenient landing-place not only for overseas pilgrims but for others as well, from England or the interior of Scotland, who preferred a short voyage from, say, Dumfries or Annan, to a toilsome overland journey. This notion, however, does not seem to be borne out by the facts. Evidence on the subject, assembled by Professor G. Donaldson,¹³⁰ suggests that the overland route must have been extensively used; in 1427, for example, James I granted safe-conducts to pilgrims from England provided that they came and returned by way of the West Marches, only those from the Isle of Man receiving similar protection if they came by sea. The question of the overland itineraries consequently remains a real one.

The valley and headwaters of the Cree are largely shut off from the neighbouring ground to the east by the mountainous Rhinns of Kells (Corserine, 2668 ft.), to which Cairnsmore of Fleet (2331 ft.) and its associated high-lying moorlands stand as an outlier on the south. Ways of access from eastern and central Scotland were consequently influenced by the problem of passing this obstacle, and for the purposes of the present paper two natural routes are important — a northerly one which strikes through the Lowther Hills from the valley of the upper Clyde, proceeds by Penpont and Dalry to reach the Cree at what is now the town of Newton Stewart, and a more southerly one which, after reaching Dumfries by one method or another, continues by Kirkcudbright and Gatehouse. Travellers on this latter route, after passing the River Fleet, could either cross the moorland barrier from Anwoth on a more or less direct line some nine miles long, to reach the Cree at Creetown, or alternatively they could skirt round the coast, likewise to Creetown, by a route three miles longer.

Subject to the position of their starting-points, Whithorn pilgrims could of course come down from the north by Ayr, Kyle and Glenluce; this was, for example, a natural route for kings and queens to take if they started from Stirling, but it falls outside the scope of the present study as it involves no crossing of the Cree.

Evidence for itineraries to Whithorn is derived mainly from records of royal pilgrimages, and although mentions of these occur frequently enough,¹³¹ they are frequently of little value for present purposes, as mere notice of a king's presence at Whithorn or Wigtown does not necessarily show how he came there. Conditions on the more northerly of the routes suggested above are, however, well illustrated by the record of a pilgrimage made by James IV in March 1506-7,¹³² which gives details of his daily stages, overnight stops, and expenses. The lengths of the stages in his case are governed by the fact that he covered the whole distance on foot — in Bishop Lesley's words,¹³³ 'the Quene wes wexit with seiknes' after the birth of

130. *TDGNHAS.*, 3rd ser., xxvii, 152 ff.

131. For a list, see Chalmers, G., *Caledonia*, v, 412 n.

132. *Acct. L.H.T.*, iii, 372 ff.

133. *The History of Scotland* (ed 1830), 75.

their first child, 'quhairfor the King passit to Sanct Ninianis on his futt for her helth'. Starting on March 11th, the King made his first stage to Dolphinton, some 22 miles;¹³⁴ but on the 12th he went only about 13 miles, to Lamington by Biggar. His movements on the 13th are uncertain, being obscured by what seems to be a clerical error in the record. That is to say, on 'that nycht', i.e. presumably that of the 13th as it follows the one at Lamington, one entry states that the King 'lay' at Crawford, 18s. being paid to his hostess there; but another has it that on 'the 13 day of March' the king lay all night at Durrissdeer, where the vicar was duly paid 28s. The distance from Lamington to Crawford is only about 9 miles, and from Crawford to Durrissdeer a further 13 miles, and it is therefore tempting to suppose that the Treasurer, fair-copying notes made on the spot by a clerk, simply inserted the night at Crawford in error. On this showing the record for the following day, the 14th, would work out reasonably well as the King was then at Penpont, where various payments were recorded; and while the stage from Durrissdeer, 9 miles, seems unusually short, this may have been due to trouble with the King's shoes, which were resolved at Penpont at the cost of 16d. The dating of the next stages, between Penpont and Minnigaff, is again not free from difficulty. It is true that a payment of 28s. was made on the 15th to the vicar of Penpont, presumably for the previous night's lodging, and that this, with a dinner at Castle Fearn, would lead on well enough to an overnight stay at Dalry, some 20 miles from Penpont, on the 15th; but the payment recorded at Dalry, on the 16th, is simply entered as 'belcheir'¹³⁵ and is for the 18s. only, and thus materially less than was paid at Penpont. This slight anomaly need not, however, throw doubt on the rest of the time-table, as this brings the King to Minnigaff, another 20 miles on, by the evening of the 16th, when it is noted that he 'sowpit' there. On the 17th he was in Penninghame, having presumably crossed the Cree by boat or ford as no bridge existed before about 1745;¹³⁶ several payments were made in Penninghame, and on the 18th 'belcheir' is recorded in Wigtown, 'quher the king lay', evidently in respect of his lodging for the night of the 17th-18th. On the 18th he finished his pilgrimage, leaving Wigtown 'before day', with a guide, for the 11-mile stage to Whithorn.

Before leaving the subject of this northerly route to consider more southerly alternatives, it will be well to hark back to the rather obscure subject of its crossing of the Lowther Hills. The figure of 13 miles given above for the stage between Crawford and Durrissdeer, is based on the evidence of a road-book of 1776,¹³⁷ which shows the 'Road from Edinburgh to Whitehorn' as mounting from Abington to Leadhills, passing over a col at the watershed, descending to and traversing the headwaters of the Enterkin Burn, and at lower levels giving access to Durrissdeer. It is named as 'the Enterkin Pass'. This arrangement long predates Taylor and Skinner, as Gordon of Rothiemay records distances of 6 miles from Crawford-john to Enterkin Head and of 16 miles thence to Dumfries.¹³⁸ Taylor and Skinner

134. The figures given here for the lengths of the stages are necessarily imprecise, as nothing is known about detours, short cuts, etc., which may have been in use.

135. Subsistence, entertainment.

136. *Stat. Acc.*, iii, 341.

137. Taylor, G., and Skinner, A., *Survey and Maps of the Roads of North Britain or Scotland*, Pl. 7.

138. *Geogr. Coll.*, ii, 607.

note further that the road is 'made' from Edinburgh to Leadhills and from Newton Stewart to Whithorn, but that 'on account of the Precipice, at Enterkin Pass, and the Ruggedness of ye Rd. through the Steuarty of Kirkcudbright it is impassible with Carriages, which Obliges them to go by Dumfries'. The 'precipice' no doubt occurred on the descent from the watershed col to the Enterkin Burn (square NS 8810), a section of which the O.S. map shows as falling from 1800 ft. to 1450 ft. O.D. in a distance of 600 yds., i.e. at a gradient of 1 in 2.8. A possible alternative route to Durrisdeer would have been by Elvanfoot and the Well Path, the latter an ancient route with Roman ancestry; but the distance would only have been about 2 miles longer than that by the Enterkin Pass, and consequently the point is of little importance in the context of the pilgrimage as a whole.

For more southerly connections with Whithorn evidence may be found in the record of the King's return journey. He seems to have spent the nights of March 18th and 19th at Whithorn, perhaps under canvas as 38s. was paid for 'carrying of ane pailzoun (pavilion) to Quhitern and againe'; to have left on the 20th when he dined at Wigtown and 14s. was paid to the friars in belcheir; and to have slept that night at Tongland. The Bladenoch had been bridged since 1441¹³⁹ and a fee of 18s. was paid for his double crossing, 'cumand and gangand'. No fee is recorded for his crossing of the Cree estuary, but it is natural to suppose that he crossed from Wigtown to Creetown by ferry or ford, as a detour by Minnigaff would have added some 15 miles to the day's stage, which in any case amounted to some 30 miles if routed by Anwoth and Kirkcudbright. The stage of the 21st., from Tongland to Lochmaben, would have been of some 38 miles; its course is indicated by the King's purchase of three bridles in Dumfries, and several transactions are recorded in Lochmaben. What route the King followed on the 22nd., from Lochmaben to Peebles, does not appear from the record; but one by Moffat and Tweeddale would have given a figure of about 34 miles and one by the Moffat Water, Rodono, and the Manor Water might have been about 4 miles longer. The final stage, from Peebles to Edinburgh, is of 23 miles only.

The notable increase in the King's daily mileage from Whithorn onwards evidently reflects the fact that, with his pilgrimage achieved, he was now on horseback. In fact, while at Whithorn he received two horses as gifts, one from the Bishop of Galloway and the other from the Prior of Whithorn. He also made arrangements, repeated at Tongland and Lochmaben, for the hire of horses for his four Italian minstrels.

This use by the King of the southerly route in 1507 was not an exceptional thing, as the Treasurer's accounts for earlier years contain some corresponding entries. Thus in April, 1501, 28s. was paid to 'the gudwif of the King's lugeing' in Dumfries when he was 'riding to Quhitirn'; and on the following day, in Kirkcudbright, 18s. 'to the gudwif of the King's innys'. That same night the King was in Whithorn, dispensing drinksilver to masons.¹⁴⁰ In 1503, 42s. was paid in Kirkcudbright for the King's belcheir, and a man was sent on to Wigtown 'with the

139. *T.DGNHAS*, 3rd ser., xvii, 159.

140. *Accts. L.H.T.*, ii, 104.

King's doggis'.¹⁴¹ It was on this same pilgrimage that the King forded the Cree, as noted above (p. 69). In 1505, again, having made his pilgrimage through Ayrshire, he returned by Dundrennan, Dumfries, Lochmaben and Peebles.¹⁴² It seems fair to regard these pilgrimages as samples of what must have been a general traffic, pilgrim and secular, which used the Dumfries and Kirkcudbright route for movement in both directions; and, as was noted above, the topography of the region inevitably directed such traffic either to Creetown as we know it or to some point in its close neighbourhood. Creetown is thus marked out as an important cross-estuary terminal, with its counterpart at Wigtown or at whatever point near Wigtown the condition of the bank permitted at one time or another.

APPENDIX B

List of sites in topographical order (Fig. 1)

All the National Grid references are to 100-km. square NX apart from those marked NW.

Carty Port 431625	Back Bay 3639	Sandhead 099500
Kelly Port 447612	Front Bay 3639	Drummore 138368
Knockdown Ferry 462603	Monreith Bay 3540, 3640	East Tarbet 145309
Barsalloch 4558	Port Whapple 349409	Clanyard Bay 100380
Wigtown 438546	Rue of Doury 338430	Port Logan 094405
Baldoon 428538	Port William 336436	Port Nessock Bay 0940, 0941
Innerwell Port 478493	Chang Port 297474	Port Gill 078430
Brandy Port 4650	Chippermore Port 287481	Ardwell Bay 069450
Orchardton Bay 4649	Corwall Port 277489	Float Bay 064472
Garlieston 481462	Alticry 271497	Portpatrick NW 9954
Port Allen 477410	Garheugh Port 269499	Salt pans Bay NW 964615
Portyerroch 477390	Auchenmalg Bay 2351	Galdenoch NW 964615
Isle of Whithorn 476363	McKeand's Loup 7237516	Dally Bay NW 964689
Castle Feather 448341	Stairhaven 209536	Stranraer 058610
Port Castle 425357	Burnfoot 209536	Cairnryan 061685
Port of Counan 417361	Piltanton Burn 1756	

Abbreviations used in the footnote references.

Accts. L.H.T. Accounts of the Lord High Treasurer of Scotland, Edinburgh, 1844-75.

APS. Acts of the Parliament of Scotland, Record edition.

Cal. of Docts. Calendar of Documents relating to Scotland, Edinburgh 1881-8.

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141. *Ibid.*, 371.

142. *Ibid.*, iii, 152 ff.

Stat. Acct. The Statistical Account of Scotland, 1791-9.

TDGNHAS. Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society.

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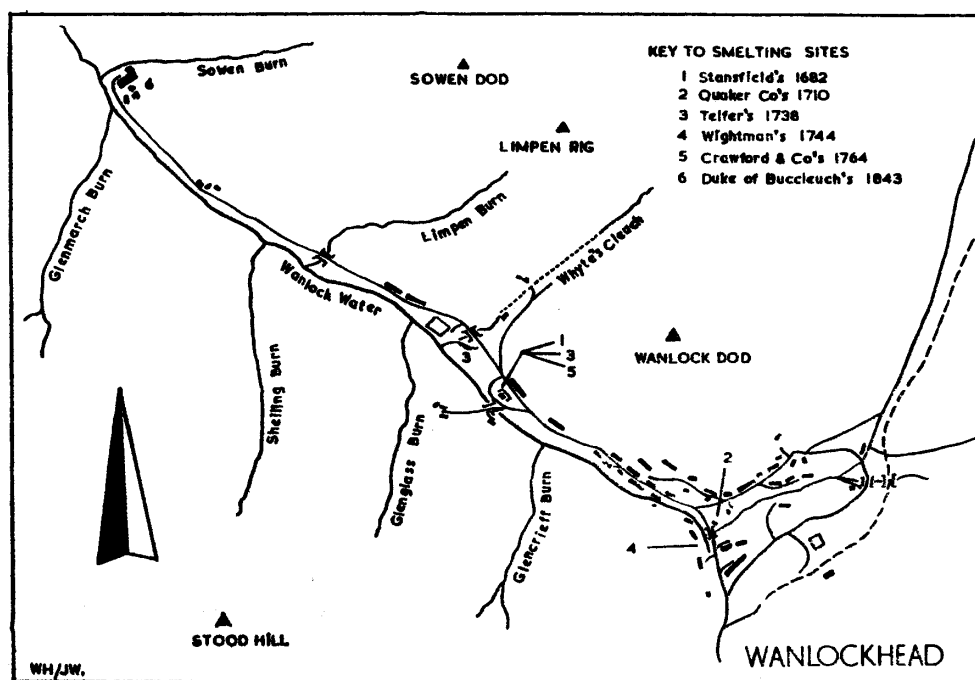
Tours. Pococke, R., Tours in Scotland, S.H.S. (1887)

LEAD SMELTING SITES AT WANLOCKHEAD : 1682 — 1934

by G Downs-Rose BA(Soc) and W S Harvey CME MIMechE

Introduction

The new Southern Upland Way, stretching from Portpatrick in the west to Cockburnspath in the east, takes in the old road from Sanquhar to Wanlockhead over whose hilly route, until the middle of the 18th century, coal was carted one way and coffins carried the other. From the Sanquhar direction today, the first view of the upper Wanlock valley takes in the devastated slopes of the Sowen Dod which rises above the ruins of the last lead smelter to be worked in Scotland. Lines of wooden posts circle the poisoned hillside and mark the remains of huge flues. Rendered almost indestructible by their lead content these posts are the 'Wood Henge of the Industrial Revolution', a memorial to two hundred and fifty years of lead smelting in the Wanlock valley.



This, the Meadowfoot smelter, in its heyday made use of a technology and a craft chemistry that had changed little since Agricola described them in the 16th century. Similarly, the mill worker of the 1930's spoke the technical language of those Germans who worked these mines in the 16th century as he 'watched' his hearth fire and 'laced' the molten metal into the bar moulds.

But the buildings in which such men worked came and went as mining companies prospered or failed, centres of mining activity shifted or, inevitably, they

gradually decayed with the corroding smelter fume. A record of the location of the smelting sites on the upper Wanlock is now emerging, and their history can be fitted into four main phases of commercial exploitation.

1675 — 1755

The records of a co-partnery between Sir James Stansfield, an Edinburgh merchant, and William Blackett, who worked the mining grounds from 1675 to 1684 provide the earliest reliable evidence of lead smelting at Wanlockhead¹. In 1677, after two years of development, Stansfield received the encouraging news that enough good ore was to hand to repay his costs. Consideration was given at that time to smelting the ore on site, but a decision delayed because experienced smelters were scarce and good prices could be got for potter's ore in the Low Countries. An agreement was made as late as 1681 to supply Rotterdam merchants with 200-250 tons of ore yearly via the port of Leith.

Nevertheless, ore was experimentally smelted for the partners at Leadhills, and in 1680 ore hearth materials were ordered from a foundry at Allington, near Newcastle on Tyne, and a carrier called 'Carlisle of Dumfries' engaged to fetch them.

The building of a mill was completed by November 1682. It comprised a smelting house and bellows house. An inventory of the mill's contents dated 1683² shows that one hearth was smelting with blast from bellows worked by a water wheel which also operated a set of ore stamps. The inventory provides a detailed description of the mill gear. The hearth was of substantial cast iron parts, though the weight of the hearth bottom, four and a half stones, suggests this was a thick flat sheet, unlike the lid-less box shape of a conventional Scotch hearth which would weight several hundred weights. There was a 'Pan to cast the pickes (sic) of lead in', and a large die for impressing (Sir James' numbers) on the lead pigs. The mechanism for connecting the wheel shaft to the bellows included a 'swingel tree' and 'links and hukes', and appears to have followed the design described by Agricola. In design too, the building would have been traditional, having a work chamber in which fuel and ore was stored, a large archway which framed the fire-place proper in which the ore hearth was set, and behind this the bellows house and wheel.

The site of the mill has not yet been confirmed on the ground, but Stansfield's mining activities were chiefly carried out in Old Glencrieff vein which crosses the Wanlock valley from the Black Hill going northwards beyond Whytes Cleuch glen into the Limpen Rig. An 18th century mine plan³ marks the entrance to Stansfield's Level into Old Glencrieff as being quite close to the smelt mill at Pates Knowes which is described below. A mill in that vicinity could command a good fall of water to turn the wheel.

Details of the amount of lead smelted in the mill are scanty. One account shows the sale of 1202 bars of lead to William Luckup, master of works at Drumlanrig Castle.

1. Scottish Record Office, RH15/102/6/2, Stansfield MSS
2. SRO RH15/102/6/2/91, Inventory by William Roa, 1683.
3. Wanlockhead Museum Archive, 'A Plan of the Mining Liberty', c1780.

The mining venture was unprofitable and Stansfield's efforts were finally frustrated by 'disorders and malconduct from violent, impudent and hectoring humans abusing my people ...' for this was the 'killing time' and the Lowther Hills the scene of sporadic guerilla activity. Stansfield's operations ended in 1684 when his mill had been in use for less than two years.

In the more settled times following the Glorious Revolution, Matthew Wilson and Arthur Wall from County Durham took a 19-year lease of the mines. Their contract with William, Duke of Queensberry, dated 15th July 1691, allowed the new co-partners to: 'build new houses and a Lead Miln for smelting the Lead ore or repair the old houses and miln as they shall think convenient'. The work of repairing the old mill, or building a new one was evidently expected to take some time, for the Duke's tack at the start was reckoned in Lead ore, but 450 tonnes of lead were eventually smelted by the co-partnery.

No evidence has been found as to whether Wilson and Wall used Stansfield's mill or built a new one. Nor do we know much about the technology they used, other than that they successfully introduced the use of peat fuel for smelting, thereby reducing costs incurred by carting coal from Sanquhar.

There is firm documentary and slight physical evidence for the smelt mill built by the London Lead Company who took over the Wilson and Wall lease in 1710. This mill stood a few yards east of the road bridge which crosses the Wanlock burn in the middle of the village. The site was the only flat area in the upper part of the valley close to their mining operations, and having access to water power. The space is now occupied by premises which formed part of a forge and workshops built in the late 18th century. A stretch of the lade which carried water from the Wanlock to their waterwheel can be traced.

The London Lead Company or, to give their full title: The Governor and Company for Smelting down Lead with Pittcoal and Seacoal', were highly experienced and innovative smelters who had, a few years previous to taking the Wanlockhead lease, pioneered the successful use of coal-fired reverberatory furnaces at their Flintshire mines. They were the first company to desilver the lead at Wanlockhead, using the cupellation process and re-treating the litharge produced for sale as bar lead. The product in 1730 was 5½ ounces of silver and 10 cwts of bar lead from every ton of lead ore.⁴ Energy-dispersive microprobe analysis carried out recently with a sample of some silver foil in the possession of the Duke of Buccleuch and Queensberry, which survives from that period, showed the silver to be of extremely high quality.⁵

The above figures are interesting, for they imply that after allowing for slag material as much as 20 per cent of the lead was lost in the smelting. High losses were to continue into the 19th century until gas washing apparatus and long flues were introduced to condense and recover the fume products. No imagination is needed to picture the effect on the health of people living in the upper half of Wanlockhead when the prevailing south westerlies blew the poison-laden smoke across the village.

4. 'The London Lead Company 1692 — 1905', A. Raistrick, *Trans. Newcomen Soc.*, Vol. XIV.

5. 'Wanlockhead Gold, Silver and Lead', R. M. Callender, *The British Journal of Photography*, pp 474-475 Vol. 124 No. 6097.

Dorothy Wordsworth remarked on the incidence of skin disease among children she saw at Wanlockhead in 1802.

Documentary evidence of the design and contents of the London Lead Company's mill is given by a plan of the mines made in 1744⁶, which shows it as a three-hearth mill, and the contents of an inventory dated 1756⁷, which include 'Three pairs of smelting bellows and their appurtenances and two pairs of refining bellows'. Between 1710 and 1721, 1250 tonnes of bar lead was produced, and between 1729 and 1741 another 717 tonnes. The amounts from 1722 to 1728, and 1742 to 1755 are not known.

It would appear from the evidence that the Company did not use reverbatory furnaces in place of Scotch ore hearths at Wanlockhead. Unlike Wilson and Wall, they used coal for hearth fuel, and took a lease of coal mines at Sanquhar⁸. Reverbatory furnaces were suited for the roasting of the slimes produced by crushing and washing operations, and were used at both Wanlockhead and Leadhills for that purpose.⁹ But tests made to compare the relative efficiencies of reverbatory and Scotch hearth furnaces were carried out at Leadhills in 1735 and at Wanlockhead and Leadhills in 1787¹⁰, and demonstrated that seven to ten times as much coal was consumed by the reverbatory type, and labour costs increased by as much as 50 per cent.

From 1721 to 1755 the mining grounds were shared by a number of co-partneries and joint stock companies. The Duke of Queensberry, who had held a fourth share in the London Lead Company's enterprise from 1710 leased his share in 1721 to Robert Wightman, an Edinburgh Dean of Guild, whose partners included George Irving. The latter was writer to the Signet and represented Sanquhar at the Convention of Royal Burghs from 1718 to 1726¹¹. A third partner was James Douglas, and these three formed a joint stock company, the Friendly Mining Society, in 1722 and shared the London Lead Company's lease until 1728 when the mining grounds were divided between them. From that date, until 1755, the London Lead Company retained the grounds north of the Wanlock burn, including the productive mines at Straitsteps and Beltongrain, while Wightman's company mined the grounds south of the burn. When in 1734 the Friendly Mining Society surrendered its lease, Wightman retained the southern ground between Mennoch Hass and Glencrieff glen but sub-leased the remainder, including the rich Glencrieff vein to Alexander and William Telfer.

Employing only a few men, Wightman personally directed his operations and smelted his own lead from 1744.¹² The site of his smelt mill and refinery is recorded as being on the skirt of the Black Hill, southside of Wanlock burn, opposite the mouth of the day level which gives access into Loch Nell mine.¹³

Wightman brought two novel ideas to the technology of local lead smelting.

6. SRO RHP 9390 'Plan of Wanlockhead, 1744'.

7. Drumlanrig Castle muniments.

8. Drumlanrig Castle muniments.

9. WMA Day Book, Wanlockhead Mining Company, 1778 — 81.

10. Hopetoun House muniments.

11. *History of Sanquhar*, J. Brown p. 168.

12. SRO GD18/2675, Wightman to Sir John Clerk, 28 August, 1744.

13. Horne Library, Broughton House, Kirkcudbright, Wanlockhead Mining Company Journal 1 Aug. 1757.

He depended for his water supply on Mennock Hass burn and a small spring from Little Arthur Grain. These being insufficient to turn a waterwheel to work bellows, his mill, designed by a Mr Sharponbank used a device known as a 'water-blast'. Water, falling down a tube, induced a strong current of air to flow and this was fed to the ore hearth.

He also experimented, somewhat less successfully, with a hearth of novel design. The conventional Scotch ore hearth had a bottom which consisted of a heavy cast iron sump from six to twelve inches in depth which was kept full, during the smelting process, of molten lead on top of which floated the fire of coal and peat. The fire had to be 'watched', that is, supplied with fuel, ore and lime, and the mixture stirred from time to time with the gavelock, or poker, and the partly smelted ore raked forward onto the work stone where it could absorb oxygen before being returned to the fire. Molten metal overflowed from the sump, trickled down the sloping workstone, and was collected in the sumpter pot whence it was ladled into moulds and cast into bars.

Wightman's hearth had no sump, and between its flat bottom and the workstone a small gap was left to allow the molten lead to fall through into a collecting vessel, the slag being drawn across the gap on to the workstone. In the Leadhills Diary it is conjectured that Wightman's aim was to reduce losses, caused by vapourisation, from the molten lead that lay in the conventional sump. However, the method failed because absence of a sump filled with molten lead made the fire difficult to work, and because the gap between the hearth and workstone clogged with solidifying slags.

It was Wightman who, by making a cart road through the Mennock Pass in 1744, first opened that route from Wanlockhead to Nithsdale for vehicles. He died shortly afterwards.

The Telfers, who subleased part of the old Friendly Mining Society's grounds from Wightman in 1738, found rich ore in New Glencrieff vein. The 1744 plan shows 'Mr Telfer's Upper Smelting Mill', and his 'Low Smelting Mill'. The former was the larger, having three hearths to the other's two. The larger mill occupied a site on the north side of the Wanlock burn, across from the Green Hill, and the smaller mill stood about two hundred yards west of it.

A survey made in 1756¹⁴ confirms the location of the two mills, and the plan shows the upper mill as having a bellows house flanked at each end by a furnace house, while the lower mill consists of three separate buildings.

The data from these two plans raises a number of tantalising questions which have yet to be answered by field work. The choice of sites for mills at Wanlockhead was strictly limited by considerations of water supply, proximity to mining operations and, above all suitably flat ground. Little of the latter was available because the hills rise steeply from either side of the Wanlock burn. As industrial building took priority, it explains why cottages are perched haphazardly on the skirts of the hills. Apart from the London Lead Company's mill site in the middle

14. SRO RHP 37555, Plan of Wanlockhead Mining Grounds, 1756.

of the village, the other large flat area was on the north bank of the Wanlock between Bryson Terrace and the old graveyard.

Telfers upper mill was probably built on the site later occupied by the 1764 mill at Pates Knowes, which is discussed below. During excavations on that site using Job Creation workmen in 1976 a series of sandstone blocks were discovered that were unrelated to the later mill.

During the excavations at the site of the low mills, as shown on the two plans, a wall several feet high, built into a bank, was partly exposed. One end of it continues under 20th century mine gravel deposits. Further excavation there might throw light on whether the Stansfield and Wilson and Wall mills were sited there or at Pates Knowes.

While figures for lead smelted at Wanlockhead from 1741 to 1755 are lacking, other evidence suggests that mining operations during that time were indifferently pursued. After Wightman's death the Telfers were evicted from their sub-lease, though Alexander Telfer, ever an opportunist, sub-leased the Cove vein from the London Lead Company in the final year of their lease and raised 700 tonnes of smelted lead before leaving to take up coal mining.

1756-1842

Determined to select more dependable leaseholders the Duke of Queensberry let the whole of the mining grounds in 1756 to Messrs Crauford and Company. The original shareholders were Ronald Crauford of Restalrig, his brother, and Daniel, son of Alexander Telfer. The Craufords were Edinburgh merchants with trading links in Rotterdam. They had previously handled the shipment of both Leadhills and Wanlockhead lead from Leith to the Low Countries. Soon after the new company took over, Daniel Telfer sold his share for £1500 to another Edinburgh merchant, Gilbert Meason, an Orcadian, who subsequently managed the mines. This company held the lease for over eighty years, during which time the major shareholdings passed by marriage to the Marquis of Bute and the enterprise came to be known as the Wanlockhead Mining Company.

This lengthy period of operations provides many insights into the chequered development of local mining technology. Crushing and washing became partly mechanised; steam engines replaced waterwheels for mine drainage, and were in turn replaced by water-pressure machines; horse-drawn waggons replaced hand-tramming in some underground levels and supplemented cart haulage on the surface; the miners continued to reach their places of work either by scaling ladders or riding the shafts at the end of ropes, while ore was wound by both man and horse power. Underground extraction methods changed very little — black gunpowder was in common use for driving levels and sinking shafts, but until dynamite came later the hammer and wedge chisel was the only way to break hard rock.

Smelting methods changed very little. The Scotch ore hearth and slag hearth retained their usefulness into the 20th century, changing only in size to cope with the greater ore outputs. Smelter building design was governed by the need for the

bellows to be placed immediately behind the ore hearths and close to the water-wheel which worked them.

In 1756 at the commencement of the long lease, the smelting houses at Wanlockhead were the London Lead Company's mill in the middle of the village, Telfer's upper smelt mill at Pates Knowe, and his low mill just to the west. Which mills Crauford and Co. used during the early years of their lease is not known for certain. But their lead output would require the use of four hearths with as little interruption of work through lack of water as was possible. The London Co.'s mill was unfavourably placed for the latter, but its wheel and bellows could be adapted for the forge, which replaced it on the site by 1773.¹⁵ Furthermore, it was badly sited for Crauford's mining operations : in the period 1756 to 1765, 4364 tonnes of smelted lead, the total output, came from New Glencrieff (3434 tonnes), Straitsteps (250 tonnes) and workings in Whytes Cleuch (680 tonnes). The Pates Knowes site, with its more favourable water supply, was central to all these operations, and the Telfer upper and lower mills more likely to have been used.

In 1764 the company built a new two-hearth mill.¹⁶ It is shown on a mining plan of 1773,¹⁷ and had, on its west to east axis, a wheel and bellows house and furnace house. It was sited at Pates Knowes and was probably built with stone salvaged from Telfer's upper mill which it replaced. The low mill was still in use and it and the 1764 mill are shown on a drawing by John Smeaton made in 1780.¹⁸

In that year Smeaton was engaged to survey the surface water courses at Wanlockhead and to make recommendations for improving the water supply and its use at various points on the mining grounds. Among his recommendations were the use of larger wheels or higher heads of water at the Pates Knowes mill and the low mill. However, the company chose to enlarge the Pates Knowes mill by adding another bellows house and a two hearth furnace house west of the 1764 mill's wheelpit. Stone for the extension was quarried in March 1781.¹⁹ A plan of the mining grounds copied in 1840 shows the mill as enlarged.²⁰ It was a long rectangular building having chimneys above the east and west furnace houses and a tail race leaving the centre of the building.

Recent excavations,²¹ show that the placing of bellows and hearths to the east and west of a common wheel pit made a conventional tail race at one end of the pit impracticable, so the wheel was set with extra clearance beneath it and the bottom of the pit, and the race was taken out off-centre of the wheel axle through the south pit wall. From there the spent water was taken to washing floors outside the main mill building en route to the Wanlock burn. Those remains of the mill which have been conserved by the Wanlockhead Museum Trust show that each furnace house consisted of two work chambers each with a hearth set back from a low archway entrance. The stone roofs of the chambers were corbelled over to guide the gases

15. WMA 'A Plan of the Mining Liberty at Wanlockhead', 1773.

16. HL, BH, K, Wanlockhead Mining Journals.

17. WMA, 1773 Plan.

18. Royal Society Library. Smeaton Drawing No. 113B.

19. WMA, Day Book 1778-81.

20. WMA, 'Plan of the Mining Liberty, c 1780.

21. An account of the Pates Knowes Mill excavations by the authors was published in *British Mining* No. 8 pp 21-28, Northern Mines Research Soc. 1978.

from the hearths to one of two large squat chimneys which rose from the eight-feet thick walls separating each pair of chambers.

Other operations were concentrated at Pates Knowes. Smeaton in 1780 designed ore stamps worked by a water wheel, but if these were installed they were later replaced by an ore crusher driven by a small wheel whose pit and associated jigger sump remain. Remains have also been found of the site of a reverberatory furnace and fuel bar-lead stores.

An estimate of the total amount of lead smelted at Pates Knowes over nearly eighty years of operation may be hazarded. Although complete figures are not available from the mining journals,²² records from 1765 to 1780 give 10,000 tonnes, Montgomery in the New Statistical Account quotes 48,000 tonnes for the period 1785 to 1835, and a conservative estimate of 5,000 tonnes for the missing ten years gives a grand total of 63,000 tonnes.

By the time the lease expired in 1842 blowing engines had been applied elsewhere to provide a more powerful blast and more flexible mill design²³, and in the north of England gas washing and condensing plant introduced, with long flues to reduce waste from escaping lead fume. The failure to modernise the smelting plant at Wanlockhead was a direct result of lack of capital and the low profits which resulted from the lifting of duty on English exported lead, a privilege which Leadhills and Wanlockhead had enjoyed alone previously, coupled with the effect of foreign lead imports which Free Trade encouraged in the 1830's.

1842 — 1906

Attempts to find successors to the Wanlockhead Mining Company failed and the Duke of Buccleuch and Queensberry in 1842, solely to safeguard the livelihoods of the miners, appointed a manager and took control of the working of the mines²⁴. He invested capital in their development, guided by a manager who held no brief for 'expensive steam engines', and water power came back into its own for the rest of that century.

A decision to build a new smelt mill was taken in 1843 when the manager reported 'That the present smelt mills cannot last for very long'²⁵. Pates Knowes mill was dismantled and much of its stonework used in the construction of the new mill on the Duke's own insistence. Cannibalism of unwanted buildings to save the cost of carting sandstone from Nithsdale was commonly practised throughout the mines' history.

The proposals put forward by Stewart the manager were quite radical. Lacking ground for a reservoir, he chose a site one and a half miles below the village so that maximum use could be made of the Wanlock burn and its tributaries. A new dressing plant was built half a mile east of the mill, using the water on its way to the mill. At the mill, a wheel delivering eight horse-power worked a blowing machine having two compression cylinders and two storage vessels capable of dis-

22. 'Lead and Leases', authors, *British Mining* No. 3 NMRS 1976.

23. SRO, Carron Invoice Books, Vol. 30, Correspondence with Scots Mining Co. at Leadhills, 30 June 1807.

24. 'The Bay Mine', authors, *British Mining* No. 2, Monograph NMRS, 1976.

25. SRO GD224/506, J. B. Stewart to Messrs Gibson & Hume 6 May 1843.

charging 614 cubic feet of air per minute to the hearths. There were three Scotch hearths and one slag hearth larger in size than those at Pates Knowes and capable of dealing with the higher output planned for the mines. The mill also had a roasting furnace and desilvering plant. No drawings or photographs of the finished mill are known of, but it must have looked in keeping with other buildings in the village at that time at the Duke's insistence, for the original design was amended to include windows to admit light to the work chambers, an innovation, and plaques bearing the symbol of the Douglas 'flying Heart' were affixed above each hearth.

The design of the 1843 mill also tackled the job of process production more positively. The building was 'L' shaped, having the hearths and roasting furnace laid side by side on a N-S axis. The desilvering and refinery plants were built at right angles to the mill at its north end. Behind the hearths, the air for the blast was piped from the blowing machine through a stone-lined tunnel. From the back of each hearth a separate flue ran to a small gas condenser and from there a common flue led to a chimney some distance up the side of Sowen Dod hill. This condensing system was described in the catalogue of the Great Exhibition of 1851 and a model of it displayed at that time is now in the Science Museum, London.

Stewart had previously visited mines in the north of England where he found 'everything is conducted on an improved plan'. There he had seen the application of Pattinson's new process for desilvering the lead, and introduced the method at the new mill. It both saved time and reduced the amount of litharge produced.

In 1867 the fume condensing system was greatly improved at a cost of £3,000, and over the next fifteen years a profit of 63% on that capital was gained from additional fume lead recovered and resmelted²⁶. The alterations to the flues at that time have left a striking memorial to Scotland's last working lead smelter. The system uniquely used wood lined flues whose remains, two concentric loops with interconnecting passages, stand out today on the poisoned slopes of Sowen Dod. These flues were swilled out twice each year by men using buckets of water, the slime being collected in settling tanks where the fume material drained. After this, it was roasted and resmelted. As much as 12% of the total smelted lead came each year from fume material saved.²⁷

By 1883 the mill was not capable of dealing adequately with an increased output. Though an additional Scotch hearth and a larger slag hearth were needed the low profitability of the mines prevented their being built.

Continuous mining records are not available, and detailed production figures therefore not known, but Wilson gives 93554 tons of concentrates mined for the period 1842 — 1910²⁸. As these are officially returned figures they may be low, however, given 80% Pb concentration of the ore, a total of 76,000 tonnes of smelted lead may be adduced. Over the same period 380,000 ounces of silver were refined, of which 1,633 ounces were sent to the 1851 Exhibition²⁹.

26. SRO, GD224/506, Manager's Report 1883.

27. WMA, Manager's Report, May 1923.

28. 'Special Reports on the Mineral Resources of Great Britain' Vol. XVII, G. V. Wilson, HMSO 1921

29. SRO GD224/506 'Amount of silver sent to Exhibition'.

1906 — 1934

Successive attempts were made to lease the mines after the 1880's until the Wanlockhead Lead Mining Company took them over in 1906. They faced acute problems arising from antiquated methods and plant³⁰. They brought back steam power for winding and pumping, introduced machine drilling and an improved underground and surface haulage system, and rebuilt the dressing plant. At the same time, 1910, the smelt mill at Meadowfoot was thoroughly overhauled and capacity there increased to two roasting furnaces, five Scotch hearths and one slag hearth. The desilvering and refining plants were scrapped and from that time the silver-lead was sent to refiners. Final closure of the mill came with the depression of the 1930's, for when the New Glencrieff mine reopened briefly in the 1950's the dressed ore was smelted elsewhere. At least, Wanlockhead ore was saved from the ignominy attributed to that from the Wilson mine at Leadhills before it closed. There, on the evidence of one old miner, hand-picked ore was packed into boxes bearing the mark of the Swastika and shipped to South Africa!

When the Meadowfoot smelter closed, its hearths and blowing apparatus was torn out for scrap, and work on its demolition advanced during the 2nd World War when the buildings were used for artillery targets. Nature is completing the work and now, from its debris, it is difficult to pick out the features of what will probably be the last smelt mill at Wanlockhead.

30. 'The Wanlockhead Lead Mines', J. Mitchell, *The Mining Magazine*, pp 11-20, Vol XXI No 1, 1919.

LORD HOPETOUN'S MINE AT LEADHILLS : ILLUSTRATED BY DAVID ALLAN & PAUL SANDBY

by W. A. J. Prevost

In spite of the fact that for many years David Allan (1744-96) had been recognised as a 'distinguished Scottish painter',¹ it is surprising that it was not until over a century and a half after his death that a full biography of the man was written. This gap has now been filled by T. Crouther Gordon whose *David Allan* was published by subscription in 1951. It is a monument to the painter's vital contribution to Scottish art.² This was followed by an exhibition opened on 31 March 1973 at 19 Charlotte Square in Edinburgh of just over one hundred of his works which was sponsored by the Scottish Arts Council. The Council were also responsible for publishing in February the catalogue for the exhibition entitled *The Indefatigable Mr Allan*. Both exhibition and catalogue were the outcome of considerable research carried out by Basil Skinner of the University of Edinburgh. Apart from his foreword and the biography of Allan in the catalogue which he wrote, Skinner was also responsible for the check-list of the recorded work of the painter which 'updates and supplements the list published by Crouther Gordon'.³ He has this to say about Allan which has some bearing on what follows, how 'one category of his work speaks to us not simply for its artistic merit . . . but more for its visual documentation of eighteenth-century social history. Allan's drawings can be just as informative on contemporary Scottish life as those classic contemporary writings — Topham's *Letters from Edinburgh* of 1774 or Boswell's *Journal of a Tour to the Hebrides* in 1773.⁴ This was evident in so many of the paintings and drawings and it is certainly true as regards Numbers 77, 78, 79 and 80 in the catalogue which were oil paintings depicting 'Lead-Mining at Leadhills'. These canvasses⁵ are the subject of this paper and their story begins as follows.

Crouther Gordon writes that at one stage of his career David Allan owed much to the Hope family and he relates how the painter could not stand up to the cold east winds of Edinburgh and that during the winter of 1779-1780 'he was laid low with chest and stomach complaints which brought him to the point of mortal peril. Lady Charlotte Erskine, one of his faithful patrons in Alloa, was a Hope of Hopetoun House, and her kinsfolk befriended the ailing painter in his time of need.⁶ To escape another winter in Edinburgh he gladly accepted the invitation of Lord Hope to stay at Hopetoun House and there he remained during the winter of 1780-81 which gave him some time to paint'.⁷ It seems that for the rest of his life Allan received many kindnesses from the Hope family⁸, and it was due to this association that he came to paint at Leadhills.

1. *Chamber's Encyclopaedia* (1874), i, 151.

2. T. Crouther Gordon, *David Allan* (1951), ix.

3. Letter 14 February 1978, B. C. Skinner.

4. Foreword by B. C. Skinner in *The Indefatigable Mr Allan* (1973), 3. Published by the Scottish Arts Council.

5. All four paintings measure 14 x 22.

6. T. C. Gordon op. cit., 30.

7. *Ibid.*, 70.

8. *Ibid.*, 70. Proof that the Hope family were looking after David Allan is contained in a letter in the possession of Sir James Hunter Blair who writes that the letter was sent by Lady Hopetoun to the 1st Sir James Hunter Blair (1741-87), strongly recommending Allan in 1785 for the post of Master of the Trustee's Academy of which he became Master and director in 1786.

Although lead was probably worked at Leadhills in the time of the Roman occupation it is said that the lead was discovered in the year 1513 in the bed of a small rivulet which runs through the village⁹, but records of the mining operations do not reach farther back than to about the year 1600. However, in so far as this paper is concerned the property of Leadhills was acquired by Sir James Hope of Hopetoun when he married on 14 January 1638, Anna, the daughter and heiress of Robert Foulis of Leadhills, a wealthy goldsmith in Edinburgh. He paid great attention to the working of the mines there¹⁰ and indeed he was encouraged to do so for an Act of the Scottish Parliament which was passed in his favour in August 1649 refers to his 'leid works within his lands and baronies of Waterheid in the Sherefdom of Cliddisdail' . . . 'and being the onlie of that natur within the kingdom aucht to be cherished'. His mines were exempted from public burdens¹¹ and were still owned by his family long after David Allan's day. 'Wattisheid', 'Waterheid' or Waterhead was the old name of Leadhills.

In 1792 when the minister of Crawford wrote his contribution to the Statistical Account he noted that lead was then being found very plentifully and that it was fetching a much higher price than it had been in the early eighties. The works were being managed by the Scotch Mining Company who employed 200 men. These were pickmen, smelters, washers who were generally very young, and labourers who cleared away rubbish from behind the pickmen. There were also carpenters and smiths. James, the third Earl of Hopetoun who had succeeded to the title in 1781, was the proprietor and the rent paid to him was every sixth bar of lead produced. He took a personal interest in Leadhills and a practical interest in the management of the mine to the extent that he deputed his 'baillie' to see all the lead weighed¹² and that for the rent set apart.

It seems that the Earl may have made a tour of inspection of the mine at Leadhills in 1786, accompanied by the Countess and David Allan who memorised what he saw and painted the four pictures which the Earl had commissioned as a record of the process of lead manufacture carried out at his mine.¹³

The first picture Plate VII shows the shed in which the crude ore was being prepared for reduction by bruising or pounding very small. This was being done by two boys.¹⁴ Allan has painted the Earl and Countess just about to enter the shed which had open sides and must have been a very cold place in which to work. On the extreme right can be seen the large lumps of ore and the object of breaking them up was this, that as the mined ore contained other materials from the vein, mainly quartz, it was broken to facilitate separation and prepare it for a suitable size for the hearth. After crushing, hand separation got rid of some of the 'gangue' materials or bits of rock in which the ore was embedded. Washing the concentrated material followed and this is shown in Plate VIII.

The square trough on the right of the picture appears to be a simple 'buddle'

9. *The Statistical Account of Scotland* (1799), xxi, 98. Leadhills.

10. *Ibid.*, names Sir Thomas Hope as the man who married the daughter of James Foulis, but see the *Scots Peerage*, iv, 491, 492.

11. R. W. Cochran-Patrick, *Early Records relating to Mining in Scotland* (1878), 174 and 177.

12. *Statistical Account of Scotland* (1792), iv, 511. Parish of Crawford.

13. Basil Skinner *op. cit.*, 21, number 77.

14. Bine, a tub. *Chamber's Scots Dialect Dictionary*.

which has been defined as an inclined trough for washing ore. The crushed ore was shovelled on to a sloping floor and water fed over it. Low wooden walls of board restricted the water except where it was allowed to escape. The man is shown to be using a rake to move the ore about in the buddle, and is separating the 'galena' or lead ore from the gangue materials. The flow of water serves to move the latter, which are lighter, from the ore. So the process shown there is first to shovel in a mixture of ore and gangue materials. Then rake to allow the water to separate them by moving them. Release the water by a small sluice so that the lighter materials are washed out. Finally rake the ore out, clean out the buddle and start again.

The large bine¹⁵ or vat on the left of the picture would contain water. The man is seen filling a sieve. The boy would immerse the sieve in the water and shake to get rid of dirt and small bits of galena. The galena from the sieve would then be ready for smelting. The dirt and small galena which had accumulated in the bottom of the bine would be re-treated, probably through another buddle. The fine dirt particles would then be discarded and the fine galena coked in a roasting furnace before smelting in the ore hearth.

The Rev. Thomas Anderson, writing in 1835, has something to say about this process and how that the ore is subjected to a 'stream of water'.¹⁶ It would seem that a generous water supply was necessary for the purpose and that there was one is evident from the picture of a water-wheel drawn by Paul Sandby and included amongst his numerous water-colour landscapes which he painted when in Scotland on the survey of the Scottish Highlands between 1746 and 1751. A caption on the picture reads 'Lord Hopetoun's Lead Mines' which of course proves that it refers to Leadhills. Plate VI.

In the left top corner of the picture is a hill bisected by a gully down which water is pouring. This the painter has exaggerated in order to show that the power for the water-wheel comes from that source. The water is shown fed by a wooden box lade to the wooden overshot water-wheel which is in the right foreground. The lade is supported at 12 or 15 feet above ground level on pole trestles, and behind the wheel is the machinery which is connected to two spear rods which descend a mine shaft and work two pumps. A windlass is set over the shaft top and the picture shows a man turning a windlass, presumably winding ore up the shaft, and probably assisted by another man who is hidden behind the machinery.¹⁸

On the left of the picture, in the middle distance, is a building which might well have been the shed where the ore was ponded and washed. It is a separate building from the smelting house which is some distance away as can be seen in the background of Plate VI. It was conveniently placed near the mine and also near a water supply. On the other hand it has been suggested that the building was more probably the equivalent of the Derbyshire lead miners' 'coup' or hut where they hung clothes and stored tools. It may be taken for granted that it was for on the right of Paul Sandby's drawing, at the foot of a hill in the far distance,

15. Letter 28 Nov 1978, from G. Downs-Rose.

16. *New Statistical Account*, op. cit., 336.

17. Exhibited in the National Gallery of Scotland. Loaned by Somerville and Simpson, Savile Row, London, and sold by them to America. It is illustrated in the catalogue of the exhibition, compiled by James Holloway and Lindsay Errington and entitled *The Discovery of Scotland* (1978), 38 and 44b.

18. This description of the water-wheel has been extracted from a letter 7 Dec 1978 from G. Downs-Rose.

can be made out with difficulty the chimneys and outline of the smelter house. Near it is another large building, presumably the one in which the ore was treated.

Spring water coming down from the hill above the mine buildings was pure and safe to drink but the water below the smelting-milns which had been used to wash the ore frequently contained arsenic, sulphur, zinc etc. which was poisonous. Fowls of any kind would not live many days after picking up arsenical particles. Horses, cows, dogs, and cats were liable to the 'lead-brash', a disease affecting animals which was peculiar to Leadhills. A description of how it affected these animals smitten 'with that distemper' is horrifying. 'A cat springs like lightning through every corner of the house, falls into convulsions and dies. A dog falls into strong convulsions also but sometimes recovers. A cow grows perfectly mad in an instant and must be immediately killed'.¹⁹ It is noteworthy that Paul Sandby has painted two cows grazing peacefully near the water-wheel, watched by two men who were no doubt herding them carefully away from the poisonous water.

There may have been some attempt made to neutralise this noisome pollution but if so the aforementioned Mr Anderson had nothing to say about it. However, he has described the next stage when the ore was taken to the smelting house where it was 'put into a small blast furnace with peat or turf, coal and a small portion of lime by which process the volatile ingredients are carried away, the ore becomes oxidised, then decomposed, and the oxygen combining with the carbon flies off in the form of carbonic gas, while the lead in its metallic state sinks to the bottom of the furnace. It is then drawn off into a reservoir and put into moulds with an iron ladle or spoon'²⁰.

David Allan in Plate IX shows the smelting furnace with the fire alight, the molten lead dripping into the reservoir whence it is being ladled by a smelter into a mould. In the background, under the far archway, a man is working at the fuel dump, and on the extreme right is a woman carrying a basket containing food and drink for her man. Lead ingots are scattered about on the floor where they have been left to cool, waiting for the final stage when they were weighed. Allan shows this being done in Plate X.

The ceremony of weighing the lead was attended by certain officials from the mining company who employed at Leadhills an agent, two overseers and two or three clerks. Allan has drawn a man, dressed in black, sitting writing with a quill pen at a desk, who was doubtless the head clerk. Sitting next to him and also making entries with a quill was perhaps Lord Hopetoun's baillie who appears to be better dressed than the others as befitted his station. Indeed it may well be a portrait of the baillie with whom David Allan was no doubt well acquainted. One might hazard a guess and point out that the man sitting on a stool and supervising the weighing of the ingots on the scale was the agent. He too was well dressed and may have been a scion of a well-known county family, for in 1799 Archibald Stirling was the agent. He was of Garden, an estate in Kippen Parish in Stirlingshire which had belonged to the Stirlings for well over 150 years.

19. *The Statistical Account* (1799), xxi, 97, 98, 99. An Additional Communication respecting Leadhills, by the Rev. William Peterkin, Minister of Ecclesmachan, deceased.

20. *New Statistical Account*, op. cit., 536.

The man standing to the right of the scales and holding what appears to be a whip might have been one of the baillie's staff who was there to check the weighing and to call out the weights to the two men at their desks. The man in the left-hand corner sitting on the floor and wielding a mallet, is probably numbering the lead bars. The collie dog in the foreground is a characteristic touch of the painter while the earthenware jug, the barrel and the mug all help to create an atmosphere which brings the scene to life. Scotland owes much to David Allan.

Acknowledgements

I am grateful to Sir James Hunter Blair for giving me permission to use his David Allan pictures. The photographs are by Tom Scott, Edinburgh. The Paul Sandby drawing is here reproduced by kind permission of the Yale Center for British Art, New Haven, Connecticut, U.S.A. I am indebted to G. Downs-Rose, Trust Adviser to the Wanlockhead Museum Trust, whose description of the water-wheel and information concerning the treatment of the lead ore has been invaluable.

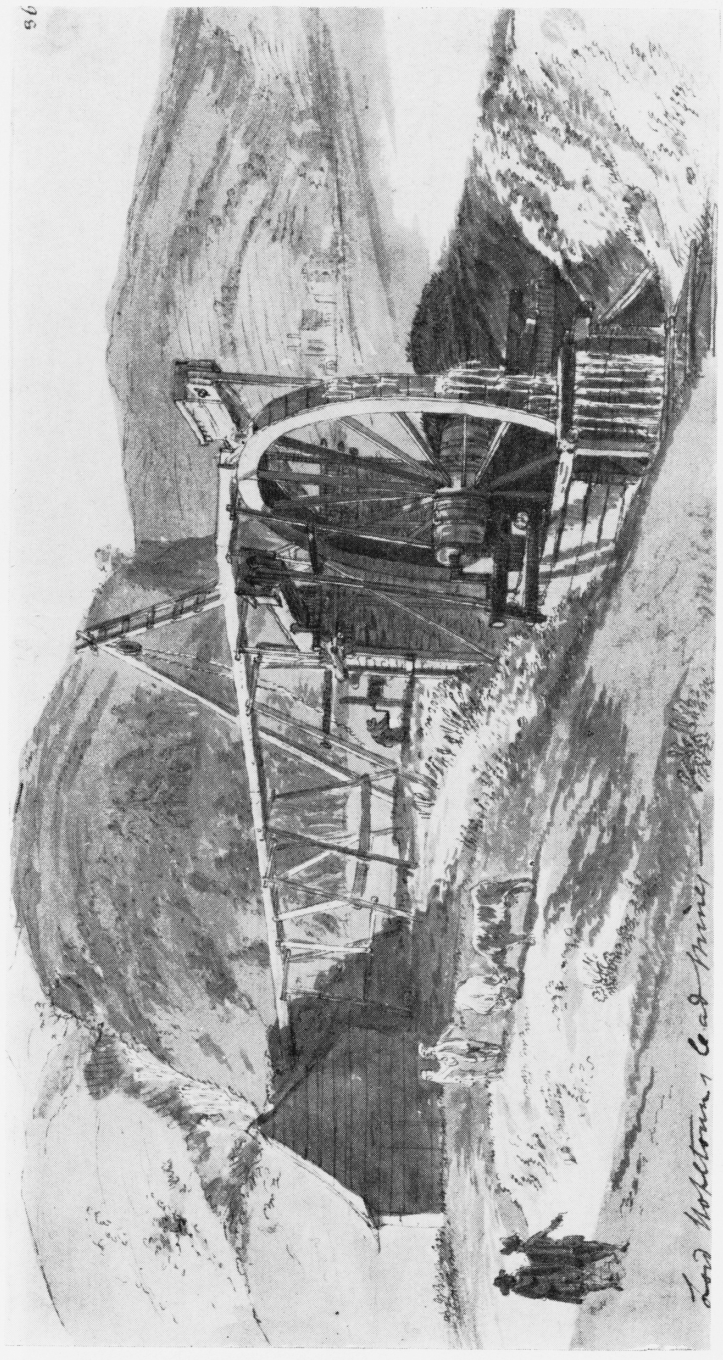


Plate VI

Lord Hopetoun's Lead Mine by Paul Sandby. Published by kind permission of Yale
Center for British Art, New Haven, Connecticut, U.S.A.

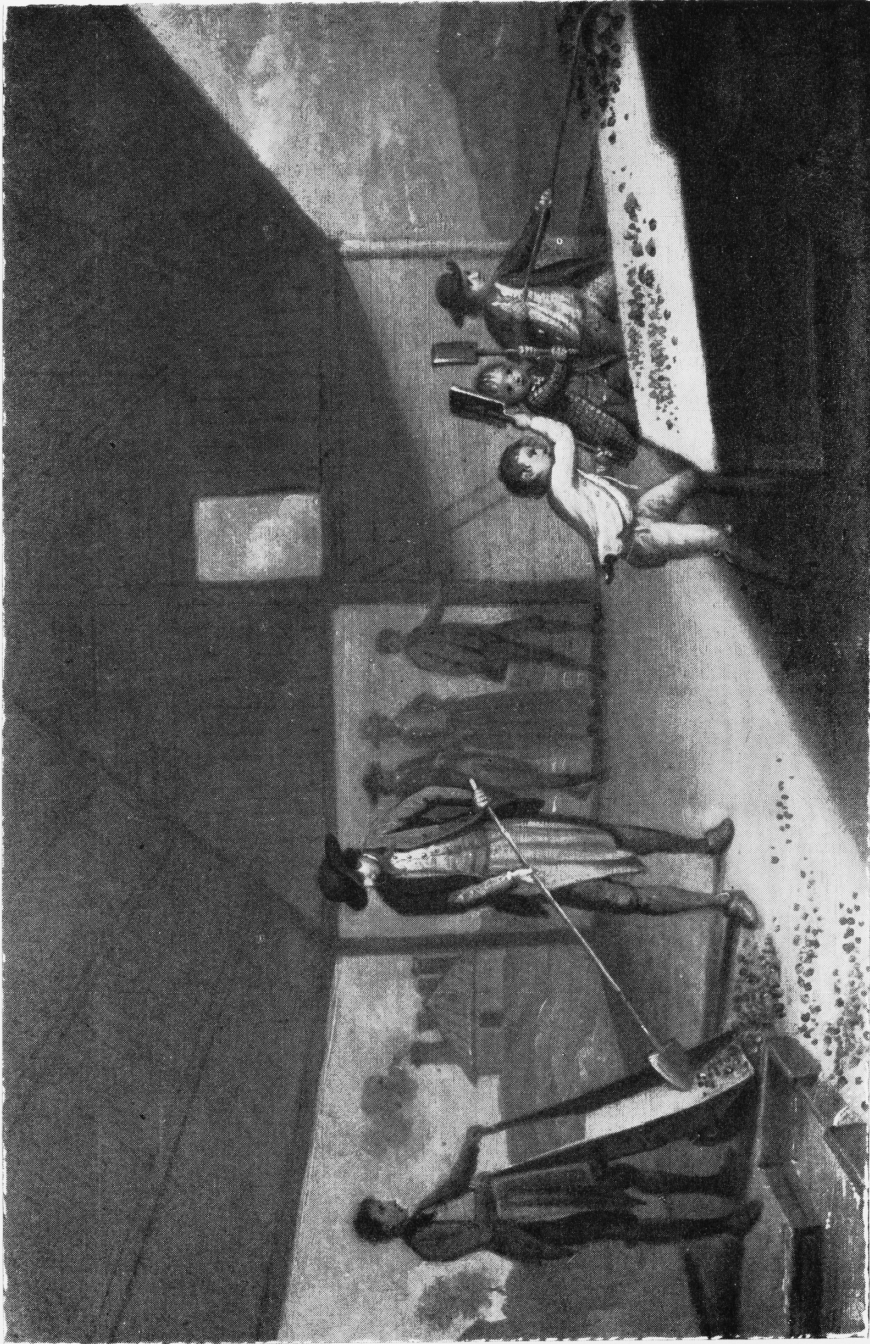


Plate VII

Lord Hopetoun's Mine at Leadhills — *Pounding the Ore* by David Allan. By kind permission of Sir James Hunter Blair.

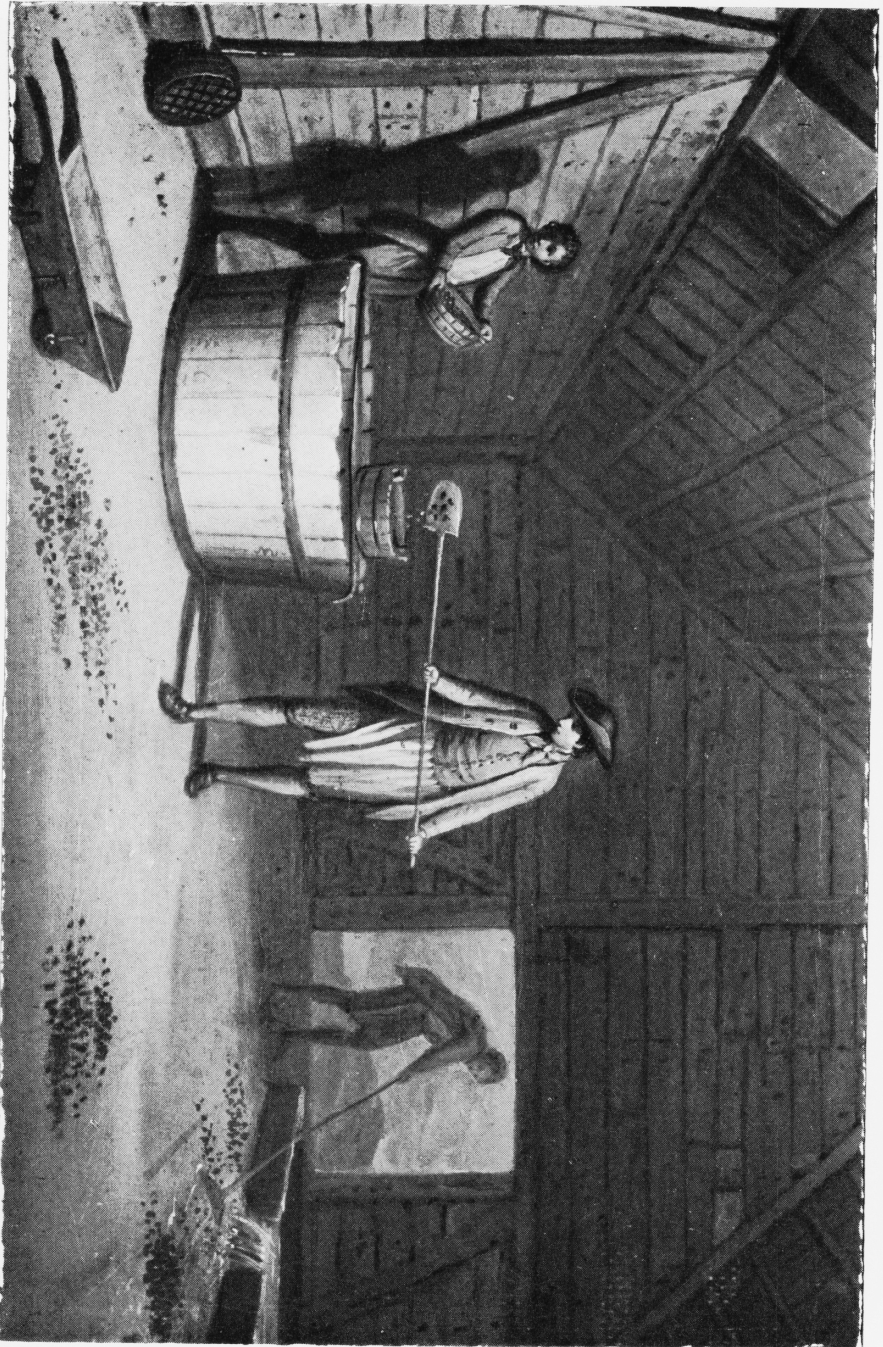


Plate VIII
Lord Hopetoun's Mine at Leadhills — *Washing the Ore* by David Allan. By kind
permission of Sir James Hunter Blair.

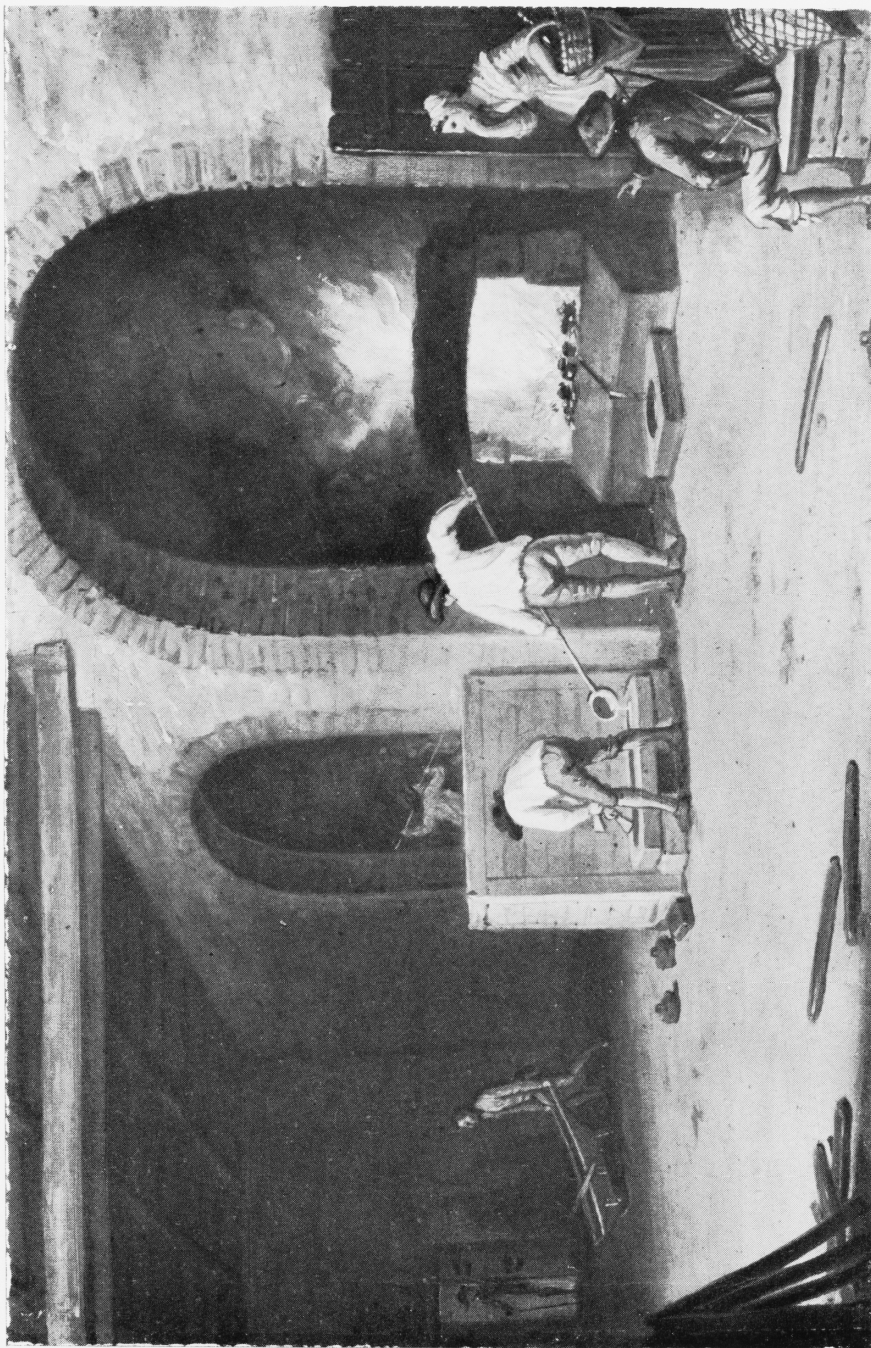


Plate IX

Lord Hopetoun's Mine at Leadhills — *Inside the Smelter house* by David Allan. By
kind permission of Sir James Hunter Blair.

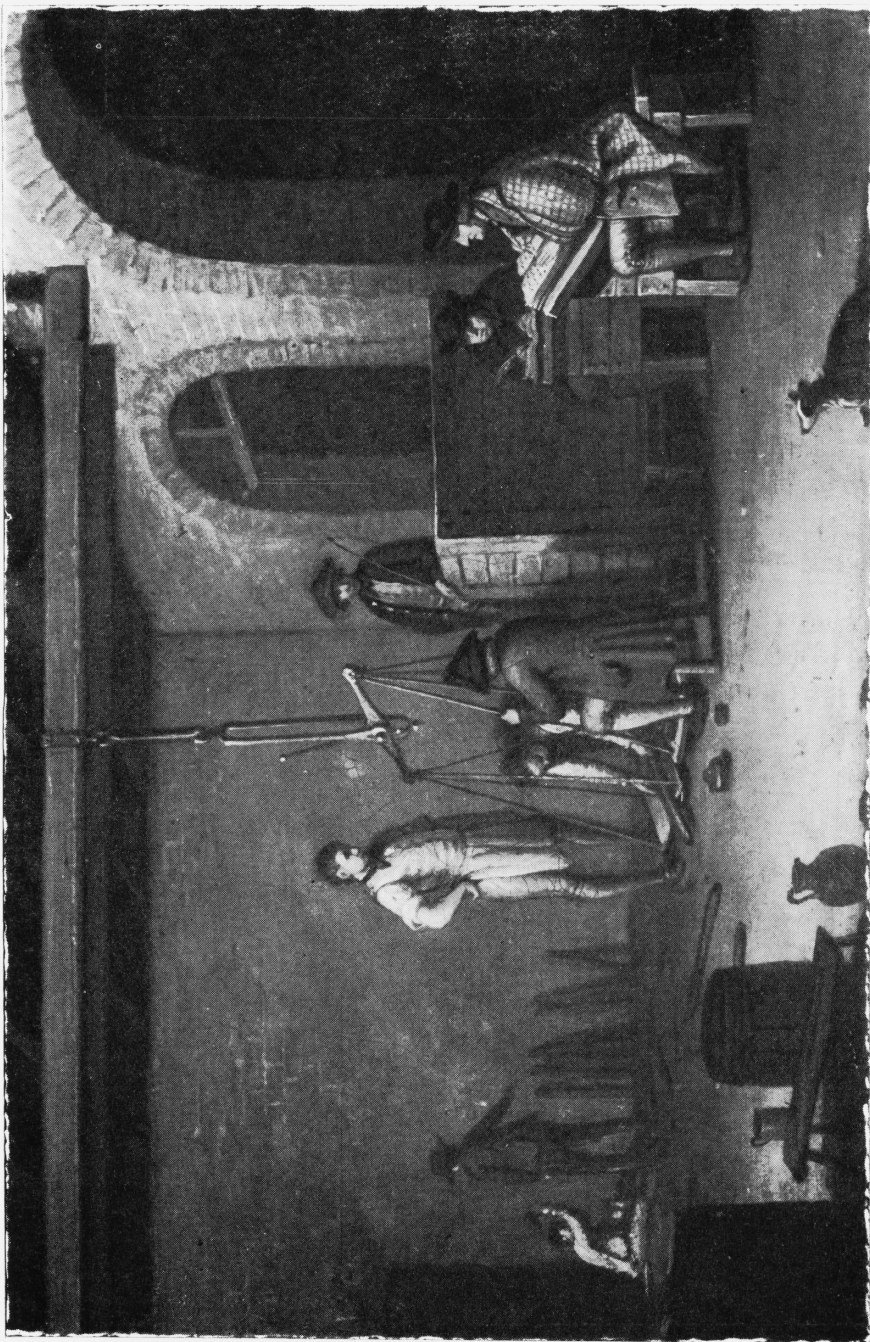


Plate X

Lord Hopetoun's Mine at Leadhills — *Weighing the Lead bars* by David Allan.
By kind permission of Sir James Hunter-Blair

A VIEW OF THE LEADMINES AT WANLOCKHEAD, 1775

by W. S. Harvey, C.M.E., M.I.Mech.E.
and G. Downs-Rose, B.A.(Soc.)

Introduction

The drawing in the Burgh Museum at Dumfries entitled 'The Leadmines at Wanlockhead' (Plate XI) is not only a pictorial record of this remote village in the late eighteenth century; but it also shows what must have been a typical scene at many leadmines at that time. Men are descending into the mines; drawing up the minerals from their depths; and preparing and washing the ore ready for sale or smelting. This was the essence of the operation, but by the time the drawing was made the mines were being sunk ever deeper in search of ore, and the operation was demanding investment in pumping machinery. It is therefore no coincidence that two waterwheel driven pumping engines are a central feature of the drawing. The engines reflected particular pumping problems at Wanlockhead, and the search for water to turn them was instrumental in the introduction of steam engines at the mines.

John Clerk of Eldin

The drawing is believed to have been made by John Clerk of Eldin. He was born in 1728, the seventh son of Sir John Clerk of Penicuik, and showed early artistic ability. His accurate pen, and an interest in geology, led to an association with Dr. James Hutton for whom Clerk made a number of geological drawings. Clerk's son, John Lord Clerk, was also a skilled artist and seems to have collaborated with his father¹.

John Clerk's interests were far ranging. He was not only a noted coal master but also made a study of naval strategy and in 1782 he published 'An Essay in Naval Tactics'². This advocated the technique of breaking the line, and it may have influenced Patrick Miller of Dalswinton in his experiments with paddle-assisted boats³.

A collection of Clerk's etchings was published in 1855⁴. Many of these have an extravagance of line which seems very different from the drawing of Wanlockhead. It may be that this was no more than a careful sketch intended to provide the basis for an etching. The drawing has the date 1775, but nothing is known of its history until it was found with others during alterations to the offices of a Dumfries solicitor, and was purchased for the Museum.

Clerk was said to have drawn with 'much correctness', and his view of Wanlockhead has an attention to detail which makes it an almost photographic record. But he also had an artist's eye and the drawing can be seen as a landscape with figures in the classical style. In the way this is depicted Clerk has followed the conventions of his time. The hills are as seen from a different stance and they tower above the valley. This not only accentuates an impression of wild desolation,

1. Dictionary of National Biography. 'Clerk, John (1728-1812)' and 'Clerk, John, Lord Eldin (1757-1832)'

2. *ibid.*

3. This is based on current research by the authors for a book on William Symington.

4. *Etchings, Chieftain Views of Scotland*. John Clerk of Eldin. 1773-1779. Published by the Bannatyne Club, 1885.

but also reflects that feeling of dread that most eighteenth century artists had for mountainous country. Clerk has also altered the perspective so that objects are brought forward, and the central waterwheel and the mine on the right become dominant features. The eye is thus drawn to the huge machinery the industry needed, and to the men raising ore from the earth; the operation on which the industry depended.

To enable the latter to be seen Clerk has broken open one wall of the pithead hut. The use of a 'broken section' in this way was not unusual in industrial landscapes. Joseph Wright, one of the great artists of the Industrial Revolution, used a broken section to show the forge in his celebrated 'View of an Iron Forge from Without' painted in 1774⁵. Wright was very conscious of the feelings aroused by the new technologies, and in the painting a woman looks on, half terrified, half fascinated by the way the hot iron is being fashioned. Clerk, however, saw no need for comment on the industry at Wanlockhead. His drawing has a pastoral quality for the man resting on a spade might be a shepherd resting on his crook. Although the scene is one of men at work, the impression is a static one. Nobody reflects on the ponderous movement of the pumps; the dangers surrounding the miners; or the hardships of the ore washers at the burnside.

The Straitsteps Mine

Clerk made his drawing at a point above the Wanlock Water and looking almost due east to Dungrain Law and Green Lowther (see Plate XI). His stance is now covered by the line of a mine tramway, but the approximate viewpoint is marked by a plinth erected by the Wanlockhead Museum Trust in 1978. Immediately on the left rise the slopes of Wanlock Dod. On the right is the foot of the Black Hill. Behind it, though out of sight, is the Mennock Pass and the road to Nithsdale. The drawing shows what must have been most of the houses in the village at that time. Most are the single storey thatched cottages of the miners,

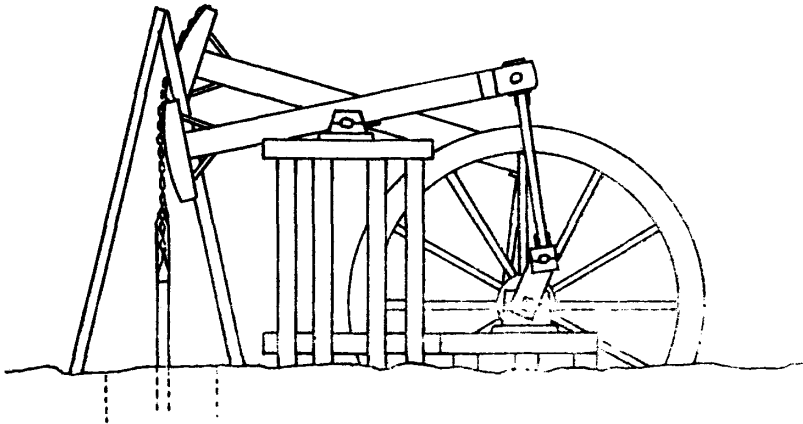


Fig. 1 "The Black Engine", Wanlockhead — based on Plate XI

5. Copy in Severn Wharf Museum, Ironbridge. Also used as illustration in *A History in Technology*, ed. C. Singer et al. Oxford 1958 Plate 8b.

but the large building which rises among them was the house of the Duke's agent. Below this and to the left, a large building with dormer windows was probably the mining company's meal store.

In the foreground two shafts go down into the workings on the Old Glencrief vein, but the two waterwheel pumps which are such an important feature were on a mine called Straitsteps. The larger wheel (Fig. 1) was called The Black Engine, and the water which turned it was carried along the lade or launder seen to the right. The lade was made of timber and was carried on trestles along one side of the slope above the burn. The lade took its water over the wheel from behind, and its tailrace flowed along another lade and turned the second waterwheel; known as The Little Engine.

The two wheels are the most interesting objects in the drawing. If they are carefully examined one can see the meticulous care that Clerk gave to their details, and it is clear that he himself must have closely examined the machinery. Researches by one of the authors in MSS in Drumlanrig Castle, the Scottish Record Office, and the Hornel Library, have discovered something of the history of the two waterwheels and the part they played in the development of the mines.

The Straitsteps vein was first worked by a partnership headed by Sir James Stansfield in 1675. He took a lease of the ground from the Duke of Queensberry and began an industry at Wanlockhead which lasted for some two hundred and sixty years⁶. The partnership was succeeded by two Durham men : Matthew Wilson and Arthur Wall in 1691. By then much of the ore in the upper parts of the veins had been worked out. Wilson tried to mine below the floor of the valley, but it was said he had nothing better than 'rag pumps' to clear out the water⁷. Better pumps needed capital, and this was provided by Wilson's successors : the Governor and Company for the Smelting of Lead with Pit Coals. This grandiose title was usually abbreviated to The Governor and Company, or The Quaker Company; the latter reflecting their non-conformist origins. They leased some of the mines in 1710, and built a water wheel driven pumping engine on the Straitsteps vein. It was the predecessor of the pumps Clerk drew, and was of similar arrangement. The design was in fact an innovation for earlier pumps had the waterwheel over the shaft, and from the wheel shaft hung pumps or a chain of buckets. Such engines had been described by Agricola in 1556, and one may have been used on a coal mine at Culross at the beginning of the seventeenth century⁸. By interposing beams between the wheel and the pumps, the drive was away from the shaft mouth, and such pumping engines continued in use at Wanlockhead into the present century. That built by the Governor and Company was one of the first used in Scotland and was contemporary with one built by George Sorrocolld at Alloa⁹.

Alexander Telfer, a flamboyant entrepreneur who had taken a lease adjacent to the Governor and Company also built pumping engines. Water to work them was collected from every possible source. Even so the quantity was less than ade-

6. Details of the mining history may be found in the following of the Society's Transactions.
Robert Brown. More about the Mines and Minerals of Leadhills and Wanlockhead. Vol. XI11. 1927.
T. C. Smout. The Leadmines at Wanlockhead. Vol. XXXIX. 1960-1.
7. T. C. Smout. *op cit*.
8. A. I. Bowman. Culross, a Sixteenth Century Mine. *Industrial Archaeology*. Vol 7. 1970. p. 359.
9. B. F. Duckham. *A History of the Scottish Coal Industry*. Vol 1. Newton Abbot. 1970. p. 79.

quate. In 1743, Peter Rae, Minister at Kirkbride and Agent for the Duke, reported that the pumping power was small at best, and there was little or none in summer when the streams were low¹⁰.

A map of the mining grounds dated 1744 shows the Governor & Company's pumping engine on the Straitsteps mine¹¹. The lade to its wheel seems to have followed a similar line to that shown by Clerk. It is likely that the head available suggested pumping capacity could be improved by putting in a second wheel, the water running over each in turn, for by 1750 the Company had built another pump nearby. It was known first as the 'New Engine', but later was called the Black Engine.

In spite of expenditure on this and other pumps, the Governor & Company seem to have allowed their affairs to get into some disarray during the last years of their lease. It was not renewed, and in 1755 the Duke looked for a new operator to work his mines. He found it an enterprising partnership headed by Ronald Crauford, an Edinburgh lawyer with trading interests in Rotterdam. Having taken stock of the situation, the partners appointed Gilbert Meason to be the manager at Wanlockhead. Meason was an Orcadian merchant, and a man of exceptional ability. Although knowing nothing of mining, he developed the industry at Wanlockhead and encouraged technical innovation. Curiously, the era saw his flair matched by another novice to mining technology, James Stirling of Leadhills¹².

The development of the rich Straitsteps mine was one of the first objectives of the new company. A condition of their lease was that the two pumping engines should be left in place, but the Governor and Company seem to have been reluctant to abandon what had been a large investment. This led to an inventory being drawn up of the machinery. Details provide information of the two engines. The old pump seems to have lifted from about 8½ fathoms below the adit level, and the New Engine from 16 fathoms¹³.

Meason had the New Engine altered, perhaps to enable it to pump from a greater depth, and it was re-started by July 1757. However there was not enough surface water to keep it working continuously, and the mine seems to have been flooded out from the end of that year until August 1758¹⁴. It must have been abundantly clear that the water supply to the pumping engines was totally inadequate. In an attempt to improve the situation, work was begun on a lade along the steep slopes of Wanlock Dod from the stream in Whytes Cleuch. This was seen as of doubtful success, and in a report of 1st August, 1758 it was recommended that a tunnel should be driven under the Mennock Hass to tap water from the Mossy Burn¹⁵. A map of 1756 shows the water course from Whytes Cleuch, and another up the syke to the Mennock Hass to utilise such surface water as could

10. Scottish Record Office. GD18/2679. 'Answers to Queries Proposed by His Grace the Duke of Queensberry and Dover, 1743'.

11. SRO. RHP.9390. 'Plan of Wanlockhead 1774'.

12. Biographical details of Stirling may be found in the Wanlockhead Museum Trust publication, *Men of Lowther*.....

13. G. Downs-Rose. Water Pumping Engines on the Straitsteps Vein, Wanlockhead. Northern Mine Research Society. *Memoirs*, Vol 7, No 2, 1972, pp 81-82.

14. Hornel Library. Wanlockhead Mine Journals. Reports October-November 1757 and July-August 1758.

15. *ibid.* July-August 1758.

be collected there¹⁶. The new tunnel would supersede this and would provide a great deal more water. The plan was a bold one, but its cost would be considerable; skilled men would have to be taken from other work, and lucrative mining delayed. On the other hand, the tunnel could follow the southern line of the Straitsteps vein complex, and perhaps enough ore would be found as would defray some of the expense.

That no action was taken for four years was probably a measure of the argument involved. During that time the old engine at Straitsteps was repaired. The work took two years, so its likely that a new wheel was fitted to maximise the head available.¹⁷

The time taken demonstrated the effort and costs needed to provide what would seem to have been a very simple piece of machinery. In fact water wheel pumps were not easily provided, and the mining records both for Leadhills and Wanlockhead make many references to hand pumping. In 1756, eighty men were employed in pumping in the Cove vein, an operation regarded as expensive as to wages rather than costly in human effort.¹⁸

With the two pumps working there may have been some improvement in clearing the water from Straitsteps but the output figures show no increase, and the decision to drive the water tunnel must have been inevitable. In July 1763, eight pickmen began work on the tunnel near 'the High Mill' in the village, and soon after another team started driving from the Mossy burn end to meet them.¹⁹

The work was fraught with many difficulties and it was November 1774 before the two gangs of miners at last met under the Mennock Hass.²⁰ It had taken 11 years to tunnel about $\frac{3}{4}$ of a mile but the hopes of finding ore had been more than realised. The miners found what was to become the Margaret Mine, and by the time the water tunnel was finished no less than 3572 bars of lead, about 260 tonnes, had been smelted from the ore produced.²¹

Today, the line of the old lade can be seen from the Mossy Burn to the now flooded tunnel, and water still issues from a pipe later placed at its outlet in the village. When Clerk made his drawing in 1775, water from the tunnel was turning the two wheels. The Black Engine's wheel was overshot and 30ft. in diameter, while the little Engine had a breast wheel, 24ft. in diameter.²²

It might be expected that the water tunnel brought a solution to the pumping problems on Straitsteps, and enabled production there to be increased. Instead, the Margaret mine came to dominate the scene. In 1777, production from it amounted to 60% of the total output, and it was expected that the rich ore would continue deeper in the vein.²³ To have diverted the new water supply over an underground pumping engine would have altered the whole water system, and some alternative

16. Drumlanrig Castle. A Map of the Mining Grounds of the Duke of Queensberry and Dover leased to Crauford and Co. at Wanlockhead. Surveyed by Ja. Wells. 1756. RHP. 37555

17. W. M. J. Reports of July-October 1761 and January-April 1763.

18. W. M. J. 'The state of His Grace the Duke of Queensberry and Dover's Mines on the East side of Wanlock Burn, 1756'

19. G. Downs-Rose. op cit.

20. ibid.

21. W. S. Harvey and G. Downs-Rose. Lead and Leases. N. M. R. S. *British Mining* No. A. 1976. p.28

22. G. Downs-Rose. op cit. p.87.

23. W. S. Harvey and G. Downs-Rose. op cit. p.28. and G. Downs-Rose. op cit. p.86.

power was needed if the Margaret mine was to be developed at depth. In July 1777, Gilbert Meason set out for Birmingham, there to meet Watt and Boulton and to order a steam engine for the new mine.²⁴

The two waterwheel pumps John Clerk drew so confidently were in a sense made redundant as a result of the search for water to work them. Soon steam pumps took over, as engines designed first by James Watt and then by William Symington pumped the mines.²⁵ The two waterwheels on Straitsteps continued in use, but after 1776 production from the mine declined, and operations there ceased in 1782. The two pumps seem to have been kept as a back-up to other operations, but by 1790 they were considered to be 'so greatly failed that there could be no dependance on them'.²⁶ In 1797, parts of the Black Engine were used to build a pump on the nearby Old Glencrieff vein.²⁷ The two engines were still to be seen when James Taylor reported on the mines in 1815, but by then were probably derelict.²⁸

When the Duke of Buccleuch and Queensberry took over the whole mining operation at Wanlockhead in 1842, his engineers turned back to using water power for pumping. The Bay mine at the northern end of the Straitsteps vein complex was re-opened, and a water pressure engine pump installed. Water running back from the old workings on Straitsteps proved a constant hindrance, and some time around 1880 the beam engine water pump, which still stands on the mine, was erected to 'keep the southern feeders in check'.²⁹

Winding and Washing.

The two shafts in the foreground of Clerk's drawing were on the Old Glencrieff vein. It too had been worked by Sir James Stansfield's miners, and later the Governor and Company had worked it from three drifts under the Black Hill. The shafts illustrate other aspects of the mining operation. That on the right was the access shaft to the lowest of the three drifts. The rough building which enclosed the shaft head gave protection from the weather; provided shelter for the men waiting their turn to go down; and a place to leave their tools. Although horse driven windlasses, horse gins, were used at the time for winding from deeper mines, Clerk shows the Old Glencrieff shaft had only a hand windlass. The two men are lifting out a kibble, or bucket, probably filled with ore, for whenever possible waste rock was left below ground. The hut has a roof of turf on a timber frame, and in the top a hole allows foul air to escape. By it a horse and cart wait for a load of ore. The style of the vehicle and the way the harness is arranged, seems little different from farm carts of the present day.

The second shaft was an open one, and was probably part of a limited mining operation on the actual vein. A miner carrying a pick or other tool is on the rope.

24 W. M. J. Report January 1774-January 1778.

25 W. S. Harvey and G. Downs-Rose. Mr Symington's Improved Atmospheric Engine. Paper read to the Newcomen Society, March 1774. (The paper was not published in full, but a transcript may be seen in the Society's library, and also in the Wanlockhead Museum Archive.)

26 W. M. J. 'Report on the Charles Vein, June 1799'

27. *ibid.* 'Report on the Margaret Vein, May 1798'

28. Hornel Library. Copy of letter James Taylor to Samuel Laing 23rd March 1815.

29. G. Downs-Rose and W. S. Harvey. Water Bucket Pumps and the Wanlockhead Engine. *Industrial Archaeology*. Vol 10. 1973. pp. 142-3

He would have had one leg in a loop, and, half dangling, half sitting, would have been winched up or down the shaft. It was not a safe way to the workings, and only a year before Clerk made his drawing, an Overseer had 'slipped off the rope' and fallen to his death.³⁰ In fact the dangers were probably secondary to the necessity for having at least two men on the windlass, and in the nineteenth century ladders came to be used in the shafts instead.

At best the ore from the mines was mixed with clay, and often it was part of a solid matrix of other minerals. It had then to be 'dressed' before it could be smelted. The drawing shows some part of this work being carried out on a 'dressing floor' by the burn. The water was made to flow through shallow troughs or 'buddles', into which the raw ore was shovelled. By agitating the mixture, the lighter debris was carried off, leaving the heavy galena. To facilitate the removal of other minerals the ore was first broken up by hammering as can be seen near the washers.

Ore dressing was a task for those unable to undertake the heavier work, and dressers were women and young boys. Like the miners, they worked in small teams and were paid by a system of piecework. They worked out of doors and in all weathers except only when the water was hard frozen. They probably accepted the harshness of their lot, but it could occasion concern in others. In 1792 members of the Court of the Scots Mines Company, who had visited their mines at Leadhills, wrote to Archibald Stirling, the manager, of their distress at the hardships of the ore dressers. They urged he should provide some sort of shelter, but as the matter was brought up more than once, it is likely that Stirling did not share their anxiety.³¹

This then was the scene John Clerk drew in 1775, he probably knew little of the local problems the scene reflected, or saw anything remarkable in the exertions of the workers. But the care he lavished on the details of the scene have left a valuable and unique record of the industry, and gives us a greater insight into the business of lead mining at Wanlockhead two hundred years ago.

30. *Dumfries Weekly Magazine*, September 13 1774.

31. Stirling of Garden MSS. Box 1. Bundle 17. Letters from the Scots Mining Company, London, 1792



Plate XI

The Lead Mines at Wanlockhead 1775. Probably by John Clerk of Eldin.



Plate XII
Wanlockhead now, from the same viewpoint as Clerk's drawing, Plate XI

WANLOCKHEAD MINERS' LIBRARY, 1756-1979

by John C. Crawford, B.A., A.L.A., F.S.A. (Scot)
and Stuart James, B.A., A.L.A.

Wanlockhead Miners' Library (originally the Society for Purchasing Books in Wanlockhead) was founded in 1756 in direct imitation of Leadhills Reading Society founded in 1741 by the mine manager, James Stirling,¹ who introduced a package of reforms including the foundation of the library. These reforms were intended to improve the standard of behaviour of the miners. This point was emphasised by the local historian, James Moir Porteous.

"The [Leadhills] library was originally established by an overseer named Mr Stirling, who was a famous mathematician. Prior to its existence the miners were in no degree superior to ordinary colliers; but a taste for literature speedily produced its ordinary concomitants — decency, industry, and sobriety of manners, pride of spirit, and a desire to give a good education to their children . . ." and he further noted.

"Similar effects have also been produced by a library at the neighbouring mines of Wanlockhead".² The libraries in both villages must be seen as an essential and integral part of a complex scheme of social reform.

Wanlockhead Miners' Library was only the second subscription library for working men to be founded in Britain and predates by almost forty years the movement, among weavers and other prosperous artisans in Scotland, to found both temporary reading societies and permanent libraries for themselves. It should be noted that the origins of working class societal library activity in Britain is largely a Scottish phenomenon.

Apparently the founding of the library was the independent action of 32 residents of the village but this view must be regarded with reserve. The library was founded on November 1st, 1756 but earlier in the year industrial disputes had resulted in all turbulent elements being removed from the village³ so that those who remained were sympathetic to the mine management. Furthermore the Leadhills reform programme was copied in almost every detail at Wanlockhead by the mine management so their role in the founding of the library must have been crucial. Nevertheless it would not have been as successful or lasted as long without the enthusiasm of the miners.

At first, the library was not very effective and did not increase its membership until the 1780's, its relatively poor initial performance apparently being caused by a combination of mortality, poverty and apathy. It had collected only 116 volumes by 1783 which compares poorly with Leadhills over a similar period but its rules were redrafted in that year and they provide a clear picture of the society's values and administration (They were clearly modelled on Leadhills). It was a society controlled by its members through quarterly meetings, one of which was the annual general meeting and the overall aim was to infuse a spirit of moral

1. ALLARDYCE, A. *editor*. Scotland and Scotsmen in the eighteenth century . . . 1888. Vol. 2. Page 322.

2. PORTEOUS, J. Moir. *God's treasure house in Scotland*. 1876. Page 94.

3. GOLDIE, Jean. *Family recollections and national progress*. 1841. Page 45.

earnestness into its members through a combination of careful book selection and an extremely stern and rigorous administration. Fines were charged for every conceivable dereliction of duty : failure to appear at a meeting, failure to return a book on time, damaging a book, or behaving in a disorderly manner at meetings. Yet this draconian administration was completely democratic. A preses (president), secretary, treasurer, librarian and several inspectors, whose duty it was to examine returned books, were chosen annually from the membership, and the officebearers, together with a committee of eight, were responsible for the day to day running of the society. Their principal duty was book selection as it often was in subscription libraries of all types.

A curious feature of the Wanlockhead rules, borrowed from Leadhills, is the prohibition on members of the mine management from taking part in the running of the society's affairs. This was theoretically intended to prevent the mine management from unduly influencing the society's affairs and it has been represented as symbolising a spirit of sturdy working class independence⁴ but in practice the miners were beholden to the management in all essentials and the rule had little real significance. It was abolished in 1822⁵.

Somewhat more subtle was the device of honorary membership which allowed the society to recognise its benefactors without conferring voting rights on them, which was important as they were frequently people of influence.

The rules were revised in 1837, but the spirit of the 1783 rules was retained and even extended. For example, the rule sanctioning censorship was lengthened and made more specific. No real change took place until 1888 when the society's membership was shrinking. The rules were drastically shortened, all those attempting to offer moral guidance being abolished. This marks the formal end of the library's aim to be a major social force in the community, although local memory records that it continued to be run in the same unbending fashion until the early twentieth century.

For a surprisingly long period, until about 1888, the library was only open once a month. In the early days this was on the first Thursday of every month when the members met to return their books and select new ones, each member in turn getting first choice at successive meetings. As the library's membership reached 147 in 1850 this operation had to be managed with some care and measures to improve the circulation of books were taken in the 1830's.⁶

The society was initially expensive to join, an annual subscription of 4/- together with an entrance fee of 3/- being demanded in 1756, but the subscription was halved in 1783 to 2/- which obviously made membership more attractive. It was customarily collected quarterly in sixpences as the miners were paid four times a year. The annual subscription remained at 2/- until 1921 when it was again raised to 4/-. As the miners' incomes doubled between 1840 and 1870 the cost of membership was falling in real terms for much of the society's existence. The most expen-

4. KAUFMAN, Paul. Libraries and their users. 1969. Page 164.

5. Minutes of Wanlockhead Miners' Library. 3/4/1822.

6. Minutes of Wanlockhead Miners' Library. 1/10/1834.

sive time to be a member in real terms was between 1815 and 1840, the library's most successful period.

Although the growth of membership was initially sluggish this improved greatly after the reorganisation of 1783. In 1788 there were 38 members and by 1803 membership had increased to 64. Progress was rapid thereafter despite a check after the Napoleonic Wars the hundred mark being passed for the first time in 1825. After another check in the 1830's the society reached its peak membership of 147 in 1850 the year the new library building was erected. This peak was followed by an alarming decline, membership falling to 68 in 1876. This decline continued, more or less uninterrupted, until the 1880's when membership began to rise again. A figure of 84 was reached in 1901, never to be equalled again. Thereafter membership fell into a trough bottoming at 47 in 1915 and rising again to a last peak of 79 in 1919. From then on a decline was rapid and the library fell out of use in the late 1930's.

Curiously enough the variations in the library's membership over the years do not relate to the peaks and troughs in the village's prosperity. There were checks in the rise of membership after the Napoleonic Wars and in the 1840's which were hard times, but the library's peak year of 1850 was well before the village's second flush of prosperity in the 1870's and 1880's. In fact these were the library's worst years when membership plunged to its lowest levels since the eighteenth century. Similarly the second peak of 1901 occurred during a period of deep depression.

Nor can any very obvious correlation be drawn between the fluctuations in membership and variations in the village population as the table shows.

Year	Village Population	Number of Library Members
1831	675	103 (1825)
1861	743	91
1871	772	84
1881	788	57
1891	745	55

Between 1831 and 1891 the overall pattern in the village population was one of growth, but during the same period the overall pattern of library membership was one of decline.

The fluctuations in membership cannot therefore be related to economic or population factors. They might, perhaps, best be ascribed to the changing objectives of the working class subscription library. Both Leadhills and Wanlockhead emphasised that their object was "mutual improvement" or "improvement of the mind". The rules of working class libraries in the late eighteenth and early nineteenth centuries in Scotland are rife with references to mutual improvement, intellectual improvement and godly and moral seriousness. This is essentially a philosophical concept, the idea that the mind can be refined and improved as an end in itself to create a better human being more fitted to inhabit both this world and the next. In the mid nineteenth century, however, the pursuit of intellectual activity came to be identified more with material goals and wordly success and less with

abstract intellectual achievement. The concept of improvement therefore declined and with it the institutions designed to promote it, like Wanlockhead. The library's revival in the late nineteenth century, furthermore, was largely a populist venture of little intellectual significance.

Similar developments can be detected elsewhere. Cumbernauld Public Library founded in 1816, also a working men's library, fell into decline at mid century and was revived by populist means in the 1860's. The weavers' library at Langloan, near Coatbridge, also declined in the mid nineteenth century but unlike Cumbernauld and Wanlockhead did not revive.

During its lifetime the library has been housed in three buildings. Its first real home was the village school, but in 1788 with help from the mine overseers the society acquired a small "library house" on the west side of the Wanlock, which it occupied until 1850 when growth of stock and membership made it imperative that larger premises be found. The building was also in poor physical condition. (See Plate XIX). The society therefore decided to build a new library house nearer the centre of the village. A site was provided by the Duke of Buccleuch and his architect drew up the plans and supervised the building work. A subscription list was opened to cover the cost of the work which was completed by the end of 1850.⁷

The library is simply a rectangular cottage similar to others in the village but has no internal divisions. Its internal dimensions are 30 ft. by 15½ ft., being shelved on three sides (one long wall and two gable walls), the fourth wall being left free for fenestration. There is an entrance porch at the east gable which is combined with a coal bunker and storage area. The unshelved wall has three windows which provide good natural lighting. Paraffin lamps supplied artificial lighting and heating was provided by two fireplaces, one at either gable. The society held its first annual general meeting there in 1851 and the library still remains there today. Because it was, and indeed is, one of the few public buildings in Wanlockhead many of the village's societies have used it as a meeting place over the years including the Free Church congregation, much to the wrath of the orthodox.

The library building probably housed some 4,000 volumes during the society's lifetime although only some 2,600 volumes survive today, partly through casual loss and partly because of a deliberate policy of discarding duplicates and other unwanted stock. Initially the collection grew slowly but began to benefit from donations in the late eighteenth century.

Only 309 volumes had been acquired by 1790 but by 1829 this had risen to 1050 volumes. By 1848 the library had 1909 volumes and 3116 volumes in 1901. Although the library's stock had compared favourably with Leadhills in the mid nineteenth century, by the beginning of the new century Leadhills had drawn ahead, having 3805 volumes in 1904. According to its last supplement Wanlockhead had 3717 volumes by 1925. Printed catalogues of the stock were issued in 1808, 1829, 1848, 1854, 1868, 1888 and 1901 with supplements in 1908 and 1925. Although published cataloguing rules were available from the mid nineteenth century on-

7. Minutes of Wanlockhead Miners' Library. 1/5/1850 — 21/7/1851 *passim*.

wards they were never used and cataloguing was done in the same unsophisticated fashion for over a hundred years.

There was no organised system of shelf arrangement until 1854 although the books may have been arranged, for a time, in the order in which they were acquired. In 1854 each shelf was numbered and each book given the number of the shelf on which it sat. This fixed location system greatly facilitated retrieval, although it was simply a formalisation of a pre-existing shelf arrangement apparently based on size, which took no cognizance of the subject matter of the books as a modern system of shelf arrangement does.

Until the late nineteenth century book selection standards were high and a good collection of general literature was built up. Reading tastes at Wanlockhead were, however, somewhat different from other working class libraries which were often prejudiced against fiction and other imaginative literature and showed a marked preference for religion. Wanlockhead certainly shared this preoccupation. 37% of the stock consisted of religious books in 1829 and books on religion formed an important component of the stock long after reading interests became more secular in other parts of Scotland. Fiction and imaginative literature, however, were also popular. Fiction comprised 15% of the stock in 1829. History, by contrast, which figures largely in the catalogues of other libraries was insignificant at Wanlockhead. The table shows the development of the library stock in percentage terms.

LIBRARY STOCK : subject areas as percentages. 1783-1925

Class	1783	1790	1829	1848	1868	1888	1901	1925
Religion	30.2	23.6	37.6	35.6	33.4	31.7	26.7	22.4
History	21.5	18.4	9.8	8.7	7.3	7.6	7.2	6.4
Fiction	18.1	14.2	15.3	11.4	11.9	16.0	25.5	33.9
Periodicals	11.2	4.2	3.3	8.3	11.4	11.5	8.4	9.6
Miscellaneous	10.4	16.5	9.2	9.2	8.9	8.8	8.4	7.1
Literature	6.9	9.4	7.7	6.0	5.0	5.0	4.7	4.1
Biography	1.7	5.2	6.8	5.8	5.6	6.0	6.5	5.6
Voyages and Geography		3.9	3.3	7.4	7.7	6.6	5.7	4.9
Science and Technology		3.9	3.9	5.1	5.6	4.9	4.9	4.3
Politics and Law		0.7	3.1	2.5	3.2	1.9	2.0	1.7
Totals	100	100	100	100	100	100	100	100

Although much of the stock was bought with members' subscriptions, donations played an important part, some of these being quite large. The fifth Duke of Buccleuch gave 149 volumes to the library in 1845, many of which can still be seen

in the library today. There is no real evidence that donation was used as a means of influencing book selection policy in any particular direction.

The nature of the stock emphasises the Library's function as a recreational and educational institution for the villagers. The original bookstock contained no works relating to lead mining or to science and technology in general, although a number were added at later dates once the Library had established itself as part of the village life and the miners naturally turned to it for advice and background scientific knowledge in their occupation.

Throughout the Library's history its bookstock has been dominated by two classes of literature, namely religious works and imaginative literature. The large numbers of theological works and sermons cover a fairly wide range while the field of comparative religion extends to a translation of the Koran dated 1887. Among the presentation copies in the Library are a number of volumes presented by the Free Church and further volumes, particularly of sermons, apparently donated by visiting preachers (often of their own works). There is naturally a good selection of works on the Covenanters, typical being such titles as A. Morton Brown's *Peden the Prophet : a tale of the Covenanters* (London : J. Snow, 1859) and John MacFarlane's *The Harp of the Scottish Covenant* (Paisley : A. Gardner, 1895). This latter work was one of a number of "Harp" volumes published by Gardner covering various aspects of Scottish poetry on a mainly geographical basis (e.g. *Harp of Renfrewshire* etc.) and this particular copy was presented to the Library in 1895 by the Hon. J. B. White of Fort Wayne, Indiana, U.S.A.

While religious works dominate the stock, science, natural history and general philosophy were also well represented. The works of Aristotle and Plato were available and there survives a set of the classic *Natural History* of the Comte de Buffon (8 vols. Edinburgh : Wm. Creech, 1780. Volume 6 is missing). There is a copy of Darwin's *Origin of Species*, but in a fairly late edition. (6th ed. London : John Murray, 1888). The scientific subjects covered include astronomy, chemistry and, of course, geology. Various more practical "mechanical" works were also added in the course of the nineteenth century as well as some typical "self-help" publications such as the *Popular Educator*. A number of works on mining and mineralogy were acquired over the years, and the list of journals subscribed to includes the *Mining Journal* (between 1838 and 1863; the surviving set lacks a number of volumes) and the *Mining Magazine* (some issues from 1919 only survive).

The bookstock was otherwise dominated by a generally liberal range of imaginative literature, particularly novels and romances. Scott is of course well represented by some 40 volumes of his works, while other novelists present in early editions include Smollet, Sterne and Mrs Radcliffe. Later nineteenth century authors were also purchased and works of Dickens, Mrs Gaskell and Trollope were available as well as some American works later in the century, by James Fenimore Cooper and Nathaniel Hawthorne. Four novels by John Galt survive : *The Last of the Lairds* (Edinburgh : Blackwood, 1826), *Lawrie Tod* (an imperfect copy lacking title page), *Ringan Gilhaize* (London : Greening, 1899) and *Sir Andrew Wylie* (3 vols. Edinburgh : Blackwood, 1822); rather surprisingly his most famous

novels (*The Annals of the Parish*, *The Ayrshire Legatees* and *The Provost*) seem never to have been acquired.

The collection is also rich in a wide range of nineteenth century (and some eighteenth century) literary periodicals in sets of varying lengths. Among these titles are Anthony Trollope's *Saint Pauls* (in which the "Palliser" novels were first published in serial form). Dr. Johnson's *Rambler* and other well-known names such as the *Edinburgh Review*, *Blackwoods Magazine*, *Chambers Journal*, *North British Review*, *Quarterly Review*, and others.

The choice of poetry was fairly conservative : Milton, Pope, Dryden, Cowper, Tennyson, Young and, of course, Burns are represented, but no Wordsworth, Keats or Shelley. A copy of James MacPherson's *Poems of Ossian* has survived (new edition. Edinburgh : J. Robertson, 1792). Drama was represented by the works of Shakespeare (8 vols. Edinburgh : Donaldson, 1771) and some plays of Jonson and Fielding.

During the mid nineteenth century in particular, works of travel and exploration became increasingly more numerous in the stock. These supplemented a good basic collection of books on geography and world history. The reading tastes of the miners were not only comparatively liberal but certainly far from parochial : they could read not only of the history of the ancient world (including Gibbon's *Decline and fall of the Roman Empire*) and of modern Europe, but also had available accounts of the exploration of Africa, India and Asia, including of course accounts from the missionaries to newly-discovered regions. A number of works on modern American history, including the Wars of Independence and the Civil War, testify to a lively interest in the United States. Biographies were also wide-ranging, from church and religious figures to monarchs and statesmen of all periods, and many countries. Nearer home they included *Scots worthies* (2 vols. Glasgow : W. R. McPhun, 1840), Samuel Johnson's *Lives of the . . . English poets* (4 vols. London : J. Buckland etc., 1793) and James Boswell's *Life of Samuel Johnson* (4 vols. London : Baynes, Cowie etc., 1826). The works of Johnson were supplemented by a copy of his *Dictionary of the English Language* (3 vols. 2nd ed. London : Longman etc., 1827) donated by the Duke of Buccleuch in 1845.

Apart from the international flavour of much of the stock the Library has also inevitably collected a number of interesting local works. The well-known *God's treasure house in Scotland* by J. Moir Porteous (London : Simpkin Marshall, 1876) is held, together with a set of the *Statistical Account of Scotland* (donated by the Duke of Buccleuch). Some local authors are also represented in the book-stock : Wanlockhead-born Robert Reid presented a copy of his poems to the Library in 1875 (Robert Wanlock. *Moorland rhymes*. Dumfries : J. Anderson, 1874); his finest poem was "Kirkbride", expressing the spirit of the Covenanters, and this, with "Wanlock" and a few others has recently been reprinted in a booklet by the Wanlockhead Museum Trust. Allan Ramsay was born in Leadhills, employed briefly at Wanlockhead and made his fame and fortune in Edinburgh : a late edition of his poems survives in the Library (3 vols. London : A. Fullerton,

1851). A copy of the *Poems of William Laing* (Sanquhar : John Williamson, 1859) was presented by Tom Stewart in 1860.

Most of the books were acquired through booksellers in Edinburgh so that most bear imprints of either Edinburgh or London; their dates range from the early seventeenth century to the beginning of the twentieth, with the majority covering the late eighteenth and entire nineteenth centuries. A few local imprints have been noted above and two further interesting fairly local publications were from the presses of John Wilson in Ayr : William Dalrymple. *Faith in Jesus Christ* (Ayr : John Wilson, 1790) and Samuel Hayward. *Seventeen sermons* (Ayr : J. & P. Wilson, 1792). A few other Ayrshire imprints are also held. The Library's major benefactor was the Duke of Buccleuch and from his private Library came two of the best examples of bookbinding in the Wanlockhead Library, namely two works by William Coxe : *Account of the Russian discoveries between Asia and America* (3rd ed. London : T. Cadell, 1787) and *Travels in Switzerland* (3 vols. London : T. Cadell, 1789); these volumes formed part of a large donation made in 1845.

In 1974 the Wanlockhead Museum Trust took over the Library from the Wanlockhead Village Council after it had lain more-or-less untouched for over thirty years. Both books and building were in a poor condition but with the help of grants from the British Library, the Pilgrim Trust, the Historic Buildings Council and Nithsdale District Council, they have been restored during 1976 and 1977 to something approaching their original condition and appearance. The restoration culminated in an official reopening in July 1978. The books themselves were repaired and, where necessary, rebound by Dunn and Wilson of Falkirk and between Summer 1977 and Spring 1978 a qualified librarian was employed under a job creation scheme to arrange and re-catalogue the surviving bookstock. The catalogue is now being edited and reproduced and copies will be deposited in the National Library of Scotland in Edinburgh and the British Library in London.

A LEADHILLS DIARY FOR 1745

Transcribed by Miss E. M. Brown: With additional notes and Introduction by James Williams, F.S.A.Scot.

Introduction

The *Leadhills Diary*, which follows, is an illuminating source document describing details of both the social and technical aspects of life in a leadmining community during the middle years of the 18th Century. The information it contains has previously only been available to researchers in the form of typescripts prepared by its present owner, our former member, Miss E. M. Brown of Glen-cotho, near Broughton, in Peebleshire (Formerly of Boreland near Lockerbie). A microfilm copy of the original is also available in the National Library of Scotland, Edinburgh.

Based on information in Miss Brown's possession, and some research (see Appendix) by our former Council member, and one time Wanlockhead resident, David Ford, the Diarist can be tentatively identified with a Matthew Wilson — an early forebear of Miss Brown. It occupies folios 16-47 of a 180 folio vellum-bound volume measuring 6.3 x 8.2 inches in size. Besides his journal the Diarist has used folios 3-7 to record notes on mathematical, astronomical and optical subjects & some matter of a more general nature. Much of the remainder has been utilised at a much later date by John Brown in Gateslack (1783-1829), a great-grandfather of Miss Brown, to contain farm accounts for Gateslack during the period 1822-28 — rents paid, stocks of animals, seeds purchased, produce, etc. At a later period still, 1843-59, it was again used as a cash-book and records details of the expenses incurred in the running of the farm of Glenim.

We today cannot possibly foresee all the needs of future generations of researchers and it is only right, in fairness to them, that complete texts should be published whenever financial constraints permit. All too frequently we possess scattered extracts from documents and, interesting as they may be, they are usually taken out of context and we ourselves cannot judge their true worth. The present *Leadhills Diary* has been transcribed in completeness by Miss Brown and is reproduced here without deletions: Contractions have been expanded as necessary and are indicated, along with a few editorial additions, by the use of square brackets thus []. For Notes see end of article.

Miss Brown has given freely of both her time and knowledge and the Society owes her a deep debt of gratitude in making available this most significant document retained in her possession.

The Diary

11. [June 1745]. Attended the Randevouz¹ between 5 and 6 this Morning, afterwards with Mr S[tirling]² and the 2 overseers consulting about some new Tryals to be carried on this summer. For having nearly as much Ore raised already as will make a moderate Crop for this year, and because the Susanna Vein is now approaching near the boundaries of Glen-

dorch, Mr S.[tirling] intends to work little more in that vein till either the Boundaries be precisely determined or the Company get a Lease of that ground, which they intend to procure if My Lord Hopetoun³ will agree to it upon reasonable Terms. When we parted I got a Copy of the Company's Lease from Mr S.[tirling] the perusal of which was my business the rest of the forenoon, having never seen it before.

Went out after Dinner to try the practice of Dialing⁴ a second time. I took all the same Stations and angles as I did the last time, beginning at the same place, in order to try if I could correct my former Error. I succeeded so well that the line A.H. in the Plan measured 268 foot 9 Inches in the field which is only 5 foot 3 Inches Short of what it ought to have measured by the Plan; and the same line A.H. fell within the point H, towards G, only 2 foot by this survey. So that the Err.[or] now is not above a fathom, the Dyal is a very bad one.

12. [June]. At the Randevouz by 6 o'clock this Morning — With Mr S.'s sisters from 9 at night till about 11.

13. [June]. Spent the evening with Mr S.[tirling] and R. W.

14. [June] Took a walk after Dinner with John Williamson (Hole)⁵ who came to town this Day — Invited in the evening to take a Glass with Mr S.[tirling], John Williamson & Jas. Reid being in the Company.

15. [June]. I made a Calculation this Evening of what Coal has been consumed by our 3 Smithy hearths since the 1st of Jan[ua]ry as follows

	Loads
Carried by James Tacket, which John Moreis says went all for the use of the Smithys	118
Carried by John Watson ⁶	3
Carried over from the House in time of the Storm which John Moreis says would not exceed five loads	5
Total	126

The Loads which I have reckoned by are or ought to be 8 Stone Amsterdam weight each.

The number of days which the Smiths have wrought in the Smithy since the 1st Janry. last.

Archd. Newbigging	133
Alexr. Smith	137½
William Nickel	140

Total of Shifts wrought since January 1st 410½

Now as to 410½ the number of working days: 1s to 126, the number of Loads of Coal:: So is 6 days or one Week: to 1691/821, the Coal consumed by a constant going hearth in one Week.

Invited to take a Glass this Evening with Mr Stirling in Company with Mr Hamilton, Mr Jas. Marjoribanks and John Williamson.

16. [June]. Sunday. Having read part of the Poem Leonidas lately, I read the rest of it this day for the first time.

17. [June]. Went out towards the Evening and made a third Trial of the practice of Dialing as follows viz

	Degrees	Feet	Inches
1 Station	131½	55	2
2 Station	194	51	6
3 Station	160	48	„
4 Station	227	39	2
5 Station	223½	60	„
6 Station	125	48	„
7 Station	139	50	10
8 Station	115	53	„
9 Station Joining the 2 Extreme points	345	305	9

Sent for to Mr S. between 8 & 9 at Night, with whom and the Overseers I was in Company till 12. Conversation. The English Bing of Ore is 64 Stone weight, 14 lbs. Averdupois being reckoned to the Stone. In order to find the proportion of the English Bing to our Leadhills Bing (which is 72 Stones Amsterdam) Mr S.[tirling] used the following method viz

	1	64x14x70	
		<u>76</u>	: 72x16
1 ÷ 16	2	4x14x70	
		<u>76</u>	: 72
2 ÷ 4	3	14x17	
		<u>76</u>	: 18
3 ÷	4	7x70	
		<u>76</u>	: 9
4x76		490	: 684

But he made me do it over in the same way for a Check upon him, yet I could not perceive the reason why the proportional numbers being divided by equal Numbers made their quotients in the same proportion, (N.B. I am to look for the reason of this in some of Euclid's propositions. where I suspect it is to be found.) nor could I perceive why 64 being divided by 16 in the first Step, the rest of the Numbers remaining entire should be equal to

$$\frac{64 \times 14 \times 70}{76} = \frac{4 \times 14 \times 70}{76}, \text{ but I find both totals upon Trial.}$$

18. [June]. Spent this Evening in Mr Whitfield's, one [blank] a Mill Clerk [blank] a Smelter, both from Mr Vein's Mine in the N. of England, being in Company. Conversation. Borax is a good Flux for Smelting of Lead Ore in a crucible. In Smelting Copper they first Calcine it, or reduce it to a Regulus in a long oval furnace, then reduce it by fusion into common Copper, and by another infusion reduce it into fine copper. The fuel used in the first operation is Coal, in the Second Cinders, and in the third Charcoal of Wood.

Mr Whitfield says that Mr Whigham⁷ has told him of a Vein in the Company's privileges, bearing a solid ribb of Copper of a considerable wideness.

20. [June]. Afternoon and Evening with Mr Stirling, the 2 Overseers and John Williamson. 21. [June]. Assisting Mr S.[tirling] to level the Bowling green most of this forenoon. With Mr S.[tirling] and the 2 Overseers Went out after a Dinner with Mr S.[tirling] and the two Overseers and viewed the Comp[an]y Marches from the Mark above the Marjoribanks washing House, to the head of Lady Manner's Scar, afterwards we were all invited to take a Glass with Mr Stirling, John Williamson being with us all the while, and about 9 we were joined by Mr Vetch younger of Elliock,⁸ who has just come from London.

22. [June] Went along with the overseers and John Williamson and some of the miners where it is proposed to take Trials this Summer. At the old works in Rispingleugh, there are three Shafts nearly in a Streight line with one another. Willm. Dunwoddy & Samuel Thomson who had both wrought in that place agree, that a Belly of Ore, consisting not of a solid Ribb, but loose lumps, began about 5 fathoms to the North of the Middle Shaft &

extended Northward five fathoms, that that about a fathom before they came to the North end of that belly, a String flew off from the vein on the West side and ran up the hill on a paralel with Rispingleugh burn. That there is a String or Vein which crosses the cleugh near the head in such a direction that it must meet Rispingleugh vein towards the North. Mr Whitfield seemed to be of the opinion that, as veins are generally observed to be richest where they join one another, it might not be amiss to trace out these two by there general run to the places where they may be supposed to meet, & there to sink a few fathoms and drive cross till we cut the vein — In one of the grains at the head of Bale Gill we discovered a String or vein of fine Spar of three or four Inches wide, and a little below it, several pieces of Ore laid together, which the Miners say were gathered out of the same grain. There are two other grains to the N.E. of this — From Balebill we went over the hill to the head of Langcleugh, on the West side of which is a pretty wide hollow resembling an open Cast which John Williamson told us is cal[le]d [blank] hole, and that according to tradition it was digged by [Bevis] Bulmer⁹ who is said to have got out of it transparent Spar, which being pounded and washed produced Gold. In our way down the burn we saw many heaps like that they call the Gold Workings in Glengonner, and particularly John Williamson showed us a place where Bulmer had a Stamp Mill. We could perceive the Vestiges of a Water Course from the burn along the hill side, and at the place where the Mill is said to have stood, there is a heap overgrown with grass, which we digged a little into and found it to be a heap of very small wastes intermixed with Spar. Then we came further down and viewed the workings for lead Ore near the foot of the burn, which had been carried on by the Company's predecessors and afterwards by themselves, but the Overseers seem to have no great opinion of that Vein.

23. [June] Sunday. Took a long walk along the head of the Lo[w]ther & with J[ohn] Williamson & Jas. Wills, afterwards glanced [at] part of the London Magazine for May &c.

24. [June]. At Night read the Parliament Speeches in the Lon[don] Mag[azine]: for May.

26.[June]. With Mr S.[tirling] and 2 Overseers and John Williamson this Evening.

27. [June]. Went to Samuel Hunter's Weding about one o'clock & staid till between 5 and 6 next morning. I made it my study to shun drinking as much as possible, and consequently kept sober tho' we were very Mery all the while.

28. [June]. Went to see the young new wedded couple this afternoon and in the evening I was with Mr S.[tirling]. He had dined with My L[or]d. Hopetoun who came here this day. Mr S[tirling]. told his Lordship that he believed we were pretty near the boundary of Glendorch and the Susanna Vein and therefore desired that the Marches might be settled. His Lordship made answer that he did not incline to restrain the Company too much on that side, because the further they went the more it was in his interest, since the lead which was got in Glendorch grounds paid 20th of Jun[e] upon Exportation and the other was free from any Tax, but he would not consent to give Lease of these Lands of Glendorch till the Boundaries were fixed.

30. [June]. Sunday.

1 July. [1745]. Took a walk with Jo.[hn] Williamson after Dinner to see the New Trial set on yesterday above the Deadburn houses — went to the Quarterly Meeting of our [? Reading] Society about 7. Thence sent for to Mr S[tirling]. and staid with him Jo[h]n. Williamson and Ed[ward]. Whigham till 12. My father came here this day with his Wife to pay us a visit.

2.[July]. Took a Walk beore Dinner with Mr S[tirling]. and John Williamson to see the Trial above Deadburn. The miners have now found two sides of a Vein. near the wideness of a drift as under. The vein already carried several lumps of Ore, intermixed with clay and Mineral soil — Mr S[tirling] having si[g]ned yesterday with My L[or]d. Hopetoun, his Lordship told him that the grounds on the Southside of Shortcleugh Water was free of Duty on the Exportation of its Lead, as well as the North side, and that about two years ago his Lordship had his Charter renewed, and had [it] [?] created into a Lordship all the Lands which he was then in possession of, with the Imunities and privileges of the former, which

made him suppose that the Lead got in Glendorch or any other of his Lands would likewise be free of Duty on Exportation, but was not altogether certain if his Charter would bear that Interpretation in Law.

3. [July]. Walked as far as the Low Mill with my Father and his Wife who went home this day, afterwards. Invited to take a Bottle of Ale with Jo[h]n. Percival, who wanted to advise [advise?] with me about a proposal which he and T[homas]. Rutter intended to give in to Mr S[tirling] for trying a New Vein in the Company's Liberty. Tho[mas]. Rutter, who came from the Lead Mines at Nethenhead the end of last week, tells me this day they have a Vein of ore in that Groove several Inches wide at the roof of their drift, which is not above 3 yards from the surface, and that it opens downwards, so that in the sole of the drift they have sometimes a foot wide of solid Ore. That they have a Low level about 100 fathoms behind the place where the ore is got, that will when brought up relieve the Vein to 18 fath. deeper. That Mr Mooter got a lease of these Mines near 3 years ago for 57 years, that he has groovewood for several years gratis, and pays only the 7th stone of lead. He says that the workmen employed there till of late were such as had no knowledge of the business, & tha[t] they had often some ore in the sole of their drift, they did not keep near a level, but still rose upwards upon the ground that was easiest to work.

4. [July]. I learn from Mr Stirling that in his Conversation with My L[ord]. Hopetoun about a Lease of the Lands of Glendorch, he could draw nothing from his Lordship like a promise of it to the Comp[an]y. which made him suspect that he designed it for the Marjoribanks. Mr S[tirling]. told his Lordship that the Company was able to give more for it from any other, because they had levels already drove for carrying the Susanna vein into these lands, where any other that took it would be obliged at a great expense to carry up levels from the other side of the hill, for the Company would not carry their levels nearer the boundary than 30 fathoms. This argument had its own weight with his Lordship as Mr S[tirling]. supposes. Went out with the Overseers and Estimate[d] the Companys Ore above ground undressed, after dinner which amounts to [blank]. Afterwards came up to [John] Percival's with Mr Whitfield and one Lonesdale from the N. of England, where we staid till after 9 at Night.

5. [July]. As it was a fine day I was pretty much in the Bowling Green and park beside the workmen. Walked over the new Trial at Deadburn Afternoon with Mr S[tirling]. and John Williamson. There is scarce any appearance of a vein now to be seen in it. N.B. the Mercury in the Barometer stands at 28½ Inches this afternoon, the highest I have observed it of a long time. Spent the evening with Mr S[tirling]. and John Williamson.

6. [July]. Walked out several times (the day being exceeding warm) to see the men at work in the Bowling green and clearing ground for the foundation of a House to make Assays in.

In the Interval of Business and diversion this week I read part of Raspin's Hist[ory]. of England Vol. [blank]¹⁰.

7. [July]. Sunday. Continued to read the Vol: [blank] of Raspin's History.

8. [July]. Since R. Whitfield came home from England lately with his family I have been ordered to write all Bargains that are lett for the future (for Mr S[tirling]. seemed not to be pleased with R. Whitfields way of expressing them.) which therefore makes now part of m[y] attendance. Before we went to lett Bargains this afternoon, I had occasion to complain of John Wilson one of my miners, who being accused to me some time ago by his labourers for not paying them their Wages. I sent for him to speak with me about the matter, but instead of coming to answer for himself, he told the person that I had sent for him that he had no business with either him or me yet lest the man (who was one of the labourers that complained) had magnified his refusal out of revenge, I came one day in by Wilson's house to know the reason why he did not appear, & not finding him told his wife that I wanted expressly to speak with him, & would not dispence with a denial, notwithstanding of all which, he seemed still to disregard my Orders. This I told Mr Stirling before both Overseers, upon which he gave Orders to refuse him his Bargain.

Invited to take a Glass with Mr S[tirling] this evening Mr Whitfield being in the Company.

9. [July]. I was at the Randevouz this Morning a little after 6. This forenoon Mr S[tirling]. went for Nithsdale, R. Whitfield being to follow him tomorrow. As the weather continues good I was much without doors this day, sometimes with the Masons who are building the Assay house and twice at Deadburn seeing that Trial where they have no no appearance of a Vein.

10. [July]. Attended the Randevouz between 5 and 6 this morning — still much without doors on account of the good weather. Being appointed by our Society to make one of their Committee for choosing Books, I gave attendance this Evening with the other Members chosen for that purpose.¹¹ At 2 o'Clock this afternoon the Barometer stood at $28^{11}/_{20}$ Inches high.

11. [July]. Attended the Randevouz this morning between 5 and 6. After 12 took a Walk with Wm. Fisher¹² and Tho[mas]. Hog two of our labourers to see a new vein in the side of the Well grain at the head of Balegill, which Fisher says he discovered on either Friday or Saturday last. He says moreover that after he had digged a little in order the better to discover the soil and was coming away Robt. Harper one of our Miners coming up found the place & now pretends to the first discovery, tho' Fisher declares that it had not been touched before he saw it. Harper having taken out Mr Whigham this morning to see it, Fisher desired that I would go along with him and see it likewise. When we came to the place he shewed me that [which] he discovered, in the side of the Wall grain, a little above where that rivolet runs into Balegill burn. We found the same Vein laid open on the North side of the burn, which had rather a better appearance than the other. The soil was mostly a black Matter intermixed with a pale coloured clay. That on the South side being about a finger breadth and the other a little wider. But about 5 or 6 fathoms up the burn from that on the North side we found another Vein laid open of the same soil and about a foot wide. These two on the North side we concluded had been opened by Mr Whigham and Harper, for Fisher and Hog both told me that there had been no Trial made of them this Morning. When we were coming homeward we found a great many old shafts upon the random of these Veins towards the South and very near one another.

The Mercury in the Barometer stands at $28^{11}/_{20}$ Inches betwixt 4 & 5 this Evening. The very same as yesterday.

12. [July]. At the Randevouz this Morning a little after the Bell. After Breakfast went out with Mr Whitfield to Corbiehall where some of the Miners are employed to open an old Insett. There are three insetts near one another at that place, and our Miners are set to work the other day to open one of them which is the lowest in order to cut Laverockhall vein. James Russel, who is one of the workers there told us that it was upward of 12 years since the Marjoribanks made Trial there. That the Inset they are opening was driven between 60 & 70 fathoms across the hills & that they found a vein or string which they made trial of, but finding it to disperse into several small Branches they gave it over. We went next down by the Mills & down the Highway till we came to the foot of Balegill burn & up that burn till we came to the String and vein which I viewed yesterday in the Well grain and returned home about 3 afternoon — Mr Whigham has a very good opinion of that vein in the Wellgrain — John Williamson, who delivers our Lead to the Carters tells me that one of the Carters told him he had weighed a quantity of my Lord Hopetoun's Potter-ore [galena: Lead Sulphide] that was delivered to them for 24 stone and it weighed just 36 Stone Mealweight, which shews that one stone of Potterore weight is Equal to 1 stone of Amsterdam or Scotch Troy weight.

The Barometer at 6 o'Clock this Evening just the same as yesterday. — Mr S[tirling]. came home this Evening and sent for me to take a Glass with him the 2 Overseers being likewise in the Company. Very bad news from our Army in Flanders.¹³ Mr Whitfield having been viewing the Company's Wood at Camling, says that by John Rammages Estimation

we have 250 Loads of wood yet to come, which may serve our Works for groove wood about 5 years.

13. [July]. This being a fine warm Day especially afternoon I was pretty much without doors, with the Masons &c. Tho[mas]. Lowrie says that new slacked Lime is bad for building, for in wet weather it swells so as sometimes to bring down the Wall built with it.

The Barometer stood at $28\frac{6}{20}$ th Inches this morning.

Spent the evening with Mr S[tirling]. and Jo[hn]. Williamson. Conversation. Upwards of a Doz[en]. or 14 years agoe Dean of Guild Wightman bought all my Ld Hopetoun's sorrelled Lead & the price of Lead advancing after the Bargain was made Mr Wightman raised the process against my lord alleging that his Lordship did not smelt so much as he ought but on account of the advance sold for potters ore what was not fit for that purpose, in order to defraud him; Upon which the Earl being impatient of a Lawsuit referred the Matter to Arbitrators, who determined that his L[ordshi]p. should pay Mr Wightman £500. When the same Mr Wightman had a Lawsuit with the K[ing]. of Denmark, the Danish Ambassador at London employed Mr Erskin, now Lord Finwell, to speak with Mr Wightman in order to make up the mater, & Mr Erskin by the Ambassador's order made him an offer of £1500, to quit the process after some argument about it, Mr Wightman plainly told Mr Erskin that £1500 would do no more than pay off his Debts and unless he has something moreover for himself he did not value that one farthing; an answer which could proceed from no good principle. Mrs S.

Some of my spare hours this Week were spent in reading Cramer's Elements of the Art of Assaying Mettals.¹⁴

14. [July]. Sunday. Walked out this forenoon with James Wells to the top of the Wool Law. We went in by Lord Hopetoun's Works in the Woolgill, and I think all the ore they have yet raised out of that Vein does not exceed 5 or 6 Bings. It is all very dirty and the ore of a black Coal colour.

15 [July]. At the Randevouz by 6 this Morning being half an hour after the Bell. Spent the Evening with Mr S[tirling]. and the 2 Overseers. Conversation. At Wanlockhead they mix fern Ashes with Bone ashes for making up their refining Tests.

16 [July]. As I am to go for Edinburgh tomorrow for the peat money, I have been exceeding throng all this Day making up the 2 last weeks Accots: to take along with me. A little Rain & Fogg towards the evening.

17 [July]. At 9 o'Clock this morning the Barometer at $28\frac{1}{2}$ Inches. It still continues a little wet and foggy. Set off this afternoon for Edinburgh to fetch the peat money having one of our men along with me. We staid in Biggar all night. A fine Afternoon and Evening.

18 [July]. Left Biggar between 6 and 7 this Morning and came to Edinburgh against 2 afternoon, having Corned [the horses] at the Nine Mile Burn. After I had delivered several letters, I went down to Leith with Mr Stirling's new Horse to Mr Brown's the Horserider, where I met with Mr Jas. Marjoribanks and Mr Cha. Shirreff, and after we had drank some bottles of wine I returned to Edinburgh with Mr Marjoribanks and another Gentleman in a hackney Coach. Spent the Evening in Robert Mars' with Mr Bran Watchmaker¹⁵, Mr Bagshaw &c.

19 [July]. Dined this Day with Mr Shirreff and Mr Irvine in Mrs Wilsons, and afterwards received £200 from Mr Shirreff for the peats. Going up this Day to Mr Finleyson's Mathematical Instrument Maker to call for some Glass tubes for Mr Stirling, I saw him seal hermetically several glass tubes. James Kirkpatrick was along with me who came accidentally to town this day.

20 [July]. Went to the Bank & exchanged 2 £50 Notes for Silver and finding that I could [not] make Biggar this night, I resolved to stay till Monday and lodged the Money in Mr Sproth's Candlemaker, thinking it safer there than in my Quarters.

21 [July] Sunday. Took a walk with Tho[mas]. Brown as far as Crammond Bridge which is 4 miles West from Edinburgh. A very agreeable walk this fine weather.

22 [July]. Took my horse at 10 o'Clock and come to Biggar precisely at 3, afternoon, for

I did not stop anywhere by the way. The Day being exceeding hot I rested in Biggar till near 6 and came to Leadhills about 9 at Night. Staid with Mr S[tirling] and Mr Whigham till between 11 and 12.

23 [July]. Attended the Randevouz between 5 and 6 this Morning. Afterward took over the Money to Mr Stirling. Spent the Evening with Mr S[tirling]. and Mr Whigham till after 11 at night.

24 [July]. Slept long this Morning being a little uneasy with a cold. Dined with Mr S[tirling]. Read some of the Speeches in Parliament in the Lon[don] Magazine for June this Evening.

25 [July]. Attended the Randevouz at 6 o'Clock this Morning, afterwards went to the Mills with Mr Whitfield to Number the Bars of Lead, which kept me till one o'clock. There is one Bar a Missing, Read part of Rapines Hist[ory] of England Vol. 13 this evening. Still a little indisposed.

26 [July]. Read a little more of Rapin this morning. Went to the Mills about 11 o'clock to burn some Coal that Stockbriggs had sent up in order to try if they would make good cinders; but they do not promise well.

27 [July]. Dined with Mr Stirling and his two sisters. And at night I was invited to Drink a glass with him, David Williamson and Jas. Reid being invited also. We sat till 2 Next Morning.

28 [July]. Sunday. Glanced part of several Books.

29 [July]. Attended the Randevouz between 5 and 6 this Morning. My attendance this Day was wholly confined to the Examination of Mr Whitfield's Journals, where I found several Considerable Mistakes.¹⁸ So unattentive is he in anything where figures is concerned, that although several Reprimands for mistakes of that kind have come down from the Court of Directors, yet he still continues to make blunders of that nature; and some time ago I had orders from Mr Stirling never to let one Journal pass without a Strict Examination. After Dinner I went to the Mills to see the Smelting Tryals begun this Day.

30 [July]. Exceeding busy all this Day with the Quarterly Accounts.

31 [July]. Early at work this Morning, and we sent off the Quarterly Accounts between 2 and 3 afternoon. Too[k] a walk [in the] afternoon to see the Tryals.

AUGUST [1745]

1. The Post Day. Took another Walk this afternoon to see the Smelting Tryals — When these Trials begun the Mills were swept clean both hearths and floor and any either ore or Bruce; some of the smelters told me that their beginning without bruce [?]lols to the Masters, in their opinion two Bars of Lead in the first Shift: This made me to enquire of them all concerning that matter, and they all affirmed that it lost one Bar to the Masters at least. But not being satisfied with this general affirmation, and to find if it was not said through inadvertancy or Ignorance, I put the case to them thus. Suppose you was to smelt 5 or 10 Bings of Ore beginning with such a determined quantity of bruce as might be sufficient and after you had done with smelting the proposed quantity of Ore, leave just the same quantity of bruce as you began with, After that take the like quantity of Ore as before of the same quality, and beginning without any Bruce, Smelt all clean up without leaving any when you had done smelting. Which of these two equal quantities of Ore could you engage to bring the largest quantity of Lead from? They readily answered that they would engage to bring the most Lead from that where they began with Bruce, and left the same quantity at the end. and added that any Smelter of Experience would say the same thing. If this be so we had done better to have made every hearth begin with an equal quantity of Bruce by weight. — John Steel says that Adam Scot works as true a hearth as any Smelter he sees about the Mills.

2 [August]. Attended the Randevouz this Morning by the Bell, a little before 6. About 9 went along with the Overseers to Corby Hall and (To Russel & partrs. having finished their Bargain for reading up the mouth of the High Insett there) we went into the forehead and found a fine drift all the way, measuring from the outermost doorshead to the forehead

18½ fathoms. There is a Vein which crosses it about 9 or ten fathoms from the forehead, with pretty good Clay, and hadeing with the foot of the veins to the West.

Yesterday the Weather began to clear up, and this has been a fine Day, especially afternoon. Spent the Evening with Mr Stirling alone, till after 11.

3 [August]. Took a Walk this Morning to the Mills by the Meadow head Engine; and observing that the water was not to have such a considerable fall upon the Wheel as formerly, I asked G. Simpson the reason, who told me that he found by experience that the weight of the Water had the most considerable Effect in driving the Wheel. That when the Water fell from a great height upon her, it could have very little Effect except by the first Stroke, because the Water rebounded and broke into Froth whereby it lost its weight, but when the water was brought upon the Wheel near the top by Troughs gently stoeping, it had both a considerable Stroke and the Water continued to press the Wheel with its weight. I remember to have had a dispute about two years ago with one Mr Cleghorn¹⁷ in Edin[bu]r[gh]. upon that subject. Mr Cleghorn affirmed that a high and perpendicular fall of Water was best for driving a Wheel, and said he had proven it by Experiment upon a Corn Mill. I afterwards bestowed some time in attempting to solve this proposition by a Calculation from Mechanical Principles; but by reason of the difficulty, as well as uncertainty of such a Calculation, and the want of leisure, I never went through with it. I remember that while I was contemplating the power which the Water had by its weight of turning round the Wheel (which I somehow happened to consider as the power of gravity alternately increased and diminished in the same portion of Matter) the following Reverie came into my head viz : That supposing there could be found such a thing in Water as being suspended either under or over one side of a Wheel would either augment or diminish the power of Gravity on that side without any artificial reparation of the Course, the application thereof would infalibly give us a perpetual motion. But as there is not one particle of Matter to be found, at least so far as we know, unaccompanied with the power of Gravity, it did not seem possible to find the principle of such a Motion in Nature. Yet in spite of Reason the Mind will sometimes please itself by contemplating a thought that has anything new or uncommon in it, the never so ridiculous absurd and Chimerical. And so did the Phantom of a Machine for some time obtrude itself upon my fancy, till I was almost induced to believed that it might succeed by the application of a Magnet to the Rim of a Wheel : the rim being made of Iron and the Axis of the Magnet applied almost contiguous to it as a Tangent to a Circle. But this could succeed only was altogether or mostly in the direction of its Axis; Which though indeed I never had an opportunity of knowing by Experiment, I had some reason to suspect was not the Case. On account of this suspicion I never put the Matter to a Trial, tho' for some time while my Fancy was warm with the Conceit, I could scarce refrain from a secret Triumph in supposing myself the Author and Inventer of a perpetual Motion.

Spent the Evening with Mr Stirling alone till after 11. I was entertained with passages of his Travels through Italy, such as that the heats of summer, tho' much greater in that Country than here are not so apt to make one lazy and listless except when a S.E. Wind blows which they call [blank] at which time it is so very sultry that one can scarce stir. That the [persons of] Quality there never stir out of their houses during the summer heats from 11 forenoon till 3 or 4 afternoon. that during that season all journeys are performed in the night time; the great Clouds of Dust which rise in the Day time making it impracticable to travel &c.

4 [August]. Sunday. Took a Walk this forenoon with Jas. Wells. We walked out by the Engines, the Works in Lady Manners Scar, My Lord's Works at Woolgill &c. so to Whigham's Vein near the foot of the Well grain at Balegill head. The trial in this vein was begun the [blank] of July last, when it got that name in the Bargain Book. This vein is the same with that mentioned above on the 11th July — the farthest up in the grain.

Afternoon and Evening read the first part of B. [] Chymistry.

5. [August] Attended the Randevouz between 5 and 6 this Morning and in the Evening

read part of Cramers Art of Assaying Mettals. Mr S[tirling] went down [the] Clyde this day to buy Meal &c.

6 [August]. After Breakfast took a walk to the Mills, where I staid till after 1 o'Clock — In the Evening glanced more of Cramer's Art of Ass[aying] Met[als].

7 [August]. Being a while this Morning with [blank] Hunter the Painter working in one of the Rooms of the Co[mpany]'s house, he told me that the best thing for whitening a Room was Spanish White[ning], mixed up with Size.

8 [August]. I was some hours this Evening in Company with Hopetoun's Grieves and John Bell Louthian, and his partners. They were all met in [John] Percival's to drink a Glass with John Bell, who is entered this week into a Lease for a Coal Work in Louthian near West Calder. He has his Lease from one Andrew Marjoribanks of that Ilk.¹⁸ As John and I were talking about it yesterday, he expressed a strong inclination for having me conjunct with him in the Lease; but I declined it as I was afraid he had gone too precipitantly into the Affair.

9 [August]. Took a Walk to the Mill this Afternoon, and staid some time and in the Evening I was awhile with Mr Stirling's Sisters.

10 [August]. Went to the Mills about 9 in the Morning, for as the Lead Smelted in the Tryals for these two Weeks was to be weighed off this Day, I proposed to see the Smelters do all alike in smelting up their Ore that it might appear who was like to get the better, and that by one of them smelting cleaner up than another it might not be rumoured abroad that such of them had been Victors in the Tryals who might only have a greater Prudence than the Best by smelting their Ore cleaner up. There has been a particular Emulation between the Scotch and English Smelters during these Tryals. Mr Whitfield has all along betraid an Anxiety for the English Smelters having the better, which put him much upon the fret, when it was like to appear that they had a bad chance.

11 [August]. Sunday. Went to Church this Forenoon, And studied Cramer's Art of Assaying Mettals the rest of the Day.

12 [August]. Attended the Randevouz between 5 and 6 this Morning, Mr Stirling having heard of Whitfield's partiality in favours of the English Smelters, asked me about his behaviour as I came over to the Counting room and appeared pretty much displeased with his folly.

13 [August]. Being in Conversation with John Bell Lowthian about his Coal Works, he told me that one Robert Sharp in Wanlockhead gave him an imperfect Description of a Machine which he had seen for drawing Water, and which, so far as I could understand by the hint which John Bell gave me of it is contrived in the following manner.

A Beam of Wood of a larger, or less size as the Machine requires is suspended by the middle on an axis which moves in a frame fixed for that purpose, so as both ends of the Beam may freely move upwards and downwards to a certain height. To one end of this beam is affixed the Aparatus for drawing Water by means of a pump, and to the other end a Vessel of Capacity sufficient to hold as much Water as shall by its weight overbalance the weight of water in the pump and overcome the friction. This end of the beam with the Vessel being at its greatest Elevation, a stream of water is conveyed into it which when the Vessel is filled bears it down, till coming to its lowest, the Vessel is by some device either overturned or a Slu[i]ce opened in the bottom or side of it, to let out the Water. Again the Vessel is no sooner em[p]tied, than the weight of the Aparatus on the other end of the Beam, raises this end with the Vessel, which being at its highest is again filled with the Stream; and this being moved alternately upwards and downwards, it works the pump and draws the Water out of any Coal pit or mine which cannot be drained by a Level.

This Machine is entirely new to me, having never heard anything of the kind before now. It seems to me a very Curious and Cheap contrivance, as it saves the expense of a Wheel, and I think the Machine as above described might be considerably improved; For example, If such a Machine was to be erected where there was a scarcity of Water to drive it, as is often the Case, the Water that must otherways be lost while the Vessel is emptying

itself might be preserved by means of a door sliding perpendicularly up and down in the Trough that conveys the stream of Water into the Vessel. This Sliding door might be so contrived, as to open at the instant the Vessel came to its greatest height and let the water run into it, and to close when the Vessel was full and beginning to move downwards, all by means of the motion of the beam.

I think the Spear of the pump should be suspended between the farther end of the Beam and the Axis, which would increase the power.

In Company this Evening with Mr S[tirling]. and Mr Whigham.

14 [August]. Went out about 2 afternoon to see the vein which Jo[h]n Percival has discovered in the yards above Meadowhead Engine. It is the top of Labour in Vain Vein and there are several large lumps of Ore discovered in that place very near the Surface.

Went down the way this evening along with Wm. Talhouse to drink a Glass with John Bell before he leaves this place.

15 [August]. Went down to Mr Shirreff this afternoon with some letters for him to take with him to Leith, and drank several bottles of Wine with him and Henry Otto, David Williamson and My Lord Hopetoun's Grievances. Spent the Evening with Mr S[tirling], Tho[mas] Reid, Ja[mes] Reid and E[dward] Whigham. Mr Stirling, Mr Shirreff and several others had drunk pretty largely last night, which together with what he had drunk this afternoon made Mr Stirling very free and good natured, and speaking of R. Whitfield's behaviour at the late Smelting Trials, he said that he would enquire into the matter, and if he found that Whitfield had behaved in such a ridiculous way as had been represented to him, he should lose his favour, but added that he would endeavour to do it cautiously, for he was conscious to himself, that when he was good he was over good, but was put out of temper he was apt to say such things as were too severe: Which is indeed his Character. He said to me by way of complaint that I was too reserve[d] in never making him acquainted with things that were looked upon as grievances till he had them from other hands, which I ought by no means to conceal for, says he, I look upon you to be as good as any overseer the Company has, and require you to take as much notice of everything belonging to the Company's affairs, and make him acquainted with every irregularity, by whomsoever comited; and added that he had a good mind to get the odd seven pounds added to my salary.¹⁰

16 [August]. Dined with Mr Stirling, and after we had let some Bargains he called me to meet him again in the Evening. We sat by ourselves till near Eleven at Night, looked over the Smelting Trials, and cast up the Expence of fuel and Lime to see the charges of smelting on a Tun.

17 [August]. With Mr Stirling this this Evening till 11 at Night.

18 [August]. Sunday. Read a little of Cramer's El[ements] of the Art of Ass[aying] Metals. this Forenoon. Sent for at 2 to dine with Mr Stirling & Staid with him till after 11 at night. Conversation. Bombs do not move in the Curve of the parabola in the open Air, as they would do in a space void of resistance, but do actually fall in a line not sensibly differing from perpendicular. Mr S[tirling] says he has sometimes stood just by the Flag when the Artillery were exercising at Greenwich, and traced the Bomb with his Eye flying all the way through the Air, and that they take their aim at the Flag, one may easily avoid the bomb by flying the place where they see them falling. A body falling through space void of all resistance falls 16 feet in the 1st Second, but a Bomb falling through the Air takes a considerably longer time, yet the larger the bomb the quicker will its fall be through the air or any resisting Medium.

19 [August]. Took a walk after Dinner by the Engines to the Mills. I took out my Watch²⁰ and observed how much time intervened between the time that the Smelters drew their fire and their drawing it a second time, and found that they drew it 7 times in 29 Minutes, it varying a little from 4 minutes betwixt every 2 times.

Spent the Evening with Mr Stirling and Thomas Reid.

21 [August]. Most of my spare time this day was spent in preparing to ride to James Reid's Wedding tomorrow. In Company this Evening with Mr S[tirling]. and Mr Hamilton.

22 [August]. Went to the Wedding. We set out a little after 10 o'Clock, staid above an hour in Sanquhar and came to Garallan betwixt 5 and 6 at Night. After the Mariage Ceremony (which lasted but a few Minutes) we had a Sumptuous Dinner; The Lord Dumfries²¹ and several Gentlemen and Ladys in the Neighbourhood being at the Wedding. Mr Stirling and Mr Hamilton were along with us from Leadhills. After Dinner and some glasses of Punch, we were entertained with dancing &c till about 12 at Night, when most of the Company dismissed, and 8 of us went to Cumnock. The Night was exceeding dark so that we had difficulty to find the Way. I was somewhat surprized to find us sit almost mute for a considerable after dinner, before the diversion began; notwithstanding of Company from whom one might have expected agreeable Conversation.

23 [August]. We took Horse about 11 or 12, Staid more than an hour in Sanquhar and came home about 7 at Night; We had a Dinner prepared for us in Percival's, and made merry till about 3 next Morning.

24 [August]. Slept this forenoon till near 12, afternoon. I was called over to Percival's to John Anderson in Douglas, James Black in Abington²² and Adam and Hugh Kennedys in Newton. The Coalworks of Rigg and Glespin are lately fallen into the hands of [blank] in Douglas Mill, & the above named H. and A. Kennedys, but with this provision that they are to find bail against Friday next to pay a premium of betwixt 40 and 50 pounds within a month after for the Bargain. They wanted to have Mr Stirling for their Bail, which they wanted me to propose; but I refused and told them they could not expect to succe[e]d as proved to be the case upon John Anderson's making aplication to him. The Kennedys extole the Bargain, & propose great advantage from it, but I am told that most people are of opinion they will make little by it. However Jo[h]n Anderson, who has had all Bramwell's Accounts through his hands says that Bramwell made 1693 pound Scots of these Coalworks last year, after paying all Expenses excepting the Rent which is £100 Sterling p.Annum.

25 [August]. Went to Church both forenoon and afternoon. At night came up to Mr Stirling's and sat over a Bottle of Wine, he and I till near 11.

26 [August]. This afternoon John Wilson gave in a petition to Mr Stirling, or rather a demand desiring that he would either order him his Work again or give him his discharge (vide July 8th) upon this Mr Stirling sent for me and seemed to be disposed to give him his work again as the times were hard, but said he would first oblige him to make up mat[t]ers with me. I answered that I should very readily forgive the offence he had done to me if he would but ask it. But upon looking again upon Wilson's petition Mr Stirling said what occasion have I to restore him to his work when our works are overcrowded with Men & he asking either his Work or his Discharge indifferently, and so desired me to fetch him a sheet of paper and so wrote him his discharge, with a Recomendation to Bagbie for a Pass to protect him on the Road. I was really uneasy that the poor fellow should be so reduced merely on account of his ill nature, for if ever he had desired me to interceed for him I would willingly have done it, and could certainly have prevailed with Mr Stirling to restore him to his work; But his haity temper would not al[l]ow him, tho' he seemed very dejected upon my delivering him his Discharge. Mr R. Maxwell in Dumfries with Mr S[tirling] all the while, and I was desired to return to their Company. We sat over a glass till between 11 and 12 and E[dward]. Whigham being sent for came in about 10 pretty much in liquour. Conversation. The D[uke]. of Queensberry's eldest son²³, but a Boy, is now Aid De Camp to the K[ing]. of Sardinia.

27 [August]. Attended the Randevouz about 6 in order to enquire of the men if they are willing to take English Cheese, which Mr Maxwell²⁴ proposes to furnish us with at 24 S[hillings] p[er] c[w]t. exclusive of Carriage from Dumfries to this place. Afterwards came down to Percival's to Mr Maxwell and commissioned 10 or 12 hundred weight of his cheese.

The Overseers were just leaving the Randevouz when I came to it and I found there had fal[l]en out some difference betwixt them and that they had been cursing one another

in the Timber yard. After I left Mr Maxwell I came up to the Counting room and wrote the above from the 22nd inclusive. I was told yesterday that My L[or]d. Hopetoun had sent orders to this place to turn John Bell Louthian out of Doors, not knowing that he was already gone. I heard likewise that the Colliers had loosed the Water in the Coalworks, before he got there with his family & thereby stopt the Work. A very hard beginning if these reports hold true. No doubt My Lord's Severity is owing to Mr Shirreff who has been long an Enemy to John Bell.

29 [August]. I am pretty uneasy this Night with a head Ake occasioned by writing so long this forenoon. Walked.

30 [August]. Took a Walk this forenoon by the Meadow-head Engine to the Mills. I observed again (Vide 19 Instant) by my watch how frequently the Smelters drew their fire and found that they took exactly the same time as by my last observation, only at Corson's hearth they drew the Fire only 3 times in 15 Minuts, but I observed that she was not going right. The Bevan's say that a Slagg hearth takes a stronger blast than an Ore hearth.

31 [August]. Helping my Landlady to count and clear with her Peat leader kept me at home sometime this afternoon, Took a Walk to the Engine towards the Evening.

September

1. Sunday. Took a Walk to the Works in Lady Manners Scar, and read part of several Books viz. Cramer's Art of Ass[aying]. Met[als]: On Mettals,²⁵ Art of preserving health (a Poem) and Pope's Essay on Man.

2 [September]. Came to the Randezvous a little after 6, afterwards wrote three letters to Douglas. Having been desired by Stockbriggs sometime ago to procure him the sale of the Cinders which the Bevans'es will require for smelting the Slaggs, and got their consent to take them from him. Stockbriggs sent up K. Rankine his Coalgrieve this day to Make a Bargain. The Coalgrieve and I met the Bevans at Robert Parks and they agreed that Stockbriggs should have eighteen pence p[er] Load for his Cinders and for every 100 Loads of Cinders which the Bevans receive from him, he is to give them Ten Loads of Coal gratis. Culbert Stobs their Slagg hearth man was with us and says that the more thoroughly that Cinders are burnt the better they are, and that a South or West wind is best for burning them being generally the most constant. I was with them most part of the afternoon.

3 [September]. Took a Walk after Breakfast by Meadowhead Engine to the Mills. Culbert Stobs was just begun to build the Slagg hearth, which I intend to take a particular notice of, as I never had occasion to observe the Structure of a Slagg-hearth before. I was in Company this Evening with Mr Stirling, E[dward]. Whigham, Jo: Dobie Jas: Reid and H. Otto²⁶ till 11.

4 [September]. Took a walk this afternoon to the Mills. The Wrights have been cleaning and oiling the Mill Bellows since Monday and will finish them this Night. They say the the Curreers used to oil their Leather when it is a little moistened with Water, which they account ye best way.

5 [September]. After preparing for the post, I took a walk to the Mills. C. Stobs had just about finished the Slagg-hearth and set the Smelting of the Slagg about 5. The Slagg-hearth differs from the Ore hearth in the following particulars viz : It has no sump but perfectly plain in the bottom, the higher edge of the Workstone being on a level with it. The Workstone sloping forward as it does in the Ore hearth, hath two bearers for ledges to it, on each side one opening gradually as they recede farther from the Hearth: Except at the bottom, the Workstone, the two bearers & the back below the blast the rest of the hearth is all built of free stone, and is considerably narrower every way than an Ore hearth but higher. The Workstone in this hath no channel as in the Ore hearth. Before they kindle the fire in the Slagg hearth, they fill up all the bottom of the hearth as high as the lower edge of the blast behind and the lower edge of the forestone, as also the workstone to the top of the ledges with Smithy Culm, put through a sieve. Then fill their hearth with peat and kindle it, adding Cinders and Slagg as soon as the Fire is well kindled, and when the Slagg begins to melt

they open a little hole between the Culm and the forestone with a pocker to let out the black Slagg. The greater part of the Lead separating from the Slagg in the hearth, sinks down through the Culm & comes trickling down the Workstone into the Pot, as fine as Quicksilver, while part of the Lead being involved in the black slagg comes out at the hole above described along with it, intencely red hot. Came up to Mr Stirling and was in Company with him R. Whitfield and David Williamson till 2 o'Clock next morning.

7 [September]. Took a Walk to the Mills this afternoon and staid some hours to see the Slagg hearth working.

8 [September]. Sunday. Read a good deal on Cramer's Art of Ass[aying]. Metals.

9 [September]. Mr Stirling told me this morning that he had a letter by last nights post acquainting him that several Shippes were sent from Leith to Inverness to bring the Army under G[eneral]. Cope back by sea; and that amongst the rest 5 ships, on board of which he had shipped part of the Companys lead for Holland, were pressed off without being allowed so much time as to unload their lead.

10 [September]. Took a Walk [this] afternoon to the Mills principally to see the Slagg hearth, but it was blown down. One of the hearths was smelting white Ore, [cerussite — lead carbonate] I took out my watch and observed the time till the Smelters drew the fire thrice, I found the first Interval ten Minut[e]s, the Second Interval 6 Minut[e]s and the third 8 Minut[e]s 24 Minut[e]s in all.

The reason why the White ore hearth does not require to be so frequently drawn as that of the Blue ore [? Galena — Lead Sulphide], seems to be this, because the White ore is lighter, and does not set so firmly down in the fire nor does the hearth grow so much with it as with the Blue Ore, I asked the Smelters if they thought that White Ore would smelt in a Slagg hearth, but one of them said he had known it tried with a parcel of White Ore at Wanlockhead without success, for that it soon choaked up the hearth with growing. This Evening read a little of Cramer's &c.

11 [September]. Read a little this Evening of Cramer's Art of Ass[aying] Met[als].

12 [September]. Took a Walk to the Mill after Dinner where I staid about 3 hours Two hearths were smelting Blue ore, one White, and the Slagg hearth was going. I made further observation by my Watch of the Minut[e]s the Smelters took betwixt the times of drawing (their Term for it is Watching) the fire, I found that the intervals were no[t] very regular in the White ore hearth for sometimes they did not draw it fully for a good While together, only they would now and then put the Gavelock into one corner when it turned black, and ease it a little to let the blast get vent and sometimes only force out a lump of Slagg. But at the Blue Ore Hearthe they still kept time, without having any other measure of time than the symptoms that appeared of their fires requiring it. I observed McDonald's hearth while they watched it 7 times which they did in $29\frac{1}{2}$ Minut[e]s, and the longest did not exceed $4\frac{1}{2}$ Minut[e]s all the time. Next I came to Corson's hearth, where they were not all together so regular and watched her 9 times in 28 Minut[e]s. Now these two hearths smelt the same number of Bars in about the same time, by which it is plain that McDonald must give his hearth a greater Load of Fuel and Ore at a time than Corson, I propose to make more such comparisons of that kind, for perhaps it may be a question whether drawing the fire too frequently does not cool the Bruce too much, and thereby lessen the produce as well as the other extreme may do it harm another way.

There were 3 Wanlockhead Smelters in the Mills at the same time who told me that Mr Wightman had begun to smelt with his Water blast, and that he was trying the hearth in a new form. He has the bot[t]om of the hearth, they say, on a level with the inner and higher-most side of the Workstone, and leaves betwixt them an opening at which the lead runs out as soon as it falls to the bottom, and so comes running out under the Workstone, but this opening they say soon fills up with the Slagg and then tho' lead flowed all over the Workstone at every part and besides they say that this way renders the fire very difficult to work. I imagine that what put him upon that contrivance might be this, he might think that the lead was consumed by so much of it always lying in the sump and being there-

by so long exposed to the Violence of the fire. This is what I have several times thought myself, and no farther gone than last night I had a notion in my head of a remedy something of kin to his for preventing that loss, supposing it to be a real one. I proposed to have the sides of the bottonstone and the workstone that were contiguous to one another on the same level, and that the bottom stone should decline as much towards the back of the hearth as the Workstone does the other way, besides this I should have a space open below the Bottom stone quite through from the back of the hearth to the fore-side of the Workstone, and an opening left at the back side of the bottom stone to communicat[e] with it, so that by the backward declination of the bottom of the hearth, the lead should fall into the space below, which again being made to decline a little towards the forepart of it, and filled with Smithy Culm as a Slagg hearth, the Lead would come out strained pure from all dross and cool at the same time. Now supposing it practicable to work the fire in this way, and that the opening in the backside of the hearth where the lead is supposed to run out, could be kept clear which I imagine would be the two greatest difficulties, this might be presumed to remedy in a great measure the evel [sic] above mentioned. But perhaps this is all a Reverie. I was at the Rendevous this morning between 5 & 6. Read part of Cramer's Art of Ass[aying] Met[als] this evening.

13 [September]. Robert McKendrick told me this day that John Forrest's & Rich[ard]. Garth's Bargains just now finished in Clinery Scar cost them 15 S[hillings] p[er] Fath[om] for drawing their Work, and each of them got about 2 Bings of Ore. — Took a Walk to the Mills after Dinner. I observed again by my Watch how frequently the Smelters drew (or watched) their fire. Laurence Corson watched his 8 times in 37 Minut[e]s. They were complaining that the Ore they were smelting was of a harder and more stubborn nature than usual, Laurence Corson's hearth did not go well the Bruce when the fire was drawn came out in big dark coloured lumps, but McLeans hearth made a very good Bruce. Corson said his hearth was too large for such hard & Stubborn Ore, for the harder the ore is the less ought the hearth to be built and Vice Versa. and consequently a white ore hearth Should be larger than any Blue Ore hearth.

I have for these several Months observed how many hands are employed by Wm. Otto in the Washinghouse, in order to make a Calculation of what he makes by his Bargain, and never yet observed him to have more than 17 men and boys besides himself, but on the contrary have often found them fewer. Alex[ander] Ross, who let in the Smethin(g), had 20 p[er] Day, and I hear that his boys have 4d and his servers 8d p[er] Day. I am not certain what his other Washers wages are, but I suppose they do not exceed 12d p[er] Day and I doubt if Tho[mas] Nelson, who works at the Bouce Buddle has so much, but shall suppose him to have twelve pence in the following Calculation, which I make from the 1st of July to the end of that Week as under viz :

Dressed from 1st July to 7th Septr. 1745 being 10 Weeks

Ore of Portobello Vein at 12d per Bing	Bings ...	11 $\frac{3}{4}$...	£ ..	11" 7 $\frac{1}{2}$
Ore of the Susanna Vein at 20d per Do.		542 $\frac{5}{8}$...	45" 4" 4 $\frac{1}{2}$	

£45" 16"

Wm. Ottos Charges on the above

	Days			
Alexr. Ross letting in the Bouce	60 ...	at 20d ...	£5	
5 Washers at Sieves & Buddles, each	60 ...	at 12d ...	15	
5 Servers each	60 ...	at 8d ...	10	
6 Boys, knocking the, Ore, each	60 ...	at 4d ...	6	36" " "

Remains for Wm. Otto's neat Gain £9" 16 "

Now at the rate of £9 " 16" " in 10 Weeks, his gain in one Year amounts to £50 :19 :24, but I am certain that the above is not the extent of his gain these 10 Weeks past, for besides that I have several days observed fewer than 17 Men in the Washinghouse, I have heard

some of his men say they never wrought more than half a day on Saturdays, which is one twelfth part of their time, and consequently the twelfth part of the above expenses (£3) in W[illiam] Otto's pocket, which added to £9 : 16 : , makes £12:16 : free to him for 10 weeks or £66:11:2½ a year.

14 [September]. With Mr Stirling this Evening.

15 [September]. Sunday. Read a good deal of Cramer's Art of Essaying Mettals.

16 [September]. I was with Mr Stirling the most of the Day settling the prices [of] the Men's provisions, and after business was over we sat together over a glass till 1 in the Morning. I was at the Randevouz this Morning before 6.

17 [September]. Took a Walk to the Mills this Morning. The Carters report that there was an Engagement yesterday between Garners & Hamilton's Dragoons joined with the Trained bands of Ed[inbu]r[gh] on the one side, and the Pretenders Son with his Highland men on the other, and all day reports to that Effect were running from different hands: but while some said that it happened on Drumshorland Moor²⁷, others gave different accounts. Some said that 200 of the Highland men were killed.

All my attendance this Day was settling the prices of provisions with Mr S[tirling] and letting Bargains. and I was with him and H. Otto in the Evening till after 11.

18 [September]. I went to the Randevouz this morning before 6, Mr Stirling having desired me to get a man to go express to Ed[inbu]r[gh]. for intelligence but soon after the Express was gone we had it confirmed by Sir Tho[mas] Kirkpatrick's²⁸ Serv[a]n[t] that the Pretender's Son entered Edinburgh yesterday without firing a gun or drawing a sword, and his Father was immediately proclaimed King of Great Britain &c. with the usual solemnity and with lowd [sic] Huzzas and acclamations of the people. These are news which surprize everybody.

20 [September]. In Company this Evening with Mr Stirling & [blank], when the Express returned from Edinburgh with a Letter from Mr Shirreff which carried very little of news only that General Cope was landed with his Army at Dunbar from Aberdeen that he was Marching Westward and that the Highland Army were in motion to meet him.

21 [September]. Mr Stirling sent for me this morning before I got out of bed, he seemed half determined last night to go to Edinburgh this day himself and proposed to take me along with him, but upon second thoughts was determined to stay, and proposed that I should go alone. Accordingly I set off betwixt 11 and 12 forenoon, and reached the House in the Moor²⁹ this night. At Biggar I had news of an Engagement betwixt Pr[ince] Charles' Army and that of G[eneral]. Cope, and soon after found that G[eneral]. Cope was entirely routed.

22 [September] Sunday. This morning I wrote the news of the Engagement to Mr Stirling by the Post. I left my horse for fear of losing him & came to Ed[inbu]r[gh] by 11 o'Clock forenoon. None of the Presbyterian Ministers preached this day within the City, tho' it is said that Pr[ince] Charles sent to them all last night desiring them to preach in their ordinary [way] this Day, only desiring that they might pray for the K[ing] and Royal Family without naming K[ing] George. About 3 afternoon I went down to the Abbey, having notice[d] that P[rince] Charles and his Army were to be there this night in their return from the Battle. Soon after the Highlanders came marching in bodies to the Abbay, with a good many prisoners and other trophies of Victory, such as waggons with their own baggage and Spoils of Cope's Army, &c. Several of their own men who were wounded in the battle came in also on waggons, I asked most of them about their wounds. Some of them were shot through their leg, some through the thigh &c. but I could not find one amongst them that was wounded with the sword. At last came P[rince] Charles with the Noblemen and gentlemen who had accompanied him to the battle all riding on horseback. I was in the outer Court of the Abbey when the Prince past by amongst a croud of Spectators, who almost with one voice congratulated him on his success with lowd huzzas and acclamations. Pr[ince] Charles was in Highland Cloaths laid deep with gold lace & a bonnet on his head, His pony is strong and well made, but as it was just 6 in the evening and beginning to turn dark I could not well

observe the features of his face. I could not but be diverted on this occasion, with the Enthusiastic ravings of some who were zealously at[t]ached to the interest of that family, especially the women. A woman standing by me when the Prince appeared to our view clapped her hands and cried out, There is my dear sweet Prince, God bless his princely face, I'm sure there is Grace in it.

23 [September]. Went down to Leith this forenoon and staid dinner with Mr Sh[irreff] he told me that the Effects in the Custom house of Leith were computed to be worth £8000 Sterling, when it was seized for P[rince] Charles. Before dinner I went with Mr Alexr. Shirreff's Clerk & John Williamson who I had bro[ugh]t from Ed[inbu]r[gh] with me, and viewed the old Citadel of Leith. Returned to Ed[inbu]r[gh] towards the evening to prepare for coming off next day.

I endeavoured all that I could to inform myself of the Truth with regard to the late Battle, and it appears pretty probable that Prince Charles's Army was about 6000 strong, and G. Cope's about 3000 tho' some give out that the two Armies were about equal in number being 4000 on each side. Some again will have it that the Highland Army had many more killed than they gave out, but that they carried them off the field and buried them instantly. But by the best information I can get, the account given of the Battle in this Days Caledonian Mercury, published by Authority of P[rince] Charles, does not seem to aggravate Circumstances in their favour much beyond the Truth. One thing is certain that a more compleat Victory never was gain[e]d by any Army than was gained by that of P[rince] Charles on this occasion.

24 [September]. Set off for Leadhills this Morning about 9 o'Clock in company with Wm: Low Plummer,³⁰ and came home about 8 at night. Staid with Mr S[tirling] till 12, and sat with Mr Hunter from Penpont³¹ & James Wells till about 2 in the morning.

26 [September]. Spent the Evening with Wm. Low, Alexr. Ramsay, &c. in [John] Percival's where we sat late.

27 [September]. Slept long this Morning. went over towards the Evening to see Mr Low cast the Sheet Lead.

29 [September] Sunday. Read part of Steel's Christian Heroe. In the Evening Mr Stirling sent for me to bear him Company. We were by ourselves.

October 1745

12 [October]. This forenoon I finished a Letter to J. Williamson of Leicester a copy of which follows,

Dear James

I rec[eive]d. your Letter of the 14th Sept[embe]r and after acquainting that your Mother & your sister's family are all well, I shall (without staying to trouble either you or myself with Excuses for not writing) endeavour a little to satisfy your curiosity with regard to that singular and mysterious Interprize of the Bold Adventurer, as the Chivalecr de St George is pleased to stile himself, and indeed the story looks more like the adventures of a Knight Errant, than a piece of genuine Hist[ory]. His appearance and progress has been much like that of a Comet, which from being hardly perceived increases by degrees till beholders are obliged to stand and wonder at its Blaze and Magnitude.³²

When we first had the Intelligence of his being in the North Highlands about the end of July, and for a considerable while after, everybody here laughed at the project, considering how poorly he was attended, for some affirm that he landed with not above 9 persons in his Company and those for the most part men of no remarkable genius. But afterwards when we heard that numbers of Highlanders with their Chiefs were daily repairing to his Standard, that they were in motion towards the South & that General Cope, marching Northwards in order to disperse them, had passed by them and marched Streight to Inverness without daring to venture a Battle, tho' he was about 2000 strong, these Circumstances made people to eye their motions with a little more attention. Having got clear of Cope, the High-

land Army marched forward and came to Blair of Athol on the 30th of Aug[us]t. on the 2nd Sept[embe]r they came to Dunkeld, and on the 3rd to Perth where they quartered till the 11th. During their Stay there they had £500 paid them by the town; They sent a Demand likewise to Glasgow who paid them £5000 in Cash and £500 in Linnen and Tartans, but what gave the most universal surpriz of all was their taking possession of Ed[inbu]r[gh]. on Tuesday morning the 17th September, without ever firing a pistol. P[rince]. Charles took possession of the Abbey, and immediately sent Orders to the Kings Heralds and Trumpets to turn out, who proclaimed his Father over the Cross the same day at 1 o'clock in their Robes with the usual solemnity. The same day G[eneral] Cope landed at Dunbar with his Army from the North, and marching towards Ed[inbu]r[gh]. was joined [by] Gardner's Dragoons (who had retired all the way before the Highland Army from Stirling) & Hamilton's Dragoons, who had been lying at Ed[inbu]r[gh]. As soon as P[rince]. Charles heard of their designs, he marched out his Highlanders to give them Battle, which accordingly happened on Saturday morning the 21st of September. Cope's army took up their ground and formed themselves the day before the Battle, and before the Highland Army came up. They had the Town of Preston[Pans] (some [3] miles E. from Muselburgh) on the Right, a small morass on the left, and the Firth of Forth on the Rear. Gen[eral] Hamilton's Dragoons stood on their Right, Col[onel]. Gardner's on their Left, The Regiments of Lacelles and Murray, 5 Companys of Lees, 4 of Guise's 3 of the E[arl]. of Loudon's new Highland Regiment &c formed the Center. The Highland Army came up to within half a mile of them that Evening, but finding them advantageously posted, did not think it safe to attack them in front, and so both Armies lay upon their arms all Night. The Right wing of the Highland Army was commanded by the D[uke]. of Perth and the left by L[or]d. George Murray, the D[uke]. of Athol's brother. This Army before break of day on Saturday morning, stole about to the Eastward where they could attack the other with greater advantage, and about 5 o'Clock, the Signal being given to form an attack, the Highlanders after the first discharge, engaged with so much fury, sword in hand, that in 7 or 8 Minut[e]s at most, they obtained as compleat a Victory as was ever gained by any Army. The foot of G[eneral]. Cope's Army behaved very gallantly, but Hamilton's Dragoons, mostly Irish, wheeled about at the very first onset and rode down a great many of their own foot. Gardner's Dragoons behaved but little better, and he, attempting several times in vain to rally them was at last cut off himself. His behaviour is much commended, & some even say he charged the Highlanders on the head of a party of foot after his own men had deserted him. I can never find any account of the killed on each side that can be depended upon. The Victorious Army gave out at first that they had only 5 or 6 Officers killed and about 30 private men; and that they killed 500 of Cope's men and took 1400 prisoners, but they have acknowledged more killed on their own side since; however it is certain they were few in comparison with the other; Cope fled off to the South with several other Gentlemen. We hear since that they are in Berwick-sh[ire with] a few troops of their horse; the rest of his men who got off were so scattered that scarce two of them were left together. Most people make very free with Cope's Conduct on this occasion, and many say that he left the field as soon as the Armys were engaged. The Highland Army took all his Cannon, Morters, several Collours, Standards, abundance of horses and Arms, with all their Baggage, Equipage &c. and it is said they found £4000 in Cope's Ammunition Chest. Besides C[olonel] Gardner, I do not hear that there [were] above 6 or 8 Officers killed on that side. Having had occasion to go to Ed[inbu]r[gh] at that time myself, about Business for the Company, I was in the House in the Moor the night after the Engagement and next Afternoon I was Witness to the Prince and his Army Marching in from the Battle [vid. September 22nd]. First came in several of the wounded Highland-men, some on horseback and some in Waggon. Next the Army in several bodies, guarding great numbers of prisoners, at last came the Prince on horseback in Highland Cloaths richly mounted with lace and a green bonnet on his head. They had neither trumpet nor Drum, but Pipers playing before them according to the Highland taste. The Prince is in the 25th year of his Age, has a strong like [? lithé] body well proportioned pretty tall, and, as I thought

of a ruddy complexion; but I had not so good a view of his face as I could have wished, for it was just 6 at night & a dusky Evening. It was diverting enough to observe the Enthusiastick raptures of some expressed by some of his Friends of the lower Class, upon this occasion, especially the Women, Several instances of which I had during my two days stay in Edinburgh. One instance I shall give you. A Woman standing by me as P[rince] Charles entered the outer Gate of the Abbay, clapping her hands roared out There comes my Dear Sweet Prince! God bless his Princely face! I'm sure their's Grace in't. This would have looked very odd if her voice had not been drowned by the louder Huzzas and acclamations of a vast Multitude. Next day every Street & Corner of the City was over crouded with Highlandmen, each with his gun and broadsword, so that one could scarce walk without being every moment in danger of getting himself brained on a Musket, and even the little Highland Bastards, about 12 or 14 years of Age were walking the Streets with Dragoon's Steel Caps on their heads. One material Circumstance I had almost Forgot, that G[eneral] Cope's Army was about 3000 strong, foot and Dragoons; & P[rince] Charles's 6000, by the best information I can get; but they affirm (I mean the Princes Friends) that only 1456 of the Highlanders engaged. These troubles have put a stop to all business about Ed[inbu]r[gh]. and indeed almost everywhere throughout Scotland. About a week after the battle, the Highlanders began to make some attempts upon the Garison in the Castle, by lurking privately within gunshot, and firing upon those they would discover upon the Walls, at the same time their Prince stopt all communication with the Garison, denyed them provisions, which they had pretty free access to a while at the first. This so insensed the Gen[eral]. Guest that he threatened to lay the Toun in ashes unless they would desist and dismiss the Toun; Allan Ramsay's House on the North side of the Castle hill was all beat to pieces and several houses damaged besides. This Alarm put the Inhabitants in the greatest consternation, and many of them fled to the Country with what Effects they could carry along with them, till all above the Luckinbooths was almost quite depopulated; At last the Highlanders withdrew to their Camp at Dudingstoun about the beginning of the week, and so hostilities ceased for a time. The Prince has sent Circular Letters to the Magistrates of all the Boroughs in Scotland to come to Ed[inbu]r[gh]. and settle with him, what sums of money they are to pay him, which is to be proportioned according to the Duties which each place pays to the Crown, the sum paid by Glasgow being proposed as the Standard.

It is given out that the Prince's Army is considerably increased since the Battle but it is very difficult to judge what is Truth amongst so many different and contradictory accounts, for others talk of Disertions; but upon the whole, I cannot believe that he is above 7 or 8000 strong; but it is pretended there are still more rising in the North in order to join him. We hear of great preparations in England but little appearance of their Marching Northward. I desire you'll write me how Matters go in England relating to this Affair, and as Matters of Consequence happen in this Country you may expect to hear farther from me.

Thus you see I have endeavoured to make this Sheet hold as much as I could, in order to punish myself for my former laziness, and I expect you will be particular likewise when you write to me. Robert Brown and several Friends have their Complements to you, but I have scarce left room for how much I am

Yours & Mrs Williamson's
Friend and humble Servt: &c

13 [October] Sunday. Read with James Wells the Articles of the Union betwixt Scotland and England in Cokes Dilections³³. Sent for in the Evening to Mr S[tirling]. & was in company with him and D[avid]. Williamson till 2 next morning. We drank a Bottle of Shrub in Punch & 5 Bottles of Strong Ale.

14 [October]. Indisposed and listless on account of last nights Drinking.

16 [October]. Mr Stirlings sisters sent for me this Evening, Mrs Hamilton having a letter from Mr Hamilton which was sent him from John Anderson in Douglas advising that 26 Gentlemen with 14 Servants from Pr[ince]. Charles came to Douglas on Monday night

last, all well mounted on horseback, and well armed; The Party was commanded by one Sir W[illiam]m. Gordon of Park. They first waited on the D[uke]. of Douglas from whom they received 43 Muskets with Bayonets and Belts, and 3 Case of fine pistols with some fouling pieces. They lodged that night in Douglas, behaved civilly, and set off again next Day with Stockbriggs along with them They said that they had joined P[rince]. Charles only last week.

17 [October]. Attended the Randevouz this Morning about 6 o'Clock, in order to procure 2 men to go in search for My Lord Kenmuir's³⁴ Watch which he lost coming from Newhouse to this Town lastnight. Mr Stirling who came home this Morning from Gilkerscleugh, told me that My Lord Kenmoor tho' he was going for Ed[inbu]r[gh] did not intend to join P[rince]. Charles, which he could not do on account of the present situation of his affairs. But having been sent for by the Prince he was going to make his excuse. He likewise told me that the design of sending a party to the D[uke]. of Douglas at this time was his. My Lord Dundee's³⁵ Estate of about 1000 Marks p[er]. Annum, having been forfeited at the Revolution was at that time given by the Government to the Family of Douglas, which P[rince]. Charles intending now to restore to the antient possors, was demanding restitution of the Duke. In Company this Evening with Mr S[tirling]. and the 2 Overseers.

18 [October]. In Company this evening with Mr Stirling and Mr Lowthian.

19 [October]. The Fair Day. In my Quarters this Evening with Jo: Lorimer James Wells &c having engaged in no Company abroad this Day.

20 [October] Sunday. Read with Mr Wells, Vertot's Revolutions of Portugal,³⁶ for the first time quite through. In the Evening with Mr Stirling, Mr Lowthian and E[dward]. Whigham till after 1 o'Clock next Morning. Conversation. P[rince]. Charles when he arrived first in the West Highlands, proposed to apply himself to Sir Alexr: McDonald,³⁷ but Sir Alexr: being out of the way on purpose that he might not see him, the Prince made a visit to his Lady who told his Highness that as Alexr had no good opinion of the success of his attempt and therefore could not agree to join him, upon which the Prince left Sir Alexander's & made his next visit to Cameron of Locheal. Locheal, at first of the same opinion with Sir Alexander, endeavoured to persuade his Highness to desist, but upon the Princes telling him that he was fully determined to make a push, Locheal dropt his importunity and said since it was so it remained for him to give him all the assistance in his pouer, and therefore joined him with his Clan. Mr S[tirling]. said moreover that P[rince] Charles had always inured himself to much Exercise as hunting &c. but was no dancer; nor was he a Bigot in Religion: whereas his younger Brother delighted in what they call polite Deversions, and was more under the influence of the Clergy. But Mr L[owthian]. said he had heard that they were the reverse with regard to Religion.

22 [October]. This forenoon I read part of [Rev' Peter] Rae's Hist[ory] of the Late Rebellion.

23 [October]. Mr Stirling this forenoon gave me the following particulars from My Lord Kenmoor's information, who was here Mondays night last on his way home from Ed[inbu]r[gh] viz: That P[rince] Charles's Army was not above 3500 strong at the late Battle, and were so unskillfully conducted that it was next to a Miracle, they were not all cut to pieces. That that Army does not yet exceed 6000 men. That there are at least 1000 of them deserted since they came to Ed[inbu]r[gh]: That they are under very bad discipline, it not being in the pouer of their Officers to command them: That there are very grivous complaints of the many robberys comitted by them about Ed[inbu]r[gh]: so that people are growing weary of their stay there: That a man lately come from the West Highlands had declared upon oath that Sir Alexr. McDonald was raising his men in order to join the Prince: That My Lord Lewis Gordon was sent off from Prince Charles in order to raise the Clan of that Name: That the McKenzies and My Lord Lovite with his men were likewise rising to join the Prince: That the Ship lately arived at Montrose brought 13 Officers, about a million of Cash, several pieces of battering Cannon of 30 pounders, with several other warlike Stores and Cardinal Tesuin(?)'s Nephew came over in the same Ship and has joined

the Prince. That the Prince's younger Brother and the D[uke]. of Ormond and My Lord Marshal were at Dunkirk, ready to sail for England with the Scotch and Irish Regiments in French Pay: That the Million of money come over for P[rince]. Charles is thought to have been raised upon the Pretender's Land[ed] Estate in Polland, of 60,000 pounds per Annum, which he got with the Lady Sobieski; That a Fellow having been suborned to Assassinate Prince Charles, he had intelligence thereof with a Description of the person, and having discovered a fellow at a Review near Leith, answering the description, they immediately apprehended him, and having searched him they found a Draught of £500 Sterling sewed within the headband of his breaches, and upon examination he could give no account of himself: That a Woman was apprehended climbing over the wall of the place where the Princes Magazine was kept, nearby the Abbey, who is thought to have designed to blow it up.

Mr Stirling set off for Glasgow this Afternoon.

25 [October]. Coming up from the Mills this forenoon with John Carmichaell one of Wil[lia]m Otto's Washers, I endeavoured to inform myself of such particulars relating to the Dressing of the Ore, as might enable me to judge of the Profit which Mr Otto made by his Bargain. And in answer to several questions to that Effect, John Carmichaell told me that he himself expected 14d p. Day for this half year, That he had wrought about 84 Shifts since the 29th of June last, which was more than any of the rest had wrought except Francis Dickson; That he could not tell what J. Harknes's wages were; but James Dickson was promised no more than 12d p. Day, and except Harkness, Dickson and himself, none of the rest had above 8d p. Day, and the knocking boys were some of them at 3d and some of them at 4d. He said moreover that Harkness might possibly expect the same wages that A[lexander]. Ross had but he did not deserve it so well (Vid. 8th Novr:)

There are parcels of ore which was dressed last week not yet weighed, but is to be weighed this week; And when I have received the Acco[un]t thereof I shall be able to make a near Estimate of Otto's gain since the 29th of June to the End of last Week viz. the 19th October. For there is none dressed this Week on account of repairing the Washinghouse. — Read part of [Revd. Peter] Rae's History of the Late Rebellion, and glanced part of Puffendorfs Introduction to the Hist[ory] of England and Portugal.³⁸

26 [October]. Read further in [Revd. Peter] Rae's Hist[ory] of the Late Rebellion.

27 [October] Sunday. Read part of Puffendorff's Int[roduction] to the Hist[ory] of Europe. With Mr Stirling's sisters a considerable while this evening.

28 [October]. Mr Stirling's sisters having taken Journey this Day for Calder, I waited upon them till they took horse, afterwards with R. Harrop & R. Whitfield, consulting about the making of a Tryal of our Slagg in order to determine whether they may be smelted in the Ore hearth or Slagghearth to the best advantage.

29 [October]. Took horse this Morning in order to meet Mrs Anne & Mrs Mary Stirling at Gilkerscleugh and accompany them to Douglas Mill and going up from thence to see my Father, I sat up all Night and got myself fuddled for we drank pretty hard.

30 [October]. Returned to Douglas Mill³⁹ about 6 this Morning and after the Ladys were gone I returned home along with Mrs Hay.

November

1. Meeting with Mr Whitfield and Jo[hn] Percival towards the Evening at the Smithys. We went into R. Parks, and after a little stay there, I went with Percival to his own house where meeting with Brownlee⁴⁰ in Lanark and some others I sat up till 2 next morning.

3 [November]. Sunday. Read part of Puffendorff's Introduction to the K[ing] of Eng[land].

4 [November]. The Post coming up about 2 o'Clock this Morning alarmed the whole town by telling that a small party of the Highlanders were coming directly up this way up Clyde. Immediately all got out of bed and nothing was to be seen but people carrying burthens of their Moveables and hiding them in Shafts and levels under ground till day appearing the pannick was in a great measure dispelled with the sable Curtains of the Night. But when

we were least aware, three men (who called themselves Hussars) two of them in Highland Cloaths, all on horseback and well armed came to the town. One of them being a little before the rest came directly to the Company's Stable and demanding that his horse should be taken in, and one of our men acquainting me in the Counting room I went to the Stable and desired the man to come in to the House and refresh himself, as I did the other two as soon as they came up, ordering all their horses to be put up and corned. Our Cart horses being all in the Stable, the first of the Men told me, he thought that the bay horse would fit their purpose and therefore he was to take him for the Princes service, which I did not think proper to deny, but gave fair returns till we should know more of their Strength; but after a little conversation they owned that they had no warrant to seize either Cart or Plough horses, and their intention in coming here was for them if Mr S[tirling]. had been at home; But missing their aim after they had rested themselves a little they returned by the way they came without offering the least insult to anybody.

Read part of the Reign of James 2nd in Rapine's Hist[ory] of England this Evening As also part of Don Quixot[e].

5 & 6 [November]. Continued to read more of James 2d's Reign, and Don Q[uixote]. both Evenings.

7 [November]. Continued to read the same Books this Afternoon and Evening.

8 [November]. According to the Information I received anent the Dressing of our Ore, I have this Ev[en]ing made a Calculation of W[illia]m Otto's gain upon the Dressing as under. N.B. In this Calculation I suppose Ross and Harkness to have 70 Shifts betwixt them, for there were 14 days at least of an Interval betwixt the Rosses going away and Harkness entering to Work. I likewise suppose all the rest besides Carmichaell and Dickson to have 80 Shifts apiece, Since Carmichaell told me that he himself had more than any of the rest except Dickson. Vide October 25th.

Amount of the Dressing for the Quarter ending 28th Septr; last£38.19. 3
Dressed from 28th September to 19th Octr: 127 Bings at 20d 10.11. 8

£69.10.11

Estimate Ore dressed but not weighed at the 29th June last to be)
Deducted from the above 104½ Bings at 20d) 8.14. 4

Remains £61.16. 7

Alex[ande]r. Ross and Tho[mas]. Harkness at 20d p. Day 70.....£5.16.8.

John Carmichaell at 14d p. Day 84..... 4.18.,,

Francis Dickson at 12d p. Day 84..... 4. 4.,,

8 Men at 8d p[er]. Day each of them 80 Days 640.....21. 6.8.

3 Boys at 4d p[er]. Day, each of them 80 Days 240..... 4. ,,,.

3 Boys at 3d p[er]. Day, each of them 80 Days 240..... 3. ,,,.

43. 5.4.

Wm. Otto's gain from the 29th June to 19th October£18.11.3.

Now by the above it appears that Wm: Otto has gained the last sum clear to himself in 84 working days at most which is 14 Weeks, and consequently every week close working affords him 26.6d. after all charges are paid.

The above Calculation will likewise afford a rule for Judging what Otto's charges amounts to upon a Bing of Ore. For £43.5.4. is the Charges of Dressing 734½ Bings of Ore whereof 11½ is Blue Ore of Portobello Dressed at 12d p[er]. Bing and the rest Viz: 723 Bings is all the Susanna Vein Ore Dressed at 20d p[er]. Bing. Now if we call his Charges of Dressing the 11½ Bings of Portobello Ore A. and his Charges of Dressing the 723 Bings of the Susanna Ore C. Then will $A + C = £43.5.4. = b$; and $a : c :: 12:20$ from which we

11½ 723

have the following Equation and analogy Viz

$$\begin{array}{rcl}
 a + c & = & b \quad) \\
 a:c::279:28920 &) & \\
 279c & = & 28920a \\
 b - c & = & a \\
 & & 279c \\
 b - c & = & \frac{28920a}{279} \\
 28920b - 28920c & = & 279c \\
 28920b & = & 29199c \\
 \frac{28920b}{29299} & = & c = £42.17. \frac{1}{2}d
 \end{array}$$

and since £42.17. $\frac{1}{2}d$ is the Charges of Dressing 723 Bings of the Susanna Ore, the $11\frac{1}{2}$ Bings of Portobello Ore will be 8s $3\frac{1}{2}$ which is $14\frac{1}{2}d$ p[er]. Bing for the Susanna Ore and $8\frac{1}{2}$ p[er]. Bing for the Portobello. And consequently Wm. Otto has $5\frac{1}{2}d$ profit upon every Bing of the former and $3\frac{1}{2}d$ upon every Bing of the latter.

19 [November]. Having read the last Vol. of Rapine's Hist[ory] of England Octavo twice over since the 4th Instant, and Don Quixote once over as far as the 170[th] page of Vol[ume] 2. I propose now to continue my reading of the latter, and likewise to begin at the 13th Vol[ume] of Rapine, and note down at the end of every week how many pages I have read of each, by which I shall be able to judge how much time I spend in that Exercise, from observing how many pages I commonly read in an hour.

23 [November]. Since the 19th I have read from the 1st to the 82nd page of the 13th vol[ume] of Rapine's Hist[ory] of England which is 82 pages; and from the 170[th] page of the Second Vol[ume] of Don Quixote to the 48th page of the 3rd volume, which is 182 pages. Now I read 16 pages of Rapine in an hour and 28 pages of Don Quixot[e] in the same time by which Rule I have for these four last days of this week read $11\frac{1}{2}$ hours.

30 [November] Saturday. Most of my spare hours this week have been employed in reading viz. —

	h.	m.
Puffindorff's Introduction to the Hist[ory] of Portugal at the rate)		
of 16 pages in an hour. Containing 34 pages	2	$7\frac{1}{2}$
Rapine's Hist[ory] of Eng[land] from p. 82 to p. 370 of Vol[ume] 13 at the)		
rate of 16 pages in an Hour		
Don Quixot[e] from the 48 to the [blank] page of Vol. 3 at the)	18	—
rate of 28 pages in the hour		

The whole time that I have spent reading this Week is [blank] To which if I add 25 hours Attendance given in the Counting room, the whole will amount to [blank].

7 [December] Saturday. All my hours that I can give and reasonable account of this week were Spent in the following Exercises viz.—

	H.	M.
Attendance in the Counting room upon Business	20	45
Reading Rapine's Hist[ory] of England, vol[ume] 13 from p. 370 to)		
the end viz. p. 444 & vol[ume] 14 from p. 1. to p. 110 at the rate)		
of 30 pages in an hour	9	12

Don Quixot[e] vol[ume] 3. from p. to the end Viz. p. [blank] and Vol[ume] 4)

from p. 1 to p. 132 being [blank] pages at 28 pages in an hour)

The whole of my Time spent in Reading & Attendance this week [29 57m]

Besides this I attended the Randevouz on Monday and Wednesday Mornings and at times glanced part of Chamber's Dictionary⁴¹ and some other Books but cannot guess what time I spent thereon.

Saturday 14th [December]. Excepting Thursday Night, I spent all the Evenings of this week in Company, Mr Stirling coming home on Wednesday I was with him on that and Friday Evenings, who gave us account that there were 5600 Men up in the North for P[rince].

Charles & that there were joined with 4000 Men landed from France, He told us moreover that it was said the Prince expected to be joined by 10000 men from France as soon as he was able to meet them in England. It seems however that the Prince has been disappointed, for we have had advice this Day that after P[rince] Charles' Army and that under the D[uke]. of Cumberland and Gen[eral] Ligonier were within View of one another, the Prince with his Army retired in the Night, and are on the March returning toward Scotland. Their Baggage is faln [sic] into the Duke's hands.

The time I spent this Week in Attendance on business and reading this Week is as under

Viz. —	H.	M.
Attendance	21	"15
Reading Don Quixot[e] Vol[ume]. 14 from p. 132 to p. 208 at 28 p. hour	2"	43
Rapine's Hist[ory] of England Vol. 14 from p. 110 to p. 140	1	"30

The whole of my time Spent in reading and Attendance this W[eeek] 25 "28

July 1746

11 [July 1746]. Taking a walk to the Mills and Washinghouse this Morning John Carmichael told me that the whole of his Wages with Will[iam] Otto for the year 1745 amounted to just £10-"10. being 780 shifts at 14d p[er] Shift. He informed me likewise of several particulars from which one may make a Calculation of Wm. Otto's Gain upon the Dressing for the whole of last Year viz. — That none of all Otto's men wrought so many Shifts as himself that Francis Dickson had 10d p[er]. Day for the first half years and 12d p[er] Day for the last half year. of 1745. That James Muir and James Martin had each 8d p[er]. Day for the first halfyear and 9d p[er]. Day for the last half. Now I know that Alex[ander] Ross who wrought with him till about Midsummer 1745 or a little after, had 20d p[er] Day and Tho[mas] Harkness who entered the Work about the Month of August told me this Day himself that he had 16d p[er]. Day And I observed that Wm. Otto had commonly 15, 16, or 17 hands at work last year of men and Boys besides himself Viz. — Alexr. Ross & Tho[mas] Harkness the last of whom did not enter to work till the first left it off and therefore were but as one man through the year; John Carmichael, Francis Dickson James Muir, James Martin, Six men more which cannot be reckoned at above 8d p[er] Day each; and Six Boys which make in all 17 as above besides himself; and some of these Six Boys I believe had 4d p[er] Day, which could not be above three of them at most. the rest had only 3d p[er]. Day. These things being supposed, and that every man and Boy wrought as Many Days as John Carmichael (which he positively says None of them did) Wm. Otto's account will stand thus Viz. —

The Sum paid to Will[iam] Otto for Dressing for the Year 1745 is	£156:12: 3
To be deducted for 45 Bings White Ore at 2s 6d)	
Dressed Anno 1744 but not Weighed till 1745).....	5:12: 6
	£150:19: 9

Labourers Wages

	[days]	
Alex[ander]. Ross at 20d p[er]. Day	90	£7.10 "
Tho[mas] Harkness at 16d p[er] Day	90	6. " "
Jo[h]n Carmichaell, at 12d p[er]. Day	180	10.10 "
Francis Dickson at 10d p[er] Day	90	3.15 "
Do. at 12d p[er] Day	90	4.10 "
James Muir at 8d p[er]. Day	90	3. " "
Do. at 9d p[er]. Day	90	3. 7 6
James Martin at 8d p[er]. Day	90	3. " "
Do. at 9d p[er]. Day	90	3. 7 6

6 Men more at 8d p[er]. day 180 each	1080	36. " "
3 Boys at 4d p[er]. d[ay]. 180 Days each	540	9. " "
3 Do. at 3d p[er]. Day 180 Days each	540	6.15 "
		96.15. "
Will[ia]m Otto's gain for the year 1745		£54. 4.9.

12 [July]. This Day [blank] Dunwoody one of Wm: Otto's Boys told me that his Wages with Will[ia]m Otto last Year amounted only to £2, Viz 120 Shifts at 4d p.Shift, that some of the other Boys has [sic] more Shifts and some fewer than himself, but none of them were more than 10 Shifts above him: that [William] Otto had 8 Boys in all Viz. 5 at 4d p.Day and 3 at 3d.

1. Randeuous — mustering of men before their dispersal to places of work.
2. Mr [Stirling]: James Stirling (1696-1770) was the second son of Stirling of Carden and grandson of Lord Carden who, in 1666 succeeded to the estate of Kier. He attended Glasgow University for a time "which gave him one of Snell's Exhibitions at Balliol College that was in their gift". To Oxford he went in 1712 or 13 and remained there for about six years.
In 1720 he accompanied the Venetian Ambassador to Venice on being promised the chair of Professor of Mathematics at one of the Republic's universities. He stayed in Venice for 5 or 6 years where he was "highly respected by the literati". On his return to England he taught mathematics at Wall's Academy for a time.
He made many useful friendships among eminent merchants to whom he was able to impart much information about Venice etc. and they had a very high opinion of his ability, and, probably due to their influence, he was appointed agent or manager of the Scottish Mining Company in place of Sir John Erskine of Alva "who found it necessary to retire", as the Company affairs were in a state of the greatest confusion. This in 1734. In 1736 he took up permanent residence at Leadhills and only left it on business trips or when visiting friends.
He not only got the Mines into good working order and the personnel in control, but did an immense amount for their general welfare and morale. He provided good houses with gardens, provided good food, — "they ate more animal food than people of their station used to do at that time", and for their leisure, started a library and recommended books "which might instruct and entertain". Under his auspices a fund was provided for the poor and aged.
The Company in appreciation of their manager's labours, made him a shareholder, gave him a good salary which was increased from time to time, built him a house and gave him a nearby farm and many other presents "useful in housekeeping", when he got older, a carriage was kept for him.
Mr Stirling, as is obvious in the diary, was a very sociable man, and among his friends were many literary and scientific men.
He married a Miss Watson of Stirling who died a few years later, leaving one daughter. Mr Stirling never re-married. He died in Edinburgh in December 1770, whither he had gone to seek medical advice.
His daughter married her cousin, Mr Stirling of Carden, who succeeded his uncle as manager for the Scottish Mining Company. He had "been bred up" under his uncle's auspices as a boy, and possibly may have been his assistant at Leadhills. He is understood to have been the Manager for over 30 years "with equal ability & success" as his predecessor had done.
James Stirling appears to have been known as the "Venetian" — probably because he had lived in Venice for about six years. [Based on the John Ramsay of Ochertyre MSS. James Stirling's testament is recorded among the 1773 warrants of the Lanark Commissariat Records: That of his wife, Barbara Watson, was registered on 16th April 1753.]
3. John, second Earl of Hopetoun, was born at Hopetoun House 7th September 1704 and took the title upon the death of his father, Charles Hope of Hopetoun (1681-1742) — the builder of Hopetoun House under the direction of Sir William Bruce the celebrated architect. He was one of the Lords of Police (1744-60) and it is said that he spent the whole of the salary of that office in works of charity. He was Lord High Commissioner to the General Assembly in 1754 and died at Hopetoun on 12th February 1781. He was thrice married and had a total of 18 children. See *Scots Peerage*. Ed. Sir J. Balfour Paul, Edinburgh 1906, Vol. IV.
4. Dial or dial — a miner's compass for surveying. See the property lists of David Williamson and David Williamson younger elsewhere in this volume of *Transactions*.
5. The Williamsons (Willison is a known variant of the name.) were a well-known Nithsdale family and connected with the Covenanting cause: See Dr. Simpson's *Traditions*; Chapters XIX and XLIV. A descendant of Alexander Williamson Cruffel, in Sanquhar, went to Northern Ireland and a descendant of this Ulsterman was Woodrow Wilson the American President. Hole is the name of a farm between Elvanfoot and Leadhills. (Further Williamsons were associated with the mining activities at Wanlockhead — see paper on 18th Century Property Lists elsewhere in these *Transactions*).
6. John Watson, Carrier in Braehead, parish of Carnwath. *Lanark Tests*, 24 Apr. 1753.
7. Mr Edward Whigham, *Lanark Tests*, 3rd Nov. 1749. The Whighams were very prominent in Sanquhar: See *Memorials of Sanquhar Churchyard*, T. Wilson, Sanquhar, 1912.
8. James, son of William, Veitch of Ellock was admitted Advocate in 1738 and raised to the Bench as Lord Ellock in 1760. He died in 1793 and it is probably his testament which is recorded in the Edinburgh Register for 19th June 1797.
9. Bevis Bulmer obtained a grant to work the gold mines in Scotland, 1578-92: *God's Treasure-House in Scotland*, Rev. J. Moir Porteous (1876). See also Patrick Dudgeon's *Historical notes on the Occurrence of Gold in the South of Scotland*, Min. Mag., 1876, Volume 1, p. 21; and Cochrane Patrick's useful compendium of *Early Records relating to Mining in Scotland* (1878).
10. Rapin — undoubtedly Paul Rapin, Sieur de Thoyras (1661-1725), a French Historian and Soldier. He wrote a *Histoire d'Angleterre* which came down to the reign of George II, and was "Rendered into English", in 15 Volumes, by Nicolas Tindall (London 1726-9). He is also known for his *Dissertation sur les Whig and Tory*.
11. The Diarist is identifiable from the Minute Books of the Reading Society — see Appendix.
12. William Fisher, workman in Leadhills, *Lanark Tests*, 5th Nov. 1746.
13. The Battle of Fontenoy where Marshal Saxe defeated the Duke of Cumberland.
14. Johann Andreas Cramer, an 18th century German Mineralogist who wrote, in Latin, *The Elements of the Art of Assaying Metals*.

15. Perhaps James Bran[d] son of his more famous father Alexander (Freeman 12th Apr. 1716, died c. 1743). James was apprenticed to his father on 5th Aug. 1732. *Handbook and Directory of Old Scottish Clock-makers* (1540-1850), by John Smith, Edinburgh, 1909.
16. The Leadhills Mines' Journals for the week 20th-27th July 1745 show the errors and subsequent corrections in the Diarist's handwriting. His handwriting is to be found in the Journals from 6th April 1744 until well into the 1760's.
17. Perhaps Mr William Cleghorn, late Professor of Ethics at the University of Edinburgh. *Edinburgh Test.* 24 May 1757.
18. Andrew Marjoriebanks of that ilk, W. S., *Edinburgh Tests*, 11th Dec. 1766: His father, and namesake, had been Commissar of Edinburgh and his testament is registered on 14th February 1743.
19. Further evidence to suggest the managerial status of the Diarist.
20. The possession of a watch at this period should indicate a position of some affluence. See the property lists detailed elsewhere within this volume — particularly that of William Telfer.
21. William Crichton-Dalrymple, Fourth Earl of Dumfries, succeeded his Mother in the honours of the family. He held a commission in the army and served in various regiments. At the Battle of Dettingen, 26th June 1743, he acted as *aide-de-camp* to his uncle, John second Earl of Stair. He was made a K.T. in 1752 and in 1760 he succeeded his younger brother, James, as Fourth Earl of Stair; Being styled Earl of Dumfries and Stair. He died at Dumfries House, near Cumnock, on 27th July 1768, with surviving issue, and was succeeded by his nephew. *Scots Peerage*, Vol. III, p. 237.
22. Possibly John Black, tenant in Overabbingtown. *Lanark Tests*, (warrant recorded in 1774.).
23. Henry, Lord Drumlanrig, 1st son of Charles the 11th Duke of Queensberry & 11th Duke of Dover. Born 30th Oct. 1722, entered the army and distinguished himself in service abroad but met a sudden death, in his 32nd year, by the accidental explosion of one of his pistols, while he was on a journey to London, near Bantry in the County of York on the 19th [or 20th] of October 1754. He had, a few months earlier, on the 24th July, married Elizabeth Hope, eldest daughter of the 11th Earl of Hopetoun — she was greatly affected by his death and she herself died *s.p.* 7 April 1756, and is buried beside her husband at Durisdeer. *Scots Peerage*, Vol. VII, p. 144. See also C. T. Ramage's *Drumlanrig Castle and the Douglasses*, Dumfries, 1876.
24. Probably Robert Maxwell of Cargan of the well-known Dumfries merchant firm of Maxwell & Rorison who are known to have dealt with William Hendry the Wanlockhead & Leadhills general merchant: See elsewhere in these *Transactions*.
25. John Armstrong (1709-79), a Scottish Physician and Poet — *The Art of Preserving Health* apparently his most important poetical work.
26. Henry Otto was a German who came to work at the mines: His descendent William Otto, probably a grandson, was Provost of Sanquhar and a friend of Mungo Park the African explorer — he was in the medical profession.
27. Drumsoreland in the parish of Uphall in the County of Linlithgow.
28. Sir Thomas Kirkpatrick of Closeburn; See *Drumlanrig Castle and the Douglasses*. He married Susanna the daughter and heir of James Grierson of Capenoch — see these *Transactions* 11th series, Vol. 15. *The Kirkpatrick of Capenoch* (1727-1846) by our late member John Gladstone.
29. Probably "House of the Muir" — a Common in Glencorse parish and, at one time, the scene of a weekly market.
30. Mr William Low, master plumber for the Office of Ordnance in Scotland. *Edinburgh Tests* 13th Apr. 1749.
31. Mr Hunter from Penpont is probably identifiable with the Revd. Robert Hunter who had been Preacher at Leadhills and was afterwards presented to Penpont. He married a daughter of the Revd. Peter Rae of Kirkbride and Kirkconnel whose book *The History of the Late Rebellion* (Dumfries 1718) is mentioned by the Diarist.
32. For comparative accounts of the '45 see *Battles of the '45* by Tomasson & Buist; *A Memoir of the Forty-Five* by the Chevalier de Johnstone; *Narrative of Charles Prince of Wales' Expedition to Scotland in the year 1745* by James Maxwell of Kirkconnel in Troqueer Parish; etc.
33. Sir Edward Coke (1552-1633) the English lawyer, jurist and Member of Parliament.
34. John Gordon, but for the attainer, eighth Viscount of Kenmure — for a detailed account of the family, and their involvement in '15 and the '45, see *Scots Peerage*, Vol. V.
35. James Graham, "writer in Edinburgh", sixth titular Viscount, son and heir of his father William Graham who raised the Standard at Dundee in 1715 — see Rae's *History of the Late Rebellion* — and who was subsequently attainted. For his part in the '45 James was also attainted, and afterwards had a company in French service under Lord Ogilvie. He died at Dunkirk in November, or December, 1759: Since his death the title has never been assumed. *Scots Peerage*, Vol. III, p. 332-3.
36. Rene Aubert Vertot (1655-1735): French Historian and Ecclesiastic.
37. Sir Alexander McDonald of McDonald, Bart., *Edinburgh Tests*, 18th Jan. 1751.
38. Samuel Puffendorff (1632-94): German writer whose *De Reipublicae Germanicae* made it advisable for him to accept the professorship, and later the historiographership, offered by Charles XI of Sweden.
39. Douglas Mill: Formerly an inn very well-known in coaching days — William and Dorothy Wordsworth, and also Samuel Coleridge, stayed there. Now a farm.
40. Perhaps Robert Brownlie, writer in Lanark. *Lanark Tests*, 20th June 1747.
41. *Chamber's Cyclopaedia* was the first English volume of its species ever produced and was the work of Ephraim Chambers who had been born in Kendal about 1680 — he died in 1740. The first edition appeared in 1728 and was followed by a second in 1738.

Appendix.

Extracts from a letter by David Ford formerly of the Radar Station, Wanlockhead and a member of Council of this Society to the late Mrs M. McLean former Librarian and President of this Society.

Dated — Wanlockhead 11th June 1957.

"..... Although our search ("our" and "we" hereafter mean Mr Gilchrist of Leadhills Schoolhouse and myself) has proved somewhat inconclusive in that we cannot say definitely who wrote the Diary, we have narrowed the field down to two names, Robert Brown and Matthew Wilson, and I am inclined toward the latter, as you will see. However, first things first

The handwriting is exactly the same as that appearing in the Leadhills Mines journals and bargain books, the first entry in this hand being dated 6th April, 1744. We have yet to trace the last but know it is well into the 1760's. The "journals" are the daily summaries of work done, lead smelted, etc., and bargains let. The "bargain" books contain only the bargains or contracts between the Company and teams of miners who contracted to dig so many fathoms for so much. Lead washers, smelters, etc. also figure in these contracts. Each bargain was signed by a representative of the Mine, the manager, or overseer and by one of the team of miners, all miners in the team being named. This is important as it provides a rich source of names. As the Diarist was neither miner overseer, manager, etc., but probably a superior clerk, his name would not and does not appear in any of these books and so we had to turn elsewhere.

Fairly recently, Mr Gilchrist unearthed the original list of members of the Leadhills Reading Society, the original of the library which was started in 1741. By cross-reference to the bargain books, he was able to identify all but two of the library members for that time. These were Robert Brown and Matthew Wilson. Now, we know from the Diary that its writer was a member of the library and in fact on the committee which selected its books, therefore he must be either Wilson or Brown. His being a mines clerk is proved conclusively by the fact that he says in his 27th July entry that he spent all day sorting out errors in the journal. This is reflected in the journal for that date which contains notes correcting previous omissions.

The Diary for 12th October is taken up almost wholly with a copy of a letter about the '45 rising but, right at the end, he says that among others, Robert Brown sends his complements. This seems to eliminate Brown as the writer but a re-check of names showed that there were two Robert Browns at that time, so we cannot eliminate him entirely.

However, there are two pointers in favour of Wilson as the writer. His father lived in Douglas and he visited Douglas — in fact got drunk with his father on one visit — which provides the evidence that he probably knew that district fairly well if not intimately. It was common practice for many years that, if there were two men of the same name, the second was identified by his place of origin or the name of his farm. In the library list there is a Robert Brown and a Robert Brown Douglas. It is most likely, I feel, that Wilson of Douglas would mention Brown of Douglas to one who was probably a mutual friend.

The other point is that, if a Robert Brown writes a letter and mentions another Robert Brown, it is more than likely that he would add some explanatory remark. For instance, if I were writing, I would not say, "David Ford sends his regards, yours sincerely, David Ford". Rather I would say, "The other David Ford sends" or something to that effect. But it is quite in order for Matthew Wilson to say that Robert Brown greets"

18th CENTURY PROPERTY LISTS FROM WANLOCKHEAD TESTAMENTS

by James Williams, F.S.A.Scot.,

A cursory examination of the indices to the Dumfries¹ and Lanark² Commissariat Registers provides a not inconsiderable list of individuals associated with the mining activities at Wanlockhead and Leadhills during the 17th and 18th centuries. The Wanlockhead material has been examined in greatest detail and the testaments of the following four individuals have been selected, transcribed, and are reproduced hereafter :—

1. John McDonald, miner in Wanlockhead, called Baldinnoch. (23rd February 1743).³
2. William Telfer, commonly called Struntion, miner in Wanlockhead (5th November 1755).
3. David Williamson, younger, overseer to Messrs Crawford & Co. at Wanlockhead (10th June 1778).
4. David Williamson, overseer to Messrs Crawford & Co., at Wanlockhead (31st December 1782).

This selection has been based on the existence of an exceptional series of property lists: These provide many of the details of the physical way of life of the period and include everything from the most substantial furniture to the most insignificant and trifling of ephemera. They act as an extremely effective *back-drop* to an already illuminating document such as the *Leadhills Diary for 1745* (q.v.) and consequently provide a rather more full appreciation of the *total* involvement of 18th Century living-conditions. That of David Williamson, younger, in 1782 is particularly interesting for its record of a Public Roup which supplies not only the details of the goods themselves but also the names and designations of the purchasers.

At first sight the selection appears to supply an even balance between the more lowly miners and their managerial superiors the overseers. It should however be noted that the designation *Miner* in the case of William Telfer is a rather remarkable understatement of the true facts: He was, in company with his brother Alexander, one of the Tacksmen to the Wanlockhead Mines and was associated with a particularly successful period of mineral exploitation. In his testament we have, in addition to the property-list itself, an interesting list of those persons (usually with designations) in debt to him in respect of a miscellany of goods such as cheese, pork, onions, salt, tobacco, clogs and watches: Such a list could well represent the remnants of his involvement in the provision of a *Company Store*.⁴

Financial restrictions preclude any attempt to provide details of a genealogical nature but there is little doubt that such data would be readily forthcoming from the extensive record sources which exist for the area during the period in question. The property lists, and lists of debts, have been rendered into columnar form to allow of a better presentation; repetitive legal phrasing has been deleted where

it contributes nothing towards an understanding of the texts and additions are provided in square brackets thus [].⁶

The Dumfries and Lanark Commissariat Records are now in the custody of the Scottish Record Office, Edinburgh, and I am indebted to the Keeper of Records for Scotland for permission to publish material in his care.

Testament of **John McDonald** variously designated as "myner in Wanlockhead called Baldinnoch" and "John McDonald Ferrentosh, workman in Wanlockhead". James Telfer, innkeeper in Wanlockhead, became "Executor Dative *qua* creditor in respect of a money Bill for £4. 5. 2. issued on 10th June 1741. The Cautioner was George Wighame, Deacon of the Sanquhar Shoemakers. The date of McDonald's decease is not known but it cannot be much before the 23rd of February 1743 — the date of Registration. [SRO CC/5/6/12, fo. 94].

	£.	s.	d.
Imprs. a suit of blew English Cloaths, vizt. coat, vest and breeches worth	1.	15.	0.
Item. a copper coloured Coat and Tartan vest worth		16.	0.
Item. two harn shirts, six stocks and a Stock Buckle worth		5.	0.
Item. a Bonnet a hat and a wig worth		4.	0.
Item. Three pair stockings worth		3.	0.
Item. a Chest worth		6.	8.
Item. Three barrels, three pair old stockings and two pair Gloves worth		2.	6.
Item. Two Razors, a knife & two Boxes worth		1.	2.
Item. a pair of shoes, a pair of old Clogs and a pair of shoe Buckles worth		2.	6.
Item. a half wide Coat & Green vest and Breeches worth		4.	0.
Item. an old blew Coat & Brown vest worth		1.	0.
Item. two pair old leather Breeches worth			2.
Item. a suit of old work Cloaths worth		1.	4.
Item. a little piece of Beef worth		1.	6.
Item. two shirts, two napkins, a cap and a pair of Tartan stockings worth		3.	0.
Summa of the Inventory [All Sterling money]	ivLib.	viSh.	xd.

There was justly owing and addebted to the said defunct by Alexander Telfer Tacksman of the mines of Wanlockhead the sum of one pound fifteen shillings sterline money as part of a bargain of work⁶.

	Lib.	sh.	D.
Summa of the debt owing to the Defunct	i.	xv.	oo.
Summa of the Inventory with the debt	vi.	i.	x.

The Testament of **William Telfair** "commonly called Struntian",⁷ miner at Wanlockhead at the time of his decease in February 1755. As his nearest relative his brother Alexander, also a miner at Wanlockhead, became Executor. The "Goods & Gear" were "inventaried, valued, and appretiated" by John Symington & William Wilson, wright in Wanlockhead. Thomas Williamson, a merchant in Wanlockhead, became Cautioner and the testament was registered on 5th November 1755. [SRO. CC 5/6/14, fo. 176.]

	£.	s.	d.
Imprimis. a Chist worth		4.	6.
Item. a wide coat worth		6.	0.
Item. a black Body Coat worth		19.	0.
Item. a brown coat worth		5.	0.
Item. a blue coat worth		1.	6.
Item. a light blue coat worth		18.	0.
Item. a brown Waistcoat worth		1.	0.
Item. a black Waistcoat worth		7.	0.
Item. a Tartan waistcoat worth		4.	0.
Item. a black serge waistcoat worth			10.
Item. a black manco. waistcoat worth		1.	4.
Item. a brown Shape[d] Waistcoat worth		12.	0.
Item. a White Freeze waistcoat worth		2.	6.
Item. a pair of Tartan Breeches worth			10.
Item. a pair of black manco Breeches worth		1.	0.
Item. a pair of blue Hair pluss Breeches worth		16.	0.
Item. a pair of black cotton Breeches worth			4.
Item. a pair of Drab Breeches worth			4.
Item. a pair of blue breeches worth			4.
Item. a pair of Buckskin Breeches worth		3.	0.
Item. a pair of light grey fram'd stockens worth		1.	4.
Item. a pair of light rig & fur'd Stockens worth			4.
Item. a pair of grey home-made Stockens worth			10.
Item. a pair of blue Stockens worth			3.
Item. a pair of grey stockens worth			8.
Item. a pair of sanquhair Stockens worth			6.
Item. a pair of grey Home-made stockens worth			8.
Item. a pair of blue stockens worth			3.
Item. a pair of light rig & fur'd stockens worth			2.
Item. a pair of blue rig & fur'd stockens worth			5.
Item. a pair of black aberdeen Stockens worth			9.
Item. a pair of grey rig & fur'd Stockens worth			2.
Item. a pair of Sanquhair Stockens worth			4.
Item. a pair of Threed stockens worth		1.	6.
Item. a pair of plain blue stockens worth			3.
Item. a pair of grey Duncasters worth		1.	0.
Item. a Hat worth		10.	0.
Item. a coarse hat worth			4.
Item. a grey Wig worth		4.	0.
Item. a pale Wig worth		5.	0.
Item. a white Wig worth		10.	6.
Item. a black Wig worth		5.	0.
Item. a coarse shirt worth			10.
Item. another coarse shirt worth			10.
Item. another coarse shirt worth			7.
Item. another coarse shirt worth			10.
Item. another coarse shirt worth			10.
Item. another coarse shirt worth			10.
Item. two fine shirts worth Twenty one pence each, inde.		3.	6.
Item. another fine shirt worth		1.	4.
Item. a pair of pumps worth			6.
Item. another pair of pumps worth			6.

	£.	s.	d.
Item. a pair of Boots worth		6.	0.
Item. a Bedstead worth	1.	15.	0.
Item. another Bedstead worth	1.	10.	0.
Item. a Tiking Bed worth		2.	6.
Item. a Bolster worth		2.	0.
Item. two Bolsters worth		1.	4.
Item. three pillows worth			6.
Item. three Bed Cloaths worth		5.	6.
Item. a Covering worth		1.	8.
Item. twelve pairs of Blankets worth	1.	0.	2.
Item. six Chairs worth		9.	0.
Item. a nest of Drawers worth	2.	0.	0.
Item. a Cupboard & Dresser worth	1.	0.	0.
Item. a Hogshead worth		1.	6.
Item. a Child's Chair worth			6.
Item. a Grate & a Cran worth		3.	0.
Item. a pair of Tongs & a Gridiron worth		3.	2.
Item. a Toaster, two pots and a Kettle worth		12.	0.
Item. two pairs of Cleps & a Saucepan worth		3.	6.
Item. two Candlesticks & five wooden Dishes worth		1.	34.
Item. Twelve Delph Trenchers & two delph plates worth		2.	6.
Item. seven Earthen dishes worth		1.	0.
Item. two Tankards & a Filler worth			10.
Item. a Fleshfork, a dozen of spoons & a Box worth		1.	0.
Item. a Baking Board & a fire Cran or Sway worth		4.	6.
Item. a pocket Lanthorn & a Chamber pot worth		1.	2.
Item. a little wheel & a Clackreel worth		8.	6.
Item. a pair of old Boots worth			6.
Item. a Bed worth		18.	0.
Item. two pots worth	1.	6.	0.
Item. a Boat, two Barrels & Three Bowies worth		2.	6.
Item. a Chist worth		8.	0.
Item. three dozens of Bottles & a Greybeard worth		6.	1.
Item. two pairs of Silver Shoe buckles & a pair of Silver Knee buckles worth	1.	4.	0.
Item. a pinchbeck Watch worth	3.	15.	0.
Item. two frame-Caps worth		2.	0.

The foresaid sums being all sterling money amount to Twenty six pounds thirteen shillings & six pence.

	£	s	d.
Summa of the Inventory	xxvi	xiii	vi.

There were justly owing & adebted to the said umquhile William Telfair at the time of his decease aforesaid the several sums of money underwritten by the persons after designed viz. —

Imprimis. By George Miller miner in Wanlockhead conform to a particular accompt	8.	9.
Item. by George Hunter miner there the price of fifty two pounds & fifteen ounces of Cheese bought & received by him from the said defunct about six years ago	12.	14.
Item. by William Buckleg Miner there the price of Cheese bought and received about the same time	11.	11.

	£.	s.	d.
Item. by Thomas Russell (Smith in Wanlockhead) the price of twenty two pounds of Cheese bought and received about the same time		5.	6.
Item. by Cornelius Clison, Washer in Wanlockhead, the price of ninety three pounds & fourteen ounces of Cheese bought & received about six years ago or since that time	1.	3.	6.
Item. by John McCall Miner in Wanlockhead the price of Cheese bought & received about six years ago	1.	2.	5.
Item. by David [?] Lawder, Wright in Drumlanrig the price of twelve pounds of Cheese bought & received about the same time	[no entry]		
Item. by William Wilson, Wright in Wanlockhead, for Cheese bought & received about the time foresaid		11.	0.
Item. by James Clark called Billie the price of Eleven pounds and a half of Pork bought & received about the time foresaid		5.	1½.
Item. by William Telfair, Refiner in Wanlockhead the price of a stone salt & a stone of onions bought & received in or about the moneth of october 1754		2.	2.
Item. by Andrew Thomson in Ballgreen of Crawford-john as the price of seventy five pound six ounces of cheese bought & received about six years ago	1.	2.	0.
Item. by Angus Sinclair, miner in Wanlockhead, the price of twenty five pounds & seven ounces of cheese bought & received about six years ago		7.	4½.
Item. by William Waite, Refiner'sman in Wanlockhead, the price of thirty pounds of Cheese bought & received ... about the same time		7.	0.
Item. by James Barbour, miner there, the price of sundry articles bought & received conform to a particular accompt	3.	5.	7½.
Item. by Ninian Cunningham, miner there, the price of a pair of clogs bought & received about six years ago		2.	8.
Item. by James Clark called Hapland, Miner there the price of several articles bought & received conform to a particular accompt.		15.	3½.
Item by Thomas Cosk, miner there, [blank] shillings conform to a note signed by him bearing date the seventh day of august MviiC & fourty seven years	[no entry]		
Item. by John Mitchell, Smelter there, [£4. 10. 0.] the price of a watch bought & received by him about six years ago and two shillings and six pence sterling as the price of Two pounds & half a pound of Tobacco bought & received about two years ago	4.	12.	6.
Item. by Simeon Martin, miner there, the price of a pair of Clogs bought & received about six years ago		2.	5.
Item. by James Humphray, Coalier in Sanquhair, the price of a pair of Clogs bought & received about the same time		2.	1.
Item. by William McQueen, Miner in Wanlockhead, the price of a pair of Clogs bought & received about the same time		2.	5.
Item. by Andrew McMillan, miner there, price of a pair of Clogs bought & received about the time foresaid		2.	5.
Item. by James Dunlop, miner there, the price of a pair of Clogs bought & received about the time foresaid		2.	5.
Item by Thomas Brown, Cooper there, the price of a pair of Clogs bought & received about the same time		2.	4.
Item. by Alexander Lockie, Washer there, the price of a pair of Clogs bought & received about the same time		2.	4.

	£.	s.	d.
Item. by Archibald Black, Miner there, the price of two pairs of Clogs bought about six years ago		4.	1.
Item. by William Muir, in Morton — the price of a pair of Clogs bought about the same time		2.	3.
Item. by David Cock, Miner in Wanlockhead, — the price of a pair of Clogs bought about the same time		2.	5.
Item. by Thomas Paterson, Miner there — the price of a watch bought in the moneth of october Mvije and fifty four years	2.	12.	6.
Item. by William McMath in Sanquhair — the price of a Watch bought in summer Mvije & fifty four	2.	15.	0.
Item. by James Henderson, miner in Wanlockhead for a Watch exchanged with him in the moneth of October Mvije & fifty four years	1.	15.	0.
Item. by Alexander Telfair of Symington — for work performed by the said defunct conform to a particular accompt.	19.	6.	8.
Item. by Mr Richard Lowthian & Company — for work performed conform to a particular accompt.	23.	19.	2½.
Item. the principal sum of £1. 15. 0. sterling contained in a Bill dated 27th July 1749 drawn by the said defunct & accepted by William Billie workman in Wanlockhead.			
Item. the @rent thereon at the time of the defunct's decease	9.	9.	
Item. £3. 5. 2. sterling remaining due by James Robertson, miner in Wanlockhead, of the contents of a Precept dated 12th May 1753 payable to James Craig in Carstairs Miln.			
Item. the @rent of the said sum extending to	4.	10.	
Item. the sum of £4. 10. 0. sterling contained in a Bill dated [blank] drawn by the said defunct & accepted by James Hunter, Washer at Strontian.			
Item. the @rent thereon			[blank]
Summa of the Debts owing to the defunct (besides the annual rent of the last article)	£	s.	d.
	Lxxviii.	ii.	iv½.
Summa of the Inventory & Debts	Civ.	xv.	xi.

“Testament of David Williamson, younger, overseer to Messers. Crawford’s Company at Wanlockhead, at the time of his decease, which was upon the twenty eighth day of November last” [1777]; Executor — Janet Aitken, relict of the deceased; Cautioner — Alexander Williamson, in Dabton; Valuers — Archibald Cleland, wright in Closeburn, & Robert Ker, wright at Wanlockhead. Registered 10th June 1778. [SRO. CC 5/6/16. fo. 170.].

	£.	s.	d.
Imprimis. a pot containing sixteen pints		4.	0.
Item. a pot containing twelve pints		2.	6.
Item. a pot containing four pints		1.	6.
Item. a pot containing two pints		1.	0.
Item. a pot containing one pint			6.
Item. an iron oven		1.	6.
Item. an Iron Frying Pan			10.
Item. a Dropping Pan, speet & Raxes		2.	6.
Item. a pair of Tongs, a Pocker & Shovel		1.	0.

	£.	s.	d.
Item. a Cheese Toaster			2.
Item. Four common smoothing Irons		1.	6.
Item. Three brass candlesticks		3.	0.
Item. two Tea Kettles, one much worn		3.	6.
Item. a Copper Coffee pot		1.	3.
Item. an Iron Cran			8.
Item. an iron sprottle for turning bread			1.
Item. a Gridiron with clips			6.
Item. two large pewter plates		2.	0.
Item. six small pewter plates		2.	0.
Item. a pewter stoup			4.
Item. a pewter Bason			3.
Item. two large stone plates, one of which broken			6.
Item. six small cream coloured soop plates		1.	0.
Item. seven small plain plates			10.
Item. six breakfast stone plates			6.
Item. six smaller stone plates, one of which broken			6.
Item. seven brown stone Bowls			9.
Item. three white stone Bowls			3.
Item. two blue & white small stone bowls			1.
Item. three small Bowls			2.
Item. an Iron Winter			10.
Item. four Timber plates			2.
Item. Four timber Trenchers			2.
Item. two Hatchets and a saw		2.	6.
Item. ane dozen Ram-horn spoons			3.
Item. a Ladle & fleshfork			2.
Item. a pair of bellows			10.
Item. Three pair of sheep sheers		1.	0.
Item. four common Table Knives			4.
Item. five forks			4.
Item. five common breakfast Knives			4.
Item. a Knife box			1.
Item. a large Goan			2.
Item. a small Coag			1.
Item. two Coal Buckets			4.
Item. a Coal Riddle			1.
Item. an iron heater & toaster		1.	0.
Item. one big Chair & one small Chair		2.	0.
Item. Three stools			8.
Item. two Tables, one of which is very small		2.	6.
Item. a pair of groove Clogs			10.
Item. two groove Coats, one of which is quite worn			2.
Item. one groove Waistcoat & a pair of Breetches			2.
Item. two pair of groove stocking			1.
Item. two groove hats			1.
Item. two iron Hammers, one of which is small			6.
Item. Three burning Irons			2.
Item. a sown syle			1.
Item. a Brander			2.
Item. four wool Combs & a pair of Cards		1.	4.
Item. a timber salt Box			2.

	£.	s.	d.
Item. a meal Hog[s] head with a cover		1.	0.
Item. a Bakeboard & Rolling Pin			6.
Item. a large Kitchen Knife			1.
Item. a timber Box			2.
Item. a Chest		7.	0.
Item. Thirty pair of Blankets	6.	0.	0.
Item. a Bed twill		2.	6.
Item. a black English Cloth Coat, vest & Breeches	1.	0.	0.
Item. a pair of old Cloth Breeches		1.	6.
Item. a blue big Coat		5.	0.
Item. an Iron Ladle & a small iron spoon			1.
Item. a pair of pepper Quairns & a pepper Box			2.
Item. two large brown plates & two small plates			1.
Item. three porringers			2.
Item. two cream coloured Decanters			3.
Item. two old black japanned Decanters			1.
Item. one small pudding Pan			1.
Item. a brown pint pig			1.
Item. a brown croak pig			1.
Item. two brown muttchon pigs			1.
Item. a steel heater			1.
Item. an iron garden spade			8.
Item. a Press	12.	0.	
Item. three pair of sheets			6.
Item. eight table Cloths		7.	0.
Item. thirteen cod slips		2.	3.
Item. Four Linnen Towels		4.	0.
Item. four pair of stockings		1.	0.
Item. six yards [of] Haggiebag for Kitchen Towels		2.	0.
Item. a flannel Jacket			6.
Item. a blue Trocossie			1.
Item. a Hat, much worn		1.	6.
Item. a pair of old shoe brushes			2.
Item. two water stoups			6.
Item. an old looking Glass			2.
Item. a pair of Collop Tongs			3.
Item. a Glass Lanthorn			3.
Item. an old sword			2.
Item. a Potmettle Tea Kettle		1.	6.
Item. an Agur [sic] & an Adz		1.	0.

IN THE BREWHOUSE

Item. Three washing Tubs	2.	6.
Item. a masking fat		2.
Item. two ale working Boats		6.
Item. a screen for drying Cloths		6.
Item. two old small Boats		1.
Item. a small butter Boat		1.
Item. a small powder Barrel		1.
Item. a big wheel	2.	0.
Item. a little wheel		2.

	£.	s.	d.
Item. an Iron Rake			1.
Item. a Garden Spade, much worn			3.
Item. a garden Hoe			1.
Item. a hay fork			2.
Item. a Grape, the shank broken			2.
Item. a Clat wanting the shank			1.
Item. an old cutting moss-spade			3.
Item. a smearing stool			1.
Item. two ale Barrels			2.
Item. a brewing stool wanting feet			1.
Item. an iron beam with Boards & Bucket	1.	6.	
Item. a small tub			1.

IN THE NORTH ROOM.

Item. a Feather Bed with worsted Hangings	2.	10.	0.
Item. five small Chairs with Timber Bottoms		4.	0.
Item. a pair of Tongs & Shovel		1.	6.
Item. a winescot dining Table, very old		2.	0.
Item. two Bolsters and eight Codd's		12.	0.
Item. Thirty five plain linnen shirts, twelve of which are much worn	2.	0.	0.
Item. a Chest of Mahogany Drawers	2.	0.	0.
Item. a white stone water pot			1.
Item. Twelve dozen of Bottles		14.	0.

BOOKS.

Item. Universal Bible. two volumes folio	15.	0.
Item. anotations on the Bible, two vol. folio	4.	0.
Item. Petrie's History of the Church, one vol. folio		6.
Item. Hutchison's Exposition on John's Gospel, folio		3.
Item. Clark's marrow of Divinity, one vol. folio		6.
Item. Buckannan's History of Scotland, one vol. folio		3.
Item. Clerk's Examples, folio		6.
Item. Wellet on the Romans		8.
Item. Hutchison on Job, folio		6.
Item. Taylor on Titus, one vol., folio		8.
Item. Durham on the Revelation, quarto	1.	0.
Item. Durham on the Fifty third of Isaiah		4.
Item. Watson's body of Divinity, quarto		4.
Item. Sclater on the Thessalonians, quarto		2.
Item. [?] Ocheman's Epistles		1.
Item. Burgess on Justification		1.
Item. Cotton's way of life		4.
Item. Dickson on the Psalms, three vol., octavo		8.
Item. Durham's Heaven on Earth		1.
Item. Hutchison on the minor Prophets, two vol.		4.
Item. Cocker's Arithmetic		1.
Item. People's Right vindicated		2.
Item. Confession of Faith		4.
Item. Hutchison's Sermons on the hundred & thirtieth psalm		1.
Item. a volume of sermons		2.
Item. Wetherburn's sermons		1.

	£.	s.	d.
Item. Truth's Victory over Error			2.
Item. a small Bible			1.
Item. a small Bible & four old small Books			4.
Item. spirit level			6.

IN THE SOUTH ROOM

Item. a Bed with stuff Hangings	10.	0.	
Item. a Clock	2.	0.	0.
Item. a looking Glass		2.	0.
Item. Five small Chairs with timber Bottoms		3.	6.
Item. a Corner Fir Cupboard		2.	0.
Item. a small Press			6.
Item. a duffle Coat & vest		3.	0.
Item. a pair of Breeches			8.
Item. a Gun		2.	6.
Item. a pair of Tongs, Pocker, Shovel & Fender		2.	0.
Item. a Cloth Brush			3.
Item. Three Wigs		1.	6.
Item. a small Press		2.	0.
Item. a Table		2.	0.

IN THE CLOSET

Item. Two old tyken Beds	1.	0.	
Item. a tyken Bolster			6.
Item. a large flesh Boat			8.
Item. a small flesh Boat			2.
Item. a large yellow Bowl			3.
Item. Half a dozen green spoons			8.
Item. Half a dozen red hafted Knives & Forks	1.	2.	
Item. Half a dozen green hafted Breakfast Knives	1.	2.	
Item. a Water Bottle & Bason			6.
Item. a butter Boat			3.
Item. Five old waistcoats & one big & one melt [sic] Coat	3.	0.	
Item. two pair of leather Boots	4.	0.	
Item. a pair of silver plated spurs	1.	0.	
Item. an old Hat			2.
Item. a check Reel & an old little wheel		5.	0.
Item. two old plades	1.	6.	
Item. a chest at the stairhead	1.	0.	
Item. fourteen china Cups & Saucers, very much worn	3.	6.	
Item. two old china slop Bowls	1.	0.	
Item. a japanned Sugar Bowl			4.
Item. a pair of japanned Tea Tongs			3.
Item. half a dozen silver Tea spoons & case	10.	0.	
Item. four stone Tea pots	1.	0.	
Item. two stone milk Pots			2.
Item. a large Tea Canister			3.
Item. Three stones of wool	9.	0.	
Item. Five pair of old Shoes	4.	0.	
Item. Three powder Horns			3.

AT LEADHILLS

	£.	s.	d.
Item. Two old Beds	12.	6.	
Item. a Cupboard & dresser	5.	0.	
Item. a Crook & Ladder	2.	0.	
Item. Two Grates	2.	0.	
Item. a Chist	2.	0.	

AT SHORTCLEUGH [WANLOCKHEAD]

Item. Two old Beds	4.	0.	
Item. a Stool		1.	
Item. a Table		2.	
Item. a Churn & Staff	1.	0.	
Item. a milk Coag		2.	
Item. a Crook & Tongs & a pair of Clips		9.	
Item. a flesh Hook		1.	
Item. Two old Chists	1.	6.	

IN Mr. ALEXr. WILLIAMSON'S HOUSE.

Item. an old Chest of Drawers	2.	0.	
Item. Two small Box dials	4.	6.	
Item. two pair of nutcrackers		2.	
Item. Three two-foot Rules	1.	0.	
Item. two small Protractors		2.	
Item. two small mahogany squares and Ruler		2.	
Item. a small Lock & Key		2.	
Item. a Glass Cruet		1.	
Item. a Buckle brush		1.	
Item. a pair of old spectacles		1.	
Item. two small Knives		2.	
Item. two pair of old compasses		2.	
Item. two Combs & case		2.	
Item. two Ivory & a horn snuff milns		6.	
Item. a set of Gold Weights	2.	6.	
Item. a Brass Inkholder		1.	
Item. a pair of old Gloves		2.	
Item. a pair of shoe & knee buckles		3.	
Item. a Room door lock	1.	6.	
The aforesaid sums being all sterling money amount to Thirty one pounds three shillings & one penny.			
Sum of the Inventory	£31.	3.	1. Sterling

Testament of David Williamson, overseer to Messers Crawford & Company at Wanlockhead. The inventory "made & given up by Archibald Tweedie, Innkeeper, and William Miller, miner, both in Wanlockhead, and James Broadfoot, merchant in Douglas, creditors to the said Defunct, in so far as the said Archibald Tweedie [and the others as specified] upon the twenty third day of July last [1782], obtained Decreet *cognitionis Causa* . . . before the sheriff substitute of Drumfries against Mr John Williamson,^a minister of the Gospel at Tinwall, lauffall son of the said deceased David Williamson." The "several goods & Gear" were "valued &

appreciated by James Weir, one of the overseers of the Lead Mine at Wanlockhead, and James Crichton, writer in Sanquhar . . . and which Goods & Gear were afterwards . . . sold at Wanlockhead . . . by way of public Roup at the prices and to the persons as respectively after specified." John Aiken the younger, writer in Dumfries, became Cautioner and the Testament was registered on 31st December 1782. [SRO. CC 5/6/16, fo. 385.]

	f.	s.	d.
Imprimis. Three Earthen plates to Robert Brown, miner			4.
Item. two little timber stoups to James Russel in Leadhills			4½.
Item. three Earthen bowls to James Russel, miner			2.
Item. three Earthen plates to William Fergusson, drawer			2½.
Item. five Bowies to William Gemmil, Drawer			9.
Item. three small timber dishes to William Fleck, miner			5.
Item. two Decanters & a wooden dish to Charles Stevenson, Miner	1.	0.	
Item. three plates & a Bowie to Thomas Rogerson, Smelter			7½.
Item. six horn spoons & a divider to Thomas McMillan			11½.
Item. thirteen horn spoons to John Gracie, miner			9.
Item. eight horn spoons to William Bryden, Drawer			7.
Item. a little wheel to William Watson, drawer	2.	6.	
Item. another Little wheel to said William Watson	1.	8.	
Item. another Little wheel to said William Watson	1.	8.	
Item. a churn & Churn staff to John Stevenson, miner	1.	7.	
Item. a Tub to Adam Bae, miner			5.
Item. another Tub to William Miller			5.
Item. an old Tub to Thomas Rogerson			3½.
Item. two Crocks to Martha Robertson			10.
Item. two Crocks to Robert McCall			6.
Item. six timber trenchers to Daniel Campbell, Drawer			6.
Item. twelve stone plates to said Daniel Campbell	2.	2.	
Item. eleven stone plates to William Watson, Labourer	1.	2.	
Item. eleven Breakfast knives to James McCall	1.	3.	
Item. eleven knives & ten forks to William Fergusson, Labourer	2.	2.	
Item. two smoothing Irons to Thomas Ramage, miner	1.	2.	
Item. two smoothing Irons to Thomas Rogerson	1.	1.	
Item. a little pott to John Wilson miner	1.	3.	
Item. a larger pot to William Sadler, merchant	1.	7.	
Item. another pot to James Russel	2.	6.	
Item. another pot to Hugh McGowan, wright	4.	0.	
Item. another pot to Archibald Milligan	1.	5.	
Item. a frying pan & Girdle, both old, to James Wilson in Fingland	1.	4.	
Item. an oven to Robert Brown, Labourer	4.	0.	
Item. a Boiler to John Murray, Miner	1.	2.	
Item. another Boiler to James Houtson, washer	2.	10.	
Item. a large Pot to Mr John Taylor	13.	6.	
Item. a Boat to Charles Stevenson, Miner	1.	2.	
Item. another Boat to Robert McCall			10.
Item. another Boat to William Fleck			6.
Item. a large Boat to David Cock	3.	1.	
Item. two dozen bottles to John Baillie in Robertson	2.	4.	
Item. two dozen bottles to Samuel Bannatyne	2.	4.	
Item. two dozen bottles to James Howatson, washer	4.	3.	
Item. a Saddle & Bridle to Mr Weir	8.	0.	

	£.	s.	d.
Item. nine bottles to James Howatson		1.	6.
Item. Thirteen pewter spoons & Mustard Box to Thomas McMillan		1.	3.
Item. five pewter Trenchers & two cannisters to William Watson, Labourer		1.	6.
Item. three cannisters to Mr Newbigging			8½.
Item. two candlesticks to James Robertson, Baker		1.	5.
Item. another Candlestick to Daniel Campbell			8.
Item. three pewter plates and a Flaggon to John Dalryell, miner		2.	3.
Item. a Dial to John Murray		2.	2.
Item. six chairs & a big chair to John Wilson		19.	6.
Item. a press to William Adamson, washer		20.	0.
Item. a Dresser & Cupboard to John Wilson		10.	6.
Item. six stuff bottom'd chairs to Mr Lorrimer	1.	3.	0.
Item. a round Fir Table to John Sinclair		6.	6.
Item. a Wainscott Table to Alexander Carlaw, miner		9.	0.
Item. a Chaff Bed & Bolster to John Sinclair		1.	10.
Item. another Chaff Bed & a Bolster to Robert Scott, Labourer		5.	0.
Item. another Chaff Bed to Robert Brown		3.	3.
Item. another Chaff Bed to John Stirling, smith		3.	9.
Item. another Chaff Bed to William Wilson, Cropline ⁹		7.	10.
Item. two sacks to Mr Taylor		5.	0.
Item. two sacks & three poaks to Alexander Broadfoot		2.	2.
Item. a Cod & Bolster with Feathers to John Stirling, smith		3.	7.
Item. another Cod & Bolster to Thomas McMillan		3.	1.
Item. a Feather Bed, three Cods & a Bolster to Mr Newbigging	2.	2.	0.
Item. a mounted Bed in the west Room to William Fleck, miner	1.	16.	0.
Item. three Bed coverings to Peter McHallan		3.	3.
Item. two Bed coverings to James Wilson, carter		2.	8.
Item. two Bed covers to Mr Weir		7.	1.
Item. two pair of Blankets to Peter McHallan		3.	8.
Item. three pair of Blankets to John Muir, miner		6.	7.
Item. three pair of Blankets to Peter McHallan		11.	4.
Item. three pair of Blankets to Mr Taylor		17.	0.
Item. three pair of Blankets to Mr Weir		11.	7.
Item. three pair of Blankets to John Dyer		10.	11.
Item. four pairs of Blankets to Robert Brown	1.	4.	6.
Item. five pairs of Blankets to Mr Newbigging	2.	0.	0.
Item. six pairs of Blankets to Charles Stevenson, miner	2.	3.	0.
Item. Eight Ells of Blue Duffle Cloth to Thomas McMillan		17.	6.
Item. a Press in the West Room to Mr Robert Taylor	2.	12.	0.
Item. a Looking Glass to Mr Lorimer		5.	0.
Item. a Bible and ovids metamorphasis to John Gracie, miner		1.	3.
Item. a Gazetter & Keils anatomy to James Mason		2.	6.
Item. six Razors & Cases to Mr Lorimer		2.	0.
Item. two snuff Milns & Tobacco Pouch to Andrew Dalryell, washer		2.	1.
Item. a knife and fork, Inkipiece and a pair of scisors to John Baillie in Crawfurd		1.	2.
Item. a Stone Bowl, some Tea dishes and Tea pot to Alexander Broadfoot	1.	4.	
Item. a Cannister & Brush to William Hyslop, Wright			3.
Item. a Crowat [?cruet], pepper-box and mustard box to Thomas McMillan			5½.
Item. a Boat to Donald Campbell	7.	0.	
Item. a Tea pot, sugar box, milkpot, six cups & Flatts, all of China to Thomas [Mc]Millan	5.	9.	

	£.	s.	d.
Item. six silver Tea spoons to Miss Williamson		10.	0.
Item. a large Chist to Alexander Broadfoot in Sanquhar		3.	2.
Item. a big Chair and a little Chair to John Stevenson, miner		2.	0.
Item. a big Table to James Nicol, Wright		4.	4.
Item. a pair of sheets to Mr Newbigging		13.	0.
Item. a Dozen Cod-slips & four Bolster slips to Mr Newbigging		10.	0.
Item. three Table Cloths to Miss Williamson		7.	0.
Item. three Table Cloths & two little table Napkins to Thomas Rogerson ...		12.	7.
Item. Bed hangings & Iron Rod to John Murray		6.	9.
Item. a Cupboard to John Wilson		8.	11.
Item. a Dial and a pair of Spectacles to John Wilson		2.	0.
Item. a Mill & two Rules to Hugh McGowan		1.	0.
Item. a Round Saugh Table to John Wilson		10.	6.
Item. a Silver Watch to Mrs Wilson	2.	0.	0.
Item. a suit of Grave Cloaths to John Wilson		4.	0.
Item. five pair of shoes to John Wilson		10.	0.
Item. seventeen pairs of Worsted stockings to John Wilson		10.	0.
Item. a hat to John Wilson		2.	6.
Item. two big Coats to John Wilson	1.	5.	0.
Item. two night Caps to Robert Wilson		1.	0.
Item. a suit of blue Duffle Cloaths to Robert Wilson		17.	0.
Item. a suit of Black Cloaths to Robert Wilson	1.	8.	0.
Item. a suit of Brown Cloaths to Robert Wilson		12.	0.
Item. a black Coat & Vest to Robert Wilson		11.	0.
Item. a Vest to Robert Wilson		7.	0.
Item. three flannel Keittles to Robert Wilson		4.	6.
Item. a black silk napkin to Robert Wilson			10.
Item. twenty two shirts to Robert Wilson at four shillings each, inde	2.	8.	0.
Item. three musline Cravats to Robert Wilson		3.	0.
Item. four Wigs to Robert Wilson		5.	0.
Items. two small Barrells to Robert Wilson		4.	0.
The aforesaid sums being all Sterline money amount to Forty seven pounds nine shillings & eightpence halfpenny.			

1. *The Commissariat Records of Dumfries: Register of Testaments 1624-1800*. Ed. Francis J. Grant. Scottish Record Society, Edinburgh, 1902. In addition to the testaments recorded in detail in the present article the following further entries might be noted with interest. (Dates of registration are noted and "T" indicates that the testament is only to be found among the original warrants.)

AITKEN, John, in Thurston, sometime miner in Hopetoun, under Mr George LOTHIAN there 13 Mar. 1728.

CLERK, James, called Hapland, miner at Wanlockhead. 30 Sept. 1756.

FARQUHAR, Agnes, widow of William McKAY, late clerk to the Wanlockhead Mining Company 20 Dec. 1800.

FOWLS, Andrew, smith in Wanlockhead 12 May 1748.

HENDRY, William, merchant in Wanlockhead 12 Sept. 1757. (For details of this testament see Article on William Hendry's Day-book for 1742-50 elsewhere in this volume of *Transactions*).

McKAY, John, miner in Wanlockhead 12 Apr. 1758.

WATT, John, workman in Wanlockhead 16 Oct. 1753.

WELSH, James, in Wanlockhead T 1758.

2. *The Commissariat Record of Lanark: Register of Testaments 1595-1800*. Ed. Francis J. Grant. Scottish Record Society, Edinburgh, 1903. The following individuals, obviously associated with the Leadhills district, and its mining activities, can be noted. (Dates of registration are noted and "T" indicates that the testament is only to be found among the original warrants.)

CALDWELL, Alexander, miner in Leadhills, and Janet CARMICHAEL, spouses 25 Mar. 1743.

CLEMISON, John, workman in Leadhills 5. Sept. 1757.

COLIAR, Gabriell, workman in Leadhills 6 Aug. 1683.

COOK, John, servitor to Thomas FOULLIS, in Leadhills 24 July 1626.

COUPER, James, surgeon, in Leadhills T 1776.

CRICHTON, Charles, workman in Leadhills 28 Apr. 1738.

CRICHTON, Janet, spouse to William PATOUN, workman in Leadhills 23 Apr. 1679.

CRICHTON, John, in Leadhills 1. Apr. 1669.

DOUGLAS, Robert, in Toun of Douglas, designed in Wanlockhead 9 Oct. 1693.

ESPIE, James, miner in Leadhills 10 Aug. 1757.

FAULHOUSE, John, workman in Leadhills 7 Mar. 1734.

- FAULDHOUSE, William, wright, miner in Leadhills 31 May 1751.
 FISHER, William, workman in Leadhills 5 Nov. 1746.
 HENDERSON, John, late miner in Leadhills 18 May 1789.
 HOME, John, workman in Leadhills 16 August 1744.
 LORIMER, George, workman in Leadhills 8 June 1744.
 McQUEEN, Margaret, spouse to John WILLIAMSON, in Leidhill 6 Jan. 1679.
 McWATT, John, miner in Leadhills 13 July 1745.
 MURE, John, workman in Hopetoun, par. of Crawford, 14 May 1731.
 PRATT, Leonard, workman in Leadhills 21 June 1744.
 RAMAGE, James, workman in Leadhills 13 and 30 Dec. 1746.
 RENWICK, John, miner in Leadhills 1 Feb. 1793.
 SHELDINE, James, workman in Hopetoun 6 May 1715.
 SHELDINE, Mary, sister-german to John SHELDINE, workman at Hopetoun, and aunt of the deceased James SHELDINE, workman there 8 Apr. 1724.
 STIRLING, James, agent for the Scots Mining Company at Leadhills T..... 1773.
 TELFER, Alexander, miner in Leadhills 22 Oct. 1790.
 THOMSON, James, in Leidhill 23 Nov. 1670.
 WATSON, Barbara, spouse to James STIRLING, agent to the Scots Mining Company at Leadhills 16 Apr. 1753.
 WATSON, Barbara, lawful daughter of the deceased John WATSON, of Thirty Acres, and sometime spouse of Archibald STIRLING, of Garden 24 Mar. 1797.
 WEIR, Gavin, portioner of Glendouran, workman in Leadhills 30 Mar. 1726.
 WEIR, Robert, workman in Leadhills, and Isobel KIRKPATRICK, his spouse 11 and 22 May 1739.
 WILSON, George, workman in Leadhills 20 Dec. 1731 and 13 Apr. 1732.
3. Dates of registration are provided in parenthesis.
 4. It is interesting to note that William Telfair appears in William Hendry's daybook for the period 1742-50 purchasing goods on behalf of others. See paper elsewhere within this volume of *Transactions*.
 5. Reasons of economy preclude the provision of a glossary but the meaning of most obsolete terms will be found by reference to Scots Language Dictionaries such as those by *Chambers* and *Jamieson*.
 6. The bargain, or contract, system was a method of piece-working much used in the mining industry. For a very adequate account of the system, as practiced at Leadhills, see William Harvey's *Miners' Bargains at Leadhills during the 18th Century*. Journ. Glasgow Spelaeological Society, Vol. 2, pt. 1, Feb. 1970 pp. 1-21.
 7. Strontian in Argyllshire — another well-known leadmining area in 18th century Scotland; A high proportion of the miners at Wanlockhead and Leadhills came from the mines at Strontian — others came from Allandale in Northumberland and even further afield, Cornwall.
 8. John Williamson was presented to the united charge of Tinwald and Trailflett on 8th June 1776 by Charles, Duke of Queensberry & Dover: He had previously acted as preacher at Wanlockhead and was ordained on 27th March 1777. He died there at the early age of 32 years on 18th October 1783 and is buried in the churchyard at Tinwald where his gravestone also records the death of his wife Janet and some of his children. Hew Scott's *Fasti Ecclesiae Scotticae* suggests, now obviously erroneously, that he was the son of Alexander Williamson of Barony Parish, Glasgow.
 9. Croglin in Tynron parish: For an account of the family see *Wilson in Croglin* by our late member R. C. Reid in these *Transactions* IIIrd series, Volume 28, pp. 135-49.

THE DISCOVERY OF TWO FLAT BRONZE AXES NEAR CAERLAVEROCK CASTLE, DUMFRIES

by M. J. Yates, B.A.

In September 1976 two flat bronze axe heads of the Early Bronze Age were found near to Caerlaverock Castle 11.8 kms. (7.4 miles) S.S.E. of Dumfries. Fortunately these important finds were taken to Dumfries Museum for identification and it was consequently possible to arrange a meeting with those responsible for the discovery. During a visit to the site the precise circumstances and location of the finds were established and recorded. The axes were found 44 m. south of the south-west corner of the castle moat and 7 m. south of a low stoney bank, probably a ruined wall, which ran east-west beyond the castle ramparts, at N.G.R. NY 0251 6551. (Fig. 1). The area was approximately 7 m. O.D. (23' O.D.), flat, poorly drained and, at the time of writing, was covered by oak and birch wood. The axes were 0.6 m. apart in the leafy topsoil, not more than 150 mm. beneath the surface.

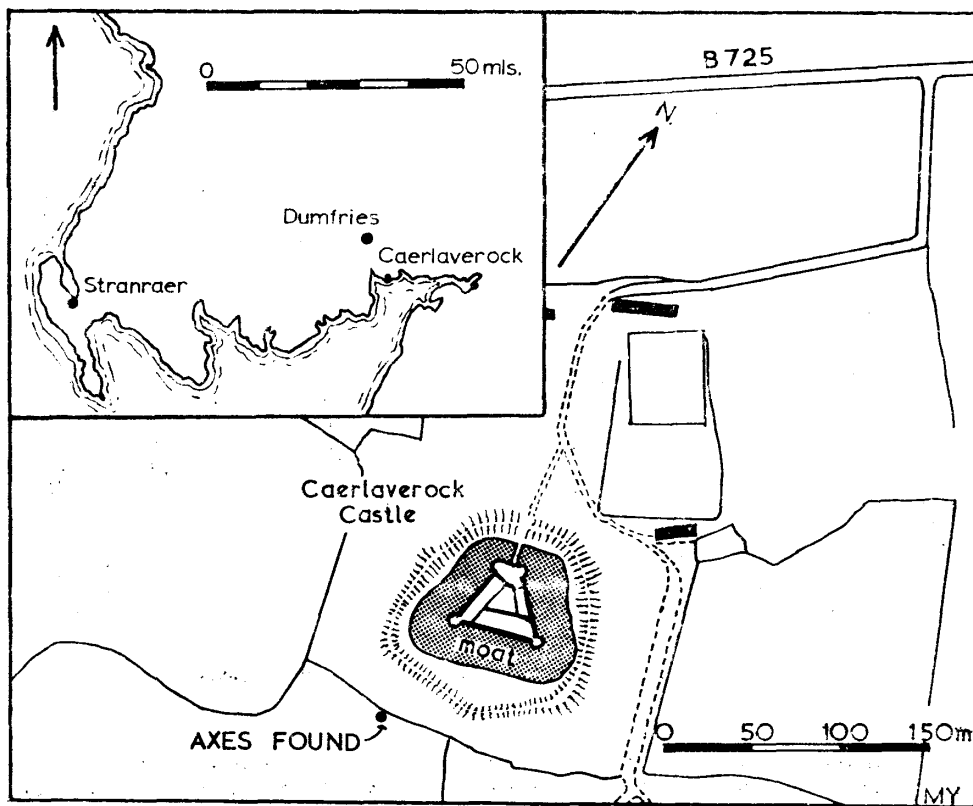


Fig. 1 Location of two axes found near Caerlaverock Castle.

At the instigation of the Inspectorate of Ancient Monuments (then in the Department of the Environment,) a small excavation was planned in order to examine the location more closely. A trench 3 m. x 3 m. around the find spot was excavated down to the orange and blue mottled clay subsoil. Although the soil was passed through a riddle with a 9 mm. square mesh no additional finds were identified. The examination of the soil and subsoil also failed to produce any evidence for the excavation of a pit or other feature intended to accommodate

the axes. This may have been partly due to disturbance caused by the roots of the surrounding trees, but generally these had not penetrated the clay.

In the case of the larger axe it was possible to recognise its original position by the impression it had left in the top soil. It had been tilted sideways with the blade lower than the butt which was resting on a substantial tree root. The soil around the smaller axe was too disturbed but the description of its position given by the discoverers suggested that it too lay in the top soil.

It was difficult to explain the distance of 0.6 m. between the axes in terms of movement due to natural agencies. The pressure of tree roots alone could not cause such a separation. It was possible that the area had been cultivated at some time in the past and that ploughing had moved the axes. Although agricultural activity in this area may seem unlikely in view of the heavy and wet soil conditions of recent years drier and more hospitable conditions could have prevailed in earlier times.

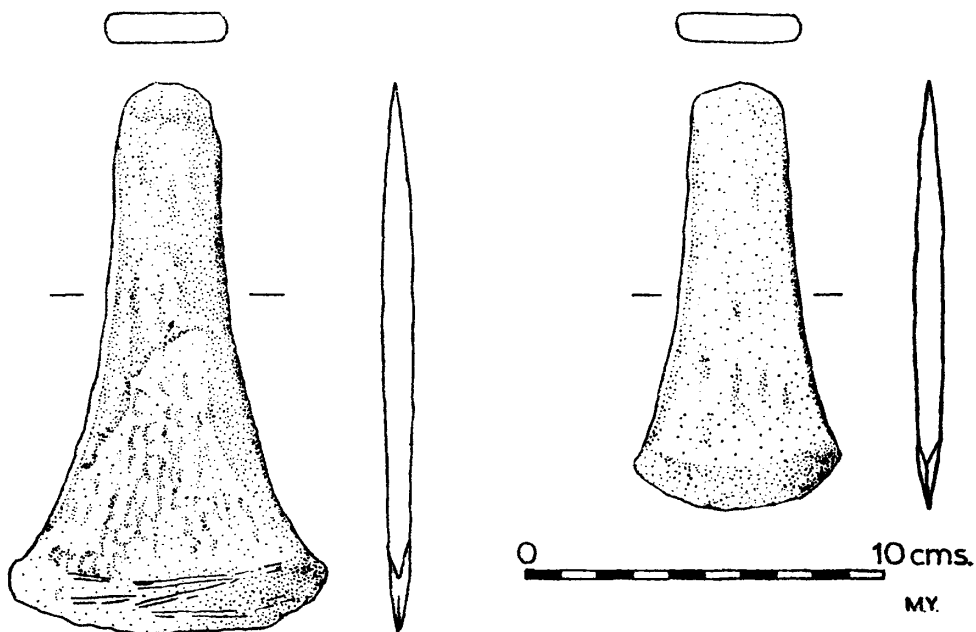


Fig. 2 Two flat bronze axes found near Caerlaverock Castle.

Description of the axes

The larger axe measured 153 mm. in length and was 27 mm. wide at the butt. (Fig. 2) The concave sides spread out towards the blade which was 87 mm. across. In section the axe tapered to a sharp edge at both the blade and the butt and at its thickest, 67 mm. from the butt, it measured 9mm. It was generally well preserved but the edge of the blade had been indented by a small amount of corrosion and the surface near the butt was not in good condition. Where the surface was intact the axe showed two interesting characteristics. Small, shallow depressions were visible, especially on one side. These seemed to have been produced by hammering the surface. This would have rendered the metal harder and therefore more efficient for cutting since it would retain its edge for longer. As well as fulfilling a very practical function it was possible that the hammering was used to decorate the axe in a simple way. Most of the hammer marks were no more than 2 mm. across and from 4-6 mm.

in length. They were arranged so as to run down the length of the axe and some appeared to form rows.

Striations running across the edge of the blade could also be easily identified and seemed to indicate that the axe had been sharpened shortly before its deposition. Occasionally the finders of bronze axes try to sharpen them themselves but in this instance the marks were clearly of some antiquity since they were patinated like the rest of the surface. There was always the possibility that the axe was found, sharpened, and lost again in earlier times but in view of the discovery of the two axes together this would seem unlikely in the extreme. Similar striations could be seen on the other side but here they ran lengthways down the axe. Under strong side light conditions it was also just possible to make out several faint striations running obliquely across the edge of the blade, again probably produced by sharpening.

The smaller axe measured 119 mm. in length and was 24 mm. wide at the butt. It widened towards the blade which was 56 mm. across. Like the other axe it tapered in section at the blade and at the butt to give a sharp edge at either end. At its thickest, 60 mm. down from the butt this axe measured 8 mm. It was in a similar condition to the other with a portion of its surface lost to light corrosion. There was no obvious trace of any decoration. It was interesting that the smaller axe corresponded almost exactly to the shape and thickness of the upper part of the larger axe. This may suggest that originally the two axes were much the same size but the blade of the smaller axe had been worn down by use and repeated sharpening.

Examined together these two items would seem to constitute a small hoard of essentially similar axes. Deposits of two axes have been discovered elsewhere in Scotland (Coles, 1969, 3-34.) and appear to have been even more frequent in Ireland (Harbison, 1968.). Typologically both axes belong to the class of **narrow (or thin) butted type B** flat axes (Case, 1966.). Axes of this type in Scotland have been sub-divided into three groups by Coles (1969.) and the two examples from Caerlaverock should be placed in his group Bb on account of their overall shape. This group of axes had a wide distribution throughout Scotland but was most common in the south and east. The possible decoration on the larger axe would also seem to have its best parallels upon other group Bb axes, most notably upon those from the Colleonard hoard in Banffshire. Similar decoration has also been found on local Bb axes from Half Morton, in Nithsdale and the larger of the Glenstockdale axes in Wigtown District (Stevenson, 1948, 124-125). Coles has pointed out that axes of this group were especially plentiful in Ireland and that there was a complete lack of moulds found in Scotland. This he suggested could imply an Irish origin and thus the Caerlaverock axes may serve to emphasise the close link between Galloway and Ireland which existed during the early Bronze Age.

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SOME UNRECORDED MINERAL TRIALS IN KIRKCUDBRIGHTSHIRE

by James D. Floyd

Between 1972 and 1975, the Institute of Geological Sciences carried out a mineral reconnaissance survey on behalf of the Department of Industry in the Doon-Glenkens area of Ayrshire and Kirkcudbrightshire.¹ During the course of the survey a number of un-

1. DAWSON, J. and others. 1977. A mineral reconnaissance survey of the Doon-Glenkens area, south-west Scotland. *Mineral Reconnaissance Programme Rep. Inst. Geol. Sci.*, No. 18.

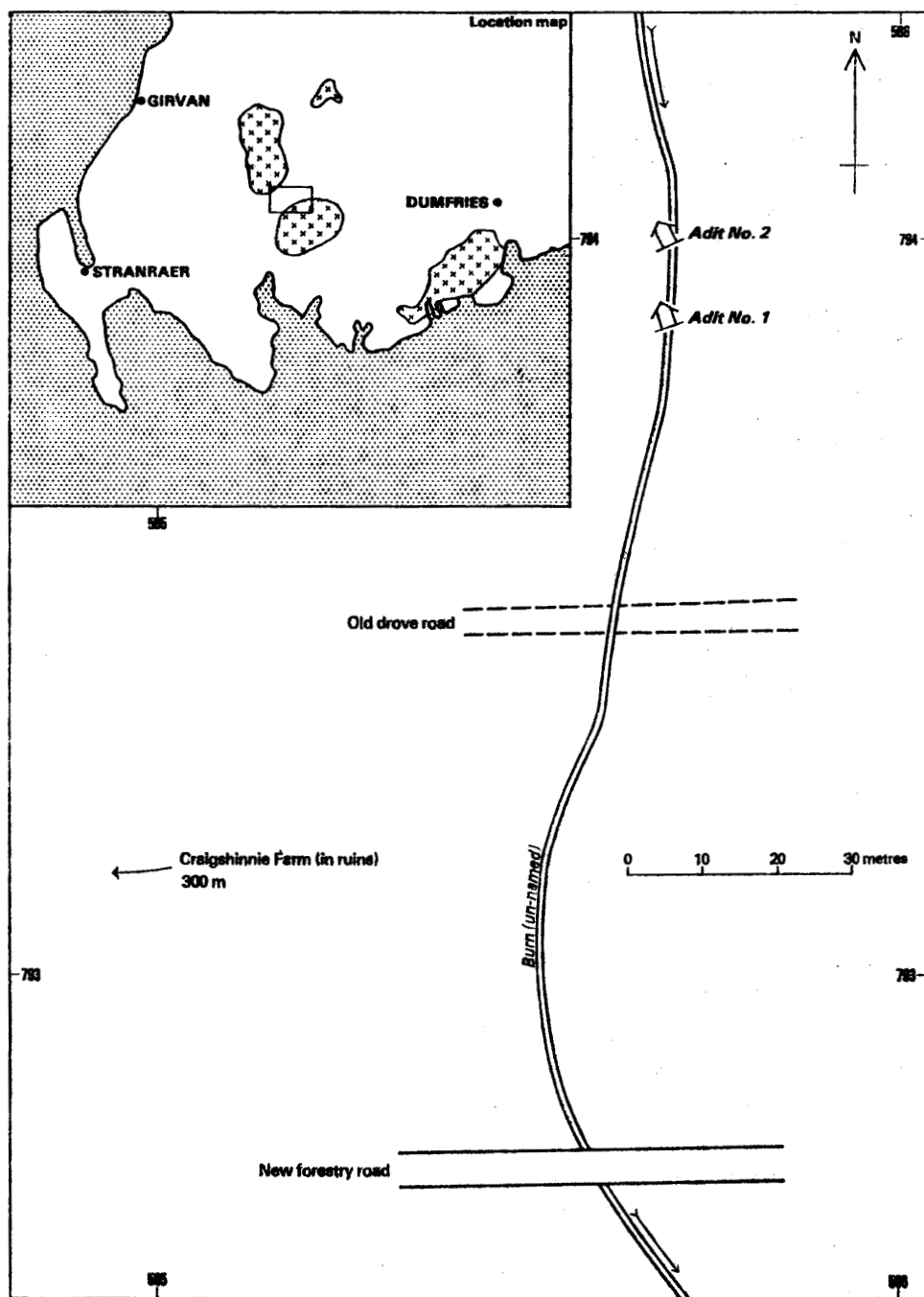


Fig. 3. Location map of Craigshinnie lead trials. Inset map shows general location of Figures 3 and 4.

recorded mineral trials were found and investigated by geologists of the South Lowlands Unit.

Craigshinnie trials

In 1973, information was received from local officers of the Forestry Commission about two "tunnels" near the farm of Craigshinnie (now in ruins), about 4 km south-west of Dalry. Upon investigation these were located [NX 5857 7939] on a fairly steep hillside within a dense coniferous plantation, about 100 metres north of a new forestry road and on the course of an un-named burn which drains southwards into the Craigshinnie Burn (Fig. 3). Both entrances are almost hidden by the burn which cascades over them as small waterfalls.

The adits are driven along a thin breccia trending N350° (all bearings in this note are related to grid north), cutting Silurian greywackes which strike N060° and dip to the north-west at 60°. The two trials are of similar dimensions, about 1.8 metres high and 0.8 metres wide, the southern one (Adit No. 1) being about 15 metres long and the northern one (Adit No. 2) only about 4 metres. A thick layer of silt and sand washed in by the burn covers the floor of both adits.

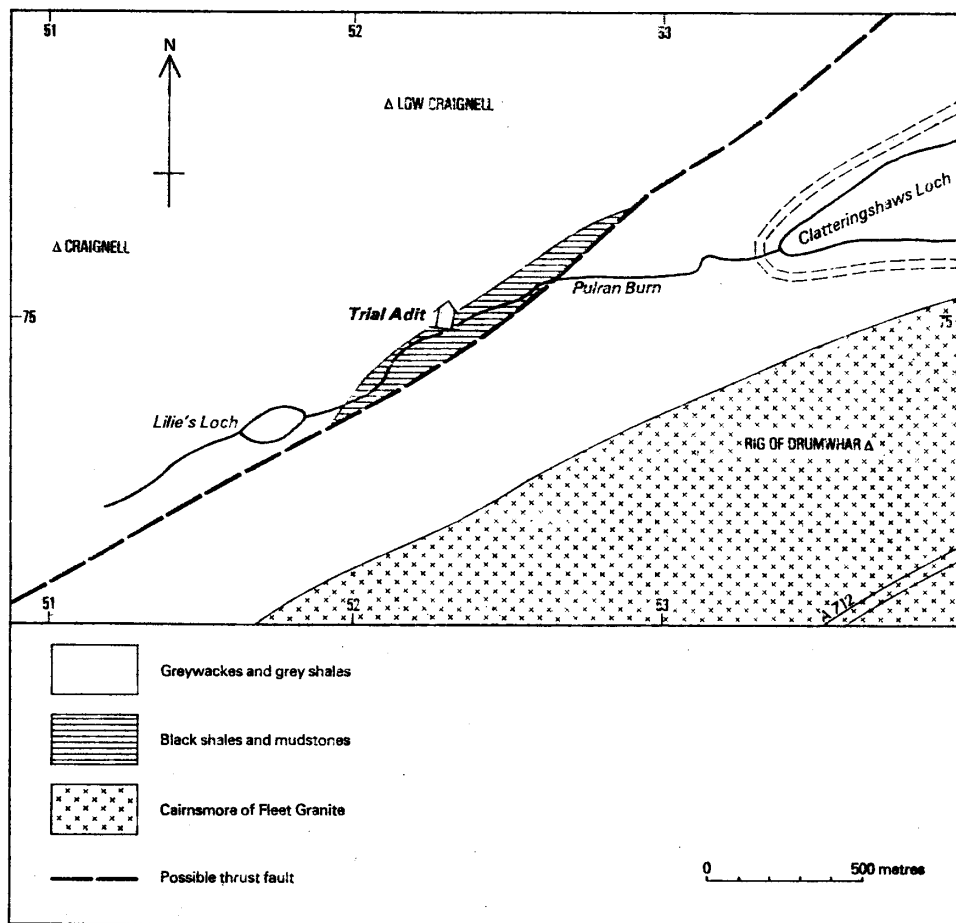


Fig. 4. Geological and location map of Pulran Burn copper trial.

At present there is very little visible sign of the mineralisation which may have encouraged the search for minerals, although traces of galena (PbS), the most important ore of lead, were identified in greywacke breccia on the east side of the portal of Adit No. 1. There is also little sign of any heap of spoil from the trials, but since this would be mostly broken greywacke, it might be difficult to recognise as dump material. Alternatively, the spoil may have been simply dumped into the bed of the burn and gradually washed away.

The burn was panned immediately downstream from Adit No. 1 and the resulting heavy mineral concentrate yielded chalcopyrite (CuFeS_2), galena and mimetite $[(\text{PbCl})\text{Pb}_4(\text{AsO}_4)_3]$, the latter usually found in the oxidation zone of lead deposits.

It is concluded that these two trial adits were driven in search of lead mineralisation which proved to be too poor to justify further work. They probably date from the middle of the 19th century when this area was exhaustively searched by local mineral prospectors.

Pulran Burn trial

About 12 km west of New Galloway, another small mineral trial was discovered in the north bank of the Pulran Burn at [NX 5227 7494]. The level has been driven into a steep cliff for over 5 metres on a quartz vein trending N010°. Traces of pyrite (FeS_2), arsenopyrite (FeAsS) and chalcopyrite with some malachite $[\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2]$ staining can be seen on a vein fragment at the adit portal.

The country rock is Ordovician black shale and mudstone which has been hardened and sheared due to the combined effects of thermal metamorphism by the Cairnsmore of Fleet 'granite', which outcrops only 600 metres to the south-east, and a possible thrust fault shown in Fig. 4.

A small spoil heap, probably derived from the trial, was located on the north bank of the burn only a few metres upstream. This material was panned and the heavy mineral concentrate yielded traces of hematite (Fe_2O_3), pyrite, arsenopyrite, malachite, galena, sphalerite (ZnS) and ?tennantite $[(\text{Cu}, \text{Fe})_{12}\text{As}_4\text{S}_{13}]$. The trial is now flooded due to a fall of rock at the entrance but could be drained by digging a small channel to the nearby Pulran Burn.

It is concluded that the trial was probably driven in search of copper mineralisation, traces of which may have been visible on the face of the cliff. The trial may date from the late 19th century when the nearby Talnotry nickel (1885) and arsenic (1899) trials were carried out.^{2,3}

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2. WILSON, G. V. 1921. The lead, zinc, copper and nickel ores of Scotland. *Mem. geol. Surv. spec. Rep. Min. Resourc. Gt Br.*, 17.
3. DEWEY, H. 1920. Arsenic and antimony ores. *Mem. geol. Surv. spec. Rep. Min. Resourc. Gt Br.* 15

DUMFRIES RENTALS OF 1674-1703

with additional notes on other Assessment and Valuation Rolls

by

A. E. Truckell

One very useful class of local records is that loosely described as rentals, assessment, taxation or stent rolls, or other lists of people and property made for the purpose of exacting payments. All of these give names, occupations and, usually, details of the property. These begin in Dumfries town in 1516 and 1519 and with the annual "Heid Court of Whitsunday" when the burgesses are rented their annual "sowmes" or portion of the town's common land, and carry on until the end of that volume of Burgh Court Records in 1537. The first reasonably full Rental — and that only for royalties, not burgages, in 1548 is appended to the same volume.

Among the many Burgh documents transferred in the 1950's from the Ewart Library basement, where they had been stored by G. W. Shirley, County Librarian, in 1931-32, on the building of the new Town Hall, to the Burgh Strongroom and then to the Burgh Record Room, were a long series of assessment or stent rolls. Three of these stood out as being patently earlier than the main series : none of them bore a date but what was clearly, by the script, the latest of them bore that it had been used for the assessment of 1703-4 : the main series of assessment rolls takes up in 1712 and runs at ten-year intervals from then until well into the 19th century, being uniform in character and quite different to the early group.

As the three early assessment rolls have a blank in their heading where the date should be a study was made of the dates of the persons named in what seemed by script and spelling to be the earliest.

Provost William Craik held office 1674-78, 1679-80, 1688-90. John Corbet, late Bailie, is shown as alive : his testament was registered 10 May 1683. The testament of James Maxwell Notar, shown as alive, was registered 22nd Oct. 1680.

John Copland younger is mentioned but not as Provost or Late Provost : he was Provost 1680-81 : but the testament of Alexr. McGowan was registered 11 June 1678 : Nicoll Rae is shown as alive and the testament of Janet Dickson and Nicoll Rae her spouse was registered on 9 December 1674 : Council elections were in early October so Craik would be elected then : hence the rental must date to October-December 1674.

So much for this earliest text, Text A. Text B shows Homer Anderson as Convener : he took office as Convener at the Glorious Revolution of December 1688 and held office until 1693. James Lawson is shown as "Late Deacon" : he demitted office as Deacon at the Revolution in December 1688. John Martin is termed "late thesaurer" : he was Treasurer up to at least 8th August 1692 and so almost certainly to the 30th September election, when James Ross succeeded him : therefore the text is after December 1688, before the Autumn elections of 1693, and after September 1692 : therefore late 1692 or early 1693. There is another point about Text B : the very many datable names in it show a marked peak in 1682-83, and the order of owners or possessors of each property, taken with this peak, strongly suggests that a lost rental, based like B and C on A, had been drawn up around 1684-85, and modified to give our Text B. This would give an original four rentals : 1674, 1684-5, 1692-3, and 1703 : that is, at approximate 10-year intervals, with the upheaval of the 1688 Revolution possibly responsible for the need for earlier revision of the lost 1684 text.

There is a marked break in style and script between A and B on the one hand and C on the other, C being much more "modern". Andrew Bell — "Andrew Bell his few book" — was Treasurer from October 1702 till at least 1704 : the book bears "from Michael Mass 1703 to Michael Mass 1704" on the inside of the front cover : like A and B it bears a blank in its preamble where the date should be : but the inside of the back confirms that of the front, bearing "Andrew Bell Thresuer 1703". As the front cover bears "March the 4 1709" it must have been in use until then. The item runs "Andrew Bell his Few Book as Treasurere Lent to John Gilhagie Treasurere March the 4, 1709".

Text A has 20 pages, Text B 22, and Text C 20, but the number of properties mentioned is about the same in each. In all three texts, but especially in the first two, revisions have been made from time to time by inserting new owners or occupiers : these can be noticed by the difference in ink and handwriting. All three texts run in a rough geographical order, district by district, though sometimes properties scattered around the town will all be listed together under the owner's name. One very noticeable feature is the dominance of the dead in ownership — very many of the entries begin "the heirs and successors of . . .", the person named having died a generation or two generation before — quite a few as early as 1618-1624: as most of these were elderly when they died we have a virtual continuity with the Burgh Court Book of 1584-88 and thus with the personnel of the previous Rental of 1548 : and continuity in both personal and place names is very noticeable (1584-88 is mentioned because this is followed by a gap to the 1640's filled only by a few fragments and a Kirk Session

Book). The Maxwells of Conheath, the McBairs of Netherwood, the Raynings, the Newalls, the McGeorges, the Corsanes, Halliday, Neilson, Rome, Edgar, Hyslop, Swan, Lewars, Ewart, Paterson, Ferguson, Rule, Rig, Corbet, Walls, McQuharry, Irving, Sharp, Crosbie, McBurnie, and many more are common to all the sources mentioned. So also for the places : Newark, Kirkgate, Watslacks, Marchhill, Laripotts, Barkerland, Fish Cross, the Cruikit Aker, Clerkhill, the Lady Aker (still paying its pound of wax yearly though more than a century after the Reformation), Soutergate (usually spelt Southerngate in the feu books), Milnhole, Aldermanhill, "ffreir vennall", "under the yeards", the Chapel Yeard, Tounheid, Blaberrie dyk, Holine bush, yeardheads, the ffrearland, stinking vennell, Gallowrigg, Corbelly Hill, Midraw, Lochmabengate, Sandbeds, Brigend (and it is noticeable how many feu properties lie on the West bank of the river), the Sandbed milne, and again the number could be multiplied many times : what is noticeable is the very small proportion of new personal or place names. Many of the properties shown as feus were of course still common lands rented out annually by the Town in 1548 : the process of feuing out had gone far in the intervening years. Spellings vary a good deal : Gutter of Calsay can be changed to Guttracalsay only to reappear in a later volume in its older form.

Correspondence, item by item, between the three texts is close : thus in A on Page 1 we have the order Maxwell of Conheath — McBair of Netherwood — Lightbodie — Lewars — Newall — ffareis — Andersone — Broth and ffaid — Davidsone — Ramsay : in B Maxwell of Conhaith — McBair of Netherwood — Lightbodie — Lewars — ffares — Andersone — Ramsay — McGoire : and in C McBair of Netherwood — Lightbodie — Newall — Andersone — Gordone — ffarries — Ramsay — McJore. Changes of ownership or occupation of course show up : thus C has on its last page "The fue of the meallmercat now Doctor Archbalds" and "John Neilson mert. for his land at Reidbrae bought from Barnclugh", while on the preceding page John Lanrick, Writer, makes a first appearance with a whole block of properties — this is the Lanrick who was for a long time Town Clerk. An important point about the three texts, in fact, is that they give us more information about so many people already known from the Minutes and loose correspondence and accounts so abundant for this period.

List of Valuation and Assessment Rolls held in Nithsdale District Archives

1. Burgh Court Records, 1516-1537. Lists of burgesses taking their "sowmes" of Burgh land for the year at the Whitsunday Heid Court.
2. Rental of 1548 — a fairly full rental of royalties in and around Dumfries (G. W. Shirley: These *Transactions* IIIrd Series, Vol. XXXIX.
3. Rental, 1674.
4. Rental, 1692-3.
5. Rental, 1703.
6. "Feu and Ruinous Ground Record" — runs from late 17th into 18th century.
7. Rental, 1712 — "Ane exact and Just account of the trew and real rent of the several lands tenements mills fishings and other hereditaments which are or have been subject to pay cess . . . estimated by the persons appointed by the Town Council's Act of 19th May 1712", This, unlike the earlier rolls, is alphabetical by surnames and has brief but adequate descriptions of the properties. It runs to 18 pages.
8. "Valuation of the Land Rent of Dumfries", 1722. This runs to 57 pages and has the same format as 1712, but with very full descriptions of properties.
9. Rental, 1732 — runs to 72 pages and includes at the end "additional" houses". Parallel with this volume runs another, apparently of the same date, drawn up by Lanrick the Town Clerk for his own use — this, though in poor condition, seems even fuller.
10. Feu Rental Record, 1731-1825.
11. Small Feu Register, 1755. This runs to 65 pages and gives very full details of properties arranged as in the 1712 and following volumes. Some entries bear reference to an

- earlier rental ("O. Rental No. ———"), and all items have a reference number at the side.
12. Small Feu Register, 1773 : its format is as for 1755 but on a double-page spread. It gives very full details of owner and property. Of its 147 pages a few have been left blank. There is added information on pasted-in or loose sheets.
 13. Supply Ledger, March 1787-March 1791, arranged in years : it runs to 127 pages, bearing name and occupation of each person in alphabetical order for each year.
 14. Book of Feu Duties and Ground Rents, 1789.
 15. Book of Feu Duties and Ground Rents, 1792.
 16. Ground Rental Record, 1795-97.
 17. Rental Arrears 1796-99. This is full and interesting, though in poor condition — it is in alphabetical order with names and trades but no detail of properties.
 18. Feu Duties — Ground Rents — 1805.
 19. Police Assessment Book, 1810 : this is a list of names in alphabetical order, with trades but no locations.
 20. Police Tax Arrears Book, 1810-14 — this has marginal notes such as "cannot pay", "relieved", "lost by neglect" and so on.
 21. Police Assessment Book, 1811.
 22. " " " 1812.
 23. " " " 1813.
 24. " " " 1814.
 25. " " " 1815.
 26. Property Tax Cash Book, 1813-19 — this, while carrying rather less detail on occupations than the Police Assessment Rolls, gives a long list of proprietors.
 27. Assessed Tax Report, 1814 — this is very full, with names and trades but no locations.
 28. Police Assessment Books, 1817-66. Each annual volume is very full, arranged by wards and streets, street numbers being given in some cases : trades, such classifications as "poor" or "cannot pay" and details such as "shops vacant" make these volumes highly informative. There is occasional duplication : for example, a "Feu Rental of the Burgh of Dumfries" covers the years 1819-26 : a book of "measurements of Footpath, Street and Crib Stones" for 1824 gives details of owners, trades and sites and a list of the vessels carrying the stones. Besides the individual volumes for 1823-27 there is a large, very detailed single volume covering the same period. A large undated valuation roll with full details of owners (in alphabetical order, and of properties, with columns for "valuation of houses", "valuation of land" and " $\frac{1}{3}$ of houses and $\frac{1}{3}$ of land", contains three rolls of different sizes and seems likely to date to the late 1830's or early 1840's — it includes the French emigre Perochon whose death date is known. There is a volume of Police Tax Arrears for 1827-33, giving names only, with wards, against the amounts owing, in no order.
 29. Land Tax or Supply Lists — 1841-45, annually and 1850-52, plus a Land Tax Record Book for 1857. The 1842-43 section has at the end a list of "houses building, 8th March 1842".
 30. Assessment Rolls, in pairs, one volume Wards 1-2 and the other Wards 3-4, for the upkeep of the Prison, etc., — 1860-1882, in annual volumes. These are followed by 8 more (undated) volumes and then by a series of annual valuation rolls continuing into the 20th century : these later rolls, however, contain little that is not in the printed Valuation Rolls.
 31. Expense Assignment Roll 1860-61 for costs of registration of births, deaths, etc., and of voters, in two volumes, by wards.
 32. Voters Rolls (printed) — a few, from the Reform Act of 1832 onwards, for Dumfries and one for Maxwelltown.
 33. Assessment Roll, Maxwelltown Prison Board, 1845-6 — gives much information.

WANLOCKHEAD and LEADHILLS - A BOTANICAL NOTE

by

J. D. S. Martin

Wanlockhill and Leadhills lie in the National Grid square 26/81. For this 10km. square, 280 species of flowering plants and ferns have been recorded. This is rather a low number, suggesting that it might be increased by further visits. Many of the plants are those characteristic of upland habitats or disturbed soil, e.g. spoil heaps. A selection of such plants is listed below:

<i>Antennaria dioica</i>	Mountain Everlasting	<i>Nardus stricta</i>	Mat-grass
<i>Briza media</i>	Quaking-grass	<i>Oreopteris limbosperma</i>	Lemon-scented
<i>Carex bigelowii</i>	Stiff Sedge		Fern
<i>Carex binervis</i>	Green-ribbed Sedge	<i>Parnassia palustris</i>	Grass-of-Parnassus
<i>Carex pulicaris</i>	Flea Sedge	<i>Pinguicula vulgaris</i>	Common Butterwort
<i>Coeloglossum viride</i>	Frog Orchid	<i>Polygala serpyllifolia</i>	Heath Milkwort
<i>Eriophorum angustifolium</i>	Common	<i>Pteridium aquilinum</i>	Bracken
	Cottongrass	<i>Saxifraga hypnoides</i>	Mossy Saxifrage
<i>Eriophorum vaginatum</i>	Hare's-tail	<i>Saxifraga stellaris</i>	Starry Saxifrage
	Cottongrass	<i>Scirpus cespitosus</i>	Deergrass
<i>Gentiana campestris</i>	Field Gentian	<i>Sedum villosum</i>	Hairy Stonecrop
<i>Juncus squarrosus</i>	Heath Rush	<i>Sieglingia decumbens</i>	Heath-grass
<i>Linaria vulgaris</i>	Common Toadflax	<i>Vaccinium vitis-idaea</i>	Cowberry

A brief field meeting was held at Wanlockhead in May, 1975, following the Annual General Meeting of the Botanical Society of the British Isles, which in that year was held in Dumfries.

This proved to be too early in the season for much plant growth at this altitude, but the hedges of *Ribes alpinum*, the Mountain Currant, which enclosed many gardens, were in young leaf. One plant of the uncommon little fern, *Botrichium lunaria* - Moonwort - grew by the roadside, and *Viola lutea*, the Mountain Pansy, was common on the spoil heaps. A single plant of *Draba muralis*, the Wall Whitlow-grass, grew at the base of the churchyard wall. This turned out to be the first record of the species in Dumfriesshire, although it had been recorded for Leadhills. It is generally very scarce throughout Britain, but is said to be a common weed in the Cornish market-gardens where anemones are grown for the cut-flower trade. It is tempting to imagine that its seeds arrived at this distant spot in a bunch of flowers laid upon a grave; but an alternative, and perhaps more plausible, introduction would be via some of the Cornish miners who are known to have been occasionally employed in the area.

THE WANLOCKHEAD CURLING SOCIETY

by

G. Downs-Rose

It is not known when 'Scotland's ain game' was first played at Wanlockhead. Certainly it had been popular for many years prior to the Curling Society's formation in 1777. When its first meeting was held on the 26th of December of that year the Society's minutes, which are complete, record there were one hundred and twenty-three members enrolled and that "John McCroan and Alexander Turnbull, who were formerly directors, were rejected. Not on account of having any disrespect for these persons but on account of having their residences in the country and consequently might be absent from plays when their presence was absolutely necessary."

One successful Dumfriesshire curling club once offered to play the moon but the curlers of Wanlockhead, the little lead mining village in the Lowther Hills, advised : "Ca' at Wanlockhead on the road up!" The club from the valley below did so and were soundly defeated.

That story has come down from the nineteenth century, at a time when the Wanlockhead curlers could look back over a century of triumphs.

The minutes tell us how the Society was founded. In 1776 the curlers of the lead mines were invited by the Sanquhar Society of Gentlemen Curlers, itself formed two years earlier, to engage in play between the townsmen and the parish, and a number were admitted to membership. On the 17th of January 1777 the village men petitioned the Sanquhar Society for permission to form their own club and this was granted in a letter of 22nd of December 1777 along with the right to transmit the mysteries of membership.

The latter consisted of **The Curler Word** : "If you be a Curler keen, stand right, look ev'n, sole well, shoot straight, and sweep clean." Also **The Curler Grip** : "Gripping the hand in the common manner of shaking hands is the gripping of the curling stone. The thumb of the person instructed or examined thrust between the thumb and forefinger of the examiner or instructor signifies a 'port'. The little finger of the person examined or instructed linked with the little finger of the examiner or instructor means an 'inring'."

Four days after receiving the letter the Wanlockhead curlers met, appointed their officers, directors or skips of the rinks, and drafted the Society's rules. These, given in full in the minutes, express the seriousness of the undertaking.

Down the years, amendments to the rules reflect changes in the method of play. Originally eight men to a rink played one stone each, and the stones were not reversible. In 1830 double-soled stones became popular, but their use was opposed by the Wanlockhead curlers. Lead-hills, the neighbouring club, when seeking a play in 1832 was given the Wanlockhead terms :

"1st Rinks to be forty yards long.

2nd That anyone using a double-soled stone should decide on which sole he would be playing and not change during the game."

In 1866 the new system of playing was introduced, with four men in a rink with two stones each.

From the Society's birth, the first local game played each season was a match between the married and unmarried men, or "the Lads" as they were known; though it is on record that many were bald-headed!

One of the earliest Lads' directors was William Symington of steamboat fame. A junior engineer at the lead mines, the minutes for the years 1783 and 1784 are written in his hand. Only twenty years of age he was designing a steam engine to challenge Watt's monopoly at the time, the forerunner of his successful 'Charlotte Dundas'.

Other than in the 'Lads' Play', unmarried men were banned from full membership of the rinks, being deemed to be under instruction by "the middle-aged and senior members of the Society, men who are held in general estimation for their strict integrity ..." which suggests the 'generation gap' is not new! About the time of the 'Disruption' the Lads formed a break-away Wanlockhead Curlers' Club, playing for their own award, the Radical Medal which "had on it the symbol of Liberty." They would, it is recorded, shout to their seniors: "Where's a' your men?" To which, with some point, the older men replied : "Where's your ice?"

Time softened this antagonism and the Lads were eventually absorbed into the rinks and the Radical Medal was awarded in the annual play between the upper half of the village against the lower half. The Lads' Play resumed its place as first event each season and was played from 1912 for a silver challenge shield presented by Sir Thomas, later Lord Dewar, who leased the Duke of Buccleuch and Queensberry's shooting at Wanlockhead.

The other annual local plays were for the Society Medal, purchased in 1832, the Championship Medal presented in 1843 by Dr. Watson, the village surgeon, and the Fraser Cup, presented in 1899 by Archibald Fraser a local benefactor. All these trophies have been preserved.

The problem of finding suitable ice, despite the altitude of 1500 feet, faced not only the

rebel Lads. There are no natural pools near the highest village in Scotland and the minutes record the making of a succession of dams "sheltered from the thaws of the southern and west winds." Their maintenance was the recurring task of the dam inspectors, and theirs appears to have been the most onerous of official roles, one not helped by the depredations of ubiquitous moles!

Early in their history the Wanlockhead curlers were playing at home to the Sanquhar men on a dam constructed by the mining company to store water to power hydraulic machines at the mines. On this occasion, unknown to the players, the water had been drawn off overnight and when play was at its busiest the ice cracked with the sound of thunder and dropped six feet to the water!

What the moles constantly strove to do but failed, the Light Railway built in 1902 from the Caledonian main line at Elvanfoot to Wanlockhead, accomplished. Its track was laid through the Society's dam at Hill End and the £200 paid in compensation was used to make a fine large pond behind the railway station above the village. Its cost contrasts with that for a dam built by the Society in 1778 for fourteen shillings.

The last pond used by the Society was of tarmac and constructed in 1923. Today it presents a rather forlorn memorial to the generations who played 'the roaring game'.

The close relationship with the Sanquhar Society was maintained down the years, each club playing on the other's ice annually. Often the two Societies joined forces to play against the more numerous rinks of the New Cumnock coal miners from Upper Nithsdale. The last matches against Sanquhar were played in 1940 only four years before the village's rinks turned out for the final game.

Such matches were known as the 'foreign spiels', and for them the village would muster eight to twelve rinks with ease and still have lower-station rinks from which to supply replacements. Permission was given by successive mine managements for the men to take time off from work to play, though the lost time had to be made up beforehand or afterwards. It was a common sight to see a hundred curlers and their supporters trudging the eight tiring miles over the old hill road to Sanquhar, while the carts carrying 'the stanes' rolled down the longer Mennoch Pass route.

Most exciting of all were the 'bon spiels' when the Wanlockhead curlers sent their best rinks to compete for the District, County and National trophies. If the coming of the railway destroyed a favourite dam it nevertheless made travel possible to distant places. In 1912, already holding the Nithsdale District Cup and the County trophy, the Waterlaw Cup, the curlers went on to win the Carsebreck Trophy in the national competitions between the rinks of the North and South.

When news of the Carsebreck success reached Wanlockhead by telegram the villagers turned out with the silver band at their head to greet the victors, and the skips of the rinks were carried shoulder high from the railway station to a celebration feast in the village hall.

There were to be many more successes, such as winning the District, County and Province Cups in 1929, and the County Cup for the third time in 1933. That cup thus became the property of the Wanlockhead curlers but they generously loaned it back to the Dumfriesshire Curling Association to be played for.

The history of the Wanlockhead Curling Society is the story of individuals whose dedication, prowess and leadership both in the rinks and as officials was second to none, and no man gave more to curling than John Edmonds, village school master at Wanlockhead for nearly forty years. Joining as a member in 1883 he was skip of a rink and president by 1889, which office he held until his retirement in 1920 when he was made honorary life president.

It was under his leadership that the Society went from strength to strength, and perhaps his greatest contribution was to found in 1883 the Wanlockhead School Curling Club. Many years later he was to speak with pride and not infrequently in verse of the skill of grown men whom he had painstakingly encouraged from boyhood :

"We've seen wee callens 'fore the doors
 Their wudden ice-stanes fling,
 The same tee totums, men grown, place
 Three stane stanes in the ring."

This unique boys' curling club gained the interest of the Royal Caledonian whose chaplain in 1908 wrote asking for an account of the club and photographs of its members. During most of its fifty years of active life the club would play with four to six rinks of boys whose names occur later in the annals of the Society. The school club had its own honours too, the Fraser Silver Bowl, the School Medal, and the Wilson Medal.

Not only is the ice more fickle these days, but when the lead mines closed the community dwindled in size and it is thirty years since the Society was active. The last of the school boys trained by John Edmonds are past their curling prime, and few of their fathers are left. But the days of the 'Roaring Game' survive and are vividly recalled by the excitement of memories. There is more than a hint of yearning in the nostalgia.

However, the 200th anniversary of the Society was not marked by even a temporary revival of the game. In 1977, the Museum of the Scottish Lead Mining Industry at Wanlockhead had a special display of trophies, medals, photographs and documents, and published a poster and postcard to commemorate the occasion. As memorials, a few pairs of curling stones flank some Wanlockhead doorsteps, and polished brass handles rest on modern tiled fireplaces in cosy cottages.

Conceivably, modern technology will change all that, imposing that abundance of leisure which will make an ice-drome at Wanlockhead prescriptive. Then John Edmonds' appeal :

"May cradle weans grow curlers yaul,
 Ne'er let oor auld club tine.
 An' may we see her winnin' cups
 In Nineteen Ninety Nine!"

would be vindicated — but only the old miners, with their imagination and optimism, would accept that as a possibility.

SUICIDE-STONES FROM LOWTHER HILL, WANLOCKHEAD.

by A. E. Truckell and J. Williams.

The former crime of suicide was one regarded with particular horror in the Scotland of two and three hundred years ago — a sense of that feeling is given by a passage contained in one of the notebooks maintained by Dr. Thomas B. Grierson, a founder member of this Society and of the former well-known Museum in Thornhill (See these *Transactions* IIIrd Series, Volume 43, 1966, pp. 65-72). :

"Joseph Brown an old shepherd told me that a James Walker, farm servant at Burn in Morton [parish] committed suicide by hanging himself in the stable of the farmhouse, the people would not take his body out of the house by the door, but made an opening in the wall by which they removed it and they took the body to the top of the Louder [Lowther] hills where the[y] buried it leaving everything that they had taken with them to remove the body, only bringing back the horse, he also mentioned that the beam in the stable on which he had hung himself was taken down, I do not know exactly the date but it was when Joseph Brown would be a boy. He did not witness the burial. May 1874."

A further, rather better-known description of this practice is given in John Brown's short publication on *The Enterkin* published by Craufurd Tait Ramage in his *Drumlanrig Castle and the Douglasses* : J. Anderson & Son, Dumfries, 1876.). p.10.

"On its [Lowther Hill] summit the counties of Lanark and Dumfries meet, as also three lairds' lands, and here it was the custom, up to fifty years ago, to bury suicides. Any more solitary and out-of-the-world place could hardly be conceived. The bodies were brought from great distances all around, and, in accordance with the dark superstitions of the time, the unblest corpse was treated with curious indignity — no dressing with grave-clothes, no *srieking* of the pitiful limbs; the body was thrust, with the clothes it was found in, into a rude box, not even shaped like a coffin, and hurried away on some old shattered cart or sledge, with ropes for harness.

One can imagine the miserable procession as it slunk, often during night, through the villages, and past the farmsteads, everyone turning from it as abhorred. Then, arrived at this high and desolate region, the horse was taken out, and the weary burden dragged with pain up to its resting place, and carried head foremost as in despite; then a shallow hole dug, and the long, uncouth box pushed in — the cart and harness left to rot as accursed. The white human bones may sometimes be seen among the thick short grass; and one who was there more than fifty years ago remembers with a shudder still, coming — when crossing that hill-top — upon a small outstretched hand, as if one crying from the ground; this one little hand, with its thin fingers held up to heaven as if in agony of supplication or despair. What a sight, seen against the spotless sky, or crossing the disc of the waning moon!"

On first December 1949 a workman at the Lowther Radar Station site presented to the Society, via one of the Writers (A.E.T.), a piece of Silurian greywacke, 180 x 95 mm., bearing an inscription (Fig. 5 upper), which he had found, along with a skull, whilst preparing the



Fig. 5 : Suicide-stones from Lowther Hill (x $\frac{1}{2}$).

foundations of the building — he noted that some fifteen of these inscribed stones had been found. The thinly cut lettering is rather elegant and reads "WK 1767 E 25"; there are three deeply incised parallel scores preceding the letter "W", and presumably the letter "E" is an abbreviation for "AETAT" — aged. Almost a year later, on 20th November 1950, Mr Syme, Wanlockhead, a foreman, with the then Ministry of Transport, on the Lowther Radar Station, brought in, on loan from the Ministry of Transport, a small block of buff-coloured sandy Silurian rock, 200 x 115 mm., bearing a neatly cut inscription "C.C.A.I, 1756", (Fig. 5, lower), found on the same site, and at the same time, as the others mentioned above. The presence of two sets of initials is unusual : "A" is, in our district, rather more common as a feminine initial than as a male — could this represent a Suicide-pact?

Both stones are of fairly soft material and the inscription in each case has probably been cut with a strong pocket-knife. Both stones lie within the material available in the soil of the mountain-top. It is hoped that the publication of this note may bring in to the Museum some of the other stones, which are known to have ended up in gardens or in cottages : Most should be in the mid and upper Nithsdale area, the Wanlockhead/Leadhills district, and perhaps as far away as Crawfordjohn and Crawford, as the workmen employed seem to have been drawn from, or to have been lodging in, this district.

WANLOCKHEAD ROADS

by James Robertson

The following references to roads in the Wanlockhead neighbourhood are taken from the Minutes of the Fourth (Upper Nithsdale) District Turnpike Road Trustees.

At Dumfries 5/8/1789 — The Committee reported to the general meeting today that there ought to be Four Tollbars erected between Dumfries and Ayrshire the first to be at the north end of the Bridge over Clowden, the second at or near the Bridge over Clauchrie Burn, the third at the foot of the Mennuick Road, the fourth at the Cairn Burn. (Note — at that time the turnpike road from Dumfries by Sanquhar to Ayrshire and Glasgow was intended to go by Sanquhar and Muirkirk and not by Kirkconnel and the Cumnocks).

At Thornhill 2/10/1790 — A memorial was presented to the meeting from the Lessees of the Mines at Wanlockhead in the following terms "Whereas it was agreed by a general meeting of the Gentlemen of the County of Dumfries to have the road leading from Wanlockhead amongst the Water of Menock to where it joins the Great Turnpike Road at Dalpeddar, and to have given a side bar entirely for the support of Menock Road included in the Act of Parliament in consequence of the Lessees having put the said road in the most complete repair at a very considerable expense which was of infinite utility to the Public. But for want of the necessary notifications this road is not included in the Bill by which there is no fund for keeping it in repair. The Lessees propose to keep the said road, in consequence of the Resolution of the Gentlemen, in constant repair from Dalpeddar hass to Menock hass, on the Trustees permitting all the carts with coals and cynders for the use of Wanlockhead from Sanquhar to be free of Toll, they only travelling about two miles upon the Turnpike Road, and will have six miles to support at their expence. The Lessees will provide Tickets to all the carts they employ to prevent any sort of fraud.

Wanlockhead
8th Oct. 1791

(signed) Gilbt. Mason
acting partner.

It is to be understood that this agreement is only to subsist while the Company keep two fire engines to draw water from the mines.

G.M.

"

The meeting unanimously agreed to this proposal which has all along been mentioned at former meetings and understood to be the agreement between the Trustees and Lessees.

(Note — the two fire engines mentioned were steam driven pumps operated by coal-fired vertical boilers, one of which, if not both, was situated on the hillside and immediately east of the present road and about a mile south of Wanlockhead, at the part locally called "Engine-house Brae").

At Sanquhar 5/6/1792 — It was reported that the Tollhouse at Mennochfoot was burned down by accident in May last and immediate repairs had to be undertaken..

At Thornhill 28/3/1795 — The Trustees having considered the Memorial given in formerly by the Lessees of the Mining Company at Wanlockhead and heard the tacksman at Mennoch Bar and others as to the exemption claimed in consequence thereof, they are of opinion that that exemption is only meant to free the carts passing the said Bar with coals for the use of the Mining Company's Works, not carts with coals for the inhabitants of Wanlockhead and the neighbourhood as they are certain it has been in a great measure owing to abuse as to this point, and the Lessees not giving Tickets as they had engaged to do that the Bar has not been let this day, they direct the clerk to send a copy of this Minute to Mr Mason and to request that he would give directions that Tickets should be regularly given to carts with coals for the Company's Works in time coming and to none other and that he would return an answer to the clerk betwixt and the next meeting at Dumfries on 15th. April next ..

At Dumfries 15/4/1795 — Reply from Mr Meason —

"Edinburgh, 6th April, 1795 . . . I duly received your favour of 30th past with the Minute of the Trustees on the Turnpike Road by which it would seem the Trustees have not looked at my proposals of 8th. Oct. 1789 registrate by you at Thornhill, 15th. Sept. 1790 wherein I particularly mentioned all the carts with coals and cinders for the use of Wanlockhead and it was then understood that the coals for the use of the men as well as the Works were to be free of Toll and the want of Tickets is of no consequence as there was a list of the carters always sent to the Tacksman and whenever any of them was turned off or new ones engaged, the Tollman was regularly advised of it so that there was no fraud committed by our people . .

You will therefore please acquaint the Trustees that we have kept Mennoch Road in full repair, which the whole country have the benefite, at a very great expence, as all the carriages to Dumfries, Galloway and all Nithsdale come that way by which they draw Toll and if the country what keeps Mennoch road in repair I shall be very well satisfied to pay Toll for all our carts with coal, as it is now the only road into the county but the cause of the Toll not setting is owing to Mr Baker not having good coals to supply the country which I hope will soon be remedied if he consults his own Interest.

(signed) Gilbt. Meason

At Thornhill 21/5/1795 — The Meeting having resumed consideration of the exemption formerly given to the Wanlockhead Mining Company, with the letter from Mr Meason of 6th April unanimously Resolved that from and after 26th curt the said exemption shall cease, and that the said Bar shall now be exposed to Roup with power to levy Tolls on every carriage passing the Bar on the Road leading to Wanlockhead and the Trustees agree that from the said 26th. curt that the road shall be upheld out of the public road funds . .

At Sanquhar 2/6/1795 — The Meeting agreed with John Kirkhope in Sanquhar to uphold the road from Mennoch Tollbar to Wanlockhead for seven years at the rate of £20 yearly whereof £10 to be paid out of the Road Funds of the Parish of Sanquhar. As the said road is apt to be blown up with snow, the Meeting empower Mr. Gilbert Mason, when the same happens, to employ people to clear the road for which the Trustees shall allow what shall appear reasonable . .

Under an Act of Parliament in 1801, the road from Mennoch Tollbar to Wanlockhead

became a Turnpike Road and shortly thereafter the Tollhouse and Bar at Wanlockhead came into action . .

At Thornhill 18/7/1814 — The clerks reported that John Smith, Tacksman of Mennock Bar, notwithstanding their utmost exertions, has run considerably in arrears; that they had raised ultimate diligence against him and his cautioner Francis Bell; that Smith has lately been poided and thrown into prison, but that his cautioner has suspended under the allegation that his name has not been adhibited to the Bond of Caution for said rent and in the meantime Smith has applied to the Magistrates for the benefit of the Act of Grace . .

The meeting direct the Treasurer to lodge aliment for Smith until the fate of Bell's suspension is known . .

At Thornhill 23/7/1814 — Petition from William Blackwood, Cautioner for John Smith, Tacksman at Mennock, for the current year's rent offering to pay what rent may be due at the present time and requesting that on his doing so, the Trustees would take the Bar off his hands in regard Smith is now a prisoner in Dumfries Tollbooth as noticed in the last minutes. The Meeting think it advisable, as the case of the Petitioner appears hard, to call a new Roup of the said Bar for the $\frac{3}{4}$ of the year from Lammas next and on the Petitioner paying up the rent to that period as he proposes, the Trustees will sustain the half of the loss that may arise between the present rent and what the Bar may bring at such roup.

Under the annual accounts on 6/6/1815 the following item of expenditure is given —

June 6 To aliment to John Smith in Jail 241 days £14-1-0.

The minutes are thereafter silent on John Smith and Francis Bell.

(Note — The Tollbars on the Turnpike Roads in the County were let by Public Roup each year, the Articles of Roup stipulating that each successful bidder had to provide security and an acceptable Cautioner for the due fulfilment of the contract. In many instances the rents offered to and accepted by the Trustees at the annual roup obviously proved to be too high for the actual amounts of Toll collected at the Tollbars and many of the Lessees or Tacksmen soon fell into arrears in the payment of their rents which were due each quarter and these arrears continued over several years. No doubt to alleviate this situation several of these Tollkeepers also had contracts at the same time for the repair and upkeep of parts of the Turnpike Roads.

The clerks to the Turnpike Trustees at this time were Messrs Goldie and Threshie, Writers, Dumfries.

It is of interest to note that a Toll Board showing the several Toll charges levied for vehicles and animals and, no doubt, in use at Wanlockhead Tollbar is now an exhibit in the local museum at Wanlockhead) . .

After the abolition of Tolls on the Turnpike Roads of the Fourth (Upper Nithsdale) District from Whitsunday 1867, the only road at Wanlockhead maintained as a public highway was the throughgoing main roads from Mennock to Wanlockhead and Leadhills, all the other side roads in the village remaining as private roads, the upkeep of which was the responsibility of the proprietors and occupiers concerned. This state of affairs continued until the mid-1930's when, after many representations by the householders, the dwelling houses by that time being individually owned mostly by people in straitened circumstances owing to the derelict state of the local mining industry, Dumfries County Council agreed to accept the local roads as public highways and be responsible for their upkeep and maintenance, after they had been brought to the required standard of construction. In the normal circumstances, the initial cost of bringing roads to the required standard for adoption as public highways had to be met by proprietors and other interested parties concerned . . owing to the special circumstances at Wanlockhead then prevailing, the County Council ultimately agreed to provide materials, plant and labour with the assistance of such local labour as was available being given by the inhabitants of the village . .

A final item of interest regarding road materials is that considerable use was made of

the large spoil heaps of waste materials from the mining industry as hard core and gravel surfacing for roads in the neighbourhood. Owing to the high content of various salts in this waste material, much of this salt was dissolved during wet weather and appeared as a greyish-coloured liquid along the roadside channels — although it was perhaps not recognised as such until later years with the more general application of salt for the chemical treatment of ice and snow on roads, this waste material had an undoubted beneficial effect as a road material in this direction.

THE WANLOCKHEAD SILVER BAND

by the late George Gracie, with an introduction by G. Downs-Rose.¹

Introduction

It is singular, in a village whose institutions' records were assiduously kept, that the minutes of the Wanlockhead village band survive only for the period from 1911 to its demise in 1962.

Local tradition puts the band's origin much earlier than the mid-nineteenth century, by which time its music was a necessary accompaniment at village marriage processions. The minutes of the Curling Society, formed in 1777, refer to the band as playing at bon spiels and the author of the following article, writing in 1922, states with conviction that it "was formed well over a hundred years ago".

A band minute for the 5th August 1911 records that "the band was one of the old institutions of the village, being over a century old". The occasion was the election of a new band committee, a revision of the band Rules, and the purchasing of a set of new silver band instruments costing £285.

The band had by that time established for itself a local reputation by playing in the villages and towns around Wanlockhead, and a wider one through its successes at minor band contests. With the coming of the branch railway from Elvanfoot in 1902, and the "new machines" — as motorised charabancs were first described in the band minutes — the players were enabled to undertake more engagements and enter national contests.

The article below was written at a time when the band's popularity and successes were increasing. Besides taking part in contests in the South of Scotland, it fulfilled a heavy calendar of engagements at fetes, shows and sports days in Dumfriesshire, Lanarkshire and the Stewartry. At home, it encouraged enthusiastic support by giving frequent concerts and parades, marching every New Year's Day around the village "whenever weather and the roads permitted".

The band became affiliated to the Scottish Amateur Brass Band Association and, in 1926, won the Fourth Class Championship Shield, becoming thereby of Third Class rank. Unfortunately, within a few years its fortunes, with those of the village's other institutions, suffered setbacks from which it never recovered.

In 1932 the lead mining company began to pay off its workers. Good players left the village to work for other firms who were glad to obtain such instrumentalists for their own bands. In 1935 the band committee met to call in the instruments. The outbreak of war followed the mine closures. But in 1946, despite the problem of training young, inexperienced players, a determined attempt was made to re-form the band. For two years band practices were held regularly and some engagements outwith the village — such as the Sanquhar Riding of the Marches — were undertaken.

All proved too difficult. There was no work locally for young men returning from the services and, as they left the village for distant parts, the band instruments were again collected in. After fourteen inactive years the band committee met a delegation from Leadhills Village Council on the 28th September 1962 in an attempt to form a joint band. It came to nothing, and the instruments were later sold to Leith Band.

1. Mr Gracie's Article is reprinted with kind permission of Dumfriesshire Newspapers Ltd.

It is worth noting that the author of the article 'Wanlockhead Silver Band' was George Gracie, a member of a musically gifted family of Wanlockhead lead miners. The Gracie family lived in the cottage which still stands in Old Library Row where, until 1850, the Miners' Library books were housed. The Gracies were avid readers and George himself is reputed to have left a large book collection.

He was the son, by a second marriage, of Thomas Gracie, music teacher and, from 1911 to 1918, bandmaster for the village band. George's step-brother, Thomas Grierson Gracie, also a musician, is remembered locally for his 'Songs and Rhymes of a Lead Miner', published by the Courier and Herald Press, Dumfries, in 1921, and 'The Grey Glen' a series of articles on Victorian Wanlockhead written for the 'Hamilton Advertiser' and 'County of Lanark News'.

In 1918 George succeeded his father as bandmaster, holding the position until 1924, and he remained an active member of the band committee until the second world war. He left no family of his own but his nephew, William Watson, lives at Wanlockhead. He, in the Gracie tradition, has a fine singing voice, a fund of reminiscences, and a gift for making the past come alive. I am indebted to him for these brief notes on the Gracie family.

Wanlockhead Silver Band

brief history of famous
combination.
(Contributed)

WANLOCKHEAD band was formed well over a hundred years ago. It has had many ups and downs, but has never been defunct for any length of time. Prior to its inception instrumental music was supplied by flutes, fiddles, and clarionettes, and occasionally the wail of the bagpipes resounded through the glen. The first of the brass to appear was the bugle. This primitive instrument, having no keys and only used when the music was in accord with its open notes, was soon displaced by the cornopean — the father of the present day cornet. The ophicleide and the bassoon were introduced for bass parts, and circular French horns for tenor and alto parts. Slowly, very slowly, funds being very difficult to raise, the bassoon and ophicleide were discarded in favour of the Eb bombardon, and the trombone, baritone, and euphonium made a first appearance.

With a very faulty and inferior instrumentation the band struggled on for years, fulfilling engagements all over the district. The Duke of Buccleuch — the present Duke's grandfather — on the occasion of a visit to Drumlanrig Castle of the Prince of Wales, required a band, and sent for the Wanlock combination. He was much impressed with their playing and appearance on that occasion, but was musician enough to know that they were heavily handicapped with such poor instruments. Without saying anything of his intention he, as soon as possible, remedied this by presenting them with a complete set of Besson's A class. His Grace's kindness did not end there, for he also supplied them with an English teacher (Dewhurst), under whose tuition the members soon justified his confidence in, and kindness to, them by taking first place at Stirling and second place at West Calder Brass Band Contest in 1870. While the Duke lived he continued to take a keen interest in their progress, and by his demise the Wanlockhead band lost its best friend.

Since that time the band has been kept up with varying success. The loss of young players, leaving for foreign parts, told heavily against it at times, but there was always a sufficient number of enthusiasts left to keep the life in the band and train up the rising generation in the playing of the different parts. When the instruments presented by his Grace, supplemented by a number of others from different makers, became completely worn out, a strong effort was made to secure a new set. Supported by the Fraser brothers, the natives of the glen who had gone to near and far countries, and with the unanimous help of their own village, and generous assistance from the neighbouring village of Leadhills, the effort was a complete success, and the result a full set of Boosy's best silver instruments, which have stood the test of ten years' hard use without deteriorating in tone or appearance.

The band is now fully equipped with a fine uniform, a comfortable hall in the Fraser Memorial Institute in which to practice. Up-to-date music, the nucleus of a good fund, a management committee, the villagers and friends at their back, ready to support them in any reasonable request, also the goodwill and kindly consideration of the mines' managing officials. To their credit, it must be said that the members are taking full advantage of these conditions. The band is in better form than it has ever been in its history, and there is little doubt a Rimmer, a Sutton, or any of these famous teachers could soon bring it into class form and give it a chance to emulate its predecessor of 1879 by bringing home the honours.

In looking back at the old band, it is borne in upon us that their love of music and enthusiasm must have been wonderful. In those days there were no motor cars or even horse-drawn vehicles to convey them to an engagement outside their own village, and their only mode of travel was 'shanks' naigie'. Long distances had to be travelled, and it was no uncommon thing for them to tramp as far as Thornhill — a distance of fourteen miles — give a good account of themselves in a hard day's playing, and return home in the evening, marching bravely into the glen playing the 'Return' march they could play in pitch darkness. How many of our present-day bandsmen would face that? None, I'm afraid, and we must admit our enthusiasm to be lukewarm compared with that of the old bandsmen.

Interest in the band was not confined to the band members and it had a large following when it made an outside appearance. There was on one occasion when returning from Thornhill by way of Glenim an amusing example of this interest. The shepherd followed the band, being very keen to have a whack at the drum. At last, in despair of having a try, he offered to carry it two miles if the bandmaster would allow him to have three whacks at the end of his stipulated journey. Needless to say his offer was accepted.

There was one notable exception to those who were keenly interested in the person of the manager of the mines, who made progress for the band very difficult by refusing a suitable practice room and in refusing to allow the members to arrange their work so as to get away to engagements. The members rebelled against this last, but must always have been in fear of losing their work by such an attitude. His antipathy to the band was carried too far when he kept up the instruments presented by His Grace, which had been forwarded to the mines' office for distribution, and it was only after the bandsmen had threatened to appeal to the Duke that he gave way. Each player had to go to the office in turn, receive his instrument, listen to a few unkind remarks, and thank their master, to whom no thanks were due. Some things are better to be buried and forgotten, but I mention these facts to show what the old bandsmen were up against. An incident that happened at Thornhill proves to my mind that deep down in his heart he admired the bandsmen for their spirit. The band was playing in front of the Buccleuch Hotel. The mines' manager was inside, in company with a few other gentlemen, and on hearing the band being

praised by the gentlemen in his own company, he exclaimed, 'They are all my men, the best in the country. It is my band.'

The history of the band is full of incidents, humorous, pathetic, almost tragic, which want of space will not allow me to enumerate, and I am compelled, reluctantly, to drop the subject. May the progress of the band continue, and may its members always look back into its past history, to the forefathers from whom they inherit their musical ability with admiration and pride.

For noo they've a' gane frae amang us,
Nae mair will their music inspire,
But surely the Maister has taken them
To play in the Heavenly Choir.

G.G.

27th July, 1922.

THE DAY BOOK (1742-50) OF WILLIAM HENDRY, A WANLOCKHEAD AND LEADHILLS MERCHANT

by James Williams, F.S.A.Scot.

William Hendry, or Henry, was a Wanlockhead and Leadhills merchant who died in the early part of April 1757: His testament, with its interesting "Inventory of the Goods & Gear and sums of money", was subsequently registered in the Dumfries Commissariat Records on 12th September of the same year. His son Patrick, a weaver in Glasgow, was declared Executor Dative *qua* nearest in kin and the value of the goods in his Father's possession at the time of his death were realised by a Public Roup Sale held in Wanlockhead (Warrant dated 11th April 1757). This sale was conducted by Thomas Williamson, merchant there, and Alexander Telfair, "struntian", miner, also of Wanlockhead: James Telfair, an inn-keeper in the village became Cautioner. Extracts have been made from this interesting document and are appended to this note: From the list of goods and possessions it provides it becomes obvious that Hendry was what we would now term a General Merchant. This information from the testament can be further complimented by a manuscript day-book kept, by Hendry himself, for the period 1742-50 and now retained among the *Miscellaneous* archives of Nithsdale District Council. The volume is leatherbound, 3½ inches x 11½ inches in size, and somewhat bent and contorted — no doubt due to being improperly stacked at some time in the past. It contains some 90 folios which, excepting the last six, are completely filled with details of the sums of money owed for various commodities. From additional loose documents, retained with the volume, it can be seen that Hendry was certainly in business so early as 1739 — In confirmation of this statement it should be noted that there are many references, within the day-book, such as "see other book" and "see earlier book".

The actual commodities dealt in were quite varied and included, besides comestibles, materials to be used in the repair of dress, chemicals for dyeing, paper, and books. Among William Hendry's suppliers were the "Airdry Brewerie" and the Dumfries Merchant-firm of [Robert] Maxwell and Rorison. An account by this latter firm is extant for the period 31st August 1739 — 7th May 1740 and is not without interest as it presents a reasonably representative picture of the commodities dealt in and it is reproduced below¹ :—

1. Besides the materials recorded in Maxwells & Rorison's Account the following commodities might be recorded from the day-book itself — Soap (white, black and "casteell"), Snuff, Tobacco ("baco" and "twist"), "trackle", malt, "unions", garlick, gingerbread, cake, plums, "fruit", "copros" (copperas = ferrous sulphate), starch, clog "takets" and "cakers", candles, cord, thread (various colours), corks, and "drams" — this last-named item readily identifies the regular imbibers of the district! Further stock-in trade will be noted in the testament (q.v.) — the list of books being of particular interest.

William Hendry at Leadhills.

Bot. of Maxwells and Rorison.

			£.	s.	d.
1739.					
Augt. 31.	16 lb. Rice	3d.		4.	0.
	16 lb. Kit[chen] Sugar	4½d.		5.	8.
	4 lb. Indigo	4½d.		17.	8.
	½ lb. Galls				5.
	4 lb. Red Braziel			3.	0.
	8 lb. Bright Mader	5d.		3.	4.
	8 lb. Hops	7d.		4.	8.
Sept. 5.	3 pocket Books	7d.		1.	9.
	1 lb. Nutmegs			10.	6.
	30½ [16 lb.] Loaf Sugar	7½d.		18.	11.
	6 lb. Jaimeca Pepper	10d.		5.	0.
	12 lb. Black Do.	17d.		17.	0.
	6 lb. Carvie seed	3d.		1.	6.
	4 lb. Race Ginger	4d.		1.	4.
	1 Firkin Sope		1.	4.	0.
	1 Cts. [i.e. hundredweight] Raisens		1.	12.	0.
[Sept. 20.]	1 lb. Floss Sulphur				6.
	8 lb. Bright Mader	5d.		3.	4.
	16 lb. Allum 3/-, 16 lb. Rice 4/-			7.	0.
	1 pair Cairds			1.	5.
	16 lb. Kit[chen] Sugar	4½d.		5.	8.
[Sept. 26.]	6 lb. Logwood	3½d.		1.	9.
	1 lb. Floor Anniseeds			1.	6.
Novr. 12.	2 lb. Clove Pepper	10d.		1.	8.
[Novr.] 24	¾ Cts. 8 lb. Raisens	94/-	1.	7.	11.
	8 lb. Currans	5½d.		3.	8.
	8 lb. Figs	3½d.		2.	4.
	6 lb. Black Pepper	18d.		9.	0.
	16 lb. Pruns	2½d.		3.	4.
	4 lb. Indigo	4/6		18.	0.
	1 firkin Sope		1.	4.	0.
	12 lb. Anniseeds	6½d.		6.	6.
	1 pint 6 Gills Vinigar & Botle 8d.			1.	[5½.]
	1 pint 6 Gills S: oyle & botle 20d.			2.	7½.
	12 lbs. Ligs Ball	8d.		8.	0.
	8 lb. Mustard	5½d.		3.	[8.]
	36½ lb. Lump Loaf [i.e. Sugar]	8d.	1.	4.	2.
			£15.	9.	2½.
[page 2.]	Brot. over		15.	9.	2½.
1740			£.	s.	d.
Feb. 4.	16 lb. Rice	3½d.		4.	8.
			£15.	13.	10½.
Apr. 22.	2 Qrs. 17 lb. Raisens	46/- p. Ct.	1.	10.	0.
	2 St. 4 lb. Allum	3/-		6.	9.
	1 lb. Nutmegs			10.	0.
	16 lb. Figs	3d.		4.	0.
	16 lb. Pruns	3d.		4.	0.
	8 lb. Currans	6½d.		4.	4.

		£.	s.	d.
	2 lb. Floss Sulphur		1.	1.
	1 firkin London Sope	1.	6.	0.
May 7.	5 pints 1 Mut[chkin] Venigar 8d.		3.	6.
	2 pints 3 Mut. S: oyle 22d.		5.	0½.
	1 pint 6 Gills Black beer 18		2.	1.
	½ lb. Cinamon		5.	0.
	7 Botles 4d. p.		2.	4.
		£20.	18.	0½.

May 9. 1740. Received Twelve pounds Stg. in part
of the above accot.

Rests ... £8 18. 0. Stg.

[initialled]
Rote Maxwell & Coy.

An extensive list of persons [204] from the Leadhills/Wanlockhead area is provided by the volume and is reproduced below :— It should be of considerable interest to the genealogist and family-history researcher.²

Adamson, John —	 Samwell —	Edgar, Thomas —
..... William —	Carmichael, John —	Elder, Margaret —
Alexander, James —	[30] Carsan, James —	(?) Elme, Thomas —
..... Robert —	Chrystie, James —	Falconer, Archbold —
[5] Allan, John —	Clatchie, Thomas —	[60] Ferguson, Christian —
Anderson, Agnes —	Clerk, James —	 William —
..... James —	Cosh, Thomas —	Foull[i]s, Androu —
Baird, John —	[35] Cranstoun, Thomas —	Foull[i]s, Daniell —
Barbour, Robert —	Creighton, Janat —	 John —
[10] Barnie, Thomas —	 Thomas —	[65] Fradrick, John —
Barr, William —	Crosbie, Thomas —	Gardner, James —
Black, Edward —	Cunningham, Chris-	 William —
..... John —	tall —	Gibson, James —
..... William	[40] Michael —	 John —
[Sanquhar.]	 Ninnian —	[70] Gilchrist, James —
[15] Bon, Alexander —	Currie, Androu —	Gray, James —
Boyd, Margaret —	Cuthbertson, James —	Haddin, Duncan —
(?) Bread, Thomas —	 William —	Hair, Archbold —
Bridon, Thomas —	[45] Dallyell, Andreu —	Hamleton, John —
Brodie, Thomas —	 George —	[75] Matheu —
[20] Broun, Alexander —	 John —	Harkness, James —
..... Samwell —	 Robert —	Harres, James —
..... Thomas —	 William —	 John —
..... Thomas	[50] Dickson, James —	Harvey, Mr —
[Crauford.]	Dobson, Jooram —	[80] Henderson, John —
Bruce, Robert —	Douglas, William —	Houatson, James —
[25] Cameron, Dougall —	Doweall, William —	Hunter, John —
..... Duncan —	Dunsop, James —	 Samwell —
Campbell, John —	[55] Dyer, James —	[“miener”.]

2. An additional list of names could be provided by a second document in the Nithsdale District Archives — a fragment, representing pp 109-168, of a Sanquhar Pharmacist's Account Book for the period 1742-46. Besides providing details of the pharmaceutical wants of the inhabitants of the former burgh it also records a considerable number of Wanlockhead residents. It has been earlier mentioned in these *Transactions* (IIIrd. Series, Volume 39 p. 151) when an interestingly high number of anti-scorbutic remedies was noted as being dispensed to the Wanlockhead residents: There is no doubt that the document would amply repay a more detailed study.

- | | | |
|---------------------------|--------------------------|--------------------------|
| William — | McDonald. Alex- | Robert — |
| [85] Hyslop. James — | ander — | Shanklan[d] |
| John — | Donald — | William — |
| ["Haslops".] | [125] McDonald. John — | [165] Sinklers. John — |
| Robert — | Mceuan. William — | Smith. James — |
| ["Hislops".] | McKlur. John — | Robert — |
| Ingram. John — | McLeerie. John — | ["Morton".] |
| Jarvie. John — | (?) McMifyer. Wil- | Stevenson. John — |
| [90] Kearnis [& 'Kearns'] | liam — | Taylor. John — |
| William — | [130] McMillan. Andreu — | [170] Telfer. Agnes — |
| Killop. James — | James — | Alexander — |
| Killpatrick. George — | Mcniell. Daniell — | John — |
| Ladho. John — | McNat. James — | ["chap".] |
| Lammie. James — | [or "Mcmat".] | John — |
| [95] Lanosay. Samwell — | Orr. John — | ["washer".] |
| Larnon. Coll — | [135] Park. William — | [175] John — |
| Lau. Isack — | Parker. Robert — | William |
| John — | Patterson. James — | ["Mr".] |
| Samwell — | John — | Tennant. Androu — |
| [100] William — | ["gufock" & "gu- | Thomson. Chris- |
| Lightbodie. Alex- | fockland".] | tian — |
| ander — | Patton. John — | T'ood. Thomas — |
| Lindsay. James — | [140] Mrs — | [180] Treadall. George — |
| John — | Penman. John — | Walker. James — |
| Thomas — | Phillip. William — | Samwell — |
| [105] Logan. James — | Person. Robert — | Wansold. Samwell — |
| John — | Pierson. John — | Warfield. Samwell — |
| William — | [145] Pollock. John — | [185] Watson. George — |
| Laramuir. John — | Porter. John — | James — |
| ["neuhouse" & | Robert — | Robert — |
| "cattonhous".] | Porty. James — | Wier. James — |
| George — | Prat. Matheu — | Williamson. Agnes — |
| [110] Love. John — | [150] Rammage. William — | [190] Bessie — |
| Mathieson. John — | Robison. Alex- | George — |
| Middilton. George — | ander — | ["Leadhill".] |
| Miller. William — | James — | Gilbert — |
| Moffat. Elizabeth — | Robson. George — | James — |
| [115] Muir. James — | William — | Thomas — |
| Murfie. William — | [155] Ross. John — | [195] Wilson. George — |
| Murrie. William — | Russal. Thomas — | ["Leadhill".] |
| McCall. George — | Russell. William — | James — |
| McCallon. John — | Scot. George — | Willson. Thomas — |
| [120] McClag. Archbold — | Sellers. Daniell — | Robert — |
| McClastie. David — | [160] Sharp. Alexander — | Wodmis. John — |
| McCullne. Samwell — | James — | [200] Young. William — |

The following names are to be found on the loose sheets only.

Aitken. Robert —
Harkness. Thomas —

(?)McMing.
George —

[204] Willson. Matheu³ —

3. Two undated records indicating a debt of 15/4 but giving no details — perhaps identifiable with the "Lead-hills Diarist".

Extracts from the Testament of William Henry, Merchant in Wanlockhead, from the Dumfries Commissariat Records now preserved in the Scottish Record Office, Edinburgh (SRO. CC 5/6/14): I am indebted to the Keeper of Records for Scotland for permission to publish this material in his care.

"There were justly pertaining and belonging to William Henry at the time of his decease the Goods and Gear underwritten which were sold by public Roup, at the prices after mentioned Vizt.

	£.	s.	d.
Imprimis Four pounds Common Tobacco	2.	8.	
Item Twenty pounds Kitchen Sugar	3.	4.	
Item four pounds Coperas and an old Kitt with some more Coperas in it		9.	
Item Twelve ounces of Rough Ginger		10½.	
Item Twenty two pounds & a half of black Sope	9.	4½.	
Item Seven pounds of Brown Candy	4.	3½.	
Item Twelve ounces of white Candy		9.	
Item Seven pounds of Sugar Liquoriz	4.	1.	
Item four ounces of Starch		2.	
Item Three pounds of Raisins		9.	
Item Three pounds and a half of Hemp	1.	3.	
Item Twelve ounces of anniseeds		9.	
Item Two pounds of Loaf Sugar	1.	6.	
Item a Remnant of Sinna		2.	
Item Three pounds Twelve ounces of white sope and an old Bannockiron	1.	8½.	
Item six pounds Big Carvy	1.	6.	
Item six Hundred heel Tackets	2.	6.	
Item a Remnant of spoiled Annis-seeds and Carvy and a Dozen Catechisms		6.	
Item a parcel of pins	1.	0.	
Item some white thread, remnants of Knitting & Binding and a Box	1.	10.	
Item Eight pounds and a half of Twist Tobacco	7.	1.	
Item a Frying pan	2.	0.	
Item a parcel of Hops and a Bag		6.	
Item two pounds of Rosine		4.	
Item an old Axe		1.	
Item a Suit of Blue Cloaths, Black Vest and Breetches	8.	0.	
Item a Door lock		6.	
Item a pair of Shoes and a Choppine Stoup	3.	9.	
Item Twenty two pounds of Candles	8.	3.	
Item an old Closs Bed	10.	0.	
Item sixteen pounds Common Roll Tobacco	11.	4.	
Item fifteen pounds of said Tobacco	10.	10.	
Item Perkines works	12.	0.	
Item some Glew, Rope and Ginger Bread	1.	16.	0.
Item a weigh Baulk and Boards		6.	
Item a pair of Brass Scails and Weights	3.	0.	
Item four Grey beards	4.	0.	
Item Two Dozen Chopine Bottles	2.	2.	
Item a white iron filler and old Pewther	3.	5.	
Item a peppermill	2.	6.	
Item Two pounds Stocken Waxes		8.	
Item six pairs Stockens	2.	0.	
Item four wigs and a Bonnet	2.	0.	
Item Fulks Exposition of the New Testament and Byfield on the Collossions	1.	6.	
Item Two Books anent popery		6.	

	£.	s.	d.
Item some Scots Magazines & Brightman on the Revelation		1.	6.
Item Ambrose prima media & ultima		2.	0.
Item Doctor Twiss upon Reprobation		1.	0.
Item Davies upon Church Government and Hildersham upon John		1.	0.
Item Jackson's Variety		1.	0.
Item Muirs Description of Glasgow, an old Dictionary And part of Pilgrims progress		1.	6.
Item Dyke upon Philomon and Websters Sermons and some pamphlets with a Display of Hierarchy		1.	0.
Item Gavin Upon the Principals of Religion, Grays Sermons, The Holy War and proverbs		1.	0.
Item Gibbon upon Genesis and Truths victory over Error		1.	0.
Item David's Testament			6.
Item an old Spit trippers and Shovel			4.
Item a Big Chair		2.	6.
Item a Box for Goods & two old Chests		2.	0.
Item Two Chairs and Two Stools		1.	0.
Item a Little Pot and broken pots		2.	0.
Item Three old Meat Dishes			1.
Item there were pertaining to the said Defunct the following Goods & Gear Which were valued by the said Thomas Williamson and Alexander Telfair at the sums underwritten Vizt. Ten Shirts and necks and a stock	1.	1.	0.
Item Blankets, Chaff Bed Bolster, and Pillows		9.	0.
Item a night Cap			4.
Item a Dark coloured Coat, Black vest & Two pairs of Breeches		3.	0.
Item a Bible and a Big Coat		11.	0.
Item Five hundred Door nails		6.	8.
Item a Crook and Two Old Barrels and Two old Little Chests		2.	0.
Item the sum of Two pounds four shillings Sterling found in the Defuncts pocket after his Decease	2.	4.	0.
Summa of the Inventory and lying money	xiv	viiij	v.
There were justly owing and adebted to the said umquhile William Henry			
the sums of money underwritten by the persons following. ⁴ Vizt. —			
Item by James Porteous, workman at Leadhills, the principal sum of		16.	9.
Item by Ronald Duncanson, miner in Wanlockhead, the principal sum of ...		17.	0.
Item the @rent due thereon at the time of the defunct's decease		5.	0.
Item by Niel Lammond, workman at Wanlockhead, the principal sum of ...		11.	0.
Item the @rent due thereon		3.	9.
Item by John McDonald, miner in Wanlockhead, the principal sum of		11.	0.
Item the @rent due thereon		3.	9.
Item by Thomas Anderson, miner in Wanlockhead the principal sum of ...		18.	5.
Item the @rent due thereon		4.	3½.
Item by Duncan McIntyer, miner at Wanlockhead the principal sum of		16.	6.
Item the @rent due thereon			6.
	£.	s.	d.
Summa of the Debt owing to the defunct	v	viiij	—
Summa of the Inventory with the debt	xix	xvj	viiij
			(Sterling)

4. All the debts owing are in the form of Bills drawn upon the deceased: Dates of issue and recall being specified.

A SELECT BIBLIOGRAPHY TO THE WANLOCKHEAD AND LEADHILLS AREAS

(excluding works of Poetry and Fiction)

The geology, and more particularly the mineralogy, of the Wanlockhead and Leadhills area is extremely complex and a plethora of papers and articles will be found scattered throughout the standard journals and other works of reference. Papers descriptive of the social and historical aspects of the mining industry are no less numerous and many are not without interest. This Society has expressed an interest in these mining operations from an early period and the earliest papers actually read to members were those by a Mr Niven of Leadhills, on *The Mines and Mining Operations at Leadhills*. (April 2nd and 6th May 1867). A Field Meeting had been undertaken to the area in August of the preceding year, (1866), and further excursions were made in 1880, 1894, 1913, 1929 and 1954. Some of the reports of these Field Meetings are informative and references to them have been included in the following bibliography along with other papers to be found in the *Transactions* and elsewhere. The list is by no means exhaustive, and, not intended to be so, but should go some way towards providing an introduction to the literature relating to the locality. (Ed.).

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A NOTE ON HOUSING AT WANLOCKHEAD

by G. Downs-Rose

'A lanely wee toon, wi' its hooses reel-rall keekin' oot at ilk turn,

is how its local poet, Robert Reid described the village of Wanlockhead in the late nineteenth century (Plates XX and XXI). Cottages were perched wherever small ledges on the Dod Hill and Stake Moss could be put to use, for level ground was scarce and reserved for mine buildings and operations. During the invasion scare of the Napoleonic war the village's eighty-strong defence corps could not find flat ground of sufficient size to drill on.

The beginning of a permanent settlement on the upper Wanlock dates from 1675 when the first commercial attempt was made to mine lead there. Before, hill farming had established small steadings in the locality, and although adventurers such as Bulmer and Bowes when seeking gold there in the sixteenth and seventeenth centuries had built themselves cottages at the head of the Wanlock, their workmen made do with military tents and temporary huts.

From 1675 each lease of 'The Farm of Wanlockhead' to mining partnerships and companies gave consent for stone to be quarried to erect cottages. Then, as now, ready-built accommodation was an inducement for miners moving to newly developed mineral sites. By 1744 most of the present day layout of the village was established on sites such as Gold-scaur Row (Plate XVI), Straitsteps (Plate XVII), Old Library Row (Plate XIX), Church Street and Long Row. In addition to sixty cottages there was a chapel, and houses for the mine managers.

All the buildings were basically constructed from greywacke the local country rock, which has no regular grain and is extremely difficult to dress. So walls were made two to three feet in thickness having middlings of small stone and soil, with external joints pointed with a lime and sand cement. Only the more important buildings had dressed sandstone, carted from Nithsdale, for facings and window and door quoins.

When operations were interrupted by a fall in lead prices or a change of mining com-

pany and workers were laid off, the neglected cottages quickly fell into ruin and had to be rebuilt when mining resumed. It evidently suited some companies to allow new workers to build for themselves, choosing any suitable site they might find. A 'customary right' to do this had become established by the mid-nineteenth century, and we have a local minister protesting indignantly to the landowner's law agent that one miner had squatted in the manse field!

Similar incidents, including that of an emigrating lead miner who attempted to sell his cottage to raise his fare to America, brought matters to a head and, in the absence of documentary titles, the miners lost this perquisite along with other customary rights to dig peats for fuel and take turf and heather from the hills for roofing materials. As the mines were, at this time, managed directly for the Duke of Buccleuch and Queensberry who had instigated large-scale rebuilding of the village, what might have caused real hardship was mitigated.

Much of Wanlockhead's present day appearance dates from that period. In the 1840's and 1850's parts of the village were rebuilt and forty new cottages were erected. These were still simple dwellings, having two ground floor rooms for living and sleeping accommodation, but the rooms were larger, had wooden floors and, with higher roofs, space under the thatch provided extra bed space for the large Victorian families. The cottages of that period are easily recognised by their dressed sandstone quoins around windows and doors (Plate XVIII). They were more substantially built than previously to withstand the rigours of the Wanlockhead winters, and some were fitted with window shutters for extra insulation. Internal wood fixings around windows and doors were finished with simple wood mouldings identical with those to be found in other estate buildings of that period and made using hand tools which were certainly a few years ago still kept in the workshops at Drumlanrig Castle.

The face of the village changed and, whilst retaining its character and architectural harmony, took on a more prosperous look. The old school, itself a single storey cottage, was replaced by a large airy building, now used as the village community centre, to provide facilities for a growing school roll. A schoolhouse was built for the newly appointed Mr McArthur, an imaginative and innovative schoolmaster who introduced technical education to the younger mine-workers.

The village church was completely rebuilt, as were the manse and manager's house. New accommodation — the present day youth hostel — was provided for a residential surgeon and the miners, caught up by this tide of redevelopment, moved their book collection from a dilapidated cottage in Old Library Row to the present premises built in 1850. After the dust of the 1843 Disruption settled a free church, since demolished, and a manse for its famous first minister, Mr Thomas Hastings, were added. In all, by the end of the nineteenth century, there were one hundred and sixty-two houses and cottages in the village and another eleven in the hamlet of Meadowfoot further down the Wanlock.

The final phase of company-sponsored building occurred immediately after 1906 when the mines were re-leased. The long row of miners' cottages, Fraser Terrace which stands off the main road from Sanquhar, and Bryson Terrace opposite Glencrieff mine are of this period. At this time too, a number of single storey cottages were converted to two storeys by using poured concrete made from mine debris and cement in the construction. This technique was also used imaginatively, but inexpertly, in the building of the Fraser Memorial Hall, the miners' institute which seems to have embodied the communal aspirations of Wanlockhead people.

Built in 1906 through the generosity of the leading shareholders of the mining company after whom it was named, it had a large hall with stage and sprung dance-floor that attracted enthusiasts from many miles around. Also there was a reading room and billiards room, kitchens, showers and hot air central heating, plus a caretaker's flat.

But it had the shortest life of any communal building at Wanlockhead. All overheads had been carried by the mine company and when the mines closed in the 1930's and support

and income fell it became increasingly difficult to maintain it. However, when it was finally demolished earlier in the 1970's as a dangerous building, it was primarily because the iron used to reinforce the concrete during construction had failed and the structure was falling apart.

Under successive mining companies a private water supply had been developed for the needs of the mines but servicing the cottages also. A blind eye had been turned to the use of dry toilets whenever their contents and domestic refuse were carted by the mining companies. The first outcry for a mains water and public sewage system arose when the mines closed but it and successive attempts to get such amenities went unheeded. Three centuries of paternalism had ended in a vacuum which the public authority of the day was unable or unwilling to fill.

A large number of the older Wanlockhead cottages fell into ruin as people left but those who remained have, particularly over the past decade and by sheer determination in the face of apathy or grudging concessions on the part of public authority, been modernised and enlarged. A too rigid adherence to building regulations has been responsible for the despoiling of the exceptional character of Wanlockhead as an example of industrial housing spanning three centuries through the insistence on raising roof levels and insertion of unnecessarily large windows — anomalies in building design which in this high altitude locality serve to add to energy consumption besides being a disservice aesthetically. Ironically, for the first time in its history, the village has been forced into changes which with greater foresight and a more imaginative policy would have conserved for posterity and, more immediately, thousands of visitors, more of the unique quality of 'The Old Grey Glen'.

Further information may be obtained in Wanlockhead Trust Booklets :
'All About Wanlockhead' and 'Wanlockhead — A Golden Age'.

OBITUARY

Robert Jardine Little

On 13th March, 1979 the Society lost one of its most valuable members after a short illness. Joining the Society in 1961, Robert Little first became a member of the Council in 1964 and was latterly a vice President.

He was born in Annandale, where he had the good fortune to spend many of his formative years in an environment in which he acquired a close knowledge of agriculture, botany and wildlife, all of which he assimilated readily, retained and increased throughout his life. During the war, while a naval officer, he was stationed at times as far afield as Iceland and the Mediterranean, the former stimulating his interest in geology and folk life.

He suffered injury when in the Navy, which partly affected his mobility and decided him to give up a promising business career. Accordingly for some thirty years his friends in the Society would find him ensconced in his smallholding on the outskirts of Lockerbie where he was readily available for help, advice and criticism in all fields of the Society's activities. Somewhat modest and shy, he never addressed the Society, nor published a paper, but he strongly influenced nearly all its active members. His knowledge of botany of the region was extensive; he was a close observer of its geology; his practical ability with tools — he was for example a first class boat builder — and his knowledge of agriculture made him look on an artifact, not as an abstract museum exhibit, but as a tool fulfilling a particular need in the life of an individual, but his greatest gift was to challenge, often with a puckish sense of humour, accepted "truths" about the past. He will be much missed in the Council for when a long and perhaps fruitless discussion had been taking place there, it would usually be a forthright commonsense remark from him that would bring the members back to earth, and a unanimous decision.

W.F.C.



Plate XVI : Old Wanlockhead — Goldscaur Row.
For notes on this and plates XVII to XXI see Addenda.



Plate XVII : Old Wanlockhead — Straitsteps Cottages



Plate XVIII : Old Wanlockhead — New Row



Plate XIX : Old Wanlockhead — First library (thatched) 1787-1850



Plate XX : Old Wanlockhead — Highest houses — c. 1900



Plate XXI : Old Wanlockhead — General view — c. 1910

PROCEEDINGS 1978-79

13th October, 1978

The Annual General Meeting was held in the Education Offices, 30 Edinburgh Road, Dumfries. The President, Mr Alex Robertson, was in the chair. The Treasurer, Miss Morag Donald, reported a deficit of £803 and said that the rates of subscription would probably have to be raised next session. The speaker was Mr N. Q. Bogden, director of the recent excavation of Medieval Perth. Marks and Spencer had allowed his team, which included many 'Job Creation' workers, to investigate a site near the town centre, by the ancient Skinnergate. Traces of some 135 wattle buildings, dated about 1300, had been uncovered. Among the finds were huge quantities of leather and also some signs of shipbuilding, metal work and textiles.

27th October, 1978

Mr James Robertson, a Past President of the Society, gave a talk on the turnpike road era in Dumfriesshire. He said that the first turnpike road had been begun in 1764, but it was ten years later that a group of the leading heritors formed a turnpike roads committee and a systematic approach began. The committee's minutes lasted continuously until 1882 (four years after tolls had ended). By 1798 a considerable network of roads had been either built or planned, covering most parts of the county. Tolls were let annually by public roup. Toll houses were usually two-roomed and were supposed to be at least six miles apart. Mr Robertson referred to connections of Telford and Macadam with the locality, but the principal road builders were less famous men, such as John Greenlaw, the first surveyor, and John Aitken, his successor, an uncle of Thomas Carlyle. Mr Robertson also showed a number of maps.

10th November, 1979

Mr D. Clarke, curator of the Tullie House Museum in Carlisle, gave a lavishly illustrated lecture on insects, covering a remarkable variety of information. For example, the largest insects lived some three million years ago and had a wing span of three feet; there are several hundred different species of beetle, and there are more insects than the combined total of all other living creatures. One of Mr Clarke's themes was the use by insects of protective devices, such as the black and yellow coat of the hover-fly and other insects, in imitation of the wasp, and the poisonous pigment which discourages birds from attacking butterflies. He also discussed the different ways in which butterflies spend the winter, some being migrants and others hibernating.

24th November, 1978

Mr D. Gaskell, a member of the Society, gave an illustrated talk on a journey which he had made with two companions in 1972, entitled 'From the Amazon to the Andes by River, Road and Rail'. They had set out from Manaus in a slow cargo boat, where they contended with poor cooking and primitive washing facilities by day and with mosquitoes by night. Then they made their way by bus to the old Spanish city of Cochabamba, 9,000 ft. high in Bolivia (where all the women wore bowler hats). Thence by rail, they climbed to 14,000 feet, near Oruro, where the rocks were a deep lilac colour. Finally, by car, they reached Lake Titicaca and Cuzco, centres of ancient Inca civilisation, and the 'lost city' of Machupichu. Mr Gaskell showed slides of Inca settlements, with massive stairs and terraces on the steep mountain sides.

8th December, 1978

The speaker was Mr David Murison, former editor of the Scottish National Dictionary. He deputised for Mr Aitken, who had unfortunately suffered a heart attack. Mr Murison was able to report that Mr Aitken was recovering. He kept to the advertised title of the talk — 'The Guid Scots Tongue'. Mr Murison said the Ruthwell Cross was the earliest

example of the Scots language in writing. Thereafter the influence of Norse created many differences in vocabulary and pronunciation between the North and the South of English speaking Britain, such as the Norse 'k' for the English ch, (kirk and muckle — church and much). After 1066 English began to replace Gaelic as the chief language in Scotland. Anglicisation was brought about partly through the church, partly by the feudal system, but above all by the development of burghs. In this period many Norman French, Flemish and Parisian French words were introduced. By 1400, Scots was being occasionally used in official documents, and the language had its heyday between 1460 and 1560. After the Reformation, however, English became the language of the Church, while after the unions of the Crowns and the Parliaments, it gradually became the language of all educated people.

12th January, 1979

Mr Bob Fraser, principal teacher of geography at Dumfries Academy, gave a talk on landscape evolution in South-West Scotland. He said that, on a large scale, the landscape had been essentially the same since the end of the last ice age about 10,000 years ago. However, on a small scale, change was taking place all the time, most notably when rivers were in flood — as shown by the ox-bow lakes near Kirkton or the river valley which appeared overnight near Torthorwald. Much of the landscape had been formed by glaciation. Among characteristic features of the area were U-shaped valleys (e.g. the Moffat Water), smaller hanging valleys (the Grey Mare's Tail), the higgledy-piggledy landscape around Allanton near Auldgirth (formed by a terminal moraine), drumlins (on the two local golf courses), kettle-hole lochs (at the Uniroyal), ribbon lakes (such as Loch Ken), and 'roches moutonnees' rock clumps.

26th January, 1979

Dr. J. B. Wilson, one of our own members, gave an illustrated lecture on the history of the church, castles and town of Lochmaben. He said the parish church possessed the oldest bells still in regular use in Scotland — the Bruce bell of about 1300 and the Pope's bell of about 1350. It also had two remarkable early photographs, of the Rev. Thomas Marjoribanks and of his successor, Dr. Liddle, both apparently taken in 1850. In the graveyard Dr Wilson had been able to trace the site of the older kirk, a Gothic building seating 333 people, and he had also found a very early gravestone, which was believed to commemorate a late 13th century female burial. The earliest recorded mention of the town of Lochmaben was from 1173. It's moment of glory came in 1483 when the townspeople were largely responsible for defeating the invading forces of the Duke of Albany. However, in the ensuing centuries, the town council had a record of maladministration, which led to the loss of much of the burgh's land and property. The provosts were members of the great landed families, who valued the position, especially in the 18th century, because of Lochmaben's share in electing the M.P. for Dumfries burghs.

9th February, 1979

The speaker was Mr Trevor Cowie of the Scottish Development Department. He is a member of the Central Excavation Unit, based in Falkirk, which undertakes rescue digs on sites threatened by proposed development. Mr Cowie spoke about his excavation in 1977 of a site in the Luce Sands area known as Torr's Warren, which is threatened by development by the Air Force Establishment at West Freuch. This is an area of high dunes where many finds on the surface indicate settlement from Neolithic times to the Bronze Age and possibly much later. Unfortunately, these finds are scattered about as a result of the erosion of the dunes and are not found in their original site. Mr Cowie removed the top sand from some parts of the dunes to reveal the old land surface. He was disappointed by the small number of finds but he did uncover two Bronze Age burials (discovered earlier by Mr Cormack), some pits full of charcoal, and some late Neolithic pottery. There was no trace of

animal remains because of the acidity of the soil. In various places he found parallel and criss-cross markings suggesting tillage, but he couldn't say whether it dated from Neolithic or Medieval times.

This was the Members' Night. Mr A. D. Anderson spoke first, on the building of the Old Military Road from Sark Bridge to Portpatrick. Although it was constructed by the military, the initiative, in 1757, was apparently civilian. There was some doubt about the route taken through Dumfries. Mr Anderson thought it probably went from Collin to Loganbarns, Eastfield Road and Hood's Loaning. From the Old Bridge it went by Howgate Street and Laurieknowe.

The second speaker was Mr Tom Collin, curator of Kirkcudbright Museum. He talked about the hundred year history of the museum. By 1891 the original premises were already too small, and funds were raised, through a public appeal and a bazaar, to purchase the present building. Another landmark was in 1953, when it was decided to make it a purely local museum. This led to the sale of the most popular exhibit, an elephant's skeleton.

After the tea-break, Mr Kenneth Tucker argued that the early Scots language was Anglo-Friesian rather than Anglo-Saxon. There was the authority of Procopius to indicate that there had been a strong Friesian element in the population, and many Scots words seemed to support such a view, for example the words 'frien' and 'licht', which are more like modern Friesian than English, and 'feckless', which has an equivalent in Friesian but not in English.

The last meeting of the session was a Special General Meeting at which it was agreed that the rates of subscription should be raised. The speaker was Mr J. Williams, Joint Editor of the Transactions, who gave a survey of some aspects of the history of Lochrutton from prehistoric to modern times. He said the crannog had probably been occupied in the 15th century, and in the late Middle Ages there had been several towers in the parish, but now only his former home, Hillis Tower, remained. In the 18th and early 19th centuries very detailed records had been kept by two ministers, father and son, each named George Duncan. From these a fairly complete reconstruction of the population could be made. It rose gradually in the 18th century, much more rapidly from 1790 to 1850, and declined after 1870. The black cattle trade, dominated by the Swan family of Brae, brought prosperity to the parish and a popular rhyme had it thus :—

Catch a' ye can, keep a' ye hae.,
And you'll soon be as rich
As old Swan o' the Brae.

The parishioners had a certain reputation for meanness. According to legend, they had a special cart to hurry stranger women out of the parish before they could give birth to children who might be a burden on the parish poor funds. Also, in 1803 they paid the schoolmaster the minimum salary allowed by law. Mr Williams concluded his talk by showing a number of slides of Hillis Tower.

Publications of the Society

Transactions and Journal of Proceedings: 1st Series—(a) 1862-3, (b) 1863-4*, (c) 1864-5* (d) 1865-6*, (e) 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 — (1) 1912-3*, (ii) 1913-4*, (iii) 1914-5*, (iv) 1915-16*, (v) 1916-8*, (vi) 1918-9, (vii) 1919-20*, (viii) 1920-1, (ix) 1921-2*, (x) 1922-3*, (xi) 1924-4, (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) 1935-6*, (xxi) 1936-8*, (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) 1960-61 (with Index of Vols. xxvii to xxxviii), (xl) 1961-62 (Centenary Vol.) (xli) 1970, (xlvi) 1971, (xlix) 1972 (with index of Vols. xxxix to xlviii) (li) 1973, (li) 1975 (lii) 1976-77 (liii) 1977-8.

Prices : Single Volumes — To Vol. 53, £3; Vol. 54, £5, all plus postages.

Runs of Volumes — 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 those 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 Stewart, W.S., 1932*.

Records of the Western Marches, Vol. III, The Upper Nithsdale Coalworks from Pictish Times to 1925, by J. C. J. McConnell, 1962, £1.00.

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. £1.

The Marine Fauna and Flora of the Solway Firth Area by Dr E. J. Perkins, 1972, 112pp. £1.

Birrens (Blatobulgium) by Prof. A. S. Robertson (1975) 292 pp. 88 figs., 12 pls. £5.50 post free to members, £7.50 to non-members. Obtainable from Hunterian Museum, The University, Glasgow G12 8QQ.

*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 post free.

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 post free.

A Mesolithic Site at Low Clon, Wigtownshire, by W. F. Cormack and J. M. Coles (1968), 29 pp., 10 figs., 1 pl. 25p post free.

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

Beaker Pottery in South-West Scotland by J. N. Graham Ritchie, 1970. 45p post free.

Beaker Pottery & Associated Artifacts from S. W. Scotland, by J. N. Graham Ritchie & I. A. G. Shepherd (1973). 18 pp. 35p. post free.