Transactions

of the

Dumfriesshire and Galloway Natural History

and

Antiquarian Society

XLVII 1970

Transactions

of the

Dumfriesshire and Galloway Natural History

and

Antiquarian Society

FOUNDED 20th NOVEMBER, 1862

THIRD SERIES, VOLUME XLVII

Editors

A. E. TRUCKELL and W. F. CORMACK, FF.S.A.Scot.

DUMFRIES

Published by the Council of the Society

1970

Office Bearers, 1969-70

Hon. President

JAMES ROBERTSON, O.B.E., B.Sc., J.P., F.I.C.E.

Hon. Vice-Presidents

R. J. LITTLE, Mrs M. GLENDINNING, Dr WILLIAM M'ADAM and ALEX. M'CRACKEN

Fellows of the Society

Sir ARTHUR B. DUNCAN, B.A.; ANGUS MACLEAN, B.Sc.; D. CUNNINGHAM, M.A.; Dr J. HARPER, M.B.E.; Mrs M. D. M'LEAN; Major-General J. SCOTT-ELLIOT, C.B., C.B.E., D.S.O.; and J. D. S. MARTIN, B.Sc.

Hon. Secretary

*Mrs H. R. M'ADAM assisted by Dr WILLIAM M'ADAM

Hon. Treasurer

*ALEX. M'CRACKEN, B.Sc.

Hon. Editors of "Transactions"

General Editor: A. E. TRUCKELL, M.B.E., M.A., F.M.A., F.S.A.Scot., Burgh Museum, Dumfries.
Business Editor: W. F. CORMACK, W.S., F.S.A.Scot., Royal Bank Buildings, Lockerbie.
Assistant Editor: Mrs M. GLENDINNING.

Hon. Librarian

DESMOND DONALDSON, F.S.A.Scot.

Hon. Curator

A. E. TRUCKELL, M.B.E., M.A., F.S.A.Scot., F.M.A.

Members of Council

The above office-bearers ex officio and H. M'A. RUSSELL, JAMES WILLIAMS, A. W. WILSON, J. GAIR, L. J. MASTERS, M. M. ANSELL, D. A. G. BROWN, H. G. QUINN, Dr J. B. WILSON, Mrs S. VEITCH, A. ROBERTSON, J. BANKS.

*For Hon. Secretary and Treasurer at date of publication, see Editorial.

Contents

Editorial

Contributions are invited on the Natural History, Antiquities, Archæology or Geology of South-West Scotland or the Solway Basin and preference is always given to original work on local subjects. Intending contributors should, in the first instance, apply to the Hon. 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.

Presentations and exhibits should be sent to the Hon. Secretary, Mrs J. Williams, Hills Tower, Lochfoot, Dumfries, and exchanges to the Hon. Librarian, c/o Ewart Library, Dumfries, from whom enquiries regarding purchase of Transactions should also be made. New members are invited to purchase back numbers—see rear cover. 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, either of their own or those of deceased members, to be handed in. Off-prints of individual articles may also be available and the Hon. Librarian can provide a list of these. Payment of subscriptions should be made to the Hon. Treasurer, Mr A. Archibald, Eriskay, 13 St. Anne's Road, Dumfries, 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 illustration on the front cover is from an article "The early Church in Dumfriesshire" by the late W. G. Collingwood in volume XII of these Transactions. It is of the Wamphray Grave Slab, which dates to about 950 A.D., and which is unusual in having the Scandinavian Dragon side by side with a pattern derived from Anglian leaf scrolls.

The Society is indebted to H.M. Treasury for a Grant towards the cost of Dr J. N. G. Ritchie's Article on the Beaker Pottery of South-West Scotland.

Plate I—Dr R. C. Reid—from the bronze head by Benno Schotz, R.S.A., LL.D., etc.

BIOGRAPHICAL NOTE[1] ON ROBERT CORSANE REID 1882-1963

" A man so various that he seem'd to be
Not one, but all mankind's epitome."

To those who will read it in years to come the lists of publications and manuscripts to which this is a preface may well seem a lifetime's work in itself, so prodigious is the labour which it bespeaks, yet to those who knew Robert Reid in person it will be recognised as a truly remarkable labour of love, accomplished, in his spare hours, during a lifetime dedicated to public service in a variety of fields of activity.

Early Life

Robert Corsane Reid, born 7th November, 1882, was the second son of John James Reid of Mouswald Place, Dumfriesshire, Queen's Remembrancer for Scotland. Educated at Cheltenham, he suffered the misfortune of an early injury to his leg and later a shooting accident which burdened him with life-long lameness. After graduating at Trinity College, Cambridge, in 1905, he was called to the Bar and became a member of the Inner Temple, acting first as private secretary to the Lord Privy Seal (Lord Ripon), then in 1907 to the Lord Chancellor and later in 1908 becoming Clerk to the Public Trustee. In 1907 he married Helen Mary Tobin, daughter of Henry Murray Tobin of the Indian Civil Service, by whom he had two daughters. His career as a Barrister and as Secretary to H.M. Visitors in Lunacy (1910-1920) was brought to a close by serious eye trouble, which for a time endangered his sight and eventually caused him to desert the Bar and move to Scotland where he took up farming at Mouswald, living at Cleughbrae, which he had lent to his uncle, Earl Loreburn, while the latter was M.P. for Dumfriesshire.

Service to Local Government

Robert Reid's misfortune proved to be Dumfriesshire's gain; his first public appointment came in 1927 when he was elected an Honorary Sheriff-Substitute and in 1929 he became County Councillor for Mouswald and Torthorwald, a seat which he held until 1958. Though the area which he represented was itself a small one, his influence was soon widely felt throughout the entire county. Serving on all the main Committees of the Council, as well as on many Joint Committees too numerous to be detailed here, his main interests were in Education, Finance, Planning and Libraries, and from 1933 to 1952 he acted as a vigorous and knowledgeable Chairman of the Planning and Buildings and

1. The Note has been framed by Mrs M. D. M'Lean in collaboration with James Robertson and A. E. Truckell, while the Lists comprising Appendix A to D have been compiled by the Library cataloguing department and abbreviated by the Editor.

Works Committee. Always a doughty fighter, he was a force to be reckoned with in local government circles. Eloquent and persuasive in debate, always well-informed and carefully briefed, he was tireless in promoting the welfare of whatever measure he believed to be for the good of the people of Dumfriesshire and particularly for their children in whose educational future he took a passionate interest. His strong determination, coupled with a charm of manner and the great gift of humour which could often carry his point when other pressures failed, enabled him to gain victory in many causes where he believed right was on his side. Undeniably it is to Robert Reid that Dumfries owes its Arts Centre at Gracefield. He championed its inception against much adverse criticism and succeeded, with the financial aid of the Dumfriesshire Educational Trust, in bringing his idea to splendid fruition during Festival of Britain Year. Appropriately he became the first Chairman of the Gracefield Arts Centre Management Committee, a post which he held to his death. With the help of experts, to consult whom he travelled all over the country, he with his Committee, built up at Gracefield a fine gallery of painting and sculpture, some items of which were a witness to his own generosity. It is fitting that a sculptured head of Robert Reid by the eminent sculptor, Benno Schotz (see frontispiece), should flank the entrance to the main gallery of the Arts Centre which resulted from his vision—and his labours. He was also instrumental in founding the schools Prints Loan Scheme in Dumfriesshire, a scheme which was one of the first in Britain and a prototype of many others.

Public Office

"A complete and impartial Chairman" was how one Ministry Official recently described Robert Reid's contribution to the affairs of his department. His work as Chairman of the Dumfries and District Local Employment Committee, an office which he held from 1951 to 1959, is still remembered with admiration. As this period included the War years, it entailed much documental study and attendance at many additional hearings, some naturally controversial and difficult. He also chaired the Conscientious Objectors' Tribunal in 1940 and the Committee for the Reinstatement in Civil Employment and Military Hardship from 1948 to 1954. Both these Committees needed his legal brain and balanced judgment to preserve impartiality and yet maintain a measure of humanity—an unenviable task at times. He also served as a Traffic Commissioner for Southern Scotland from 1931 to 1957, work which he found of great interest, although it was time-consuming and entailed considerable travel.

Spare Time Interests

It is gratifying, indeed, when a man's hobbies and interests are those which contribute not only to his own delight but at the same time add to the sum

total of knowledge of his chosen area. Himself a genealogist and historian of repute and indefatigable purpose, " R.C.", as he was affectionately known, pursued his researches in odd hours throughout a long life and, in addition to work published under his own name, many volumes of family history bear witness to his co-operation in the form of a foreword of acknowledgment. Cleughbrae became a Mecca to which many researchers came for guidance and help. To be with him on a genealogical foray was an education in itself and much material which might have faded into oblivion was rescued by him for preservation, research, and possible publication.

Archaeology was his second love and with such a man in its midst the Dumfriesshire and Galloway Natural History and Antiquarian Society was singularly fortunate. As early as 1914 he had contributed papers and the succeeding volumes of Transactions reveal the extent of his knowledge and the wealth of his varied work. To hear him deliver a paper was a joy for he had the knack of putting over erudite material with humour and vivacity. He was President, Editor and even Secretary at one time, carrying the society completely on his own shoulders during a difficult period. But his real efforts extended far beyond this. It was the personal contacts which he had with all the great names in history and archaeology throughout the years which not only gave the Society's Transactions such distinction but brought to Dumfriesshire and Galloway many specialists such as W. G. Collingwood, Ralegh Radford, Ian Richmond, Douglas Simpson, John Clarke and Stuart Piggott as well as in more recent times R. B. K. Stevenson, Anne Robertson, Charles Daniels, Charles Thomas and many others of similar quality. As one of their number said: "We were drawn into his schemes by a mixture of bullying and cajolery and were enthused by his irresistible warmth and courage." Aided by grants which he secured from various bodies, "R.C." was the means of opening up a new chapter in the history of Roman Britain in Dumfries and Galloway. Through his wide circle of scholarly friends, he found the best workers in each particular field and in his capacity as a county laird himself, he was able to persuade landowners and farmers to permit access to—and subsequent excavation of—important sites, not always an easy task. He was primarily responsible for the establishment of the Scottish Field School of Archaeology which, under Dr. Anne Robertson, has for many years been training young archaeological students from Scottish Universities. This ensured the continuity of his efforts for over 30 years to have the Roman presence in South-West Scotland more fully brought to light. He was the mainspring in every major effort which achieved yet another breakthrough in knowledge and resulted in Sir George Macdonald's work in the 1920s, Birley and Richmond's excavations at Birrens, Carzield, Glenlochar, Dalswinton, John Clarke's explorations at Durisdeer and Milton, Dr. St. Joseph's aerial discoveries and the subsequent excavations at

Wardlaw, Roxburgh Mill, Raeburnfoot, Gatehouse and Broomholm by a younger generation of archaeologists. He also financed the Mouswald Trust which was formed to give grants for archaeological work.

Dumfries itself owes him a major debt. With the co-operation of the late G. W. Shirley he undertook the formidable task of calendaring and arranging the Dumfries Burgh Records which were rescued from the old Town Hall, after the fire of November, 1908.

Conclusion

Many have wondered, through the years, why public honours were not bestowed on such a man. It was typical of him that he should repeatedly refuse those offered to him for, in truth, he valued them little. In 1958, however, he accepted with real delight an honour of a different type, that of Honorary LL.D. of Glasgow University. Although a serious hip operation caused him to suffer a decline in mobility and in health he achieved his desire to be present at the actual ceremony, a truly herculean effort. He was also a Trustee of the National Museum of Antiquities, a Director of the National Register of Archives and an Honorary Fellow of the Society of Antiquaries of Scotland.

To those who knew him this brief memoir would appear incomplete without mention of his wife. Mrs Reid, a talented and gracious lady, devoted much of her life to community work in various fields with considerable success, but her first and foremost task, which she fulfilled to an exceptional degree, was to give her husband every possible backing to pursue his own work. At Cleughbrae she was a charming and thoughtful hostess to a constant succession of notable academic and eminent figures and to an ardent stream of less well-known researchers who found their way to her door. In the latter years of her husband's life it was only through her valiant efforts that his way was made smooth to accomplish the tasks on which he had set his heart. It was indeed a partnership which, for those who lived through the days of the Second World War, had something of a Churchillian quality.

Dr Robert Corsane Reid is remembered as a man of great ability and tremendous drive, unsparing of himself and utterly dedicated to the welfare of the community, a man filled with fiery purpose and gifted with infectious enthusiasm and energy. With his death on 21st April, 1963, Scotland, and more particularly Dumfriesshire and Galloway, lost a well-known and greatly respected figure whose contribution to the southern counties is difficult to measure. His genealogical work, preserved in the Ewart Library, ensures his memorial as a leading historian of the area, but perhaps his true memorial lies in less tangible form in the many forward-looking schemes which he promoted and encouraged for the welfare of the people of the county he loved.

APPENDIX A

Separately Published Works

1. Introduction to the History of Dumfries 1915
2. Whithorn Priory 1928
3. Mouswald Kirk ... ... 1929 (?)
4. The Heriots of Ramornie 1931
5. Records of the Carruthers Family 1934
6. The Family of Charteris of Amisfield 1938
7. Annals of the Tobin Family ... ... 1940 (?)
8. Scottish Record Society Protocol Book of Mark Carruthers ... 1956
9. Wigtownshire Charters 1960

APPENDIX B

Contributions to the Transactions of this Society

The order of the entries is: title, session, series, volume, page.

Accounts of the Treasurers of the Royal Burgh of Dumfries, 1633-4; 1634-5; 1638-9.
1914-15, 3, III, 291-299.
Agnew of Kilumquha.
1944-45, 3, XXIII, 151-154.
Applegarth before the thirteenth century.
1926-28, 3, XIV, 158-169.
The Archdeacons of Galloway.
1954-55, 3, XXXIII, 66-72.
Armstrong of Woliva.
1931-33, 3, XVIII, 338-366.
A Barnsoul inventory.
1955-56, 3, XXXIV, 205-208.
The Baronies of Enoch and Durisdeer.
1920-21, 3, VIII, 142-183.
The Baronies of Glencairn.
1922-23, 3, X, 236-238.
Bonshaw.
1935-36, 3, XX, 147-156.
The Bonshaw Titles.
1958-59, 3, XXXVII, 48-61.
The Border Grahams, their origin and distribution.
1959-60, 3, XXXVIII, 85-113.
The building date of M'Clellan's Castle.
1951-52, 3, XXX, 196-197.
Buittle Castle.
1923-24, 3, XI, 197-204.
Buittle Church.
1923-24, 3, XI, 189-197.
The burgh records of Dumfries.
1935-36, 3, XX, 10-27.
The Cannon family in Galloway, By D. V. Cannon and R. C. Reid.
1952-53, 3, XXXI, 78-120.

The Caput of Annandale, or the curse of St Malachy.
1953-54, 3, XXXII, 155-166.
Castle O'er.
1926-28, 3, XIV, 321-323.
Castledykes, Roberton.
1956-57, 3, XXXV, 141-142.
The Chaplains of Comlongan.
1953-54, 3, XXXII, 194-195.
The Church of Kirkandrews.
1947-48, 3, XXVI, 114-118.
Corrie and Hutton Documents.
1958-59, 3, XXXVII, 169-170.
Corrie Castle.
1931-33, 3, XVIII, 385-391.
Cruggleton Castle.
1929-30, 3, XVI, 152-160.
The Culvennan and Gordon MSS.
1942-43, 3, XXIII, 41-55.
The Culvennan writs.
1922-23, 3, X, 20-80.
Cumstown Castle.
1931-33, 3, XVIII, 410-417.
De Amundeville.
1955-56, 3, XXXIV, 74-83.
De boys of Dryfesdale.
1942-43, 3, XXIII, 82-83.
De Veteripont.
1954-55, 3, XXXIII, 91-105.
The derivation of Dumfries.
1942-43, 3, XXIII, 60-65.
Douglas of Castle-Douglas.
1920-21, 3, VIII, 183-191.
Dowies.
1946-47, 3, XXV, 36-43.
A Drumlanrig Estate Book, 1740-1745.
1931-33, 3, XVIII, 85-97.
Dungarry Fort.
1928-29, 3, XV, 157-160.
Dunragit.
1950-51, 3, XXIX, 155-164.
Dunskey Castle.
1936-38, 3, XXI., 236-247.
Durisdeer.
1928-29, 3, XV, 164-171.
The early Browns in New Abbey, by F. J. Stewart and R. C. Reid.
1958-59, 3, XXXVII, 93-110.
An early Coschogill writ.
1951-52, 3, XXX, 132-142.
The early Ecclesiastical History of Kirkgunzeon.
1926-28, 3, XIV, 201-215.

The early History of Eskdalemuir.
1926-28, 3, XIV, 323-332.
The early History of the Corries of Annandale—a further contribution,
1915-16, 3, IV, 29-34.
The early Kirkpatricks.
1951-52, 3, XXX, 61-110.
The early Records of Kirkcudbright.
1938-40, 3, XXII, 142-153.
Edward de Balliol.
1956-57, 3, XXXV, 38-63.
Edward I's Pele at Lochmaben.
1952-53, 3, XXXI, 58-73.
The election of Parish Clerks.
1955-56, 3, XXXIV, 22-28.
The etymology of lane.
1916-17, 3, V, 127-128.
The excavation of Auchencas.
1925-26, 3, XIII, 104-123.
The family of Glendanyng.
1938-40, 3, XXII, 10-17.
The feudalisation of Lower Nithsdale.
1955-56, 3, XXXIV, 102-110.
From Castledykes (Corbriehall) to Crawford, by C. A. Ralegh Radford, R. C. Reid, J. Robertson and E. A. Truckell.
1952-53, 3, XXXI, 30-34.
The furnishings of Comlongan, 1624.
1953-54, 3, XXXII, 180-185.
G. W. Shirley—an appreciation.
1938-40, 3, XXII, 135-142.
Gillesbie Tower.
1931-33, 3, XVIII, 376-378.
Girthon Kirk.
1925-26, 3, XIII, 209-210.
The Gordon MSS.
1942-43, 3, XXIII, 56,60.
The History of Southwick prior to the Reformation.
1926-28, 3, XIV, 218-223.
The Inglistoun Mote.
1946-47, 3, XXV, 166-172.
John Maxwell of Castlemilk.
1933-35, 3, XIX, 187-204.
Johnstone of Kinnelhead.
1925-26, 3, XIII, 193-198.
The Kinsmen of "Kinmont Willie."
1931-33, 3, XVIII, 62-70.
Kirkandrews and the Debateable Land.
1929-30, 3, XVI, 120-129.
Kirkclaugh Mote and its tradition.
1931-33, 3, XVIII, 205-209.
Kirkcormack.
1922-23, 3, X, 238-241.

Kirkcudbright Town Council Records (Review).
1957-58, 3, XXXVI, 190-192.
Kirkdale Parish and the Norman intrusion.
1925-26, 3, XIII, 219-227.
The Legend of King Galdus.
1925-26, 3, XIII, 237-246.
A letter of the '45.
1929-30, 3, XVI, 50-56.
The Littlegill murders, 1589.
1945-46, 3, XXIV, 83-94.
Lochwood Tower.
1925-26, 3, XIII, 187-193.
Logan Estate.
1923-24, 3, XI, 178-180.
The Logan Whale, 1719.
1946-47, 3, XXV, 105-117.
The long cairn site at Glaisters.
1935-36, 3, XX, 199-201.
Lord Maxwell in Dumfries, 1523, by R. C. Reid and A. E. Truckell.
1959-60, 3, XXXVIII, 196-199.
Mauchline Castle.
1929-30, 3, XVI, 166-171.
The Merkland Cross.
1936-38, 3, XXI, 216-228.
Minnigaff.
1924-25, 3, XII, 245-253.
The Monastery at Applegarth.
1956-57, 3, XXXV, 14-19.
More notes on Roman Roads.
1958-59, 3, XXXVII, 123-135.
Morton Castle.
1924-25, 3, XII, 255-262.
A Mote-like structure on Chapelhill.
1925-26, 3, XIII, 45-46.
Mote of Urr.
1923-24, 3, XI, 204-207.
The Mote of Urr.
1936-38, 3, XXI, 11-27.
A Mowbray service, c. 1365.
1954-55, 3, XXXIII, 197-199.
Myrton Castle.
1936-38, 3, XXI, 384-391.
Note on a cinerary urn from Garrochar.
1944-45, 3, XXIII, 136-143.
Note on a sacrament house at Orchardton.
1930-31, 3, XVII, 33-35.
Note on a stone circle near Loch Stroan.
1938-40, 3, XXII, 164-165.
Note on the family of Coningsburgh.
1935-36, 3, XX, 133-139.

Note on the Knockbrex Skull.
1947-48, 3, XXVI, 128.
Notes on Roman Roads.
1953-54, 3, XXXII, 73-76.
Notes on the old prisons of Dumfries.
1919-20, 3, VII, 160-179.
The old castle site at Caerlaverock.
1942-43, 3, XXIII, 66-71.
The old place of Mochrum.
1933-35, 3, XIX, 144-152.
Papists and non-communicants in Dumfries.
1953-54, 3, XXXII, 186-190.
Paterson of Kinhervie.
1953-54, 3, XXXII, 132-137.
Physgill.
1949-50, 3, XXVIII, 99-103.
Plunton Castle.
1925-26, 3, XIII, 204-208.
The pre-reformation church at Kirkinner.
1929-30, 3, XVI, 141-147.
The Priory of St. Mary's Isle.
1957-58, 3, XXXVI, 9-26.
The Provosts of Lincluden.
1916-17, 3, V. 110.
Report on excavations of a camp at Mouswald.
1910-11, New Series, XXIII, 310-312.
Rusco Castle.
1945-46, 3, XXIV, 27-35.
St. Midan's Cave.
1923-24, 3, XI, 180-184.
Sanquhar Castle.
1926-28, 3, XIV, 333-338.
A Sanquhar Castle document.
1929-30, 3, XVI, 57-59.
Scott of Wamphray and their kinsmen.
1954-55, 3, XXXIII, 18-28.
The Scottish Avenels.
1958-59, 3, XXXVII, 70-78.
1959-59, 3, XXXVII, 70-78.
The site of Cokpule.
1953-54, 3, XXXII, 190-192.
Some early de Soulis Charters.
1947-48, 3, XXVI, 150-162.
Some early Dumfriesshire Charters.
1938-40, 3, XXII, 79-95.
Some letters of Captain James Gordon, last of Craichlaw.
1945-46, 3, XXIV, 36-62.
Some letters of Patrick Miller.
1921-22, 3, IX, 125-147.
Some letters of Thomas Bell, Drover, 1746.
1938-40, 3, XXII, 177-181.

1938-40, 3, XXII, 177,181.
Some notes on Pre-Reformation Wigtown.
1924-25, 3, XXII, 239-245.
Some processes relating to Glenluce Abbey.
1936-38, 3, XXI, 290-309.
Some relations of John Paul Jones.
1945-46, 3, XXIV, 79-82.
Soulsear.
1930-31, 3, XVII, 172-181.
Staplegorten.
1952-53, 3, XXXI, 167-173.
Synopsis of two papers on the Deil's Dike, written with Dr William Semple.
1930-31, 3, XVII, 59-72.
Tibbers Castle.
1936-38, 3, XXI, 210-216.
The tragedy of Wamphray.
1923-24, 3, XI, 169-177.
Trusty's Hill Fort.
1926-28, 3, XIV, 366-372.
Two mediaeval crosses at Kirkpatrick-Fleming, by R. C. Reid and W. F. Cormack.
1959-60, 3, XXXVIII, 114-127.
Two ornithological notes.
1917-18, 3, V, 230-231.
Unthank, a Manor of the Lovels, by C. A. Ralegh Radford and R. C. Reid.
1958-59, 3, XXXVII, 26-25.
The Ventidius Stone, Kirkmaiden.
1957-58, 3, XXXVI, 184-185.
Wilson of Croglin.
1949-50, 3, XXVIII, 135-149.

APPENDIX C

CONTRIBUTIONS TO OTHER SOCIETIES AND PERIODICALS

Locations of copies are given below each entry.

The order of the entries is: title, name of society or periodical, volume, date, page.

Hermitage Castle.
The History of the Berwickshire Naturalists Club.
XXVII Part III, 1931, 356-368.
Lincluden.
The History of the Berwickshire Naturalists Club.
XXVII Part II, 1930, 202-209.
Bierley—Burlaw—Byrlaw.
Transactions of Cumberland and Westmorland Antiquarian and Archaeological Society.
LV New Series, 1955, 325-326 (Note 7).
The Montgomerys.
Scottish Historical Review.
XXVIII Number 106, October 1949, 165-168.

APPENDIX D

GENEALOGICAL WORKS IN MANUSCRIPT

Titles

Abstract of the Services of Heirs, Dumfries, 1751-1830.
Acta Dominorum Concilii. Vols. I to V.
Acts and Decreets. Vols. I to IV.
Agnew Family—Lochnaw Charters.
Armstrong Family—Armstrong Notes.
Cannan Family—Cannan Notes.
Carruthers Family—Carruthers Abstracts. I and II.
Carruthers Family (of Holmains)—Calendar of the Holmains Writs.
Charteris Family—Charteris MSS. Vols. I and II.
Calendar of the Culvennan Writs. Supplementary to those published in D. and G. Transactions (1922-3). Vol. X.
Proctocol Book of Herbert Cunynghame, The, Nov. 1561-Feb. 1573/4.
Selected Abstracts from the Protocol Books of Herbert Cunynghame, Town Clerk and Provost of Dumfries.
Douglas Family of Drumlanrig—Calendar of Drumlanrig Writs.
Dumfries Commissary Court Deeds, 1652-64.
Dumfries Commissary Court. Register of Deeds, Apr. 1673-June 1675.
Dunbar Family of Mochrum—Mochrum Notes. Vols. I to III.
Gordon Family—Gordon MSS. Vols. 1 t 7.
Gordon Family—Gordon MSS. Miscellaneous. Vols. I to XXII (Vols. 8 to 29 of Gordon MSS.).
Gordon Family—Gordon MSS. Vols. 30 to 35 (N.B. 32 and 33 are misnumbered 14 and 15 on spine respectively).
Gordon Family—Gordon MSS. Gordon Walker Notes. Vol. I and II (Vol. 36 and 37 of Gordon MSS.).
Gordon Family—Gordon MSS. Vols. 38 and 39.
Gordon Family—The Culvennan MSS. Vols. I to VII.
Gordon Family—Culvennan MSS.
Gordon Family—Gordons of Earlston.
Gordon Family—The Earlston and Charters.
Gordon Family—A loose leaf index of the Gordons in Galloway of proved legitimate male descent.
Grierson Family—The Lag Charters. Vols. I and II.
Grierson Family—Notes on various families of the name of Grierson, by Sir Philip J. Hamilton-Grierson Kt. Transcribed by J. R. H. Greeves.
Johnstone Family—Johnstone Evidence (Dates covered by this volume, approx. 1413-1885).
Johnstone Family—Acta Dominorum Concilii, 1501-1557
Johnstone Family—Johnstone MSS. (29 separate MSS.).
Johnstone Family—Johnstone Testaments recorded at Edinburgh, 1560-1600.
Johnstone Family—Johnston MSS. Miscellaneous. Vols. I to IV.
Johnstone Family—Campbell Johnstone MSS. Vols. 1 and 2.
Johnstone Family—Campbell Johnstone MSS.
Johnstone Family—Johnstone Extracts (2 MSS.).
Johnstone Family—Johnstone Testaments.
Johnstone Family—Cadets of Johnston. Vols. I and II.

Abstract of the Commissary Court Register of Kirkcudbright 1585-1588.
Calendar of the Stewart Court Deeds of Kirkcudbright consisting only of documents in envelopes.
Calendar of Stewart Court Deeds of Kirkcudbright consisting only of documents in Envelopes. Vol. II.
Kirkcudbright Stewart Court Records: selections from the Processes, Vols. I and II.
Register of Hornings and Inhibitions for Kirkcudbrightshire. Vol. I. 1614-1621.
M'Culloch Family. M'Culloch Notes. Vols. I to VI.
Calendar of the Title Deeds, Personal Documents and other papers in the Charter Chest at Ardwall compiled by W. J. M'Culloch. W.S., and incorporating previous inventories prepared by J. Ronaldson Lyell, Notary, and Dr Gordon Donaldson, Ph.D., of the Historical Department of H.M. Register House.
M'Dowell of Logan. Calendar of the Logan Charters, Wigtownshire, now deposited at the Register House.
Maxwell Family of Monreith. [The Maxwell Family of Monreith, Mochrum.]
Miscellaneous, MSS. Vols. I to III.
MSS. Various. Inventories. Vols. I and II.
MSS. Various. Vols. I to XXV.
Murray Family—Moriquhat Charters.
Murray of Murraythwaite: a family history.
Selected Charters mainly from the Register House collections.
Selected Deeds from the Register of Deeds at the Register House [1555-1671].
Stewarts, Earls of Galloway—Calendar of Charters of the Earl of Galloway.
Stewarts of Physgill, Glasserton—Physgill Papers.
Stranraer Protocol Books. Vols. I and II.
Testamenta Vetusta. Vols. I to V.
Vaus Family—Barnbarroch Charters. Vols. I and II.
Wigtown Sheriff Court Records prior to 1700.
Wigtownshire Hornings and Inhibitions. Vols. I and II (bound in one).
Calendar of Wigtownshire Sasines. Vol. I (1619-1627).

SOME ASPECTS OF THE BIOLOGY OF CARCINUS (MAENAS (L.))

III RESPONSE TO pH

By E. J. PERKINS, J. R. S. GILCHRIST and J. LOGAN

Department of Biology, University of Strathclyde

Sea water is normally slightly alkaline with a pH about 8.2. However, in inshore waters a range from 7.0 to 9.0 may occur under natural conditions; some industrial effluents may have a limited influence upon this parameter. Bateman (1933) found the lethal limits for **Carcinus maenas** to be 6.0 and 9.0. However, such a conclusion is not reconciled readily with the ability of **Carcinus** to resist adverse conditions (Perkins, 1967, Perkins, Gribbon and Murray, 1969), or with the results given below.

An investigation of a shore influenced by fresh-water run-out showed a distribution of **Carcinus** in relation to salinity similar to that described by Perkins, Gribbon and Murray (1969). In all 130 crabs, size range 3-52 mm., mean 14 mm., carapace width were taken at pH's ranging between 6.7 and 7.9; 50% were taken at a pH $\leq$ 7.2 and 8 crabs were found in water of pH 6.7.

In the laboratory, an acid reaction was produced in sea water by addition of small amounts of hydrochloric and sulphuric acids, and a more alkaline reaction by addition of sodium carbonate. Exposure to sea water of varying pH was conducted in acute tests for 24 hr., followed by a recovery period in clean, fresh sea water for up to 10 days. An extreme pH is difficult to control, because the crab exoskeleton reacts with the acid to neutralise it, and absorption of CO_2 can influence the pH of very alkaline solutions. Crabs ranging from 10-36 mm. carapace width reached the 50% inactivation point about pH 4, and the 50% mortality point occurred at pH 3.5; 50% of the hermit crab, **Eupagurus berhardus** were killed by pH 3.5 also. All **Carcinus** recovered after a 24 hr. exposure at pH 4.0. Long term chronic studies showed that **Carcinus** can resist pH 6.0 administered in single shot weekly doses for a period exceeding 9 weeks; **Eupagurus** is much less resistant, although to what degree is uncertain. It is of interest that hydrochloric acid produces a much greater softening of the exoskeleton than sulphuric acid: a difference in keeping with the very different solubilities of calcium chloride and calcium sulphate.

Under an elevated pH, i.e. from 9.2-9.7, no inactivation of the **Carcinus** occurred during treatment, and all treated animals survived the 10 day recovery period.

REFERENCES

1. BATEMAN, J. B. (1933), Osmotic and ionic regulation in the shore crab, **Carcinus maenas.** J. exp. Biol., 10: 355-368.
2. PERKINS, E. J. (1967), Some aspects of the biology of **Carcinus maenas** (L.). Trans. Dumfries and Galloway Nat. Hist. and Antiq. Soc., 3rd ser., 44: 47-56.
3. PERKINS, E. J., GRIBBON, E., and MURRAY, R. B. (1969), Some aspects of the biology of **Carcinus maenas** (L.) II. Trans. Dumfries and Galloway Nat. Hist. and Antiq. Soc., 3rd ser., 46.

TRUE BUGS (HEMIPTERA-HETEROPTERA) FROM KIRKCONNEL FLOW NATIONAL NATURE RESERVE

by

HARRY K. KENWARD

(Department of Geology, University of Birmingham)

In 1968 I spent the period between 20th and 28th August collecting Heteroptera in National Nature Reserves in the Dumfries area, at the invitation of the Nature Conservancy. The present account deals with the records from Kirkconnell Flow, in which reserve most time was spent. I hope to deal with the bugs from the other reserves in a later paper.

Kirkconnell Flow National Nature Reserve (fig. 1) lies in Kirkcudbrightshire about a mile to the west of the Nith and roughly half way between Dumfries and New Abbey (Grid reference NX 9770). It is about a mile long and half a mile wide, having an area of approximately 383 acres, and is on average some thirty feet above mean sea level.

The reserve is described in detail in the Management Plan (Huxley 1961). The following account, based on Huxley's, will suffice to introduce the reserve to those not familiar with it and to place the records in context. The reserve was originally created to preserve what was regarded as an example of lowland raised bog. However, closer study has shown that although it is derived from such, a long history of disturbance by man through peat cutting, draining and burning has altered its character. These activities have brought about a lowering of the water table and this has been expressed through a spread of trees on to the bog, so that the reserve is now 'of great ecological interest because of the diversity of its vegetation types ranging from *Eriophorum—Calluna—Sphagnum* bog, with a high water table, to dry heath and mature stands of Scots Pine (*Pinus sylvestris*) and birch (*Betula cf pubescens*)' (Huxley, op. cit.).

About two-thirds of the area of the reserve bears birch or pine wood. Scots Pine occurs in a full range of ages, from seedlings to mature trees, and in densities ranging from mature woodland with a closed canopy to isolated trees on the wet bog. These latter, although they may reach a considerable age, remain small because of waterlogging and low availability of nutrients. Seedlings occur throughout the bog, but Huxley considers that these are unlikely to give rise to woodland. There is a band of tall pine trees near to the south-west edge of the reserve; from this pines tend to become smaller towards the north and east of the bog except for a central island of taller trees. Birch is abundant and is present in all stages from low scrub to mature woodland. Ground vegetation in the woodland seems to be dependent

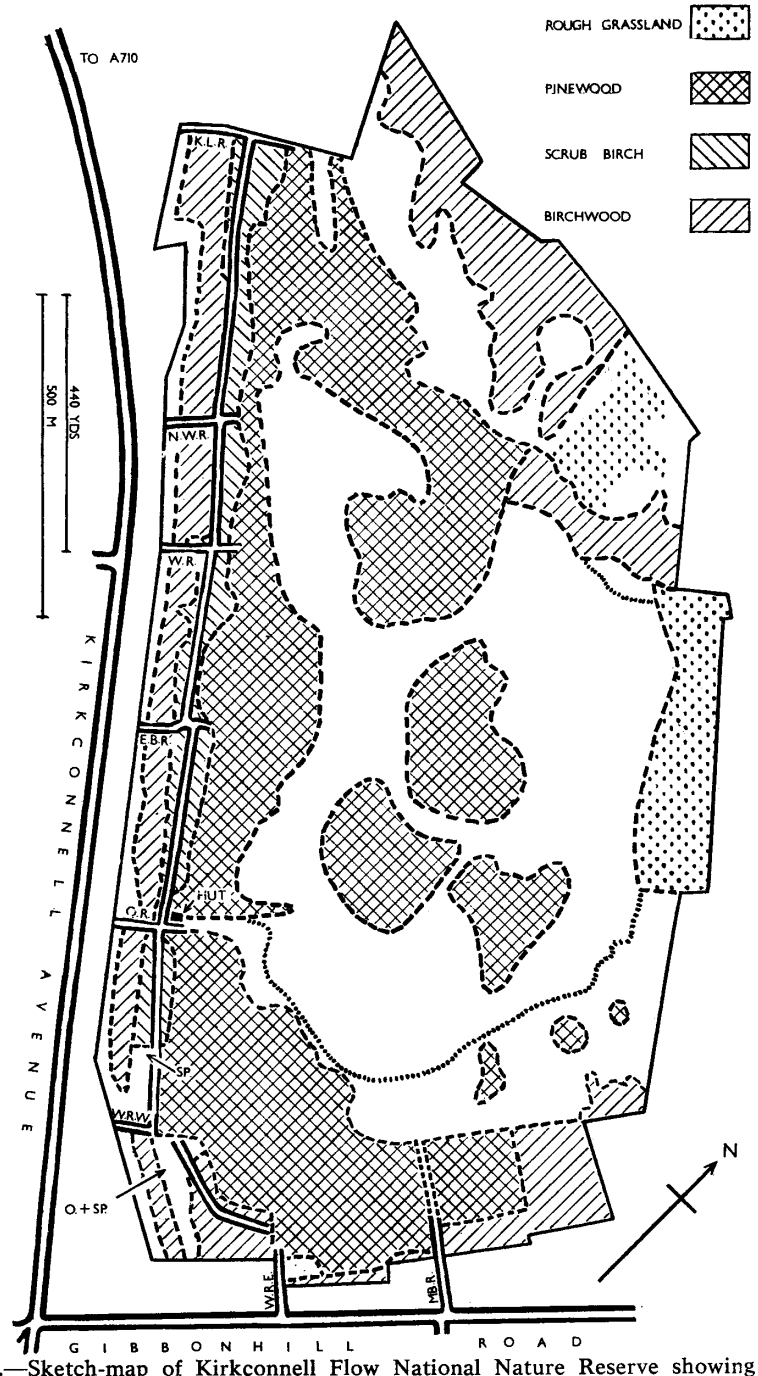


Figure 1.—Sketch-map of Kirkconnell Flow National Nature Reserve showing rides and vegetation. Broken lines—approximate boundaries of main plant communities. Dotted line—limit of peat cutting. Unmarked areas within the reserve range from **Calluna** moor to **Sphagnum** bog except along the south-west edge which is wasteland with aquatic marginals along the boundary ditch. Abbreviations—E.B.R., Eel Burn Ride; K.L.R., Kirkconnell Lodge Ride; M.B.R., Maxwellbank Ride; N.W.R., North Woodcroft Ride; O.+SP., row of oaks and spruces; Q.R., Quarry Ride; SP., group of spruces; W.R., Woodcroft Ride; W.R.E., Woodside Ride East; W.R.W., Woodside Ride West.

on the degree of closure of the tree canopy rather than upon the species of tree. Open canopies generally have a *Calluna vulgaris* (heath) dominated ground community; *Vaccinium myrtilis* (bilberry) becomes progressively more important as shading increases. Where the canopy is very dense a carpet of moss (or below pine, needles alone) occurs. Dense stands of *Pteridium aquilinum* (bracken) are present on some open areas.

The drier parts of the bog generally carry numerous stunted pines amongst *Calluna*, with lichens where the heath is senescent. The wet bog generally supports a mixed community of *Calluna vulgaris*, *Eriophorum* species (cotton-grass), *Erica tetralix* (cross-leaved heath), *Andromeda polifolia* (marsh andromeda), with *Empetrum nigrum* (crowberry), *Oxycoccus palustris* (cranberry), *Narthecium ossifragum* (bog asphodel), and *Trichophorum caespitosum* (deer grass) common here and there. Some hollows have a strongly differentiated vegetation with aquatic *Sphagnum* species dominant, while often the lichen *Cladonia impexa* is abundant or even dominant.

This brief survey considers only the major vegetation types of the reserve. There are many variations on the main theme and a number of minor habitats and plant associations. Of these, the most important entomologically are (*a*) a small amount of open water, (*b*) the aquatic-marginal vegetation associated with the ditch along the south-west edge of the reserve, (*c*) wasteland plants along the marginal fences and in a few places on the rides and (*d*) rough grazing land to the north east of the reserve. These and other minor habitats are described as is necessary under the species headings.

Species List

In the following list a brief summary of the known ecology and distribution in the British Isles is given for each species. The bulk of this information is drawn from my own observations and from Southwood and Leston (1959). The species are listed under family headings; their order and the nomenclature follow Kloet and Hincks (1964).

ACANTHOSOMATIDAE

Elasmostethus interstinctus (Linnaeus)

This bug is widely distributed throughout the British Isles on birch, generally on trees bearing fruits. It often occurs with the next species but is usually less abundant.

At Kirkconnell this species occurred fairly frequently where there was mature birch, often with *Elasmucha grisea* but in smaller numbers. Larvae, which were mainly last instar, were sometimes found with the adults. One adult was beaten from *Picea abies* (Norway spruce) together with other birch species, a record which is discussed later.

Elasmucha grisea (Linnaeus)

This species is very common on birch throughout the British Isles, possibly excluding northern Scotland, and is of special interest in that the female guards the eggs and larvae. The larvae follow the parent and remain aggregated in a characteristic group, making contact with the antennae.

Adults of *E. grisea* were very common both on birch scrub and on the mature trees, and were also often found by sweeping at some distance from their food plant. Larvae, probably all fourth or fifth instar, were common on fruiting trees but always absent from scrub. One group of larvae was noticed, consisting of about six individuals arranged radially around a central one. A few adults were beaten from *Sambucus niger* (Elder) near the southern corner of the reserve, and one each from oak and Norway spruce in the same area. The latter occurred with *Elasmostethus interstinctus* and *Blepharidopterus angulatus* (see page 22).

PENTATOMIDAE

Pentatoma rufipes (Linnaeus)

A fairly common species which feeds on oak and rarely on alder and other deciduous trees, though because of its large size and bumbling flight it is often noticed away from these, commonly at light. It occurs throughout Britain, though its northern limit is not known.

In the Kirkconnell Flow reserve this bug was frequently found by sweeping tall grass or bracken in many parts of the reserve, a total of some twenty individuals being seen. It was never found on any of its known host plants, and indeed the largest numbers were found by sweeping in a grassy field to the north end of the reserve, from which area no oak was visible. One specimen was found alive in an *Araneus* web and took to flight when freed. Adults often flew from the net when caught if the weather was warm.

Picromerus bidens (Linnaeus)

This predatory species is generally found by sweeping in lush or marshy places with mixed vegetation. It has a wide distribution but becomes less common in the north.

P. bidens was very common throughout the reserve where conditions were suitable and, like the last species, was often noticed at rest on vegetation. A few larvae were swept along the Main Ride[1]. It was repeatedly observed that the bug occurred principally at the woodland-bog transition. This was possibly because the transition provided a combination of shelter, sunlight and taller, more mixed vegetation which favoured the bug and its prey, the soft larvae of Lepidoptera and chrysomelid beetles.

LYGAEIDAE

Trapezonotus arenarius s. lat.

It is uncertain whether British *Trapezonotus arenarius s. lat.* is to be regarded as a single variable species (Southwood and Leston 1959) or as three closely related ones, namely, *T. dispar* Stål, *T. desertus* Seidenstücker and *T. arenarius* (Linnaeus) (Seidenstücker 1951, Woodroffe 1960) although the latter view is probably the correct one. Forms referable to *T. dispar* (*T. quadratus* of authors) are usually found in woodlands, to *T. desertus* on inland dry areas and to *T. arenarius* mainly from coastal sand dunes (Southwood and Leston 1959, Woodroffe 1960). The distribution of the three forms is poorly known in Britain.

At Kirkconnell Flow a single *Trapezonotus* was taken by searching amongst low (10-20 cms) *Calluna* and *Vaccinium* in the Main Ride just north of the intersection with Woodcroft North Ride. Prolonged searching produced no further individuals. The specimen, a brachypterous male, was 4mm long before dissection of the genitalia and had the hind and intermediate tibiae completely black, corresponding with *T. arenarius s. stricto*. However, the parameres and forewing membrane shape and overlap do not fit Woodroffe's description of *T. arenarius*. The parameres are close to *T. desertus* while the membrane overlap corresponds fairly well with that taxon. On the basis of the parameres I am inclined to regard the specimen as a small dark *desertus*, and this identification is supported by the habitat. It appears that this is the first Scottish record of *T. desertus*, which is not separated from *T. arenarius* in Massee's (1955) list.

1 The principal ride running north-west to south-west parallel to Kirkconnell Avenue is unnamed on Conservancy maps. For convenience I have called it the 'Main Ride' both here and in my report to the Nature Conservancy.

Stignocoris pedestris (Fallén)

S. pedestris is one of the commonest British bugs and is often abundant at the roots of plants in dryish places. It is found throughout the British Isles.

This bug occurred in moderate numbers below *Calluna* and other plants in many parts of the reserve, generally along the rides. It was particularly common by sweeping the grassy margins of Quarry Ride. The bug became noticeably less common as the substratum became damper.

Drymus brunneus (Sahlberg)

Fairly common and widely distributed, this is a ground bug of rather damp places, generally in or near woods. It is known to feed on mosses and fungi.

D. brunneus was found in many places scattered throughout the reserve, either by searching at the bases of low plants or, less often, by sweeping. It was most numerous in an area a few yards from the hut, where there was *Vaccinium myrtilis* up to about 15 cm high with tussocky grass and *Polytrichum*, and seemed generally to occur where there was both grass and *Vaccinium*. However, it was also found in abundance by sweeping a pure stand of *Vaccinium* (below pines at the inner end of Maxwellbank Ride) and by searching mats of *Polytrichum* (in birch woodland at the north end of the reserve). A number of specimens were found under and around *Calluna* plants on open ground with a loose peat substratum in a cleared area in the southern corner of the reserve, a habitat which seemed atypical because of its dryness and incomplete plant cover. Whether the bug has invaded the area subsequent to clearance or has survived since before that time must be a matter for conjecture. If the latter is the case the bug must have passed through at least five generations at this site since the clearing is marked on the Nature Conservancy map last amended in 1963.

Scolopostethus decoratus (Hahn)

Very common and often abundant under suitable conditions, this bug is rarely found away from *Erica* or *Calluna*. Its distribution extends throughout the British Isles except the northernmost part of Scotland.

At Kirkconnell adults and larvae of this bug occurred in varying numbers below mature and senescent plants of *Calluna*, though it was never very abundant and was often absent from apparently suitable habitats. The greatest numbers were found in an area of dry *Calluna* heath beyond the inner end of Maxwellbank Ride.

Eremocoris plebejus (Fallén)

E. plebejus is known from areas of pinewood and mixed heath. It has a markedly discontinuous distribution in the British Isles, with records from the Scottish Highlands, southern England and Glamorganshire.

My attention was drawn to the presence of this interesting insect by a single specimen swept from a patch of sedges, *Erica tetralix*, *Vaccinium* and *Calluna* growing through a loosely packed layer of pine needles in the Main Ride just north of its intersection with Woodcroft North. A single larva, probably last instar, was found by searching nearby amongst the mass of needles and *Vaccinium* stems at the base of a pine. Three more adults and another large larva were found in rather similar conditions, amongst pine needles overlying the stems of mature *Calluna* plants at the foot of large pines, at the inner end of Eel Burn Ride.

This is apparently the first southern Scottish record of *E. plebejus*, which has previously been recorded from Cambridgeshire, Hampshire, Kent, Glamorganshire and northern Scotland (Massee 1955, Southwood and Leston 1959). Southwood and Leston say that the bug is known from Perthshire (Forres), while Woodroffe (1962) places it 'mainly in the eastern Scottish Highlands' but gives no named localities. Woodroffe (1967) records one specimen from Aviemore, Inverness-shire, and describes the distribution as 'largely confined to the Cairngorms area'. Thus Forres and Aviemore seem to be the only published Scottish records. I have not been able to decide whether the specimens conform to the northern or southern forms of Woodroffe (1962). As this is a lowland

locality and very much to the south of the known range of the northern form they will probably prove to be of the southern form.

Gastrodes grossipes (Degeer)

This is quite a common bug on *Pinus sylvestris* and occasionally on other conifers. Its distribution in the British Isles seems only to be limited by that of its host.

The bug occurred fairly commonly throughout the reserve, being found both by beating pine and, when the weather was warm so that the bugs were active, by general sweeping. Specimens found on the host tree all came from mature pines bearing cones of all ages. Some last instar larvae were beaten from one tree at the south-east corner of the open bog.

BERYTINIDAE

Cymus glandicolor (Hahn)

A bug of marshy places and occasionally sand-dunes, *C. glandicolor* feeds on sedges. It is known from most English and some Welsh counties.

At Kirkconnell Flow *C. glandicolor* was restricted to an area of grasses and sedges just to the north of Quarry Ride. Here both adults and larvae (in their third to fifth instars) were abundant. This appears to be the first recorded occurrence of *C. glandicolor* in Scotland.

TINGIDAE

Acalypta carinata (Panzer)

Occurring locally throughout the British Isles, *A. carinata* is generally found in moss, often on rotting logs.

A single brachypterous male was swept in a grassy area by the Main Ride near to the hut, and a brachypterous female from a similar area in Quarry Ride.

Acalypta nigrina (Fallén)

An uncommon bug, found in moss and apparently restricted to Scotland.

A single female brachypter was found by searching below isolated *Cladonia* tufts on waterlogged bare peat at the old limit of peat cutting to the south east of the reserve.

REDUVIIDAE

Empicoris vagabundis (Linnaeus)

This species, which is remarkably mosquito-like in appearance, is fairly common and widely distributed, occurring less often in the north. It is predatory and occurs mainly on trees.

A number of adults of this bug were found in the mass of detritus caught on the lower branches of a Norway spruce at the south-east end of the reserve. Together with the *Empicoris* were large numbers of small nematoceran flies, Collembola and Psocoptera upon which the bugs were presumably feeding.

Coranus subapterus (Degeer)

C. subapterus is a ground-living predator, and is quite common on heaths and sand-dunes throughout Britain.

A single specimen was found on wet *Sphagnum* in an open area of bog some way to the south of the wooded 'island'. The individual was brachypterous and so probably originated in the area where it was found although, having open water between the tussocks, the substratum was very much wetter than is normal for this species.

NABIDAE

Nabis flavomarginatus (Scholtz)

This bug is common and widely distributed in Britain. It is usually found by sweeping grasses, especially where conditions are damp and tussocks have formed.

A few specimens were swept in the grassy field at the north-east end of the reserve, probably the only area of vegetation in the reserve suited to the bug's requirements.

Nabis ericetorum (Scholtz)

This is a common bug throughout the British Isles where there is *Calluna* or *Erica*.

Adults, and more usually larvae of all sizes, were found in small numbers by sweeping or searching wherever there was *Calluna*.

Nabis rugosus (Linnaeus)

N. rugosus is a very common insect which is found in most kinds of grassy area and often below other plants. Its distribution covers the greater part of the British Isles.

Two specimens of this insect were found, one by sweeping *Juncus* and grasses by Eel Burn Ride, the other being noticed running on bare peat near the south end of the Main Ride.

Dolichonabis limbatus (Dahlbom)

Found commonly throughout the British Isles, this is primarily a bug of damp places and lush vegetation though it often occurs in rather drier conditions.

At Kirkconnell Flow this bug was one of the commonest along the rides, generally where there were grasses. It also occurred in varying numbers in other areas of mixed vegetation, for example the grassland to the north east of the reserve and the lush vegetation along the edges of the marginal ditch. A few specimens were taken in wooded areas where there were grasses.

CIMICIDAE

Temnostethus gracilis (Horváth)

This species has a wide but diffuse distribution and, when found, generally occurs in fair numbers. It lives on lichen-covered trunks and branches of deciduous trees and is predatory.

T. gracilis was found amongst lichens on *Betula* and *Quercus* in the few places where it was searched for at any length, though only in small numbers. A few were beaten from lichen-covered twigs, particularly those of some oaks near the south-west corner of the reserve.

Anthocoris confusus (Reuter)

A common species throughout the British Isles, found on deciduous trees and sometimes on other plants.

A. confusus occurred in small numbers in various parts of the reserve, usually where there was birch, and was never common. A few were beaten from oak in the south-west corner of the reserve together with *A. nemorum* and *Temnostethus gracilis*.

Anthocoris nemorum (Linnaeus)

This is a very common and widely distributed bug found on a great variety of plants. Like most of the Cimicidae, it is predatory, feeding on many kinds of small arthropods.

At Kirkconnell larvae and adults were found by sweeping along the rides and in other open areas of mixed vegetation and by beating oaks and scrub birch. A number of adults were found by searching amongst low *Vaccinium* and *Polytrichum* on the woodland floor near the hut. The bug was never very abundant.

Acompocoris pygmaeus (Fallén)

Having a wide distribution in Britain, this bug usually occurs on conifers, especially *Pinus sylvestris*.

Specimens of this bug were taken by beating crab apple in Maxwellbank Ride and by general sweeping in woodland just to the east of it. Surprisingly, none were found on the normal hosts.

MIRIDAE

Monalocoris filicis (Linnaeus)

A common and widely distributed species on Polypodiaceae, especially bracken (*Pteridium aquilinum*).

M. filicis was found commonly and in fair numbers in most parts of the reserve where there was bracken.

Bryocoris pteridis (Fallén)

B. pteridis is common and widely distributed in Britain, on ferns. It often occurs with the previous species but is rarely abundant on *Pteridium*, its main hosts being male fern (*Dryopteris filix-mas* aggregate) and lady-fern (*Athyrium filix-femina*).

At Kirkconnell this species was swept in varying numbers in many places where its hosts were plentiful. It was also occasionally found with *M. filicis* on bracken.

Atractotomus magnicornis (Fallén)

Found throughout the British Isles, this bug occurs on spruces and occasionally on other conifers.

A few specimens were beaten from lichen-covered branches of *Abies* by the Main Ride near the southern end of the reserve.

Plagiognathus arbustorum (Fabricius)

P. arbustorum is a widespread species in Britain. It is found on various herbaceous plants, particularly nettle, and often occurs in large numbers.

In the Kirkconnell Flow reserve a few specimens were swept from patches of nettle along Maxwellbank Ride, and some others from *Mentha* along the boundary ditch near Quarry Ride.

Dicyphus pallicornis (Meyer-Dür)

This is a fairly common species, generally found wherever its host, *Digitalis purpurea* (foxglove), grows. It is known from most parts of the British Isles.

A single specimen was taken by turning over the leaves of foxgloves growing in a large patch near the hut. No other adults or larvae were found anywhere in the reserve despite the examination of a large number of foxgloves, nor was there any evidence of feeding damage.

Campyloneura virgula (Herrich-Schäffer)

Quite common on deciduous trees, particularly oak, hazel and hawthorn, this bug occurs throughout Britain.

A single specimen of *C. virgula* was taken by beating crab-apple in Maxwellbank Ride.

Blepharidopterus angulatus (Fallén)

This predatory species, known in horticulture as the "black-kneed capsid", may be an important factor in the control of red spider mite on fruit trees. It is quite common and widely distributed on a variety of deciduous trees, particularly alder, elm, birch, as well as fruit trees.

Specimens of *B. angulatus* were beaten from *Betula* in several parts of the reserve, the bug being particularly numerous on fruiting birches at the south-west end. It occurred in moderate numbers on alders along the marginal ditch by the Quarry Ride bridge. A single specimen was beaten from Norway spruce together with *Elasmucha grisea* and *Elasmostethus interstinctus* (both exclusive birch feeders). All three came from one branch. No other specimens of any of these bugs were found on spruce although a prolonged attempt was made to find them. The probable explanation lies with the location of the spruce just at the point where a cleared area surrounded by birches narrows into the Main Ride. It is likely that insects flying or shaken from their host tree in winds the previous night would encounter the spruce from which they were taken before any other object on which they might settle. That all three specimens should occur on the same branch seems, however, to be a remarkable coincidence.

Orthotylus ericetorum (Fallén)

Found on *Erica tetralix* and *Calluna*, often in large numbers, *O. ericetorum* has been recorded from most of Britain.

This species was locally common at Kirkconnell, and occasionally was found in large numbers by shaking *Calluna* plants on to a sheet. The bug appeared to be most numerous in areas of mature or senescent *Calluna* on a dry substratum with plenty of litter, for example, the area beyond the inner end of Maxwellbank Ride.

Cyrtorhinus caricis (Fallén)

With a wide distribution in Britain, *C. caricis* is predatory on larvae of beetles and Homoptera around the bases of sedges and rushes.

This insect was found in moderate numbers by sweeping *Juncus* and grasses at the boundary end of Eel Burn Ride. Surprisingly, none were found by searching at the base of *Juncus* stems in the same area, and the bug seemed to be absent from an apparently suitable area to the north of Quarry Ride.

Mecomma ambulans (Fallén)

Being common on lush vegetation throughout Britain, this species generally occurs in or close to woodlands.

A few specimens of *M. ambulans* were swept from lush vegetation along Maxwellbank Ride. The bug was not seen elsewhere in the reserve.

Pithanus maerkeli (Herrich-Schäffer)

Widely distributed in Britain, *P. maerkeli* is found in open grassy places, especially, but not invariably, where conditions are a little damp.

Single specimens were taken in two widely separated parts of the Kirkconnell reserve; one in the area of grasses and rushes at the outer end of Woodside West Ride and the other by sweeping grasses amongst scrub birches at the extreme north of the reserve.

Lygus rugulipennis (Poppius)

'Common and generally distributed on a wide variety of hosts' (Woodroffe 1966), this bug tends to be especially abundant on nettle and chenopods.

At Kirkconnell a few specimens were taken by sweeping along the boundary fences and in the rides where there was a mixed wasteland vegetation. A number of other specimens of *Lygus* species were taken: these I have not been able to determine with certainty using either Southwood and Leston's (1959) or Woodroffe's (op. cit.) keys.

Liocoris tripustulatus (Fabricius)

L. tripustulatus is a nettle species recorded from the whole of the British Isles.

The bug was swept from nettles in Maxwellbank Ride, Quarry Ride, Eel Burn Ride and by the boundary fence along the south-west side of the reserve, one or two specimens being taken in each case.

Lygocoris pabulinus (Linnaeus)

A commonly and widely distributed species, *L. pabulinus* is found on a wide range of deciduous trees and herbaceous plants. It has an unusual life-cycle, overwintering in the egg stage on a woody host which is left by the young larvae in early spring for a herbaceous one on which the spring larvae mature and a summer generation is passed. Some woody plants may be utilised for the whole cycle.

L. pabulinus was found frequently and in moderate numbers in Kirkconnell Flow Reserve, being swept from lush vegetation along the rides, swept from scrub birch or beaten from mature, fruiting, birches.

Calocoris sexguttatus (Fabricius)

This bug is widely distributed in Britain. It generally occurs on *Urtica dioica* (stinging nettle), almost always in or at the margins of woodland.

Single specimens of *C. sexguttatus* were taken on two occasions in Maxwellbank Ride, once by general sweeping and once from nettle.

Phytocoris tiliae (Fabricius)

P. tiliae is recorded from most deciduous trees, with oak perhaps the commonest host, and is known from most parts of Britain.

Several adults and late larvae were beaten from oaks between Woodside East and Woodside West Rides. Most specimens came from twigs with a dense lichen cover (which would presumably harbour abundant small invertebrates, providing prey for the bug).

Phytocoris ulmi (Linnaeus)

With a wide distribution in the British Isles, this bug is most commonly found on hedgerow trees and shrubs.

At Kirkconnell a single specimen was swept from scrub, principally birch, just within the wooded part of the south-east end of the reserve.

Stenodema calcaratum (Fallén)

Occurring throughout Britain, *S. calcaratum* feeds on grasses in a wide variety of habitats.

Adults, which were mainly fresh, and large larvae were swept in considerable numbers in Maxwellbank and Quarry Rides, and occasionally in smaller numbers in the grassy parts of other rides. The species was particularly abundant in the grassy field at the north-east corner of the reserve.

Stenodema holsatum (Fabricius)

This bug is common on grasses and rushes, especially in woodland. It is found throughout the British Isles with the exception of South-East England.

This was one of the commonest bugs at Kirkconnell, being swept almost everywhere where there was grass in shaded conditions. It was often found in company with the last species; the proportion of *S. calcaratum* was greater in drier more open areas. A few specimens of *S. holsatum* were found in isolated grass tussocks amongst *Calluna* in a dry area at the south end of the bog.

Trigonotylus ruficornis (Geoffroy)

T. ruficornis is found throughout the British Isles in dry grassy places ranging from moors to saltmarshes, generally in small numbers.

A single specimen was swept on the grassy field at the north-east end of the reserve.

Leptoterna dolabrata (Linnaeus)

Widespread and often abundant, *L. dolobrata* occurs in grassy places. It requires conditions to be slightly damp.

A few specimens were taken by sweeping grasses, together with the last species.

SALDIDAE

Saldula saltatoria (Linnaeus)

This is a very common bug, usually occurring at the margins of lakes, ponds and streams where there is firm mud, sand or flat rocks. It occurs throughout Britain, becoming rarer at high altitudes.

S. saltatoria was found in a series of atypical habitats at Kirkconnell, as follows: (*a*) The bug was taken in numbers by sweeping mixed vegetation (mainly scrub birch) around the edges of boggy areas, especially at the woodland/bog transition, and often with *Picromerus bidens* (page 18). It

was found much less commonly on the open bog, which would have provided a more nearly typical habitat, though an apparent scarcity could have been brought about by the ability of the bugs to escape from the approaching net more easily in open areas. Amongst tall vegetation the bugs were presumably living on the surface of *Sphagnum* tussocks below the erect plants. In a wetter season there may have been free water between the tussocks. (*b*) One specimen was found together with *Drymus brunneus* (page 19) amongst the carpet of *Polytrichum* on the floor of birch woodland at the north end of the reserve. This individual would have been regarded as a stray were it not for the other records. (*c*) A number were found, again with *D. brunneus*, by searching under and around *Calluna* growing on dry, loose peat in a cleared area towards the southern corner of the reserve. This situation, like the last, seems quite wrong for this species, being much too dry, and indeed was thought to be too dry even for the terrestrial *D. brunneus*. However, saldids may not be limited primarily by their water relations to wet places, and indeed some, for example *S. orthochila*, are dry land species and many others occur in saline, *i.e.* physiologically dry, conditions. It is possible that their primary requirement is an open substratum over which they can move freely, searching visually for prey. This type of open substratum is, in lowlands and without the interference of man, generally only available in association with water, being created by changes of level (seasonal or tidal) or flow, or by wave action, or in some kinds of bogs through restriction of flora. These speculations seem to be supported by the present observations, which suggest that *Saldula saltatoria* can at least temporarily exploit small areas of *Sphagnum* surface between plant stems and true dry land situations where there is a certain amount of shelter.[2]

VELIIDAE

Velia caprai (Tamanini)

This common species occurs throughout Britain on waters ranging from chalk streams to peat cuttings, preferring weed free water of low organic content.

At Kirkconnell *V. caprai* was extremely abundant on almost all areas of open water, including the marginal ditch, the newly cleared ditches near the hut and the small pools formed by the torn-up root masses of fallen pine trees. In these pools the bug was particularly numerous, and it was estimated that some supported several hundreds of adults and last instar larvae. It is interesting to note that of the very large number of adults I examined none were macropters, although these might have been expected to be present at all times in a population of a uni-voltine species which was quickly invading newly-formed habitats.

CORIXIDAE

Hesperocorixa sahlbergi (Fieber)

H. sahlbergi occurs in small water bodies of many kinds, particularly where there is a bottom of black mud, plenty of plants, much organic matter in solution but a fairly high pH.

Several adults were taken from a small ditch at the inner end of Kirkconnell Ride. The water was fairly clear with abundant filamentous green algae, the margins bare peat except in places where there was *Sphagnum*. Some corixid larvae were found in the ditch by the hut, and these may have been of *H. sahlbergi*.

About five and a half days were spent actually collecting on the Kirkconnell Flow reserve during a period of exceptionally good weather, generally hot and often

2 Mr G. E. Woodroffe has been kind enough to examine some of the specimens, and confirms that they are, without doubt, **Saldula saltatoria.** Mr Woodroffe has also confirmed the identifications of **Trapezonotus desertus, Cymus glandicolor** and **Eremocoris plebejus.** I hope to add to the account of the last species and of some others in a later publication.

sunny. It was probably because of these favourable conditions that a comparatively large number of species of Heteroptera was taken, the insects being more active and thus more easily noticed at higher temperatures. Many species which are principally ground-living climb plant stems when it is warm and thus can be taken in the sweep net. For example, it is unlikely that *Eremocoris plebejus*, *Acalypta carinata* and *Cyrtorhinus caricis* would have been detected unless swept, for the probability of finding species of such localised occurrence by random searching would have been very small. About fifty species of Heteroptera, many of them abundant, were taken during the brief stay at Kirkconnell Flow. This is a good total (amounting to one-fifth of the species recorded from Scotland in Massee's (1955) list). However, a large proportion of the species are bugs of newly created wastelands, open spaces and grassland. These habitats, which at Kirkconnell occur around the boundary fence, in the small number of clearings and in places along the rides, are dependent for their continued existence upon the activities of men. Should localised disturbance cease it is probable that many species would quickly disappear from the reserve. Only two water bugs were taken, both very common species in Britain: one (*Velia caprai*) tolerating a wide range of waters and the other (*Hesperocorixa sahlbergi*) being a typical component of the fauna of woodland pools. The small number of aquatics reflects the dearth of open water in the reserve. The Management Plan expresses an intention to create more open water and a start has been made by digging out and damming a ditch by Quarry Ride. This is unfortunately under tree cover and so will be inevitably restricted in fauna—in 1968 only *V. caprai* and some corixid nymphs, probably of *H. sahlbergi*, were present.

Our stay at Kirkconnell was made most enjoyable by the generous hospitality of Mr and Mrs C. A. McQuillin of Garden Cottage, Kirkconnell Lodge. The reserve warden, Mr John Young, gave us a warm welcome and much assistance. Thanks are also due to the Nature Conservancy for giving me the opportunity to visit this interesting reserve, to Mr T. Huxley and Mr A. J. Kerr at the Conservancy's Edinburgh office for helping me in various ways, and to Shell from whose grant the work was financed. In the field and during the preparation of the manuscript I have been helped throughout by my wife, Sandra.

References

Huxley, T., 1961, Kirkconnell Flow National Nature Reserve, Kirkcudbrightshire, Management Plan.

Kloet, G. S., and Hincks, W. D., 1964, 'A check list of British insects,' second edition, part 1. The Royal Entomological Society, London.

Massee, A. M., 1955, Entomologist's Mon. Mag. **91,** 7.

Seidenstücker, G., 1951, Senckenberg. **32,** 79.

Southwood, T. R. E., and Leston, D., 1959, 'Land and water bugs of the British Isles.' Warne, London.

Woodroffe, G. E., 1960, Entomologist **93,** 218.

Woodroffe, G. E. 1962, Entomologist's Mon. Mag. **98,** 262

Woodroffe, G. E., 1966, Entomolgist **99,** 201.

Woodroffe, G. E., 1967, Entomologist's Mon. Mag. **104,** 220.

NORTH SOLWAY BIRD REPORT No. 3—1967-1968

Compiled and Edited by A. D. WATSON and J. G. YOUNG

Circumstances largely beyond our control made it impossible to produce a report for the single year, 1967, to follow our reports for 1965 and 1966. We have, therefore, decided to present an amalgamated report for 1967 and 1968, the latter year generally being given the more detailed treatment.

We have followed our previous policy of giving restricted details of some scarce or vulnerable breeding species for obvious reasons. The three counties, Dumfriesshire, Kirkcudbrightshire and Wigtownshire have again been denoted by the letters D, K and W, but when a place name occurs frequently, the county letter has not been repeated every time.

We have tried to develop the policy initiated in 1966 of broadening the scope of the report, in some instances, beyond the bare details of status and distribution, but as this report covers two years many birds have had to be dealt with very briefly and some of the commoner species have again been confined to a list when there was no special comment to make about them.

The North Solway region covers a wide area of varied terrain and we are only too well aware of the gaps in a report of this kind. Some localities are much more actively watched than others and the status of many species changes continually. We would like to stress that a number of people have contributed valuably to the report; it would be invidious to single out our contributors for Dumfriesshire and Kirkcudbrightshire, but notes supplied by R. C. Dickson have a special importance for Wigtownshire. We hope, however, that all will feel that this is a co-operative effort and will understand that it would greatly increase our task and the length of the report if all observations were accredited to individual contributors. In the case of the more unusual records attributions can, in fact, be found by reference to the Annual Scottish Bird Report.

We would welcome notes from new contributors in the future but at the same time must ask that, especially where uncommon birds are concerned or exceptional numbers of any species noted, great care should be taken to supply full details to the compilers.

CLASSIFIED NOTES

Black-throated Diver. One on a loch in (K), July, 1967.

Great Northern Diver. 1968: One, still showing signs of summer plumage, Earlstoun Loch (K), 18-26 Dec.

Red-throated Diver. Fairly frequent coastal records, Sept.-April, mostly of single birds or very small numbers, especially in Loch Ryan (W); also noted at Knock Bay (W), Carsethorn, Southerness and Dee Estuary (K) and at Caerlaverock and Stanhope (D)—the last an oiled bird. An exceptional count of 16 at Southerness, 29th Sept., 1968, after a westerly gale and a passage movement was noted between Portpatrick and Mull

of Galloway (W), 24th Sept., 1967, when 33 divers, of which 2 and probably all were of this species. No inland records.

Great Crested Grebe. Commonly seen around coasts in winter, largest numbers noted Loch Ryan (30 on 29th Dec., 1967, and 37 on 3rd March, 1968). Inland, 1967, 27 on Lochmaben Lochs (D), a pair Woodhall Loch (K) in March, up to 5 birds, L. Ken, March-Nov. and pairs on Lochs Kindar, Lochfoot and Auchenreoch (K) but successful breeding not recorded except at Loch Arthur; present Lochinch and Mochram (W); lack of further details. In **1968** there were 19 Castle Loch, 2 pairs Hightae, 2 pairs Mill Loch, Lochmaben (D), 30th March, no details of successful breeding. Up to 5, again L. Ken, March-Nov., nesting observed, but no young seen, single Woodhall Loch (K), 20th March, one Loch Arthur (K), 1st Dec., bred, one pair each at Lochinch and Castle Loch, Mochram (W).

Red-necked Grebe. One, Loch Ryan, 7th April, 1968.

Slavonian Grebe. One Loch Ryan, 27th Feb., 1967; 2 Loch Ryan, 3rd March; and one Carsethorn, 21st October, 1968.

Black-necked Grebe. Small numbers regularly winter Loch Ryan; highest counts 7 on 29th Dec., 1967, 3 March and 7 April, 1968. Elsewhere the only record was of one L. Ken, 21st-23rd Oct., 1967.

Little Grebe. Bred both years, all 3 counties; more widespread on fresh water in winter, largest numbers L. Ken, 10 on 20th Feb., 1967, and 12 on 18th Feb., 1968.

Storm Petrel. One came aboard the "Caledonian Princess," 30th Sept., 1967, later released near Stranraer.

Manx Shearwater. Single storm driven bird (D) on main Carlisle road 1 mile from Solway 1st Feb., 1967. 207 moving west, during three half-hour watches, Meikle Ross (K), 16th July, 18 same locality 24th July, 1967.

Fulmar. Bred (K) and (W), one flying inland 2 miles north of Dumfries, 30th Aug., 1967, one over Caerlaverock, 7th April, 1968.

Gannet. On 8th June, 1968, the colony on the Big Scar Rock (W) consisted of 437 pairs.

Cormorant. Common on coastal waters, rivers and lochs. In June, 1967, the following counts of nests were obtained: Mull of Galloway, 14; Castle Loch, Mochram, 293; Garlieston-Cruggleton, 35-40; "Mulberry," off Garlieston, 41, all (W); Orroland, c. 70; Port o' Warren, 13-14; Meikle Ross, 11; Portling, 20-30. **1968:** Burrow Head, 10; Piltanton Estuary, 32; Scar Rock, 12 (W). Up to 270 were at Caerlaverock, Jan.-Feb. and Oct.-Dec., 25-30, L. Kindar (K), 14th Feb., where roost shot regularly.

Shag. Bred both years, at usual sites (W), 50-60 pairs Mull of Galloway; 24 pairs Big Scar, 1968. Breeding probably continues in small numbers in (K). Common L. Ryan in winter, regular in very small numbers Southerness-Nith Estuary.

Heron. In 1968 bred very well at established heronries (D); at least 20 pairs reared young at Dalskairth (K); a pair bred, Loch of Lowes (K), 1967, and breeding continues at Lamloch. No details received on Minnigaff heronry. A pair bred Lochinch (W), 1968.

Little Egret. One found dead near Mochram (W), 23rd April, 1968, was the first record for Solway (See S.B. 5 (4) 209).*

Bittern. One shot Lochmaben (D), Nov., 1967.

Flamingo. A bird of the Chilean form, doubtless an escape from captivity, was noted regularly in the Nith Estuary near Glencaple, 4th June-16th Aug., 1967, in both (D) and (K).

Mallard. High numbers noted after exceptionally good breeding season in **1968.** 670 had gathered to moult on the Blackshaw Bank by 20th May. On 8th Dec., 1968, 2340 were

* Reference to page and volume of Scottish Birds

counted in the littoral area between Southerness and Gretna. Highest count at L. Connel (W) 500, on 19th Nov., 1967. Normally counted waters give no real indication of the very large wintering population.

Teal. Bred fairly commonly; a late brood of 5 very small ducklings seen on the Black Water of Dee (K), 5th Aug., 1967. In 1967 highest numbers in L. Ken region noted in Oct. (250+). Peak at L. Connel (W) 260, in Nov. In **1968** large flocks were a feature of early Sept., at Caerlaverock (max. 2240), dispersing by late Nov., when peak of 150 occurred at L. Ken. Normally counted waters give little indication of real winter population as large numbers frequent small marshes and ponds in all 3 counties. In 1968 an influx of continental birds took place in late Dec., when 2 Danish ringed birds were shot in (D) (and another shot near Garlieston (W) in early Jan., 1969).

Garganey. A drake was shot at Browell (D), 5th Oct., 1967. In **1968** a pair Balmaghie (K), near L. Ken, 28th March; a pair Caerlaverock, 17th April, 3 ducks and a drake 19th April, 4 ducks and a drake 20th April; a pair near Stranraer, 18th April.

Gadwall. 1968: 2, L. Milton (K), 11th Feb.; 7 on the sea at Carsethorn, 7th-14th Oct.; a duck or immature drake, Mochrum L., 9th Nov. A first winter duck was shot on Lochar Moss (D), 22nd Nov.

Wigeon. In both years large numbers in winter in several coastal and inland areas, all 3 counties. In 1967 1000 Loch Milton (K), highest count, at L. Ken, 650, on 10th Jan., and 680, on 24th Dec.; at L. Connel (W) highest count 460 on 17th Dec., and at L. Ryan, 800 in Oct. In **1968** a large movement was noted on 14th Jan., when at least 3000 flew down the Nith to the Blackshaw Bank in gale conditions, larger numbers than usual were grazing at Eastpark, Caerlaverock, by 20th Oct. (700); highest count at L. Ken, 1200, on 18th Feb. Although winter counts at L. Ken are often much lower than this it should be pointed out that large flocks also occur regularly further down the valley at Netherhall/Threave and in the Dee Estuary, so that the Ken-Dee river basin as a whole is an important region for wigeon. Maximum at L. Ryan, 1968, 620 on 21st Jan.

Pintail/Mallard. 1968: A hybrid was shot on Lochar Moss (D), 22nd Nov.

Pintail. 1967: Largest numbers at L. Ken were 170 in late Dec., and 50 in March, at Carsethorn and Drumburn the mean of 6 winter counts was 1500; on 19th Nov., there were at least 2200. **1968:** 1720 at Carsethorn during Feb., highest count at L. Ken, 70 on 18th Feb., but this may have been exceeded in Nov.-Dec. A very early brood of 4 was hatched at L. Ken between 27th April-4th May and at least 5 well grown broods were seen there in July; a pair at another Loch in (K) may well have been breeding. 500 at Caerlaverock on 20th Oct., were very probably the Carsethorn flock.

Shoveler. Continues to breed locally in (K), c 12 pairs at L. Ken in 1968 being above average summer population in recent years. Breeding also recorded in Luce Bay area (W), 1968. Regular in the inner Solway, Nov.-March, 300 at Powfoot, 14th Dec., 1967, highest count at Caerlaverock, 40-60 on 8th Dec.; most at L. Ken, 35, Nov.-Dec. (1968).

Scaup. Widely distributed from Gretna (D) to L. Ryan (W) in small flocks during winter. c 350 in L. Ryan on 4th Feb., 1967, more than usually seen there. The mid-winter population off the (D) shore rarely exceeds 340-400 and the largest count at Carsethorn in 1968 was only 100+ in Oct., and at L. Ryan, c 160 in Jan. and March.

Tufted Duck. Continues to breed all 3 counties. In 1968 pairs bred at three localities (D), breeding strength above average L. Ken; decreased markedly at several localities in West (W); winter numbers on L. Ken, Carlingwark and Lochmaben continue below average.

Pochard. No breeding records; winter numbers on L. Ken (peak of 84 in Feb., 1968), often

in excess of Tufted, never the case 10 years ago; decreased on Carlingwark. Regularly shot in small numbers by fowlers on the (D) shore; 40 off Priestside 23rd Nov., was highest count. Small numbers often winter on several lochs in (K) and (W); e.g. 23 Lochinvar 15th Jan., 25 Woodhall 4th March and up to 36 on L. Connell in Nov.-Dec. (all 1967).

Goldeneye. Widespread and numerous in winter; peaks at L. Ken were 105 in March, 1967, and 115 in Feb., 1968; small numbers recorded on many other inland waters and also on the sea, notably at L. Ryan and Annan-Gretna where 100+ counted on 8th Dec., 1968. Last seen in spring, in (K) 6th May, 1968, but a pair remained through the summer at Mochrum (W) while a drake was noted at L. Eldrig (W) on 18th June, 1968.

Long-tailed Duck. 1967: A duck on Carlingwark Loch on 1st Jan.; on L. Ken (probably the same bird) from 10th Jan. to early March. A duck was again on L. Ken on 12th Nov. One was on L. Ryan on 27th Feb., 1968; a duck or immature drake at L. Magillie (W), 2nd Jan.

Velvet Scoter. 1968: Four flew west at Carsethorn, 8th Aug. The paucity of recent records seems to confirm that this is a scarce duck in our area. (There were no reports of Surf Scoter in 1967-1968, after being noted in 1965-1966.)

Eider. 1967: A pair at the Wig. L. Ryan, 4th Feb. Large numbers (max. 500 on 16th June) gathering there in summer; 22 on 17th Sept., but not seen in L. Ryan Oct.-Dec. At Knock Bay on the Rhinns, breeding was again confirmed, at least 6 broods of ducklings being seen on 22nd July. On 10th Sept. 80-100 birds still at Knock Bay. In **1968** no information on breeding was obtained but 180 were counted off Knock Bay on 4th August and birds were present there into June and July. Parties of drakes were seen in L. Ryan—11 at Tevally Bay on 30th May and 10 at Cairn Ryan on 20th June. A pair were at Southerness on 3rd Feb., 1968.

Gooseander. 1968 was a good breeding year—the post breeding flock at L. Ken, mostly birds of the year, was 61 on 15th Sept., compared with the highest 1967 count in Aug.-Oct. of only 20. In Nithsdale and Eskdale where 9 nests were found, 1968 was also a good season. A brood was on the Round Loch of the Dungeon (K), 27th June, and an unusual nest site was on a sea-island in the Fleet estuary. No marked change in winter numbers.

Red-breasted Merganser. Regular small numbers on the coast, Jan.-Feb. and Oct.-Dec., but flocks in Loch Ryan exceeded 70 in Sept., 1967, and April, 1968. Continues to increase as breeding species in (D), up to 40 on Water of Ae during July; 18 drakes, still in eclipse, on R. Nith, 18th Aug. No breeding recorded in (K); bred Lochinch and Mochrum (W) both years.

Smew. 1967: An adult drake shot Knockquhasson (W), 11th Jan., 1968; an adult drake at Carlingwark L., 14th Jan., a "redhead," L. Ken, 14th Jan. and 24th Mar.

Shelduck. Bred all three counties both years, but in 1968 an absence of the usual large crèches of ducklings was noted at Southerness-Kirkconnell-Caerlaverock. Winter counts, 1968, showed a marked change in local distribution, Carsethorn-Drumburn being largely deserted in favour of Caerlaverock and Priestside-Annan.

Greylag Goose. 1967: Highest count 5-6000 Lochinch (W) during Nov., at L. Ken, 370 on 20th Feb.; departure over Dalry noted on 12th, 13th and 14th April, but still c 40 at Livingstone, L. Ken on 15th April. Autumn arrivals, L. Ken in mid Oct., 1968, having arrived by 16th, more arriving on 18th Oct. over Dalry. **1968:** As usual large flocks in the west 2-3000 was the mid winter average from 4 counts in the Stranraer area, Lochinch and Loch Connel providing as usual the main roosts, with 2-300 regularly at Mochrum, and up to 720 at Baldoon Sands (a bag of 112 shot in the

Wigtown area in Jan., received press publicity). In (K) 700 at Threave and 585 on L. Ken, 7th-14th Jan., were the highest counts, although flocks move between the two areas; 170 regularly roosted in Kirkcudbright Bay, and up to 240 either on Lochs Milton, Kindar or Lochrutton. In (D) 600 Lochmaben, 240 Thornhill, 370 Caerlaverock were the maximum counts; departure north noted at Dalry 13th-22nd April; as usual a few pricked birds remained throughout the summer. The feral population bred in all three counties and consisted of c 1000 birds, 120 nests were known and at least 230 goslings were reared. After a very protracted autumn migration numbers slowly built up to: 1270 Lochinch, 4-500 Threave by 30th Nov., 270 Lochmaben, 300 Caerlaverock by 31st Dec.

White-fronted Goose. 1967: In Jan.-April period the Greenland flock in L. Ken area was at maximum c 450 (Jan.-Feb.); most left in fine cool weather on the evening of 18th April. Forty-five had returned by 16th Oct., 350 by 25th Oct., the highest count in the Oct.-Dec. period. 103 were at Moor of Genoch (W) on 3rd Jan.; 83+ on 27th Feb. **1968:** In (K), flocks at L. Ken, Jan.-April, where highest count was of 340, 18th Feb., departure observed over Dalry on 25th April; first in autumn about 24th-25th Oct., when 120; main arrival by 10th Nov.; maximum Nov.-Dec., c 300. In (W) flock of Greenland race, up to 119 Moor of Genoch, 27th Jan., 17th Feb. and 8th Mar., 46-50+ still in area, roosting at Lochinch on 18th April; 288 at Castle Loch, Mochram, 14th April. In (D) up to 11, race undetermined, were at Caerlaverock intermittently from 28th-31st Dec.

Bean Goose. 1967: Eight, near Carlingwark Loch, on 9th Jan., unconfirmed reports of 18 on 18th Feb., and 14 on 3rd March, in Gelston-Threave area, observers only seeing the birds in flight and not claiming positive identification. Calls almost certainly heard over Dalry on night of 19th Nov. **1968:** Small flock, Gelston-Threave, 8th Jan.-24th Feb., maximum 17 on 10th Jan., first returned 31st Dec., when 14 at Gelston.

Pink-footed Goose. 1967: In (K) one with White fronts, Ken Valley, 10th Jan. and 12th Nov. Seventy-five flew south-east over Parton, 10th Jan. In (D) maximum of 7000, 24th Oct.-7th Nov. **1968:** Increased at roost Caerlaverock to 7000 by 14th Jan. decreasing to 2000 by 14th March; last seen 70 on 22nd May. Winter flocks roosting at Caerlaverock often exploit grazing and potatoes in (K), up to 2000 at Barbush and 800 Southerness area, with 470 still on Kirkconnell merse, 12th May during the period; 200 were on Baldoon Sands (W) by 20th Feb., 38 at Logan (W), 14th April. First in autumn were 160 near Annan (D) on 16th Sept., increasing to 6500 roosting Caerlaverock by 6th Oct., decreasing rapidly to an average of 1200 throughout Nov., increasing again to 2400 on 17th Dec. During the past 6 seasons at Caerlaverock, the pattern of arrival, build up, onward passage, low mid-winter population, followed by another increase, has become firmly established.

Snow Goose. 1968: Single, unringed, adult male, Blue phase Lesser Snow, Caerlaverock, 12th Feb.; Single White phase Lesser Snow, throughout Feb., to 9th March with Pinkfeet, seen Caerlaverock, Kirkconnell and Southerness area. Probably the same bird with Pinkfeet at Caerlaverock 28—31st Dec.

Brent Goose. One at Threave, October, 1967, with Greylags; perhaps the same bird, again with greylags, at L. Ken, 10th and 16th April, 1968.

Barnacle Goose. 1967: First at Caerlaverock were 30 on 28th Sept., increasing to 2500 by 1st Oct., and to maximum of 3700 by mid October. A pair, probably escapes from a private collection were moulting with greylags in June, on Loch Dornal (W). **1968:** After being absent from Caerlaverock from 23rd Feb., c 1000 returned on 1st April, increasing to 2200 by 5th, decreasing to 1000 by 17th; 750 by 19th, last seen 550 on 23rd. First in autumn were 75 on 18th Sept., increasing to 240 by 21st

and to 1880 on 23rd, maximum count mid Nov., of 4000-4200. The average brood size of 2.0 and percentage of juveniles in the flock 23.2 indicated a reasonably good breeding season. The fluctuating counts at Caerlaverock with an average of 2200, support current thinking, that either not all Spitsbergen birds reach Britain in some years or that another wintering area in Britain or Ireland is still undiscovered.

Canada Goose. 1968: Breeding stock at Kinmount (D), still very low compared with the numbers a decade ago; 2 pairs at least reared goslings at Holywood, 30-36 regularly Nith estuary Oct.-Dec. Bred Lochinch and L. Dornal (W), where freely hybridising with feral greylag; 10-12 flightless in wing moult at Murray's Isles Fleet estuary, one regularly with Greenland White-fronts at New Galloway from 25th Oct. was small enough to be a Lesser Canada and may have travelled to this country with the White-fronts.

Mute Swan. **1967:** Loch Ryan flock regularly 50+. max. 62 in Dec. Winter numbers at L. Ken higher in 1968 than in 1967, i.e. max. 1967, 25 in Jan. and Dec.; 1968, 40 in Jan. and 35 in November. In (D) usual flocks at Annan (max. 32), Dumfries (59), Nov.-Dec.

Whooper Swan. **1967:** Max. at L. Ken, 34 on 10th Jan. and 5th Nov. Max. at L. Ryan 35, 22nd Jan.; up to 27 L. Connell on 18th Feb. Two remained at L. Connell till end of April, one being found dead in May (cf N.S.B.R. No. 2, 25 found dead in same area in 1966). The regular flock at Islesteps arrived on 21st Oct. increasing to 43 by 12th Nov., with no first winter birds. **1968:** The Islesteps flock (regularly noted at Kirkblain and Holywood (D)), was 84 on 9th Feb., and 21st March when the herd contained 3 first winter birds, numbers at L. Ken rose from 20-30 in Jan.-Feb., to a record peak of 58 on 17th March but with only 2-3 young birds. Max. in autumn Islesteps 34 on 14th Nov., at L. Ken 45 on 24th Nov., several other smaller groups on other lochs and riverside pastures, etc., also on Dee estuary and L. Ryan.

Bewicks Swan. **1967:** 2 Luce Bay (W), 27th Feb., 3 Islesteps (K) with whoopers, 27th November. **1968:** Two Islesteps, 8th Jan.-21st Mar. 3 on 9th Feb., 2, very probably the same birds were at Kirkblain (D) on 6th Feb., 5 Caerlaverock, 13th Feb., flew in from the Solway, one at L. Ken, 23rd-24th Nov.

Golden Eagle. No evidence of young being reared in (K) either year. (An eaglet was fledged in an eyrie close to our boundaries in 1968). In 1967, at one eyrie, a nest with 2 eggs was deserted. In 1968, at a different one, a clutch is thought to have been taken but it is not certain whether the nest had already been abandoned. Two or three immature birds were present during summer 1967 and in April, 1968, it was noted that one of a pair at an eyrie showed much white in the tail and may have been too young for successful breeding. Four birds were seen soaring together in April, 1968. To summarise, although lack of breeding success was disappointing, the Galloway population remains in good strength.

Buzzard. No apparent change in status (K), 1967 or 1968, breeding rather sparsely in the mountainous regions but rather more plentifully in wooded country on the fringes of the hills and in the valleys, where it is sometimes persecuted by game preservers. On 10th March, 5 or 6 were seen together at dusk, probably gathering to roost. In late July the unusual number of 11 were seen together over forest near L. Ken. A nest with three young in hill country contained the following prey: a slow-worm, a weasel, a rat, an adder and a mole. Reliable reports of breeding in west (W) were received in 1968. In (D) breeding numbers continue to increase in spite of scarcity of rabbits, especially in Nithsdale where one wooded glen held 7 pairs in 1968.

Sparrowhawk. In (D) 47 pairs found in territories in breeding season 1968, but fledging

success very uneven, with strong evidence that toxic chemicals were still affecting birds in some districts. Considered to be increasing with widespread breeding in (K) and also common in some parts, at least, of (W), 8 pairs being reported in the Portpatrick area alone, in 1968. Continues to be shot frequently in districts where game is preserved.

Goshawk. Occasional records.

Hen Harrier. (See also report No. 2, 1966). Although at least three pairs were in breeding territories in 1967, no successful nests were known. On 27th May, 1967, an adult female, which had been ringed as a nestling in 1965, was found dead about ¼ mile from its birthplace. It was sent to Monks Wood Experimental Station of the Nature Conservancy, where Mr Ian Prestt's findings confirmed that there was a probability that it had died as a result of a wound inflicted by a Golden Eagle, possibly in aerial conflict. A pellet considered by E. Blezard to have been disgorged by an eagle was found by the body (see note by A. D. W. in Scot. Birds 5 (7) P. 379). **1968:** A good nesting year with at least 5 pairs rearing young including 2 broods of 4. It is likely that breeding success depends much on weather conditions in spring. Widespread records all 3 counties outwith breeding season.

[Marsh Harrier. A report of a bird at a loch in (K) on 9th May, 1968, almost certainly referred to this species.]

Peregrine. 1967: Pairs present and eggs laid at several sites, but hatching and fledging again very low. One brood of 3 flew and another of 2 probably did so, a poorer season than 1966. In **1968:** There were again a number of failures, but a total of 8 young are believed to have fledged from 4 nests. Although there have been no recent reports of successful breeding at coastal sites, it is encouraging that a pair was noted at one such site in 1968. At one eyrie in (D) 1968 after the falcon had apparently eaten her own eggs, she appropriated and incubated 5 eggs of a Kestrel nearby but ate these also after 6 days. (See also Dr D. A. Ratcliffe's note in B.B.,* 1963: 453-460). In 1968 a brood is known to have been destroyed by man but there is reason to hope that representations made through the R.S.P.B. and the co-operation of the landowner will prevent this happening again at that eyrie.

Merlin. No notable changes in status, 1967 or 1968, but there were indications of improved breeding success in 1968 in (D) where 5 pairs were known. Human disturbance may have caused failure at one nest which became widely known in (K) in 1968, but the species continues locally well established in that county, widely seen as usual in autumn and winter in all three counties.

Kestrel. Widespread breeding in both years, 1968 being a particularly good season, 37 young being ringed by one ringer in a fairly restricted area of (D). Very common on low ground in autumn, fewer in mid winter when a male at Dalry was caught by hand and later released. On 4th June, 1968, in Cairn Edward forest, one was seen to attack and apparently seize a vole from a flying short-eared owl.

Red Grouse. In general 1968 was a good breeding year. In young forest with luxuriant heather in (K), numbers were very high.

Black Grouse. Continues to increase slowly in Upper Nithsdale and in the forest of Ae (D), plentiful in (K) where several leks observed, though none very large. A regular roost was in a large flat expanse of grasses and sedge near conifer forest. Locally quite numerous in (W).

Partridge. Again rather scarce all three counties but some improvement in breeding success in the dry summer of 1968, with some good coveys noted later.

*B.B. This refers to British Birds.

Quail. 1967 : One Applegarthtown (D) on 17th June and on 9th July.
1968: Single bird at Village of Ae, 18th June, and at Applegarthtown (D) 22nd-23rd July.

Golden Pheasant. The feral population in (K), mainly in conifer forest, appears to be spreading.

Water Rail. Widely recorded in winter, all 3 counties ; on 12th Jan., 1968, 12 were seen on a 3-mile walk over the Lochar Moss (D). Information on breeding is scanty but on 30th and 31st May at least 2 were very noisy at night at a small overgrown loch near New Galloway and breeding must be presumed there.

Spotted Crake. 1968: Two were calling at night at a marsh in (K) in late May and one at a different site not far distant on the night of 30th June/1st July.

Corncrake. 1967: recorded calling in 9 localities (D) by 14th May, and from Killantringan and Kirkcolm (W). In **1968** one was found dead under wires at Sanquhar on 13th April (an early date) and between 16th-30th May no less than 20 widespread records received of birds calling in (D). 2 broods were later seen in Caerlaverock parish. In (K) at least 3 broods recorded in lowland areas and a fledged young bird found dead on the road near Castle-Douglas in July. Recorded in (W) from Craigiaffe but no clear indication of distribution in that county.

Moorhen. In winter scores on riverside meadows by the River Ken. Reported feeding on sands and saltings, Luce Bay. In Mid-Nithsdale commonly feeds in association with outside feeding of farm stock.

Coot. No fewer than 1120 were at Loch Milton (K) on 17th Dec., 1967. On 16th Oct., 1967, a young bird, still unfledged, was seen following an adult on L. Ken. Up to 400 fed on grassland by L. Ken in Feb., 1968. Again a small flock fed on muddy shore of L. Ryan in autumn/winter. Peak numbers in (D) where it is a scarce breeder in Nithsdale, were 275 Lochmaben during Feb.

Oystercatcher. 9th Jan., 1967, was an unusual date for one to be seen as far inland as Crossmichael (K).
A tightly packed flock of over 100 was gathered to roost at Duchrae, L. Ken, on 21st Feb., 1967. In **1968 :** the main movement to inland haunts in (D) was 8th-9th March. At some breeding haunts (K) numbers considered reduced in 1968. Peak numbers on the shore reached by late Oct., when 20,000 present between Southerness and Gretna.

Lapwing. 1968 : The first eggs of the season were seen at Lochside, Sanquhar, on 24th Mar., where later 50 eggs were removed and replaced during agricultural operations in one field. Breeding distribution in (K) tends to extend more on to higher pastures and in (D), colonial nesting at higher altitudes continues to increase, groups of 14—20 pairs now not uncommon in the Thornhill area, and at one locality near Sanquhar 70 pairs were in territory.
The annual build-up on the Solway was most marked by 20th-24th Nov., and a count on 8th Dec., from Southerness to Gretna, gave a total of 18,000 birds in the littoral area.

Ringed Plover. 1968 : Widely noted all 3 counties as a common winter visitor, passage migrant and breeding species. Evidently fairly frequent prey of peregrine, remains being found at eyries. In a previous year this species also found as prey at a Peregrine eyrie (K) over 20 miles from the shore, in an area where inland breeding of Ringed Plover has not been proved.

Grey Plover. 1967 : in (D) 2 Caerlaverock 4th Feb., 2 Waterfoot, Annan, 18th Nov. Winter numbers recorded are usually small all 3 counties : in **1968** the only records were: 2 Southerness, 3rd Feb., 1 Browhouses (D), 18th Feb., 2 Carsethorn, 26th

Feb., 4 in almost complete summer plumage, Glencaple, 24th Aug., 2 Carsethorn, 31st Aug., 5 Caerlaverock, 20th Oct., 1 Torduff Point (D), 8th Dec.

Golden Plover. 1968 : Usual migrant spring flocks of northern birds at Sanquhar (170) and Thornhill (320), bred in localised haunts (D) and (K) but lack of breeding information from (W), where flocks of several thousands noted in mid Oct., at Baldoon and c 500 near Stranraer in Dec. In the inner Solway the first 300 were on the shore at Glencaple by 24th Aug., increasing to 2000 by 20th Oct., and to 5800 by 8th Dec.

Dotterel. A trip of 11 near Southerness, 16th-17th May, 1967.

Turnstone. Although widespread on many parts of the coast, the only regular haunt in (D) was at Waterfoot, Annan, on mussel beds.

Snipe. Common all seasons (D) (K) (W). In 1968, breeding strength good in Glenkens (K) and Lochside, Sanquhar; 40 on 17th Oct. at Caerlaverock was the only notable gathering.

Jack Snipe. 1968 : Singles from Buchan, Penpont, 10th and 27th Jan., at Caerlaverock 8th Dec., 3 Buchan, 30th Nov. Lack of records from (K) and (W).

Curlew. Spread of afforestation in (K) has caused some long-established nesting haunts to be abandoned. In **1968,** 300 were at L. Ken during Sept., on the shore at Caerlaverock-Glencaple, flocks had increased to 700 and by 20th Oct., there were 1200.

Whimbrel. 1967 : One R. Annan (D) 9th April, one at Killantringan shore (W). 22nd July, a rather late bird flew west past Southerness 19th Nov. **1968 :** 5 different records at Caerlaverock during April, 2 over Glentoo Loch (K) 11th May, 2 Moor of Genoch (W) 13th May, 1 over Dumfries on 27th Aug., 3rd and 8th Sept.

Black-tailed Godwit. 1967 : 3 Glencaple 19th April, 2 Luce Bay (W) 14th May, 52 Drumburn (K) 27th July, 2 Carsethorn 26th Nov.
1968 : In (D) single throughout winter and until 25th Mar., at Caerlaverock, 4 there 17th April, 8 Cummertrees 24th April, in autumn; 25 Glencaple on 17th Aug. increased to 50 by 24th and to 142 on 26th, decreasing to 47 by 17th Sept., and to 4 by 8th Oct. one inland near L. Ken 17th April, and one with Oystercatchers on a playing field at Stoneykirk (W), 19th Aug.

Bar-tailed Godwit. 1968: 217 Kirkconnel merse (K) on 13th June, a remarkable number for this date, 120 at Glencaple 24th Aug. On Priestside to Waterfoot (D) a traditional haunt, 2800-3000 were in one flock 20th Oct., decreasing to 2000 by 2nd Dec. and to 470 by 31st.

Green Sandpiper. 1967 : Singles at Islesteps (K) 3rd Mar., 21st Oct., one found dead at Roundstone Foot, Moffat Water, 14th Nov. **1968:** Singles at Parkgate (D) 30th March and at Caerlaverock and near Glencaple 6th Sept., 2 at Islesteps 28th Sept., one there on 29th.

Wood Sandpiper. 2 Kirkconnell Merse (K) 25th Aug., 1968; the first definite record for the county.

Common Sandpiper. 1967: First Drumlanrig (D) 8th April. **1968:** First in spring at Clatteringshaws (K) 7th April, widespread records, by 18th, bred plentifully; normal return migration on shore noted at Caerlaverock 28th June.

Redshank. Widespread breeding records all 3 counties, both years, marked immigration on 23rd-24th August, 1968, to Nith estuary, where up to 2000 in Carse Bay-Drumburn (K) in Sept., decreasing to 6-700 in Dec. 14 shot Drumburn and 7 at Caerlaverock were all of the larger Icelandic form " robusta."

Spotted Redshank. 1967: 2 on 19th Aug., at Sandmill, Sandhead (W). **1968:** At least 2 Caerlaverock 12th April, 2 Glencaple 24th August, 8 Stanhope (D) 26th Aug., 1 Rough Firth (K) 14th-20th Oct, single Carsethorn 15th Oct.

Greenshank. 1967: One over Lockerbie (D) in dense fog on 6th Jan., 2 Castle Loch, Lochmaben, 26th Feb., at least 3 Caerlaverock 27th Dec. **1968:** Wintering birds were 3 Caerlaverock and 3 Sandmill (W); in autumn at Luce Bay (W) by 27th July, River Annan 31st July, 10 Glencaple 24th Aug., and 20 in a row at Stanhope. Up to 7 at Carsethorn 1st-7th Oct., 6 Wigtown merse 13th Oct., single Cardoness (K) 21st Oct., 4 Caerlaverock, 2 Annan, 2 Torduff Point (D) 8th Dec., single Rough Firth (K) Dec.

Knot. 1968: First 200 in autumn were on the shore at Glencaple by 24th Aug., largest flocks were in (K), up to 10,000 at Carsethorn, widespread records of much smaller flocks, all 3 counties.

Purple Sandpiper. 1968: Up to 9 at Southerness Jan.-March, 6 at Donnan Bay (W) 3rd Mar., 6 Scar Rocks 20th July.

Dunlin. Decreased as breeding species (D) and (K) 1968, in (K) probably due to afforestation of some haunts. One or two pairs nested near Clatteringshaws (K). Breeding presumed to continue in Mochrum area (W) where a pair seen in June, 1967. Widespread on coasts out of breeding season, apart from major haunts such as Nith and environs, the Dee Estuary held 1000+ on 18th March, 1968.

Sanderling. 1968: Only one record of 2 at Southerness 3rd Feb., undoubtedly a scarce wader in most of our coastal area but is perhaps more regular in autumn on sandy coasts in West Wigtownshire than recent reports suggest.

Ruff. 1968: Garlieston (W) 9th April, 1967. 2 on 24th Aug. at Glencaple increased to 10 on 26th, 14 Caerlaverock 12th-20th Sept., single birds at Priestside and Mid Lochar-woods 28th Sept.

Red-Necked Phalarope. One at Broomhills near Lochmaben (D) 19th April, 1968.

Arctic Skua. One dark bird at Meikle Ross (K) 24th July, 1967, 2 of the lighter form at Southerness, 5th Aug., 1968.

Greater Black-backed Gull. Inland breeding at Castle Lorh, Mochrum, continues, "many" in 1967; coastal breeding in small numbers at scattered sites in (W) and (K), one pair on Scar Rocks, up to 25 pairs in one colony Isles of Fleet.

Lesser Black-backed Gull. 600 pairs Heston Island (K) breeding in small numbers at other (K) and (W) coastal sites, none on Scar Rocks 1968, although single bird present. First spring arrivals by 18th Mar., on Nith, where scarce after 20th Aug. Up to 8 wintered on R. Nith, 2 on R. Esk, one Stranraer harbour.

Herring Gull. In addition to widespread coastal breeding (K) and (W) the inland colony at Castle Loch, Mochram, was of 120 pairs 1968. In (K) only small numbers penetrate inland as far as L. Ken in winter (cf Common Gull). 20,000 estimated flying down R. Nith to roost on Blackshaw Bank on 14th Nov., 1968.

Common Gull. Decrease at L. Skerrow colony (K) to 6-8 pairs 1967-68. In (K) much the more numerous inland feeding gull in winter especially on pasture land, with regular flights to estuarine roosts.

Black-headed Gull. In 1967 the large colony at Loch Urr (D) produced very few young and there was evidence of rat infestation on the islands. **1968** was a particularly productive year in all 3 counties.

Little Gull. 1 Luce Estuary (W) 16th Sept., 2 at Stranraer 1st Oct., 1967.

Kittiwake: 22 nests Meikle Ross (K) 1967; 523 Mull of Galloway, a large increase on only 165 in 1959; 175 nests on Scar Rocks (W), the only other notable haunt.

Common Tern. 1968: First in spring at Kirkconnell merse on 19th April, 300 pairs later bred there; other smaller colonies on (K) coast and several (W) including inland sites as follows: 49 pairs at Knockquhassen Res., 10 pairs Dunskey Loch; 3 pairs Dernaglar Loch; 1 pair Dindinnie Res., 6 pairs Castle Loch, Mochrum.

Arctic Tern. 2 pairs during July, Kirkconnell merse, 1967, but breeding not proved.

First in spring **1968** at Kirkconnel by 19th April where at least 7 pairs bred; at least one pair had a chick at Ardwell Bay (W).

Sandwich Tern. No proof of breeding in either year, though numbers seen in Knock Bay (W) all summer, 1968, and several there 22nd July, 1967. Elsewhere small numbers widely reported on coasts, first in spring, 1968, at Stairhaven (W), 4th April, 2 at Kirkcudbright same date.

Little Tern. A late straggler at Southerness on 26th Oct., 1967. In **1968** a pair were at the Wig, L. Ryan May-July and also at Chapel Rossan Bay, Ardwell (W) but no nests found nor young seen in either year.

Little Auk. One Carrutherstown (D) 15th Jan., 1969, died later.

Black Guillemot. Bred in (W) at established sites 1967 and breeding probable at Meikle Ross (K). In **1968** bred both counties, including 2 sites in (K) i.e. Meikle Ross and Balcary. At least 10 at Scar Rocks 20th July but breeding not proved. 114 in L. Ryan 5th Oct.

Puffin. 4 close inshore to Mull of Galloway, 25th June, 1967, at least 6 regularly Burrow Head and at least 2 Scar Rocks, 1968. Regularly noted in Luce Bay June-July by local fisherman, but no proof of breeding.

Stock Dove. Probably increasing (D) where in winter dispersal from higher ground noted, bred rather locally in (K) both years; one in "song" near Castle-Douglas on 26th Dec., 1967.

Turtle Dove. One in a flock of Collard Doves, Dumfries, 29th May, 1967. **1968:** One Coatsgate, Beattock (D), 27th April, and one Poldean, near Moffat, 9th Oct.

Collard Dove. 1967: In addition to established breeding in (D) and (W) a pair built a nest at Dalry (K) in May, several birds being present there in April-May, but disappeared thereafter and none were known to breed successfully, odd birds again visited Dalry, spring, 1968, but breeding in (K) now apparently regular in Auchencairn and Kirkcudbright district. Plentiful in (W) both years, especially in west, a flock of 32 noted at Kirkcolm on 18th Nov., 1967; one pair attempted to nest on a crossbar of a telegraph pole at Garlieston. 14 at Hayfield, Thornhill (D), 9th Oct., 1968, was notable for that district.

Cuckoo. 1968: First in spring, at Waterside Mains, Keir, 14th April, widespread records by 24th. No evidence of decline in (D), large population still centred on Lochar Moss.

Barn Owl. Continues to breed widely in (D) and (K) scarcer in (W), very high percentage of recoveries of ringed birds killed by road and rail traffic.

Little Owl. One near Whauphill (W), 10th Sept., 1967. In 1968 at least one roosting Caerlaverock Castle, Jan.-Feb., one Broomlands (K), near Dumfries, 17th Feb., one killed on wires near Langholm, 12th April.

Long-Eared Owl. Lack of reports from (D) and (K): recorded in (W) from Glenluce area (nest found) and further west, near L. Ryan, in summer 1968.

Short-Eared Owl. 1968 was a good breeding year in young conifer forests of (K) but not (D). In winter most commonly seen on low ground near coasts but upland areas not entirely deserted.

Nightjar. 1967: Regularly heard and seen in Kirkconnell Flow (K) during July, but no proof of breeding. In long established haunt in conifer forest near L. Ken none recorded 1967 and only one or probably two heard there in 1968. A probable record from Monreith (W), June, 1968.

Swift. Early arrivals in 1968, at Dalry, and Dumfries on 26th April, where widespread records by 1st May. 1500 over Lowther Hills (D), late July, last seen (D) one, on 7th Sept. at Carrutherstown.

Kingfisher. 1968: In (D), some evidence of a slight increase compared with five years

ago; bred Water of Dryfe, sight records from two other localities, lack of information from (K) and (W); only one record, on River Cree, in late Aug.

Hoopoe. One, near Eliock, Sanquhar, 24th April, 1968, and again at Burnmouth, Sanquhar, 9th May.

Green Woodpecker. Numbers well maintained (D) and (K); one at Clachaneasy (W), 5th May, 1968—breeding not yet recorded in (W).

Great-Spotted Woodpecker. Marked decline (K), lack of data (W), continues to breed widely (D) where no evidence of decrease.

Skylark: Although still an abundant breeder, it is notable that the massive spread of afforestation in hill country of (K), especially, is reducing suitable nesting habitat very considerably.

Swallow. 1967: A very early bird was at Applegarthtown (D) on 23rd March, last one seen on 4th Nov., at Caerlaverock. **1968:** First in spring at Killantringan (W), 11th April, Keir, Thornhill, 16th April, main arrival somewhat later, 1st-10th May. Brood still in nest near Dumfries, 19th Oct., last one seen at Caerlaverock, 11th Nov.

House Martin. 1968: First, at Waterside Mains, Keir (D), 16th April, main arrival, as swallow, by 1st-10th May, when widespread all three counties.

Sand-Martin. In 1967, 10 were at Lochmaben by 1st April. **1968:** Had arrived at six localities (D) by 28th Mar., 100 Mill Loch, Lochmaben, by 30th, first in (W) by 29th Mar., at Dunskey Loch; reported widely by 14th April, last one seen near Moffat, 25th-26th Oct.

Raven. In both years breeding success was uneven, some nests being destroyed, while other pairs reared broods of 3 to 4 young; some evidence of declining success at coastal sites—at one of these, in (K), a pair did not nest for the first time for many years, while another traditional site in (W) was deserted. At one regular inland site in (K) 3 young were fledged in both years but in 1968 the brood flew a full month later (late May), than in 1967, presumably from a repeat laying. As in 1966, most of the former nesting sites in conifer afforested ground were untenanted but there may be some increase of nesting in (D) where 7 tree sites were known to have been used in 1968.

Carrion/Hooded Crow. Birds showing varying amounts of grey colour continue to be seen regularly in (K) and (W), but none of these were indisputably pure Hoodies. Reliable information on whether there is a population of pure Hooded Crow in (W) would be of interest. Carrion Crow continues to increase (D) and more especially (K).

Rook. As usual flocks regularly seen feeding on moorland in hilly country in Galloway and even over 1500 ft. in (D) in June-July. A feature of July at Caerlaverock was the presence of flocks feeding predominantly on the red fescue merse land where they also often associated with waders feeding on estuarine mud.

Jackdaw. In (D) considered to have further increased in 1968; at the old colony at Dalpeddar Hill, with nests in disused rabbit burrows, there were at least 98 pairs. In Galloway numerous colonies both inland, especially in villages and on coastal cliffs. At Caerlaverock noted as the most frequent predator on wader chicks and eggs.

Magpie. Continues scarce in (D), only 2 or 3 pairs being known in Nithsdale. Definite spread in maturing conifer forest in upland parts of (K), most common in lowland district of (W), Sorbie-Whithorn area, also noted in lowland parts of (K).

Jay. Widespread and locally numerous, especially in conifer forests, spreading in (K) and (W).

Coal Tit. No notable change from 1966; nest sites in and around conifer plantations are often in dry stone dykes and frequently in cavities on the ground.

Willow Tit. In (D) and (K) increased observation emphasises that this is a widespread breeding species; in (D) distribution ranged from Kirkconnel and Sanquhar in the north, the Thornhill area, Holywood, Dumfries burgh (5-6 pairs) to Caerlaverock in the south In (K) favoured haunts include the wooded fringes of many lochs and waterways, such as L. Milton, L. Arthur, L. Ken and the River Ken, including the "Sauchs" of the upper Ken Valley, while it is also found in mixed hardwoods in dryer situations. More information is needed from (W). but, at least in the eastern part of the county, it is well established where suitable woodland occurs.

[Nuthatch. As this species has been definitely identified in two recent years (see 1966 report) mention may be made of probable sightings in 1967 and 1968, both in (K), in two different localities.]

Tree Creeper. A common woodland species in all three counties. A brood of 5 newly fledged young, clustered into a ball on a tree trunk were watched being fed near Garlieston shore on 23rd May, 1967.

Wren. This common species was noted as a particularly abundant inhabitant of fairly young conifer forest in (K) and in mature conifer forest (D). Large population winters in Kirkconnell Flow (K) and throughout considered to have fully recovered from the hard winter of 1963.

Dipper. A widespread breeding species all three counties: in 1968 a pair in (D) were observed to escape the persistent attacks of a male sparrowhawk by diving under water; the stream which they haunted was near a sparrowhawk nest, and was used many times per day as a flyway by the hawk. The dippers' escape mechanism was employed regularly. A pair of grey wagtails nesting nearby were not so fortunate. Almost the same behaviour was noted in (D) in 1967, when a Kingfisher was seen to avoid predation by diving. Both species were probably alerted by alarm calls of other birds further up or down stream.

Mistle Thrush. Probably increasing as a breeding bird of older conifer forests, both in (D) and (K). In the Forest of Ae noted as frequent prey of sparrowhawk and tawny owl, early nests there very often failing from predation. Among widespread observations of late summer and autumn flocks, one of 20 with fieldfares close to the Mull of Galloway lighthouse on 18th Oct., 1968, suggested emigration from there.

Fieldfare. In 1967 autumn arrivals first noted in (W) and (K) on 1st and 4th Oct. respectively. Winter roosts noted in willows in upper Ken Valley and in spruce, Cairn Edward forest. In **1968,** large spring movements noted over a wide front in (D) on 30th March and between 1-16th April. First autumn arrivals were on 26th Sept. at Dumfries, and on 29th at Dalry, with massive arrivals by 8th Oct. A single bird, which became very tame, fed on fallen apples in a garden at Dalry during Nov., in quite mild weather; it drove away blackbirds competing for this food.

Redwing. In both winters vastly fewer than Fieldfares.

Songthrush. The imitative powers of this widespread species are sometimes deceptive —in green woodpecker country, the song includes phrases very like the "laugh" of that species, while one bird in hen harrier territory included an almost perfect rendering of the harrier's food begging call in its song, another, near the shore, mimicked the flight call of a whimbrel.

Ring Ouzel. 1967: First noted on 27th March, when 5 were at Glenim, near Sanquhar. **1968:** First in Scar Glen (D) 25th March, reported in 7 localities by 28th; 5 with fieldfares in Crawick Glen, 8th April. As usual bred widely in upland areas of (D) and (K) often at heights well below 1000 ft. though one was in song from a gully at c 2400 ft. just below the summit of Corserine. No reports from (W).

Blackbird. The usual early Nov. influx were noted. On 28th May, 1967, a female was

seen flying to a probable nest site among rocks on the face of Benniguinea (K), a traditional ring ouzel haunt. The advance of conifer forest in such places favours the spread of breeding blackbirds, study on whether ring ouzels are in retreat in these circumstances would be of interest.

Wheatear. 1967: First in (K) a pair, Mackilston 2nd April: last in (W) at Whithorn, 15th Oct. **1968:** First in spring 24th March, Crocketford, widespread by 28th March, but not noted in (W) until 30th: last in autumn Caerlaverock 23rd Oct. A strikingly beautiful partial albino, at Craigdews (K) on 16-18th May; general impression, with snow-white back, creamy white underparts and black wings, reminiscent of colour scheme of male snow bunting in breeding plumage. The possibility that it could have been the rare Black-eared Wheatear (an example of which was recorded at the Calf of Man on 31st May, 1968) was ruled out by the absence of any black behind or below the eye.

Stonechat. 1967-68, now well established again in many inland breeding haunts in (K), some at least remaining in hill country in mid winter. Increase of inland breeding (D) — at least 5 pairs known in the county, including 2 pairs Branrig near Ae, common all year in many parts of (W), especially near coasts, and frequent on coast of (K); 3 pairs at Southerness on 3rd Feb., 1968.

Whinchat. 1967, first in spring in (K) at Mackilston, 2nd May. **1968:** First in spring in Scar Glen (D) 22nd April, Luce Bay (W) 25th April; widespread all 3 counties by 30th, but more patchily distributed in (W).

Redstart. A very early male at Irongray (D), 5th April, 1968, fairly widespread by 17th April. Numbers considered less than in some recent years (K).

Robin. As in 1965-66 a very tame bird flew to and entered a car for food at the north end of L. Ken; similar behaviour possibly by the same individual has occurred at the same spot since 1959 but on 10th Dec., 1967, a second very tame bird was present.

Grasshopper Warbler. Again very common in areas of young conifer forest, noted all 3 counties. In **1968** as many as 7 were singing at Moor of Genoch on 24th April, the date of first arrival there, and at Jardine Hall (D). Main arrivals by mid May, when 5 singing in one area on Lochar Moss (D).

Sedge Warbler. 1967: First noted 1st May at Caerlaverock Castle wood; first in spring **1968,** Moor of Genoch, 24th April, not noted in (D) till 1st May and in (K) 4th May. As is well known this species regularly sings at night and continues to do so in late June-July.

Blackcap. In winter, 1968, at least 2, a male and female, from 29th Nov.-Dec. in Dumfries Burgh, in (K), and another male at Dundeugh (K) mid Feb., 2 males singing and feeding on sycamore at Mill Loch, Lochmaben, 28th April, were probably migrants. Widespread breeding records (D) and (K), more local in (W), though recorded in summer as far west as the L. Ryan area.

Garden Warbler. Widespread breeding both years; noted as probably breeding in 10-year-old conifers (mainly spruce) in (K), 1968. Autumn passage noticeable in (D), by 14th Aug.

Whitethroat. 1968: First in spring, at Caerlaverock 20th April, and near Laurieston (K) on 21st, widespread all 3 counties by 1st May.

Willow Warbler. 1967: First spring arrivals at Dunskey, (W) 3rd April, (D) 5th April. **1968:** One seen and in song, at Langholm 31st Mar., main arrival (D) 18th April; first in (W) on 13th April at Ardwell and 7 at Moor of Genoch on 20th, when also noted at Dalry (K), thereafter numerous; as usual heavy autumn passage noted at ringing sites in (D) (see app. II.).

Chiffchaff. An early bird was at Rockcliffe (K) on 20th March, 1967, and 4 at Lochnaw (W) by 11th April. In **1968,** a bird which was either this sp., or the last, near Stranraer, 3rd March; single chiffchaff at Canonbie 29th, and Caerlaverock 30th March, were the first; main arrival protracted, but widespread all 3 counties by 14th April.

Wood Warbler. 1968: First in spring, near Dalry 28th April, when several known to have arrived, not noted in (D) until 6th May, continues to breed widely on steep dry sunny bankings in mixed hard woodland; autumn passage noted near Thornhill, where 7 trapped and ringed 3-12th Aug.

Goldcrest. Continues to breed widely and very probably increasing in conifer afforested areas (D) and (K), " Many " at Carsethorn and 40-50 Caerlaverock, 16th Sept., may have been migrants.

Spotted Flycatcher. 1967: First in spring (K) at Dalry, 12th May. In **1968:** First at Hayfield, Thornhill, 3rd May, thereafter common and widespread breeding records (D) (K) and (W), last seen in Dalry (K), 15th Sept.

Pied Flycatcher. First in spring, 1968, a male at a nest box, near Glenarlie (D), 3rd May, and a female at Lochaber (K) 5th May. Thought to be decreasing (K), perhaps due to scarcity of nest sites, but in (D) continues as widespread breeding species, especially where boxes provided, breeding in Crawick Glen and near Village of Ae, including two previously unrecorded sites where boxes are now provided. A single bird trapped at Waterside Mains, Keir, on 16th Sept., was the first autumn record since at least 1963.

Dunnock. A leucistic nestling was in a brood hatched in a garden in Dalry, May, 1967.

Tree Pipit. Two Glentrool, 31st March, 1967—an early date. **1968:** First in spring at Glenarlie (D), 24th April, and at Garroch (K) by 28th, remains a widespread breeding species (D), thought to be increasing in places; locally common in (K), scarcer in parts of (W), especially in the west.

Meadow Pipit. Although much suitable nesting habitat is gradually being lost by the growth of conifer afforestation in (K), for instance, it is notable that the breeding population in the young forests is very high and the density of pairs is obviously greater at this early stage than on much open moorland; high level nesting includes the summits of the Kells mountains, though only 2-3 pairs were seen on the ridge from Meaul to Corserine in June, 1967.

Rock Pipit. Breeds widely (K) and (W) especially on mainland coast but also on most of the islands. In 1967 a nest with 3 young was found in a tussock in the harbour at Port William (W). In winter flocks of 20-30 regularly at Southerness, smaller numbers feeding on the tide wrack in (D), where there is no recent breeding record.

Pied/White Wagtail. In 1968, a marked movement of Pieds was widely noted 29th Sept.-17th Oct., large numbers being noted at Skyreburn (K); Dunscore (D), and at Lochmaben where at least one " white " was identified. The usual large flocks were at Sanquhar and Kelloholm sewage works, and on the lawns of Caerlaverock Castle, the numbers feeding among the lichen and mosses on the roofs of houses at Glencaple being an interesting feature.

Grey Wagtail. Widespread breeding records all three counties, passage noted on Caerlaverock merses Sept.-Oct. both years, but scarce in winter except on the low ground, especially near coasts.

" Yellow " Wagtail. 1968: Two at Piltanton, Luce Bay (W), in late Aug.—the only record.

Waxwing. 1967: Four at Kenside, Dalry, 26th Nov., 2 frequented a garden in Dalry from 29th Nov. and numbers up to 12 were seen in the village throughout the rest of the winter, the last two being recorded on 10th April. Apples put out to attract them

were a frequent food in a particular garden where two returned on 19th Nov., 1968. Twelve were at Stranraer Nov., 1967. In **1968:** in (D), 10 on juniper, near Buchan, Keir, 9th Jan.; 5 there on rosehips, 11th Jan.; 30 at Shawrigg, Westerkirk, 20th Jan.; 18, Buchan, 5th Feb.; 34 Mennock, 17th Feb.; up to 7 at Langholm, 13th-22nd Mar; 5 Village of Ae, 23rd Sept.. In (K), 9 at Newton-Stewart, 23rd Jan; up to 12 at Dalry (as above); singles at Crocketford, 12th Feb., and at Castle-Douglas late May; two returned to same garden in Dalry as in spring on 19th Nov.

Great Grey Shrike. 1967: One perched on tombstone, Balmaghie churchyard, 10th Jan., one Cairn Edward forest, 20th and 26th March; one Mossdale-Hensol, 8th, 9th 18th April; one Forrest Glen, 9th April; one Trostan, 12th Nov. **1968:** One Polmaddy Glen (K) during Jan., one in Dalry Village, 1st Feb.; one Glenlee (near Dalry), 26th Feb., and probably same bird in vicinity till April. One in same area of Cairn Edward forest as in 1967, Feb.-31st March. One Bridge of Ae, 24th Sept. This species is known to hold winter territories and there have been several recent examples in our region of individuals being seen in successive seasons in the same areas.

Starling. In 1968, one of the largest roosts seen in (D) in recent years built up at Brockhillstone near Dunscore. It was not possible to estimate numbers, one photograph of a part of one flock contained c 10,000 birds.

Siskin. In 1968, no definite breeding records, at least 12 pairs singing in territory (D), and breeding presumed in usual area of Glenkens (K); regularly noted outwith breeding seasons at Glencourse, Caerlaverock (D) and Loch Arthur (K), but no evidence of large continental influx, as in some years.

Twite. **1967**: (cf. 1966), breeding again seems almost indisputable in (W), a pair reported feeding fledged young near Kilquhockadde, 26th July. Two were at Clanyard (W) on 30th March. In **1968:** 15 at Moor of Genoch (W) until 21st Jan. In (D), 50 at Glencaple. 25th Nov. increased to 250 by 6th Dec., when another flock of about the same size was at Kennethbank and 25-30 on Caerlaverock. The existence of two quite separate flocks was carefully checked, and the area was known to be holding 500-530 twites during 14th-20th Dec., roosting in both gorse and phragmites. The large flocks had dispersed by the end of the month, when only small parties of 20-25 could be found.

Redpoll. A very numerous breeding species all three counties; notably in young conifer forest, although breeding in very diverse habitats, including small bushes, scrub, birch, hawthorn and several evergreens. Winter flocks and numbers greatly reduced compared with a decade ago. No definite reports of mealy redpolls since 1956-7, when they possibly remained to breed.

Crossbill. **1967:** Adult male in song, Cairn Edward forest (in larch) 20th March, 2 on top of Clatteringshaws dam 15th April, numerous Dalbeattie area during Nov. In (D) autumn and winter breeding commenced in the forest of Ae, in Sept., and continued into May, 1968, by which time 17 nests had been found and 13 nestlings ringed. This large scale breeding of crossbill (specifically L.c. curvirostra), apparently coincided with a large spruce cone crop and terminated with seed failure, as in 1963, when nests were found on Christmas Day near Sanquhar. Low temperatures had no ill effect on incubating females, although nests readily succumbed in prolonged wet conditions. A few were in Cairn Edward Forrest Feb.-Mar., and c 20 were at Loch Mannock 17th July.

Two-Barred Crossbill. In the Forest of Ae (D), a male on 17th Feb., 1968, 2 and then 3 on 19th Feb., included a male and female, seen again on 23rd Feb.; last seen, 2 on 19th May. This is the third occurrence in (D) since 1890.

Brambling. 1967 was a poor year. In 1968, unusually large numbers for (K) were 300

feeding on beech-mast, near Castle-Douglas in Jan., with 50+ at the same locality 3rd Feb. In (D) widely noted Jan.-Feb., when at least 7 flocks of over 100 birds reported. The first in autumn was at Moffat on 22nd October. Lack of records from (W).

Corn Bunting. A numerous bird in lowland (W), especially in the west—even so a flock of 200 and another of 40-50 near Sandhead, on 3rd March, are notable, also widely distributed lowland (K). In (D) where it bred widely inland, at least from 1920 to 1936, had declined in Nithsdale by 1940: since 1963 there is evidence of a gradual recovery and the species probably bred at Thornhill and Sanquhar, 1968. Has always been a widespread breeding species on lowland coastal areas (cf Gladstone; Birds of (D)).

Snow Bunting. In 1967, 6 on the Merrick mountain (K), 22nd Oct. 22 near Sanquhar 18th Nov. In (D), 12 Euchan Head 14th Jan. **1968:** 12-14 at Wanlockhead 17th Feb., no inland records from low ground in (K), a few near Loch Minnoch in Jan., a male and female at Southerness 24th March.

Tree Sparrow. Bred Luce Bay (W), 1968; although numbers small, increasing on low ground in Castle-Douglas area, probably bred near Crossmichael (K), breeds widely (D) on lower ground but continues to increase and spread slowly northwards, e.g. bred at two localities Thornhill area; usual flocks of 25-30 at Lochmaben, Kinmount, and Caerlaverock, Jan.-Feb., and Oct.-Dec.

The following species were also recorded during the two years covered by this report

Common Scoter	Long-Tailed Tit
Woodcock	Greenfinch
Razorbill	Goldfinch
Guillemot	Linnet
" Rock " Dove	Bullfinch
Woodpigeon	Chaffinch
Tawny Owl	Yellowhammer
Great Tit	Reed Bunting
Blue Tit	House Sparrow

ACKNOWLEDGMENTS

The late E. K. Adam	T. A. Halliday	Dr R. J. H. Raines
R. Adamson	M. K. Hamilton	Dr D. A. Ratcliffe
W. Austin	T. Hastie	J. Richmond
Miss P. G. T. Baxter	Adm. Sir N. Henderson	E. L. Roberts
E. Beaddie	J. Henderson	Mrs E. L. Roberts
E. Bell	W. Hughes	A. Russell
G. Bell	E. Hunter-Blair	H. M. Russell
H. Bell	C. Johnstone	Dr J. Selwyn
A. Black	P. Kelly	R. J. W. Shaw
The late E. Blezard	S. Laybourne	J. Sheldon
Miss J. Bristowe	J. Lockerbie	D. Skilling
K. Bruce	J. Maxwell	J. Skilling
W. Buchanan	Mrs R. Maxwell	J. Sloan
R. Byers	J. Morrison	R. E. Smith
C. A. B. Campbell	J. M'Cubbin	R. T. Smith
J. Corson	Mrs J. M'Gregor	R. W. J. Smith
J. K. Cowden	J. M'Dowall	J. Stewart

E. Dicerbo
R. C. Dickson
Miss J. Donnan
C. E. Douglas
Sir A. B. Duncan
W. Dunlop
J. N. Dymond
Sir R. Erskine Hill
M. J. Everett
R. Farmer
J. Fergusson
A. D. Fentham
A. Fisher
Dr G. A. Fleming
Miss E. Forster
Captain Freer
E. Gatenby
A. Gordon
R. Graham
M. E. Greenhalgh
C. K. Mackinnon
D. M'Gowan
Miss C. M'Geoch
R. M'Farlane
G. M'Murdo
J. K. R. Melrose
E. Miller
R. H. Miller
Dr H. Milne Redhead
W. H. Moyes
J. Murray
W. Murray
Nature Conservancy
R. Nelson
Dr I. Newton
Major A. A. Nimmo Smith
H. Ostroznik
C. E. Park
J. L. F. Parslow
J. Pearce
Dr I. Prestt
R. Stokoe
D. Swindells
B. Symons
N. Tait
J. Todd
R. B. Tozer
G. Trafford
B. S. Turner
Mrs Turner (Glasgow)
L. A. Urquhart
A. F. G. Walker
J. Wagstaff
I. Wattret
A. D. Watson
Mrs A. D. Watson
A. J. Watson
R. Watson
R. White
J. Williamson
W. Williamson
D. R. Wilson
J. Wood
J. F. Young
J. G. Young

We are indebted to the contributors listed above. We would also like to thank J. M'Cubbin and J. F. Young for compiling appendix I and II, on behalf of the North Solway Ringing Group and Mrs S. Smart who typed a draft of this report. We apologise for any names of contributors inadvertently omitted.

APPENDIX I.

Ringing Progress List 1963-1968

	1963-1967	1968	Total
Gannet	100	213	313
Cormorant	5	5	10
Shag	—	20	20
Heron	2	—	2
Mallard	114	2	116
Eider	5	—	5
Red-breasted Merganser	—	2	2
Greylag Goose	166	—	166
Mute Swan	86	—	86
Buzzard	17	3	20
Sparrowhawk	19	48	67
Peregrine	4	—	4
Merlin	2	—	2
Kestrel	81	14	95
Water Rail	3	—	3
Corncrake	—	1	1
Moorhen	36	3	39

	1963-1967	1968	Total
Coot	1	—	1
Oystercatcher	49	14	63
Lapwing	648	275	923
Ringed Plover	14	—	14
Golden Plover	4	—	4
Snipe	3	5	8
Woodcock	5	2	7
Curlew	100	24	124
Common Sandpiper	12	2	14
Redshank	47	14	61
Greater B.B. Gull	2	—	2
Lesser B.B. Gull	161	7	168
Herring Gull	159	59	218
Common Gull	29	—	29
Black-Headed Gull	935	330	1265
Kittiwake	20	6	26
Common Tern	48	5	53
Razorbill	2	4	6
Guillemot	97	4	101
Stock Dove	7	—	7
Wood Pigeon	7	—	7
Collard Dove	2	—	2
Cuckoo	2	—	2
Barn Owl	36	13	49
Tawny Owl	54	15	69
Long-Eared Owl	3	—	3
Short-Eared Owl	11	—	11
Swift	—	1	1
Kingfisher	1	—	1
Great-Spotted Woodpecker	—	1	1
Skylark	44	1	45
Swallow	1057	454	1511
House-Martin	330	136	466
Sand-Martin	587	96	683
Raven	41	4	45
Carrion Crow	4	2	6
Rook	174	42	216
Jackdaw	88	12	100
Jay	1	3	4
Great Tit	314	40	354
Blue Tit	946	191	1137
Coal Tit	55	24	79
Willow Tit	56	11	67
Long-Tailed Tit	146	28	174
Tree Creeper	68	28	96
Wren	257	36	293
Dipper	24	29	53

	1963-1967	1968	Total
Mistle Thrush	52	15	67
Fieldfare	51	6	57
Song Thrush	464	132	596
Redwing	55	12	67
Ring Ouzel	25	4	29
Blackbird	1268	254	1522
Wheatear	14	6	20
Whinchat	33	—	33
Redstart	96	42	138
Robin	611	114	725
Grasshopper Warbler	2	—	2
Sedge Warbler	209	21	230
Blackcap	29	6	35
Garden Warbler	106	39	145
Whitethroat	318	115	433
Willow Warbler	1724	421	2145
Chiffchaff	50	12	62
Wood Warbler	2	7	9
Goldcrest	57	6	63
Spotted Flycatcher	168	56	224
Pied Flycatcher	113	44	157
Dunnock	639	89	728
Meadow Pipit	59	14	73
Tree Pipit	10	—	10
Rock Pipit	—	3	3
Pied Wagtail	226	132	358
Grey Wagtail	35	25	60
Waxwing	1	—	1
Starling	1934	247	2181
Greenfinch	561	55	616
Goldfinch	21	20	41
Siskin	7	6	13
Linnet	71	60	131
Redpoll	386	96	482
Bullfinch	154	68	222
Crossbill	5	13	18
Chaffinch	1569	286	1855
Brambling	35	10	45
Yellow Hammer	307	94	401
Corn Bunting	5	—	5
Reed Bunting	388	77	465
Snow Bunting	4	—	4
House Sparrow	162	—	162
Tree Sparrow	143	30	173
	19,460	4,866	24,326

Grand total of 24,326 birds of 108 species

The North Solway Ringing Group, gratefully acknowledge continued financial support received from the Dumfries and Galloway Natural History and Antiquarian Society, and is pleased to record assistance from the Forestry Commission, who gave permission to work in their property.

APPENDIX II

Selected recoveries reported in 1967

Ring No.	Species	Where Ringed	Date	Where Found	Date
ED 15497	Kestrel (Pull.)*	Langholm	4. 7.67	Whitley Bay	5. 8.67
AT 92102	Oystercatcher (Pull.)	Thornhill,	1. 6.65	Snettisham (Norfolk) (Re-Trap)	4. 9.67
EC 94725	Black-headed Gull (Pull.)	Loch Urr, Dumfries	21. 6.66	Dunrossness, Shetland	29. 8.67
SS 49982	Black-headed Gull (Pull.)	Loch Urr, Dumfries	21. 6.66	Santander, Spain	25. 3.67
AT 92279	Guillemot (Pull.)	Scar Rocks, Luce Bay, Wigtown	25. 7.65	Sallenelles, near Caen France	1. 2.67
AJ 84767	Short-eared Owl (Pull.)	Kelloholm, Sanquhar	9. 5.64	Near Madrid, Spain	1967
SS 58683	Jackdaw	Applegarthtown, Lockerbie	11. 3.67	Near Yetholm (Roxburgh)	12. 9.67
CV 79058	Fieldfare	Waterside Mains, Keir, Thornhill	10.11.66	Waterside Mains, Keir (Re-Trap)	17.11.67
CV 28173	Redwing	Keir Thornhill	20.10.66	Kasterlee, Belgium (caught & caged)	6.10.67
CB 18560	Blackbird (Pull.)	Milnholm, Langholm	16. 5.66	Near Dromore (Down) (caught & released)	17.12.67
PE 1058	Willow Warbler	Applegarthtown, Lockerbie	10. 7.67	Ortuella, Spain	31. 8.67
HH 39060	Pied Wagtail	Keir, Thornhill	1. 9.66	Rennes, France	8.12.67
HH 39262	Redpoll	Keir, Thornhill	18. 9.66	West Flanders, Belgium	2.11.67
HC 62422	Redpoll	Keir, Thornhill	7. 8.66	Fox-Amphoux France	10. 4.67
HJ 26992	Redpoll	Keir, Thornhill	12. 9.67	Ruislip, Middlesex (Re-Trap)	8.10.67
HJ 26616	Redpoll	Keir, Thornhill	22. 8.67	West Flanders, Belgium (caught & released)	5.11.67

Selected recoveries reported in 1968

Ring No.	Species	Where Ringed	Date	Where Found	Date
1051923	Gannet (Pull.)	Scar Rocks, Luce Bay, Wigtown	20. 7.68	La Tranche, France	18. 9.68
1051895	Gannet (Pull.)	Scar Rocks, Luce Bay, Wigtown	20. 7.68	Armacao de Pera, Portugal	25.10.68
1051967	Gannet (Pull.)	Scar Rocks, Luce Bay, Wigtown	20. 7.68	Off Villa Bens, Spanish West Africa	11.11.68
3037086	Oystercatcher (Pull.)	Drumlanrig, Thornhill	14. 6.64	Melrose, Roxburgh	1. 5.68
DS 47155	Lapwing (Pull.)	Morton Mains Thornhill	2. 6.67	Loughrea (Galway)	22. 2.68
SS 13758	B.H. Gull (Pull.)	Drumcruilton, Thornhill	5. 6.64	Girvan (injured, being cared for)	15. 9.68
EC 99350	B.H. Gull (Pull.)	Loch Urr, Near Moniaive	25. 6.68	Ballymahon (Longford) ('captured' release requested)	1.11.68
GM 41079	Barn Owl (Pull.)	Burlyhill, Thornhill	10. 6.67	Penrith	17. 1.68
BC 33309	Great Tit	Keir, Thornhill	7.10.65	Near Sanquhar (Ring found in Kestrel pellet)	19. 4.68
CB 29857	Blackbird	Keir, Thornhill	4.11.65	Convoy (Donegal)	19.11.68
CV 28647	Blackbird	Applegarthtown, Lockerbie	3.11.66	Near Fakse, Denmark (Shot)	12. 1.68
CS 23291	Blackbird	Keir, Thornhill	7.12.67	Alesund, Norway	1.11.68
HC 62908	Robin (Pull.)	Hayfield Thornhill	25. 5.66	Wigton Cumberland	22. 1.68
HR 24165	Pied Wagtail (Pull.)	Ae, Dumfries	26. 7.68	Bath, Somerset	25.11.68
HB 45899	Redpoll	Keir, Thornhill	27. 9.65	North Somercotes, Lincs. (Controlled)	6.10.68
HR 23610	Redpoll	Keir, Thornhill	5. 8.68	Temple Grafton, Alcester (Warwicks) (Controlled)	16.11.68
HC 62231	Swallow (Adult)	near Dumfries	19.8.68	Settlers (Transvaal) South Africa	12.11.68

* Pullus, i.e. unfledged young when ringed; " Controlled " means caught and released.

Arrangement throughout this report conforms closely with the Check List of the Birds of Great Britain and Ireland (1952) except where subsequent advancement of knowledge has made division necessary (see Ibis: 157-168 (1956)).

Scientific nomenclature has been omitted but conforms with the above Check List.

THE FRESHWATER FISH FAUNA OF SOUTH-WEST SCOTLAND

By PETER S. MAITLAND
The Nature Conservancy, Edinburgh

INTRODUCTION

The south-west of Scotland includes a wide variety of freshwater habitats covering most of the types found in the British Isles. Its standing waters range from small pools (which are brackish near the coast), through many lochans and lochs to large bodies of water like Loch Doon and Loch Ken. Most of these waters tend to be dystrophic or oligotrophic, and though some of those occurring in the lowland areas are eutrophic (e.g. the Castle Loch, Lochmaben) these are in the minority. Marl waters are uncommon. Running waters in the area show a similar variety ranging from many small burns which drain directly into the sea, through streams and small rivers which connect with larger systems such as the Ayr, Dee, Annan, etc. Unlike much of the rest of Scotland (apart from the north-west) there is no single large river system draining the area as a whole.

In past accounts of the flora and fauna of this region, the exact boundaries of the area considered have varied, some authors choosing county boundaries, others watersheds or a combination of the two. In this study, the area dealt with is that under the present jurisdiction of the Ayrshire and Solway River Purification Boards, and includes the total catchment in Scotland within a watershed starting just north of Largs and finishing at Gretna at the head of the Solway estuary.

Geographically, the area can be considered to represent three main types of land and human activity—the coast, the river valleys and the upland areas. Along the coast, especially on the west, there are many harbours (used by sea-fishing boats) and the sandy shores have made many of the towns popular seaside resorts. The population here and in the river valleys is relatively dense and agriculture is an important activity: in both areas Man has had a considerable influence on local waters and their fauna. The upland areas (consisting mainly of Silurian and Ordovician rocks) have weathered into rounded hills rising to 800m and covered in most places with grass. Much of this land is used for sheep farming or forestry though on the lower slopes more intensive agriculture may be carried out. The materials, therefore, entering the waters in the area—including natural nutrients, fertilisers and sewage—vary greatly in quality and quantity from place to place.

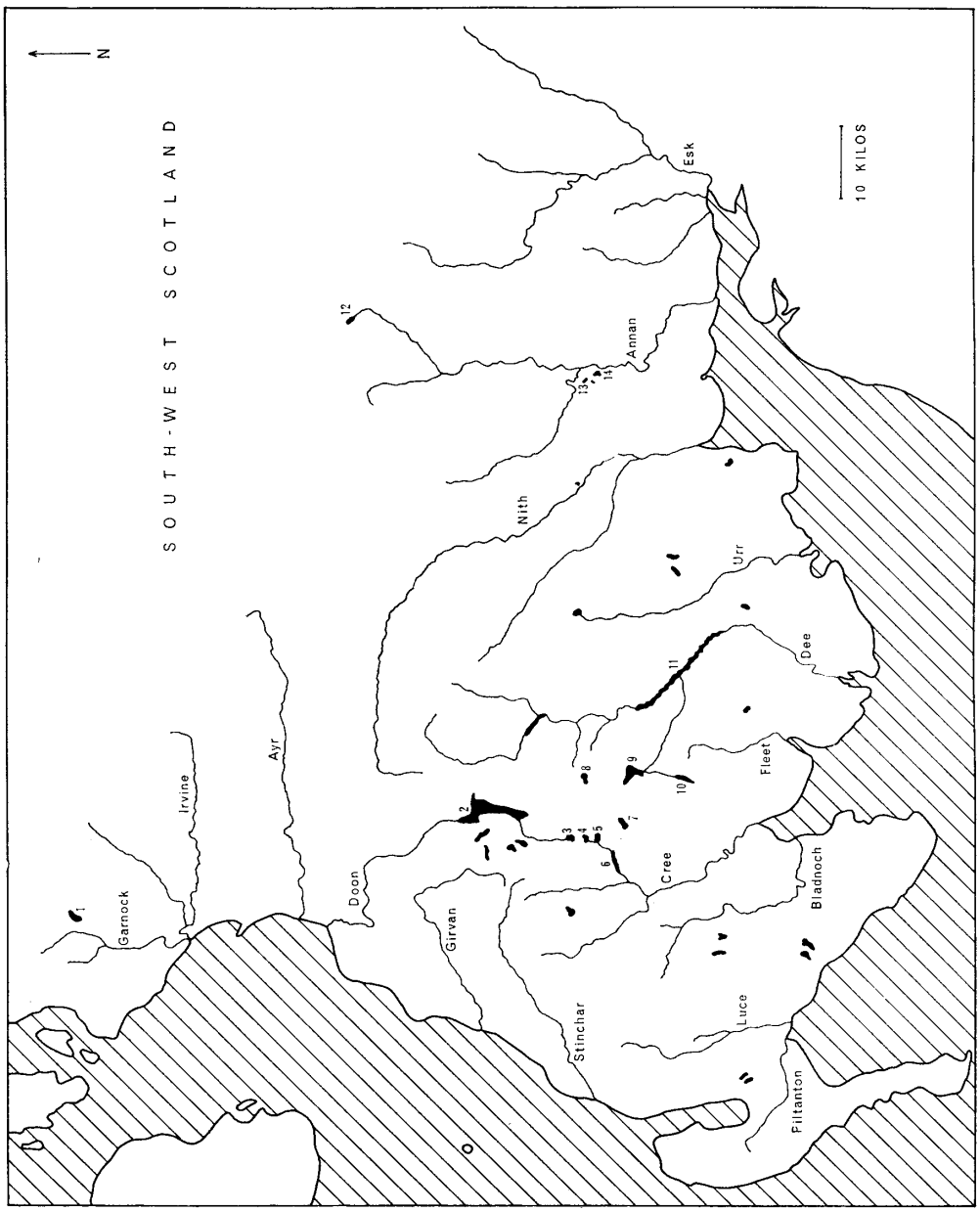


Figure 1.—The south-west of Scotland showing the major river systems and some of the more important lochs. The numbered lochs are: (1) Kilbirnie, (2) Doon, (3) Enoch, (4) Neldricken, (5) Valley, (6) Trool, (7) Dee, (8) Dungeon, (9) Clatteringshaws, (10) Grannoch, (11) Ken, (12) Skeen, (13) Mill, (14) Castle.

THE WATERS

In connection with the distribution of fish in the area, three main water types can be recognised: (1) estuaries and some regions where shore pools occur; (2) running waters; (3) standing waters.

The most important estuarine area is undoubtedly that occupying the northern part of the Solway Firth, especially at the mouths of the River Esk, Annan and Nith. Other important estuarine areas are found at the mouths of most of the large rivers entering along this south coast. Along the west coast estuarine waters are of less significance, though of local interest at the mouth of each of the major rivers. Ecologically the most significant feature of such waters is the great influence of the sea, with constantly changing levels and salinities. The salinity range encountered by fish in estuaries is extremely great, as can be seen in Table 1. The marine fauna and flora of the Solway Firth area is at present being described by Perkins and Williams (1963) and Perkins (1968).

The running waters of this area are essentially very similar in character, rising as small burns in the upland areas and gradually increasing in size to medium-sized rivers which flow into the sea. The main rivers of the area are the Garnock, Irvine, Ayr, Doon, Girvan, Stinchar, Luce, Bladnoch, Cree, Dee, Urr, Nith, Annan and Esk (Figure 1). Most of these rivers are divisible biologically into two reaches: (a) the upper fast-flowing stretches where the water is mostly shallow and its surface is constantly broken and disturbed, and (b) the lower slow-flowing stretches where the water is deeper and its surface flows smoothly. Though all the major rivers are affected slightly by pollution in their lower reaches the quality of the river water in most places is good with high average values for dissolved oxygen and low values for Biochemical Oxygen Demand (Table 2). Most of the rivers in their lower reaches are slightly alkaline.

Standing waters of various types occur over most of the region under consideration and only a few of the most notable waters are mentioned here. Loch Doon, lying among rugged hills in the west of Carrick, is the largest loch in the area (surface area: 5.3 km^2, mean depth: 8.1 m; maximum depth: 30.5 m). Numerous smaller lochs drain into it, most important among which is Loch Enoch. All of these are oligotrophic in character, in contrast to the only other large loch in Ayrshire: Kilbirnie Loch, which lies in low-lying land to the north of the region and is rather eutrophic in nature. Two other lochs worthy of mention lie near Loch Enoch, but issue in the opposite direction; these are Lochs Neldricken and Valley, both of which flow into Loch Trool. Other important hill lochs are Lochs Grannoch and Dungeon. Loch Ken is a very elongated loch (some 7.5 km long) which is really nothing more than an expansion of the River Ken which eventually flows into the Dee. Lochs Mayberry, Ochiltree, Black, White, Castle and Mochrum are lochs to the west of the central highland area which are worthy of mention, as are Clatteringshaws, Milton, Lochrutton,

Kindar, etc., to the south-east. The Castle and Mill lochs are small waters of unique interest (Maitland, 1966a) found in the Lochmaben area; Loch Skene is a notable highland loch found to the east of the area and emptying eventually into the River Annan.

FISH

Unlike the neighbouring Clyde area to the north (Maitland, 1970) there is relatively little literature dealing with the fish fauna of the south-west of Scotland; some valuable old general accounts are available along with a few short notes concerned with one or a few species. Only Service (1901; 1903), Martin (1907), Gladstone (1912), and Gordon (1921) have previously published full lists of species occurring in parts of the area concerned, though some valuable records are available in Scott & Brown (1901).

Petromyzonidae

Petromyzon marinus Linnaeus, 1758; Sea Lamprey. This species is recorded occasionally in estuaries and the lower reaches of rivers (Gladstone, 1912), where it is probably commoner than supposed. Gordon (1921) records it from the River Cree. Recent records have been from the Rivers Girvan, Urr, Nith (including Cairn) and Esk (including Liddle).

Lampetra fluviatilis (Linnaeus, 1758); River Lamprey. Recorded by Martin (1907) and by Gladstone (1912) as being common in most lakes and rivers, there appear to be few recent records of this species. Gordon (1921) notes that it is not uncommon in the estuary of the River Cree. It is very likely, however, that it does occur in some numbers in the lower reaches of all the main rivers and there are recent records from the Rivers Nith (including Cairn) and Esk (including Liddle).

Lampetra planeri (Bloch, 1784); Brook Lamprey. There is only one recent record (from the Piltanton Burn) of this species, which Gladstone (1912) notes "may occur in some rivers." Though it never occurs in estuaries, it is likely that this small species occurs in many other running waters in the area.

Acipenseridae

Acipenser sturio Linnaeus, 1758; Sturgeon. Occurring sporadically all round the coasts of the British Isles, this species is noted by Gladstone (1912) to enter the estuary in small numbers each year, and he cites specimens taken in the River Nith below Dumfries and in the nets at Newbie. Gordon (1921) records several specimens caught in Loch Ryan and in Wigtown Bay. Recent records are available of specimens caught between Arran and the mainland (Rae & Pirie, 1968).

Clupeidae

Alosa alosa (Linnaeus, 1758); Allis Shad. This species occurs only in estuary areas, and Gladstone (1912) records it frequently in whitefish nets and at the mouths of rivers. This is verified by Gordon (1921) who notes that they ascend the River Cree to spawn. It has been recorded recently off Inchmarnock, by Bute (Rae & Wilson, 1953; 1955) and off Ailsa Craig.

Alosa fallax (Lacepede, 1803); Twaite Shad. Also restricted to the estuary area, this species is noted by Gladstone (1912) to be not uncommon there. Gordon (1921) too notes that it is not uncommon in nets at Innerwell and Wigtown Bay and that it spawns in the Cree. The only recent record known to the author is of a single specimen caught off Ailsa Craig early in 1969 (Dr D. L. Burkel, personal communication).

Salmonidae

Salmo salar Linnaeus, 1758; Salmon. This species is common in all the large river systems, occurring from the estuaries upstream as far as the adults can swim during their spawning migration. In most areas the Salmon is of commercial and sporting importance. Recent records are available for all the major rivers.

Salmo trutta Linnaeus, 1758; Trout. Probably the most abundant and widespread species in the area, Trout occur in most unpolluted waters where suitable spawning facilities are available but not too many predators are present. Sea Trout, *Salmo trutta trutta* occur in most estuaries and river systems as far upstream as they can migrate; Brown Trout, *Salmo trutta fario* are restricted to fresh water but occur in all river systems and most lochs (e.g. Penwhirn, Soulseat, Dindinne, Black and White Lochs). Trout are absent from some lochs in the area (e.g. Mill Loch, Lochmaben).

Salmo gairdneri Richardson, 1836; Rainbow Trout. Though not native to the British Isles, this species (originally from North America) has been introduced to a variety of waters and is becoming increasingly popular with anglers in this country. Gladstone (1912) and Gordon (1921) record Rainbow Trout as having been introduced locally at times, but in no water is the species known to have become established. Any recent records are of introductions to angling waters (e.g. Soulseat Loch, Dalbeattie Reservoir) or escapes from such waters.

Oncorhynchus gorbuscha (Walbaum, 1792); Humpback Salmon. Formerly occurring only in waters draining into the north of the Pacific Ocean this species has recently been found round the British Isles as a result of transplants by Russia to rivers in the White Sea area. No specimens have yet been confirmed from the south-west of Scotland but a single fish was caught in 1960 in the River Derwent at Workington in Cumberland (Ellison, 1965) so the species has undoubtedly been in the vicinity of the Solway and is worth looking out for.

Salvelinus alpinus (Linnaeus, 1758); Charr. Only three waters in the area

are recorded as containing Charr: Lochs Doon, Dungeon and Grannoch. The species has been known in Lochs Doon and Grannoch for more than 200 years and in Loch Dungeon for more than 100. There are no records for Loch Dungeon since 1950, but one specimen was taken recently in Loch Grannoch (W. A. King-Webster, personal communication) and a few are caught each year by anglers in Loch Doon. It is quite possible that there are other, undetected, populations in the district for many of the lochs in the upland area appear suitable for this species.

Salvelinus fontinalis (Mitchell, 1815); Brook Charr. Armistead (1895) records the introduction of this species to a small loch three miles from New Abbey. Scott & Brown (1901) note that the Brook Charr, originally native to North America, was introduced to many lochs and rivers in Ayrshire (and Renfrewshire) and they record the species as thriving in the Rivers Irvine and Ayr. Gladstone (1912) and Gordon (1921) also mention Brook Charr as being introduced locally at times. There are no recent records of this species.

Coregonidae

Coregonus vandesius (Richardson, 1836); Lochmaben Vendace. Formerly present in both the Mill Loch and the Castle Loch, Lochmaben, this species appears to be extinct now in the latter water. Its present status in the Mill Loch has been discussed in some detail elsewhere (Maitland, 1966a; 1966b; 1967). Because of a danger of extinction in the Mill Loch also, attempts have recently been made by the author and Mr K. East to introduce the species elsewhere and in 1968, 5000 fertilised eggs were distributed in Lochs Neldricken, Valley and Narroch. This work is continuing.

Thymallidae

Thymallus thymallus (Linnaeus, 1758); Grayling. Though indigenous to the British Isles this species is supposed not to have occurred naturally in the south-west of Scotland. Scott & Brown (1901) record it from the River Ayr, while Gladstone (1912) notes that it was introduced in 1857 and 1858 to the River Nith and records it as being common there and in the River Annan. The species is undoubtedly well-established in the area, though still restricted in its distribution. There are recent records from the Rivers Ayr (including Lugar), Nith (including Cairn), Annan and Esk.

Osmeridae

Osmerus eperlanus (Linnaeus, 1758); Smelt. Scott & Brown (1901) record a single specimen caught off Brodick, while Gladstone (1912) notes that this species was formerly abundant in the Solway Firth, ascending the Rivers Nith and Annan in spring; but is now hardly known locally as a freshwater fish. Gordon (1921)

notes that it is common in the Rivers Cree and Bladnoch. The species appears still to be common in the area and there are recent records from the Rivers Girvan and Stinchar (A. N. Smith, personal communication) and Cree (W. A. King-Webster, personal communication).

Esocidae

Esox lucius Linnaeus, 1758; Pike. A widespread and common species in the south-west of Scotland, the Pike occurs in most types of standing water and many slow-flowing streams and rivers. Marjoribanks (1845), Gladstone (1912), Hewison (1912) and Maitland (1966a) all record it from the Castle Loch, Lochmaben; Gladstone records it also from Hightae Loch and Maitland from the Mill Loch, Lochmaben. Some extremely large Pike have been recorded from waters in Wigtownshire (Gordon, 1921) and from Loch Ken (Birrell, 1930). Recent records are available for the Rivers Irvine, Doon, Girvan, Bladnoch, Cree, Dee and Nith, and many standing waters including Lochs Bogton, Belston, Creoch, Fergus, Kilbirnie, Lochside, Maberry, Dornell, Martnahan, Moan, Mochrum, Ronald, Whitefield, White, Ochiltree, Soulseat, Carlingwark, Trool, Clatteringshaws, Dee, Howie, Ken, Milton, Skerrow, Woodhall, Urr, Auchenreoch, Castle, Kirk, Lochrutton, Lochaber, Arthur, Mill, etc.

Cyprinidae

Cyprinus carpio Linnaeus, 1758; Carp. Gladstone (1912) notes that this species, which was doubtless originally introduced, "was formerly kept in ponds attached to great houses and may yet be found in such places." There are few recent records of Carp in the area: the population formerly thought to be present in Laggan Tarn (Gordon, 1921) now appears to have died out (King-Webster, 1964) and a new report from Cults Loch has yet to be verified.

Carassius auratus (Linnaeus, 1758); Goldfish. This introduced species is recorded by Gladstone (1912) from a pond of warm water at the Dumfries Iron Works where it "bred and thrived till about 1895." There appear to be no recent records.

Gobio gobio (Linnaeus, 1758); Gudgeon. Gladstone (1912) recorded that this species was introduced to the Castle Loch, Lochmaben, about 1909, but there are no recent records other than an unconfirmed one from Killantringan Loch, Ballantrae, and it is likely that this species does not occur now in the area. It is unknown also from the rest of the west coast of Scotland.

Tinca tinca (Linnaeus, 1758); Tench. This species, which does not occur naturally in Scotland, was formerly recorded by Gladstone (1912) from Morton Castle Loch, where it was said to have been introduced about 1860. Recent records of Tench populations are available from Culzean Castle Pond (D. L. Burkel, personal communication), Craichlan Loch and Innerwell Pond (King-Webster, 1964).

Abramis brama (Linnaeus, 1758); Bream. This species is recorded from the Castle Loch, Lochmaben, by Marjoribanks (1845) and Hewison (1912), while Gladstone (1912) notes that it is not uncommon in the Lochmaben Lochs and the lower Annan. The Bream, which is unknown elsewhere in Scotland, has recently been recorded from the Castle Loch (Maitland, 1966a) and the River Annan.

Abramis brama x *Rutilus rutilus;* Bream x Roach Hybrid. These fish were recorded from the Castle Loch by Maitland (1966a) and appear to be common there.

Phoxinus phoxinus (Linnaeus, 1758); Minnow. This species is recorded by Scott & Brown (1901), Martin (1907) and Gladstone (1912) as being widespread in the area in clear rivers and lochs. It is one of the commonest fish in the district at present and occurs in many rivers and lochs there. Recent records are available from the Rivers Irvine, Ayr, Doon, Girvan, Stinchar, Bladnoch, Cree, Dee, Nith, Annan and Esk, and Lochs Penwhapple, Camphill, Dindinne and Mannoch.

Scardinius erythrophthalmus (Linnaeus, 1758); Rudd. Although recorded by Gladstone as occurring in several lochs in lower Nithsdale (e.g. the moat at Caerlaverock), there is only one recent record of this species in the area: a well-established population in Culzean Castle Pond. This is the only confirmed population known in Scotland at the present moment.

Rutilus rutilus (Linnaeus, 1758); Roach. This species is common in several standing and slow-flowing waters in this area. Service (1898) discusses its spread in the Solway district, while Gladstone (1912) noted that it occurred in lower Annandale especially the lochs near Lochmaben. He also recorded it from the River Lochar. Gordon (1921) records it as abundant in the Black and White Lochs (Inch). It has been recorded several times from the Castle and Mill Lochs, Lochmaben, most recently by Maitland (1966a). Other recent records are from the Rivers Doon, Nith and Annan, and Lochs Kilbirnie, Ken, Castle, Kirk, Mill, Black, Soulseat and White.

Leuciscus idus (Linnaeus, 1758); Orfe. The golden variety of this species has been introduced into ponds in Castlemilk grounds. They escape from these into the River Milk and thence into the River Annan (R. J. Little, personal communication).

Leuciscus cephalus (Linnaeus, 1758); Chub. This species, which does not occur elsewhere in Scotland, is recorded by Gladstone (1912) as being common in lower Annandale. It has been recorded from the Castle Loch by Marjoribanks (1845), Hewison (1912) and Maitland (1966a) and recent records are available from the River Annan (including the Ae) and tributaries of the River Esk (Kirtle and Sark). The largest Chub ever recorded from the British Isles was caught in the River Annan in 1955 and weighed 4.8 kgs.

Cobitidae

Noemacheilus barbatulus (Linnaeus, 1758); Stone Loach. Scott & Brown (1901), Martin (1907) and Gladstone (1912) note that this species is common and generally distributed in the area. Marjoribanks (1845) recorded the species from the Castle Loch. Though the species is probably present in most river systems there are surprisingly few recent records, those known to the author being from the Rivers Ayr, Dee, Nith, and Esk, and from Milton Loch.

Anguillidae

Anguilla anguilla (Linnaeus, 1758); Eel. Noted by Gladstone (1912) as being common and generally distributed in the area, this species is recorded from the Castle Loch and Mill Loch, Lochmaben, by Marjoribanks (1845) and Maitland (1966a) respectively. Recent records are available from the Rivers Garnock, Irvine, Ayr, Girvan, Stinchar, Luce, Urr, Nith, Annan and Esk; Lochs Ken and Dornell and the Solway Firth itself.

Gasterostidae

Gasterostus aculeatus Linnaeus, 1758; Three-spined Stickleback. This widespread species is recorded by Marjoribanks (1845) from the Castle Loch, by Gordon (1921) from the Black and White Lochs (Inch), and by Maitland (1966a) from the Mill Loch, Lochmaben. Recent records are from the Rivers Irvine, Ayr, Dee and Nith and from ditches near Caerlaverock.

Pungitius pungitius (Linnaeus, 1758); Ten-spined Stickleback. Though noted by Gladstone (1912) as being widely distributed in Dumfriesshire this species, which occurs sporadically throughout Scotland, does not appear to be common. It is recorded by Gordon (1921) as plentiful in a ditch at Glenluce Golf Course. Only two recent records are known to the author, one from a brackish ditch near Caerlaverock, the other from a ditch near Piltanton Burn in Wigtownshire.

Serranidae

Dicentrarchus labrax (Linnaeus, 1758); Sea Bass. This species, which is common all round the coasts of the British Isles, is recorded by Gladstone (1912) as being frequently taken in spring and summer in the Solway Firth. Gordon (1921) records it from nets in Wigtown Bay. No recent records are available.

Percidae

Perca fluviatilis Linnaeus, 1758; Perch. This widespread species is recorded by Gladstone (1912) as abundant in many lochs and sluggish rivers in Dumfriesshire. It is recorded from the Castle Loch by Marjoribanks (1845) and Hewison (1912) and from there and the Mill and Kirk Lochs, Lochmaben by Maitland (1966a). There are numerous recent records from the Rivers Irvine, Bladnoch,

Dee, Nith and Annan and Lochs Creoch, Fergus, Kilbirnie, Lochside, Moan, Mochrum, Black, Soulseat, White, Carlingwark, Clatteringshaws, Dee, Cardoness, Ken, Stroan, Woodhall, Dornell, Milton, Auchenreoch, Lochrutton and Arthur.

Gobiidae

Pomatoschistus microps (Kroyer, 1840); Common Goby. Recorded as common in the Solway Estuary by Gladstone (1912) there are few recent records of this widespread euryhaline species. The only one known to the author is from a small estuary near Troon (G. M. Reid, personal communication).

Mugilidae

Crenimugil labrosus (Risso, 1826); Thick-lipped Mullet. Scott & Brown (1901) note that this species is gregarious in the estuaries of some Ayrshire rivers, and Gladstone (1912) that it is rare in estuaries in the Solway area. No recent records are available.

Chelon ramada (Risso, 1826); Thin-lipped Mullet. Scott & Brown (1901) record a single specimen of this species off Fairlie while Gladstone (1912) notes that it only occurs occasionally in Dumfriesshire estuaries. There appear to be no recent records, however, and the present status of this species is uncertain.

Cottidae

Cottus gobio Linnaeus, 1758; Bullhead. The status of this species in much of the area is rather doubtful. Often said to be absent from Scotland, two populations of Bullhead have been verified recently (Maitland, 1969), one in the Clyde area, another in the Forth. Scott & Brown (1901) record it from the Carmel Burn, Ayrshire, while Gladstone (1912) notes that it is not satisfactorily recorded from Dumfriesshire. Gordon (1921) notes an unverified report from Drummullin Burn at the Isle of Whithorn. The only authentic recent record in the area is from the Kirtle Water at Cove (H. G. Proctor, personal communication) and the present status of the species elsewhere remains uncertain.

Pleuronectidae

Platichthys flesus (Linnaeus, 1758); Flounder. This widespread coastal species is common in the area and Scott & Brown (1901), Gladstone (1912) and Gordon (1921) record it as abundant and ascending many tidal rivers. There are many recent records from the Rivers Garnock, Irvine, Ayr, Girvan, Stinchar, Urr, Nith and Annan and from the Solway Firth itself. Its food in the Solway area has been studied by Williams, Perkins and Hinde (1963).

FISH COMMUNITIES

The major areas and waters related to fish distribution in the area have been described above.

The estuary areas have many characteristic species and it is only here that Sturgeon, Allis Shad, Twaite Shad, Smelt, Sea Bass, Common Goby, Thick-lipped Mullet and Thin-lipped Mullet occur. These are all typical marine or estuarine species found round various parts of the Scottish coast. Another typical portion of the estuarine community is represented by migratory species (e.g. Sea Lamprey, River Lamprey, Salmon, Sea Trout, Eel and Flounder) which are found here on their migrations to or from freshwater. The seasonal movements of such fish in the Solway area have been discussed by Service (1907). A few ubiquitous species (e.g. Three-spined Stickleback) are also found here while many purely marine species occur in various areas (e.g. Argentine, *Argentina sphyraena* Linnaeus, 1758; Plaice, *Pleuronectes platessa* Linnaeus, 1758).

Many lowland ponds and lochs are dominated by Pike, Perch and Three-spined Sticklebacks, and Roach too are common in some waters. Eels occur in most waters and together with Brown Trout are often the only fish occurring in highland lochs. The slow-flowing lower reaches of many rivers have fish communities essentially similar to those in eutrophic lochs. In faster flowing waters accessible to the sea Salmon, Trout, Grayling and Eels, together with some smaller species (e.g. Minnow, Stone Loach) are dominant, but where waterfalls, etc., prevent their ascent, Salmon and Sea Trout are absent from this community.

Several individual communities are worthy of note, especially those in which an unusual or rare species is common. Among the most important of these are Lochs Doon, Dungeon and Grannoch (Charr); Mill Loch, Lochmaben (Vendace), Castle Loch, Lochmaben, and lower River Annan (Bream and Chub), Culzean Castle Pond (Rudd and Tench), River Esk (Chub).

DISCUSSION

In common with many other parts of the British Isles, the present fish fauna of south-west Scotland is made up of a variety of species, mostly indigenous (of both marine and freshwater origin), but some of them introduced. Many species are very restricted in their distribution and, apart from Charr and Vendace, these are likely to have been introduced relatively recently. Apart from inevitable changes resulting from increased pollution, dam construction, etc., the most likely future changes to take place in the fish communities in the area, will be those resulting from the further dispersion of species like Grayling, Bream and Roach.

The most unique feature of the fish fauna of south-west Scotland is undoubtedly the population of Vendace in the Mill Loch. This species, and the urgent need for its conservation have been discussed fully elsewhere (Maitland, 1966a, 1967). Though common in England, Bream, Rudd and Chub do not occur elsewhere in Scotland and the populations noted above of these species are of some interest on this account. Of interest too are three lochs

containing Charr, the only Scottish populations known to occur south of the Midland Valley. With the increasing use of water by Man, for industrial, domestic and social purposes it is important that the interests of such ecosystems, including their fish populations, be safeguarded as much as possible.

ACKNOWLEDGEMENTS

Much of the information mentioned in this paper was obtained while the author was carrying out research at the University of Glasgow and I am grateful to Sir Maurice Young, Professor D. R. Newth and Dr H. D. Slack for the facilities provided there. Mr J. F. Flannagan, Mr K. East and my wife, Kathleen, have helped me during various fishing trips in the region. Many other people have helped me with information on fish in this area and I would particularly like to thank Drs D. L. Burkel, F. Johnstone, D. H. Mills and Messrs J. Boyd, T. M. Brown, J. A. Cairney, W. F. Cormack, J. Coutts, A. Edgar, H. Goldie, E. W. Griffiths, E. T. Hunter-Blair, T. Huxley, W. A. King-Webster, R. M'Connell, H. G. Proctor, G. Reid, D. W. Simpson, A. N. Smith, J. Stevenson, J. A. Thomson, A. E. Truckell and J. I. Wylie. I am grateful to Mr P. Barnes (Ayrshire River Purification Board) and Mr C. P. James (Solway River Purification Board) for permission to include the data shown in Tables I and II.

REFERENCES

ARMISTEAD, A. A., 1895. **An angler's paradise, and how to obtain it.** Scarborough.

AYRSHIRE RIVER PURIFICATION BOARD, 1968. **Ann. Rep.,** 15, 1-41.

BIRRELL, A., 1930. Local nature notes. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 14, 27-48.

ELLISON, N. F., 1965. A Pacific salmon in Cumberland. **Fld. Nat.,** 10, 6-8.

GLADSTONE, H. S., 1912. **A catalogue of the vertebrate fauna of Dumfriesshire,** Dumfries.

GORDON, J. G., 1921. The marine and freshwater fishes of Wigtownshire. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 7, 137-159.

HEWISON, J. K., 1912. **County geography of Dumfriesshire.** Cambridge.

KING-WEBSTER, W. A., 1964. Notes on some unusual fishes recently recorded from Wigtownshire. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 41, 52-54.

MAITLAND, P.S., 1966a. The fish fauna of the Castle Loch and the Mill Loch, Lochmaben, Dumfriesshire, with special reference to the Lochmaben Vendace, **Coregonus vandesius** Richardson. **Trans. Dumfr. Gall. Nat Hist. Soc.,** 43, 31-48.

MAITLAND, P. S., 1966b. The present status of known populations of the Vendace, **Coregonus vandesius** Richardson in Great Britain. **Nature, Lond.,** 210, 216-217.

MAITLAND, P. S., 1967. Echo sounding observations on the Lochmaben Vendace, **Coregonus vandesius** Richardson. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 44, 29-46.

MAITLAND, P. S., 1969. A preliminary account of the mapping of the distribution of freshwater fish in the British Isles. **J. Fish. Biol.,** 1, 45-58.

MAITLAND, P. S., 1970. The freshwater fish fauna of the Clyde area (in preparation).

MARJORIBANKS, T., 1845. Parish of Lochmaben. **New Statist. Acc. Scot.,** 4, 377-397.

MARTIN, J. W., 1907. The fauna of Glencairn. III. The fishes. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 18, 30-34

PERKINS, E. J., 1968. The marine fauna and flora of the Solway Firth area. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 45, 15-43.

PERKINS, E. J. & WILLIAMS, B. R. H., 1963. A preliminary list of the marine fauna and flora of the Solway Firth, with some notes on the distribution of **Elminius modestus** Darwin. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 40, 75-88.

RAE, B. B. & PIRIE, S. F., 1968. Rare fish records. **Scot. Fish Bull.,** 30, 31-32.

RAE, B. B. & WILSON, E., 1953. Rare and exotic fishes recorded in Scotland during 1952. **Scot. Nat.,** 65, 141-153.

RAE, B. B. & WILSON, E., 1955. Rare and exotic fishes recorded in Scotland during 1953. **Scot. Nat.,** 66, 170-185.

SCOTT, T. & BROWN, A., 1901. The marine and freshwater fishes. **Handb. Brit. Assoc.,** 173-180.

SERVICE, R., 1898. Spread of the roach in the Solway district. **Ann. Scot. Nat. Hist.,** 239.

SERVICE, R., 1901. **The vertebrates of Solway: a century's changes.**

SERVICE, R., 1903. **Vertebrate zoology of Kirkcudbrightshire.**

SERVICE, R., 1907. Seasonal movements of fishes in the Solway area. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 18, 149-152.

SOLWAY RIVER PURIFICATION BOARD, 1968. **Ann. Rep.,** 15, 1-35.

WILLIAMS, B. R. H., PERKINS, E. J. & HINDE, A., 1963. Some preliminary results of an investigation of the food of fish in the Solway. **Trans. Dumfr. Gall. Nat. Hist. Soc.,** 40, 60-74.

TABLE I

Maximum and minimum chloride values from the lower and tidal reaches of three Solway rivers during 1968 (Solway River Purification Board, 1968). It can be seen that the salinity (represented by the chloride) is relatively constant in the rivers but extremely variable in the tidal areas. The figures given are the maximum and minimum of the quarterly samples taken during the year but the figures may have been exceeded at other times.

River	Sampling Point	Chloride (Mg/Litre) Maximum	Minimum
Bladnoch	Shennanton	21	15
Bladnoch	Bladnoch (tidal)	662	18
Dee	Bridge of Dee	13	12
Dee	Concrete Bridge (tidal) (Kirkcudbright)	5650	34
Nith	Dumfries	20	14
Nith	Glencaple (tidal)	18000	49

TABLE II

Average analyses of water from the lower reaches of the major rivers in south-west Scotland during 1968 (Ayrshire River Purification Board, 1968; Solway River Purification Board, 1968). The % Saturation of Dissolved Oxygen represents the amounts of oxygen carried by the waters; the Biochemical Oxygen Demand (B.O.D.) indicates the degree of organic pollution (higher demands indicate higher pollution); while the pH indicates the acidity (less than 7.0) or alkalinity (more than 7.0).

River	Sampling point	% Saturation Diss. Oxygen	B.O.D.	pH
Garnock	Kilwinning	115	2.5	7.8
Irvine	Irvine	112	2.6	8.0
Ayr	Ayr	101	1.9	8.1
Doon	Doonfoot	104	1.7	7.5
Girvan	Girvan	120	4.1	8.5
Stinchar	Ballantrae	113	2.8	7.8
Luce	Glenluce	102	1.9	6.5
Bladnoch	Shennanton	93	1.8	7.2
Cree	Newton Stewart	101	1.7	7.4
Dee	Bridge of Dee	102	1.3	7.1
Urr	Corsock	104	1.1	7.3
Nith	Dumfries	99	1.2	7.2
Annan	Brydekirk	109	1.3	7.1
Esk	Canonbie	101	1.9	7.7

A MESOLITHIC SITE AT BARSALLOCH, WIGTOWNSHIRE

by W. F. CORMACK, F.S.A. Scot.

INTRODUCTION

Since 1962, extensive surface collections of flints have revealed widespread mesolithic activity in Dumfriesshire and Galloway. In 1964 a numerical analysis was made of the flints from the known coastal sites in Wigtownshire[1] and in 1965 and 1966 one of these sites, Low Clone (south site), was excavated revealing evidence of structures in the shape of a scooped area with associated fire spots, and a more complete assemblage of lithic material than could be obtained from the surface collections.[2] The site under discussion, in this paper, two miles to the south-east of Low Clone, was selected for further excavations in 1967 and 1969, since there the flint scatter also covered a small definite area and furthermore the existence of shells in the topsoil indicated a possible midden. The latter did not materialise, but structures, though less pretentious than those at Low Clone, did exist. The main achievement, however, was the obtaining of a radio carbon date — 4050 B.C. ± 110 years.

The Site[3]

The land backing the shore at Barsalloch, 1½ miles south-east of Port William, tends to be low lying and rises from the present beach in a series of steps, two of which appear to be raised beaches formed by the sea when at a higher level relative to the land (fig. 1). The lower of these two raised beaches seems to be that of the Main (or Early) Post Glacial sea which inundated the land, in round terms between 6000 and 3500 B.C.,[4] thus coinciding roughly with the Atlantic Pollen Zone and the post glacial climatic optimum when the temperature was some 2° C. warmer than at present. The landward edge of this raised beach is marked by an erosion scarp some 15 feet in height. The site under discussion is situated near Pate's Port at Nat. Grid ref. NX343422 on the seaward edge of the upper of these two raised beaches, and was disclosed by a scatter of flints which appeared in the topsoil when ploughed — a circular scatter some 100 feet in diameter accompanied by a few rather corroded shells of marine molluscs.

The upper, and therefore older, beach on which the site lies provided a most suitable occupation area, dry, probably lightly covered with vegetation

1 J. M. Coles, **New Aspects of the Mesolithic Settlement of S.W. Scotland,** these Transactions 41 p. 67.

2 W. F. Cormack and J. M. Coles, **A Mesolithic Site at Low Clone, Wigtownshire,** these Transactions 45, p. 44.

3 The site is also referred to as **Pate's Port** in for example Dumfries Museum Register.

4 W. G. Jardine **Post Glacial Sea Levels in S.W. Scotland.** Scottish Geographical Magazine 81, 1, p. 5, but further work, particularly in the East of Scotland has shown that the dating of these beaches may not be as simple as has hitherto been thought—see J. B. Sissons **The Evolution of Scotland's Scenery,** 1968, p. 203.

Plate II—Mesolithic site at Barsalloch from the S.-E. The excavated area lies beyond the stream to the right of the photograph. Behind the figure can be seen the main Post Glacial raised beach with Luce Bay beyond.

[Photo: **J. M. Coles**]

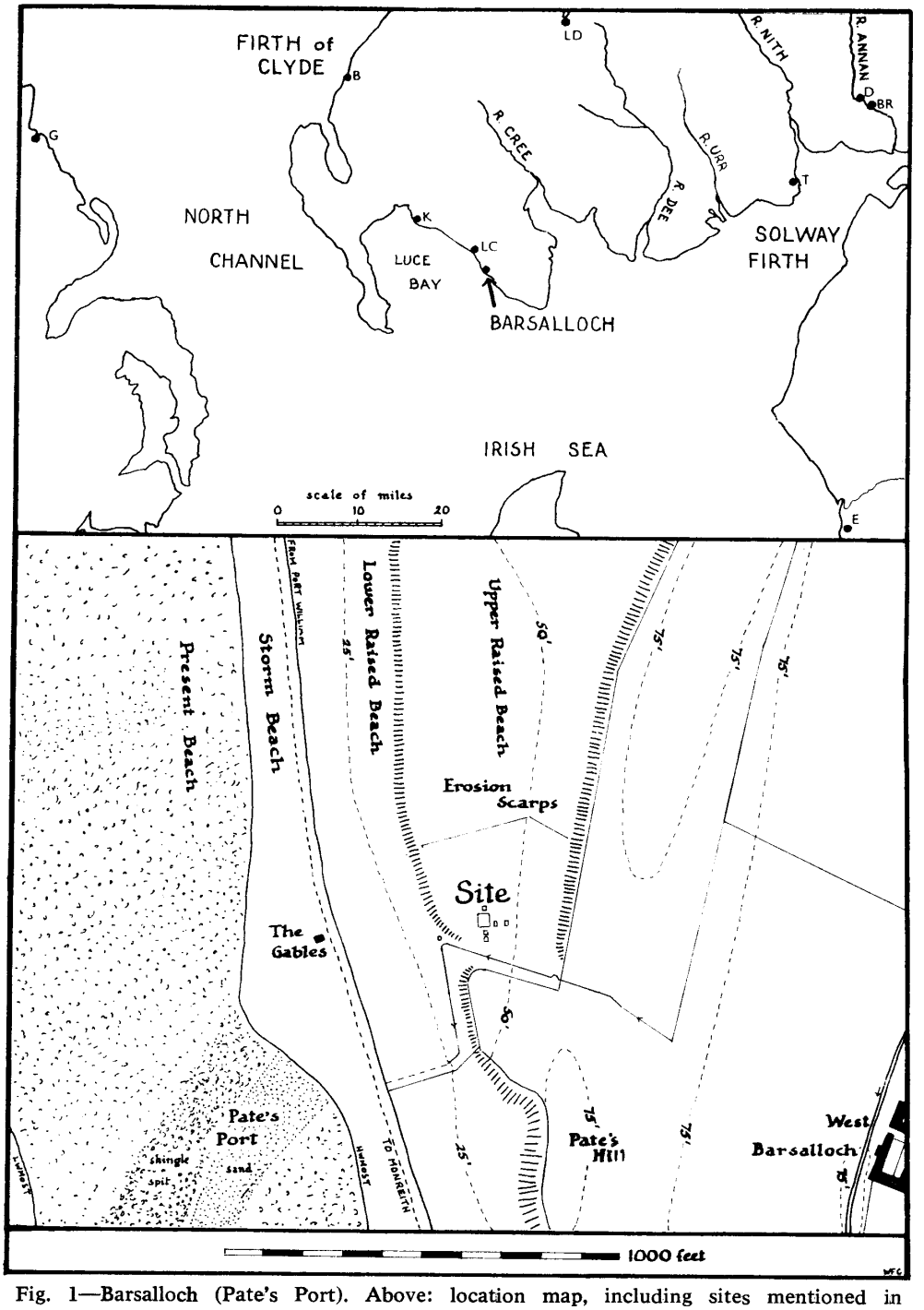


Fig. 1—Barsalloch (Pate's Port). Above: location map, including sites mentioned in the text viz B, Ballantrae; BR, Brocklerigg; D, Dalton Hook; E, Eskmeals; G, Glenarm; K, Kilfillan; LC, Low Clone; LD, Loch Doon; T, Tallowquhairn. Below: map showing relationship of site to the two raised beaches—heights in feet above O.D.—based on the 1908 O.S. map

and convenient for access to the shore in Atlantic times. While nowhere along the eastern shore of Luce Bay can one say that natural harbours exist — yet numerous gravel spits extending in a southerly direction from the present shore provide adequate landing places for small boats for much of each tide. The shore today certainly is, and probably in Atlantic times also was, suitable for settlement by strandloupers or inshore fishermen. A somewhat seasonal stream, providing fresh water, passes close by the site.

The Excavation

A grid of 10 foot squares was laid out over the approximate area of the site and initially a line of half-squares opened across the site. The flints from the topsoil showed a maximum about square F7. Accordingly, another line of half-squares was opened at right angles to, and passing through, that square. This confirmed that square F7 was about the centre of the site. An area 28 feet by 22 feet was developed fully (fig. 2) apart from balks but was not extended further, since, from the small number of flints which were appearing in undisturbed situations under the topsoil in comparison to those in the plough soil itself, it was apparent that most of the site had been ploughed away.

Below the topsoil, about 7 inches from the surface, was a layer (3 to 8 inches thick) of fine sandy material containing evidence **in situ** of prehistoric occupation. This occupation took the form of stone settings, and pits or fire spots with dark greasy filling. Throughout this layer was a scatter of flints with a tendency to concentrate in the area F6, F7, G6, G7. The principal stone setting occurred in square H7 — below this stone setting was a layer of carbonised wood which has yielded a radio carbon date as stated of 4050 B.C. ± 110 years (GaK 1601). Other less definite settings of stones occurred in squares F6, H6, and G7.

The largest pit, oval 5 feet long by 3 feet wide, situated between squares H6 and H7 extended to 1 ft. 8 ins. below the surface of the field. Some stones occurred on the periphery and associated with it were a microlith and core. Stratified above it was a fine blade. A smaller dark pit occurred in the corner of square G7. In the N.E. corner of square F6 there was a deep pit of dark greasy soil with which were directly associated 10 flints. A smaller pit in the S.W. corner of the same square was filled with stones in a black greasy deposit. It will be observed (fig. 2) that these four pits lie apparently on an arc of a circle and are situated equidistant apart. The four pits were however all different in character, and were quite definitely not postholes — their spacing seemingly being quite fortuitous. These pits are probably fire spots.

In the centre of square F7, a stone (one of a group of three) placed vertically in the fill alongside a soft patch of the latter might indicate a stake hole. Signs of recent interference appeared in part of F6. This is

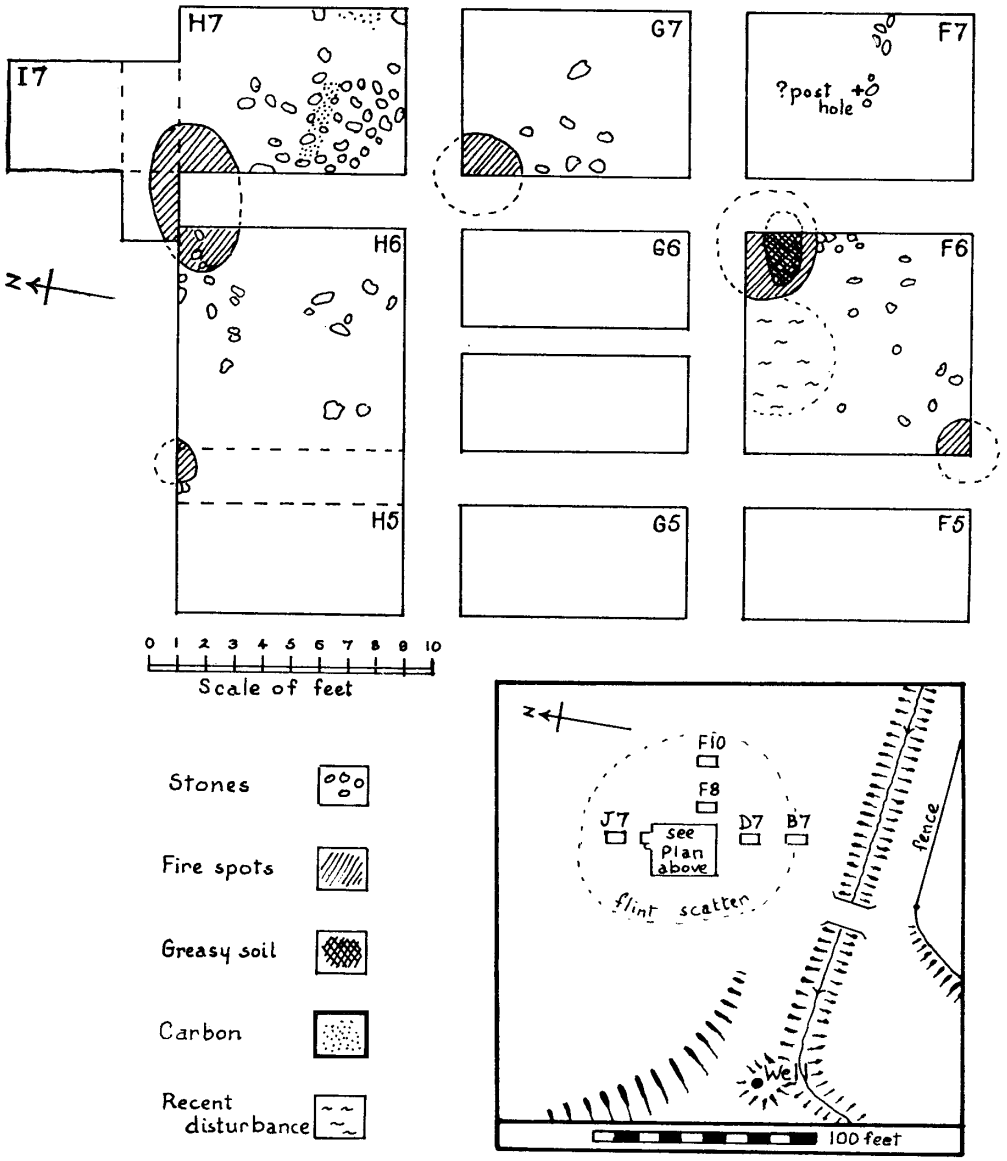


Fig. 2—Plan of excavated area with (inset) key to grid squares.

believed to have occurred after the map reference of the site was published in 1964. The sections (fig. 3) show that here in contrast with Low Clone there were no artificial scoops in the subsoil. Instead, the strand loupers occupied a natural sandy hollow on the sea shore. The number of fire spots

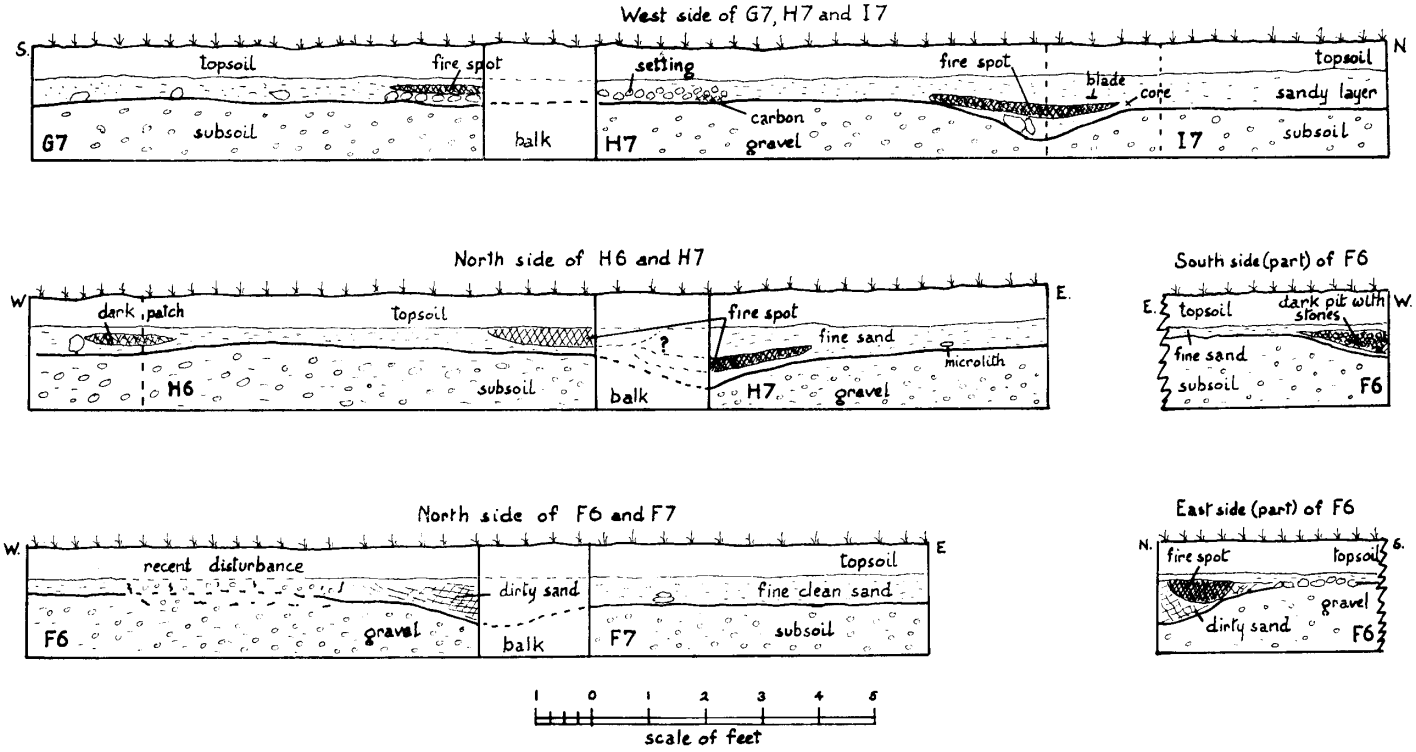


Fig. 3—Sections

TABLE I

	CORES		*REJUV. FLAKES*		*LUMPS*		*CHIPS*		*PRIMARY FLAKES*			*SECONDARY FLAKES*			*BLADES*			*TRAN-CHET*
	No.	*Ut.*	*No.*	*Ut.*	*No.*	*Ut.*	*No.*	*Ut.*	*No.*	*Ut.*	*Ret.*	*No.*	*Ut.*	*Ret.*	*No.*	*Ut.*	*Ret.*	
F5	—	—	—	—	—	—	—	—	—	—	—	2	—	—	1	1	—	—
F6	1	—	5	1	—	—	5	—	7	—	—	12	1	1	1	1	—	—
F7	3	—	—	—	—	—	3	—	—	—	—	5	1	—	—	—	—	1
F8	1	—	—	—	—	—	—	—	1	—	—	1	—	—	1	—	1	—
F10	—	—	—	—	—	—	2	—	5	—	—	2	1	—	—	—	—	—
G5	—	—	—	—	—	—	1	—	1	1	—	2	—	—	—	—	—	—
G6W	1	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—
G6E	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
G7	2	1	—	—	—	—	8	—	4	1	—	7	1	1	—	—	—	—
H5	—	—	—	—	—	—	2	—	—	—	—	3	1	1	—	—	—	—
H6	1	—	1	—	—	—	1	—	1	—	—	2	—	—	1	—	1	—
H7	—	—	—	—	1	—	5	—	—	—	—	8	2	1	1	—	1	—
I7	1	—	—	—	—	—	1	—	1	—	—	3	1	1	—	—	—	—
J7	1	—	—	—	—	—	—	—	1	—	—	3	1	—	—	—	—	—
D7	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—
Fill Total	12	1	6	1	1	—	30	—	22	2	—	52	9	5	5	2	3	1
SURFACE TOTAL	73	30	21	10	16	—	128	—	189	15	24	317	73	53	17	1	8	1
SITE TOTAL	85	31	27	11	17	—	158	—	211	17	24	369	82	58	22	3	11	2

Fill—129, Topsoil—332, Surface—430; Total—891

perhaps indicate that it was seasonally occupied on perhaps half a dozen occasions, and the stone settings imply that shelters or other temporary structures were erected, as at Low Clone.

The Flints

Altogether 461 flints were recovered during the excavation, of which 332 came from the top soil — to these require to be added 430 flints picked up on the surface since 1962, when the site was discovered. Thus, of the total of 891 flints discussed below, only 14% came from undisturbed levels. This should be compared with 54% at Low Clone — and this difference should be borne in mind when considering the weight to be given to the analysis and deductions drawn from it.

Materials. — One fragment, seemingly unworked, of green pitch stone was found in the topsoil as also one piece of red chert. The remainder of the material used was all flint, seemingly from pebbles from the shores of Luce Bay. The flint is generally honey coloured but a relatively opaque milky flint also occurs, also a few flakes of pink. Two or three fragments existed of a coffee-coloured opaque cherty flint with sepia coloured banding. The majority of flake surfaces are patinated, varying from thin bluish-white to a creamy opaque skin. One or two items show unpatinated retouch on a patinated flake. Some pieces are quite unpatinated, but there seems no chronological significance in this. A small proportion of pieces are burned.

Working Areas. — The flints were initially divided into the same basic classes (Table I) as were those from Low Clone, this included a division into primary and secondary flakes to ascertain whether any primary and secondary working areas existed. A table was prepared from those flints found undisturbed but, owing to their paucity, the table is not dependable and so not reproduced. However, of 31 flints in square F6, 42% were primary and 58% secondary, whereas of 21 in G7, 71% were secondary, and of the 15 in H7 no less than 93% were secondary. Thus, subject to reservations owing to the smallness of the sample, one can say there was a tendency to primary work at the south end of the excavated area, and to secondary working around the north-most fire spot.

Cores. — A total of 85 cores were recovered, of which 31 or 38% have traces of utilisation or retouch as core scrapers. This compares with 40% similarly utilised at Low Clone. Table II shows their arrangement in types and these expressed as a percentage of the total cores, similar percentages being given for Low Clone—(the unclassified cores either defy classification or are badly burned so are ignored in the percentage column). An immediate and important contrast is seen between the sites — Low Clone having a strong element of conical cores weakly represented at Barsalloch, where there is instead a pronounced tendency to work cores bi-directionally, i.e., from two

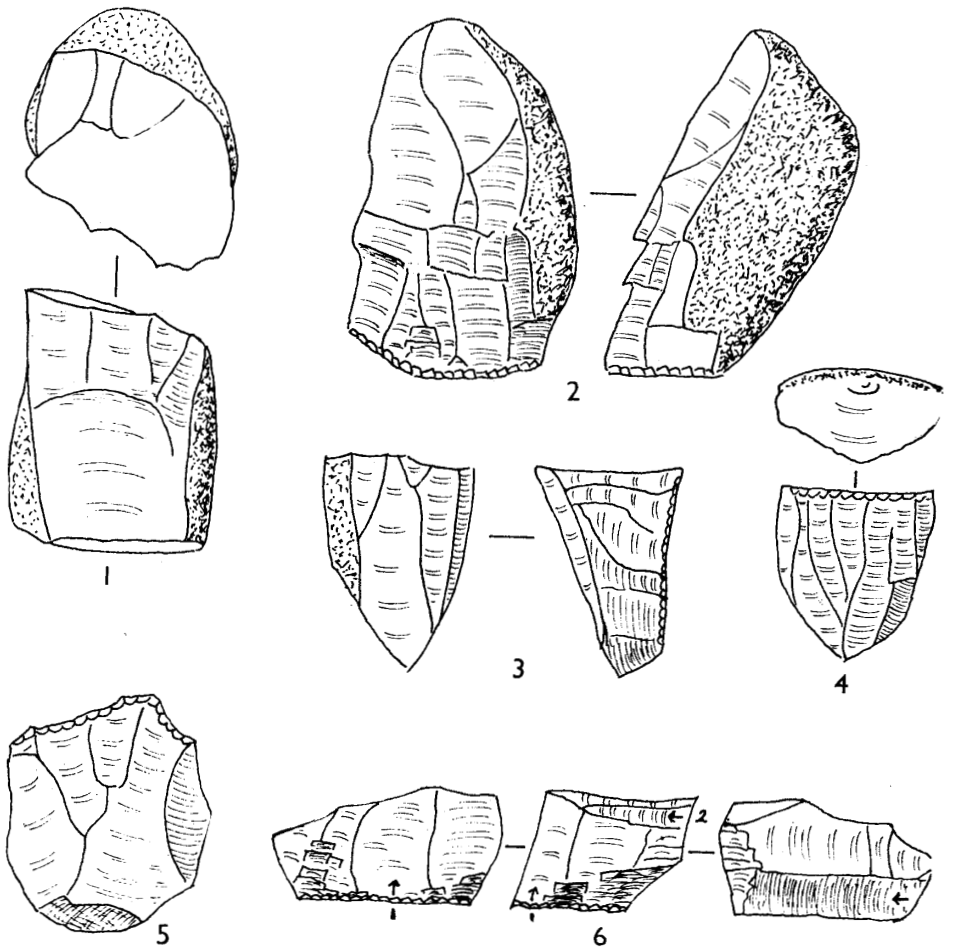


Fig 4—Cores: Double platform opposed (1), single platform with scraper edge (2, 4, 5), double platform bi-directional (3) a common type, triple platform (6). No. 1 from square F8, No. 3 from balk H7/I (17), remainder topsoil (all nat. size).

platforms not in the same plane and generally at right angles from each other — the significance of this will be discussed below. Illustrated are a cylindrical core, with two parallel striking platforms (No. 1) in the coffee-coloured cherty flint mentioned above and, used as scrapers, a single-platform core of push-plane type (No. 2), two- and three-platform bi-directional cores, a conical core of arc type with neat bladelet scars (Nos. 3, 6, 4), also a core-scraper with an acute angle scraping edge (No. 5). 34 of the cores, i.e., 40% had scars of good parallel sided flakes or blades, while the remainder had scars of irregular flakes. These should be compared with almost equal proportions at Low Clone of cores with blade and flake scars.

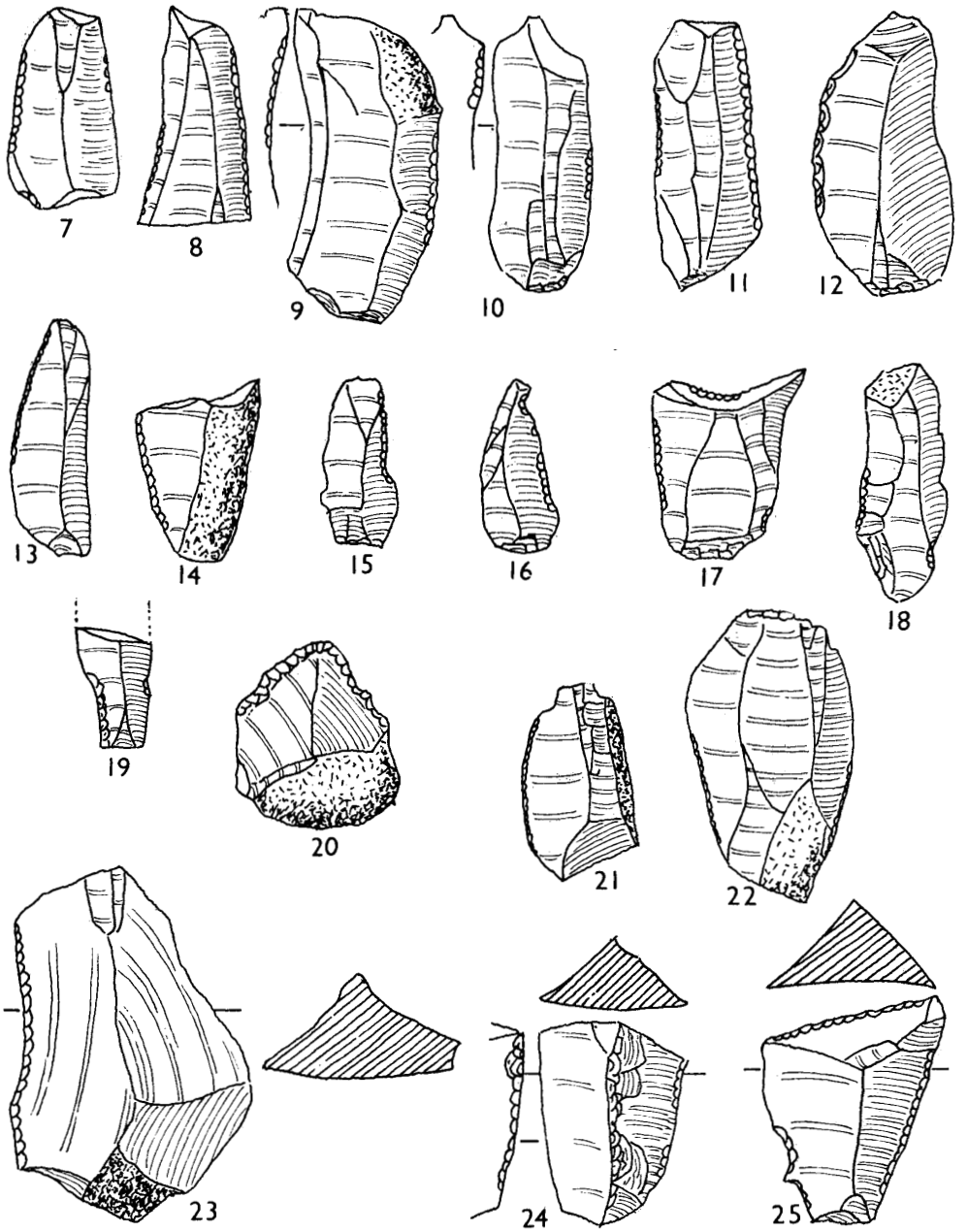


Fig. 5—Flakes with miscellaneous retouch—on blade-like flakes (7 to 16), combined with hollow scraper (17), on plunging rejuvenation flake (18), hafted blade (19), nosed scraper (20), fine retouch (21, 22), retouch on thick flakes (23, 25), fabricator (24). No. 10 from H7, No. 19 from F6, remainder topsoil (all nat. size).

TABLE II

Cores

			Barsalloch No.	Barsalloch %	Clone %
Type A: Single Platform	1. Annular	a) Cylindrical	—	—	2
		b) Conical	2	2	8
	2. Penannular	a) Cylindrical	12	16	12
		b) Conical	9	12	12
	3. Arc		16	21	12
Type B: Double Platform	1. Opposed		4	5	11
	2. Convergent		7	9	7
	3. Divergent		3	4	11
	4. Bi-directional		15	19	11
Type C: Triple Platform			9	12	9
Type D: Quadruple Platform			—	—	4
Unclassifiable			8		—

Retouched Artifacts (Table III). — The retouched artifacts have been arranged in the same categories as those from Low Clone with, in addition, a tranchet. Among "awls" are certain boring implements described below as "reamers."

The main categories of artifacts, however, from the site, comprising between them no less than two-thirds of all the specific implements, are flakes and blades with **miscellaneous** areas of **retouch** and notched flakes including hollow scrapers. Most flakes, however rough, provided they have a sharp edge, show signs of utilisation and some show small areas of coarse retouch, sometimes the distinction between these being somewhat subjective. Illustrated are parallel

TABLE III

ARTEFACTS

	Microliths	*Points*	*Backed*	*Burins*	*Misc. Ret.*	*Notched*	*Steep Ret.*	*Awls*	*Tranchets*
Fill	2	—	—	—	2	2	—	—	1
Topsoil	6	1	1	—	24	8	5	2	1
Surface	—	1	1	2	16	16	4	4	—
TOTAL	8	2	2	2	42	26	9	6	2

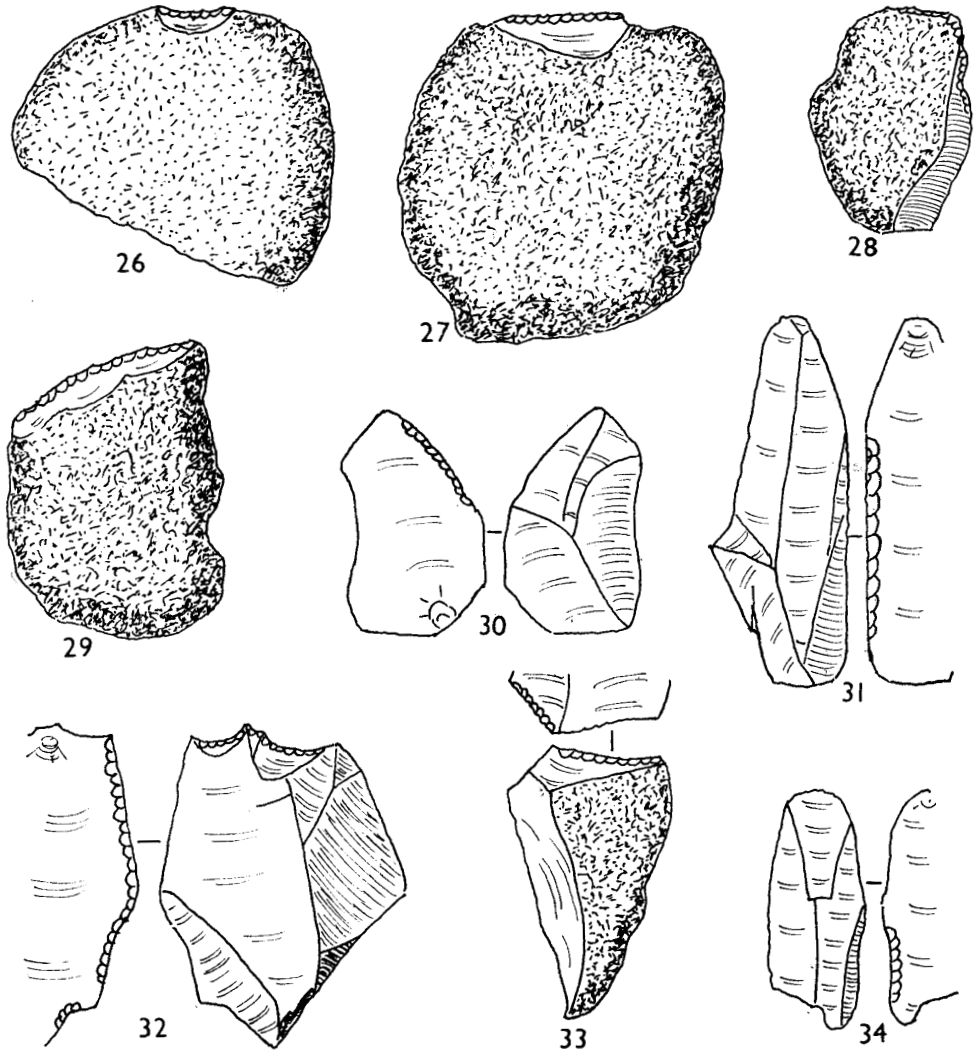


Fig. 6—Flakes with miscellaneous retouch (cont.)—on primary flakes (26 to 29), on reverse of flake (30, 31, 34), on both sides of flake (32, 33); all from topsoil and shown nat. size

sided or fluted flakes or blades with lengths of retouch along one or both sides (Nos. 7 to 16). Remarkable is No. 12 in that coarse retouch which has not patinated has been applied to a heavily patinated blade, thus showing a considerable time lapse between the original flaking and retouch. A flake retouched both as a notched or hollow scraper and a blade is No. 17, while No. 18 is an example of two small areas of retouch being applied to a plunging core-

rejuvenation flake. The areas of retouch or blunting on No. 19 would seem to be for hafting of a blade. No. 20 is a nosed scraper. Some retouch is extremely fine, two examples being shown — Nos. 21 and 22. Nos. 23 to 25 have areas of retouch applied to triangular sectioned flakes. No. 24 is also retouched on the reverse of the flake and blunted along one side of the central spine, which seem to indicate that this implement is a broken "fabricator." Fig. 6 illustrates miscellaneous areas of retouch on flat primary flakes (Nos. 26 to 29); indeed, on No. 28, the retouch has been carried on to the cortex while the remainder of that figure, viz. Nos. 30 to 34, show retouch applied to the reverse side of the flake. No. 33 is remarkable in that the retouch is applied on opposite surfaces of the flake on each side of an obtuse-angle central point, rather similar to a modern countersink bit and accordingly it may have been utilised for some such purpose.

A large and it is submitted significant element among the artifacts is that of **notched flakes** (fig. 7). The retouch takes the form of nibbled hollows on the sides of rejuvenation flakes (Nos. 35 to 37), on the end of a parallel sided flake (No. 38), on flat primary flakes (Nos. 39 to 41), on the side of a heavy core trimming (No. 42), or on the dorsal surface of irregular flakes (Nos. 43 to 47). No. 48 has similar working on the under or reverse side of a primary flake.

Steep Retouch. — A few implements show a steeper form of retouch and would probably qualify for the description of scraper (fig. 8 — Nos. 49 to 54), No. 49 is a high sided convex scraper in completely unpatinated flint. Its shape, very rare in the Coastal Mesolithic industry, and lack of patination, perhaps indicate it to be secondary on the site. Nos. 50 and 52 are side scrapers on flakes, while 53 and 51 are simple end scrapers on thin and thick primary flakes respectively. No. 54 has steep but rather coarse retouch on the under surface of a core-rejuvenation flake.

Burins.—Only two certain burins were discovered at Barsalloch (fig. 8, Nos. 55 to 56). In both cases a burin facet has been worked on the edge of a core-rejuvenation flake.

Awls and Reamers. — Falling into the category of awls are two flakes (fig. 9, 61 and 62), one being manufactured as an awl and the other utilised as such, damage being caused both to the dorsal and the flake surfaces. Also illustrated are four artifacts of a type not hitherto recognised in the South-West Scotland coastal mesolithic industry. These would appear to be reamers (57 to 60). They consist of hinged flakes worked on one edge on the dorsal surface and on the opposite edge on the main flake surface. Nos. 57 and 58 have quite definitely, and 59 very probably, been worked in this fashion, while No. 60 has been utilised as such. Their use would be to increase the size of a hole in leather, wood or other substance. As in modern practice, one

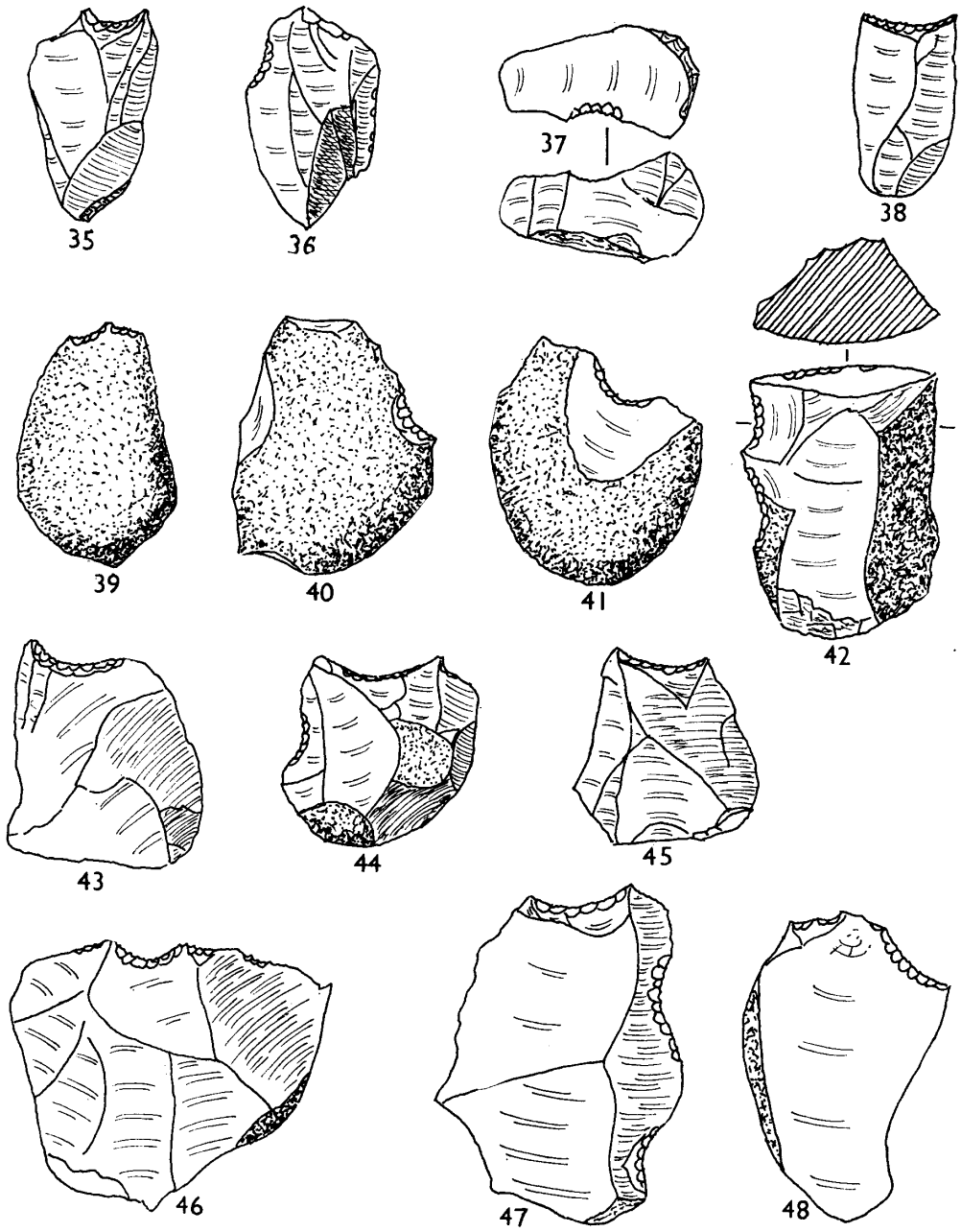


Fig. 7—Notched Flakes—on rejuvenation flakes (35 to 37), on end of blade (38), on primary flakes (39 to 41), on side of heavy core trimming (42), on irregular shaped flat flakes (43 to 48); all from topsoil and shown nat. size

would use an awl to pierce the material and then successively use each of a set of reamers to open up the hole in stages to the size required. It will be recollected that a three-in-one such reamer has been found at Glenarm, Co. Antrim.[5]

Included among the artifacts is one not represented at Low Clone, namely a chisel or tranchet (fig. 9—No. 63). Struck from the same coffee coloured and banded opaque flint mentioned above, it could well have been struck from the core which is illustrated (fig. 4 — No. 1), but attempts to re-position it on the core were unsuccessful. No. 64 is a fluted flake with a chisel end, probably resulting from the striking off of a flake from a bi-directional core, the chamfered end being a scar from a flake previously struck from the core at right angles to the existing scars. Although not a true tranchet, it has apparently, from damage to the working or chisel end, been used as such and it is therefore illustrated.

From Barsalloch are two **points** (Nos. 65 and 66). The larger is in milky opaque flint and has rather a thick butt — some inclusions in the flint there may have resulted in a break and only part of the implement remain. No. 66 is thin and lightly patinated. The bulb is on the underside of the point at the right of the illustration. No. 19, illustrated in fig. 5, may be a broken point. Two **blunted-back blades** exist (Nos. 67 and 68) both on triangular blade-like flakes with the bulb of percussion. No. 68 is in opaque milky flint and No. 67 in lightly patinated flint.

The **microliths** consist of rather unprepossessing little implements similar to those from Low Clone (Table IV). With blunting retouch on both sides are a rather thick blade (fig. 9 — No. 69), now broken, but which probably ended in a point, and a small needle point worked in the same fashion (No. 70).

TABLE IV

MICROLITHS

	2b Retouch Both Sides	*4b Triangles*	*6b Trapeze*	*Unclass.*
F8 ..	—	—	—	1
H7 ..	1	—	—	—
Topsoil	1	3	1	1
TOTAL ..	2	3	1	2

5 H. J. Movius, **A Stone Age Site at Glenarm, Co. Antrim**, J.R.S.A., Ireland LXVII p. 181.

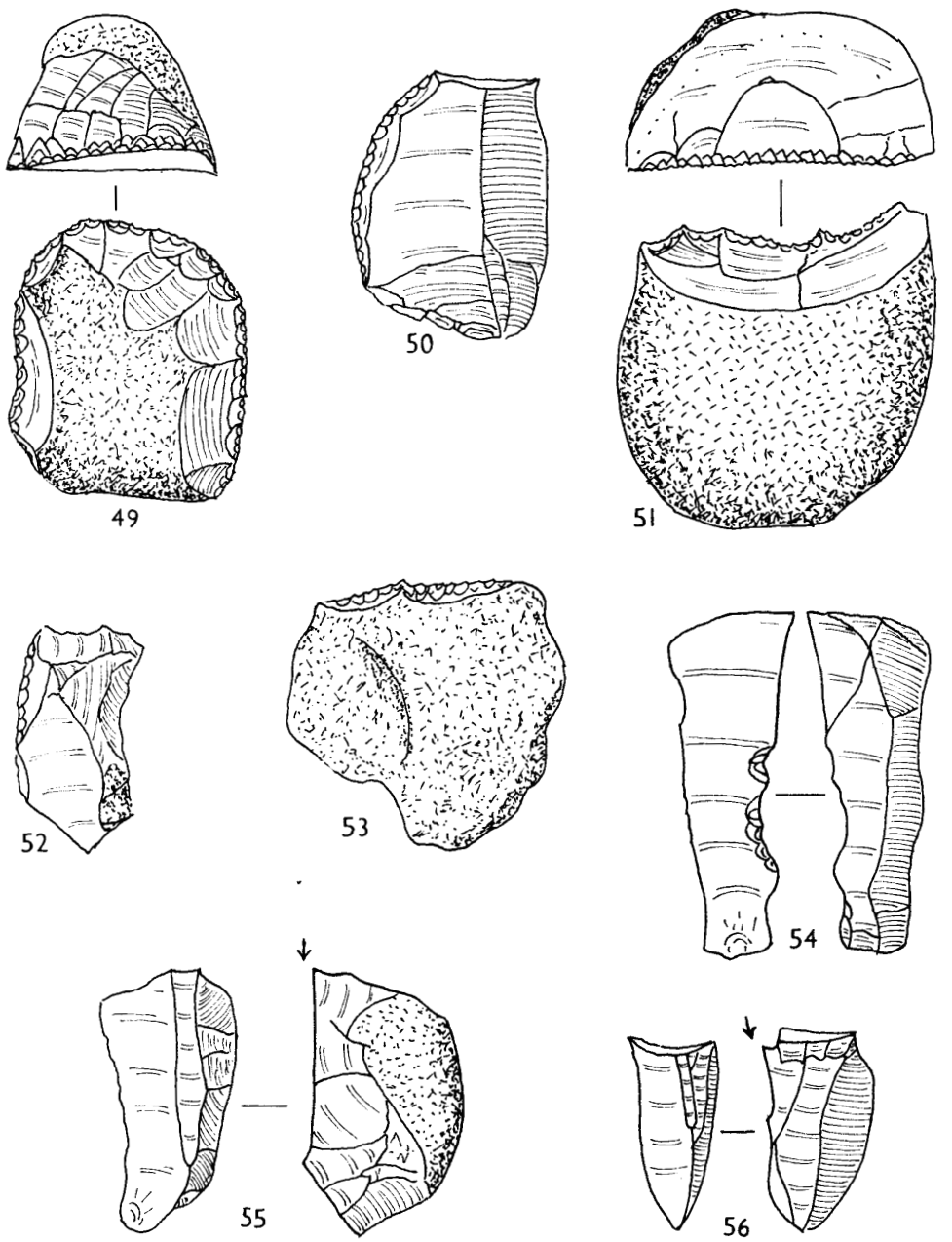


Fig. 8—Flakes with steep retouch: high sided convex scraper (49), side scrapers (50, 52), end scrapers on primary flakes (51, 53), retouched rejuvenation flake (54). Burins: on rejuvenation flakes (55, 56); all from topsoil and shown nat. size

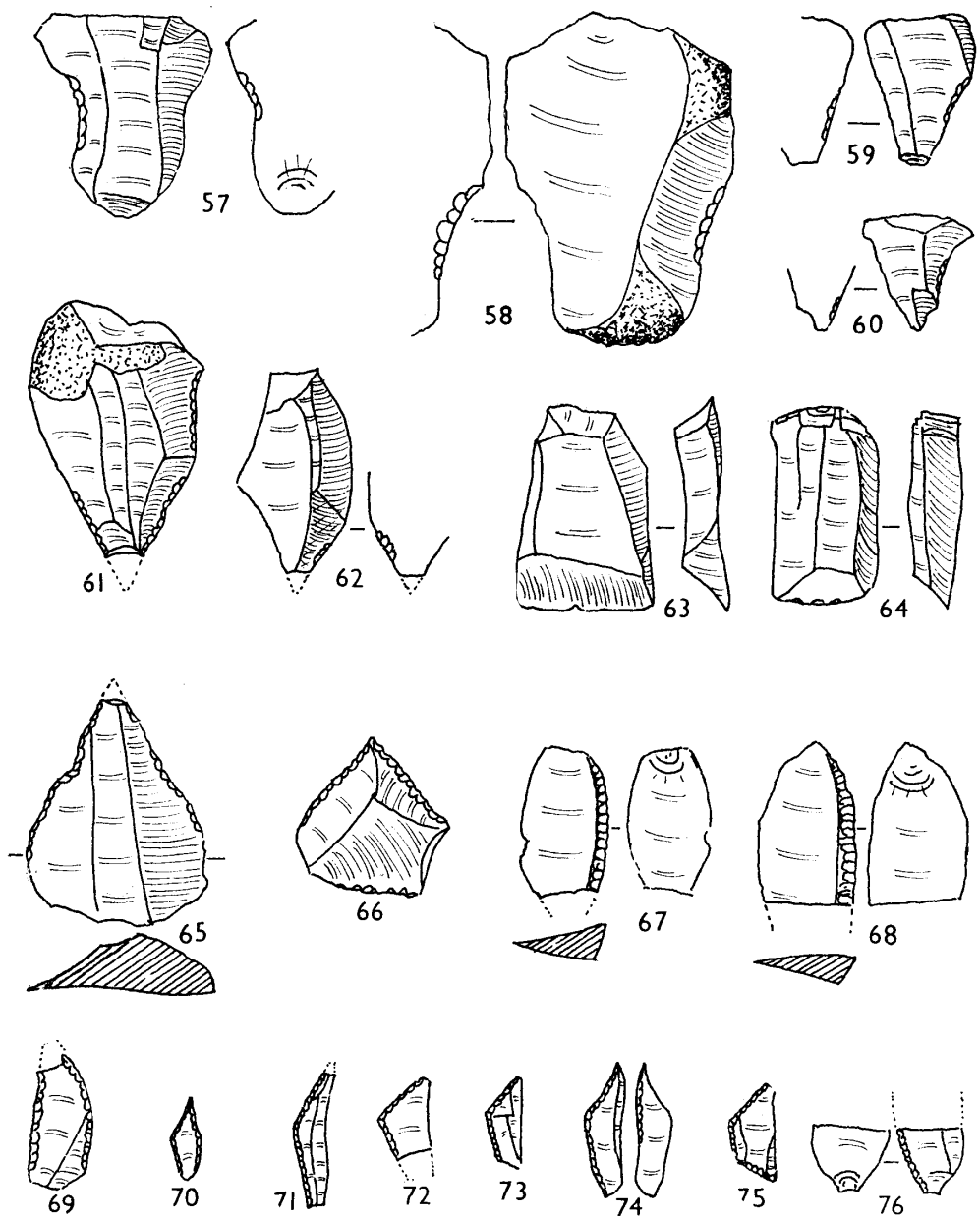


Fig. 9—Microliths and miscellaneous artifacts: Reamers (57 to 60), awls (61, 62), tranchets (63, 64), points (65, 66), blunted-back blades (67, 68), microliths (69 to 76). No. 63 from square F7, No. 70 from square H7, No. 76 from square F8, remainder topsoil (all nat. size)

Four microliths are further examples of the poor triangles (Nos. 71 to 74) which Dr Coles called "obtuse angled retouch" at Low Clone, but which this writer feels just fall into the category of Clark 4b triangles.[6] No. 71 is unpatinated, No. 73 is burned, the other two being lightly patinated. One patinated microlith is of trapeze form, blunted on three sides, and falls into Clark category 6b (No. 75). One broken fragment with the bulb of percussion is unclassifiable (No. 76), as also is a small flake with blunting applied to the striking platform.

Discussion

As Barsalloch is the only site in South-West Scotland with a radio carbon date, it is first of all necessary to consider to what extent this site is characteristic of these coastal sites and thus whether this approximate date can be extended to the whole group. Certain difficulties present themselves in that Low Clone is the only site from which a substantial proportion of the flints have been recovered from undisturbed mesolithic levels as compared with Barsalloch, where only a small proportion have come from such levels, and with the remainder of the sites which have all yielded surface collections only. When it is considered furthermore that different seasonal activities of the same community may well yield apparently different flint industries in the archæological record, and these differences are added to, or even multiplied by the objective element which must enter into these studies, any conclusions which may be drawn, if not entirely misleading, can at best be tentative only.

The site at Barsalloch (Pate's Port) differs from that at Low Clone in the absence of a scooped area, fewer scrapers, and a much smaller proportion of secondary material and chips. Occurring at Barsalloch, but not at Clone, are the two points, a tranchet and several reamers, and furthermore a larger proportion of the notched flake which was probably used as a spokeshave type of hollow scraper. Both sites are alike in their situation relative to the raised beach, the extensive use of flake and blade without the manufacture of specific tool type, a comparable microlithic element and a dependence on the local beach flint which gives rise to a characteristic patinated residue. The differences outlined above could have been due to different seasonal activities of the same group were it not for an important difference in the cores — namely the relatively large number of bi-directional cores from Barsalloch, about one-fifth, as compared with one-tenth at Low Clone. It seems to the writer that this reflects a basic difference in handling the raw material, which must imply different communities, separated presumably chronologically. The time span need not necessarily be large, perhaps a century or so could account for the differences in what are otherwise basically similar industries.

The same may be said of Barsalloch and Low Clone on the one hand

6 J. G. D. Clark, **A Microlithic Industry from the Cambridgeshire Fenland and other Industries of Sauveterian affinities from Britain,** Proc. Preh. Soc. XXI (1955) p.p. 3-20.

and the remainder of the coastal sites situated to the West of the Urr Estuary. Not only are the industries basically similar and all similarly situated in relation to the raised beach, but all rely exclusively on beach pebble flint. Post mesolithic flint types are absent, apart possibly from Kilfillan and the adjoining site at Stairhaven where neatly worked knives and round or convex scrapers occur in a milky white flint. No leaf shaped arrowheads have yet been found,[7] nor for that matter has pottery. Subject to the qualification that the sites may cover a fair time span and reflect different seasonal occupations, they nevertheless seem on the present evidence to represent all one culture. The reliance on rather poor local beach flint implies that these communities never moved very far from Luce and Wigtown Bays. This is in marked contrast to the inland mesolithic communities to be discussed below.

East of the Mote of Mark are four main coastal sites at the mouth of the River Nith, viz. Gillfoot, Maxwellfield, Powillimount and Tallowquhairn—which evince a definite contrast to the above western sites. A large proportion of non-flint lithic material appears — chert, amethyst and other coarse materials — the microlith becomes a more important factor in the tool kit — the arrow head appears,[8] yet the industry as a whole continues to be reminiscent of the coastal material lying to the west, while including features of the inland mesolithic to the north and east.

An even greater difference lies between the coastal sites of Wigtown and west Kirkcudbrightshire on the one hand and the inland mesolithic sites on the other. Not only do the latter make greater use still of the microlith but they continue to throw up here and there definite post mesolithic artifacts,[9] while the material used shows a great variety including much non local stuff. Thus at the Annandale sites, not only are local chalcedonies and agates used, but fairly massive red and blue-green cherts (from the Girvan district?), pitchstone in small quantity, a little poor flint, but much first quality flint which must have been imported from some distance. This contrast on the same sites between poor local material and good quality import seems to be a characteristic of all the inland mesolithic sites in south Scotland and one which must signify itinerant and **wide ranging** communities — wide ranging certainly in space and probably also in time.[10]

The difference in technology should however not be over stressed. Indeed now that sites in Wigtownshire have been evcavated the similarities have become more apparent and some of these are discussed elsewhere in these Trans-

7 Indeed points of any kind are rare. A miniature Bann-type point has recently been found at the southmost site at Barsalloch (Pate's Hill) referred to in **Discovery and Excavation (Scotland),** 1969, p. 51. This point 21 mm. long in patinated pink flint, has a roughly worked butt or tang.

8 A tanged but unbarbed point from Tallowquhairn.

9 Neatly worked convex scrapers (all sites), leaf-shaped arrowheads (Brocklerigg, Loch Doon), unpolished discoidal knife (Dalton Hook), blades and cores in a grey-green fine grained stone reminiscent of the later stone axes (Annandale sites). Unfortunately the extensive collections from inland sites in Dumfries and Galloway have not been published. They have been made mainly by the writer in Annandale and around the shores of Loch Doon and in the Ken-Deugh Valley by M. L. Ansell and are noted briefly in **Discovery and Excavation (Scotland).**

10 This is also the characteristic of the extensive industry from Lealt Bay, Jura. See note 13 infra.

action,[11] but the following might be mentioned. The tranchet from Barsalloch is exactly paralleled by one in chert from Brocklerigg in Annandale, while another comes from Loch Doon. The use of the notch worked on the edge of the rough flake also is a very common feature of the River Annan sites—all the Wigtownshire microliths are paralleled in the Inland Mesolithic although the latter has a greater variety. Indeed the generalisation might be made that all the coastal implements are paralleled in the Inland, but not all the Inland included in the coastal. When it is also considered that the Inland industries seem to have extended over a long period of time, and must therefore have overlapped the coastal communities at both ends chronologically, a reasonable deduction might be that the latter are an offshoot of the former.

On the other hand the Wigtownshire industries bear a close, but perhaps superficial, resemblance to the coastal ones in Northern Ireland—for example the utilized blade, the core scraper, the tranchet, the reamer are all common to Barsalloch and the industry at Glenarm 2,[12] where the flints were found on the raised beach itself and hence termed by Movius "Early Neolithic." This resemblance has led certain students to envisage a common strandlouping culture on both sides of the North Channel in late Mesolithic and Early Neolithic times which on the Scottish side received a microlithic aspect from elsewhere in Britain but which aspect failed to cross to Ireland.[13] The differences have however been pointed out by Dr Coles, and it seems to this writer that the similarities could be due to response to similar needs.

On the present evidence the closest affinity seems to the writer to be with the inland mesolithic of South Scotland and one might postulate an origin as follows: that about the end of the 5th millennium certain migratory bands from the banks of the major rivers of south Scotland made their way to the coast where, cut off by difficult terrain, made more difficult as much of the hinterland turned to bog induced by the mild and damp Atlantic weather, they lingered as rather backward and sedentary strandloupers to disappear from the archaeological record just before the sea receded from the raised beach and Neolithic immigrants entered the scene. They survived, however, on the periphery, as at Ballantrae[14] and Eskmeals[15] and possibly also at Tallowquhairn long enough for their artifacts there to be mingled with those of the newcomers on the beach itself.

The activity of the group at Barsalloch was perhaps fishing and food-gathering rather than hunting or boat building, for here the deliberately fashioned scraper which one would associate with a hunting community is

11 See article by Miss H. Mullholland on the Microlithic Industries of the Tweed Valley.
12 H. J. Movius op cit.
13 Small backed blades with the bulb of percussion certainly occur in Ireland, but the true microlith seems absent. But cf. comments in J. Mercer **Stone Tools from a Washing-Limit Deposit of the Highest Post Glacial Transgression, Lealt Bay, Jura,"** in P.S.A.S., Vol. 100, p. 1.
14 A. D. Lacaille **The Stone Industries associated with the raised beach at Ballantrae,** P.S.A.S., LXXIX, pp. 81-106.
15 J. Cherry **Early Neolithic Sites at Eskmeals,** Transactions of of the Cumb. and Westmor. Antiq. and Archaeol. Soc. LXIX, pp. 40-53.

very rare, while tools for tackling heavy timber are absent. The burin for the manufacture of animal or fish spearing equipment is also rare—but the tranchet, the reamer and in quantity the notched and utilized flake, all found at Barsalloch, and for that matter at Glenarm, would, it is suggested, be the appropriate tool kit of long shore communities manufacturing wicker or basketry fish traps. That the willows from which the locality was to receive its name in later Gaelic-speaking times[16] were perhaps derived from those providing an essential raw material for the mesolithic settlers there several millennia before, is a pleasant, if somewhat far fetched, speculation on which to close.

ACKNOWLEDGMENTS

The writer is primarily grateful to Mr H. B. Christie of Monreith Estates, Ltd., for making the site available and having it fenced off. Dr J. M. Coles assisted at the site and secured the radio carbon sample, he has also helped with encouragement and advice but the views expressed are the writer's own. Mr R. M'Haffie, of Drummore, gave several days active assistance. Thanks are also due to Mr Lionel Masters for checking over the flints and general discussion. A grant was obtained from this Society towards the cost of the excavation and radio-carbon assay. The writer desires to express his warm thanks to all those mentioned.

16 Barsalloch=Bar nan Saileach; =Headland of the Willows. Sir H. Maxwell **Place Names of Galloway.**

THE MICROLITHIC INDUSTRIES OF THE TWEED VALLEY

By HELEN MULHOLLAND, M.A.

Since the recognition of ' pygmy flints ' as human artefacts, vast numbers of Mesolithic flints have been collected from the surface of many sites in Southern Scotland and deposited in various museums and private collections. The sheer mass of material involved has deterred all but a few archæologists from undertaking a serious study of the material and in beginning such an analysis I felt that it was best to divide the material on a regional basis. Because of the obvious affinities of the material with the Mesolithic industries of Northern England and in the light of Dr Coles' work on the industries of South-West Scotland,[1] the Tweed Valley presented itself as an obvious starting point.

Due to the enthusiasm of local collectors in the Border counties, Mesolithic material has been recovered from over one hundred sites in the valleys of the River Tweed and its tributaries (Fig. 2). The majority of sites are on sloping ground close to a river, or burn, and all lie between the 150 ft. and 1000 ft. contour lines. The absence of material from higher ground must reflect the lack of agricultural activity in these areas; the absence of sites from the lower land may be accounted for by the depth of material accumulated in the main valleys since Mesolithic times or by the inference that climatic conditions during the Mesolithic period, posibly waterlogging, rendered these areas unsuitable for habitation. At the site of Springwood, Kelso, material is collected on the entire slope, including the foot, of a steep bank but not in the flat valley bottom immediately adjacent to the bank; this would suggest a considerable accumulation of material in the valley subsequent to Post-Mesolithic erosion. The long duration of the Mesolithic period would also tend to deny an explanation based on climate; it is unlikely that the waterlogging of low-ground would have been continuous during the whole of the Atlantic and Sub-Boreal periods.

Trial excavations having been made at Springwood and Kalemouth, Kelso, and at Rink Farm, Selkirk, it appeared that the deposits at all three sites were of a similar nature. In each case, it has been possible to identify centres of concentration each of which covers an area of 20 to 30 square yards; at Kalemouth there are eight such centres, at Springwood six and at Rink Farm nine. The Kalemouth site is on a continuous slope with the Kale Water at the foot; the Springwood and Rink Farm[2] sites are at the top of steep banks (both of

1 Coles, J.: New Aspects of the Mesolithic Settlement of South-West Scotland. **Trans. Dumfries & Galloway Nat. Hist. & Ant. Soc.**, 3rd Series XLI. (1962-63), 67, also see Cormack, W. F. and Coles, J.: A Mesolithic Site at Low Clone, Wigtownshire, op. cit. XLV (1968), 44.

2 Mason, W. D.; Prehistoric Man at Tweed Bridge, Selkirk, **P.S.A.S.**, LXV (1930-31), 414.

which yield Mesolithic material, presumably the result of erosion) overlooking the flat valley bottoms of the Rivers Teviot and Tweed. At Rink Farm, two of the concentrations are at the foot of the bank on flat ground only three feet above the present river level; this part of the site together with the Riverside

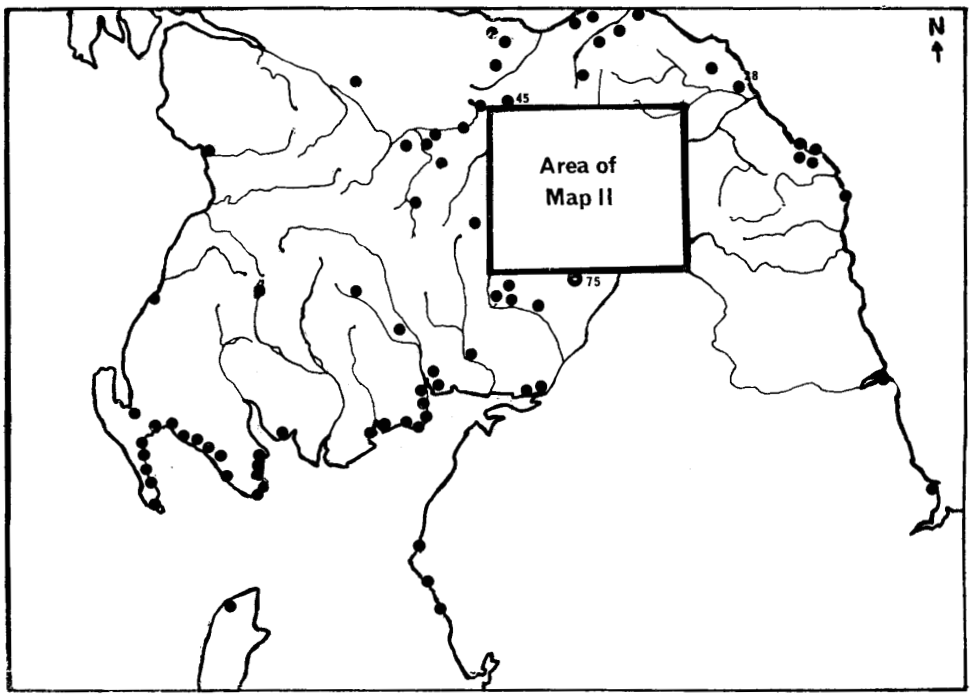


Fig 1—Mesolithic Sites in Southern Scotland and Northern England.

Field of Dryburgh Mains[3] may provide valuable dating evidence, should facilities for excavation become available, when Mr D. Rhind, Department of Geography, Edinburgh University, finishes his work on the River Terraces of the Tweed Valley.

The section of the Rink Farm excavations is typical of the sites so far investigated; a layer of large stones occurs at a depth of between 10 inches and 3 feet, being nearer to the surface on the highest part of slopes and deepest at the bottom of the Kalemouth slope and on the edges of the bankings at Springwood and Rink Farm. The material is found in the soil above this layer and among the stones. Below the stones, flints occur only where the presence of mole runs or other disturbance explains their presence. In 25 square yards

3 Corrie, J. M.: Notes on Some Stone and Flint Implements found near Dryburgh in the Parish of Mertoun, Berwickshire. **P.S.A.S.**, L (1916-17), 307-313, and Callander, J. A.: A Collection of Tardenoisian Implements from Berwickshire. **P.S.A.S.**, LXI (1926-27), 318-327.

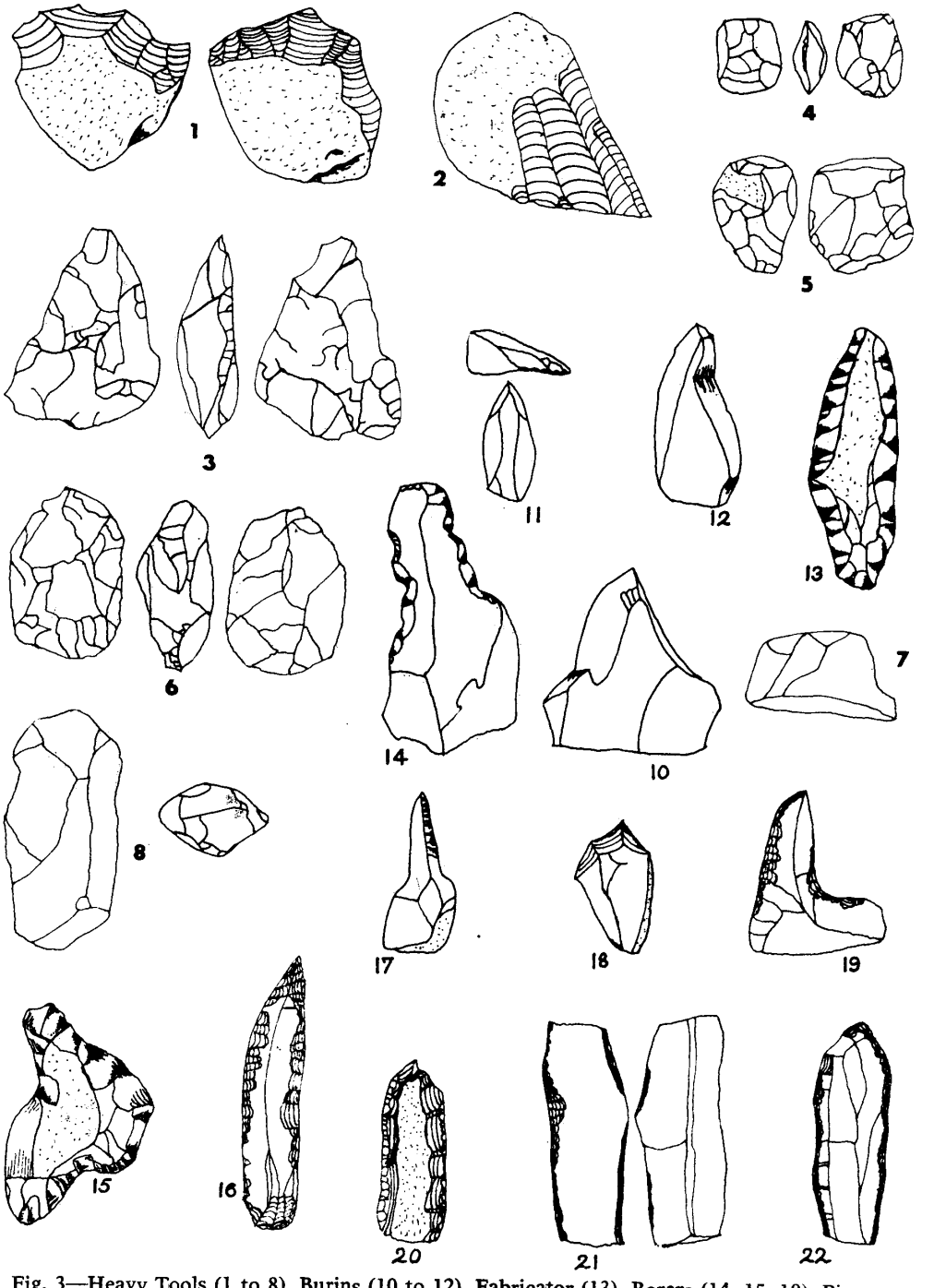


Fig. 3—Heavy Tools (1 to 8), Burins (10 to 12), Fabricator (13), Borers (14, 15, 19), Piercers (16 to 18), Knives (20 to 22) from Airhouse Farm (15), Bemersyde (10), Clackmae (6), Craigsford Mains (13, 14, 16, 17, 19), Dryburgh (3 to 5, 11, 22), Hoselaw (21), Kalemouth (7, 12, 18, 20), Springwood (1, 2), and Whitrighill (8). Scale ¾. 3 to 6 after Lacaille, 1940,6.

KEY TO FIGURE 2

No.	Site	N.G.R.	Ht. in ft. O.D.
1.	Airhouse Farm NT[1]	480540	900
2.	Ashiestiel	428352	550
3.	Bemersyde	605336	400
4.	Berrybush	275195	850
5.	Birkenside	570423	500
6.	Blakelaw	768310	450
7.	Bowden	537317	800
8.	Bowerhouse	496505	850
9.	Brockhouse	465445	700
10.	Brotherston	610370	550
11.	Cammerlaws	655502	650
12.	Clackmae[2]	563395	450
13.	Clarilaw	555274	500
14.	Cortleferry	440495	700
15.	Craigsfordmains[3]	569382	360
16.	Crumhaugh Hill	482125	650
17.	Darnhall	240482	450
18.	Denholm	568182	400
19.	Dryburgh Mains[2, 4]	585325	250
20.	Earlston	577383	300
21.	Eastfield	725469	600
22.	East Gordon	666440	650
23.	East Moriston	610421	500
24.	Eddleston	245471	700
25.	Eldinhope	295240	800
26.	Fairnington House[2]	650280	400
27.	The Fens[2]	606314	250
28.	Foulden Moorpark[5, 6]	922575	400
29.	Glendearg	519379	550
30.	Gordon	660430	500
31.	Graden	796305	500
32.	Greenhead[7]	499287	850
33.	Greenhill[7]	475252	900
34.	Greenlaw	710457	450
35.	Greenlawdean	705467	500
36.	Grizzlefield	583400	550
37.	Hallyburton	672486	650
38.	Harrietsfield	627275	400
39.	Hoselaw	800325	450
40.	Huntlywood	617435	600
41.	Huntshaw	566396	600
42.	Kalemouth	710275	200
43.	Kedslie	554406	550
44.	Kersheugh	657170	400
45.	Kingside[5]	250553	800
46.	Kirkstead	265245	850
47.	Legerwood	590431	560
48.	Lempitlaw	793326	500
49.	Lindean[8]	491312	500
50.	Lochside	802285	300
51.	Lochton	775395	200
52.	Lurdenlaw	762320	450
53.	Maxton	625297	300
54.	Mellerstain	653390	450
55.	Mosshouses	539401	800
56.	Nether Tofts	588142	700
57.	Newton	675308	250
58.	Newstead	552330	300
59.	Nisbet	675258	200
60.	Overhowden	497522	700
61.	Oxnam	701182	350
62.	Park	586363	500
63.	Philiphaugh	437280	600
64.	Purveshaugh	600398	450
65.	Rink Farm[8, 9]	485322	350
66.	Rumbleton	690457	600
67.	St. Mary's Loch	270238	800
68.	Sandy Knowe	640346	600
69.	Sandy Stones	593263	300
70.	Shawburn	535264	500
71.	Shiplaw	235495	500
72.	Smedheugh[2]	496277	900
73.	Sorrowless Field	565370	650
74.	South Common Farm[7]	489275	950
75.	Southfield[5]	475093	600
76.	Springwood	717334	150
77.	Sprouston	755345	200
78.	Stickhill	710397	450
79.	Trabroun	507494	750
80.	Trows	685320	200
81.	Wallaceneuk	724328	250
82.	Wanton Walls	550480	750
83.	Westloch	250512	900
84.	West Moriston	600405	500
85.	Westruther[2]	625505	700
86.	Whitchesters	465105	600
87.	Whitefield	602376	550
88.	Whitehill	576376	550
89.	Whitlaw[7]	510298	850
90.	Whitrighill[2]	625345	400
91.	Whitslaid	562449	600
92.	Woodheads	613253	350
93.	Yarlside	617387	450
94.	Yarrow	353278	750

1 Callander, 1928.
2 Callander, 1927.
3 Callander, 1927, 327 and note.
4 Corrie, 1917.
5 On Fig. 1.
6 Kinghorn, 1924.
7 Mason, 1927.
8 Mason, 1931.
9 Elliot, 1966.

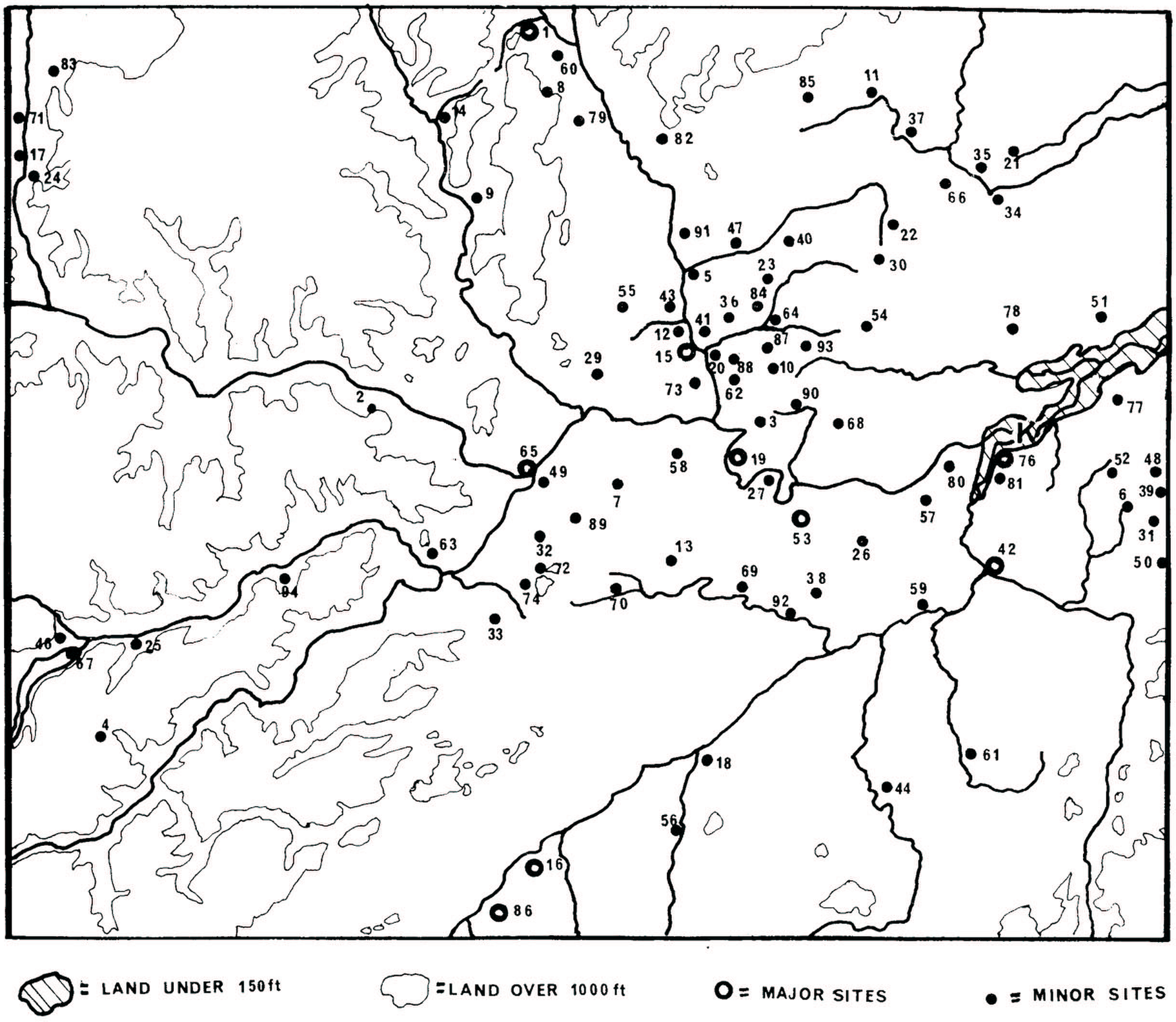


Fig. 2—The Tweed Valley. Scale approx. 5 miles to the inch. K=Kelso. For key to site numbers see facing page.

excavated at Rink Farm only 6 flints were found below the stony layer, 153 pieces were among the stones and over 800 in the upper soil. It seems likely that the Mesolithic land surface was just above the stony layer and has been destroyed by erosion or agricultural activity. At a depth of 2 to 3 feet, the red-brown sandy soil gives place to a fine grained orange soil which is also empty of flints; there is therefore no dating evidence except that the material is Post-Glacial. In the absence of peat sites no local dating evidence can be presented and relative dates only can be provided by studying the relationships of the industries.

The majority of the material used is locally occurring pebble flint and

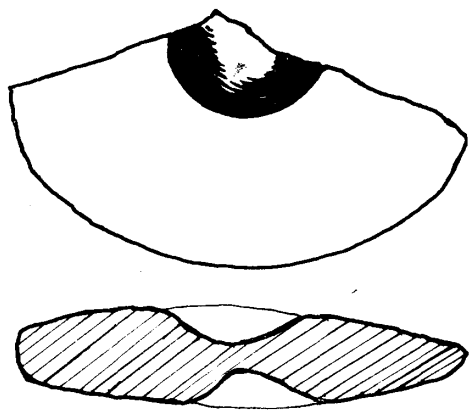


Fig 4—Hammerstone from Springwood. Scale ½.

chert deriving from glacial deposits. There is considerable variation in the amount of flint used, larger percentages being used in the sites in and around Lauderdale none at all in the sites around St Mary's Loch. In sites in the Southern part of the region chert, especially the grey-green variety, predominates and coarser rocks such as quartzite are used—these coarse materials are absent from the Lauderdale sites. A highly translucent chocolate brown flint which forms 22% of the Mesolithic assemblage at Airhouse Farm[4] is not found locally in pebble form and may prove to have been imported from Northern England; only 3% of the assemblages from Kalemouth, Rink Farm and Dryburgh Mains are made of this material but at Crumhaugh Hill, Selkirk, 10% of the material is of this type. The latter site, having 69% flint falls between the Lauderdale sites and the Southern group although geographically it is closer to Rink Farm. If the high flint percentage is taken as an indication of some sort of trade contact from which the peripheral sites were deriving only slight benefit, a route can be traced through Lauderdale to Earlston to Crumhaugh Hill and via three

4 Callander, J.: A Collection of Stone and Flint Implements from Airhouse, Parish of Channelkirk, Berwickshire. P.S.A.S., LXII (1927-28), 166-180.

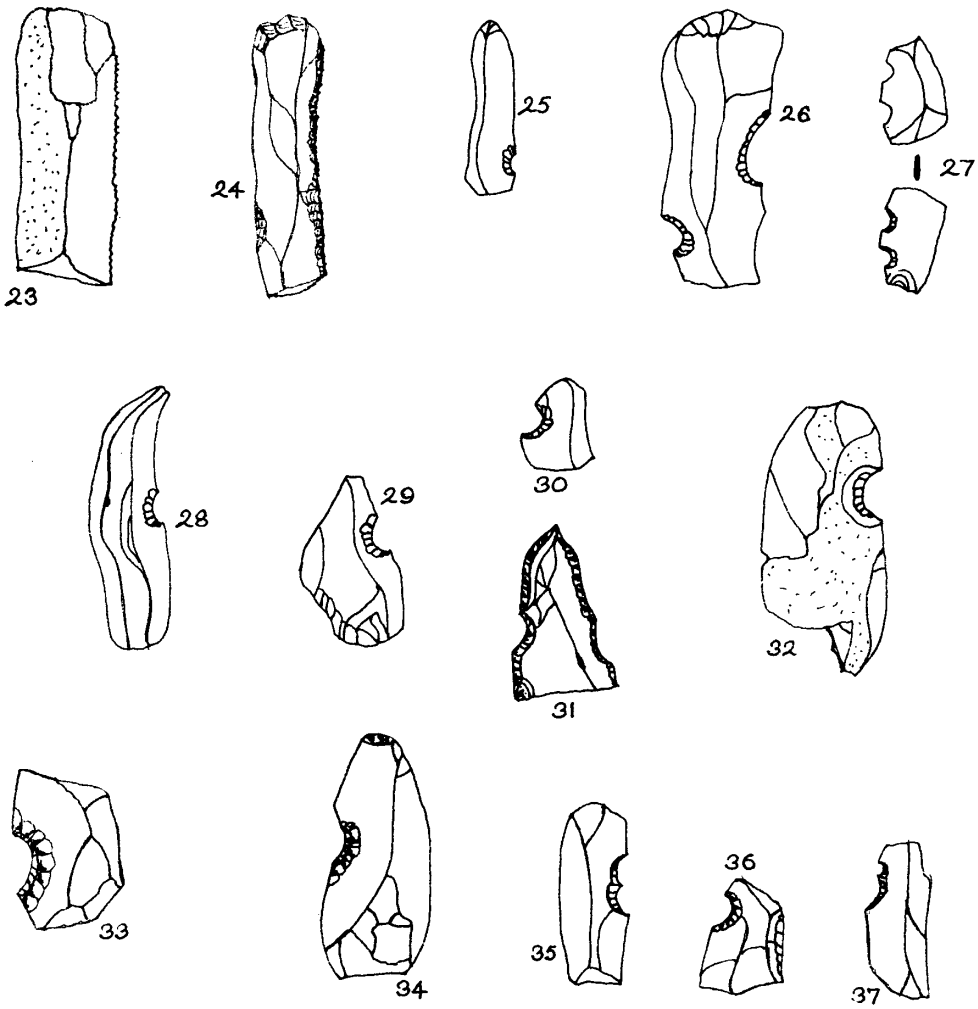


Fig. 5—Saws (23, 24), Notched Tools (25 to 37) from Bemersyde (30), Craigsford Mains (25), Dryburgh (26 to 29, 33 to 37), East Gordon (23, 24), Hoselaw (31) and Whitrighill (32). All nat. size.

sites south of Hawick to Castle O'er Forest where a large scraper of translucent brown flint, now in Dumfries Museum, indicates the continuation of the route to the Eskdale sites and the Solway Coast.

The presence of Arran pitchstone in the Tweed Valley industries would also suggest contact with the South-West and though the number of pieces involved is small the fact that 50% of them come from Crumhaugh, the site nearest to the South-West, is not without significance. This material is also

present at Eskdalemuir and, in large quantities, on Luce Sands. Pitchstone from Dunsyre in Lanark and Ballantrae in Ayrshire may indicate a more northerly East-West route possibly passing through Loch Doone from which Mesolithic material has also been obtained.[5] In view of the time involved these routes must be regarded as carrying both primary influences and reflux movements and only analysis of material from both areas will establish relative chronologies and direction of spread.

Secondary points to be noted in regard to materials are the reworking of patinated flint tools, an indication of the time span of the industries, and the influence of material upon tool sizes, larger average sizes being obtained from sites with higher percentages of flint. There is also a higher percentage of waste in industries relying on local pebble material than in those using flint, especially the imported variety;[6] both of these features may be related to the superior fracture of the flint.

The presence of Neolithic material in the assemblages occasioned some difficulties in classification particularly of scrapers as no single factor of size, shape or material could be used to distinguish between Mesolithic and Neolithic scrapers. The amount of Neolithic material, varying between over 50% at Airhouse Farm and Crumhaugh and 35% at Craigsfordmains, Earlston,[7] to 15 pieces at Dryburgh Mains, 3 pieces at Kalemouth, and 2 pieces each at Rink Farm and Springwood, may again represent a geographical rather than a chronological distinction.

The waste material of the industries includes simple conical and cylindrical cores, core-burins, chisel-ended cores and cores worked across the original platform. Thirty-five cores were retouched for use as scrapers and many have been utilised in this way without retouch. A number of large flakes and nodules of flint and chert have also been used as cores. Basal disc core-trimmings and triangular section trimmings, usually struck off at an oblique angle, occur; 7 of the latter type have been retouched to form piercers. Fourteen pieces reminiscent of the Larne pick[8] are known and the retouch form (14), is the result of development from the simple core-trimming paralleled in the Late Larnian.

Core-tools, apart from scrapers, are rare; only two can be added to those described by Lacaille,[9] and both of these come from Springwood. The larger, in the possession of Mr Colin Martin, of Kelso, has blade scars on one face, in one direction adapting the natural shape to an adze edge; the second, in the

5 For the presence of Pitchstone in Neolithic contexts and a discussion of trade in tool making materials see Atkinson, R. J. C., in Piggott ed. **The Prehistoric Peoples of Scotland** (1962), 30.
6 Atkinson, op. cit., 30; 'The part finished tools would then be distributed in that form.'
7 Callander, J., op. cit., 1927, 327 and note.
8 Lacaille, A. D.: **The Stone Age in Scotland** (1954), fig. 49, 24.
9 Lacaille, A. D.: Some Scottish Core-Tools and Ground Flake Implements, **P.S.A.S.**, LXXIV, (1939-40), 6-13.

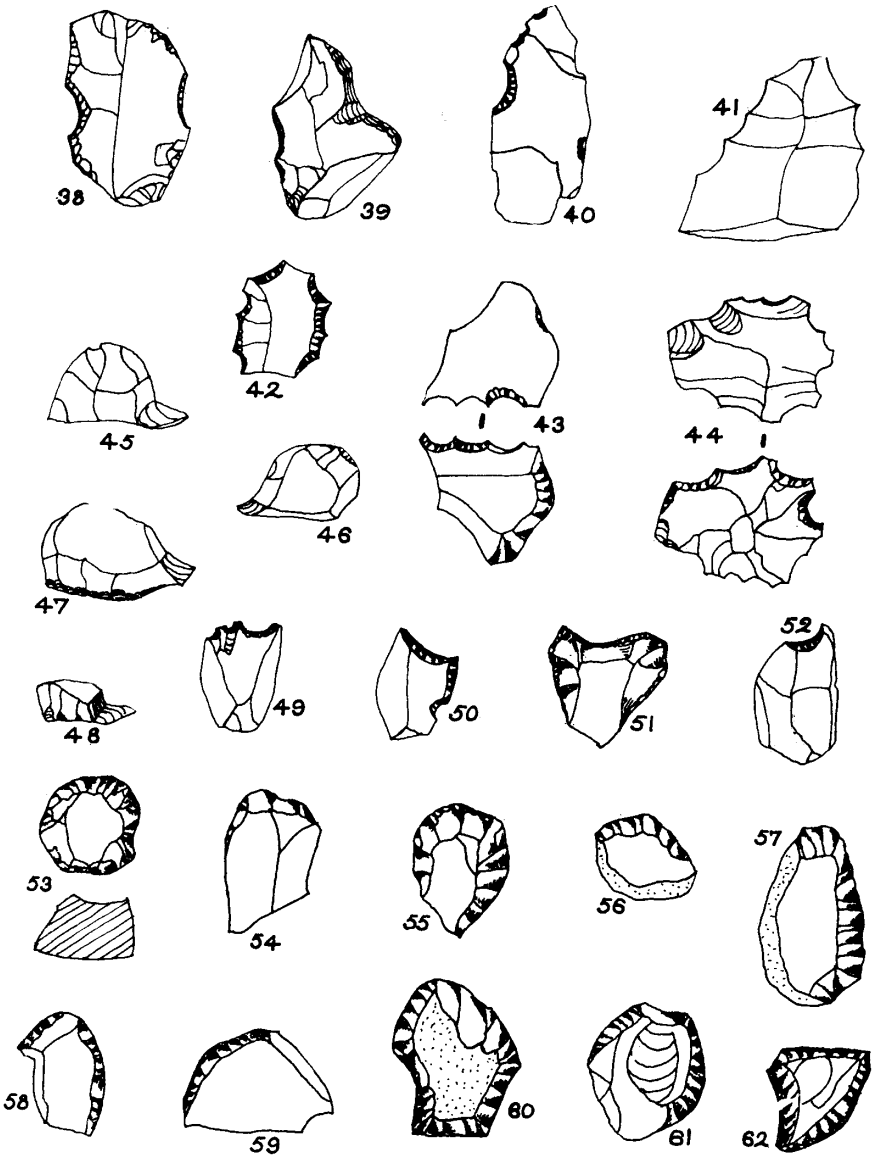


Fig. 6—Notched Tools (continued), Hollow Scrapers (39, 50, 51), Adzes (45 to 47), Scrapers (53 to 62) from Bemersyde (30), Craigsford Mains (39), Dryburgh (40, 49, 50, 57, 60 to 62), Eskdalemuir (54), Hoselaw (38, 53), Kalemouth (41, 42, 45 to 48, 51), Maxton (55, 58, 59), Newton (56), Rink Farm (52) and Springwood (43, 44). Scale $\frac{2}{3}$.

possession of Mr F. Lillie, has flakes removed from two faces to form a chopper edge (1 and 2).

Because of the nature of the material, only three sites have yielded a greater number of blades than flakes and there is a tendency for blades to have a smaller average size than flakes from the same site. Utilisation of unretouched blades and flakes is common and the percentage of the tool assemblage made up of these types varies between 15 and 48% with an average of 25%.

The Tweed Valley pick in its retouched form approaches very closely to the class of borers (14, 15, 19). Tools retouched specifically for this purpose are rare but many unretouched forms including two on end scrapers (80, 81) have marks of utilisation as borers on their narrow ends. A form which appears to be intermediate between this class and the burin is the flake, or occasionally the large blade, which has had up to half its width removed by a single blow along the greater part of its length leaving a short broad butt with a long projecting nose. The only example which bears decided use-marks appears to have been used as a borer. The two main types of piercer are the point on a broad base (17, 18), and the narrow parallel sided form (16); the illustrated example of the latter type incorporates and end-scraper. Intermediate forms also exist and are distinguished from points and weapon-heads by their greater thickness and by having been designed for use in the hand.

Apart from the nosed flakes included in the class of borers, burins are rare. The three figured by Lacaille[10] and those illustrated here (10-12) are the only examples known apart from five from Kalemouth which include a double burin and an angle-burin on a pebble. Denticulate tools occur at Airhouse Farm, Craigsfordmains and Kalemouth and on Eskdalemuir; the teeth are formed by minute retouch and the finished tool is not strong (23, 24). This factor together with the rarity of heavy tools and large scrapers is the main reason for assuming that wood-working was restricted to small articles. The sharp edges of many flakes and blades bear evidence of use but the category of 'Knives' has been restricted to retouched forms (20-22). The distribution of this type seems to be related to the Lauderdale route. The retouch used in sharpening the cutting edges resembles that used for notching, the removal of small, fine flakes from one or both faces at a angle to the edge.

Two main categories of notched tools may be distinguished: (a) those with a hafting notch or notches; (b) those with a notch designed for use—spoke-shaves (32, 33, 38, 44, 49, 52). A third category is the blade notched for the production of microburins (30, 35, 36) and the hollow scraper represents a less concave variant of Type b (50, 51).

10 Lacaille, A. D.: op. cit., 1954; fig. 60; 18-20.

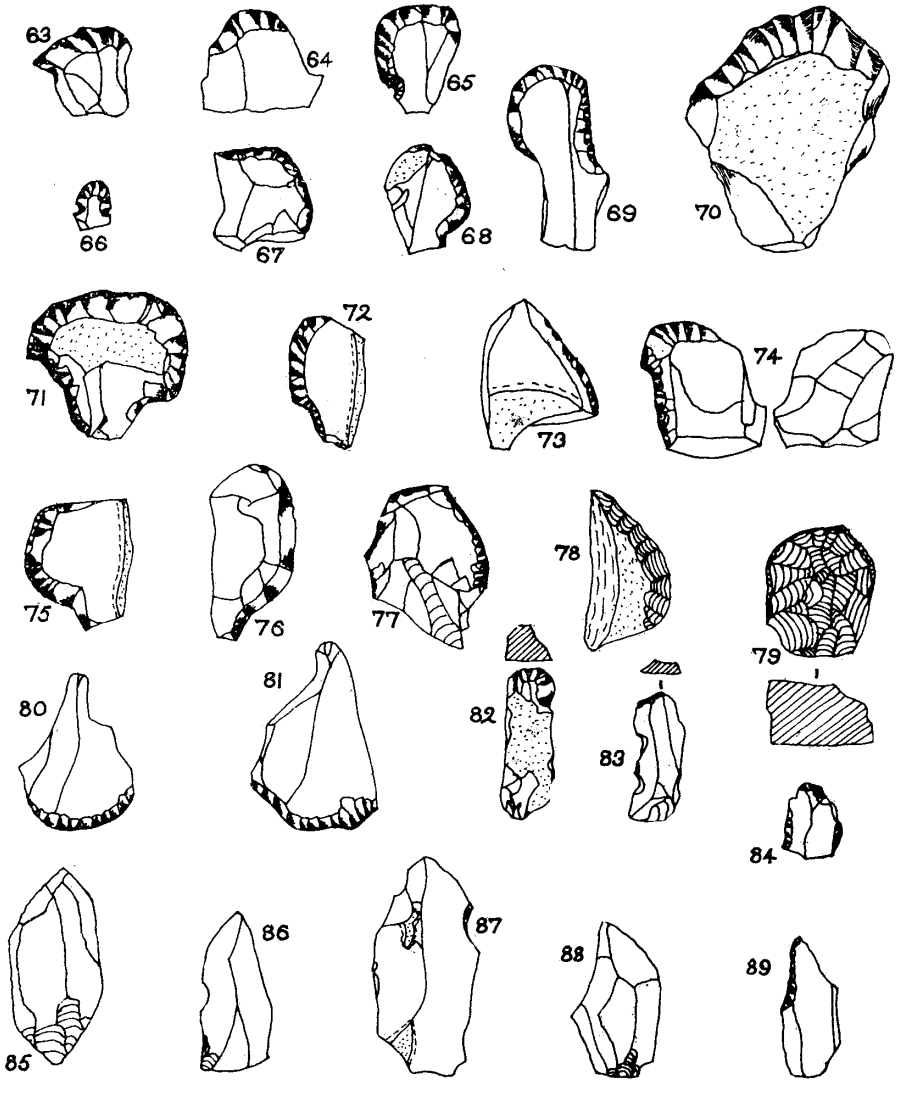


Fig. 7—Scrapers (63 to 84) and Weapon Heads (85 to 89), from Ashiestiel (68), Bemersyde (64, 65), Birkenside (69), Craigsford Mains (71, 83, 88), Dryburgh (76, 78, 82, 84, 85 to 87, 89), Earlston (77), Eskdalemuir (70), Huntlywood (79), Kalemouth (66, 72 to 75), Maxton (63), Rink Farm (67), and Whitchesters (80, 81). 82 and 83 after Lacaille, 1954 and Scale approx. $\frac{1}{3}$, remainder Scale $\frac{2}{3}$.

In general, Mesolithic scrapers in the Tweed Valley are smaller and thicker than their Neolithic counterparts but larger forms which are thinner in proportion to their size do occur and no criterion of size or proportion can be used to distinguish between doubtful forms. Recent findings in Yorkshire[11] confirm the variation in size, shape and refinement of Mesolithic scrapers and the possibility of an extremely high percentage of scrapers occurring in a Mesolithic assemblage; it is therefore likely that where there is a hidden Neolithic element it is very small. In addition to hollow scrapers, the following basic types may be recognised: A Disc scrapers (53, 55, 61), B Core scrapers, C End scrapers (54, 64, 66, 70, 82-84), D Side scrapers (56, 57, 78). The class of End scrapers may be divided into convex (84%), Transverse (4%), Oblique (3%) and Concave (9%). There are 2 double-end scrapers and 77 scrapers on which one or both sides are worked as scrapers in addition to the end. Twenty-one end scrapers have cortex tops and 31 are keeled; 12 side scrapers have cortex tops and 2 have cortex as a backing on the unworked side. Disc scrapers are extremely thick, the ratio of thickness to diameter varying between 1 : 1.2 in the smallest and 1 : 5 in the largest; although no direct mathematical relationship exists, a tendency for this ratio to increase with increased size may be observed, large scrapers of all types, except cores, are thinner in proportion to their size than smaller ones. Several disc scrapers have curved cortex on the upper surface but the majority have flat tops; two examples (61, 62), have hollow tops designed to provide a better grip. This may also be the reason for the chisel-ended core type.

Various methods of adapting scrapers for hafting or holding are illustrated by (61, 69, 71-76, 83). The most common methods are the formation of a tang on side scrapers (65, 67-69, 72, 73, 75, 76), and notching the long edge of end scrapers (66, 83). The adze-like objects from Kalemouth (45-48), may be considered in this connection; having been designed for holding between the thumb and finger, the working edge, formed by one or more transverse blows across a protusion from a core or scraper which forms the grip of the tool, is finer and sharper than those of normal scraper types.

Angle-backed blades, distinguished from scalene triangles by their larger size which has usually resulted in their having only one distinctly pointed end, are present and the base of the largest example (215), has hafting notches at the tip and base of the sharp edge which together with the shaping of the base suggest that the tool was tied into the haft with the cutting edge and point protruding.

The four spear-heads (90-93), are the only representatives of what may have been an important class of artefacts. The largest has one edge and part

11 Davies, J.: A Mesolithic Site on Blubberhouses Moor, Wharfedale: **Yorks. Arch. J.**, XLI (1963), 65.

of the other shaped by microlithic retouch and the base is shaped for hafting; it is of the translucent chocolate flint which may have been imported. The smaller leaf-shaped example, of a local dark grey pebble flint, is simpler only the base having been retouched for hafting. The two narrow parallel sided forms are shaped by microlithic retouch, the larger example also being retouched on the bulbar face of the base; the smaller has a small amount of cortex adhering to

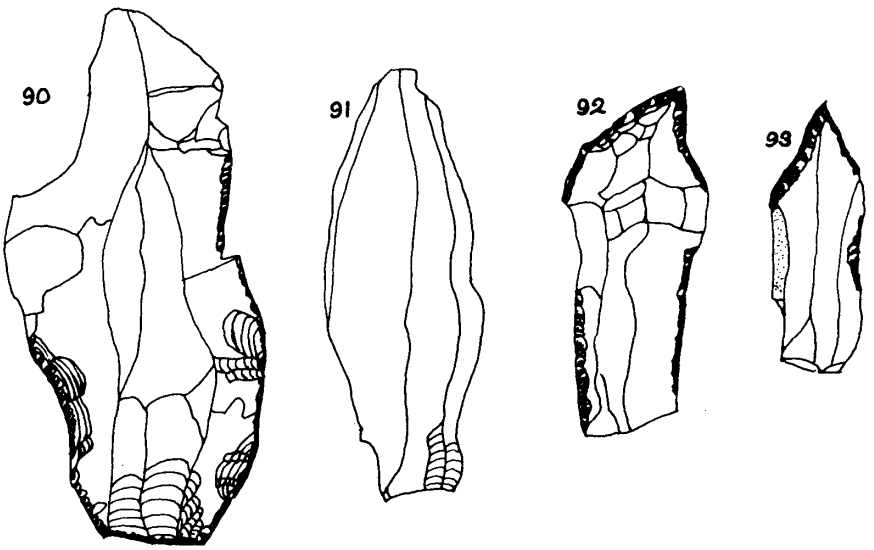


Fig. 8—Weapon Heads (continued) from Birkenside (90), Craigsford Mains (91 to 93). Scale ½.

one side and both are of local pebble material. The smaller leaf-shaped points (85-89) also appear to have been designed for use was weapon-heads. Copies of Neolithic triangular, leaf-shaped and Barbed and tanged arrowheads in microlithic technique occur at Airhouse Farm, Craigsfordmains, Dryburgh Mains and Kalemouth (94-98, 90-102 possibly); this would indicate influence from Secondary Neolithic and Beaker cultures. Surface retouch is rare and is almost entirely confined to copies of leaf-shaped arrow-heads; it is possible that some of the microlithic sub-triangular and sub-oval points should also be included in this category. Four points (103-106) have been made by microburin technique, the microburin façet remaining on the finished form and the notch retouch being extended on the opposite edge to form a sharp point. The bulb which is pronounced has been chipped away on two examples, presumably to facilitate hafting. Fabricators are of the normal cylindrical type found in Mesolithic contexts varying from long pebbles with one or both ends chipped to the example from Craigsfordmains (13) which has been worked all over the

edges leaving a cortex top. Maceheads with hour-glass perforation occur at 16 sites; all but one[12] are circular, made on symmetrical pebbles with central perforation; average dimensions of complete examples are 3.15 by 0.75 inches. A stratified find from Southampton Docks and the distribution of the type in Southern England point to an early dating for the type. The cupped pebble from Dryburgh Mains represents a separate class designed for holding in the hand and is not a partially perforated macehead of the type recently found from Springwood. Rough pebbles with opposed hollows are also known from Rink Farm. Flat pebbles chipped round part of the circumference from Dryburgh may also be regarded as Mesolithic hammerstones or pounders while large number of pebbles with opposed lateral notches from Dryburgh and Rink are presumed to be sinkers; sizes range from 2.2 by 1.3 to 7.7 by 3.0 inches. Anvil stones with pitted areas on one or both faces also occur at Dryburgh and Airhouse Farm. Both hammer and anvil stones are normally made from softer rocks but chert, flint, quartzite and grey-wake are also used.

The microlithic element of the industries consists of those tools with typical edge chipping shaping and blunting one or more edges and from which the bulb of percussion has in the majority of cases been removed. If a criterion of size must be admitted, that of Bohmers[13] by maximum thickness of 4 mm., 0.15 inches, should be preferred to that of Barrière[14] by maximum length of 3 cms., since tools of up to 2 inches, 5 cms., occur in classes of tool which in the majority of examples and in every respect of shape and technique are true microliths. It is possible that 2 inches may prove to be the maximum length of microliths in this area and the vast majority are in fact under 1 inch in length. Both geometric and non-geometric forms exist and the sole distinction in technique, material and size between the two classes is that smaller examples of geometric forms exist. Microliths have been found at 15 sites, numbers ranging from a single example at three sites to 227 at Dryburgh Mains. In all 505 microliths have been collected, and deposited in Museums; statistics are based on these examples but observations take into account the much larger body of material in the hands of private collectors. Little variation occurs from site to site except at Dryburgh where many small forms are present and Fairnington House where very large tools are made in microlithic technique. The triangle and obliquely truncated tools make up almost 50% of all microliths and the number of trapezes and crescents from sites other than Dryburgh is extremely small.

Backed microliths include those with one edge backed and one knife edge, rodlike forms with both edges backed and points (107-121, 131-134, 136-142). One backed point has its base shaped by edge chipping (138), as do the small

12 Lacaille, A. D., op. cit., 1954; fig. 61, 1.
13 Bohmers, A.: Statistics and Graphs in the Study of Flint Assemblages. **Palæohistoria**, V (1956), 27.
14 Barrière, C..: **Les Civilisations Tardenoisiennes en Europe Occidentale**, 1954, 41.

oblique points (143, 144). Several points have long shallow blade scars on all or part of the surface (129, 135, 156, 157) and (137, 139) have been worked at the base to facilitate hafting; it is assumed that the notches on knife edges, (108, 128) and the basal working (113, 115, 130) serve a similar purpose.

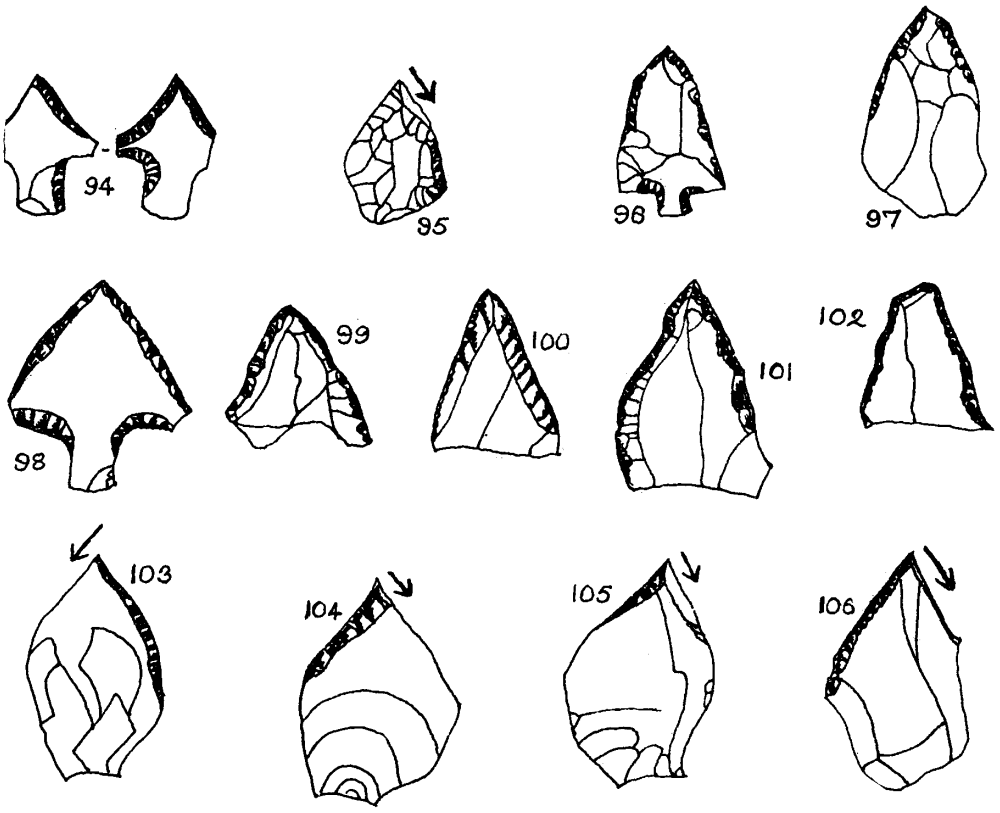


Fig 9—Weapon Heads (continued) from Birkenside (96, 97), Cammerlaws (104), Craigsford Mains (94, 98), Dryburgh (105, 106), Earlston (95), Hoselaw (103), and Kalemouth (99 to 102). All nat. size.

Eight of the 121 backed tools exceed the maximum microlithic thickness (119, 121), on these thicker forms the backing provides a grip.

Of 39 crescents known, 10 have both arc and chord blunted (123), the remainder are of the arc blunted variety (122, 124); crescentic forms with a greater degree of arc have been related to the class of backed microliths and forms approaching chord blunted crescents to the class of backed points. The class of triangles is dominated by the backed scalene form (176), the 19 backed isosceles triangles are much larger (170, 207-210) and are found only at Dryburgh, Rink, Kalemouth and in Tweeddale. The very marked preponderance

of triangles over other geometric forms suggests that the contact with the continental 'Tardenoisian' sequence must be dated to the 'Sauveterrain' or Tardenoisian I stage. Only four true trapezes are known; these come from Dryburgh and Rink Farm but trapeze shaped blade sections with blunting on 1, 3, or 4 sides are numerous. Both short and long trapezes and shapes similar to Clarke's type A, B, C and D[15] are represented; like the isosceles triangles, trapezes tend to be larger than other microliths.

Points range from 'Sauveterrain' needle points including three double points (125-127), to backed points, points with opposed retouch at the tip (146-149, 153), and broader sub-triangular and sub-oval forms, some of them with surface flaking. Blades with the truncation blunted by microlithic edge-chipping include transverse, concave and oblique forms; the last category includes pointed (192-201), and unpointed forms (205-206).

The small number of microburins from the area may be due to the belief of some local collectors that as waste pieces microburins have no value. Indirect evidence for the use of microburin technique is seen in the notched blades (30). Thick notched flakes may be interpreted in this way and related to the points (103-106).

Table I indicates some degree of internal development. A change from small narrow blades to larger, broader forms is a gradual one but a major change occurs between the Dryburgh and Kalemouth assemblages; the percentage of blades remaining constant in the 'early' or 'peripheral' sites shows an abrupt decrease in the Crumhaugh assemblage. This feature is reflected in the high percentage of cylinder and conical cores at Rink Farm; the Crumhaugh assemblage again provides a marked contrast. Percentage of unspecialised tools rises from 25% at Rink Farm to 46% at Airhouse but varies at intermediate sites, Scrapers too show a development particularly in three types; end-scrapers which form 50% of the total at Rink are superseded by disc-scrapers as the principal type at Kalemouth, Crumhaugh and Craigsfordmains; core scrapers are present at all sites except Airhouse and concave scrapers at all sites except Rink. The size of scrapers as of other basic tool types increases from the Dryburgh-Rink-Kalemouth to the Airhouse-Craigsfordmains groups but in this respect Crumhaugh resembles the Southern sites; the absence of scrapers under 0.5 inches from Rink Farm may be related to the small number of disc scrapers from that site. The saw appears to be related to the Lauderdale group. The microlithic element while retaining a basic uniformity develops in certain features. The Rink assemblage contains the simple obliquely truncated point retouched only on the truncation which is absent from Crumhaugh and Lauderdale. Backed oblique points are present throughout as are trapezoids and scalene triangles; the crescent and isosceles triangle are absent

15 Clark, J. D. G.: Blade and Trapeze Industries of the European Stone Age: **P.P.S.**, XXIV (1958), 24.

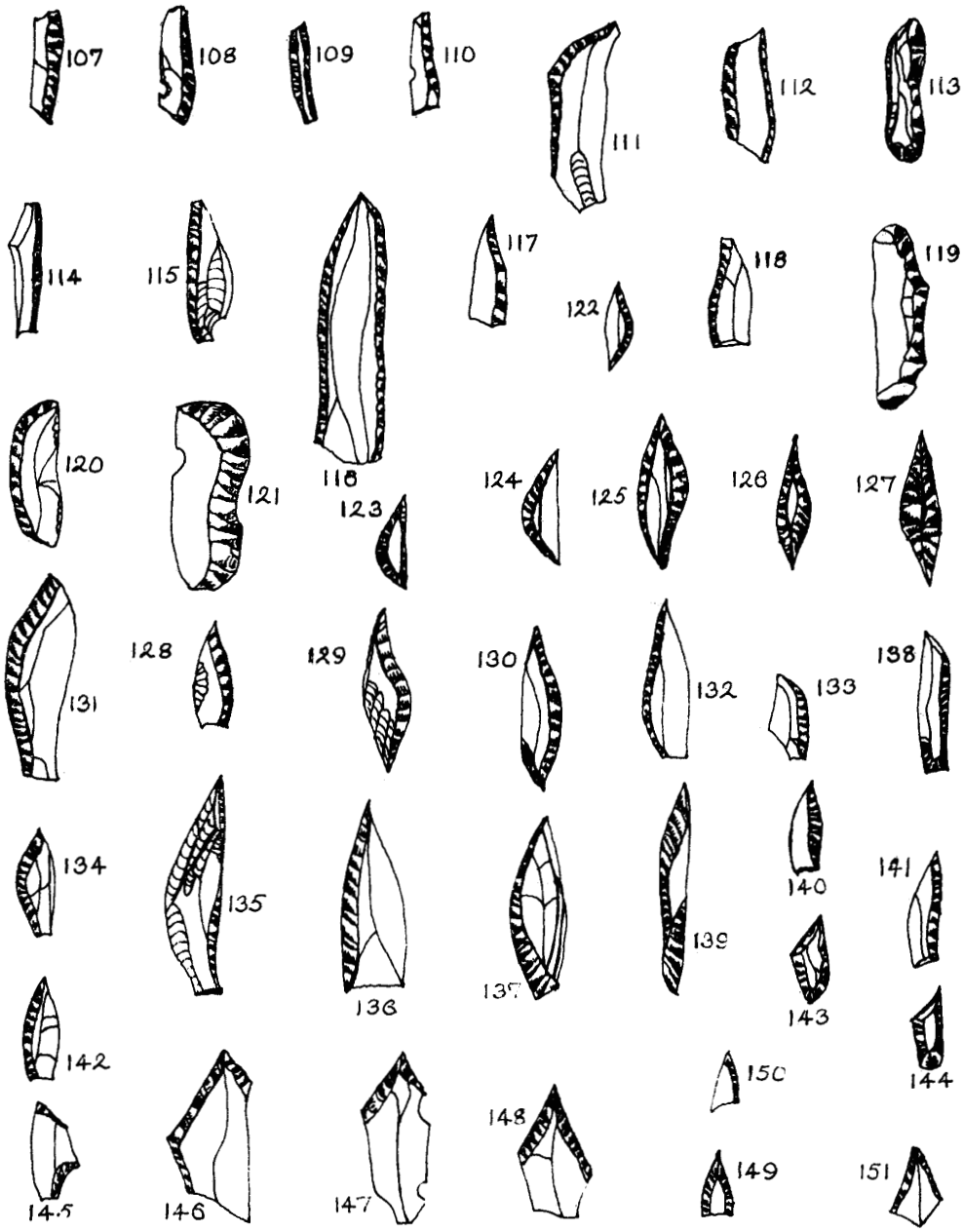


Fig. 10—Microliths from Craigsford Mains (110, 113, 140, 141, 148, 150, 151), Dryburgh (107 to 109, 121, 124, 125, 128 to 130, 132 to 134, 136, 145 to 147, 149), Fairington (111, 112, 135), Kalemouth (120, 131, 142 to 144), Rink Farm (115, 117 to 119, 123, 126, 127, 137, 138), Slipperfield (116), Tweed-dale (122), Westside (114, 139). All nat. size.

from Crumhaugh and Lauderdale as are the narrower types of point.

The relationship of this development to the series from Spindlestone[16] is important in view of the parallel between this series and the Pennine industries and it is surprising that the 'early' type of industry cannot be recognised in isolation at any site within the Tweed, although its features can be paralleled from mixed assemblages. The later, Narrow Blade, industry is extremely similar to the Tweed Valley industries and the presence of small circular scrapers and saws suggests that contact is with an industry of Kalemouth, Crumhaugh or Lauderdale type rather than Dryburgh or Rink. A relationship with this type of industry is also ruled out by the absence of simple obliquely truncated points retouched only on the tip, a feature which is paralleled at Crimdon Dene.[17] Whether the distinction between the Tweed Valley industries and those of Lauderdale and Crumhaugh is purely geographical or a combination of geography and chronology remains to be decided; on a geographical and typological basis, Kalemouth represents the closest approach to the industries of North-Eastern England of any major site in the Tweed Valley. It appears therefore that the influences carried along the route through Lauderdale and Crumhaugh did not extend to the North-East coast sites in England.

EXTERNAL RELATIONSHIPS

The microlithic element in the Mesolithic industries in South-West Scotland with their extension into North-West England is considerably less, numerically, than in the Tweed Valley industries; Mr Cormack, of Lockerbie, considers that only 1% of the Dalton Hook material can be regarded as microlithic although the percentage from Tallowquhairn, a coastal site, is slightly higher; the number of blade yielding cores from this site suggests that this low number is partly accidental. The coastal sites considered by Dr Coles[18] are usually treated as distinct from the inland sites but the microliths from Low Clone, Gillfoot, Maxwellfield, Tallowquhairn and Luce Sands are so similar in form to Tweed Valley Non-geometric types and the route between is so well marked, by the sites on Eskdalemuir and in Loch Doone, at Moniaive, Dalton Hook, Brocklerigg and Glencaple that a possible connection must be investigated.

In North-West England, microliths have been found at Drigg,[19] St. Bees and Eskmeals,[19a] all three sites lying between the 25 and 35 foot contours, presumably on top of the raised beach. These sites may be linked with the

16 Buckley, F.: The Microlithic Industries of Northumberland; **Arch. Aeliana,** 4th ser., I (1925), 44.
17 Radley, J.: Mesolithic Structure at Deepcar, Yorks: **P.P.S.,** XXX (1964), 19.
18 Coles, J., op. cit., 1963.
19 Nickson, D.: A Preliminary Report on a Microlithic Site at Drigg, Cumberland: **Trans. Cumberland & Westmorland Arch. & Ant. Soc.,** LV (1956), 17, and Cherry, J.: Flint Chipping Sites at Drigg: **Trs. Cumb. & West. A. & A. Soc., New Series,** LXV (1965), 66.
19a Cherry, J.: Early Neolithic Sites at Eskmeals, **Tr. Cumb. & West A. & A. Soc.,** New Series, LXIX (1969), 40.

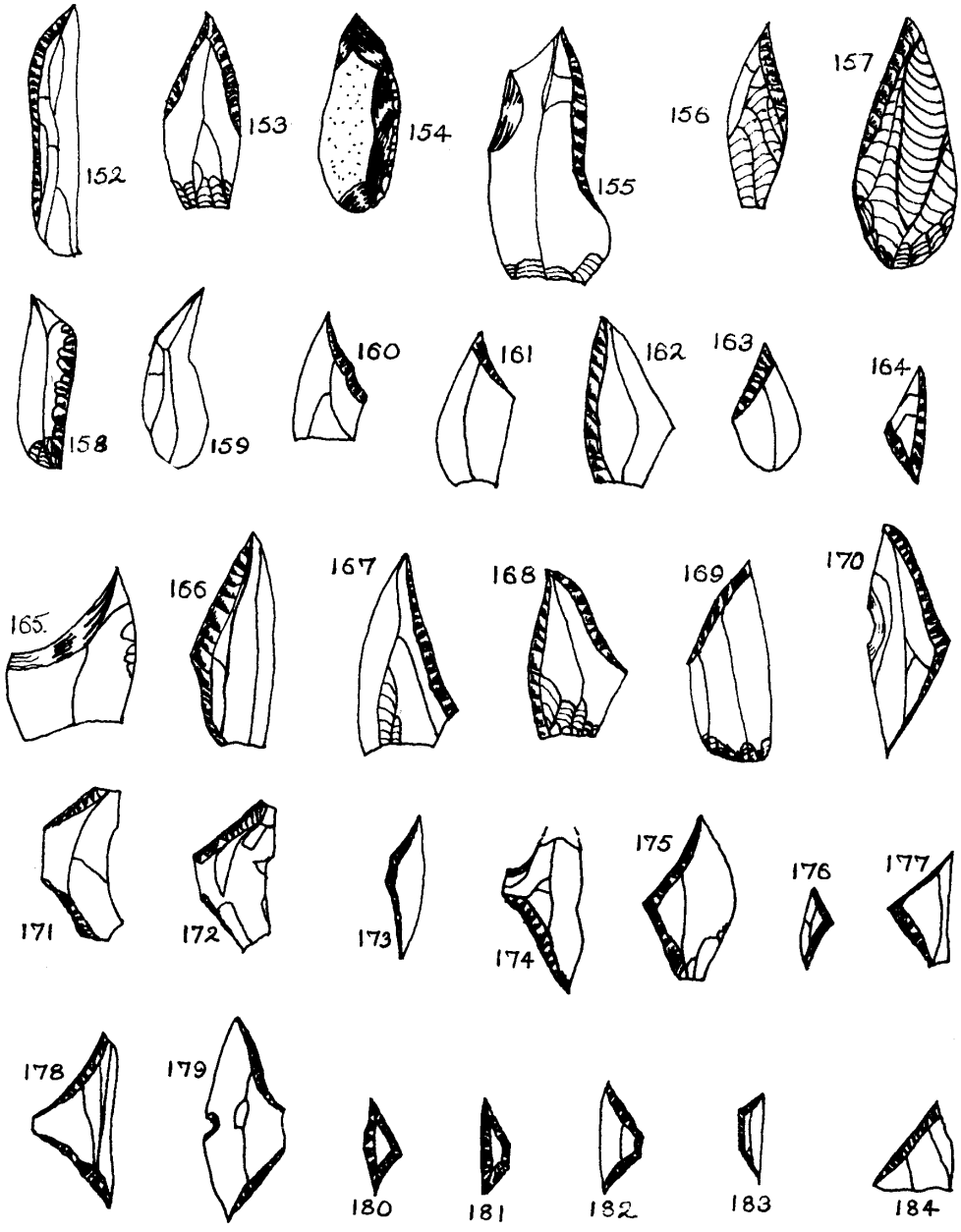


Fig. 11—Microliths from Craigsford Mains (152, 153, 158, 160, 167), Dryburgh (156, 159, 162, 168, 169, 174 to 184), Eskdalemuir (165), Fairnington (166), Kalemouth (154, 155, 161), Rink Farm (157, 164, 170 to 173) and Whitrighill (163). All nat. size.

industry from Waldney Island, Barrow-in-Furness, and thence with the Pennine industries and may therefore indicate an alternative route by which Mesolithic industries may have reached the South-West. The Drigg industry which is the most complete, is chiefly remarkable for the presence of microburins and the absence of geometric microliths; microburins are also found north of the Solway at Stranraer and it seems likely that their absence from the Solway area is accidental. The scrapers, burins and cores figured by Nickson[19] are similar to types found in the Tweed Valley but the absence of small disc scrapers is a major difference; the basically non-geometric character of the microlithic element is more closely related to the South-Western industries than is the Tweed Valley type. Both of these differences may not completely exclude a connection but would suggest that any connection must be with an industry of Rink Farm type in which these forms are less prominent.

The inland industries of South-West Scotland differ from those of the coast in their extensive use of chert, for example at Dalton Hook about 25% of the material used is of flint, the remainder being chert and other coarse materials, also a trace of pitchstone. In contrast the coastal industries west of the Urr Estuary are made entirely of local flint often patinated. The coastal sites at the mouth of the River Nith, however, seem to share the characteristics of both coastal and inland industries. Pitchstone does not occur in the western of the coastal sites, apart from Luce Sands where it is plentiful, but in no case is it worked there in microlithic fashion. Like the coastal industries the inland industries lack microburins and geometric microliths with the exception of one possible broken backed scalene triangle; scrapers and cores relate to the Tweed Valley types and the nature of the material would appear to confirm this connection. The finds from Redkirk Point and Glencaple and the coastal industries from Gillfoot, Maxwellfield, Powillimont and Tallowquhairn may indicate interaction between the two areas. The triangle and the nature of the points again suggest a link with a Rink Farm type of industry.

The geometric microliths in the assemblage from Ballantrae, Ayrshire,[20] indicate a relationship with the Tweed Valley not shared by the South-West. Since the microlithic element shows the same degree of patination as the Larnian or 'Upper Palæolithic' part of the industry, separate derivation of the two seems overcomplicated; the early Mesolithic types figured by Lacaille[21] may be paralleled in the Tweed Valley or in Northern England as well as in Northern Ireland. The alleged relationship of the Upper Palæolithic element in South-Western industries to Larnian influence has already been denied by Dr Coles;[22] it remains to be stated that this element being present in all Southern

20 Lacaille, A. D.: The Stone Industries Associated with the Raised Beach at Ballantrae. P.S.A.S., LXXIX (1944-45), 102-104.
21 op. cit., 1954, Fig. 55, p. 152.
22 op. cit., 1963, 91.

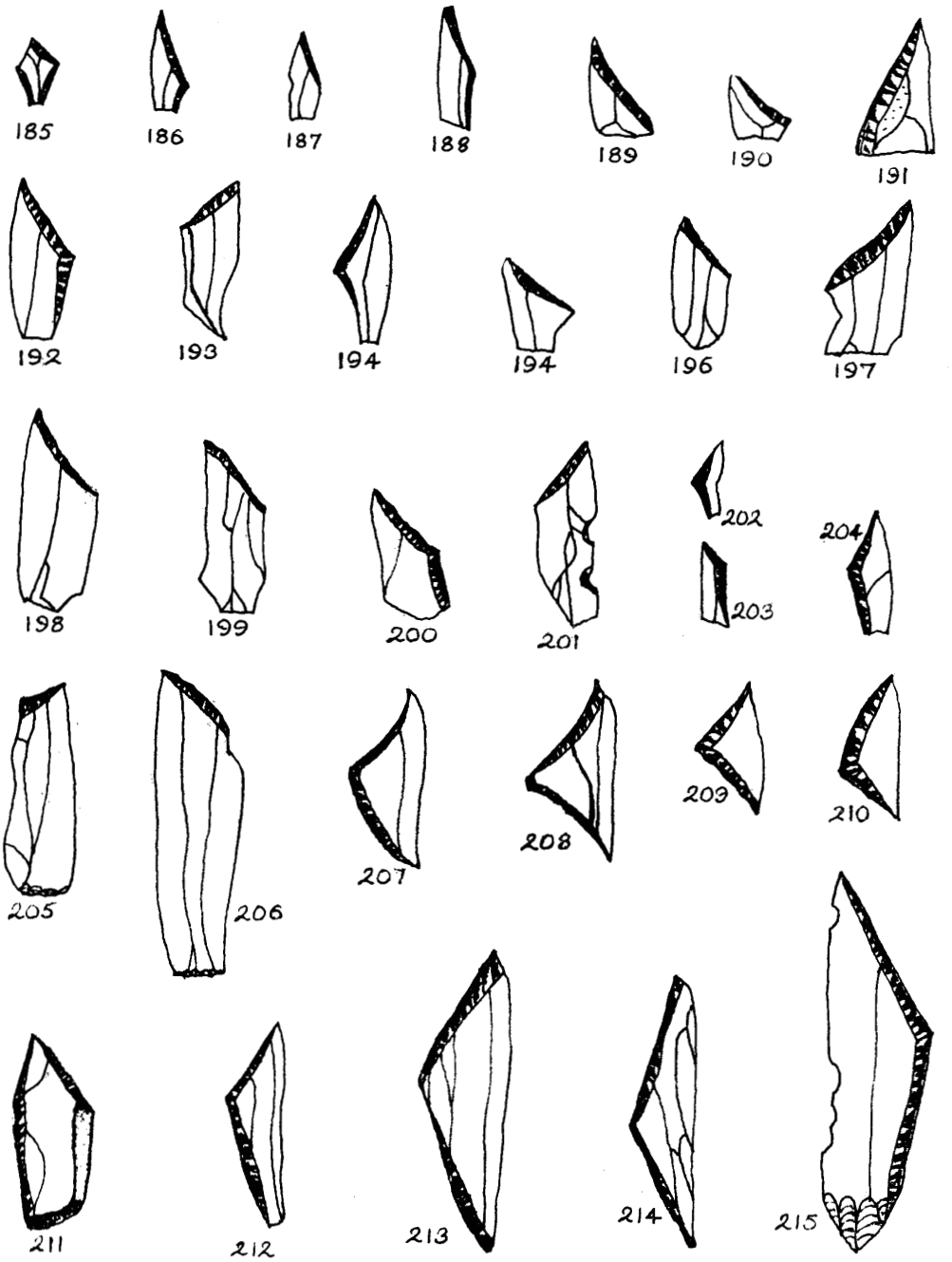


Fig. 12—Microliths from Clackmae (213), Craigsford Mains (195 to 200, 206), Dryburgh (185 to 190, 205, 211, 212), Fairnington (214, 215), Rink Farm (201 to 204), Tweed-dale (192 to 194, 207 to 210) and Whitrighill (191). All nat. size.

Scottish Mesolithic industries renders grouping difficult by imparting a basic uniformity of aspect to the non-microlithic part of the industries. The industries of North Ayrshire, Shewalton, Ardeer and Stevenston Sands[23] show close affinities with those of the Tweed in the presence of geometric microliths and microlithic copies of Neolithic arrowheads; scrapers with cortex tops and small disc scrapers suggest that the relationship is with a stage other than that of Rink Farm. These industries may indicate routes through the Clyde drainage system and the presence of pitchstone at Ballantrae suggests a source for this material which would account for its presence at Dunsyre. No connection can be traced between the Tweed Valley and the Mesolithic sites in Kintyre, the presence of the microburin and tranchet in these assemblages being accounted for by Obanian or 'Baltic Forest' influence. Since an independent type of Baltic Forest industry has been recognised at Tentsmuir, Lacaille's theory[24] of Tweed Valley influence to account for the microburin and microlithic element in the Obanian is no longer necessary.

The Central Lowlands have not been so well explored for Mesolithic sites as the Tweed Valley and the major sites are still those described by Lacaille[25] with the addition of Dunsyre, Lanarkshire; Crichton Farm, Midlothian; and Dirleton and Hedderwick in East Lothian. The sites may be divided into the inland group associated with the Clyde drainage and the Pentland Hills and the East Lothian Coastal sites; there are also a number of shellheaps and organic remains generally assumed to be associated with the Mesolithic settlement of the area.

Apart from the perforated pebble from Haddington, Crichton Farm is the furthest east of the inland group; to the west are the sites described by Lacaille and additional material is now known from Slipperfield and Hyndford in West Linton and from Dunsyre. The former sites have yielded only one microlith and two partly perforated pebbles, the latter a backed microlith, scrapers and Mesilithic waste including a pitchstone blade. The Crichton Farm assemblage contains 45 Mesolithic tools similar to those from Airhouse Farm, 42 of them being made of flint. The Coastal industries from East Lothian, Gullane, Dirleton and Hedderwick are considered by Lacaille as 'Mesolithic survivals';[26] in fact no dating evidence exists for any of these industries and it can only be assumed that Mesolithic settlers from Northern England would arrive in this area later than in the Tweed Valley and that there would be a considerable chronological overlap between the two areas. The most remarkable features of these industries are the use of large amounts of jasper and, from Dirleton, a microlithic copy of a barbed and tanged arrow-head. Both Geometric and Non-

23 Lacaille, A. D.: Mesolithic Implements from Ayrshire; **P.S.A.S.**, LXIV (1929-30), 34, and op. cit., 1954, Fig. 127 and p. 286.
24 op. cit., 1954, 241.
25 op. cit., 1954, 187.
26 op. cit., 1954, 275.

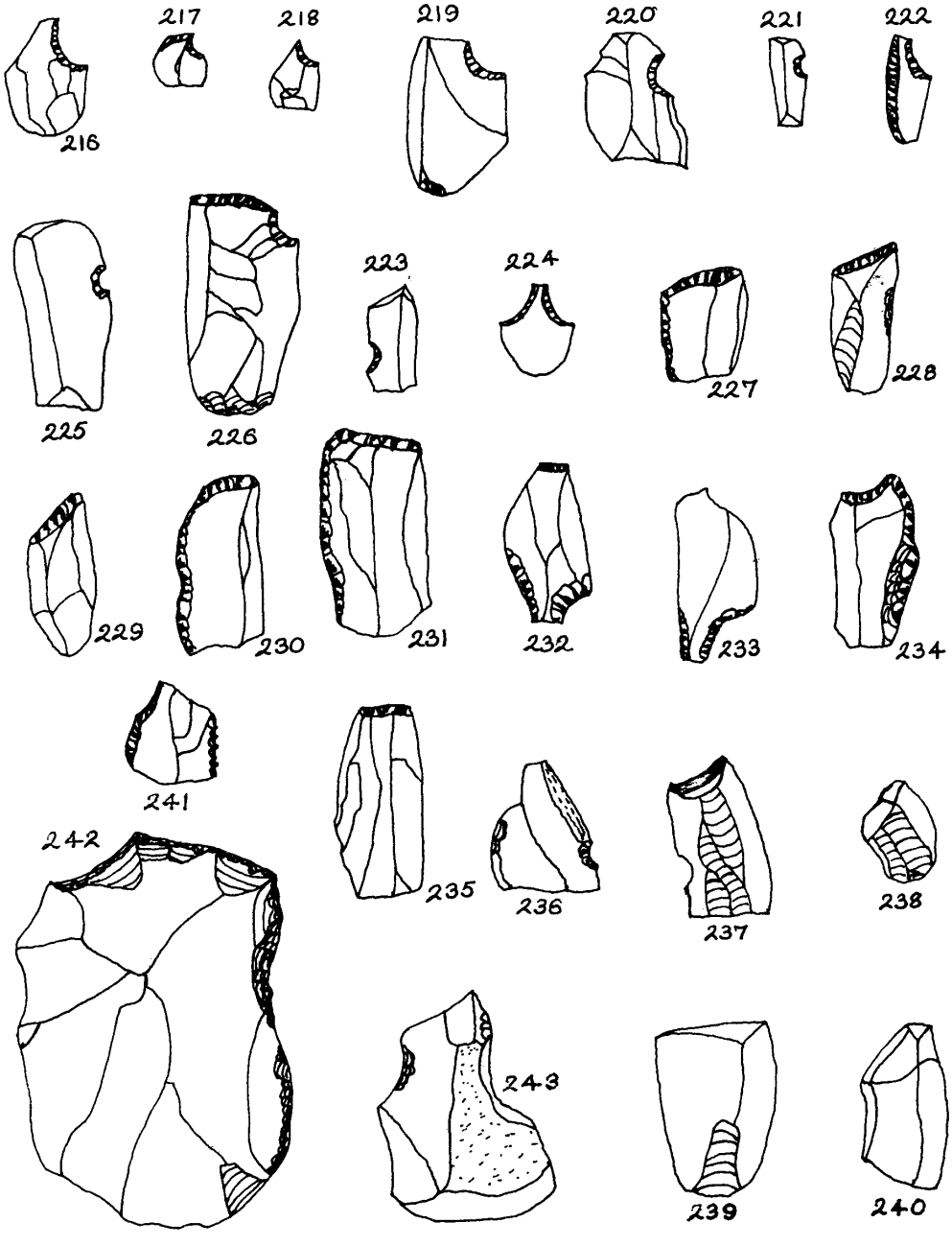


Fig. 13—Microburins and associated types (216 to 225), Truncated Blades (230, 232, 234, 235), End Scrapers (226 to 229, 231), Ground edged tool (236), Waste and unspecialised forms (233, 237 to 240) from Crumhaugh (232), Dryburgh (216 to 231, 234, 235), Eskdalemuir (236), Kalemouth (233, 237, 238) and Springwood (239, 240). All nat. size.

geometric microliths occur but the only Heavy Tool is part of a perforated pebble from Gullane.

The assemblages from Banchory, Culbin Sands and Tentsmuir Sands described by Lacaille[27] are still the major evidence for Mesolithic settlement north of the Forth. The similarity of the Banchory assemblage to those of the Tweed Valley is of particular importance in view of its direct association with the low terrace of the Dee, presumed to be of late Atlantic date. The presence of isosceles triangles, simple obliquely truncated points and narrow point forms and the absence of disc scrapers suggest a connection with a Rink Farm type of industry. The Culbin Sands assemblage is of a similar type. Evidence for contact between the Tweed Valley and Tentsmuir industries is lacking and it is possible that the latter represents a completely different stage of Mesolithic settlement.

Before seeking the origins of the Tweed Valley Mesolithic it is necessary to isolate from the assemblage later elements introduced by contact with the Neolithic and Beaker trade through Lauderdale; the microlithic copies of arrowheads and stray Neolithic implements are obvious results of this influence. The large spearheads may also prove to be results of this contact and need not necessarily occur in parent assemblages. It seems that industries of the 'peripheral' or southern group provide the clearest picture of Pure Mesolithic industry in the area.

The absence of a core-tool element is the main feature used by Professor Clark to distinguish between sites of the Horsham Culture and those of Sauveterrain affinities[28] and since he includes Dryburgh in the latter group it seems that the core-tools must be regarded as belonging to a separate industry; in the opinion of the writer such a division is not justified. Although the microlith types which distinguish the peripheral industries—obliquely blunted points and large triangles are 'Maglemosian' types, these are neither sufficiently specialised nor sufficiently numerous to constitute a separate industry. Perforated pebbles occur throughout the industries and no isolated 'Maglemosian' assemblage exists. In view of the presence of small heavy tools in Continental Tardenoisean assemblages,[29] and in the English Horsham group, the derivation from a single source within this group must be preferred. If as Lacaille suggests,[30] the industries contain elements from the Early and Middle Tardenoisian of the Continent, Barrière's Pure Tardenoisian,[31] the features which should be present are: (a) Disappearance of Palæolithic techniques, (b) replacement of roughly shaped cores by cylinder cores yielding regular blades,

27 op. cit., 1954, 179, 281, 278.
28 Clark, J. G. D.: A Microlithic Industry from the Cambridgeshire Fenland and Other Industries of Sauveterrain Affinities in Britain: **P.P.S.**, XXI (1955), 14.
29 e.g. at Teviec, Pequart, M & St. J.: **Teviec, Station Necropole Mesolithique du Morbihan** (1937), Fig. 36, and La Roche aux Faucons, Garrod, D.A.E. **The Upper Palæolithic Age in Britain** (1926), 190.
30 op. cit., 1954, 165.
31 Barrière, op. cit., 1954, 149.

(c) development of the trapeze and associated forms, (d) increase in the number of microburins. The microlithic element should also contain, in Tardenoisian I, pointes de Veille and pointes de Tardenois with a few pointes de Sauveterre or, in Tardenoisian II, points with basal spurs and no pointes de Sauveterre; discoidal core scrapers develop while end scrapers continue to be made; blades with multiple notches are numerous. While the last two features may be par-

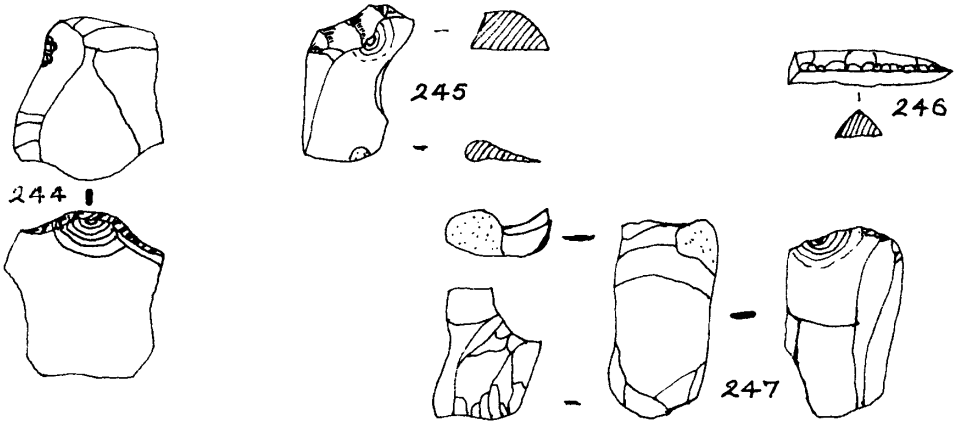


Fig. 14—Core trimmings from Dryburgh (246), Rink Farm (245), Springwood (247) and Whitrighill (244). All nat. size.

alleled in the Tweed Valley, the microlithic element contains no pointes de Veille or de Tardenois, few trapezes and only a minute percentage of microburins. It would therefore appear that contact with the Tardenoisian sequence of the Central Area must be with the ' Sauveterrain ' and the resemblance between the Rink Farm assemblage and that from Le Martinet and Cuzoul de Gramat[32] is considerable, the major objection to such a connection is the geographical distance involved. This objection does not apply to the Tardenoisian of the Low Countries from which Barrière brings Tardenoisian influence to the Pennine area.[33] The rarity of the microburin and the presence of Palæolithic elements are common to the Tweed and the Prototardenoisian of the Low Countries but the absence of tanged points from the Tweed cannot be overlooked in view of De Laet's description of the affinities of the Prototardenoisian[34] at Remouchamps. The Middle Tardenoisian industries dated in the Low Countries to the Boreal period do not include narrow point forms which are a basic part of the Tweed industries. There is therefore no single Continental industry which possesses parallels for the entire assemblage

32 Barrière, op. cit., 1954, Figs. 45-47.
33 op. cit., 1954, 300.
34 De Laet, W.: **The Low Countries** (1958), 48.

of the Tweed Valley Mesolithic; an indirect link with the Sauveterrain or Belgian Tardenoisian may be traced through the groups of industries outlined by Professor Clark.[35]

Fig. 16 has been adapted from the distribution map[36] of Sauveterrain and Horsham sites, both types having been included in a single map; by this device the mutually exclusive distribution of the two groups and the lack of a focus for the Horsham group are overcome. If the two types are in fact distinct, this device is obviously invalid but closer examination of the industries reveals that regional differences are more readily explained as the result of diffusion from a common centre than as the results of two distinct traditions. The differences listed by Professor Clark between the two are: (a) the presence of a heavy tool, axe-adze element, and (b) large numbers of hollow-based points within the Horsham group. Before detailed consideration is given to these two points the nature of the evidence must be recalled; although excavated sites form a large proportion of the Horsham group, those of Sauveterrain affinities are rare and are restricted to the South of England; the remaining industries are either surface collections or have been excavated under unfavourable circumstances.[37] In such circumstances, isolated core-tools may not have been related to their proper context and only in the Tweed Valley where analysis has shown that no other explanation is viable has the recognition of the core-tool element been possible. The numerical smallness of this element is therefore revealing and when taken in conjunction with Rankin's picture of the decrease in size and number of heavy tools from East to West in Southern England[38] may provide evidence for parallel diffusion to the west and north. A recently excavated site which also has an axe element associated with a 'Sauveterrain' industry is Blubberhouses Moor in the West Riding of Yorkshire[39] and Davies' point[40]—that although the industries in the area are 'Sauveterrain' a number of axes have been found—must be relevant to this problem. The proportion of axes to microliths at Farnham and Selmeston—1 : 46 and 1 : 40 respectively would remove the possibility of having any axes at all from the Tweed Valley except from Dryburgh and Craigsfordmains. Attention is also drawn to the number of sites within Clark's Horsham group without axes.[41]

There are slightly higher percentages of triangles and narrow points at Dryburgh than in the Horsham group but the variation within the latter[42] would cover that of Dryburgh. The major distinguishing feature in the microlithic element of the Tweed is therefore the absence of hollow-based points,

35 Clark, op. cit., 1955.
36 Clark, op. cit., 1955, 13.
37 Clark, op. cit., 1955, 12.
38 Rankine, W.: The Mesolithic of Southern England, **Research Paper Surrey Arch. Soc.**, 4 (1956), 18.
39 Davies, J.: Mesolithic Flint Axes from the West Riding of Yorks. **Yorks Arch. J.**, XL (1960), 211.
40 Davies, J.: op. cit, 1963, 66.
41 Clark, J. G. D.: Excavations at Farnham, Surrey: **P.P.S.**, V (1939), 92.
42 Clark, op. cit., 1939, 96.

the example from Rink Farm, Fig. 10; 138 being the only example which approaches to this class. Professor Clark's table[43] shows that related forms are known from most sites within the Sauyeterrain group but there is a tendency to decrease in the number of sub-types represented with the northern extension

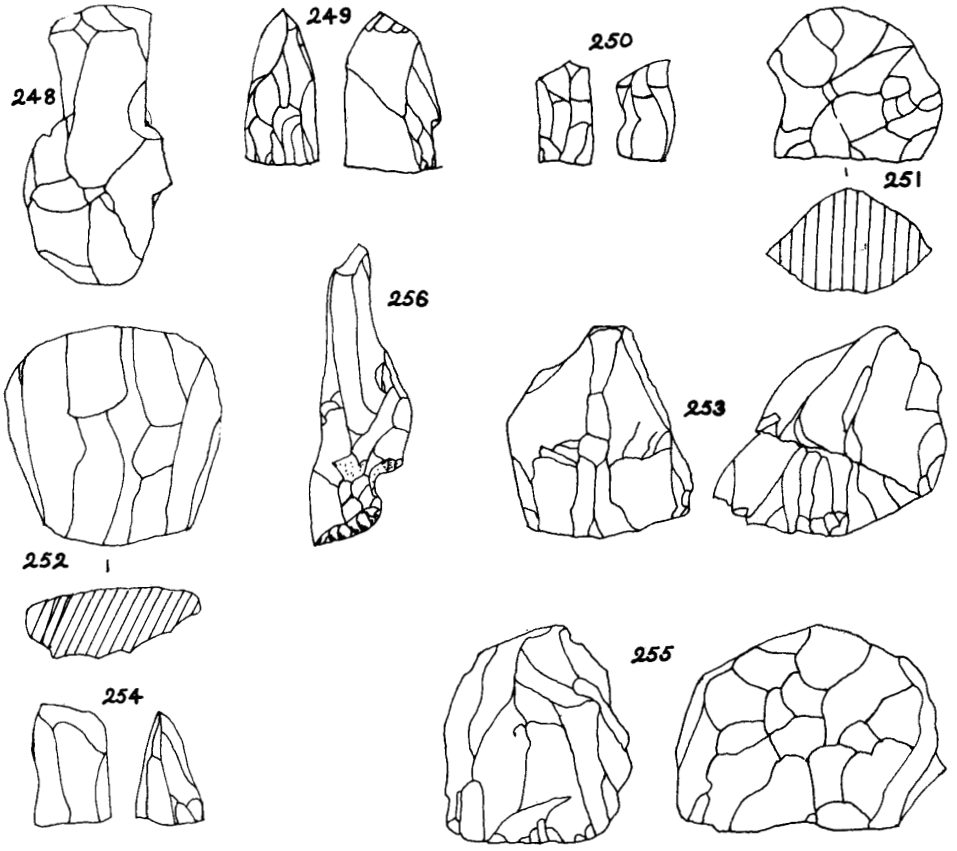


Fig. 15—Core trimmings (248, 156) and Cores from Craigsford Mains (252), Dryburgh (253, 255), Eskdalemuir (254), Rink Farm (256), Springwood (249 to 251) and Whitrighill (248). 253 and 255 after Callander, 1927. Scale ½.

along the east coast; there are five sub-types at Peacock's Farm, four at Wangford, three at West Keal and only one at Marsden and Rink. This decrease should be related to the decrease in percentage of these types from Horsham, 25%, to Farnham and Selmeston, 6%,[44] and it must be remembered that both

43 op. cit., 1955, 15.
44 Clark, op. cit., 1939, 96.

the Continental industries which may be seen as ancestral to the British material contain points with basal retouch.

The origins of the Tweed Valley Mesolithic may therefore be traced from Mesolithic industries in Southern England which may themselves be the result

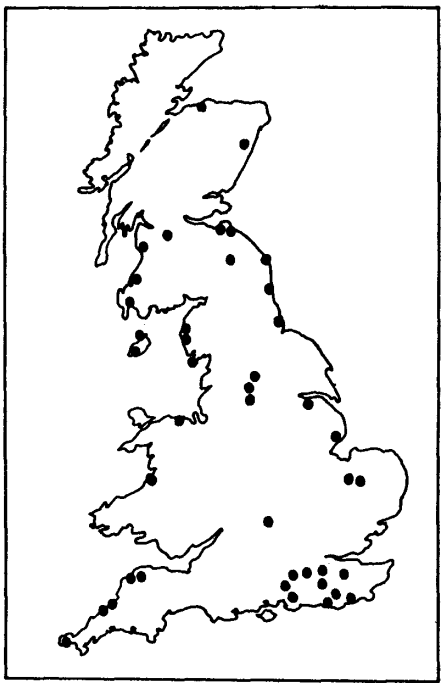


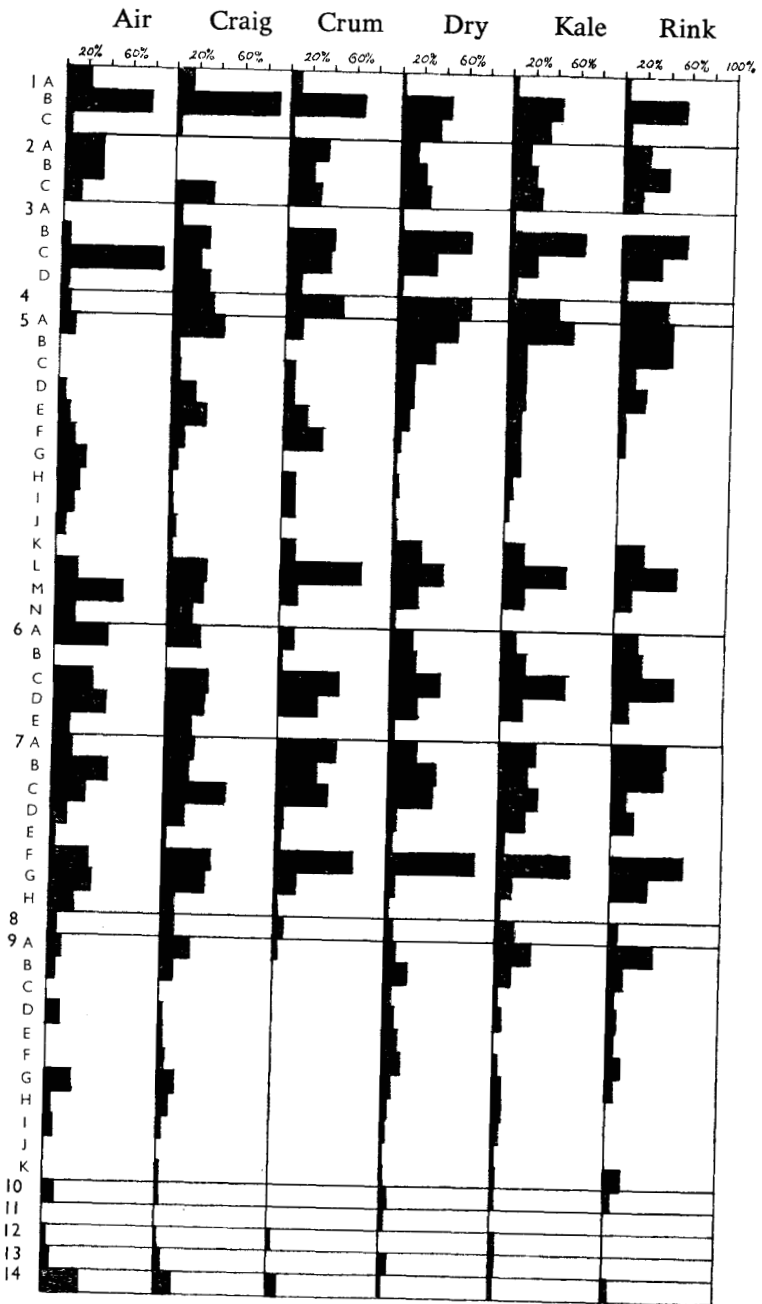
Fig. 16—Major British industries of Horsham derivation—after Clark, 1955.

of the fusion of earlier Mesolithic ' Baltic Forest ' type industries with Middle Tardenoisian influences from Belgium or North-East France[45] or of a colonisation of people whose equipment already contained a fusion of ' Tardenoisian ' and ' Maglemosian ' types.[46] Whether an additional element can be traced from the British Upper Palæolithic or whether the Continental ancestral industries contain sufficient Upper Palæolithic material to account for the presence of a decidedly Upper Palæolithic element in these industries cannot be decided until further analyses of Upper Palæolithic industries of Britain and the Continent are available.

The dating evidence contained in D. M. Churchill's article[47] may be tenta-

45 Clark, op. cit., 1939, 97.
46 Rankine, op. cit., 1956, 8.
47 Churchill, D. M.: The Kitchen Midden Site at Westward Ho, Devon: **P.P.S.**, XXXI (1965), 74.

TABLE 1



The sites represented above are, left to right, Airhouse Farm, Craigsford Mains, Crumhaugh, Dryburgh Mains, Kalemouth and Rink Farm.

NOTES ON ANALYSIS OF ASSEMBLAGES

1. **Materials:** A. Number of pieces of 'imported' translucent dark flint expressed as percentage of total number of pieces. B. Number of pieces of flint expressed as percentage of total number of pieces. C. Number of pieces of 'Coarse' materials—quartzite, etc., expressed as percentage of total.
2. **Cores:** A. Number of conical cores expressed as a percentage of the total number of cores. B. Number of cylindrical cores expressed as a percentage of the total number of cores. C. Number of flake cores expressed as a percentage of the total number of cores.
3. **Cores:** Number of cores of given size, determined by maximum length of scar, expressed as percentage of the total number of cores. Length of Scar: A, under 0.5 inch; B, 0.5-1.0 inch; C, 1.0-1.5 inch; D, over 1.5 inch.
4. **Waste material:** Number of unretouched and **unused** blades, flakes and cores expressed as a percentage of the total number of pieces.
5. **Blades:** A. Total number of blades and tools made on blades expressed as a percentage of the total assemblage minus cores, core trimmings and disc scrapers. B-J. Breadth of blades: Number of blades of given breadth expressed as percentage of total number of blades. B, under 0.2 inch; C, 0.2-0.3 inch; D, 0.3-0.4 inch; E, 0.4-0.5; F, 0.5-0.6; G, 0.6-0.7; H, 0.7-0.8; I, 0.8-0.9; J, over 0.9 inch. K-N. Similar division based on length: K, length under 0.5 inch; L, 0.5-1.0 inch; M. 1.0-1.5 inch; N, over 1.5 inches long.
6. **Flakes:** A. Number of utilised, unspecialised flakes expressed as percentage of total number of **Tools.** B-E. Division based on length as for blades: B, under 0.5 inches long; C, 0.5-1.0 inch; D, 1.0-1.5 inch; E, over 1.5 inch long.
7. **Scrapers:** A Number of scrapers expressed as percentage of total number of tools. B. Number of end scrapers expressed as percentage of total number of scrapers. C. Number of Disc scrapers expressed as percentage of total number of scrapers. D. Number of Side scrapers expressed as percentage of total number of scrapers. E-H. Division based on length; E, under 0.5 inch long; F, 0.5-1.0 inch; G, 1.0-1.5 inch; H, over 1.5 inch long.
8. **Notched tools:** Number of tools notched for use as spokeshaves, etc., but excluding those notched for hafting or for production of microburins expressed as percentage of total number of tools minus the total number of scrapers; this last provision is to exclude distortion arising from the high number of scrapers at some sites.
9. **Microliths:** A. Total number of microliths expressed as percentage of total number of tools minus total number of scrapers. B-K. Total number of specific type of microlith expressed as percentage of total number of microliths. B, Scalene triangle; C, Isosceles triangle; D, Trapezoid; E, Crescent; F, Sauveterrain points; G, Obliquely truncated points; H, Obliquely truncated blades; I, Transversely truncated blade; J. Concavely truncated blade; K, Backed blades and Rods.
10. **Hammerstones:** Number of Hammerstones expressed as percentage of total number of tools minus total number of scrapers.
11. **Core tools:** Present only at Dryburgh and 2 minor sites.
12. **Saws:** Indicates presence of type.
13. **Weapon heads:** Number of Weapon Heads (Non-Microlithic) expressed at percentage of total number of tools minus total number of scrapers.
14. Number of **Neolithic tools** from site as percentage Mesolithic assemblage.

tively related to the Tweed Valley material; the series of radio-carbon dates ranging from 5650 ± 150 B.C. at Peacock's Farm (Q 587) to 4555 ± 310 B.C. at Stump Cross in Yorkshire (Q 141) is consistent with a diffusion from Southern England and indicates a date of c. 4500 B.C. for the beginning of the Tweed Valley industries. Since the duration of the industries into the Beaker Period has already been established, it appears that the movements and influences outlined above must be seen against the changing backcloth of three millennia.

ACKNOWLEDGEMENTS

This article has been developed from a thesis submitted at Edinburgh University for the degree of M.A.; thanks are due to Professor Piggott and his staff.

It is based on material in the National Museum of Antiquities of Scotland, Hawick Museum and Dumfries Burgh Museum and in the private collections of Messrs J. Cherry, J. W. Elliot, J. Forsythe, F. Lillie, C. Martin, W. D. Mason and A. Robb. I wish to acknowledge the help given to me by these individuals and the staffs of the Museums in affording me facilities for the study of the material and in helping me to locate sites. I am also greatly indebted to Dr J. Coles of the University of Cambridge and the late Mr J. Radley of the Royal Commission on Historical Monuments for their comments on comparative material from other regions and advice on recent developments in the study of Mesolithic assemblages. To W. F. Cormack particular thanks are due for much help and information and for a paragraph on the South-Western Industries.

NEOLITHIC AXES IN DUMFRIES AND GALLOWAY

A PRELIMINARY LIST OF AXES POSSIBLY AVAILABLE FOR THIN SECTION ANALYSIS

By JAMES WILLIAMS, F.S.A.Scot, F.R.S.A.I.

The present list of polished Neolithic Axes has been prepared with the hope that it might be useful in current work on the thin-section analysis of such axes. The Scottish Group of the Council of British Archæology at their Annual General Meeting of 25th January 1969 resolved to accept the recommendations of an "ad hoc" Committee consisting of Prof. Piggott, Mr J. G. Scott, Mr R. B. K. Stevenson, and Mr P. R. Ritchie. This Committee recommended that the priority in future work would be given to axe-heads likely to be of Groups VI (Langdale) and IX (Tievebulliagh) and to those found in South-West Scotland and Aberdeenshire. The compilation of this list has necessarily involved the Curators of Museums and private individuals in a considerable amount of effort—I should like at this point to extend my sincere thanks to them. My thanks are especially due to Mr A. E. Truckell of Dumfries Burgh Museum; Mr P. R. Ritchie, Min. of Public Buildings and Works; Mr J. G. Scott, Kelvingrove Museum, Glasgow; Mr E. W. Mackie, the Hunterian Museum, University of Glasgow; Miss A. Henshall, The National Museum of Antiquities, Edinburgh; Mr S. Pilling, Wigtown County Museum, Stranraer; Mr W. M. Kirkpatrick, Kirkcudbright Museum; Mr M. Henig, Worcester College, Oxford; Mr R. Hogg, Tullie House Museum, Carlisle; and Mr G. Jobey, Society of Antiquaries, Newcastle.

The current opinions regarding Scottish Implement Petrology are outlined and extended in Mr P. R. Ritchie's paper, "The Stone Implement Trade in Third Millennium Scotland."[1] It is not the intention of this paper to be a definitive article on S.W. Scottish Axes but a few interesting facts have emerged during the compilation of information:—

1. On Macroscopic evidence it would appear that Group VI axes form an overpowering majority and it is only in Wigtown-shire that Group IX material really appears to make a modest show. This could possibly indicate a strong regional preference for axes of a particular stone or possibly a saturation of the area with Group VI material before the Group IX axes became available for general S.W. Scottish use.
2. A distribution map, neglecting a break-down into individual petrographic groups, indicates that the axe find-spots are predominantly coastal and only rarely much higher than 600 feet O.D. Axes found above this level are normally in the valleys of the larger rivers.

1 Studies in Ancient Europe (Essays presented to Stuart Piggott), Leicester University Press, 1968, p. 117-136.

3. The axes appear to have been imported into the area at the rough-out stage of manufacture and polished according to the user's whim—there would appear to be a much larger variation in axe-form than was originally expected and this facet of the problem should only be attacked once the axes have been separated into their individual groups by thin section analysis. There are five rough-outs from the area:—(1) Beckfoot, Annan; (2) Cairnsmore, Terregles; (3) Stoneykirk Sands; (4) Landberrick Hill, Mochrum; and (5) "Lochar Moss," Tinwald. There are few indications of polishing slabs in the area but the following sites may be noted:—(1) The West portal stone at Cairnholy I chambered cairn (Grid. Ref. NX518541.); (2) the large boulder on which the Foregirth, Kirkmahoe (Grid. Ref. NX953834) Early Christian Cross is incised also bears possible axe sharpening grooves; and (3) the small axe from "Stoneykirk Sandhills" (N.M.A. AL39) was found with a polishing or sharpening stone.
4. From an examination of the axes it has become apparent that many have been damaged, re-shaped, and then re-polished. This may have been done on a casual basis but there are indications to suggest that "workshops" offering this service existed in the Luce Sands area—Ludovic M'Lellan Mann's "Star-site" (Grid. Ref. NX132551) is a particularly obvious example. From the widespread occurrence of such utilised axe fragments the practice must have been relatively common.
5. Trade routes cannot easily be identified from the present restricted information but the concentration of axes in Whithorn, Glasserton and Mochrum Parishes, i.e. around Burrow Head, may indicate a direct sea-route from Cumberland to Wigtownshire. The existence of this would only be supplementary to over-land routes.

It should be noted that the suggestions given above are to be treated as a

LIST OF IMPLEMENTS[4]

Abbreviations

A:	Ashmolean, Oxford.
B.M.:	British Museum, London.
C.	Tullie House Museum, Carlisle.
D:	Dumfries Burgh Museum.
H:	The Hunterian Museum, University of Glasgow.
Kel:	Kelvingrove Art Galleries & Museum, Glasgow.
Kir:	Kirkcudbright Museum.
N.M.A.:	National Museum of Antiquities, Edinburgh.
P:	In Private Hands.
S:	Wigtown County Museum, Stranraer.
x/H	Thin-section preserved in Hunterian Museum.

* Sectioned and being examined at time of writing.

4 This list cannot be regarded as being a complete survey of the available Neolithic axes. It represents the state of affairs that exists at the time of writing. It is hoped that any axes which may subsequently appear, will be published as an Addendum in some future volume of these Transactions.

SUMMARY TABLE OF SOUTH-WEST SCOTTISH NEOLITHIC AXES

Petrographic Group		Dumfriesshire	Kirkcudbrightshire	Wigtownshire	Total
Group VI	sect[2]	13	3	1	17
	suspected	21	27	124	172
Group IX	sect	0	1	0	1
	suspected	0	0	7	7
Group XIII		1	0	0	1
	suspected	0	0	0	0
Unidentified Group	sect	0	0	0	0
	suspected	0	0	2	2
Miscellaneous[3]		6	10	137	153
	Total	41	41	271	353

2 Sectioned **and confirmed.**
3 Includes unexamined material, i.e. N.M.A. BH7924-8008.

basis for discussion and not to be taken as established fact at this stage of the study of S.W. Scottish Axes. No great weight can be placed on the conclusions reached until such time as the results of a full petrographic analysis are available.

DUMFRIESSHIRE

ANNAN PARISH			
Annan Estuary.	NY19/49.	Group VI.	D.1969-43.
Beckfoot Fm.	NY217657.	Group VI. (DUM 2). x/H. Rough-out.	D.1952-72.
Johnstonelea Farm.	NY216706.	Group VI.	C.9-1935.
Milnfield Fm.	NY184663.	Group VI.	D.1936-217.
APPLEGARTH PARISH			
Dinwoodie Green.	NY107885.	Group VI.[5]	N.M.A. AF26.
CLOSEBURN PARISH			
Locus Unknown.	NX90/92.	Group VI. (DUM 12). x/H.	D.1948-98.
DUMFRIES PARISH			
Dumfries Town.	NX98/76.	Group VI.	D.1965-100.
Kelton Mains.	NX987710.	Group VI. (DUM 5). x/H.	D.1934-27.
Pulpit Rock, Maidenbower Craigs.	NX988745.	Group VI. (DUM 3). x/H.	D.1934-11.
DURISDEER PARISH			
Locus Unknown.	NS89/04.	Group VI. (DUM 6). x/H.	D.1949-7.
Locus Unknown.	NS89/04.	Group VI.	D.1965-99.
Inglestone Rigg.	NS869047.	Group VI.	D.1965-96.
Troloss Fm. (Actually Crawford Ph., Lanarkshire).	NS915083.	Group VI.	D.1948-5.
DUNSCORE PARISH			
Greenhead.	NX903826.	Coarse micaceous greywacke.	D.1967-598-43.
ESKDALEMUIR PARISH			
Blackburn Bridge, Watcarrick.	NY247962.	(?) Group XIII. (DUM 8). x/H.	D.1952-28.
HOLYWOOD PARISH			
Baltersan.	NX913816.	Group VI.	D.1965-93.
Bellfield Fm., Cowhill.	NX948828.	Group VI. (DUM 13). x/H.	D.1935-1.
Cowhill Moss.	NX960824.	Group VI. (DUM 15). x/H.	D.1934-37.
HUTTON & CORRIE PARISH			
Heithat Fm.	NY192880.	Group VI.	P. (Farmer).
JOHNSTONE PARISH			
Locus Unknown.	NY07/94.	Group VI. (DUM 1). x/H.	H.B1914-150.

5 Possesses a hafting mark.

KEIR PARISH			
Bardennoch Fm.	NX891884.	(?).*	D.1965-92.
Barhill Fm.	NX833919.	Group VI.	D.1965-98.
Byreholm Fm.	NX857940.	Group VI.	D.1965-95.
KIRKMAHOE PARISH			
Kirkton Church.	NX974815.	Group VI.	P. (Anderson, Kirkton).
KIRKPATRICK-FLEMING PARISH			
Kirkpatrick Fm.	NY276700.	Group VI.	P. (Farmer).
LOCHMABEN PARISH			
Priestdykes Fm.	NY103813.	Group VI.	D.1967-581.
MIDDLEBIE PARISH			
Burnswark Fort.	NY183788.	(?).	D.
Carruthers.	NY257804.	Group VI. (DUM 4). x/H.	D.1949-31.
Lands, Birrens.	NY214753.	Group VI. (DUM 16). x/H.	D.1948-141.
Newfield, Ecclefechan.	NY176768.	Felspathic grit. (DUM 9). x/H.	D.1934-6.
MOFFAT PARISH			
Hunterheck.	NT102048.	Group VI.	P. (Farmer).
SANQUHAR PARISH			
Connelbush.	NS759106.	Group VI.	D.1967-598-25.
Conrick Fm.	NS788117.	Micaceous greywacke.	D.1967-598-42.
Eliock Grange.	NS797074.	Group VI.	D.1967-598-27.
TINWALD PARISH			
Locus Unknown.	NY00/82.	Quartz dolerite. (DUM 10). x/H.	D.1934-26.
East Tinwald.	NY057810.	Group VI. (DUM 14). x/H.	D.1946-7.
"Lochar Moss."	NY00/82.	Group VI. (rough-out).	D.1969-96.
TYNRON PARISH			
Tynron Village.	NX808930.	Group VI. x/H.	D.1950-8.
Carson Park, Auchenhessane.	NX803968.	Group VI.	D.1965-97.
PARISH NOT KNOWN			
"Upper Nithsdale."		Micaceous greywke.	D.1967-598-4.
Billmorag—(?) Upper Nithsdale.		Group VI.	D.1967-598-3.

STEWARTRY OF KIRKCUDBRIGHT

BORGUE PARISH			
Locus Unknown.	NX63/48.	Group VI.	Kel. 1940-7ac.
Barlocco Fm.	NX590488.	Group VI.	N.M.A. AF663.
Brighouse Fm.	NX640457.	Group VI.	P. (Farmer).

COLVEND PARISH			
Bogue Knowe.	NX909593.	Group VI.	N.M.A. AF503.
Bogue Knowe.	NX909593.	Group VI.	N.M.A. AF504.
Bogue Knowe.	NX909593.	Group VI.	N.M.A. AF505.
Kipp.	NX843558.	Fine grained grey sst.	Kir. 1035.
CROSSMICHAEL PARISH			
Browhill Fm.[6]	(?).	Group VI.	Kir. 888.
DALRY PARISH			
Todstone.[7]	NX612850.	Group VI.	Kir. 5020.[3]
GIRTHON PARISH			
Locus Unknown.	NX61/54.	(?) Group VI.	N.M.A. AF77.
KELTON PARISH			
Castle-Douglas.	NX763623.	Group VI.	N.M.A. L/1955-71.
Castle-Douglas.	NX763623.	Group VI.	Kir. 3979.
KIRKCUDBRIGHT PARISH			
Ardendee.	NX695525.	Group VI.	Kir. 109.
Ardendee.	NX695525.	(?)	A.1927-4045.
St. Mary's Isle.	NX674492.	Group VI.	Kir. 3250.
Torrs Muir Fm.	NX684467.	Group VI.	Kir. 1405.
KIRKBEAN PARISH			
East Preston.	NX968565.	Group VI.	D.1934-5.
Maxwellfield.	NX977568.	Group VI.	D.1969-121.
KIRKPATRICK-DURHAM PARISH			
Kirklandhill Fm.	NX783695.	Group IX.[8]	N.M.A. AF699.
Lairdlaugh Fm.	NX803715.	Red sst.	C.16-24.
MINNIGAFF PARISH			
Cumlodan Castle.[9]	NX418677.	(?).	H.B1951-884.
NEW ABBEY PARISH			
Maryfield.[10]	NX973663.	Group VI. (KIR 1). x/H.	D.1934-29.
PARTON PARISH			
Corsock.	NX758764.	Group VI.	Kir. 2251.
RERRICK PARISH			
Auchenfad Cottage.	NX810503.	Group VI.	Kir. 5012.
Castle Creavie.	NX722890.	Group VI.	Kir. 202.
Linkens.	NX755557.	Group VI.	Kir. 2119.

6 Recorded as 'Browhill Farm,' Crossmichael—there is no Browhill Fm. in Crossmichael Parish but there is a Brownhill Fm. in Balmaclellan.
7 Loan from Dumfries Museum—D.1949-8.
8 This axe was allocated the number Sc 45 during petrographic work.
9 Original pencil label—"Cumlodan Dumfries."
10 Original label—"Maryland, Troqueer." There is no "Maryland" in Troqueer Parish but there are "Maryfields" in Terregles and New Abbey Parishes—the latter has been taken as the more likely.

TERREGLES PARISH			
Cairnsmore.	NX943778.	Group VI.* (rough-out).	D.1964-154.
Terregles.	NX931770.	Group VI.	D.1965-94.
TONGLAND PARISH			
Tongland.	NX697540.	Group VI.	N.M.A. AF28.
TROQUEER PARISH			
Summerhill.	NX960763.	(?).	B.M. 86-10-12.
TWYNHOLM PARISH			
Gorse Loch, Inglestone Fm.	NX670535.	Group VI.	Kir. 874.
Twynholm.	NX665545.	(?).	N.M.A. AF66.
Twynholm.	NX665545.	Group VI. [11]	N.M.A. AF27.
Circular Moat at Twynholm.	NX660544.	Group VI. [11]	N.M.A. AF139.
Circular Moat at Twynholm.	NX660544.	Group VI.	N.M.A. AF140.
URR PARISH			
Dalbeattie.	NX833412.	Group VI.	D.1965-91.
PARISH NOT KNOWN			
.....		Fine sst.	S.1964-67.
.....		(?).	Kir. 1300.
.....		(?).	D.1961-20-4.
.....		(?).	D.1961-20-1.
.....		Group VI.	D.1961-20-2.

COUNTY OF WIGTOWNSHIRE

GLASSERTON PARISH			
Arbrack.	NX452373.	Group VI.	Kel. 1955-96ms.
Arbrack.	NX452373.	Group VI.	Kel. 1955-96nf.
Arbrack.	NX452373.	Group VI. (utilised frag.).	Kel. 1955-96ni.
Arbrack.	NX452373.	Group VI.	Kel. 1955-96nm.
Arbrack.	NX452373.	Group VI.	N.M.A. AF328.
Arbrack.	NX452373.	(?) Group VI.	N.M.A. AF337.
Arbrack.	NX452373.	Group VI.	N.M.A. AF627.
Blairbuie.	NX365418.	Group VI.	D.1962-35.
Blairbuy.	NX365418.	(?) Group VI.	N.M.A. AF335.
Glasserton.	NX420389.	(?).	Kel. 1955-96nr.
Glasserton Mains Farm.	NX418378.	Group VI.	Kel. 1910-117b.
Kidsdale.	NX434365.	Group VI.	Kel. 1955-96my.
Kidsdale.	NX434365.	Group VI.*	N.M.A. AF515.

11 Sectioned and confirmed as Group VI by F. W. Anderson of the Geological Survey.

INCH PARISH			
Locus Unknown.	NX10/62.	Group VI.	N.M.A. AF415.
Castle Kennedy.	NX111597.	Group VI.	S.1964-68.
Croach.	NX075679.	Metamorphosed grit.	N.M.A. AF329.
Culhorn Park.	NX068599.	Group VI.	S.1964-59.
Drumdoch.	NX097573.	Group VI.	S.1951-9.
Kirminnoch.	NXI23579.	Group VI.	S.1945-16A.
Mark of Inch.	NX13/70.	"Diorite."	N.M.A. AF111.
Stranraer.	NX062603.	Group VI.	S.1951-19.
KIRKCOLM PARISH			
Locus Unknown.	NX00/70.	Doubtful Group VI.	S.1951-3.
Locus Unknown.	NX00/70.	Grey porphyritic stone.	S.1964-30.
Locus Unknown.	NX00/70.	(?).	S.1951-4.
Locus Unknown.	NX00/70.	Group VI.	N.M.A. AF517.
Locus Unknown.	NX00/70.	(?). Group VI.	N.M.A. AF500.
Locus Unknown.	NX00/70.	Group VI.	N.M.A. AF395.
Locus Unknown.	NX00/70.	(?). Group VI.	N.M.A. AF31.
Ardwell.	NX007713.	Group VI.	N.M.A. AF314.
Balgowan.	NX050700.	Group VI.	S.1945-7A.
Balgowan.	NX050700.	Group VI.	S.1945-8A.
Dhuloch.	NW990662.	(?) Group VI.	N.M.A. AF254.
Ervie.	NW998677.	Group VI.[12]	N.M.A. AF30.
Glengyre.	NW987649.	Group VI.	S.1949-3.
Knocktimn Hill.	NW983698.	(?).	Kel. 1955-96mv.
Little Genoch.	NW970707.	Group VI.	S.1945-403A.
KIRKCOWAN PARISH			
Locus Unknown.	NX34/60.	Group VI.	N.M.A. AF260.
Drummore.	NX329593.	(?) Group VI.	N.M.A. AF331.
Drummore.	NX329593.	(?) Group VI.	N.M.A. AF332.
KIRKINNER PARISH			
Airies Moss.	NX404688.	Felspathic grit.	N.M.A. AF330.
Barnbarroch, Whaup-hill.	NX401514.	Group VI.	D.1961-20.
Culbae Fm.	NX388489.	(?) Group IX.	Kel. 1910-117a.
Kirkinner (near).	NX422515.	Group VI.	N.M.A. AF1016.
KIRKMAIDEN PARISH			
Auchabrick.	NX101419.	Group VI.	N.M.A. AF236.
Grennan.	NX124394.	Group VI.	N.M.A. AF326.
High Curghie.	NX131375.	Group VI.	N.M.A. AF237.
High Curghie.	NX131375.	Group VI.	N.M.A. AF238.
High Stock.	NX101341.	(?).	N.M.A. AF213.
Kildonan Moss.	NX065511.	Group VI.	S.1953-15.
Killiness.	NX146353.	(?).	N.M.A. AF234.
Entrenchment, Mull of Galloway.	NX145307.	Felspar phenocrysts in grey ground.	N.M.A. AF150.
Muntlock.	NX119337.	Group VI.	N.M.A. AF334.
Port-a-Yew (near Entrenchment).	NX143309.	(?) Group VI.	N.M.A. AF410.

12 Possesses a hafting mark.

LESWALT PARISH			
Locus Unknown.	NX00/63.	Group VI.	Kel. 1955-96.
Auchmotterock.	NW995606.	Group VI.	Kel. 1895-3a.
Glaik Fm.	NW996597.	(?).	Kel. 1895-3b.
Glenstockadale.	NX017618.	Group VI.	Kel. 1895-9.
High Mark Fm.	NW967644.	Group VI (utilised fragment).	Kel. 1896-115.
Lochnaw Estate.	NW99/63.	(?) Group VI.	N.M.A. AF672.
MOCHRUM PARISH			
Landberrick Hill Top.	NX364456.	Group VI (rough-out with chips).	N.M.A. AF640.
Landberrick.	NX364456.	Cast—(by working technique Group VI).	Kel. 1955-96.
Moormains.	NX353444.	sst.	N.M.A. AF638.
South Barsalloch.	NX356414.	Grey gritstone.	N.M.A. AF932.
NEW LUCE PARISH			
Gleniron.	NX194602.	Group VI.	N.M.A. AF32.
OLD LUCE PARISH			
Locus Unknown.	NX18/57.	(?).	Kel. 1955-96ne.
Locus Unknown.	NX18/57.	(?).	Kel. 1955-96na.
Locus Unknown.	NX18/57.	(?).	Kel. 1955-96nb.
Locus Unknown.	NX18/57.	(?).	Kel. 1955-96nd.
Locus Unknown.	NX18/57.	Group VI* (utilised fragment).	Kel. 1955-96mw.
Locus Unknown.	NX18/57.	(?).	Kel. 1955-96mz.
Locus Unknown	NX18/57.	Group VI (utilised fragment).	Kel. 1955-96nh.
Balcarry.	NX203554.	(?).	Kel. 1955-96.
Drochduil, Dunragit.	NX153568.	(?).	Kel. 1955-96nc.
E. of Drochduil, Dunragit.	NX153568.	(?).	Kel. 1955-96ns.
Dunragit Schoolhouse.	NX150575.	(?).	Kel. 1955-96nq.
Dunragit Council Scheme.	NX154575.	Group VI	D.1961-54.
Genoch.	NX137566.	Group VI.	Kel. 1955-96.
"Glenluce."	NX20/57.	Greywke.	N.M.A. AF636.
"Glenluce."	NX20/57.	sst.	N.M.A. AF24.
"Glenluce."	NX20/57.	Group VI.	N.M.A. AF33.
"Glenluce."	NX20/57.	Gritstone.	N.M.A. AF208.
High Torrs.	NX136559.	Group VI.	N.M.A. AF110.
Knockdoon.	NX155553.	Group VI.	Kel. 1955-96.
Knockdoon.	NX155553.	Group VI.	Kel. 1955-96.
Knockdoon.	NX155553.	Group VI.	Kel. 1955-96.
Knockdoon.	NX155553.	Group VI (group of 20 fragments from polished axes).	Kel. 1955-96.
Loddanagapple.	NX122545.	(?).	N.M.A. AF149.
"Luce Sands."	NX13/53.	Group VI.	D.1966-111.

"Luce Sands."	NX13/53.	Group VI.	D.1965-46.
"Luce Sands."	NX13/53.	Greywke.	N.M.A. AF327.
"Luce Sands."	NX13/53.	Group VI (waste flake).	S.1954-88.
"Luce Sands."	NX13/53.	Group VI.	S.1967-81.
"Luce Sands."	NX13/53.	Group VI.	S.1967-87.
"Luce Sands."[13]	NX13/53.	(?).	N.M.A. BH7924-8008.
"Luce Sands."	NX13/53.	Fine grained blue-grey ground with phenocrysts.*	D.1967-606.
Mid Torrs.	NX136559.	Greywke.	N.M.A. AF 154.
Mid Torrs.	NX136559.	sst.	N.M.A. AF155.
Mid Torrs.	NX136559.	(?).	N.M.A. AF156.
Mid Torrs.	NX136559.	Group VI.	Kel. 1955-96.
Mid Torrs.	NX136559.	Greywke.	Kel. 1955-96.
Mid Torrs.	NX136559.	Gritstone.	S.1945-4A.
Stairhaven.	NX208539.	Group VI (found with fragments of Peterborough ware in a cairn).	S.1966-9.
Star Site, Luce Sands.	NX132551.	Group VI.	Kel. 1955-96.
Star Site.	NX132551.	Group VI.	Kel. 1955-96.
Star Site.	NX132551.	Group VI.	Kel. 1955-96.
Star Site.	NX132551.	Group VI (material from this site includes at least 49 fragments of Group VI material. All of which show signs of being fragments of polished axes).	Kel. 1955-96.
Torrs.	NX136559.	Group VI.	Kel. 1955-96.
Torrs.	NX136559.	Group VI (material includes 57 small fragments or chips of Group VI material. All appear to be fragments of axes. One of the fragments is a very coarse scraper made from the core of an axe).	Kel. 1955-96.

PENNINGHAME PARISH

Carty Port.	NX431626.	Gritstone.	N.M.A. AF573.
Home Fm.	NX380693.	(?) Group VI.	N.M.A. AF572.

13 This collection of axes has not been examined by the writer but it is hoped that they will be included as an Addendum in some future volume of these Transactions.

PORTPATRICK PARISH			
Cairnpat.	NX053560.	Group VI.	S.1957-8.
Cairnpat.	NX053560.	Group VI.	S.1963-6.
Portpatrick.	NX001542.	(?).	S.1945-17A.
SORBIE PARISH			
Orchardton.	NX458498.	(?) Group VI.	N.M.A. AF333.
Sorbie Tower.	NX451470.	Group VI.	D.1961-20-3.
STONEYKIRK PARISH			
Locus Unknown.	NX09/53.	Micaceous sst.	N.M.A. AF25.
Locus Unknown.	NX09/53.	Fine-grained blue-grey ground with phenocrysts. (cf. Axe from "Luce Sands.")	H. B1914-190.
Locus Unknown.	NX09/53.	(?).	H. B1914-189.
Locus Unknown.	NX09/53.	(?) Group VI.	N.M.A. AF151
Culmore.	NX103523.	Group VI.	N.M.A. AF623.
Float.	NX065481.	Felspar phenocrysts in pale grey ground.	N.M.A. AF315.
Freugh.	NX116550.	Group VI (utilised fragment).	Kel. 1955-96.
Freugh.	NX116550.	Group VI.	N.M.A. AF506.
Freugh.	NX116550.	Group VI.	N.M.A. AF322.
Kirklaughline.	NX043507.	Group VI. (WIG 2). x/H.	D.1945-1.
Kirklaughline.	NX043507.	Group VI.	N.M.A. AF34.
Kirklaughline.	NX043507.	Group VI (utilised fragment).	Kel. 1955-96ng.
Kirkmabreck.	NX099480.	(?).	N.M.A. AF637.
"Sandhills."	NX11/53.	Group VI (found with sharpening or polishing stone).	N.M.A. AL39.
Stoneykirk (near).	NX110523.	(?).	Kel. 1955-96nu.
Three Mark Fm.	NX080518.	(?).	Kel. 1955-96.
Three Mark Fm.	NX080518.	Group VI.	N.M.A. AF534.
Two Mark Fm.	NX073523.	(?) Group VI.	N.M.A. AF152.
Two Mark Fm.	NX073523.	Group VI.	N.M.A. AF153.
West Freugh.	NX101545.	Group VI.*	Kel. 1955-96mx.
West Freugh.	NX101545.	Group VI.*	Kel. 1955-96mu.
West Freugh.	NX101545.	Group VI.*	Kel. 1955-96nj.
West Freugh.	NX101545.	Group VI.	Kel. 1955-96nk.
WHITHORN PARISH[14]			
Locus Unknown.	NX44/42.	Micaceous greywke but not Group XV. (WIG 1). x/H.	D.1934-28.

14 Among the collections in the Ministry of Public Buildings and Works' Museum at Whithorn Priory are some 7 complete or re-used axes with fragments of another 6. 11 of the items are possible Group VI material and the remainder are miscellaneous unidentifiable gritstones. The axes were presented to the Museum by a Mr Wm. Conliffe, of Newton-Stewart.

Locus Unknown.	NX44/42.	Group VI.*	Kel. 1955-96mt.
Balcray.	NX457383.	Group VI. (utilised fragment).	Kel. 1955-96np.
Balsmith Wood.	NX460391.	Group VI.*	Kel. 1955-96mr.
Chapelheron.	NX456416.	Group VI.	N.M.A. AF29.
Falhaar.	NX469388.	Group VI.	Kel. 1955-96.
Shaddock.	NX477392.	Pinkish-buff crinoidal limestone.	D.1963-47.

PARISH NOT KNOWN

Stair Estates.	Group VI.	S.1964-71.
Stair Estates.	Group IX.	S.1964-56.
Stair Estates.	Group VI.	S.1964-70.
Stair Estates.	Group VI.	S.1964-64.
Stair Estates.	Group VI.	S.1964-57.
Stair Estates.	(?) Group IX.	S.1964-58.
Stair Estates.	(?) Group IX.	S.1964-60.
Stair Estates.	(?).	S.1964-62.
Stair Estates.	(?) Group IX.	S.1964-66.
Stair Estates.	Felspathic grit.	S.1964-29.
Stair Estates.	Group VI.	S.1964-72.
Stair Estates.	Group VI.	S.1964-69.
Wigtownshire.	Group VI.	N.M.A. AF507.
Wigtownshire.	Group VI.	N.M.A. AF452.
Wigtownshire.	Schist.	N.M.A. AF451.
Wigtownshire.	Group VI.	N.M.A. AF502.
Wigtownshire.	Group VI.	S.1945-405A.
Wigtownshire.	Group VI.	S.1951-25.
Wigtownshire.	Group VI.	S.1945-19A.
Wigtownshire.	Group VI.	S.1968-26.
Wigtownshire.	sst.	S.1968-27.
Wigtownshire.	Group VI.	Kel. 1955-96.
Wigtownshire.	Group VI.	Kel. 1955-96no.
Wigtownshire.	Group VI.	Kel. 1895-87a.
Wigtownshire.	(?)	S.1945-2A.
Wigtownshire (found by L. M'L. Mann's correspondent Beckett of Stoneykirk).	Group VI.	Kel. 1955-96nn.
Wigtownshire (found by L. M'L. Mann's correspondent Beckett of Stoneykirk).	Group IX.	Kel. 1955-96nl.
Wigtownshire.	sst.	S.1945-9A.
"Found in Galloway."	Group IX.	D.1961-24.

BEAKER POTTERY IN SOUTH-WEST SCOTLAND

By J. N. GRAHAM RITCHIE

This paper is intended to complement the recent studies of the Food Vessel and Cinerary Urn pottery of south-west Scotland published in these Transactions.[1] The lay-out of this paper does not follow that of the preceding contributions in this series as the present position of research on Beaker pottery in Britain is rather different from that of other types of second millennium pottery. Beaker pottery has, in the past, been studied more intensively than have other types, possibly because a number of the styles indicate the arrival of peoples whose ceramic traditions have a recognisable European ancestry. Abercromby, the outstanding pioneer in the study of this class of pottery, published his results in a number of individual papers culminating, in 1912, in the publication of his two classic volumes on the Bronze Age pottery of Great Britain, which also include Food Vessels and Cinerary Urns.[2] Crichton Mitchell prepared a complete **corpus** of the Scottish Beaker material in 1933.[3] The nomenclature of the various types of Beaker has changed over the years, but as the historical background of the terminology has recently been examined by Piggott and Tait, it need not be discussed here.[4] In the present paper the terminology devised by Clarke in the most recent re-assessment and classification of Beaker pottery has been employed throughout[5] and the complete **corpus** of Beaker pottery compiled by Clarke makes it unnecessary to illustrate again all the pottery from the region.[6] A number of sherds, discovered in the course of excavations, have been fully published in the resultant reports and it would be superfluous to duplicate Longworth's catalogue of the Kirkburn pottery (No. 16) or Miss M'Innes' work on the material from Luce Sands (No. 36).[7] Greater stress has, however, been laid on the sites on which Beaker pottery has been found and on associated small finds than on details of style and decoration. The local distribution (Fig. 1) and context of Beaker finds are examined first, the sites associated with Beaker ware at Court Hill, Dalry (No. 3) and Muirkirk (Nos. 8-12) are then discussed, and finally there is an overall consideration of the types of Beakers represented in the south-west region. The Beakers from this area belong mainly to three of Clarke's types namely All-Over-Cord (AOC), European Bell (E) and Northern (N). Reference to individual sites will be found in the catalogue (**infra** p. 139). It may also be noted that a number of the illustrations are reconstructed drawings from representative sherds.

1 **TDGAS,** xliii (1965), 25 ff.; xlv (1968), 80 ff.
2 **PSAS,** xxxviii (1903-4), 323 ff.; **Bronze Age Pottery of Great Britain and Ireland** (1912).
3 **PSAS,** lxviii (1933-4), 132 ff.
4 Piggott, S., in **Culture and Environment** (ed. Foster and Alcock; 1963), 53 ff.; Tait, J., **Beakers from Northumberland** (1965), 9 ff.
5 **Palæohistoria,** xii (1966), 179 ff.; **Current Archæology,** ii (1969), 67 ff.
6 Clarke, D. L., **Beaker Pottery of Great Britain and Ireland** (1970).
7 **PSAS,** xcvi (1962-3), 107 ff., 122 f.; xcviii (1963-4), 40 ff., 54 ff., 78 ff.

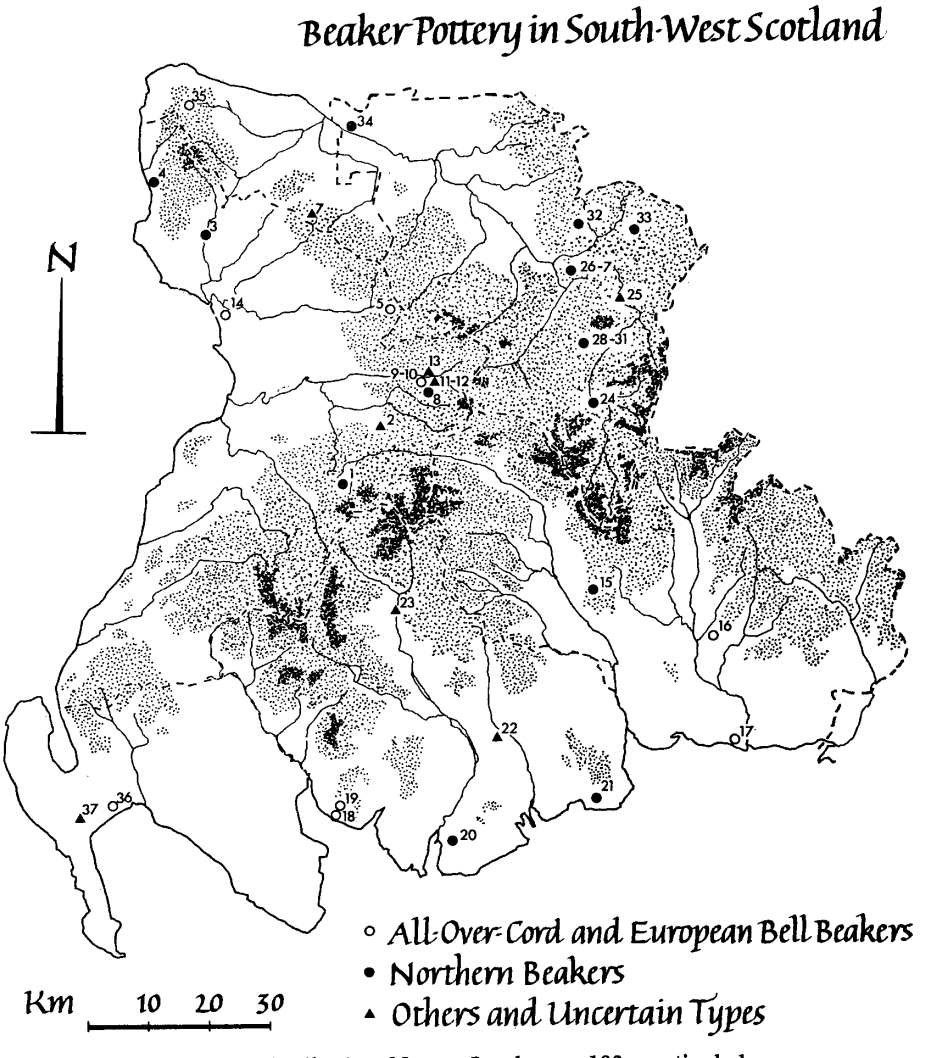


Fig. 1—Distribution Map. Land over 183 m stippled.

The mass of Beaker pottery from Luce Sands (Wigtownshire) makes this the most productive single area in the region. The material consists mainly of sherds of the two primary Beaker types namely All-Over-Cord and European Bell (No. 36); the presumably large scale settlement of this area by the earliest makers of Beaker pottery in the south-west is discussed later. The Royal Commission's **Inventory** of the Wigtownshire monuments, published in 1912, records only two finds of 'urns and fragments of pottery' from cairns; the

'urn' from a cist in a cairn at Shennanton was destroyed by the finder;[8] in a cist at Carsecreugh the inhumations of a woman and a young child were associated with an urn 'shaped like a flowerpot, horizontally ribbed, about 6 inches high, and estimated to hold three choppins.'[9] The pot fell to pieces after the discovery, and, because of its shape and the horizontal ribbing, it is perhaps more likely to have been a Food Vessel. The lost vessel from Stoneykirk (No. 37) is also difficult to classify; it was discovered in a pocket of sand and contained a jet necklace of 187 disc beads as well as a triangular jet toggle.

From Kirkcudbright, Beaker pottery has been discovered at the chambered cairns of Cairnholy I and II (Nos. 18 and 19), and in cists at High Banks Farm (No. 20), and Mainsriddle (No. 21); the Beaker from Stroangassel (No. 23), found in the west bank of the Water of Ken, has no association. Two sherds, which have been described as Beaker ware, were discovered in the central cist of the cairn at Mollance (No. 22) together with a Food Vessel. There is very little Beaker pottery from Dumfriesshire apart from the material from Kirkburn (No. 16) and a sherd of AOC ware from a sand dune site at Newby Hills (No. 17); a cist in a cairn at Auchencairn (No. 15) contained a Beaker which accompanied what may have been an inhumation burial. A cist at Mouswald, discovered in 1946 in a cairn or barrow, contained an 'urn' with a cremation burial; the 'urn,' shaped like a flower pot, 'fell into pieces and dust, and the fragments were scattered by children.'[10]

The Beaker pottery from Ayrshire and Renfrewshire illustrates a similar range of types and associations to those from the three southern counties. All-Over-Cord ornamented Beakers have been discovered at Shewalton (No. 14), Gryfe (No. 35), Loudon Hill (No. 5), Merkland Knowe (No. 6) and Muirkirk No. 2 (No. 10). Burial or ritual deposits have been found at Court Hill, Dalry (No. 3), Largs (No. 4) and Muirkirk (Nos. 8-13). The finds from Lanarkshire are, apart from the vessels in the cairn at Limefield (Nos. 28-31) and the unassociated pots from Drowsy Brae (No. 25) and Lanarkmoor (Nos. 26-7), all from individual deposits, Crawford (No. 24), Mossplant (No. 32) and Wester Yardhouses (No. 33).

Court Hill, Dalry, was a large mound, measuring about 27.4 m in diameter and 4.5 m in height, which was excavated in 1872 before it was engulfed by the debris of a nearby pit. Two features were found on the old ground surface beneath the mound, and their chronological sequence has been the subject of discussion. A rectangular timber structure with carefully shaped wooden uprights (four timbers, in pairs opposite each other, were squared and had a regular groove on one side) has been interpreted both as a Neolithic ritual enclosure

8 **RCAMS Wigtown,** 40 f., No. 100.
9 **AHCAW,** vii (1889), 103 f.; **PSAS,** ix (1870-2), 517 f. **RCAMS Wigtown,** 129, No. 373; **PSAS,** lxviii (1933-4), 189, No. 284.
10 **TDGAS,** xxiv (1945-6), 19 f.

and as a building of Dark Age date. According to the former argument the mound is a Neolithic round barrow, while the corollary of a Dark Age date is that the mound is a motte. The second feature found beneath the mound was a small stone cairn, about 3.05 m in diameter, which covered a pit containing

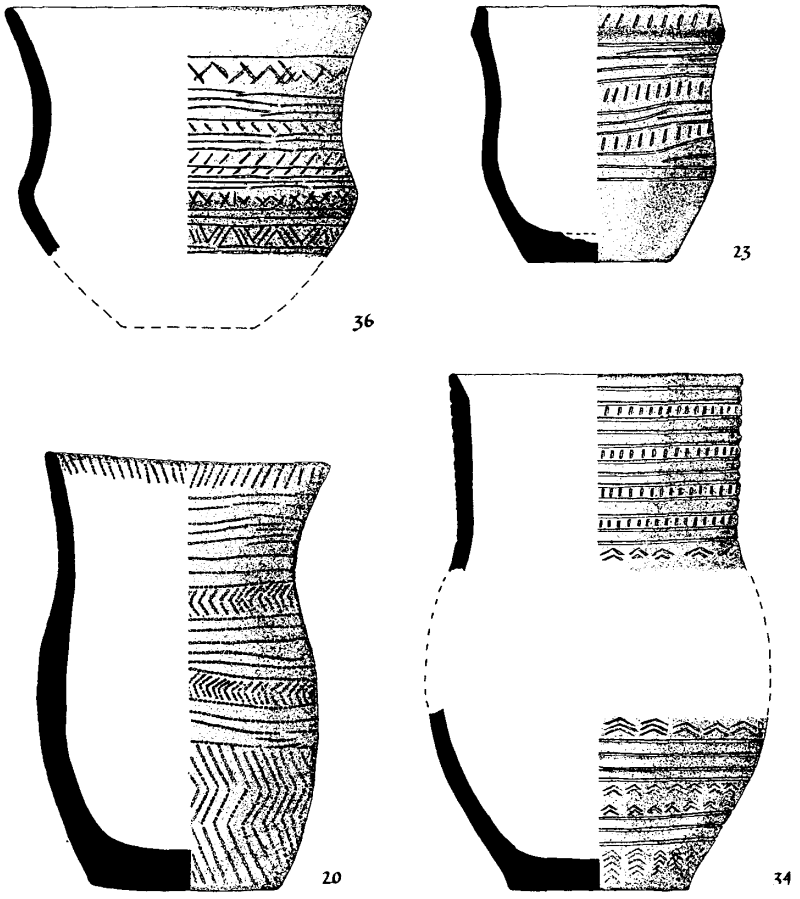


Fig 2—36, Knockdoon, Luce; 23, Stroangassel; 20, High Banks Farm; 34, Victoria Park, Glasgow (scale 1 : 3).

a Beaker in fragments (No. 3) and a piece of burnt oak. The interpretation of the timber structure and the mound thus depends on the stratigraphical position adopted for the Beaker cairn. It is extremely unlikely that, had the burial been inserted into an existing mound, it would have been dug below the old land surface, and the addition of the covering cairn would have been both unnecessary and impossible. Certainly the excavator considered that the

small cairn was overlain at a later date by the earthen mound covering the timber structure, and his conclusion is supported by the fact that the top of the burial pit was coincident with the old land surface. The fragment of blackened oak which was found in the burial pit was likened to the stakes of the wooden enclosure but it seems most likely that it is evidence of disturbance at the time of the building of the tumulus as the excavator suggested. The careful shaping of the timbers of the wooden structure suggests a Dark Age rather than Neolithic date.

The three sites at **Muirkirk** where Beaker pottery has been found stand on the lower slopes of Cairn Hill between the March Burn and the Proscribe Burn and at heights between 230 m and 290 m O.D. Following the reports of the excavations the sites are numbered 1 to 3; No. 1 and No. 2 were excavated in the autumn of 1913 and re-explored in 1924, and No. 3 examined in 1919 and again in 1924. The excavation reports suggest that the sites were 'hut-circles' and this interpretation was accepted by Childe. In recent years, however, there have been alternative suggestions that the structures might be cairn-circles, ring-cairns or enclosed cremation cemeteries. In this discussion of the three sites it will become clear that the disturbed nature of the sites makes any firm re-interpretation impossible at this remove. No. 1 stands rather more than 275 m O.D. and about 1.6 km south of Wellwood House and appears to have consisted of a bank of stones some 0.46 m wide enclosing an area about 5.6 m in diameter. Apparently within this area and extending beyond the bank, was 'a rough pavement of water-worn stones of all shapes, most of a weight which a man could carry,' with 'a large quantity of small stones, and debris, which filled the spaces between the uneven stones and made a more or less even floor.' There seems little doubt that were this discovered today it would not be described as the pavement of a house but as a low cairn. The remains of 'a fireplace paved with flat stones, with others set on edge to form a back,' found rather off-centre may perhaps be interpreted as a disturbed cist, while the fragments of a single Beaker (No. 8), found 'near the fireplace,' may have accompanied a burial.

Nos. 2 and 3 stand together at a height of about 230 m O.D. and about 670 m and 730 m SSE of Wellwood House respectively. At No. 2 a similar 'wall,' or bank, and 'pavement' are recorded, although, presumably because of medieval disturbance, these were not so well preserved; the site is about 12.2 m in diameter. Beneath what are described as 'rough cobblestones,' a layer was discovered 'consisting of clay and gravel firmly compacted and strewn with charcoal.' Sherds representing perhaps fourteen pottery vessels (No. 10, EGA 5-9) were found when this 'floor was taken up and carefully passed through the riddle.' A setting of flat stones was discovered which was covered by a layer of 'black and red charred material,' and a pit measur-

ing 0.56 m in diameter and 0.30 m in depth was found to be filled to the brim with charcoal and cremated bone. In the central area, though not in the exact centre of the site, a circular pit about 1.23 m in diameter was discovered. It was filled to a depth of about one metre with stones, some of which were fire blackened; excavation continued beneath this to a depth of about 1.8 m, and at about 1.35 m in depth was a thin layer of carbonised vegetable material. The Beaker (No. 9) is said to have been found at the bottom of the pit.

This site may be compared with two others, namely the enclosed cremation cemetery at Weird Law (Peeblesshire) and the low cairn at Chatton Sandyford

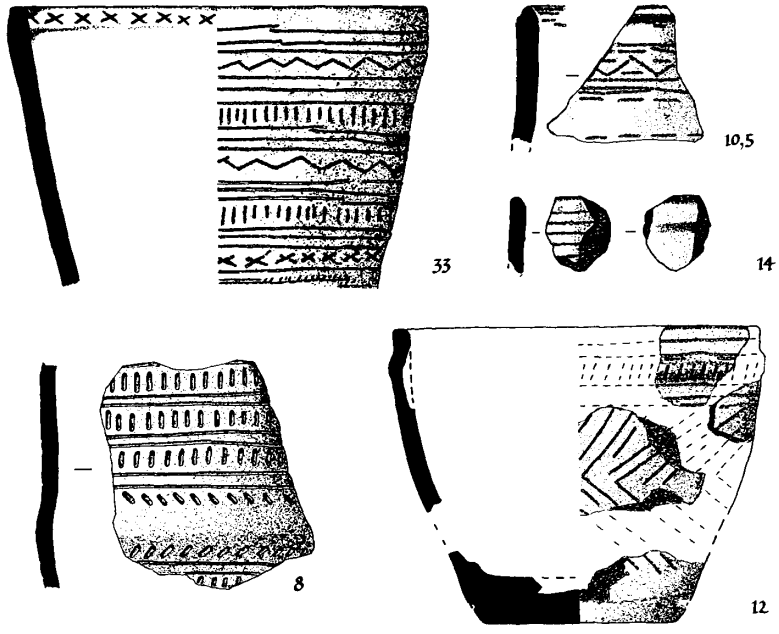


Fig. 3—33, Wester Yardhouses; 10, 5 Muirkirk No. 2; 14, Shewalton; 8, Muirkirk No. 1; 12, Muirkirk No. 3 (scale 1 : 3).

(Northumberland).[11] The internal areas of both Muirkirk No. 2 and Weird Law, enclosed by stone banks, are almost identical; the basal layer, ' strewn with charcoal,' at the former is comparable to the burnt debris found beneath the stone mound at the latter. The single pit containing charcoal and calcined bones at Site No. 2 may be closely matched by a number of examples at Weird Law. The deep burial pit at Site No. 2 may, on the other hand, be compared with a deep grave, 1.8 m in diameter and 1.5 m in depth, found in the cairn

11 **RCAMS Peeblesshire,** 64 ff., No. 109; **PSAS,** xcix (1966-7), 93 ff.; **Archæologia Aeliana,** 4th ser., xlvi (1968), 5 ff.

at Chatton Sandyford. This pit, partly cut into bed-rock, was filled with stones and earth and contained, at the bottom, a Beaker which had presumably accompanied a burial. A radiocarbon date of 1670 ± 50 B.C. (GaK-800) was obtained for the immediately preceding phase of the Chatton Sandyford sequence. In style, the Beaker found at the bottom of the Muirkirk pit (No. 9) appears to be later than the other vessels from this site (No. 10), and the span of the site may be from early in the second millennium, suggested by AOC and E wares, to a date closer to that of the Chatton Sandyford radiocarbon determination.

Site No. 3, situated about 105 m E. of No. 2, is also described as a ring of stones enclosing an area some 10.4 m by 7.3 m and covered by earth, turf and stones to a height of about 0.6 m. On a clay 'floor' similar to that recorded at Site No. 2, Beaker and Food Vessel sherds (Nos. 11-12), a flint flake, as well as patches of charcoal and quantities of calcined bones were discovered. Two small circular pits were found during the original excavation and, in 1924, underneath a setting of stones on the clay 'floor' a cremation pit was discovered, similar in size to that at No. 2, filled with charcoal and calcined bones.

The individual features of these three sites were originally interpreted in terms of habitation sites and, although an attempt has been made to show their essentially ritual and funerary nature, it is unlikely that they can be positively classified until new excavations of similar sites have been undertaken. No. 2 has been paralleled to the enclosed cremation cemetery at Weird Law, and the cremation pit and the clay 'floor' at No. 3 suggest that this belongs to the same type of site. It may tentatively be suggested that No. 1 is a type of ring-cairn.

All-Over-Cord Beakers (AOC) are characterised by Clarke as 'low, broad, bell-shaped beakers' sometimes with 'narrow mouths and cordoned or collared rims';[12] the decoration consists of the impression of a two-strand cord over the complete outside surface of the pot, and often a few lines of cord impression are added to the inside of the rim. Complete vessels of this type have been recorded at Luce Sands, but at all the other sites in the south-west only sherds survive (Nos. 5, 6, 10, 14, 16, 17, 19, 35). **European Bell Beakers** (E) are similar in shape to the AOC but carry a wider range of decorative motifs made by impressions of a short-toothed comb; the ornamental styles represented in the south-west include all-over-horizontal comb impression (Nos. 10, 18, 19), clearly allied to AOC wares, and zoned decoration with lattice, slanting lines and pendant triangles (Nos. 10, 36). No complete E Beaker survives in this area, but AOC and E styles form the greatest mass of material in the south-west, because of the large number of sherds from Luce Sands. Beakers belonging

12 **Palæohistoria, xii (1966), 185.**

to these groups have been found on three types of sites, settlement areas (Luce Sands, Shewalton, Gryfe and possibly Newby Hills), chambered cairns (Cairnholy I and II), and at ritual or burial sites (Kirkburn and Muirkirk No. 2). The sand dune sites at Luce and Shewalton probably indicate the earliest habitation sites in the region of a people who came originally from the Rhine Delta and may date to just after the beginning of the 2nd millennium. It has recently been suggested that the European Bell Beakers reached Britain at the same

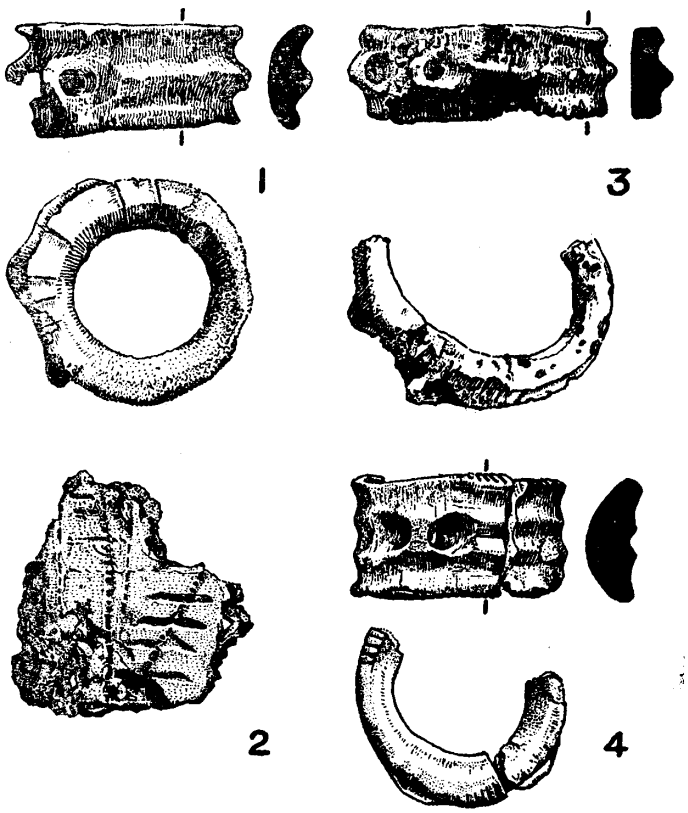


Fig. 4—1, 2 Mainsriddle, Bone ring and Beaker; 3, 4 Bone rings from Broomend of Crichie and Clintery, Aberdeenshire (scale 1 : 1), after **PSAS,** xc (1956-7), 230, fig. 6.

time as, or rather later than, AOC Beakers.[13] The preference of the earliest Beaker settlers for sand dune sites may be illustrated for example from the west of Scotland,[14] East Lothian,[15] Northumberland,[16] and Gwithian, Layers

13 **loc. cit.,** 186.
14 **Man,** xxviii (1927), 173 f.
15 **PSAS,** xlii (1907-8), 270 ff.
16 Tait, **op. cit.,** 12, 15 f.

7 and 8, Cornwall.[17] This preference for settlement in areas of dune and links cannot merely indicate a choice of site influenced by the ease with which small craft may be beached, though this may well have been important initially. The Gwithian excavations (Layer 5) suggest that certainly at a date after the middle of the second millennium B.C. sophisticated forms of agriculture might have been carried out in the light well-drained sandy soil.

The finding of European Bell Beaker sherds (E) at Cairnholy I and of E and AOC sherds from Cairnholy II emphasises the idea that the arrival of newcomers did not at once change the way of life of south-west Scotland. Piggott and Powell note that the deposition of these vessels, already in fragments, contrasts with the secondary insertions of burials with complete Beakers at other sites;[18] the blocking of Cairnholy I did not take place until after the deposition of the Beaker sherds and the nearby Peterborough ware, plano-convex flint knife and a scatter of cremated bone. The association of Peterborough ware and an AOC Beaker in an individual burial at Drumelzier (Peeblesshire), cist No. 1, was noted by Miss M'Innes;[19] in contrast to the chambered cairn ritual at Cairnholy I, the Drumelzier deposit illustrates the rite of single-grave burial under a cairn. Ritual deposits of sherds of pottery, charcoal and stones in pits at Kirkburn (No. 16) may probably be compared to the Muirkirk site No. 2. At both sites sherds of AOC and comb impressed vessels are present as well as finger-nail impressed ware and undecorated sherds, possibly of a more domestic nature. There is no evidence to suggest that the Kirkburn pits were funerary, but the absence of purely midden material argues that they probably contained ritual depositions; if this interpretation is correct it seems that the ritual area was not enclosed by any permanent feature. The ritual area at Muirkirk No. 2 was defined by what appears to have been a bank of stones, and within this area a similar range of sherds was discovered (No. 10) representing about fourteen vessels including AOC and E Beakers, finger-nail and coarse ware as well as sherds of vessels decorated with circular impressions belonging to Miss M'Innes' Class III.[20] The deposition of sherds of a number of vessels within the area enclosed by the bank, possibly on more than one occasion, may well be comparable in purpose to the deposition of such material in pits. AOC or E Beaker pottery have been associated with cremated bone material (and in some cases charcoal) at Cairnholy I, Kirkburn, Pits 27, 29 and 51, and Muirkirk No. 2; although in no case is the association certain, it suggests that cremation was the burial rite of the earliest settlers or was at least adopted by them.

The distribution of AOC and E Beakers in south-west Scotland, predominantly along the Solway coast, suggests that the incomers making these

17 **Proceedings of the West Cornwall Field Club,** vol. ii, No. 5 (1961), 202.
18 **PSAS,** lxxxiii (1948-9), 133.
19 **Ibid,** xcvii (1963-4), 52 f.; **RCAMS Peeblesshire,** 52 f., No. 14.
20 **PSAS,** xcvii (1963-4), 52

styles of vessels had made their way up the Irish Sea. The position of such sherds within the chambered cairn Cairnholy I (No. 18) suggests that, when they arrived, the tradition of collective burial was still strong; Muirkirk site No. 2 and Kirkburn illustrate, however, different rituals involving the deposition of sherds possibly with cremations. In south-west Scotland there is little reason to associate the arrival of the earliest users of Beaker pottery with inhumation burials in cists nor with the earliest use of copper or bronze. The evidence such as it is suggests than an economy similar to that of the builders of the earlier chambered cairns was followed. The areas of settlement are shown by the finds from the dune sites, while the sites at Muirkirk and Kirkburn may have been the ritual sites for small communities living nearby.

A number of the remaining Beakers fall within Clark's **Northern** groups,[21] which broadly include the Short-Necked-Beakers of Piggott's terminology and the B/C and C divisions of Crichton-Mitchell's. With only twelve pots, it is probably unwise to draw many conclusions from the further chronological and stylistic divisions into which the Northern groups may be broken down, but they may be noted here; **Northern/Middle Rhine** — Court Hill, Dalry (No. 3), **Primary Northern British/Dutch** — Lanarkmoor (No. 26), **Developed Northern** — High Banks Farm (No. 20), Wester Yardhouses (No. 33) and **Late Northern** — Auchencairn (No. 15), Crawford (No. 24), Lanarkmoor (No. 27), Limefield (No. 28), possibly Mainsriddle (No. 21), Mossplant (No. 32) and Victoria Park, Whiteinch (No. 34). Fragmentary Beakers are difficult to classify, but it seems probable that the sherds from Beoch (No. 1), Haylee, Largs (No. 4) and Muirkirk No. 1 (No. 8) might also represent vessels of the later Northern groups. The earlier Beakers (Nos. 3 and 26) are tall graceful vessels with a slack S-profile, and the later groups show the development of both shape and ornament. The earliest vessels appear to date to around 1700 B.C. and indicate a second wave of incomers currently thought to come from the Middle Rhineland and Netherlands as their group names suggest. As the main brunt of such movements was felt on the East Coast, it is hardly surprising that the distribution of these Beakers in the south-west should be in Lanarkshire with no example from Wigtown and only two from Kirkcudbright (Nos. 20-21) and one from Dumfriesshire (No. 15).

The burial rite of the makers of these types of Beaker appears to have been individual inhumation and cremation; although few remains of inhumed burials survive (Nos. 4, 20, 21), it is possible that empty cists or burial pits may originally have contained inhumations (Nos. 3, 15, 33). Cremated bone was associated with Nos. 24, 28. Burials in cists were found with Northern Beakers at Nos. 4, 15, 20, 21, 24, 33 and, although it is not possible to be certain, the following may be disturbed cist burials (Nos. 1 and 8); No. 3 was

21 **Palæohistoria, xii (1966), 189 ff.**

deposited in a small pit with a stone-lined bottom. Cairns, some of a composite nature, cover Beaker burials at several sites (Nos. 1, 3, 8, 15, 24, 28—31, 32, 33). There are, however, few associated finds and the flint knife, for example, with No. 15 is not a diagnostic type. The decorated cover-slab from Wester Yardhouses (No. 33) is discussed **infra** p. 137, but as the motifs appear to be part of an originally larger scheme there is some doubt whether the carvings are the work of the builders of the cist. The bone ring from Mainsriddle (No. 21) was examined by Stevenson at the time of the discovery and the two other examples from Beaker contexts in Scotland (Broomend of Crichie and Clintery in Aberdeenshire) were fully discussed (Fig. 4).[22] These are Scottish versions of belt- or pulley rings, often in jet, which are known from Beaker burials in England. Bronze rings similar to that from Crawford (No. 24) have been considered by Piggott and Stewart, and by Simpson;[23] the Crawford example is a useful indication of the lower chronological range of Northern Beakers, for a date contemporary with Wessex I, in about the 16th century B.C., has been suggested. The finds from Limefield (Nos. 28-31), including the V-bored jet button with Beaker No. 28, will be discussed in the forthcoming report.

It is thus with the arrival of the makers of Beakers of the Northern styles that individual burial becomes predominant, and it seems likely that inhumed burials tend to be associated with earlier vessels than those accompanying cremated remains, although, as it is inferred from a small sample, this need not be of general validity. The introduction of copper and bronze metallurgy is presumably to be associated with the makers of Beakers of this group, but in only one case has a bronze object actually been discovered with a Beaker burial (No. 24). There is little point in comparing the distribution of the three Northern Beakers in Dumfries and Galloway (Nos. 15, 20, 21) with that of the earliest bronze work of the area.[24] The concentration of early bronze work between Luce Bay and Loch Ryan is probably not the result of intensive activity of the makers of Beaker pottery, although it is difficult to link such a concentration with other pottery styles for, apart from the AOC and E types, only one late Beaker (infra p. 134, No. 37), one Beaker-Food Vessel and three complete Food Vessels have been found in this area.[25] It may be noted, however, that the chronological range of the early metal work included on Coles's distribution map extends to approximately 1350 B.C.,[26] and that the majority of the finds are narrow-butt flat axes which are certainly later than the **floruit** of the AOC and E Beaker types.

22 **PSAS,** xc (1956-7), 229 f.
23 **Inventaria Archæologica** G.B. 26 and 27 (1958). **Studies in Ancient Europe** (ed. Coles and Simpson; 1968), 198.
24 **TDGAS,** xlii (1965), 65 ff., fig. 2.
25 **PSAS,** xcvii (1963-4), 56, Nos. 166 and 165; **TDGAS,** xlii (1965), 36, No. 65; 30, No. 62 and Nos. 70-1; Nos. 63 and 64 are small AOC Beakers **PSAS, loc. cit.,** 78, Nos. 183 and 184.
26 **TDGAS, loc. cit.,** 65 ff., fig. 2.

The small dagger from Mid Torrs, Glenluce, belongs to a type which must be broadly contemporary with the Northern Beakers, and it has been suggested that the dagger dates to the 17th or 16th century B.C.[27]. The other two daggers come from Carlochan Cairn and Dunragit, the former from a cist in a cairn, apparently a very massive one, and the latter from what may have been a ruined cist with a cremation; a date in approximately the 16th century has recently been suggested for such daggers, and two examples, one in Fife and another in Angus, were associated with late incised Beakers.[28]

The remaining vessels do not fall neatly into the groups already discussed; the Beakers from Drowsy Brae, Shieldhill (No. 25) and Stroangassel (No. 23) have no context as they were found in gravel or sand slopes. The decoration of both contains bands of short vertical strokes bounded by incised lines which may be compared to Nos. 8 and 34, on which the zones of vertically stacked chevrons may also be found. The size and layout of the decoration of the small vessel from Stroangassel (No. 23) may ally this vessel to the European Bell Beaker group but the incised nature of the ornament suggests that it is rather later in style. The lost vessel from Stoneykirk (No. 37) presents a problem, and it is difficult, if not impossible, to assign it to any distinct group; it is possible, however, that the original report implies a more waisted profile than the bucket shape recently suggested. It is here accepted that it is a late Beaker, but it might also be described as an example of the Beaker-Food Vessel class discussed by Simpson;[29] the small chevrons both above and below the two main zones, which consist of lattice infilled lozenges, certainly accord better with late Beaker than Cinerary Urn decoration. The Stoneykirk vessel contained a necklace of 187 jet or lignite disc beads and a triangular toggle or pendant with a single central perforation. The disc beads are carefully graded in size and it appears that the complete necklace has survived; the present reconstruction shows the largest beads in the middle of the string with the beads gradually decreasing in size with the smallest on either side of the triangular toggle. In south-west Scotland disc beads have been found in association with a Beaker burial at Balnabraid (Kintyre, Argyll),[30] and Mann records a number of disc beads from the sands at Luce and Shewalton.[31] At Brown Head (Arran) fourteen disc beads were associated with a Food Vessel and a small flint flake,[32] but with Food Vessel deposits jet necklaces more frequently comprise both disc and fusiform beads.

Finally there are the vessels from Muirkirk, Sites No. 2 and 3 (Nos. 9-10, 11-12); the sherds from the clay 'floor' which covered the central area of Site

27 **loc. cit.**, 71 f., fig. 4, 5.
28 **loc. cit.**, 71, fig. 4, 7; Henshall, A. S., in **Studies in Ancient Europe** (ed. Coles and Simpson, 1968), 176, 190 ff., Nos. 13 and 17.
29 **TDGAS**, xlii (1965), 35 ff.
30 **Ibid.**, xliv (1967), 89.
31 **PSAS**, xxxvi (1901-2), 588.
32 **op. cit.**, 120 ff., fig. 43.

No. 2, consisting of AOC, E, finger-nail ornamented Beakers and others, have already been noted, and it is possible that the sherds from Site No. 1 should be included among the Northern groups. The Beaker (No. 9) from the central pit at Muirkirk No. 2 is decorated on the upper part of its surface by lines of comb impressions over the rim and round the neck, a band of incised chevrons divides this from the decoration of the lower part which consists of vertical lines of incised chevrons.[33] The sherds of a vessel decorated with slanting lines of finger pinching from Site No. 3 (No. 11) may also represent a late Beaker; the small vessel (No. 12) found on the same site is most probably an Irish Bowl Food Vessel but no totally convincing parallels can be found for these pots, nor can a firm date be suggested for the sites in question. The sherds of AOC and E Beakers from Site No. 2, show that a date in the early second millennium is not impossible, while the vessels at Site No. 1 and 3 fall more readily into the second quarter of the millennium.

The Beaker pottery of south-west Scotland has thus been divided into two main groups with a number of uncertain and possibly later examples; All-Over-Cord and European Bell Beakers form the earliest group with a mainly coastal and dune distribution, as well as inland sites at Kirkburn, Loudon Hill and Muirkirk. The second group, to which the various Northern types belong, has been found mainly in the eastern part of this region; five of the vessels in the south-west occur in situations close to the coast, but it is interesting to note that nine Beakers have been found at heights of over 180 m O.D. In Lanarkshire and Ayrshire their distribution is complementary to that of Food Vessel pottery, some of which may probably be contemporary. The absence of Beaker pottery (apart from No. 33) in the Clyde Valley below Lanark suggests that the continuity of tradition envisaged by Simpson is accompanied by a movement from the higher ground into the valley.[34] In cultural terms the Beaker pottery of the south-west provides a link between the agricultural communities of the third millennium and the metal-using economies of the second millennium. The makers of the earlier Beakers seem, on the evidence of Cairnholy I, to have arrived at a time when collective burial in chamber tombs was still practised; the makers of Northern Beakers, with their own traditions of individual burial, may have heralded the beginning of metal-using in south-west Scotland.

ACKNOWLEDGMENTS

The writer is indebted to Dr D. L. Clarke, Peterhouse College, Cambridge, for his assistance during the preparation of this paper. The majority of the Beakers are in the National Museum of Antiquities of Scotland, Edinburgh, and the writer is indebted to Miss A. S. Henshall and Mr D. V. Clarke for their help and patience throughout the preparation of the corpus. Mr R. B. K. Stevenson and the Society of Antiquaries of Scotland have

33 cf. Beaker from Bushmills, Co. Antrim, **Antiquaries Journal**, xiii (1933), 295 ff., pl. xl.
34 **TDGAS**, xlii (1965), 26, 37 f., fig. 1.

kindly allowed use of the block which forms Fig. 4. The assistance of Miss E. Scott, Ordnance Survey and Mr J. G. Scott, Glasgow Art Gallery and Museum, is also gratefully acknowledged. The museum authorities at Dumfries, Kirkcudbright, Stranraer, Kilmarnock and Greenock made their facilities available during the collection of material. Mr Alastair MacLaren has kindly contributed the note on the Wester Yardhouses slab and has permitted the inclusion of the Beakers from Limefield in advance of his own publication. The assistance of Mr I. G. Scott during the preparation of the drawings, and of Mr I. Larner, National Museum of Antiquities, and Mr J. Keggie and Mr G. Nicol, RCAMS, for the photographs is gratefully acknowledged.

The Society is indebted to the Civil Service Department for a grant towards the cost of this paper.

APPENDIX I

THE DECORATED SLAB FROM WESTER YARDHOUSES, LANARKSHIRE

By ALASTAIR MACLAREN

The markings here described occur on the coverslab of a cist discovered under a cairn in 1871 by Mr James Bryce, tenant of Wester Yardhouses. The slab and the Beaker (p. 145, No. 33) found in the cist were presented to the Society of Antiquaries of Scotland in 1873, and both are now in the National Museum of Antiquities.

The slab, which is of red sandstone measuring 1.2 m by 0.8 m axially and 0.11 m in average thickness, bears a number of curvilinear and triangular designs, all executed in the pecking technique; the markings are all on what was the underside of the slab when in its original position covering the cist.

The curvilinear patterns comprise: (a) on the lower half of the stone as viewed on Pl. IX, a multiple ring figure of three rings; only the innermost ring (0.07 m in diameter) approaches a true circle in shape, the other two being oval (0.11 m by 0.13 m and 0.195 m by 0.23 m respectively); (b) in the centre of the upper portion of the stone two more ringed motifs, that on the left having three rings (0.08 m, 0.12 m and 0.18 m in diameter) and the other consisting of a single complete ring (0.075 m in diameter) accompanied by three irregular gapped circles now incomplete owing to the flaking of the surface of the stone at either end. The inner and middle gapped circles return and unite at their upper extremities; at its lower extremity the middle gapped circle merges at a sharp angle with the outer of a pair of roughly concentric arcs situated between the two ringed designs; (c) above and to the left of (b), some further motifs, now incomplete due to the fracture of the edge of the stone; they consist of a branching figure with a set of arcs on either side of it, three to the left and two to the right. It is possible that the lower member of the central branched design was originally attached to the triple ring figure of (b), but the flaking of the stone now makes this uncertain.

The triangular patterns consist of (d) a roughly equilateral triangle with sides measuring about 0.29 m in length and defined by a narrow pecked line, situated near the bottom right corner of the stone. Each angle of this large triangle has been pecked away to form three smaller triangles, thus leaving a plain trapezoid area standing in false relief; (e) a similar triangular design, situated near the top left portion of the stone. Rather smaller than (d), the sides of the major triangle in this case measure 0.26 m, 0.27 m and 0.28 m respectively; (f) just above triangle (e), a small design consisting of two solid pecked triangles disposed with their apices touching so as to resemble a bow-tie or hour-glass. Finally, a number of pockmarks, which occur near the right edge of the stone

above triangle (d), may be artificial, but if so, they do not appear to make any recognisable pattern.

As the curvilinear and triangular figures do not overlap at any point, and as there are no significant differences either in the technique of their execution or in the degree to which they have been affected by weathering, there seems to be no reason to regard them other than contemporary. It may be noted, indeed, that the whole of triangle (d) and the upper right quadrant of the multiple ring motif (a) have been smoothed away uniformly either by weathering or by rubbing while the remainder of the designs, though shallow (not more that 0.005 m deep), still remain reasonably fresh and crisp.

While the triangular designs are without parallel in Scotland, the occurrence in Scotland of ring markings (without central cups, radial grooves, etc.) has been listed and briefly discussed recently.[1] To this list should be added a stone from the broch at Carn Liath, Sutherland, now in Dunrobin Castle Museum.[2] This now gives a total of some 18 examples of such ring markings known in Scotland, ten of them associated with short cists (six on coverslabs), three from chambered tombs, two from brochs, one from a recumbent stone circle, and two on detached slabs of unknown association. Multiple circles are used profusely in the varied repertoire of Irish Passage Grave art,[3] but they also occur, though far more rarely, in association with cup-and-ring markings. The Wester Yardhouses slab, however, with its combination of curvilinear and triangular motifs belongs to the Passage Grave art tradition and can be matched very closely in the Boyne tombs of Ireland, especially at Newgrange and Knowth.[4] The arrangement of multiple ring symbols close together like a pair of spectacles is almost certainly derived from the human face. Pattern (b) on the Wester Yardhouses stone may be seen as a degenerate and schematized version of a pair of eyes, the arcs between the multiple circles portraying the nose, and the incomplete motifs (c) above possibly representing eyebrows or eyelashes.

There is no evidence that the decoration is to be regarded as the work of the cist-builders; only one other Beaker cist out of the large number found in Scotland has a decorated slab associated with it.[5] Moreover, the markings on the Wester Yardhouses slab represent only part of what was originally a more extensive decoration before the stone was fractured. This would indicate at least that the markings were made before the stone was incorporated in the cist, and possibly a considerable time previously.

1 **PSAS,** xcviii (1964-5), 211 f.
2 **Archæologia Scotica,** v, pt. I (1873), 105; pl. xvi, n. I am grateful to Miss A. S. Henshall for bringing this stone to my notice.
3 For a classification of Passage Grave art and its origins, see Piggott, **The Neolithic Cultures of the British Isles** (1954), 208 ff.
4 Newgrange: O'Kelly, **Illustrated Guide to Newgrange** (1967), especially pls. 6-7, 19, 21, 27a and 31; O'Ríordáin and Daniel, **New Grange and the Bend of the Boyne** (1964), especially pls. 20-22, 26 and 35; O'Kelly, **Antiquity,** xlii (1968), 40, pl. viiia. Knowth: Eogan, **PRIA,** 66c (1968), 347, fig. 30 and pl. xlvii; **Antiquity,** xli (1967), pl. xliii.
5 Catterline, Kincardineshire, **PSAS,** lviii (1923-4), 27 ff.

APPENDIX II

CATALOGUE

The following catalogue lists the counties of south-west Scotland alphabetically, and the pottery within each county is also listed in this way. A concordance has been provided of references to the previous lists of Beaker ware: Abercromby in **PSAS,** xxxviii (1903-4) and **BAP** (1912); Crichton-Mitchell in **PSAS,** lxviii (1933-4); Clarke, **Beaker Pottery of Great Britain and Ireland** (1970). Clarke's numbering of the Muirkirk material has not been included as the numbering of the sites appears to be incorrect. There is an Addenda at the end of the Catalogue.

The abbreviations used in the catalogue and footnotes are as follows:

AHCAW—Archæological and Historical Collections of Ayrshire and Wigtownshire.
BAP—Abercromby, J., **Bronze Age Pottery of Great Britain and Ireland,** vol. I, 1912.
DES—Discovery and Excavation in Scotland.
GAGM—Glasgow Art Gallery and Museum.
NMA—National Museum of Antiquities, Edinburgh.
PPS—Proceedings of the Prehistoric Society.
PRIA—Proceedings of the Royal Irish Academy.
RCAMS followed by County, **Royal Commission on the Ancient and Historical Monuments of Scotland** followed by county of **Inventory.**
TDGAS—Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society.

The abbreviations used in the concordance are as follows: AOC, All-Over-Cord; C, Cairn; CC, Chambered Cairn; Ci, Cist; Cr, Cremation; E, European Bell; FN, Fingernail; FV, Food Vessel; I, Inhumation; N, Northern.

Ayrshire

1. BEOCH, Dalmellington. NS 522084. About thirty sherds of coarse gritty ware, possibly from a disturbed cist in a cairn; four small rim sherds with slight inward bevel, wall sherds 7 mm thick. Decoration by impression with a small circular implement, three horizontal lines below the rim, zones of vertical lines and possibly triangles or chevrons: NMA EP 55. **PSAS,** lxxii (1937-8), 235 ff., 241; Childe, V. G., **Scotland Before The Scots** (1946), 101, No. 101a.
2. BORLAND CASTLE HILL, Cumnock. NS 585173. The rim sherd of a Beaker, found in a sand pit in 1939, cannot be traced; it was described as fine red ware, estimated rim diam. 5 in. (127 mm), S-profile, decorated with shallow incised lines running roughly parallel and horizontal: Lost. **PSAS,** lxxiv (1939-40), 136 f.; Childe, **op. cit.,** 101, No. 102a.
3. COURT HILL, Dalry. NS 292495. Probably with a burial in a pit below a small cairn (covered by a secondary mound, possibly a motte); tall vessel with sinuous S-profile, fine ware, pinkish-brown in colour. Four lines of comb impression inside rim, slightly everted rim with a cordon beneath, exterior decorated with zones of horizontal comb and slanting impressions forming rough chevrons, base fringed with pendant triangles infilled with horizontal impressions; 230 mm in height, 166 mm rim diam., 90 mm base diam.: NMA EG 11. **PSAS,** x (1872-4), 281 ff.; **AHCAW,** i (1878), 53, 55 ff.; **PPS,** xxxi (1965), 46; **TDGAS,** xlvi (1969), 113, fig. 4; Clarke, **op. cit.,** 112.
4. HAYLEE, Largs. NS 208585. A short cist was discovered in 1906 on the estate of Haylee; constructed of sandstone slabs with the 'crevices stuffed with clay'; inhumation burial with a Beaker, only a single fragment of which survived, 'the rest having

crumbled into small fragments.' Beaker described by Abercromby; reddish brown colour, fine grit; two plain, three ornamented bands 'two parallel line-chevrons, spaced with their opposite angles united by vertical lines,' vertical fringe of horizontal strokes; **c.** 229 mm in height, 170 mm max. diam.: Lost. **Proceedings of the Royal Society of Edinburgh,** xxvi (1905-6), 283 f., 292 f.; **Archæologia,** lxii (1910), 246 f.; **BAP, 37.**

5. LOUDON HILL. NS 6037. Single sherd with fine cord decoration, from the Roman Fort: NMA EG 95. **PSAS,** lxxxvii (1952-3), 202.
6. MERKLAND KNOWE. Location not known. Single sherd from the base of an AOC Beaker, and single wall sherd of a finger nail ornamented vessel 9 mm in thickness; no details of the discovery are known: NMA unregistered No. 1898.
7. MOYNE MOOR, Neilston. NS 476532. Possible Beaker sherds of uncertain type. Coll. M. Macneill. The NGR shows this to be in Renfrewshire. **DES (1965),** 14; **DES (1966),** 15.
8. MUIRKIRK, Site No. 1. NS 665241. From a possible cairn, four fragments of brown gritty ware decorated with pairs of incised lines with vertical impressions between them, and slanting impressions bounding the main zones: NMA EGA 106. **PSAS,** xlviii (1913-14), 373 ff., figs. 1 and 4; lxi (1926-7), 270, fig. 4.
9. MUIRKIRK, Site No. 2. NS 670251. Beaker found at the bottom of the large pit in the central area of a site which may be interpreted as an enclosed cremation cemetery; pinkish buff surfaces, sandy ware, medium grits, slanting lines of comb impressions round the rim, slightly slanting lines round the neck, faint traces of incised chevrons in the central zone, vertical lines of roughly incised chevrons round the lowest zone; 160 mm in height, 145 mm rim diam., 75 mm base diam., partly restored: NMA EGA 1. **PSAS,** xlviii (1913-14), 373 ff., fig. 5; lxi (1926-7), 270, fig. 5; lxiii (1928-9), 95, fig. 58.
10. Sherds of vessels found in the clay 'floor' within the enclosing bank, described in order of their NMA catalogue number EGA 5-9.

    5, comb decorated Beaker sherds, red burnished ware firmly impressed with a square toothed comb; one rim and one body fragment of the same vessel; the surface of a third sherd is less clear; rim in **PSAS,** lxi (1926-7), 273, fig. 6, 1.

    6, cord impressed sherds, one rim sherd **(loc. cit.,** fig. 6, 2) and two small body sherds with less smudged impressions.

    6a, single sherd of red-brown crumbly ware, with blackened inner surface, exterior decorated with short slanting incisions, possibly finger nail impressions.

    6b, single sherd of a red-brown ware, well fired fabric with large grits, pitted exterior.

    7, small rim fragment of cord ornamented Beaker, two lines of impressions below rim on exterior and a single line on the inside, a slight cordon below the outer lines is decorated with a series of small round impressions **(loc. cit.,** fig. 6, 3).

    8, rim fragment of brownish ware with medium grits, flat rim, one boss and the beginning of another just beneath the rim **(loc. cit.,** fig. 6, 4).

    8a, several vessels appear to be included under this number including (i) at least eleven sherds of a large vessel, coarse ware between 9 and 11 mm in thickness, red outer, blackened inner surface, compact medium grit; (ii) two tiny sherds including a rim fragment, compact fine grit, slight beading of rim; (iii) fragment of comb decorated Beaker with two lines of impressions; (iv) fragment of well fired, compact reddish ware, medium grit; (v) three fragments of a thin crumbly red ware with a crazed outer and blackened inner surface.

    9, eight fragments of a large vessel, red-buff, gritty fabric, blackened inner surface; decorated with circular impressions; flat base with slightly raised centre **(loc. cit.,** fig. 6, 4); Clarke, **op. cit.,** 73 f., No. 1564, fig. 124. **PSAS,** lxi (1926-7), 270 ff.; lxiii (1928-9), 95, fig. 59.

MUIRKIRK, Site No. 3. NS 671251. Two pottery vessels were discovered within the enclosing bank of a possible cremation cemetery; No. 12 was found 'in a crevice between two stones,' a grey flint flake (NMA EGA 4), and a number of small flint chips were also found.

11. About 28 sherds of a pinkish-buff ware, with a brown inner surface, well fired, large grits, vertical lines of finger pinching, flattish rim with outer bevel and finger pinching beneath rim: NMA EGA 2.
12. About 21 sherds, probably belonging to a Food Vessel, pale buff surfaces, black gritty interior with large grits; although it is not possible to reconstruct the profile with certainty, fragments of rim, body and much of the base remains. Flat rim, slight outer thickening, two lines of horizontal comb impressions, low cordon with vertical impressions beneath these three lines of horizontal comb impressions, and finally vertical chevrons in the same technique fill the body of the vessel, flat base: NMA EGA 3. **PSAS,** liv (1919-20), 210 ff., lxi (1926-7), 274 f.
13. MUIRKIRK, Wellwood. NS 665261. The rim of a Beaker and four other fragments were discovered during the excavation of a cairn: Lost. **PSAS,** lvi (1921-2), 132, cairn No. 4; lxi (1926-7), 277, Site No. 9.
14. SHEWALTON MOOR. **c.** NS 3336. A number of sherds have been found in the sand dunes and in the course of quarrying for sand.
    Three fragments of AOC Beaker: Greenock Museum.
    At least five fragments of Beaker pottery; three AOC including one rim sherd with two lines of decoration inside the rim; and one abraded sherd possibly with comb decoration: Kilmarnock Museum SM 207-211. Abraded sherds, horizontal decoration: NMA EG 84.
    Sherds of Beaker found in sand quarry, NS 332367: Coll. Malcolm Macneill.
    PSAS, lxviii (1933-4), 179, No. 111; **DES (1965),** 14.

Dumfriesshire

15. AUCHENCAIRN, Closeburn. **c.** NX 943913. Cairn excavated in 1894 contained three cists, one with a Beaker and flint knife; Beaker now much restored with globular body and straight neck, buff ware, medium grit, wall 6 mm thick. Decoration by comb impression, bands of horizontal, vertical and slanting lines and zig-zags; the lowest zones consists of coarse impressions with an angular implement forming slanting lines; 264 mm in height, approx. 180 rim diam., 115 restored base diam.: NMA EG 51; flint EG 52. **PSAS,** 1 (1915-16), 152, fig. 1; **RCAMS Dumfries,** 35, No. 75.
16. KIRKBURN, Lockerbie. NY 130832. As the complete catalogue of the Beaker ware from this site has been fully published it is not repeated here. The techniques of decoration represented are cord impression, comb-stamp, incision and finger nail impression; undecorated ware is also present; finds in NMA EQ 645-717. **PSAS,** xcvi (1962-3), 122 f.
17. NEWBY HILLS. NX 169648. Single sherd of cord ornamented beaker, buff fabric, 23 by 16 mm and 18 mm thick, from a sand dune near the shore: W. F. Cormack, Lockerbie.

Stewartry of Kirkcudbright

18. CAIRNHOLY I, Chambered Cairn. NX 517538. Sherds of possible Beaker with Peterborough pottery in the blocking of the forecourt (NMA EO 820). Eight Beaker sherds, possibly comb impressed, on paving in chamber, pale red surface with fine micaceous grit (NMA EO 819); with flint knife and fragment of jadeite axe. **PSAS,** lxxxiii (1948-9), 119 f., Nos. 8 and 9.

CONCORDANCE

	PSAS xxxviii (1903-4)	*BAP*	*PSAS lxviii* (1933-4)	*Clarke*	*Cairn*	*Cist*	*Rite*	*Assn.*	*Type*
AYRSHIRE									
1 Beoch, Dalmellington ..	—	—	—	1557	C	?	—	—	?N
2 Borland Castle Hill, Cumnock	—	—	—	1556	—	—	—	—	Uncertain
3 Court Hill, Dalry	No. 74	Fig. 199	99	1558	C	—	?	—	N
4 Haylee, Largs	—	p. 37	110	1559	—	Ci	I	—	N
5 Loudon Hill	—	—	—	1555	—	—	—	—	AOC
6 Merkland Knowe	—	—	—	1560	—	—	—	—	AOC, FN
7 Moyne Moor	—	—	—	—	—	—	—	—	Uncertain
8 Muirkirk, Site No. 1 ..	—	—	106	See *supra*	C	?	—	—	N
9-10 Muirkirk, Site No. 2 ..	—	—	100 101-5	„	—	—	Cr	—	AOC, E, Late
11-12 Muirkirk, Site No. 3	—	—	107-8	„	—	—	—	Flint	FN, FV
13 Muirkirk, Wellwood	—	—	109	„	C	—	—	—	Unknown
14 Shewalton Moor	—	—	111	1568-70	—	—	—	—	AOC
DUMFRIESSHIRE									
15 Auchencairn	—	—	151	1614	C	Ci	?	Flint	N
16 Kirkburn	—	—	—	1615-6	—	—	—	—	AOC, E
17 Newby Hills	—	—	—	—	—	—	—	—	AOC

STEWARTRY OF KIRKCUDBRIGHT									
18 Cairnholy I	—	—	—	1694	CC	—	—	—	E
19 Cairnholy II	—	—	—	1695-6	CC	—	—	—	AOC, E
20 High Banks Farm	—	map p. 35	224	1699	—	Ci	I	—	N
21 Mainsriddle	—	—	—	1698	—	Ci	I	Bone Ring	N
22 Mollance	—	—	—	1697	C	Ci	—	FV	Uncertain
23 Stroangassel	—	—	—	—	—	—	—	—	Incised
LANARKSHIRE and GLASGOW									
24 Crawford	No. 141	Fig. 213	228	1702	C	Ci	Cr	Bronze Ring	N
25 Drowsy Brae, Shieldhill ..	—	—	—	1706	—	—	—	—	Incised
26-7 Lanarkmoor	No. 121	Fig. 208-9	226-7	1704-5	—	—	—	—	N
28-31 Limefield	—	—	—	—	C	—	Cr	Jet Button	N
„	—	—	—	—	„	Ci	?	Flint	Incised
„	—	—	—	—	„	—	Cr	—	Impressed
„	—	—	—	—	„	Ci	?	Flint	Uncertain
32 Mossplant	No. 40	Fig. 186	225	1700	C	—	—	—	N
33 Wester Yardhouses	—	p. 36	229	1701	C	Ci	?	Cist Cover	N
34 Victoria Park, Whiteinch ..	—	—	—	1703	—	—	—	—	N
RENFREWSHIRE									
35 Gryfe Reservoir	—	—	—	—	—	—	—	—	Uncertain
WIGTOWNSHIRE									
36 Luce Bay	—	—	—	—	—	—	—	—	AOC, E
37 Stoneykirk	—	p. 36	278	1803	—	—	Cr	Jet Beads	Incised

19. CAIRNHOLY II, Chambered Cairn. NX 517540. About 110 small sherds were found together on rough paving in the SW corner of the antechamber; at least six vessels are represented, including AOC and rim cordon, E Beakers with horizontal comb impression and impressed ware: NMA EO 833-8. **PSAS,** lxxxiii (1948-9), 127 f., No. 2.
20. HIGH BANKS FARM. **c.** NX 704495. Cist (0.91 by 0.61 m), five-sided with one end formed by two slabs at an angle, contained a Beaker with the remains of an inhumation burial; well fired, brown ware, rim decorated internally and externally with slanting comb impressions, two bands of impressed chevrons form the narrowest and broadest parts of the profile with horizontal lines of impressions between, the lowest zone of ornament is formed by impressed vertical zig-zags; 143 mm in height, 110 mm rim diam.; 74 mm base diam.: Kirkcudbright Museum. **PSAS,** xxv (1890-1), 24 f., fig. 1; **RCAMS Kirkcudbright,** 123, No. 236; **TDGAS,** xlii (1965) 25, 39, the Beaker cist was not under a cairn, nor were the Food Vessels **loc. cit.,** Nos. 26 and 27, found in the same cairn.
21. MAINSRIDDLE. NX 947565. Beaker accompanied a crouched inhumation in a cist; six tiny fragments survive, red exterior, brown interior and dark crumbly fine grit, about 7 mm in thickness, fine linear comb impression; associated with a bone ring: Dumfries Museum. **DES (1957),** 19; **TDGAS,** xxxv (1956-7), 112 ff; **PSAS,** xc (1956-7), 229 ff.
22. MOLLANCE, Castle Douglas. NX 777663. The central cist of a cairn some 16 m in diameter contained a Food Vessel (**TDGAS,** xlii (1965), 39, No. 21) and two small sherds of fine ware. The sherd examined, measuring 25 x 18 mm and 9 mm thick, has a sandy buff outer and a darker inner surface and is of a fine gritty compact ware; the outer surface has been carefully smoothed but not decorated. Although it seems likely that this fragment is Beaker ware, it is safer to draw no conclusions from these tiny sherds: coll. J. C. Wallace, Edinburgh. **TDGAS,** xxx (1951-2), 159 ff.
23. STROANGASSEL. NX 605873. Small Beaker found in the left bank of the Water of Ken; well fired red exterior, brown to buff interior, a low cordon beneath the rim; lines of incised decoration, three bands of short vertical strokes divided by zones of horizontal incisions; 101 mm in height, 96 mm rim diam., 56 base diam.: Dumfries Museum. **DES (1967),** 32; **TDGAS,** xliv (1967), 223.

Lanarkshire

24. CRAWFORD. **c. NS** 9321. A label accompanying this Beaker states "Urn—found on the Castle Farm—Parish of Crawford, Lanarkshire—near the Roman Road and several ancient Castle works. It was discovered in a neat stone cist, under a cairn of Stones. In the Cist was also found a Bronze Armlet sent herewith and two Bronze Spear Heads. This Urn was half filled with human bones half burned. It had a stone cover now lost. It is mentioned in the Stat. Act. of Scotland."

    The Beaker has a globular body and straight neck; reddish brown ware, medium grits. Rim slightly thickened internally, with criss-cross comb impressions on the inside; decoration on the neck consists of lines of horizontal incisions; on the body are two lines of triangles filled with vertical lines divided by a band of criss-cross motifs bounded by comb impressed lines; 153 mm in height, 131 mm rim diam., 87 mm base diam.; NMA EQ 138. Bronze ring, 75 mm overall diam., 12 mm thick, D-section: NMA EQ 139. **PSAS,** xvii (1882-3), 451; Anderson, J., **Scotland in Pagan Times, The Bronze and Stone Ages** (1886), 58 f.

    One of the bronze spearheads, said to have accompanied the Beaker, is in the NMA (DG 40); it is a basal-looped spearhead of Class E and is Middle Bronze Age in date. Anderson expressed doubt about the association of the spearhead and the

Beaker in 1883 and Coles does not include this doubtful association in his lists of bronzes. **PSAS**, xvi (1881-2), 147; xvii (1882-3), 96, fig. 7, 451 f.; xciii (1959-60), 78; xcvii (1963-4), 108, 143.

25. DROWSY BRAE, Shieldhill, Libberton. NS 982388. Beaker found in a gravel slope during road widening operations in 1911; red-buff, sandy ware with medium grits inward bevel to flat rim, which is decorated with incised criss-cross; straight neck decorated with zones of incised strokes bounded by incised horizontal lines; plain central band; zones of incised crosses at the broadest part and incised chevrons round the base; 170 mm in height, 135 mm rim diam.; 80 mm base diam.: NMA EG 92. **PSAS**, lxxxv (1950-1), 183.

LANARKMOOR. c. NS 9043. Two Beakers found in a sandpit and presented to the National Museum in 1864.

26. Sinuous S-profile, brownish-buff ware medium grits; decorated with lines of horizontal comb and lines of criss-cross impressions, fringing the base are upright triangles infilled with fine horizontal comb impressions. 173 mm in height, 125 mm rim diam., 74 mm base diam.: NMA EG 18.
27. Tall vessel with upright neck, red ware fine fabric with medium grits, decorated with fine comb impressions; metopic decoration comprising upright bands with vertical bands between, or upright, chevron-filled and plain zones, bounded by criss-cross lines. Lower zones contain chevrons and small metopic divisions just above the base; 183 mm in height, 128 mm rim diam., 86 mm base diam.: NMA EG 19. **PSAS**, v (1862-4), 214.

LIMEFIELD. NS 924315. Mr Alastair MacLaren has kindly given permission for these vessels to be included in this catalogue in advance of the publication of the report of the excavation of the cairn; the finds will be deposited in the NMA.

28. Accompanying a cremation and a V-bored jet button in a shallow pit in the centre of the cairn, Beaker decorated overall with incisions, forming chevrons round the rim and at the belly, the upper part decorated by saltires with vertical bands of short strokes between them and bounded above and below by lines of horizontal stabbing; the lower part consists of arcading infilled with vertical incised lines; 200 mm in height, 145 mm rim diam., 80 mm restored base diam.
29. Beaker and a flint flake found in Cist 3; fine reddish-brown ware, decorated overall with stabbed impressions forming horizontal lines; 185 mm in height, 157 mm rim diam., 80 mm base diam.
30. Scattered sherds probably associated with a cremation burial around the central pit probably represent a Beaker with a rim diam. of 165 mm and wall thickness 9 mm; buff ware with rough outer surface and medium grits decorated with incisions forming a criss-cross pattern.
31. Sherds in Cist 4 represent two vessels, one is buff gritty ware with inward bevelled rim, wall thickness 10 mm decorated with rough impressions, the second is represented by a single sherd decorated with horizontal incisions; a flint knife and two flint flakes were found in the same cist which had presumably contained an inhumation burial.
32. MOSSPLANT, Carluke. NS 916515. Beaker found in 1810 in a cairn; funnel-shaped neck and globular body, buff ware, fine grits, decorated with whipped cord and comb impressions in bands of criss-cross and upright strokes with two plain zones; 179 mm in height, 148 mm restored rim diam., 75 base diam.: NMA EG 25.
33. WESTER YARDHOUSES. NT 005507. A small cairn containing a cist was discovered in 1871; complete Beaker filled with black earth in one corner, no sign of burial deposit. Cist covered by an elaborately decorated slab **supra** p. 137. Beaker originally about 230 mm in height but only a single fragment survives, rim diam. approx. 165 mm; buff surfaces with black interior and micaceous grits. Decoration consists of bands of horizontal comb impression or incision with bands of

zig-zag, criss-cross and vertical comb impressions between; rim slightly bevelled inwards and inside is a band of incised crosses: NMA EQ 165; cover slab EQ 166. **PSAS,** x (1872-4), 61 f.; Anderson, **op. cit.,** 88.

34. VICTORIA PARK, Whiteinch, Glasgow. NS 538672. Beaker found in 1886 during the clearing of overburden in a quarry at Victoria Park; two Food Vessels and a Cinerary Urn found on the same occasion (**TDGAS,** xlv (1968), 119, No. 130). The Beaker is fragmentary but approximately 205 mm in height, 116 mm rim diam., 72 mm base diam.; brownish buff ware, medium grits. Upright neck decorated with incised horizontal lines, in some cases infilled with short vertical strokes; globular body ornamented by short chevrons in vertical registers and incised horizontal lines between the zones: Old Glasgow Museum, Peoples' Palace, '13-49 c and e. Two contemporary letters and a drawing of the Beaker in the manuscript records of the Society of Antiquaries of Scotland, No. 314 were brought to the writer's attention by Mr J. G. Scott.

Renfrewshire

35. GRYFE RESERVOIR. **c.** NS 267718 and NS 288712-282711. Sherds of cord ornamented and impressed vessels. **DES (1965),** 34; **DES (1966),** 40.

MOYNE MOOR—See No. 7.

Wigtownshire

36. LUCE SANDS. Not included in this paper as a catalogue has recently been published, **PSAS,** xcvii (1963-4), 54 ff., 78 ff., Nos. 168-192. One Beaker is illustrated here as an example of the European Bell class (E) from Knockdoon, Luce, **c.** NX 1355. Four sherds survive including a large rim fragment and wall fragments; fine sandy ware decorated with comb impressions, horizontal bands of criss-cross, chevrons and slanting lines: GAGM W. Br. 1918.

37. STONEYKIRK. **c.** NX 0953. 'Urn' found upright in a pocket of sand with fragments of burnt bone, charred wood, flint, stone and a fragmentary axe head nearby. It contained sand, three fragments of charred wood, 187 disc beads of jet or lignite and a triangular toggle: GAGM LA 5719c. 'Urn' about 9 in. (230 mm) in height, 6 in. (153 mm) rim diam., 3.5 in. (90 mm) base diam., the measurements given for the profile—outwards from the rim for about an inch, then inwards for about 2 inches, then outwards for an inch, and thereafter tapering to the base—suggest a more waisted vessel than that reconstructed in **TDGAS,** xlv (1968), 128, fig. 8, No. 54. Decorated below the rim with incised chevrons, the pendant triangles thus formed were left blank while the upright triangles were filled with short strokes; two rows of incised latticed-lozenge motifs decorated the body of the vessels with the lower row smaller than the upper; a further zig-zag line is recorded immediately under the lower panels: Lost. **PSAS,** xxxvi (1901-2), 584 ff., fig. 1; **PSAS,** l (1915-16), 209, 238, fig. 3, 3 (beads); **TDGAS,** xlv (1968), 84, 109 f., No. 54.

ADDENDA

Several Beakers have been found or published since this paper was completed in December, 1969.

Lochhill, Chambered Cairn, Kirkcudbright, NX 969651: **DES(1970),** 29f.

Lochpatrick Mill, Kirkpatrick-Durham, Kirkcudbright, **c.** NX 7971: Inf. Mr A. E. Truckell.

Boat Farm Quarry, Thankerton, Lanarkshire, NS 981376: Inf. Mr D. V. Clarke.

Mid Gleniron I, Chambered Cairn, Wigtownshire, NX 187609: **TDGAS,** xlvi (1969), 48.

Plate III: Left, Court Hill, Dalry (No. 3). Scale approx. 1:3. Right, Muirkirk, Site 2 (No. 9). Scale approx. 1:2.

Plate IV: Left, Crawford (No. 24); Right, Drowsy Brae (No. 25). Scale approx. 1:2.

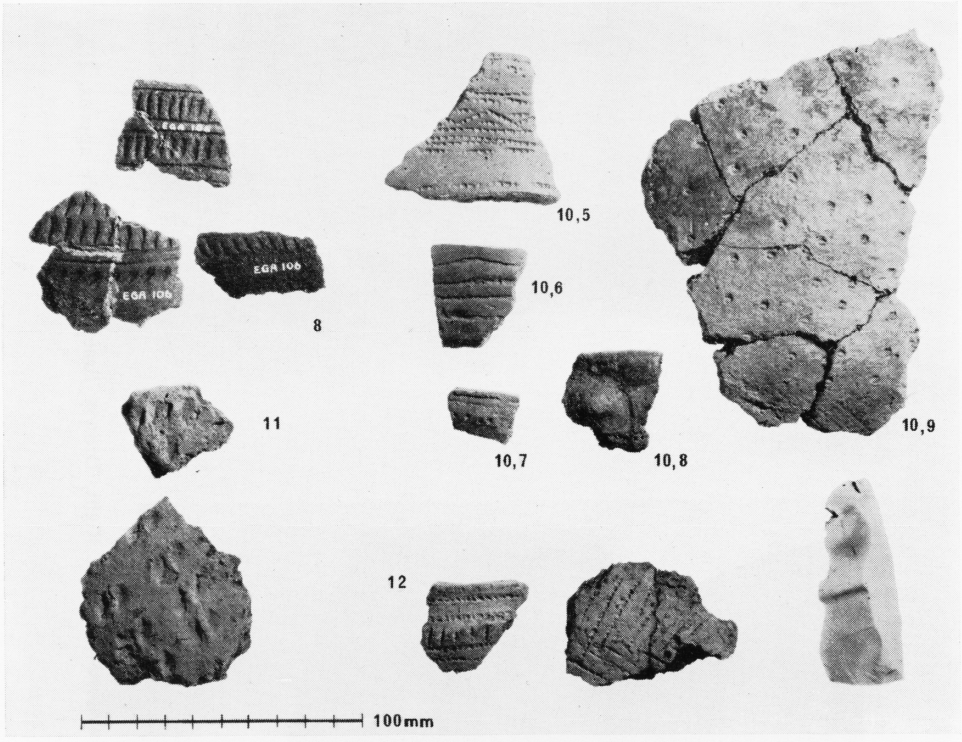


Plate V: Muirkirk, Sites 1 to 3

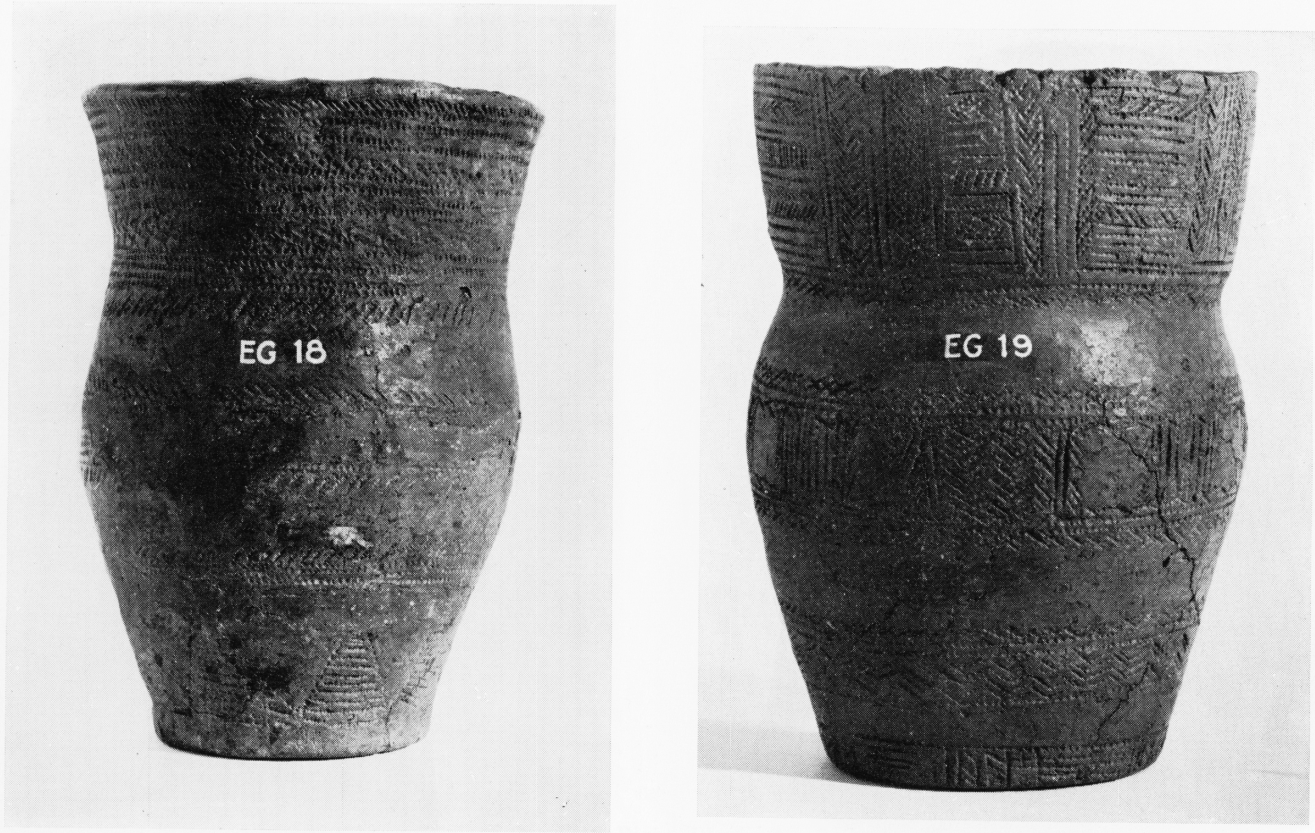


Plate VI: Lanarkmoor: Left, No. 26; Right, No. 27. Scale approx. 1:2.

Plate VII: Limefield: Left, No. 28; Right, No. 29. Scale approx. 1:2.

Plate VIII: Left, Mossplant (No. 32); Right, Wester Yardhouses (No. 33).
Scale approx 1:2.

Plate IX: Cist Cover from Wester Yardhouses (No. 33).

THE HEARTH TAX

By DUNCAN ADAMSON
Principal Teacher of History, Linlithgow Academy.

The Hearth Tax was authorised by the Scottish Parliament in 1690, to help to pay for the armies fighting against the Jacobites. Fourteen shillings Scots was to be paid for every hearth in the kingdom, except for those of the poor.[1] In some areas the collection was much easier than in others, but in the end, all but five counties were deemed to have paid: the five were Zetland, Orkney, Cromarty, Ross—and Dumfries.[2]

In the Record Office there are three lists, almost identical, which give the names of those in Nithsdale and Annandale who were supposed to pay. The first copy is dated 5th April, 1691. The third[3] copy, undated, was clearly intended as the official copy which would be transmitted to Edinburgh when the money had been collected. It is the first part of this copy which is printed here.

These lists were made up from a number of sub-collectors' lists, many of which have survived (for example, we are told the 1691 copy for the town of Dumfries was originally "in five hands"). With so much copying being done, it is not surprising that there should be some errors in transcription. The very first entry, for example, is the highly improbable "John Grive and Mr Waitter . . . l." In the first copy this was "John Grier, younger weaver." Similarly, the name "Rae" in the first list has been regularly altered to "Ker" in the third. In the third version the letter "w" never appears, but in some cases, for the sake of easier comprehension, I have altered an initial "u" to "w," as in the name Uilliam. In all other cases I have tried to keep the original spelling.

It is intended that the second part of the hearth tax should be published later. In this first part we have the hearths for Dumfries and some of the other Nithsdale parishes. Since Dumfries figures so prominently in the list this is one of the two aspects I have selected for special consideration, the other being a discussion of the county's population.

DUMFRIES

Apart from the poor, this list gives almost every house, with the head of the household, in Dumfries. One might imagine that there are a number of duplications—that the two entries for Homer Gillieson, for example, represent two residences (house and shop, for example) occupied by the same man. But there

1 The "poor" were those who received a testimonial from the kirk to that effect.
2 A considerable part of the money was paid. Robert Maxwell of Bearcroft sent the returns for some 1100 hearths in June, 1695, with a letter explaining that he was a substitute appointed by James Scott, now deceased, brother of John Scott of Rannellburn.
3 The second copy is virtually a rough copy of the first. The official copy's reference in the Record Office is GD 26/7/375/1. [Continuation of Footnote]

were in fact, two Homer Gilliesons (referred to as "elder" and "younger" elsewhere), and four different William M'Georges. It can safely be said that in this list we have the names of the great majority of the adult male population of Dumfries in 1691. But is it just a list of names? Can we tell anything about the people themselves? Naturally, we would not expect to find the Hearth Tax list pulsating with human interest—although at least one entry (No. 131) offers scope to the imaginative—but it does tell what part of the town (or parish) they lived in, the names of the neighbours, the size of their house, and sometims their occupation. From the appropriate registers, we can often find their marriages, their children, the names of their friends whom they brought as witnesses to the baptisms, and their deaths.

Apart from that, we are unlikely to get an insight into their characters unless they were in one of these categories: the rich and influential; those involved in disputes—usually with their neighbours; those wanting to make alterations to their houses; the sinners; the very poor; or the criminals. But then, a great many people, as we shall see, did belong to at least one of these groups. With the aid of the Hearth Tax and other records, we can also say a good deal about the town they lived in. Dumfries parish probably had a population of under 4000: the town itself would have about 500 less than the parish.

This population lived at an average of about five people to a household, roughly as shown in Table I, except that this misses out the houses of the poor. To those of us who are accustomed to thinking of 17th century Scotland as an impoverished country, and of Dumfries as a not especially flourishing town, it might come as a surprise to find that about one third of the houses in the burgh possessed more than one hearth—and so presumably at least two good sized rooms. Indeed, even making allowance for the poor, who presumably lived as a rule in one-hearthed houses, it would seem that something like half the population lived in these larger houses, on the assumption that the bigger houses would house more servants, and that the children of the wealthier citizens would be more inclined to live at home. However, there was a rather different pattern in the landward part of the parish, and in the rural parts of the county: fairly typical was the list for Craigs, with one large seven-hearthed mansion, and otherwise almost entirely single-hearthed houses. It is quite apparent that larger houses (i.e. two hearths or more) were far more common in the towns than in the countryside (this conclusion is supported by studying the distribution for Sanquhar, or the Hearth Tax returns in other parts of Scotland).

In Dumfries there were two comparatively wealthy areas, Lochmaben and Cross Quarters. An analysis of the quarters shows that Lochmaben quarter had by far the smallest proportion of single hearths, while most big houses (over three hearths) were in the Cross Quarter. In the Townhead and Kirkgate quarters, 71% of the houses had a single hearth and in Lochmaben and Cross quarters, 56%.

Was Dumfries a typical Scottish town? Table I gives a comparison with Linlithgow:

TABLE I

	No. of houses (incd. kilne, etc.)	% with 1 hearth	% 2	% 3	% Over
Linlithgow	593	69	14	7	10
Dumfries	531	63	21	8	7

By and large, the breakdown is similar. Dumfries had more houses with two or three hearths, Linlithgow more small and really big houses. A number of the large houses in Dumfries, of course, were the town houses of the local gentry—like the Earl of Nithsdale (six hearths) and the Laird of Hoddam (six hearths).

What sort of houses did the hearth list record? We know a great deal about this—and about a host of other matters—from the petitions to the town council. Here I must acknowledge my great debt to Mr Alfred Truckell who sought out for me summaries of these invaluable documents. The only reference to hearths, as such, is in 1709, when Dr George Archibald (151), Mrs Mitchellson (97) and others complained that many houses in that area were without hearths or chimney tops: women swept out burning ashes, and many of them kept their "fewell peitt" near their fires; only the previous month, Margaret Coltert's house (152) would have burnt down had the smoke not roused the people nearby. The area referred to was near the Friars' Vennel, where there had been a devastating fire in 1702.[4]

A little later we have a graphic description of a house occupied, before her death in 1710, by Helen Blyth, relict of John Herries, merchant (6). It consisted of a kitchen-chamber and a garret. The kitchen was full of smoke and rain water in wet weather. The floor was so uneven and full of holes that "neither stooll nor table can stand evenly yrupon." Likewise, the garret was neither wind nor water-tight. The chamber was 10 feet square, underground, without sunlight. Such air as came in was drawn through "a wood of hemlock." The petitioner who had recently taken over the house claimed that the chamber was so smoky that he had to go **out** of it. His complaint was that Helen Blyth had not kept the house in good repair. It would seem he was justified!

The petitions have frequent references to chimneys—usually complaining that their neighbour's is in danger of falling down on top of their own house. Another common cause of complaint is the unneighbourly positioning of " easing drops " and middens. However, it is fair to say that these complaints concern

4 By a "hearth" of course, Dr Archibald meant a proper fireplace. In many houses the fire would be in the middle of the floor, with a hole in the roof to let smoke out. The tax collectors would rate this as a hearth.

the worst houses. And even these imply some generally agreed standards. Obviously, a house was expected to have a fireplace and a chimney, and the chimney should be safe; sewage was supposed to be kept under control, floors supposed to be level, roofs supposed to be watertight. Many houses were built, at least in part, by stone. This was a good deal better than the hearthless and chimneyless cottage which was normal in the country districts. The majority of the townspeople may well have lived in some sort of comfort.

Besides telling us about the houses, the Petitions give us a picture of many of the townsmen in action, and one or two examples might be given for the interesting light they shed. Consider, for example, the references to John Duff. In 1702, John Duff of Troqueer was summoned for " unfree " trading. He stated that he only sold carrots, turnips and the like, and that all his predecessors except his father had been burgesses in Dumfries. Here, long before the Agricultural Revolution, we have an obviously casual reference to turnips. Later, in 1707, John Duff, workman, was imprisoned in the pledge-house for stealing malt from the town's mill. He said he was drunk, and offered in atonement to accept the post of common executioner, last held by Patrick Allan. He was accepted. However, the John Duff who appears in the Hearth Tax (372) was a different person, perhaps most interesting because of his name, which is sometimes Duff, or sometimes given as Mcilduf. There is a third version in December 1700, when James Mcleduff, son of John Mcleduff, alias Duff, elder, merchant, died, aged about 5 months. This was the third of his children to have died within two years, and this was nothing out of the ordinary. (The sequence was—April, 1698, died Agnes Duff, his daughter; November 1698, his daughter Isobel baptised; September 1699, daughter Nicolas died; July 1700, James baptised; December 1700, James died; September 1701 Lucie baptised; June 1703 Lucie buried).

Patrick Allan, the executioner, is missing from the Hearth Tax list. (His rent was paid by the town-council). He appears in more than one petition, but is recorded less dramatically than his son James, who has a paragraph to himself in the marriage register for 1696. James went to Ireland " at the time of the rising of the Irish there," and brought back with him Janet Vetch, a Scottish-Irish woman. After living together for eight years, and producing four children, it was discovered that they were unmarried.

Another who does not appear on the Hearth Tax list was George Adamson, baxter, perhaps then in Ferryport-in-Craig, who was some years later found guilty of bigamy.

One of the more unusual names in the Hearth Tax list is Thomas Goott (437) or Joat. In 1690, Joat was accused of vilifying his fellow dyer, George Mitchell of Brigend. In 1698, his wife, Agnes Bell was mentioned in connection with the beating she gave Thomas Bickmyre, the Burgh Officer, who lost " above

a mutchkin of blood." In this state he took some drink, became confused, offended the magistrates, was jailed, and lost his job.

Giving abuse to the magistrates was possibly the most commonly recorded crime. For some reasons, the Irvings seem to have been the commonest victims. A great many also found themselves in one of the pledge-houses when they fell into debt. Such, for example, was the fate of William Pickersgill (425) in 1704. He was only released on promising to assign all his property to John Irving (504?), convener of the Trades, and to his other creditors. However, the evidence is that Dumfries was a fairly peaceful town. In 1698, James Fraser, Castle (295), keeper of the prison keys, complained that since midsummer he'd had only vagabonds and a band of gypsies in his charge—who cost just as much to keep as persons of quality, but brought him no profit. It is about that time that another sort of crime begins to appear. In 1699 Isobell Gregson (spouse of James Henderson—379), Jean Gordon (spouse James Gordon elder, mert—517), Marion Cunningham (394) and others, were fined five merks apiece for buying butter before 2 p.m. on market day, despite the restrictions. The restrictions referred to were probably imposed to try to deal with the famine at that time.

It is impossible from these few examples to give a real idea of the extent to which the petitions describe the doings of the townspeople. In fact, roughly a third of the people on the Hearth Tax list have the same name as a person appearing in a petition within ten years. A sample study of the A surnames, using Sasines and registers of births, etc., shows it is possible to add information about each and every man on the list.

The names found in the Dumfries list are probably more or less what we should expect. The large number of McKinnells is a little surprising while some names are surprising by their absence—only one Douglas, and perhaps very few Kerrs. There are a number of Mac names, but Sargeant MckFarline (76) is the only one of them which suggests Highland ancestry. Of course, Highlanders in Dumfries might have adopted Lowland names, but also there are very few Highland Christian names—no Kenneths, Duncans, Donalds, Malcolms, Ewens, Murdos or Colins. One might have expected to find in a Covenanting area a number of Biblical names—Ezekiels, Jeremiahs, and the like: We do find a Mark, two Ruths, and an Esther, but apart from the traditional name Adam, that is about all. In fact, the most unusual Christian name is the pagan Homer[5] —as in Homer Gillieson and Convener Homer Anderson. Dumfries was probably unusual in Scotland for its number of Herberts, and its comparative absence of Alexanders, but what stands out most is the number of Adams. Quite a number of names appear once or twice, but 80 per cent. of the male population bore one of five names—John, William, James, Robert, or Thomas, and of these, John was twice as common as any other.

5 The name Homer is derived from Aylmer. Amer Maxwell, for example, appears in the 16th century. The version "Homer" might possibly have been prompted partly by the Renaissance.

There might seem to be a surprisingly large number of female householders, but life expectancy was short, and there were many widows. Nicolas is the most unusual female name—we have one on the list, and another referred to in the petitions—and Janet by far the most common.

Child Mortality

It was estimated in 1755 that half the children born in Scotland would live until the age of eleven. A random sample from those in the Hearth Tax suggests a broadly similar picture for Dumfries in this period. The sample consists of males, surnames beginning with A, who married after 1670, and the results are shown below:

TABLE II

Person	H.T. No.	Occupation	Children known born	Dead by 2	10	20
John Adamson	71	weaver	3	1	2	2
Robert Adamson	137	weaver	4	0	2	2
Geo. Aitken	479	cordiner	13	4	6	6
Rodger Aitken	336	mert	3	1	2	2
Dvd. Aitkenhead	253	town officer	3	2	2	2
John Ainsley	327	wright	11	5	8	9
James Alexander	415	glover	5	0	1	1
Adam Allan	367	tobacco spinner Hightown	5	3	3	3
Thomas Allan	556	Craigs	1	0	0	0
Richard Allan	179	workman	9	5	7	8
William Allan	521	workman	3	0	0	1
Gabriel Alison	15	of Dunjap	8	4	5	5
Herbert Anderson	489	Smith	7	2	3	4
John Anderson	50	mert	5	?	1	1
John Anderson	282	workman	8	1	1	1
John Anderson	407	wright	4	1	1	1
Robert Anderson	230	workman	6	3?	3	3
Deacon Rot. Anderson	316	wright	14	6	7	8
William Anderson	236	dyer	3	0	1	1
John Arthur	501	tailor	6	1	3	3
		Totals, 20 people	121	39	58	63
		%	100	32	48	52

Since a number of births and deaths went unrecorded, it is possible that the mortality rate was even higher than the table suggests—perhaps over 1/3rd dying before the age of two, more than half before the age of ten.

Of course, this is nothing more than a sample study, covering births and deaths over a period of more than 40 years. There would have to be study in much greater depth before we could say whether the results are typical of Dumfries as a whole.

There is an average of almost exactly six children per person in our sample.

There were, presumably, a number of other children whose baptisms were unrecorded (probably about 20 per cent. more); but on the other hand, four of the men married twice (David Aitkenhead, James Alexander, Adam Allan, Deacon Anderson), so an average of six children to the nearest whole number per marriage is almost certainly correct. The 44 adults, husbands and wives, in this sample, may have produced almost the same number of married adults in the next generation: there were 58 children whose deaths had not been recorded by the time they reached 20, but there would be another dozen or half dozen whose deaths had not been registered, two or three more who died before the normal age of marriage (25), and one or two who did not marry at all.

THE ACCURACY OF THE PARISH REGISTERS

In the discussion above, assumptions have been made about the degree of accuracy in the Registers of baptisms and burials. These assumptions are based largely on a sample comparison of the two registers, taking children whose death was recorded and looking to see whether their baptism was also recorded.

TABLE III

Period	Deaths	Of which baptism recorded	%
1672-82	18	11	61
1682-90	30	21	70
1691-1700	20	18	90
1701-08	11	11	100
Total	79	61	77

Two children known to have been born outside Dumfries are omitted.

The period 1678-81 records particularly few baptisms. This may have been partly because of presbyterian hostility when the Covenanting struggle was at its height.

If we accept the estimate of a parish population of 3800 and an 80 per cent. accurate register of baptisms, the birth rate would be around 33 to 34 in the early 1690's. However, the range of error we must allow for both of these estimates is so great that all we can really say is that there was a birth rate of between 28 and 40 per 1000—which is something we could have guessed before we started.

THE SERVANT POPULATION

We have very little evidence for the number and distribution of servants in Dumfries. However, the Poll Tax returns for some areas of the country have survived, among these being Midlothian. It is not improbable that the

social structure of a parish like Dalkeith, mainly urban, and close in total population, would be similar to that of Dumfries, and so a summary of the Dalkeith returns (in 1694) is given below.

There were 532 households in the parish, excluding the poor (compared to about 600 in Dumfries), and 208 servants, distributed thus:

TABLE IV

Group	No. of households	No. of servants	Average
(1) Propertied class ("gentlemen," etc.)	29	83	2.9
(2) Professional (lawyers, ministers, doctors, etc.)	14	15	1.1
(3) Merchants and traders	33	24	0.7
(4) Craftsmen—excluding group 5	202	63	0.3
(5) Weavers, gardeners, chapmen	51	5	0.10
(6) Cottars	137	9	0.07
(7) Others—unspecified, widows, etc.	66	9	—

The term "servant" covers all sorts of people from those with quite substantial wages to those who received only their keep. It does not, however, include the 16 boys classed as apprentices. The table suggests that servants were something of a luxury item—quite a lot of the merchants and most of the craftsmen did not have a servant, for example. Among the craftsmen, the brewers, dyers and fleshers seemed to have most wealth in terms of servants and tax assessment.

In Dalkeith there were hardly any examples of two families sharing the one house, and surprisingly few people had relations staying with them. Altogether, the total for brothers, sisters, mothers, uncles and so on was only 22—or one relative per 24 houses (but those living on charity were not taxed). Another feature was the small number of children of taxable[5a] age living at home and within that number there were far more girls than boys. Clearly the sons were sent out to work as "servants" or apprentices from a fairly early age.

The Dalkeith returns suggest that Dumfries should have about 250 servants, but we could achieve different results by using other parishes as a base: for example, in Kirkwall there were 150 "servants" (in this case apparently including apprentices and journeymen) in 270 houses, on which basis there could be as many as 400 in Dumfries.

THE POOR POPULATION

In 1691 there were two poor rolls, the numbers in each being more or less constant (38 on the Johnston Roll, 64 on the normal Kirk Session Roll). In addition, a great many people received occasional assistance. Many of these were strangers, often from Ireland, and it is hard to estimate how many would be living in Dumfries at one time. However, very few of the poor are listed in

5a Children under 16 were exempt except for the rich, who had to pay for each child.

the Hearth Tax, and at a guess between 100 and 150 families should be added to the Hearth Tax list.

HEARTH TAX AS EVIDENCE OF POPULATION

TABLE V

1. Parish		2. Hearths, 1691	3. Approx. Population	4. No. of Poor	5. Population 1755	6. Population 1790s
Annan	C	148	710+/−10%	6	1498	2500
Applegarth	D	91	—		897	741
Caerlaverock	A	163	790 „	1	784	955
Closeburn	B	172*a	830 „		999	1490
Cummertrees	A	145	700 „	5	631	1056
Dalton	A	74	340 „	5	451	615
Dornock	A	99	475 „		715	738
Dryfesdale	A	246	1180 „	5	1097	1600
Dumfries	A	952	3800 „		4517	5600
Dunscore	A	163*b	790 „		651	1033
Durisdeer	A	247 *c			1019	1031
Kirkbride	A	50 *c	1430 „		1794	1700
Glencairn	C	210*b	1000 „		1051	1800
Gretna	A	194	930 „		1393	1198
Hoddam	D	152	—		586	736
Holywood	B	144	700 „		993	583
Hutton	A	174	840 „		494	565
Johnstone	A	144	690 „		495	520
Keir	B	140*a	670 „		899	1000
Kirkconnell (see Sanq) / Sanquhar	C / A	341	1630 „		1998	2600
Kirkmahoe	B	180	865 „		1098	1200
Kirkmichael	D	101	—		894	950
Kirkpatrick-Fleming	D	92	—		1147	1542
Kirkpatrick-Juxta	B	99	475 „		794	617
Lochmaben	C	219	1050 „		1395	3000
Middlebie	C	103	500 „		991	1404
Moffat	D	—	—		1612	1600
Morton	A	71	340 „		435	908
Mouswald	A	201	960 „		553	628
Torthorwald	A	with Mouswald			584	660
Penpont	B	139	660 „		838	800
Ruthwell	A	154	740 „		599	1061
St. Mungo	B	89	430 „		481	640
Tinwald	D	—	310 „		795	850
Tundergarth	A	125	600 ”		625	510
Tynron	B	116	560 „		464	500
Wamphray	A	93	450 „		458	487

Explanation:

(i) The letters after each parish in Column 1 gives a guide to the completeness of the Hearth Tax return:
- A. Virtually all landowners listed in Valuation Roll gave in lists of their hearths. Returns for these parishes are possibly nearly 100% accurate.
- B. Returns from all major landowners, but perhaps not from all the lesser proprietors. Not likely to be far out.
- C. In these parishes there are considerable discrepancies between the Hearth Tax List and the Valuation Roll, the extent being difficult to judge.
- D. In these parishes, one or more of the major proprietors did not make a return to the Hearth Tax collectors, so that the number of hearths recorded has little bearing on the population of the whole parish.

(ii) Column 2 gives the number of hearths in each parish. The asterisks refer to anomalies:
- (a) Dalgarno is included with Keir in the Hearth Tax. To make comparisons with 1755, it would be best to add Closeburn and Keir together.
- (b) A small number of Dunscore hearths were listed with Glencairn.
- (c) Kirkbride ceased to be a parish soon afterwards. Its total should be divided between Durrisdeer and Sanquhar.

The totals are copied from the Hearth Tax Lists-arithmetic unchecked.

(iii) Column 3 gives a very rough estimate of the parish population, based on the Hearth Tax.

(iv) Column 4 gives the number of poor in the parishes, where this was recorded.

(v) Column 5 is taken from Webster's census.

(vi) Column 6 is taken from the 1st Statistical Account.

I GENERAL

In Table V I have given estimated parish population based on the Hearth Tax returns. It must be understood that these are very approximate, for while the Hearth Tax gives a rough guide to the number of houses in an area, there are many objections to regarding it as anything more. We know, for instance, that in other parts of Scotland, a great many hearths were omitted from the original lists—especially in country districts where the sub-collectors generally took the landlord's word for the list of his tenants.[6] Furthermore, even if all the hearths in the county were recorded, there is no proof that there would be the same number of people per hearth in each parish. Dumfries furnishes two examples. Between 1698 and 1700 there was great hardship, and a high death rate, but the numbers of hearths would remain the same. By 1702, things were returning to normal, but there was a great fire which burnt down many houses in the Friars' Vennel. So in 1702 there may well have been more people, but fewer hearths in the town. As a matter of fact, there was a fire which burnt part of Lochmabengate, Dumfries, in 1690.

There are three points where mistakes could well be made in the Hearth

6 There is a curious example in Kirkpatrick-Fleming where originally Broats' tenants, in the laird's absence, reported 6 hearths. In the final list this has been reduced to 4.

Tax returns. In the first place, some landlords did not make a return at all; secondly, landlords might make returns, but omit some farms, while, thirdly, they might list all the houses, but give the wrong number of hearths. A comparison with the Valuation Rolls has made it possible to say that in most of the parishes we are concerned with, there were returns from almost all the proprietors. However, it is not possible to check the other two factors in detail, and it must be assumed that in Dumfriesshire as in the rest of Scotland, there was a certain amount of under-recording.

This must be kept in mind when we consider what is the most likely multiple to give an estimate of the total population. With the numerous qualifications indicated above, one might argue that there can be no "correct" multiple,

TABLE VI: HEARTH LIST FOR KIRKCUDBRIGHT

Parish	Hearths	Deficient	Poor	Beggars
Kirkcudbright (b)	150	—	—	—
Kirkcudbright (land)	139	—	—	—
Crossmichael	74	4	—	4
Balmaclellan	134	11	11	—
Minnigaff	252	4	—	—
Colvend	106	3	—	3
Kirkbean	150	—	—	—
New Abbey	84	5	5	—
Parton	106	6	6	—
Dalry	142	2	—	7
Buittle	92	7	—	7
Tongland	100	11	—	11
Kirkpatrick-Durham	129	10	—	10
Kirkmabreck, Anwoth, Girthon, Borgue, alias Rerick	342	—	10	—
Dundrennan	76	9	15	—
Rerwick	116	—	—	—
Kells	199	16	—	16
Kirkgunzeon	66	—	—	—
Twynholm	65	1	—	1
Kelton	89	4	—	4
Carsphairn	83	—	—	—
Balmaghie	109	1	—	5
Irongray	140	1	1	—
Urr	104	—	—	—
Terregles	56	1	—	1
Lochruttone	98	7	—	7
Troqueer	143	10	4	—

Total paid and due—deponed March 1693—3244 (N.B. This official total is inaccurately added, and should be nearly 200 more).

since it would vary so much from one parish to another. This would be true if we were searching for complete, indisputable accuracy, but I think it is possible to suggest a pattern for rough estimates of population. At the time the accepted equation may have been 4 times number of hearths ≡ population. This, however, would give unlikely results for Dumfriesshire: it would mean, for example, that in the 14 most reliable parishes, the population rose between 1690 and 1755 from 7300 to 9650, or an increase of almost $\frac{1}{3}$. Furthermore, a detailed study of the returns all over Scotland indicates that the multiple in the towns would be much lower than in the countryside. This is probably the combined result of three factors—the tendency of towns to have larger houses, a greater proportion of "servants" (often agricultural workers) in country areas, and more accurate returns in the towns. In rural Renfrewshire, where we can check the population to some extent from Poll Tax returns, the population seems generally to have been about $4\frac{1}{2}$ times the number of hearths, excluding the poor, while a multiple of about 3.8 is normal for urban areas.

For Dumfriesshire I have suggested a multiple of around 4.8, to allow for the incomplete nature of some of the returns. The evidence suggests, however, that the Dumfries returns were as accurate as could be expected of any 17th century town, and here I have adopted a multiple of 3.8, with an allowance added for the unusually large number of poor in Dumfries. In order to allow for varying standards of accuracy, a plus/minus factor of 10% is suggested for each parish. For all those parishes outside category A, a plus is much more likely than a minus. Thus, Kirkmahoe's 180 hearths could quite conceivably represent a larger population than Gretna's 194.

II DUMFRIESSHIRE

In Table 5, columns V and VI show the populations of the same parishes in 1755 and 1790. Our estimated 1691 total for these parishes is about 26,000 (or $22\frac{1}{2}$-$28\frac{1}{2}$ thousand), while in 1755 it was 31,000. This is very close to 18th century estimates of a 20% rise in Scotland's population between 1707 and 1755.

A Comparison of columns V and VI shows that between 1755 and the 1790s the biggest increases were in parishes containing towns. In 1790 the ten most urbanised parishes accounted for 44% of the county's population, compared with 39% in 1755. Only Moffat remained static; Lochmaben and Annan made particularly striking increases.

There were no such remarkable changes between 1691 and 1755. Dumfries apparently made an average increase; Annan perhaps grew rapidly, but Lochmaben and Dryfesdale did not. Drift to the towns was not a significant feature of the period. Perhaps this is to be expected: the agricultural revolution was still in its early stages by 1755, and, in fact, only Dumfries was then a town in the modern sense at all. The most remarkable feature, indeed, is the lack of

change. In 1691 the twelve largest hearth totals were Dumfries, Durrisdeer, Dryfesdale, Sanquhar, Lochmaben, Glencairn, Gretna, Kirkmahoe, Closeburn, Hutton, Dunscore and Caerlaverock. In 1755 nine of these were still in the top 12. Annan, Hoddam and Kirkpatrick-Fleming, the three new parishes, were all seriously under-recorded in 1691, so that it may be that in reality the same parishes formed the top twelve at both times. Of the three which were replaced, Hutton had fallen only to 13th place—not a real decline at all—but Dunscore and Caerlaverock do seem to have fallen in relative importance. In Dunscore's case, on any estimate, the population of the parish actually fell.

Probably there was a drop in population in some other parishes, too—Durrisdeer, Holywood, Keir and Closeburn, Tynron, Ruthwell and Johnstone. Perhaps Dryfesdale and Cummertrees should be added to the list. It will be noticed that a number of these parishes are near each other, forming what might roughly be called South Nithsdale (i.e. south of Sanquhar). The other parishes in this part of the county did not show clear signs of growth, apart from Dumfries and Glencairn. In the total area of Cairndale, Nithsdale (south of Sanquhar), Mousewald, Torthorwald, Ruthwell, Dalton and Cummertrees, there is, in fact, a total estimated population **loss** of 300 over the 64 years.

The growth area of the county appears to have been south Annandale; probably Annan itself, Dornock, Gretna, Hutton, Kirkpatrick Juxta, Middlebie, and probably Hoddam. There was also a very substantial increase in the population of Sanquhar and Kirkconnel.

III GALLOWAY

Wigtownshire,[7] as deponed in 1690, had 3384 hearths, excluding poor. They are not listed in parishes. The Stewartry had then (as now) almost the same population as Wigtown—about 3400 hearths (around 15,000 or 16,000 population). I have included the Kirkcudbright list for interest. It shows how insignificant were the towns of the county—Kirkcudbright apart. Dalbeattie, Castle-Douglas, Gatehouse, Kirkpatrick-Durham and, for practical purposes, Creetown, were 18th century creations. However, New Galloway and Maxwelltown were in existence, and one, therefore, might have expected more hearths from Troqueer and Kells. Then, as now, Terregles was probably the smallest parish (in fact, with about as large a population as it has now, but the boundaries have been much altered).

IV DUMFRIES BURGH: Population

McDowall suggested that in 1692 Dumfries might have been the fifth or sixth largest town in Scotland. The evidence of the Hearth Tax is against him.

7 In 1683, Wigtownshire and Minnigaff had 9276 people of 12 or over. Using Webster's age distribution for 1755 this suggests a population of only 13¼ thousand (compared with about 17½ thousand in 1755), but presumably these lists would also be under-recorded so they do not make an estimate of 15,000 unlikely.

Edinburgh and Leith, of course, each had far more hearths than Dumfries. Glasgow came third with 3885 hearths, excluding 1584 poor. (It is explained in the tax list that almost 1000 of these were refugees from the civil war in Ireland. Certainly at this time its population must have been a good deal more than the estimate just a few years later of twelve to thirteen thousand). Dundee and Aberdeen each had around 2900 hearths—three times the size of Dumfries. Apart from these five " large " towns, the following towns and parishes had more hearths than Dumfries. **Towns:** Ayr (1485), Stirling (1338), Inverness (1099), Perth (about 1050), Linlithgow (954) and Hamilton (910). **Parishes:** Haddington, Inveresk, St Ninians, Tranent, Falkirk, St Andrews, Montrose, Kirkcaldy, Dunfermline, Dalkeith and Greenock. Most of the parishes included a fairly large landward population, so that probably only Montrose and possibly St Andrews, Kirkcaldy and Greenock were bigger than Dumfries.[8]

The calculation is complicated by other factors. The Hearth Tax collectors may in some cases have included areas as within certain towns which were technically outside, and there seem to have been widely varying standards applied to classifying the poor. Dumfries seems to have had a much greater number of poor families than was admitted to by other towns of a similar size, but even so, only the most generous estimate could put Dumfries among the first ten towns in the country, while a more realistic assessment would be around the twelfth to fifteenth place.

It is probable that in 1690 Dumfries was a smaller town than it had been in the 1590s. The principal evidence for this comes from the registers of baptisms and deaths. Although these are unsatisfactory guides, for registration was not compulsory, so that nothing like all births and deaths were included, they are probably the best evidence we have.

There is no surviving register for the plague of 1598, supposedly one of the worst in the town's history. It must, however, have reduced the town's population. The earliest surviving register of baptisms begins in 1605, at which time the number baptised was about the same as in the 1690s. Between 1618 and 1623 the average number of baptisms was 120, compared with 106 in the 1690-1695 period. Then came a disastrous plague in 1624, when recorded deaths exceeded baptisms by over 400. Considering that we do not have the record for the whole year, and that a great many deaths would be unregistered, it is probable that there was an actual decline of well over 500 in the town's population.

During the rest of the century[9] there were more deaths recorded than

8 The Hearth Tax brings out clearly the economic importance before the Union of the Firth of Forth area. If we regard 700 hearths as representing a "big" parish, we find that Dysert, Wemyss, Prestonpans, Bo'ness, Carriden, Dunbar and Liberton can be added to those in the list above. In no other area is there such a concentration of population. While these figures make M'Dowall's estimate for Dumfries of 5000 seem rather high, Dr Smout's estimate of a thousand or two ("A History of the Scottish People." p. 157) seems decidedly low. Most writers (e.g. Dr Smout, Hume Brown) agree in putting Perth much higher than Inverness, Ayr, Dumfries and so on—but neither the Hearth Tax nor the baptismal register gives much support to this view. Likewise, if Dundee and Aberdeen each had a 10,000 population in 1600, their decline during the century would seem to have been relative rather than actual.

9 There are a number of years missing from both registers.

births, and the average number of baptisms only returned to the pre-1624 level a century later, in the 1720s. There was never again a year as bad as 1624, but in 1675 there were 273 recorded deaths (and 71 baptisms). In 1685 there were 175 deaths, and in 1700 there were 96 more deaths than births. After 1720 the number of baptisms begins to increase steadily. In 1755 they were averaging about 160 (pop. 4500). By the 1790s there were about 200 baptisms (pop. 5600).

While the evidence is too sketchy to draw firm conclusions, it is certainly consistent with the view that between 1597 and 1691 the population of Dumfries declined.

Note on calculations

It is possible to put forward an argument for any population for Dumfries parish between 2000 and 5000.

Suppose for example we regard the Baptismal Register as 100% accurate, assume a birth-rate of 50 per 1000, and regard 100 baptisms per annum as the norm for the period—then we have a population of only 2000. Each of these assumptions is highly unlikely, but not impossible. So far as I have been able to judge, the average age of marriage was about 25, which would suggest 40 rather than 50 as a maximum birth-rate; likewise 90% accuracy is more likely than 100; and the average number of recorded baptisms for the period is nearer 110. This makes a population of 3000. Altering the assumed birth-rate to 35 per 1000 gives a population of 3500. This estimate seems not unreasonable, but it could be argued that a birth-rate of 32 is not impossibly low, which, combined with a 70% registration accurancy, gives a total population of 5000. I have already argued that at this time the registers were much more than 70% accurate, but it is by no means proved.

Secondly, we can use comparisons with the Poll Tax, also levied in the 1690s. Assuming that the age distribution in Webster's census was valid for the 1690s, the Poll Tax ought to represent something like 65% of the population. However, it must be assumed that there was a considerable amount of under-recording: a great many sixteen and seventeen-year-olds would be passed off as being under the taxable age (16). It is probably because of this that estimates based on the Poll Tax tend to give small totals. There are no complete Poll Tax returns for Dumfries, but we can make use of returns elsewhere. In Dalkeith, for example, there were 532 houses, almost exactly 900 hearths (excluding 47 poor) in the Hearth Tax, and 1338 people recorded in the Poll Tax. Dumfries had 600 houses and 950 hearths. The population of Dalkeith would seem to be around 2300 (allowing for poor). If we accept that Dumfries had probably a much larger number of poor, by proportion of hearths including poor, Dumfries' population would be around 2800.

However, this would represent for Dumfries only 4 people per house (assum-

ing 100 houses for the poor) which is hardly credible. Dalkeith appears to average 4.3 persons per house, while the Renfrewshire Poll Tax and Hearth Tax returns suggest an average of over 5 per house. The Orkney returns suggest between 4 and 5. This sort of calculation then gives a range of about 3000 to 4000 (Min. 700 houses at 4.3; max. 750 houses at over 5 per house).

The estimate of 3800 plus/minus 10% (i.e. 3400-4200) is simply a compromise between the various other possibilities, as can be seen from those summarised results:

Basis of calculation	Minimum estimate	Normal estimate	Maximum estimate
Baptismal Register	2000	3000-3500	5000
Poll Tax, Dalkeith		2800	
No. per household	3000	3200-3500	4000

In fact, 3500 would probably represent the best compromise.

I hope that further study will make the picture much clearer. It should be possible to calculate the normal age of marriage, the accuracy of the registers, and the birth and death rates at the time. At least a minimum population can be found by re-constituting the actual families in 1691: for example, nearly 200 people have already been found for the letter A of whom it can be said that they were very probably alive in Dumfries in that year.

DUMFREISE PAROCH

Crossquarter

(1) John Grive and Mr Waitter (younger, wiver) 1
(2) John Wilson turner 1
(3) Jannet Sharp 1
(4) Bailzie Irvin of Logon 7
(5) George Johnstone mert 3
(6) John Herries 3
(7) Rot Ritchartsone 4
(8) John Johnstone mert 3
(9) Tho and William Ritcherts (Ritchertson) 2
(10) Agnus Glen 2
(11) Dav Bartoun 5
(12) John Japhray 3
(13) Agnus Maxuell ... 1
(14) Margaret Broun 1
(15) Gabriell Alisone of Dunjap 3
(16) Rot Johnstone merchant 2
(17) Janet Wilsone widow 1
(18) Katarine Johnstone widow 1
(19) William Robson chapman 1
(20) Mr Samuell Mouitt 1
(21) Thomas Davidsone 1
(22) Katarine Broun ... 4
(23) Thomas Gledstones 1
(24) Andrew Corsbie 2
(25) Jean Glencorse ... 3
(26) Baillie Irvine of Dumcoutrine ... 3
(27) Andrew Euart ... 1
(28) Adam Garnochan (Gunochan) 1
(29) Mrs Muerhead ... 4
(30) James Younge ... 2
(31) Mr Rot Edgar ... 3
(32) Samuell Gordon 3
(33) Mr Drummond ... 2
(34) Dr John Maxuel 2
(35) Edward Patersone 2
(36) Adam Thompsone 2
(37) Rot Uining 1
(38) Thomas Leuers ... 2
(39) Rot Milligane ... 2
(40) John Reid 2
(41) George Beck 2
(42) John Neuell 2
(43) Baillie Kennen ... 2
(44) Mr James Hume 2
(45) Rot Maxuell (Munnell) 3
(46) John Welch 3
(47) Mr William Mcjor 1
(48) Mr Alexander Strang 2
(49) Mr Dumbar 5
(50) John Andersone mert 3
(51) Charles Logon ... 1
(52) Adam Strudgeon 1
(53) William Simpsone 1
(54) Margaret M'Kclaimrock (M'Clamarock) 3
(55) John Munnell ... 1
(56) John Martine elder mert 1
(57) William Maxwell sadler 1
(58) Thomas Rodgersone 1

(59) Janet Wallace widow 1
(60) James Ferry (Fairrie) 2
(61) James Strudgeon 1
(62) William Coutard (Coupland) 1
(63) Rot Haftlock elder (Aflock) 1
(64) Marion Glencorse 1
(65) William Sithlintoune 2
(66) Helen Millar 1
(67) Milnhead's bourns (bairns) 1
(68) John Martine tailzoure 1
(69) Rot Murraite chapman (Murran) ... 1
(70) John Shortrige deacon 2
(71) John Adamsone wiver 1
(72) Wm. Welsh 1
(73) John M'Kertney 1
(74) Agnes Edgar 1
(75) James Shortrige ... 3
(76) Seargeant Mckfarline 3
(77) Bessie Sinclaer ... 1
(78) Thomas Ramsay (messenger) 1
(79) John Adamsone writter (Adams, waiter) 1
(80) Emiely Reed (?) (Boid) 1
(81) David Hainine ... 1
(82) Janet Wilson widow 1
(83) Hen Mackay 1
(84) Adam Gordon ... 1
(85) Provost Craik ... 2
(86) John Coutart 3
(87) Agnus Brouke ... 1
(88) William Goulan (altered in the original — spelling doubtful) (Gollan) 1
(89) Agnus Ferguson widow 1
(90) James Rige 1
(91) John Fairrie 1
(92) Marie Kallans ... 4
(93) John Goodale ... 4
(94) John Murray 1
(95) Rot M'Konnell ... 2
(96) William Graham 2
(97) Beattie Mitchelsone (Bettie) 1
(98) Jannet Sharp 1
(99) Katerine Grieve 1
(100) Thomas Hunter ... 4
(101) James Johnstone 1
(102) James Ferguson goldsmith 1
(103) John Mckreaig ... 1
(104) George Meck ... 1
(105) John Davisone ... 1
(106) John Lauson Waitter 1
(107) Mrs of Barnbauchell 4
(108) John Mean 1
(109) John Watson 1
(110) James Hunter ... 1
(111) William Minzeas 4
(112) William Mckjore 2
(113) James Ross 4
(114) Wm. Martine ... 3
(115) Katarine Ross ... 3
(116) Walter Neuall ... 4
(117) James Fornent ... 1
(118) James Anderson 1
(119) Charles McKay ... 2
(120) Alexander Smith 3
(121) William Grieve ... 2
(122) John Russell 1
(123) Agnus Glencorse 1
(124) Baillzie Neuell ... 4
(125) Mrs Crockitt ... 4
(126) John Gellie tailzour 1
(127) Jannet Murray ... 1
(128) Archibald Mckbraire ..... *
(129) John Mitchell ... 2
(130) Agnus Reid 1
(131) Mary Sharp run away 1
(132) John Burges 1
(133) Isabel Hunter ... 1
(134) Jennitt Maxuell ... 1
(135) Wm. Mckennell 1
(136) Heugh Cunninghame 1
(137) Rot Adamsone ... 1
(138) Widow Adamsone 1
(139) William Mckclunie (wiver) 1
(140) Jannet Haining ... 1
(141) Susanna Dicksone 1
(142) Andrew Mckminnie 1
(143) Margaret Martine 1
(144) Patrick Ferguson 1
(145) Marion Wallace ... 1
(146) John Reull surgeon 4
(147) David Ogilvie ... 4
(148) James Martine ... 2
(149) Mrs Tailzour ... 2
(150) Wm. Craick writer 2
(151) D George Archbald 4
(152) Margaret Coutart 2
(153) Jean Wilson 1
(154) Margaret Craick 1

Kirkgate Quarter

(155) Eduard Mouse ... 1
(156) William Neuell ... 1
(157) Andrew Thompson scletter 1
(158) Homer Gilliesone 1
(159) John Dickson cordiner 1
(160) James Herrine (?) cord. (altered in original) 1
(161) Marion Byers ... 1
(162) John Lindsay wiver 1
(163) Archibald Steuart 3
(164) Adam Neuell 1
(165) John Gibsone younger mert 1
(166) Bessie Parker widow 1
(167) Rot Nicolsone cordiner 1
(168) Wm. Wright seaman 1
(169) Wm. Houstone cordiner 1
(170) Margaret Maxuell widow 1
(171) Rot Welsh cordiner* 1
(172) Harbert Wilsone 1
(173) Rot Gilmer 1
(174) John Doune (Dunn or Dinn) 1
(175) John Corsan of Mickleknox 1
(Milnholl) 3
(176) Rot Andisone tailzour 1
(177) Charles Watson for his kiln 1
(178) William Lightbody miller 1
(179) Richard Alane ... 1
(180) Oliver Mckgouen writer 1
(181) James Mckennell smith 1
(182) Heugh Millican ... 1
(183) Rot Allane tailzour 1

*In earlier version, after Rot Welsh: John M'Gowan, wiver 1; Thomas Gerdine 1; James Johnstone, cordiner 1; Harbert Wilson 1; etc.

(184) Rot Forsayth 1
(185) John Penn 1
(186) James Cousan ... 1
(187) Marion Strudgeon 1
(188) John Neilsone dragoun 1
(189) William Lightbody 1
(190) John Ronnald ... 1
(191) John Dinnie writer (Dinne, wiver) ... 1
(192) Thomas Taitt ... 1
(193) Thomas Glossell 1
(194) George Breck (Brock) 1
(195) Charles Watsone 1
(196) George Coutart ... 1
(197) Mr Richard Broune 2
(198) Mrs Corsan elder 2
(199) Helen Maxuell ...1
(200) Eduard Edgar ... 1
(201) John Glen dragoun 1
(202) Barbarie Harvie ... 2
(203) Rot Crockitt meart 2
(204) John Alane 1
(205) William Mckgeorge 6
(206) Wm. Grier writer (wiver) 1
(207) George Carlile mert 4
(208) James Welch 3
(209) Rot Blunt 1
(210) Mrs Collestan younger 2
68
(211) Mrs Guttorie (Mr in one version) ... 1
(212) Lady Steuarton ... 2
(213) Thomas Penn ... 1
(214) Mr John Mckgouen 2
(215) David Gibsone ... 1
(216) James Gorden younger mert ... 4
(217) Rot Mckbrair ... 3
(218) Rot Fergusone dyer 2
(219) Archbald Gibsone 1
(220) John Gearse 1
(221) Mrs Young 2
(222) John Lausone mert 2
(223) Mrs of Glencorse 3
(224) John Brigs 1
(225) Margaret Faissell (Frisall) 1
(226) Marion Tanner (Turner) 1
(227) Margaret Maxuell widow 1
(228) James Culbertsone (Cutbertson) 1
(229) James Dicksone cordiner 1
(230) Rot Andersone ... 1
(231) David Houstone .. 2
(232) John Bell mert ... 1
(233) Thomas Allan ... 1
(234) Rot McGecke (McGeire) cordiner 1
(235) James Selkirk ... 1
(236) William Andersone dyer 2
(237) Jo. Lanrick mert 1
(238) Thomas Goudie tailzour 1
(239) William Broadfoott 1
(240) Janet Beattie widow 1
(241) Mr John Willocks 1
(242) Adam Henderson 1
(243) Marian Ker (Rae) 1
(244) John Gilliesone ... 1
(245) James Gibson tailzour 1
(246) Janet Craufoord widow 1
(247) Tho. Forsayth ... 1
(248) Marion Pagan ... 1
(249) Bailzie Neilsone 3
(250) Rot Carruthers writer 1
(251) John Millican ... 1
(252) William Moffitt 1
(253) David Aikinhead 1
(254) Wm. Edgar cordiner 1
(255) Tho. Mckuharrie 2
(256) Alexander Cunningham 1
(257) Alexander Haining 1
(258) William Irving mert 2
(259) Homer Gillieson 2
(260) Lady Cassingcarrie 2
(261) Jean Pae widow (Orr) 2
(262) Rot Broun mert 2
73
(263) Elizabeth Craike 2
(264) Jean Johnstone 1
(268) Deacon Coasbie (Corsbie) 2
(266) William Gilliesone 2
(267) Mr John Simmerald 2
(268) Thomas Gladstone of Craige 2
(269) William Waker ... 1
(270) Ritchard Wallace 1
(271) Adam Wright tailzour 1
(272) Mr James Little 2
(273) Laird of Hoddom 6
(274) Margaret Neilsone 1
(275) James Robson cordiner 1
(276) Henry Cousine (Carsson) 1
(277) Lady Empsfield ... 2
(278) Mrs Roome 6
(279) Provest Roame ... 4
(280) Janet Goudie 1
(281) William Wateritt 1
(282) John Anderson ... 1
(283) James Mitchell mert 1
(284) *Harbert Dicksone* 1
(285) Mr James Waker 2
(286) Mrs Goudie 2
(287) John Sitlintoun 2
(288) Mr John Mckcoone (M'Colne) 2
(289) Agnus Wright ... 1
(290) Agnus Kilpatrick 1
(291) *Jo. M'Gowan ... 1
(292) *Tho Garden (or Jarden) 1
(293) *Ja Johnston cordiner 1
*Inserted by another hand.

Townhead Quarter

(294) Earle of Nidsdale 6
(295) James Fraser 2
(296) Widow Edgar ... 1
(297) Mr Rot Maier ... 1
(298) John Swan 2
(299) Thomas Fleck ... 1
(300) Deacon Fairbairns smiddie 1
(301) Rot Scotland* ... 1
(302) Mrs Mackee 1
(303) Eduard Daviesone 1
(304) Deacon Fairbairn 2
(305) John Glendining 1
(306) Rot Mckqueen ... 1
(307) Deacon Jacksone 1
(308) Thomas Mckennell 2
(309) Deacon Anderson's Killn 1
(310) John Mckilroun 1
(311) William Ker 1
(312) William Grant ... 1
(313) John Makinnell ... 1
(314) John Anderson's smiddie 1

(315) Nicolas Wilson ... 1
(316) *Jo. Wallace (inserted) 1
(317) Janet Kilpatrick 1
(318) *Rot Wilsone (inserted) 1
(319) James Ritchie ... 1
(320) John Clerk 1
(321) George Young ... 1
(322) John Fairs 2
(323) Helen Glover ... 1
(324) William Reed ... 1
(325) Rot White 1
(326) William Steanlie (altered in the original) 1
(327) John Angslie 2
(328) Wm. Edgar 1
(329) Mrs Bishop 2
(330) Jean Gorden ... 1
(331) Rot Rodgerson ... 2
(332) Rot Lock 1
(333) Ritchard Simpsone 1
(334) Rot Mitchell 2
(335) Wm. Purdie 1
(336) Rodsger Aikine 2
(337) Agnus Robsone 1
(338) James Smith 1
(339) John Chirrie 1
(340) Jean Bruce 1
(341) Conveener Andiesone (Anderson) .. 1
(342) John Steinsone ... 3
(343) John Andersone smith 1
(344) Tho. Munnie ... 2
(345) James Muatt 3
(346) Janet Kennedy ... 1
(347) George Simpsone 1
(348) Agnus Ramsay ... 1
(349) Agnus Dicksone .. 1
(350) Mr William Irving 4
(351) Mrs Wallace 2
(363) Hillen Fergusson 1
(353) Rot Gibsone 1
(354) Tho Litle 1
(355) Deacon Martine .. 2
(356) Mark White 1
(357) Wm Thompsone 1
(358) Elizabeth McKnaught 1
(359) Bailzie Gilchrust 3
(360) Wm Ker (Rae) ... 1
(361) Tho Ker (Rae) ... 1
(362) Helen Jacksone .. 1
(363) Hillen Fergusson* 1

(364) James Black 1
(365) Mr James Lauson 2
(366) Rot Neuell 2
(367) William Steuart .. 2
(368) Mr Adamsone ... 2
(369) Mrs Smith life rentrix 1
(370) Jean Johnstone ... 1
(371) Mrs Douglas 1
(372) John Duff 2
(373) John Muirhead ... 1
(374) John Ritchardson 3
(375) William Neilsone 4
(376) Janet Millikine ... 2
(377) Margaret Glen ... 2
(378) John Hudd 1
(379) James Hendersone 1
(380) James Dyer (Dyell) 1
(381) Heugh Cairns ... 1
(382) Provest Craick ... 5
(383) Hisehiebrae 3
(384) William Euard ... 1
(385) James Millikine .. 1
(386) James Neilsone younger 1
(387) John Cambell ... 2
(388) Matheu Wightman 1
(389) William Ker workman (Rae) 1
(390) James Padzen ... 1
(391) Martine Lightbody 1
(392) Mrs Coupland ... 2
(393) Thomas Wright .. 1
(394) Marion Cunninghame 1
(395) John Euard 1
(396) Janet Bell 1
(397) Mrs Bell 2
(398) Barbary Neilsone 1
(399) John Martine tresaurer 1
(400) Mrs Houstane ... 1
(401) William Hutchisone 1
(402) William Mcjore ... 1
(403) John Nimmo 1
(404) Commissar 4
(405) Heu Haire 1
(406) William Conrmonth (Carmont) 2
(407) John Andersone .. 1
(408) Herbert Cunninghame 2
(409) Ester Gairns 1
(410) Mr John Fraser ... 2
(411) Haleaths 2

(412) John Gibsone ... 1
(413) Marjon Rige 1
(414) Mrs Finzes 6
(415) James Alexander 1
(416) John Smith 1
(417) John Robsone ... 1
(418) John Kennen 1
(419) Jo. Wilsone 1
(420) James Bigger 1
(421) James Robsone ... 2
(422) Martin Coutarts oven 1
(423) Mrs Kinkead 1
(424) John Johnstone & Thackney 1
(425) William Pickersgill 2
(426) John Nicholsone 2
(427) John Cunninghame 1
(428) David Thompsone 1
(429) James Davidsone 1
(430) Mary Lausone ... 1
(431) Andrew Gibson .. 1
(432) Mrs Corbitt 4
(433) Janet Andersone 1
(434) Janet Glendining 1
(435) Mary Andersone 1
(436) John Kermontt (Carnmunt) 1
(437) Thomas Goott (Joat) 1
(438) John Herries writer 3
(439) Mrs Finzes 3
(440) Thomas Tajtt ... 1
(441) David Wallace ... 1
(442) Janet Andersone 3
(443) Ritchard Simpsone 1
(444) Mr John Fraser heritor 1
(445) Mr Mair 2
(446) John Sharp 1
(447) James Mckgouan 1
(448) Provost Graham's airs 5
(449) William Mckjore 4
(450) John Mantine chapman 1
(451) James Graham ... 1
(452) Thomas Bell 1
(453) Patrick Mckmichen 1
(454) James Robsons two wast houses 2
(455) Janet Andersone 1

Lochmaben Quarter

(456) Rot Moffitt 1
(457) John Heastie younger 1
(458) Mrs of Crooks ... 3
(459) Mrs Grahame 2
(460) Mrs Blackadder 2
(461) Rot Johnstone ... 3
(462) Bessie Maxuell ... 2
(463) Mrs Black 1
(464) John M'Knaught 2
(465) Routh Penn (Payne) 1
(466) William Euard heritor 1
(467) Mitchell Herries 2

(468) Rot Neuell 2
(469) Rot Hafleck 1
(470) Rot Mckalexander 2
(471) Jean Johnstone ... 2
(472) George Story 1
(473) Agnus Maire 1
(474) Deacon Dicksone 1
(475) Jennet Lauson ... 1
(476) Thomas Todd ... 3
(477) John Munnell ... 1
(478) Jennet Haistie 1
(479) George Aitkine ... 1
(480) John Roull smith 2
(481) John Heastie mason 2
(482) Thomas Mckinnell 1
(483) Thomas Irving ... 4
(484) James Herknes ... 1
(485) William Palmer 2
(486) Mrs Strachen ... 1
(487) Deacon Lausone ... 2
(488) James Dicksone 2
(489) Helbert Anderson 2
(490) John Millar 1
(491) Janet Lernmont ... 1
(492) Janet Lausone ... 1
(493) Janet Grier 1
(494) Thomas Mckburnie 2
(495) John Gilliesone 1
(496) Elspith Carlile ... 1
(497) Jean Maxuell 1
(498) Captain Johnstone (Robt) 4
(499) Andrew Bell 1
(500) Rot Keen (Linn) 1
(501) Decon Arthur ... 4
(502) Lady Marbie 3
(503) Bairncleugh 4
(504) John Irving younger 2
(505) Gavine Carlile ... 4
(506) Janet Fraser 2
(507) Nicoll Dicksone 1
(508) John Fleming 1
(509) John Broun 3
(510) John Crockitt ... 1
(511) John Gibsone ... 1
(512) Alexander Heastie (Christie) 3
(513) Thomas Hislope 1
(514) Rot Mackye 1
(515) Thomas Mckburnie 2
(516) Deacon Andersone 1
(517) James Gordon elder 2
(518) John Broadfoot ... 1
(519) Andrew Coupland 3
(520) John Crockitt mert 2
(521) William Allane ... 1
(522) Archbald Dicksone 1
(523) Thomas Goudie younger 1
(524) Gilbert Maxuell 2
(525) John Jamesone ... 1
(526) Rot Neuell wiver 2
(527) Marian Hairstains 1
(528) Janet Black 1
(529) Rot Fergusone ... 1
(530) James Neilsone elder 1
(531) John Smith 1

Landward

Caernsalloch in lists:

(532) John Dalgliesh ... 1
(533) John Dyat 1
(534) James Wilsone ... 1
(535) George Flint ... 1
(536) Thomas Wilsone 1
(537) Thomas Waker ... 1
(538) James Watsone ... 1
(539) John Watsone ... 1
(540) John Maxuell ... 1
(541) John Wilsone ... 1
(542) Tho Gilchryst ... 1
(543) John Chartares ... 1
(544) Andreu Davidsone 1
(545) Thomas Charters 1
(546) John Hounnam ... 1
(547) William Laustone 1
(548) Rot Maxuell 1
(549) Janet Dempster ... 1

Craigs

(550) For himself 7
(551) Jo Don in Barnkine 1
(552) Tho Sponie yr ... 1
(553) Tho Horest & kiln kiln 2
(554) James Moffitt yr 1
(555) Margaret Thompsone cottar in Buss 1
(556) Thomas Allane yr 1
(557) Andrew Corbet elder in Mossyde 1
(558) John Taitt yr ... 1
(559) James Carruthers yr 1
(560) George Becktone yr 1
(561) Daniell Hammilton yr 1
(562) Rot Tait yr 1
(563) Thomas Nicolsone yr 1
(564) John Litle yr ... 1
(565) Jo Lightbody in Over Craigs 2
(566) Jo Lockhart in Hightoun 1
(567) Adam Allane yr 1
(568) Wm. Ritchartsone yr 1
(569) Andrew Corbet young yr 1

Space in Original)

(570) James Mckinnell in (Bauntskairth) 1
(571) Rot Gilmuer portoner there 1
(572) John Fisher there 1
(573) James Rae Auhenreigh 1
(574) Janet Gilmuer Beuntskairth 1
(575) Susanna Thompsone Auhencreith 1
(576) John McKinnell yr 1
(577) John Kelly yr ... 1
(578) William Rapping yr 1
(579) Tho Hendersone Gill 1
(580) William Mullay Hoyrnood 1
(581) Tho Roome inlist for Netherwood ... 6

Nunholme Inlists

(582) Himself 2
(583) Ane Kilne 1
(584) Adam Fergusone 1
(585) Doctor Johnstone in Pasley in lists for Dargavell 3

Tinnuald Inlists

(586) For B . . . . . reith
(587) Wm. Mckinnell ... 1
(588) Rot Mckinnell ... 1
(589) Jo Gilmure 1
(590) Jo Johnstone ... 1
(591) Jo Gaall 1
(592) Tho Gaall 1
(593) Rot Smith 1
(594) Ane Wajst house 1
(595) **Rot Macbraier of Netherwood** inlists for himself ... 3
(596) Ritchard Mckolsone in Kiglydear 1
(597) Wm. Nckolsone yr 1
(598) Jo Nicolsone & Andreu Clark ... 1
(599) Wm. Edgar & Jo Dicksone 2
& a kilne 3
(600) Wm. Cherrie in Rigsyde 1
(601) Tho Huttone yr 1
(602) **Adam Miller yr** .. 1
(603) John Hill yr 1
(604) Stephen Miller & Rot Mcbrair for milne & hearth ... 2

James Rigge Inlists for Keltoune

(605) Wm. Couanse ... 1
(606) Rot Carlile 1
(607) Margaret Patersone 1
(608) Ritchart Patersone hearth and kilne 2
(609) Jo Patersone hearth and kilne 2
(610) Tho Patersone ... 1
(611) Adam Geronerie ... 1
(612) John Hislope 1
952

HOLYWOOD PARISH

John Morrane of Hidhall. Himself 1
John Morrine of Gibrinstone inlist
Rot. Maxuell of Steilstone inlist
Thomas Fergusonn Buberry 1
Thomas Roriesone in Clachan 1
William Morrine Underwood 1
Steilsone. For himself 3
Thomas Johnstone yr (in Burnfoot) 1
David Johnston 1
Edward Douglas Charterhall 1
Rot Maxuell of Bearcroft in lists. For himself 2
David Kellie in Foord 1
Rot Davidson Barnhill 1
James Ker in Midkillilung. Himself 3
Rot Davidson yr 1
Rot Johnstone yr 1
Thomas Edgar yr 1
John Neight yr 1
Rot Porter yr 1

Gatesyde and Myresyde

Herbert Burges 1
Margaret Kilpatrick ... 1
Robert Maxuell of Portract Himself 3
Thomas Wightman yr 1
Thomas Henderson in Madhanrick 1
John Henderson Crochmeggitt 1
Jo Ferguson, Holmburnefoot 1
John Thomsone yr ... 1
Elizabeth Kirkco of Sundawell inlists. Herself 3
David Kennen yr 1
John Smith yr 1
John Fitlintine yr 1
Andrew White yr 1
James Wallace yr 1
John Mckfaggane yr ... 1
Thomas Maxuell of Betersan lists. Himself 2
John Gilliesone yr 1
John Gellie yr 1
John Faire yr 1
John Hillo in Moristone 1
Janet Mckburnie yr ... 1
Ferguson of Farmachlan (lists). Himself 3
Andrew Gilliesone yr 1
Rot Ronnald yr 1
John Welch 1
Thomas Kilpatrick 1
John Waker 1
Rot Sluan 1
Robert Stott Carsegaite (Barfregan). Himself 1
Thomas Beck 1
James Aitkine of Maxueltone
David Johnstone 1
John Maxuell of Barshill. For the lands of Couhill inlists
For the mansion house 9
John Black 1
David Edgar 1
Andreu Millicane 1
Eduard and Jo Eattin in Killilung 2
John Crestie (Chressie) and Bessie Kilpatrick 2
John Edgar Mosgell ... 1
John Bleith Glengour 1
Andreu Harestans in Moorsyde 1
James Edgar Carlicroft 1
James Kellie Mossyde ... 1
John Porter Marckthorne 1
Janet Kilpatrick Sleatharncroft 1
Rot Neilsone in Abbey 2
Rot Neilsone Woodmrk (Woodnuk) 1
Edward Maxwell of Milligantone. Himself ... 2
John Mckcoon Killcroft 1
Rot Maxwell of Speddoch. Himself 2
John Steuart yr 1
Margaret Twinholme yr 1
Katarine Wright widow 1
Thomas Morraine yr ... 1
Homer Martine yr 2
William Buarzier yr (Braunzier) 1
John Twinholme 1
James M'Kneight yr ... 3
John Twinholme Smith 2
Ane Kilne 1
John Whitehead of Dalla-

wody (Dallabody) ... 1
James Scott yr 1
Adam Beck Bocksyde (Boogside) 1
Jean Hops yr 1
Mary Elliot of Martintoune (Life rentrix). Herself 1
Dvd Corsbie 1
Lilias Edgar 1
John Morrine, John Haining for lands of Glencaber
John Morrine 2
John Haining 2

Rot Davilson in Holme.
Himself 2
William Waker 1
Thomas Wightman Litle Mckuhanrigh
Alexander Maxuell 1
John Haining yr 1

James Young of Broomrige. Himself 3
Ronnald Thomsone Stepfoord 1
Edward Waker 2
Gaven Steill in Foord.
Himself 1

Thomas Irving for lands of Grimptine
For the house there ... 3
James Grier yr 1
John Mcknaught 1
George Smith 1
Elizabeth Maxuell 1
John Aitkine 1
David Haining 1
John Aitkine 1
Tho Johnstone. For the lands of Burnfoot
Thomas Baxter 1
Archbald Broket 1
—A milne & Kilne ... 2

DURISDEER

Enoch inlists

In Enoch places Cleuch-Foots 5
Boronster 1
Enochtoon & a smiddie 4
Enochmilne — hearth & kilne 2
Wakmilne 1
In CarringFoot 1
In (Grocer) Foot 3

D. of Queensberry inlists

Jo Porter Druddill milne 2
James Dalzell Cleuch-head 1
William McCall Myers 1
James Lorimer & James Steill in Halhouse 2 & a kilne 3
Jo Hunter & Jo Lorimer Ballagan 2
James Lorimer yr (smith) 4
Jean Dalzell Brekensyde 1
Thomas Hunter yr 1
James Mcclunje Crauik-nou & a kilne 2
William Aitkine Gil-shank 1
James Corson & Wm. Bell, Mar 2
Wm Corson & John Milligan Scorgiehill .. 2
George Lorimer & James mccall in Auchensceugh 2
Rot Shankielau & James Shirrilau in Crarie ... 2
Jo & James Kerr yr ... 2
James Grier & James Glencorse in Humbie & kilne 3
Janet Hunter & John Grier Knouhead 2
James Glencorse & Wm. Hunter in Maykinflatt (or Malcomflatt) 2
Wm. Kellan & Jo Dalzel Neyr Altone 2
Alexander Broune yr ... 1
Jo Corsan Fardinbank & kilne 2
Alex Broun & James Corsan in Fardinbank 2
Jo Hastie Auchensolt ... 1
Wm. Lorimer & Jo McKine Hapland ... 2
James Kennedy yr & kilne 2
James Clerk & Alexander Wood, Inglistone 2
Peter Douglass, Chazell & kilne 2
James Kennedy & George Mccall, Colleuss 2
Jo Hotsone, Neyer Dalvine 5
Jon & Rot Forsayth Over Dalvine 2
Wm Porter & Jo Lorimer yr 2
James Stitt & Rot Mccall Clozth 2
Wm Wightman & George Miller in Stonbutt 2
James Tod in Burngrains 2
Wm. Patersone Moorcleugh 1
Jo & James Corsons yr 2
James Forsayth Cottinhouse 1
James Clerk Castlehill 6
Jo Logons elder & younger in Kirkbuone 2
William Mille yr 1
Katarine Smith Disdear milne 1
Rot Broun Drumcroll milne 1
John Hastie & Jo Hunter yr 2
John Borrine Muregate (?) 1
Wm Mchie & Wm Mortone in Sureland 2
James Hair yr 1
Elizabeth Blaikie in Moorchill 2
Jo Parker & Jo Bell in Drumcrool 2
Jo Broune & Janet Hunter yr 2
Jo & Wm McCalls yr 2
Matheu McConnell & John Haistie yr 2
Jo Gillies & James Moor yr 2
James Kennedy yr & smiddy 2
Rot Broun, kilne & mill yr 3
John Patersone yr 1
Jo Lorimer & Wm Luckuy in Greenfoot 2
James Broun yr 1
Jo Lorimer maltman ... 1
James Wood gardiner at Drumlenrig 2
William Luckuy younger yr 3
The whole hearths ut office houses ut in ye Gates of Drumlenrig 60

Earl of Carnwath inlists

John Dadget, Thomas Padgen, James Blackwood, Andrew Broun, William Lamb 5
John Blaikwood, Alex Ker, James Blaith, James Hunter, John McNish, Jo Willisonn & kilne & smiddie in Burnmouth 8
William Muncie in Daylsmark 1
John Hunter Glengenie 1
Jo Logon, William Dalyel, William Logon, Wm Hunter in Neyer Glengemie 4
Jo Nilline (?), James Nilline, in Fordinmolloch 2
Jo McKie, George Ker in Glenharvie 2

George Douglas

James Minzes 1
Andrew Minzes 1
James Milligane 2
John Corsbie 1

Archbald Roxbrough

Portioner of Disdear. Himself 2
Thomas Broun 1
Agnus Roxbrough 1

John Johnstone

Himself, portioner ut supra 1
James Corsbie 1
Barbary M'Migh 1
John Corsbie 1

Fingland

For his own house 5

KIRKBRIDE PAROCH

D. of Queensberry inlists

Rot Scott in Carshogill 7
Peter Broun Enterkinfoot hearth & milne 2
James Broun & Nicoll Jamieson Kirkbride 2
James Hunter in Knockconie 1
Jo Houitsone Thristone 1
Andreu Dalzell Glenime 1
Andreu Clerk & Bessie Williamson Auchengrouch 2
William Clerk & Janet Forsaith in Castlegilmiat 2
Rot Broun Auchensou 2
Gilbert Mckail Over Doullzedder 1
Rot Douglas Midtoun 2
John & James Mckals Neyertoun of Dalzedder 2
Matheu Mckenrake yr 1
Matheu Moore Stockfoord 2
Wm. Broun in Airdoch 1
Alex & John Stouarts & kilne 3

E. of Carnwath inlists

Alexander Hunter, James Patersone, John Steuart, James Dalglish, Agnus Dalzel, Agnus Thompsone, Andreu Hislop & a kiln — Craigdarroch 8
In 20 shill rent in Dallont—Gavin Dalzel and kilne 3
John Park, John Dreu, Thomas Hiselope & John Dalzel in Dalcleuch 4
Wm. Dalzel in Countrizslack 1
Gavin Dalzel & George M'Kall in Litleuark ... 2

DUNSCORE

Rot Maxwell of Portreach inlists

Elizabeth Herres in Hill 1
John Kilpatrick yr 1
Janet Maxuell Gleib ... 1

Eilzabeth Kirk of Sundavalls

Herself 3
David Haining yr 1
John Smith yr 1
George Shitleytoun yr 1
Andreu White yr 1
James Wallace yr 1
John MckFadgine 1

Gilbert Griersone of Chapell

Himself 2
James Horner yr 1
James Watiesone yr ... 1
John Mckcone yr 1
Gilbert Neilsone 1
John Black in Milntoune 3
Rot Welch 1
James White 1
William Millar 1
John Griersone 1

James Smith of

(blank) 2

John Welch of Craighouse

Himself 2

Sir Rot Grier of Lagge

Stennick in Kellistoun 2
Mr Andreu Ross in Lagge 5
John & William Barbers in Granstone 2
Rot Gorden in Merkland 1
John Wauch Allantoun 1
William Edgar yr 1
Janet Wallace yr 1
Thomas Neilson Milhill 1
James Smith yr 1
Rot Wauch Gateside ... 2
Jo & Tho Smiths Hallidayhill 2
Jo Mckmillane Thripland 1

John Hunter of Overcraignputtock

Himself 3

James Griersone of Dalgoner

Himself 4
James Smith in Tounhead 1
John Hairstons 1
Helen Grier 1
George Pittiecrou 1
William Hairstains 1

Crafoordstoune & Rot Grier inlists by Wm. Laurie

Rot Grierson yr 1
William Laurie yr 1
William Logan yr 2

Rot Grierson of Svezers

Himself 3
John Morrine yr 1

William Fergiesone, Lagan 1

Rot Milligane for a part of Demplerstane
Himself 1
John Maxuell yr 1
Rot Milligan Neutoun-head 1

Bogrens by Alexr Moffite
Himself in ye Mains ... 7
Thomas M'Knich-millyr 2
Margaret Mckuhrgrell (?) yr 1
James Steuart yr 1
John White yr 1
Rot Kirkoe Skeltoun 1
William Steuart yr 1
Janet Wallace yr 1
James Tinholme yr 1
Marion Halyday yr 1
Nicolas Steuart yr 1

Jean Maxuell life rentrix of Cillylego
Herself 2
John Smith 1

John Hope & Rot Andersone for Over and Neyr Strachens
Rot Smith Over Strathen 1
Andreu Beruick yr 1

John Portersone 1
John Hoops yr 2
Inlisted by Rot M'Kmuedi
Collector for the lands of Killilegolagan, Mcmurdistoun, M'Cubbintoun Foot, Killicray & Stardmuall
William Maxuell Killielego 1
John Tuinholme yr 2
Homer Glencorse yr ... 1
James Smith 1
John Mcburnie Neyrlagan 3
Rot M'Murdie in M'Murdistoun 3
John Mckmurdie yr ... 1
Wm. Mckcubbine Mccabintoun 2
Thomas Welch yr 1
John Grersone Tounfoot 1
John Smith Kilroy 2
John Irland yr 1
Rot Thompsone Staedmuall 1
Anna Hamiltone 1

John Smith of Fardmeugh (Fardine)
Himself 1
Mary Hunter yr 1
Rot Grier yr (ane kilne) 2

William Coupland of Collistounne
Archbald Douglas yr ... 1
Wm Douglas yr 1
Heu Cunninghame 2
John Smith 1

John Grier of Milligautine
Himself 2
Janet Purdope 1
Rot Lachlisone 1

James Hailsone
Himself 1

John Maxuell of Carse
Himself 6
Gilbert Neuell at ye gate 1
David Hidlistoune 1
Rot Maxuell yr 1
Rot Kilpatrick yr 1
Wm Moorhead 1
Andreu Forgie 1
Jo Smith, Burnhead ... 1
Jo Scoudell Millintoune 2
Jo Hidlistone Cuss 1
James Jardine Milhill ... 1

John Grensone of Upperlagan
Himself 1
Jo Edgar elder Houtoune 1
(Steuartoun—see GLENCAIRN PARISH) ... 5

PENPONT

Eccles in lists

Himself 11
John Osburne Mccalstoune 1
Thomas McCourtie yr 1
Jean Gracie yr 1
Isabell Milligane yr ... 1
Thomas Millar 1
Thomas Smith Fiveshillingland 1
Agnus Hunter yr 1
Janet Milligane Litlegreen (Grennan) ... 1
John Douglas Fordinland 1
Janet Kirkco yr 1
Bessie McClirne yr 1
Jo Sandyland Craig (half of a kill) 1
Jo Wilsone Cairnmill ... 2
Janet Corbie Cairnkill 2
Mr John Andersone Bilbo 1
James Pennoch yr (Bennoch) 1

Andreu McLuck yr ... 1
Rot Mckinnoch Carsefield 1
Bessie Ritchlie 1
Helen Douglas yr 1
John Ross yr 1
Bessie Mcgoune Clachan 1
Mary Ritchartsone yr ... 1
Mary Gilcris yr 1
Rot Bennoch yr 1
Thomas Milligane yr ... 1
James Hairstone yr ... 3
Jean Maitland 1
James Hunter in Kirland 1
Thomas Hogge 1
James Gracie Miltoun ... 2
John Milligane in Horres 1
Mary & Agnes Milligane 1
An kill 1
Jean Gracie 1
Rot Hunter in Halltack 1
Rot Hunter in Crosjean 2
Rot Douglas yr 1

Wm. Torpie 1
Rot Maxuell of Steilstoune
John Edgar in Houtoun 1

Mr John Fraser
James McMurdie Neyr Lagan 1
Faissell Coatt yr 1
Alexander Jeland (?) in Kellistoune 1
Jo Graicie in McChantoun 1
Bessie Neilsone yr 1
James Cogan yr 1
Rot McMurdie in McMurdistine 1

James Hunter of Bankfoord
Himself 3
Rot Wilsone Barnhead 1
John Kirk, tuo (sic) ... 1
John Moore in Penponte in lists only ... 2

Duke of Queensberry inlists

Rot Hainine in Knou ...	1
Jo & Rot Lorimer Cleuchhead	2
*John Gracie Cleuchfoot	2
Jo Laurie Ashtrees	2
Jo McCubb yr	1
Jean Laurie Mottefoord	1
Peter Laurie & Isabell Milligane in Neyer Bagrahill	2
John Thompsone in Tobess? & mill	3
William Baine yr	1
Jennit Thompsone yr ...	1
Thomas Laurie Over Bagrahill	1
William Depitt yr	1
John Boar Bagrahill ...	1
Jo Mcloun Achinnight	1
Elizabet Davisone yr ...	1
Andreu & George Hunter in Holme and a kilne	3
Rot Lorimer & Jo Hislop in Achingasitt	2
James M'Shean & James White in Gouck	2
Rot M'Call & Wm. Glen in Corsinmarkland ...	2
James Hunter in Druditt	2
Rot Grier Hogieholl (Fogieholl)	2
Jo Hunter & Rot Douglas Cheepland	2
Jo Mcclige & James Milligane, Glenskeubine (M'Cliyr)	2
James Gracie	1
Jo Carmichaells elder & yor in Woodend ...	2
Archbald Mckclige yr (M'Cligy)	1
James Nivine & Wm. Hunter in Duff	2
Barbary Broadfoot yr ...	1
Alexander & Jo Kerrs Chanlockfoot	2
Rot Paterson yr	1
Jo Hainine & Jo Patersone, Chanlockhead	2
James Stone & David Edgar in Hallscarr & kilne	3
Jo Ker & John Douglas, Dalzeen	2
Jo M'Kall Glenmanochan	1
James M'Kall & James Broadfoot Glenuhargon	2
Jo Ker in Uolltrees	1
Wm. Hovitt & James Milligane, Craigbou	2
Andreu Heur (Hair) & James Thompsone Hallgouine	2
John Gibsone yr	1
William Gibsone in Tounhead	1
James Hunter Auchinbrow & Kilne	3
John Sittlintoun & Thomas Hunter Glengour	2
Janet Milligane yr	1
Jo Moore at Glengour, milne & hearth	2
William Hunter & Mary Hicksone Ladyuall ...	2

GLENCAIRN

James Hunter of Baitfrood inlists

William Thompsone Crechant	3
James Broun yr	2
Rot Cunninghame yr ...	2
Mary Cunninghame ...	1
Mary Gibsone yr	1
Tuo cottars there	2

Sir Rot Laurie inlists

Castfairn	4
Calumy (Balliny)	3
Auchenstrane	3
Craiglirjan	1
Dibban	1
Drumloof	1
Burnfoot	2
Hill	2
Peiltoun	3
Shanksteill	3
Over Belbought	1
Carsfoord	3
Laggan	1
Breakinsyde	2
Bankhead	2
Straith	2
Fluchlarge	2
Dardarroch	1
Gardistoune (Goodderstone)	2
Maxueltoune	12
Birkshau	4
Neutoue	1
Clernstone	1
Stranshelloch	1

Steuartoun inlists

Tombstoun (Comstoune)	1
Milhill	2
Coatstoune	2
Kennelstoune	2
Gatesyde	2
Moffitstoune	1
Tuo markland	4
Steuartoune	1

Craufordtoun inlists

The land of Craufordtoun	16
Inglistoun & Tuomarkland	8
Within ye Kirkland & Five marklands of Steuartoune	10
Within the lands of Suead barronie (Snead)	13

Neyr Inglistoune inlists be James Gibson

Himself	1
James Hunter yr	3
James Ritchartsone ...	1
Heugh Fergusone	1
John Crightoun of Tounhead	3

William Ferguson of Castlock

Himself	5
Alexander Wieer (Keir or Ker), David Marbon* in Mingraill ...	2
John Ferguson Knockcautle	2
John Reed, Peter Davidsone in Kerbutt	3
Thomas Denham, Culbert Connoch (Bannoch), James Corsan & Janet Mccame in Durrigane	4

Craigdarroch inlists

For ye mansion house	12
Rodsger Griersone yr ...	1
John Cunninghame yr ...	1
James Hairstains Benbune	1
Jo Harper Clanroch (Blanroch)	1
George Wilson Cornbae	1
Jo Smith Chapelmark	1
Andreu Roriesone Laydome (Lagdow)	1
Jo Fergusone cottar yr	1
Rot Moore Youngstoune	1
Jo Wilsone Corredeu (Corodane)	1
Wm. Fergusone yr	1
James Gracie Crammell (Cammell)	1
Rot Fergusone Overcairncleugh	1
Archbald Hunter & John Cunninghame in Berbine	2

William Rorrisone & Thomas Hunter Bardendonoch 2
Wm. Bogies & Jo Ritchie cottars (Allan Bowie) 2
Gilbert Roriesone in Grains 1
Jo Corsan in Jedbrough 1
Wm. White in Lochenlyes 1
Rot Griersone in Almcaive (Miniave) ... 2
Wm. Logan 1
Thomas Heron 1
Gilbert Carsone 1
Elisabeth Griersone ... 1
John Hunter 1
Isabel Glencorse 1
James Gray 1
John Fergusone 1
Thomas Creightone ... 1
Arthur Buchannan (Alex Buchannan) 1
Rot M'Ounnie 1
John Wilsone 1
John Mcturk 1
John Monteith 1
Agnus Fergisone 1
John Nivisone in Milln of Craigdarroch ... 1
William Fergusone in Neise 1
Wm. Gracie in Uakinhill 1

Total 210

*In the earliest version this name is illegible—but **not** Marbon

KEIR and DALGARNO

John Grerson of Bargarge inlists

For himself 8
James Dunkell Byerclose 1
Agnus Edgar yr 1
Jo Kilpatrick Staighole 1
Jo Watsone Ashtrees ... 1
Wm. Halyday smith, Gatesyde 2
James Taitt Neyr Auchmichan 1
Andreu McGoune Over Auchmichant 1
Rodsger Greirsone Neyr Bargarge 2
Rot Halyday Neuhall .. 1
Charles Maxuell Markland of Nether Keir 2
Thomas Herkness Summerhouse 1
James Hereine Poyterstoune (Porterstoune) 2
Isabel Patersone yr ... 1
James Mjlligane Knou .. 1
Culbert Hairstans Penmerlie 1
Isabel Hairstains Crofthungrie 1
Jo Dyrumple Penfilland 1
John Hay Kirkmilne ... 1
Bessie Reed yr 1
William Dicksone yr ... 1
John Dunkell yr 1
Thomas Cooke in Corsegipe in Neyer Longcroft, Dalgarno 2
James McCubbine 1
Janet Fraser 1
Sara Buz CleuchFoot ... 2

Earl of Nidsdaill inlist knox inlists

Agnus Kirk Poundland 3
Wm. Hairstaines Penfillan 3
Jo & James Bennochs ... 5
Jo Waugh 1
Agnus Waugh 1
John Douglas 1
John Gilchrist 1
John Neilsone 1
Bessie Wallace 1
William Wauch 2
The Old Stonehouse ... 2
John Douglas 1

Capinoch inlists

For himself 6
Rot Bennoch in Neyrtoune 1
George Rennaldsone yr 1
William Grier yr 1
William McCartie yr ... 1
John Milligane yr 1
Thomas M'Cubbie Braecoch 1
John Jackson yr 1
Rot Herrine yr 2
Stean Mcmurdie in Shaus 2
John Martine yr 3
Janet Hunter yr 2

Watersyde inlists (in K & Dalgarno)

For himself 4
Jo Hidlestone Keirmilne 2
Thomas Nicolsone Booksyde 1
Culbert Milligan B?yrnershank (Turnershank) 1
Isabel McVittie Keirmilne 1
Jean Bennoch yr 1
James Gracie yr 1
John Johnstone yr 1
Katarine Grier yr 1
*James Mjllar in Liflinstone 2
Thomas Kilpatrick Lagleuch with a kilne ... 3
William Milligan in Broomland 1
Peter McCubb yr 1
Tho Hunter in Fourshielhouse 1
Tho Porter in Laglenz 2

John Corsan of Mickleknox in lists

Rot Martine Neyr Bardannoch 3
Thomas Pagan yr 1
William Ferguson yr (Chustoune)? 1
Rot Fergusone yr 1
Lagge inlists 5 possest be Rodsger Kirk in Kirkbride & James Griersone 5

Mr John Ilis of Ilistoun in lists

Tho Hidlingtoun elder 2
Tho Hidlestoun younger 1
James Craige 1
Rot Gillespie 1
George Mckinnell 1
Charles Mckennell 1
Tho Mckinnell 1
John Wauch 1
George Davisone 1
John Neilsone 1
John Waker 1
John Wallace 1
William Wauch younger 1
Rot Masone 1

Lagge inlists in Dalgarno

Mungo Gilchrist Overholme 2
Ja Ross & Alexr Nivisone Kirkboge 3
Jo & Culbert Gilchrist in Blaphlane 2
Jean Hunter in Cunninholme 1
Tho Bell in Reidhills 1

Total 140

TINRANE

Stenhouse inlists (from John Douglas of Stenhouse)

His mansion house (10 hearths, 1 oven, 1 furnace, 1 kiln) 13
James Tinnan, Dalmacurran (1 h. 1 kiln) 2
Jo. Murdoch, smith, Burnfoot 2
Thomas Grier yr (wright) 1
Tho Ker, Stenhouse (cotter) 1
Thomas Mcige (McCaige) 1
John Jackson (webster yr) 1
John Jacksone, Laird (Lerd) 1
Tho Fergusone, Killieuarrand 2
James Duncan yr 1
James Mathiesone, Thirslie nark 1
James Wilsone, Tenleuth (1 + kiln) 2
Jo and William Irvings, Murgristoun 2
James McCall, Margmelock 1
James Wilsone, Mercroch 1
George Shitlintoun, Apin 1

Lagge inlists (Robert Greirsone) 2
Rot Griersone, Corsmilligan (tenant h. & k.) 2
James Robsone, Cordow (h. & k.) 2
Jo Hunter and John Law yr. (cottars) ... 2
Jo Hainine, Laight (tenant h. & k.) 2
James Ker yr. (subtenant) 1
Jo & Wm. Paterson, Craignie (2 h. + k. tenants) 3
Thomas Wilsone, Camline (tenant) 1
Jo Paterson, Foord (tenant, h. & k.) 2
James Hunter, Aird (2 h. + k. tenant) 1
William & John Patisone, Clorae 3
Wm. Philp and James Patisone Craigturie (Craigturow) 2
William Ker & Wm. Milligane Auchengibbirt (tenants) 2
Alexander Mcturk yr (cottar) 1
Jo and Wm. McClanroch Miltoun (John Mcclamoroch subtenant) 2
Jo Brounrig & Janet Mcnight Cairnie (Cairncroft) 2
Janet Gibsone, Miltoune 1

Baitfoord inlists

Alexr Douglas Auchenlistoun 2
Jo Osburne, John Gracie & John Dargavell yr 3
Rot Smith Tinrane kirk 2
John Griersone yr 2
Croglands in lists (from Wm. Wilsone, elder yrof)
Himself 3
Gilbert Mathisone yr (h. & k. tenant) 2
Gilbert Hunter yr (tenant) 1
Rot Milligan yr (cottar) 1

Groglands younger inlists

(James Wilson of Croglands)
Himself (M'Quyerston) 4
James Dugan yr (subtenant) 2
William Craigie yr (Graine) 1
Rot Mcclamrock yr (cottar) 1
James Geddes yr (cottar) 1
Tho Hislop yr (cottar) 1
Culbert Ker yr (cottar) 1
James Wilson, Kirkconnell (tenant) 1
John Wilsone yr (Williamson, cottar) 1
Tho Mathiesone, Crochline (tenant) 1

Strathlogan inlists

Helen Chrighton, life rentrix 1
Thomas Kilpatrick yr (tenant) 1
James Patisone yr (cottar) 1

D. of Queensberry inlists

Jo Kilpatrick, Shinnelhead 1
Jean Moore and Mctoon (Mckewn) Mid Shinnell 2
Tho & Wm. Hunters, Auchenbreck (tenants) 2
John Wallace (cottar) ... 1
Tho Hunter, Craigincome (tenant) 1
Jo Hunter in Neyr Craigincome 1

Pinzerie inlists

Mansion house 2
Mr John Wilsone yr (tenant) 1
Mary Fergusone yr (sub-tenant) 1
Tho Hunter & Tho Douglas (cottars) ... 2
Margaret Porter & John Harper yr (tenants 2 h. & k.) 3
John Glencorse (cottar) 1
John Hunter & William Blacks yr (tenants J. H., Jo & Wm. Blacks) 3

Total 116

Almost all the original lists given in by the proprietors have survived for Tynron. Information in brackets is taken from these.

*In a list supplied by John Douglas of Stenhouse, Jacksone is described as "herd."

2. "Given up by Robert Smith, his baillie."

CAERLAVEROCK

John Martine, portioner of Blackshau inlists

Himself	3
Eduard Blackstock yr	2
Thomas Martine yr	2
John Heind yr	1
James Heind yr	2
Jo Martine in Midtoune	3
Eduard Martine yr	1
Nicoll Dicksone yr	2
William Mcwilliam	1

John Maxuell of Tounhead inlists

Himself	1
Eduard Carlile	1
Janet Maxuell	4
Rot Martine	1
Thomas Mckill	1
John Grier	1

Mrs Patine inlists

For her husband's lands	5

Liferentrix of Kirkbean inlists

James Dicksone	3
John Edgar	1
John Houre	1

Craigs inlists

Janet Robsone in Knockthornock	1
John Burnie, Boardland	1
John McBraith	2

Earl of Nithsdaill in lists

Wm. Burnie, Glencaple	1
Nicoll Donaldsone yr	1
John Dunn yr	1
Janet Dunn yr	1
John Jardine yr	1
John Rauling yr	1
John Rauling yr	1
John Jardine	1
William Dunn & kilne	2
Alexr. Mckay, Highmains	1
Wm. Raird (?) yr	1
Isabel Fergusone yr	1
Thomas Scott yr	1
William Rauling yr	1
Jo Hislope yr	1
Thomas Maxuell	1
John Bell & kilne	2
Agnus Murray	2
Wm. Makie, Mains	1
Rot Lindsay	1
William Dunn yr	1
John Allan yr	1
Wm. Makie yr	1
Tho Adamsone yr	1
John Fouler	1
Janet Edgar & kilne	2
Jo Mcwilliam & kilne	2
William Mccloun	1
Tho Janisone in Glenhouan	1
William Black yr	1
John Reed yr	1
Janet Edgar & kilne	2
John Scott yr	1
Jo Hutton & kilne	2
Janet Adamsone yr	1
Janet Fergusone yr	1
Homer Jamiesone, Bankend	1
John Fouler yr	1
John Carlile yr	1
Thomas Blackstock yr	1
Wm. Mckennell yr	1
Wm. Nairn & smiddie	2
Rot Edgar	1
Rot Mckeun (?)	1
John Dicksone & smiddie	2
John Hislope yr	1
John Caird yr	1
Tho Hislop yr	1
James Edgar & kilne	2
Eduard Carlile & smiddie	2
Margaret Robsone yr	1
Tho Adamsone & kilne	2
James Fergusone	1
Rot McWilliam	1
Harbert Martine	1
Tho Mann	1
Andreu Caird	1
Jo Allan	1
Wm. Adamsone	1
Jo Edgar & kilne	2
Rot Dicksone, Blaickshau	1
James Fruid	2
Thomas Dicksone	2
John Martine	2
William Wharie	1
James Martine	1
John Dicksone	1
John Dunn	1
John Dicksone	1
Thomas Dicksone	2
Thomas Forsayth	1
Rot Dicksone, yett	1
John Jaffrey	2
John Dicksone, yett	3
Rot Dicksone	1
John Blackstock	1
William Dicksone	1
Margaret Wharie	1
Jean Fruid	1
Clement Dicksone	1
Eduard Martine	1
Isabel Andersone	1
John Fruid	1
William Nicolsone	2
Isabel Wharie	1
Jean Wilsone	1
Wm. Nicolsone	3
Janet Wharie	1
Marion Dicksone	1
Ritchard Fergusone	1
Thomas Jaffrey	1
John Mucharie	2
Janet Broune	1
John Wharie	1
William Beattie	1
William Breuhouse	1
William Fruid	1
Rot Beattie	1
Isabel Dicksone	1
Margaret Fruid	1
Janet Dicksone	1
	163

Poor:

Janet Jamieson, Tounhead	1

SANCHAR & KIRKCONNELL

Spango inlists

John Wilsone heritor	3
John Wilsone at Kirkconnell	1
John Park yr	1
James Lockie wiver	1
William Mccall in place of Corcow	1
In ye place yr of wast	2
Wm. Alexr in Spango	1
Thomas Laidlay yr	1
John Laurie herd yr	1
John Wilsone Nockinstoke	1
Ninian Haire yr	1
John Aitkine Winhouse	1

Garrand inlists (Garland)

William Crightoun heritor	2
John Crimpsone (Crimzean) webster	1
John Corsbie Chapellug	1
James Chrightone herd	1

The waist house 1
Archbald Weire Peilland 1
Alexander Moore yr ... 1
John Gibson, herd 1
Janett Galloway, poor ... 1

Duke of Queensberry inlists (by David Reid, Chamberlain)

Wm. Johnstoune in Mains
William Mcleg yr
Wm. Hare yr & a kill } 4
Rot Maitland in Burnsyde 2
Tho Park, Jo Flimminge & kill 3
James Daizell Burnhouse 1
Jo Gracie yr 1
Wm. Alies Drumdseaden 1
James Winsone yr 1
John Broadfoot yr 1
Rot Hunter yr 1
Jo Mccunnell Glenmadie 1
Jo Rich Tounghouse ... 1
Archbald Ker Glenberry 1
David Williamsone, Gleuglase 1
Allexr Wmsone Burnefoote 2
John Macmillan Glengape 1
James Wilsone Corcarse 1
John Wilsone Hillend ... 1
James Waker Connellbush 1
Rot Lorimer yr 1
Rot Lorimer Overkinelbuss 1
Rot Patie, Drumbuy ... 1
Bessie Rowan yr 1
Margaret Aitkine yr ... 1
Patrick Haire, Kilsyde 1
Jo Crightone, Dicke ... 1
Rot Davidsone yr 1
John Wilsone yr 1
Jo Russell yr 1
Rot Russell yr 1
William Russell yr 1
Patrick Black elder & yor in Rige 2
John Aitkine yr 2
Jo & Wm. Gibsons in Rack 2
Jo Creightone, Cairne .. 1
Jo Mccrerick, Cairne ... 2
John Gemmell yr 1
Ninian Osburn, Cairn .. 1
Janet Wilsone yr 1
David Crightone yr ... 1
John Gibsone yr 1
John Porle yr 1
William Houatt yr 1
Jo Dempster, Glenmoch 1
Rot Russell yr 1
William Carrie (Currie) yr 1
William Dryfe yr 2
George Ritchie yr 1
William Simpsone yr ... 1
William Russell yr 1
James Wilsone yr 1
Andreu Simpsone yr ... 1
George Dempster yr ... 1
Patrick Haire yr 1
John Gibsone yr 1
Thomas Lorimer, Kinnell 1
Mungo Wilsone, Ferdine 1
Jo Huik, Pelbour 2
Andreu Haire, Glenhairie 1
John Hare yr 1
Jo & Matheu Wilsons in Fremiddine 2
Jo Cunninghame, Blaganoch 1
Mungo Tailfar, Todhols 1
John Tailfar yr 1
Jean Mccunnell yr 1
Jo & John McMichaels 2
Margaret Andersone in Guffockhand 1
Andreu Haine yr 1
Wm. Mckilvine yr 1
Janet Taitt yr 1
Archbald Peydgen yr ... 1
Eduard Aitkine Hurliebuss 1
Gavin Weire Dalbank ... 1
John Russell yr 1
Rot Carrie (Currie) Bankhead 1
Alexander Mochan yr ... 1
Tho Andersone in Nokenjege 1
John Roome yr 1
William Grier yr 1
David Williamsone yr ... 1
James Shankilland yr ... 1
Patrick Milligane in Tour 2
Wm. Barrie Corknavock 1
John Crosell yr 1
John Smith yr 1
Eduard Withrintine Markland 1
Rot Aitkine yr 1
Jo Williamsone Gatesyde 2
John Allies Chapell ... 1
John Haire yr 1
James Johnstone Gatesyde 1
Thomas Gibsone yr ... 1
Thomas Carson Cleugoot 1
William Carson yr 1
William Park yr 1
William Haire yr 1
Ninian Haire yr 1
James Dempster Whitehill 1
Thomas Bair 2
Thomas Carrie yr (Currie) 1
Tho Dempster Brigend 1
William Taitt Mickle Corcou 2
Janet Laidlay yr 1
John Still Little Corcou 1
James Weire Spoch 2
Archbald Weire Corsbank 1
Alexander Cunninghame yr 1
Jo Coutart Glen-rie (Cleurie) 1
William Kirkhope yr ... 1
Jo Luckie Clockleith ... 1
Simeon Laidlay in Boughtholme 1
James Neilsone Duntercleugh 1
Wm. Gibsone Wanlockhead 1
John Legine, Cogshead 1
John Laidlay, Coggan ... 1
Thomas Elspie yr 1
Ninian Aitkine yr 1
George Gibsone, Marchouk 1
Mungo Mckinnell yr ... 1
Wm. Haire, Nockinhare 1
John Weire yr 1
John Whiggam, Conrige 1
John Patersone yr 1
Andreu Mcmillan, Boge 1
Alexr Russell, Brandlies 1
Thomas Umphra yr ... 1
James Hunter yr 1
George & William McCalls in Auchentayrt 3
Alexander Park yr 1
Laurie Haire yr 1
John Dargevell 1
John Clark, Quarter ... 1
Agnus Forgisone yr ... 1
Wm. Forriner, Castlemains 1
James Hunter, Tounhead 2
Jo Black, Entriehead ... 2
Cravick milne 1
Sanchar castle hath ... 27

Castle Rot inlists

William Hammiltone ... 2
William Weire yr 2
John Lainge 1
(given by Wm. Hamiltoun)

Earl of Carnwath inlists

Alexr Winsone, Pocklinbank 1
The house of Ellioch ... 24
James Dalzell, Rot Maitland, cottars & kilne 3

Sanchar Toune

Rot Black, smith & smiddie 1
John Black 3
John Kelloch, cordiner 1
David Condie 1
James Wighame 1
Rot Dalzell 1
Janet Kellock 1
Jean Millar 1
John Black, tailzour ... 1
John Connent (Couand) 2
Margaret White 1
Andreu Smith 1
Jo Cairncross & oven ... 2
William Mckinnell 1
Jean Milligan 1
Sara Millikine 1
James Mckinnell 1
Patrick Haire 1
Archbald Haire 1
Archbald Patisone 1
Helen Litle 1
James Hunter 1
Rot Kirkmichaell 3
William Aitkine 2
Rot Carrick 1
David Reed (six) 1
James Crightone, tailzoure 1
Gilbert Greusone 1
Mr James Kirkwood ... 4
John Alisone 1
John Flimming 1
John Bell 1
Wm. Hammiltone & smiddy 3
John Walls 1
William Alisone 1
Jean Kelloch 1
Alexr Chrightone 2
James Davisone 2
John White 1
Mary Mckinnell 1
William Thompsone ... 2
George Goodale 1
John Dryfe 1
Patrick Black 1
James Chrightone & smiddy 4
Jo Lorimer & kilne ... 3
Rot Crightone 2
Cristean Crightone ...
John Laurie 4
William Rae & furnice 4
James Frier 1
Rot Slouan 1
George Mitchel & kilne 2
Rot Park 1
Cristean Chrightone ... 1
Rot Haire sm & smiddie 2
Jo Neilsone, merchant 1
Rot Fisher 3
Agnus Dryfe 1
Agnus Mckenrick 1
John Wilsone 1
Jo Mossie & kiln 2
Rot Hislope 1
William Johnstone 1
William Glover 1
James Huck 1
James Philip & kilne ... 2
Ninian Flimmine 1
Thomas Milligan 1
George Dobie 1

Poor

Margrat Kellock 1
Margrat Mcmath 1
Hellin p hra (?) 1
Janet Fisher 1
James Witheringhame .. 1
Johne Merch (?) 1
William Bellocle 1
Stevin Doubie 1
Stevin Crechtoune 1
William Murdoch 1
Margrat Black 1
Johne Moffate 1

POOR LISTS exemnt from tax (GD 26/7/357/2)

HOLYWOOD

Rot Edgar in Stelltoun
James Corsbie in Bearcroft
James Eliot in Ferrhill
Tho Scott in Abay
Cathren Wright—Speddoch
Gavbra Wilson yr
Jean McFrazan
Will Twinholm
Rot Miligain in Holm
Barbara Lawgan (Lawson?)
Jannet Gordon 1 in Mortentoun
Elizabeth Howat in Glengeber

DINCOR

Michall Smith
Agnas Wmsone
Eleisabeth Conton (?) in Chapell
James Black
John Gordown
Culbert Colwart
Jean Malckesone
Will Howpe
John Walce in Dalgarnock
Homer Ireland (?)
Margaret Tagart
Margaret Lachlieson
John Dempster
Elisabeth Stewart Bograes
Adam Johnstone
Halbert Ireland McMurdistown
Bessie Wheithead

GLENCAIRN

(no poor)

KEIR & DALGARNO

Agnes McMuchie in Reimill
Elizabeth Mackie 1
John Miligan 1
Cuthbert McCayes
Elesabeth Carmihell in Capenhaugh
James Clark in Ceirholm

TINDAIL
DURSDEIR

No poor

KIRKCONNELL

James Galloway Garrald 1

CARLAVEROCK

Janet Jameson Townhead 1

KEIR & DALGARNO

(The following were listed by the proprietors as poor, but are not in the official poorlist):

Edward Kerr, Bodheid
Rot Sharp, Know
Rot Howat, Hayhouse
Jo Minsie Ashtrees
Margt Herron & Nicolas Walker in Blackhous
Agnes Broomriggs
John Hairstane Blackburn —, Watersyde ... 4
Janett Black
Eliz Carmichall Cyerholme (?) 1

The names of poor are not included with the main Hearth Tax list. These are taken from a separate list, which does not include all parishes. There is no reference, for example, to Kirkbryde nor to the town and parish of Dumfries.

NOTES

1. The numbers in brackets in Dumfries parish are added by myself for reference purposes.
2. Names in brackets are alternative versions taken from one of the earlier copies.

APPENDIX TO DURISDEER

From the Poll Tax 8th December, 1694

List of the Duke of Queensberry's familie with ..... what every one of them is lyable to pay of poll money.

	£	s	d
The Duke, his Grace	100	0	0
Ann his daughter	0	6	0
Servants:			
William Stewart	5	0	0
James Douglas	3	12	0
William Richardson	2	0	0
Mistres Bailzie	3	0	0
Ann Clark	3	0	0
Janet Kirkland	3	0	0
Andrew Makceinzie	3	0	0
William Patten (?) coachman	3	18	0
John Bizart	2	2	0
Edward Wigholm	1	4	0
Thomas Craig	5	8	0
Jean Munsie (?) (inserted later)	1	4	0
John Morrison	1	10	0
Daniell Wright	1	4	0
Duncan Makcalla	1	4	0
Henrie Aberneathie		18	0
Alexr. Makclure	2	10	0
Adam Cargill		12	0
Jean Trumble	1	4	0
Margaret Heslop		6	0
Iean Makcatney		12	0
Suma	£147	12	0

Note: This appears to be one of the few surviving records of the Poll Tax in Dumfriesshire. The tax varied according to status and property. The standard unit was 6/- Scots per person, but servants were taxed in proportion to their wages. Children under 16 were not normally taxed.

THE MARCH OF THE JACOBITES THROUGH ANNANDALE IN NOVEMBER, 1745

By W. A. J. PREVOST

In the month of October, 1745, Prince Charles Edward was busy completing his preparations for his invasion of England. He had gathered together an army which was encamped round about Edinburgh, but on Monday, 14 October, the Highlanders struck their tents and were moved to quarters in Edinburgh, Leith, Musselburgh, and in villages near Dalkeith. There were as yet no signs of the army being on the march and the Jacobites were still very active in levying contributions, commandeering horses and arms and, as two gentlemen reported from Edinburgh, " They comitt a great many Excesses in the Country, and are carrying to town all the Hay within 10 miles."[1] The people who dwelt in the country between Edinburgh and the Border were forewarned of what to expect if and when the rebel army marched their way, and this could not be long delayed. Winter was very near; conditions for campaigning were getting more unsuitable every day, and when the " Lord Provost " of Linlithgow received from the Duke of Atholl[2] the following peremptory order, dated 29 October, it was evident that it would not be long before the rebel army would be set in motion. " The Duke of Atholl orders the Provost to have ready in your Town of Lithgow by three o'clock tomorrow morning 200 carts with two horses each well harnessed, and 60 horses without carts for the cannon well harnessed as you shall be answerable."[3]

Linlithgow, so it is said, was a town which suffered severely from the rebellion and it appears that the Provost was unable to find the 200 carts demanded. Norie, when describing the preparations made for the march, writes that only 150 wagons had been collected, and that these were packed with large quantities of arms, ammunition, tents, tartan plaids and other stores.[4] This baggage train, according to a report from Edinburgh received by the Provost of Dumfries, was on its way to Dalkeith on Thursday, 31 October.[5]

It is related that the Prince, elated by his victory over Cope and his regular troops at Prestonpans, proposed marching directly to Newcastle and fighting Field-Marshal Wade, but in the end Lord George Murray's suggestion of marching into England through Cumberland was the plan approved by the Council and adopted by the Prince.[6] By 1 November he had occupied Dalkeith Palace where he was surrounded by his army in billets and in bivouacs, and that evening the advanced guard of part of the army, said to have been Ogilvy's Regiment, left Dalkeith, apparently on the way to Peebles.[7]

The army was divided into two divisions. The eastern division, under the Prince and Lord George Murray, marched by Lauder and Kelso. The western division was commanded by the Marquis of Tullibardine, called by the

Jacobites the Duke of Atholl, with the titular Duke of Perth as his second in command.[8] They were ordered to march by Peebles, Moffat and Ecclefechan, and to join up with the Prince at Carlisle.[9] A warning order or "instructions" dated 30 October for the Duke of Atholl stated that he was "to march from Dediston to . . . with" the following troops under his command:

Atholl Brigade of three regiments.

Perth's.	Menzies.
Ogilvy's.	Roy Stewart's.
Glenbucket's.	MacPhersons.

The Artillery and the heavy baggage, and the Perthshire Horse,[10] or, according to Maxwell of Kirkconnell, "the greatest part of the horse."[11]

Amongst other things, His Grace was instructed to observe exact discipline, that bread for four days was to be provided and that "The troops are to part early that they may arrive by times at their quarters." The artillery, which consisted of 13 small field pieces and the 7 guns captured at Prestonpans, was to march at the head of the heavy baggage with the Treasure immediately behind the artillery, followed by the bread wagons, and then the baggage wagons of the different regiments according to their order of march.[12]

The main body of the western division marched by Auchendinny to Peebles which they reached on the evening of Saturday, 2 November.[13] An express which left Moffat early the next morning reported that 1800 Highlanders were at Peebles that night and that "a great many gentlemen were at Broughton, which is Mr Murray's house[14] six miles (read twelve) from Peebles, escorted by 60 horse.[15] Another report despatched to Carlisle that same day confirmed that the 1800 Highlanders had arrived in Peebles and that they were followed by 150 cart loads of baggage and artillery and about 3000 Highlanders.[16] They encamped in Hay Lodge Park and demanded cess and supplies of provisions, while the town mills were kept going on the Sunday to provide meal. It is said that the troops behaved well and that no damage was done.[17] The Duke of Atholl was there on 4 November when he gave "Captain" or Colonel Grant,[18] commander of the train of artillery, an order to deliver to the Earl of Kilmarnock's small troop of horse, 24 sabres and 30 pairs of pistols, and what flints and ammunition the Perthshire Squadron of Horse might require.[19]

Ogilvy's Regiment was encamped in Peebles for the night 3-4 November and regimental orders issued that evening contain instructions, obviously emanating from the Duke of Atholl, which indicate that march discipline up to date had been very lax. Therefore, soldiers were ordered to have enough water in their canteens so that they had no excuse to quit their ranks. Officers were to be detailed off to take care that the soldiers kept their ranks, and to carry this out effectively captains were to march in rear and lieutenants on the

flanks of their regiments. Most exact discipline was to be observed. Men were forbidden to shoot sheep, hens, etc., or break open the country people's houses, and " That no man, under pain of severe punishment, pretend[20] to shoot off his ammunition in the idle way they have done."[21]

On 4 November Ogilvy's Regiment marched to Broughton where they camped for that night and it is presumed that other regiments camped there, too.[22] It was at Broughton that orders were issued to the " army " to march at seven o'clock the following morning, with all the baggage and artillery, for a rendezvous at eight o'clock at Mossfennan Haugh higher up the Tweed valley, from which place they were to proceed to the Bield, Polmood and Crook. It was from the Crook that marching orders for the 6 November were issued, to the effect that all the troops were to start early enough to be at Erickstane Brae by nine o'clock, whence they were to march in good order to Moffat. The Master of Strathallan was detailed to " detach a Lieutenant and 30 men in the morning as well to hinder any stragglers from coming before, as to prevent the cruel plunder of which their Graces the Dukes of Athole and Perth complain."[23]

These orders, which are taken from the orderly book of Ogilvy's Regiment, applied to the other regiments of the main body of the western division which was intended to reach Moffat on Wednesday, 6 November. However, one must not mistrust the somewhat misleading report from Provost Bell in Dumfries, written at eight o'clock on Tuesday the night before, when he informed Dr Waugh in Carlisle that he had heard that a quartermaster belonging to the Highlanders had arrived at Moffat at about one o'clock that afternoon to secure quarters for 4000 foot and 600 horse, "and the messenger says he saw them within half a mile of the town before he came away."[24] The messenger did not see the main body though he may well have seen the cavalry who were quartered in places like Dumcrieff outside the town, and also some of the infantry who were a day's march ahead. Charles Robertson, younger of Trinafour, who was an officer in the Atholl Brigade, wrote to his father from Moffat, telling him that " We came here Twesday last, and we are to march tomorrow (Friday) at five of the clock for an other journey; I cannot assure you which way, but I hear it is for Dumfries in the first place."[25]

Dumfries was earmarked for the cavalry before the Jacobites left Edinburgh, for on 1 November a message had been received in Dumfries that stabling and forage for 600 horse and billets for as many men were to be ready immediately since they were then at the Carse of Kinneil in the north-west corner of Linlithgow.[26] The Jacobites never went there and there is very good reason to suppose that their intention of marching to Dumfries was rumoured in order to conceal their true movements.

The problem of finding quarters for such a large number of men was most difficult, and besides the problem of quartering the Dukes of Atholl and Perth sent a report from Moffat to the Prince, informing him that they had had great

difficulty in bringing the heavy baggage that length and that they did not think that they could possibly reach Carlisle before the 10th.[27] This report does not confirm the statement made by Mrs Thomson in her *Memoirs of the Jacobites* that the tents which had been provided for the Highlanders had been left somewhere on the road to Moffat. However, she has drawn attention to the fact that November was not an ideal month for sleeping out under canvas and that even the hardiest of Highlanders should not be asked or expected to do so.[28] Not all, but only some of the regiments were " cantoned " or quartered in Moffat and the remainder slept in tents. This was the usual procedure when on the march in England and one wonders what other arrangements were made by the rebels when, on their march northward to Carlisle, sixteen carts, laden with their tents, were taken by Major-General Bland and his dragoons.[29]

The hardships experienced by Alexander Smith on the march to Moffat are described by him in a letter to his wife. Smith apparently served in Ogilvy's Regiment till he fell sick at Carlisle. He was discharged as unfit for further service and he was able to make his way back to Scotland. He and a companion seem to have been pressed into the service in Edinburgh on 1 November[30] and to have been forced to march to Dalkeith " which we was obliged to go with the rest. We was not two hours there when the Duke of Perth give orders to march to a part called Lonhead where we lay in a park six miles from Dalkeith." The next day they went to Penicuik " where we lay in a Barn about five hundred of us, and not one sheaf or straw to one of us. And from that to Peebles, where we walked the streets the whole night, and upon the Morrow was obliged to take the Drum, and I bear till I sweat and trembled for perfect hunger . . ." Though he does not say so he must have camped with the regiment a night at the Crook for on 6 November " we was obliged to travel twelve miles before we halted at a part called Moffat, and we camped upon the plain we got every man one Bisket."[31]

Smith had cause to complain about the rations issued to the men while on the march. This was remedied in Moffat where the army rested the whole of 7 November, for that night cattle were brought into the town by order of the Duke of Atholl. These were valued by two local " fleshers " at one pound four shillings a head when it is presumed that cash payments were made to the owners. Other stock owners were not always so lucky and next morning the Duke informed all officers that William Murray in Archbank, a farm on the outskirts of Moffat, had " sustained great damage particularly by having a considerable number of his sheep destroyed by the Army. These are therefore requiring you not to trouble or molest him or his family in your search for horses . . ."[32]

It might not be untrue to say that the rank and file took very little notice of Army Orders, for at a Council of War held in Moffat on the day the Highlanders arrived there, it was reported that the Army had been " marroding " on the march and taking without leave from the houses and in the fields upon the route

cows, sheep, fowls, etc. It was therefore decided that if any person whatever in future shall be found " marroding, destroying, killing or taking anything whatever on their march, or be found at any distance from the army on either side of the road," was to be most severely punished.[33] It is possible that an attempt was made to check this roving in quest of plunder when a guard of 50 men from Lord Nairn's Regiment was mounted at seven in the morning, " at the gate of Moffat that leads to Lockerby."[34]

Besides the crime of pillage senior officers were undoubtedly alarmed by the desertion of so many men from the Duke of Atholl's column though it is said that the Prince's column suffered more severely, particularly at Kelso.[35] This was history repeating itself for in 1715 there were desertions before the Jacobites had reached England, and therefore while in Moffat the majors of each regiment were asked to give an exact state of the men they had lost, by desertion or otherwise, since they had left Dalkeith.[36] Six men had deserted Lieut.-Colonel George Robertson of Faskally who commanded the 3rd Battalion of the Atholl Brigade.[37] He wrote to his mother from Moffat telling her this, " and I beg you'll punish them severely, as it shows they had little regard to me to leave me at such a time."[38] Officers must surely have had little confidence in their men when on 8 November, on the morning when the Highlanders marched out of Moffat, a captain and 50 men were ordered to stay behind an hour after the troops had left, " to bring up all the scampering souldiers."[39] Robert Chambers writes in his *History* . . . that during the march to Carlisle the Highland army lost a great portion of its number by desertion. " The Lanarkshire and Stirlingshire roads are described as having for some days swarmed with the men who thus abandoned the standard, and great quantities of arms were found lying in the fields adjacent to the line of march, which the deserters had flung away."[40] It is said that when the Prince's army reached Carlisle he had under his command only 4500 men.

There is some speculation about the route taken by the Highlanders on their march from Moffat onwards to England. There were then two passable main roads leading south from the town. Both are marked on Roy's Map which was prepared between 1747 and 1755. The western road, the " Lochmaben " road, is shown running east of Kirkpatrick-Juxta and thence by Cogrie and Templand to Lochmaben. At Lochmaben there is a cross road going east to Lockerbie while the main road continues on to Dumfries. This Moffat-Lochmaben-Dumfries road was the " Road of Dumfries," hereinafter called the Dumfries Road, which was said to have been taken by the Duke's forces.[41] The eastern road, " the Carlisle to Moffatt " road, crossed the Moffat Water by a bridge at Dumcrieff and thence by Poldean, Lockerbie, Ecclefechan to Gretna. The bridge had been built in 1728[42] and the road has been described by Sir John Clerk of Penicuik who journeyed along it by chaise to Carlisle in 1731. He remarked that the way all along to Ecclefechan was exceedingly good. " We had the Roman causeway for about 12 miles only . . ."[43] On another journey to Carlisle made three years

later Sir John's horses were bogged down in the Sark at Allison's Bank near Gretna when he decided that in future he would cross the Esk by the Longtown road which was free of " quicksands and other inconveniences." [44] Both these crossings are marked on Colonel Grant's map, which was printed in Paris in 1747, *où sont tracées les differentes routes* followed by the Prince and his army. It is observed that Grant made a special note at Longtown that the *passage de l'Esk Tres perilleux par le debordment.*[45] (Plate X).

The Carlisle road and the Gretna crossing were used by Cluny MacPherson who received an order from the Duke of Atholl on 8 November that he was " to march directly with the arms and powder left here and leave them with the convoy of arms and ammunition, etc., so that with the utmost expedition you may be able to join H.R.H. and the rest of his Army without loss of time by Lockerbie, Achilfechan, and Graitney . . ."[46] MacPherson may have left Moffat by Burnfoot and the Moffat Water bridge hotfoot for Lockerbie in order to avoid being blocked by the baggage carts and troops who were marching along the Dumfries road. At all events the story goes that Highlanders were supplied with whisky at The Bield near Gateside in Wamphray where there was a kind of roadside inn. The " old " Bield was replaced by a " new " Bield, remains of which are still visible, which was used as a toll house on the Carlisle road at some time after the Turnpike Act of 1777 had been implemented. Furthermore, George Carruthers of Milne, when a young man of 20 in 1745, remembered seeing the Highlanders marching through Wamphray. This rather unimportant information is of unusual interest as the story has been passed on by George of Milne's grandson, George of Stenrieshill, who died aged 87 in 1911, a tremendous span covering three generations.[47]

The marching orders for Friday, 8 November, which were issued to the rest of the army at Moffat, still kept up a pretence of marching to Dumfries in spite of the fact that the real objective was Lockerbie. " The Duke of Perth's, Ogilvy's, and Glenbucket's Regiments are to part at six in the morning, and to march on the road to Dumfries, to a village six miles off, where they are to wait for the rest of the Column."[48]

The rest of the column refers to other regiments which were quartered in Moffat. The village six miles off might have been Lochwood which is said to have been visited by the Highlanders though the castle was then abandoned.[49] However, Lochwood does not answer to the description of a village which was almost certainly Johnstone, for Captain Stuart of Ogilvy's Regiment records that they " marched from Kilpatrick Kirk near Moffat, by Johnstoun Kirk, to Lockerby."[50] A " sketch plan of the parish of Johnstone " dated 1786 shows the Moffat-Lochmaben road passing Johnstone Mills, Johnstone Kirk, and Kirkbank where a side road, still shown on modern maps, leads down to a ford across the Annan. [51] At the " Halt " at Johnstone Kirk orders would then be given to cross the Annan and make for the Carlisle road; then to march south by Jardine Hall

to Lockerbie.[52] The story has been handed down from generation to generation of Kirkbank farmers that the Highlanders crowded into the farmstead and that their wagons were halted on the road which passed and still passes Kirkbank house.

Sir Bruce Seton notes that the men of Ogilvy's Regiment were encamped or quartered at Kirkpatrick-Juxta,[53] and it may well be so for " there was at one time an amusing tradition of the violent trepidation of the minister's man who waited on them at lunch in the kirk,[54] " and of his concern where he could best hide the kirk plate.[55] The precentor, session clerk and treasurer, Thomas Gibson, was also anxious about the safety of the poor's money which he carefully hid in several places " some days before the highland army passed for England," but " one purse which he had put into his yard dyke (most of which he believed was copper) could never again be found." This matter was discussed at a meeting of the kirk session held over 4 years later, and as Gibson " could not specify the sum which the purse contained, the session was left to conjecture, and they did unanimously agree that there be allowed to the treasurer . . . the sum of £1.0.0." Several years elapsed and at another meeting of the session held on 28 November, 1756, Gibson's son John declared " that he had found in his yard dyke some copper coin which he believed was that hid by his father in the time of the late rebellion . . ." John Gibson was desired to hand the money over to the Minister and it was found that the sum of the said copper was £1.2.1¾.[56] All would have been well with the treasurer had he been as precautious as David Carruthers in Hazlebank, which was then a steading on Girthhead in Wamphray owned by Carruthers of Milne. David " hid the mole-skins with the guineas in the well beyond the hill when the Highlanders came," and " took Walter and John to see them put in, so they could get them if any ill fell to the lot of the old man."[57]

Gibson and Carruthers acted wisely and many others did likewise. Tradition relates how that the people of Stobo removed their cows to places of safety, with the exception of one man, a Jacobite sympathiser, who later had cause to regret that he had not followed the example of his neighbours.[58] There are many references to the commandeering of horses of which the army always seemed to be in need. There is the story of the horse stolen from the widow woman in Nether Murthat by the soldiers who were marching down the Dumfries road, and how it was recovered and returned to its owner.[59] There is the story recorded by Dr Singer in 1834[60] of how the body of Mr John Taylor, formerly minister of Wamphray, was conveyed to and buried in Kirkpatrick-Juxta parish. Mr Taylor had died early in November and by chance the funeral was timed to take place when the army was on its way to England. A party of Highlanders " met the procession, uncovered in passing, but sent back a detachment after the funeral was decently concluded and seized on some horses."

On Saturday, 9 November, the Prince's column marched to Rockcliff where

they crossed the Eden within four miles of Carlisle, " and thence pursued their march to Murray's on Brough Side, where they lay that night about four miles southward of Carlisle. That afternoon, part of the Corps which took the route by Moffat, with the artillery, joined them."[61] Ogilvy's Regiment, according to Captain Stuart, was one of those regiments which left Lockerbie that morning. It marched over the Border to Newtown of Rockcliff where it halted.

On Sunday, 10 November, the remainder of the Moffat division came up, with the exception of about 200 which could not join the Prince before the 11th.[62] Two more regiments, under Lord Ogilvy and Gordon of Glenbucket, crossed the Eden at Cargo and Grinsdale; and Carlisle was invested on all sides, one body, under the Duke of Perth approaching by Stanwix Bank; another under the Duke of Atholl, by Shaddongate; and a third under the Prince himself by Blackhall fields and St Nicholas.[63] It was the " remainder " of the division which " brought the mortifying News of 34 of their Waggons being left behind which fell into the Hands of the Militia of that County," but more about this heinafter.[64] The road taken by the regiments marching from Gretna to Carlisle is shown by Colonel Grant, in combination with Roy's Map, as passing Surone and Allison's Bank to Sarkbridge, thence south, passing to the west of Mossband to " Green Ford," the crossing over the Esk as shown by Roy. This ford was just over a mile downstream from Metal Bridge and this brought the rebels to within 4 miles of the Eden crossings.

The fact that the division took more than one day to cross the Border is confirmed by the Graitney Kirk Session minutes which record that " On Saturday the 9th November, the Highland army passed by here, [also] on Sabbath day and on Monday. Mr Gatt retired on Thursday before and crossed the Bolness Wath[65] in the greatest danger. There was no sermon at Graitney on Sabbath the 10th November, Mr Gatt being in England and a column of the Highland army being here."

The Rev. James Gatt, minister of Graitney since 1729,[66] made the hazardous crossing to Bowness on the Cumberland coast because Bowness was well to the west of the route being taken by the advancing Jacobites whom he wanted to avoid. The fact that Mr Gatt fled, and left his wife in the manse was not, it is thought, due to cowardice but to his reluctance again to be associated with the Jacobite cause. He had been expelled with seven others in April 1716 from King's College, Aberdeen, for various misdemeanours which included drinking the health of the Pretender under the title of King James the Eighth, at a bonfire lit by them at the college gate. He was reinstated two years later and graduated M.A. in April 1718.[67] Anyway, Mr Gatt returned to Graitney on F'riday, 15 November, and preached the following Sunday. " The bell was not rung, the Highlanders being on the English side," lest the far-away Highlanders should hear the sound and, according to one explanation, construe it into a loyal Presbyterian protest against themselves.[68]

There was, however, another reason which may have influenced Mr Gatt in his decision to abscond. He was a minister of the Church of Scotland and as such had accepted a call to Graitney which was in the Presbytery of Annan and in the Synod of Dumfries. There is no doubt that the church in Dumfriesshire was very anti-Jacobite, and it seems that as early as September the synod had recommended to the presbyteries to meet frequently for prayer and to appoint a Day of Humiliation " so soon as they had certain Intelligence of the march of our Army's, and had reason to expect an Engagement betwixt them and the Rebells."[69]

The Lochmaben Presbytery appear to have been more partisan than the Annan Presbytery whose minutes after 31 July were noted by the synod clerk as having been carelessly kept and, it is safe to say, their proceedings not properly recorded. For example, on 12 September, the Lochmaben Presbytery bemoaned the dangerous and expensive war with France " and by suffering a Popish Malignant Party, with the Pretender's Son at their Head, to Disturb the Peace of our Native Country, by a wicked Rebellious Insurrection at home." At another meeting three weeks later they resolved " to continue their vigorous endeavours to animate their people to Loyalty to His Majesty King George."[70]

Both Annan and Lochmaben presbyteries had appointed Thursday, 7 November, as a Day of Humiliation, and some weeks later only two parishes in the Lochmaben presbytery reported that the fasting had been observed, the other congregations had been unable to conform " by reason of the Rebells coming into their Bounds." Under the circumstances and whatever his true feelings may have been, Mr Gatt was in an uncomfortable situation. Moreover, the Duke of Atholl and his troops were very soon made aware that in Dumfriesshire they were marching through an unfriendly country, and this was forcibly brought home to them by the loss of the 34 baggage carts to which reference has already been made. There are several versions of this incident.

The first is contained in a letter from Langholm, 18 November 1745, which relates how that the rebels " had left about 30 Cart load of Baggage at Lockerby with a Guard; but the Guard, upon hearing that Carlisle was besieged, was so earnest to have a share in the siege, that they left their Charge, and run forward to Carlisle."[71] This explanation was repeated by the *Scots Magazine* which also suggested that perhaps the guard were afraid of being attacked by the country people from Dumfries.[72] Thirdly it may well have been that the 34 carts were immobilised owing to the slackness of the baggage guards " who was not so careful as they ought to have been by which a great many of the horses and baggagemen made their escape."[73] It was reported that the carts were loaded with arms, bread, Highland plaids and waistcoats.

At any rate the baggage was seized on 14 November when the Dumfries militia or, as Mr John Dun wrote on 19 November, " the Secedars in Galloway, Nithsdale and Annandale, getting information that the Highlanders were all into

the English side and that there was Thirty Two Carts on the Road thro' Annandale for that Army, loaded with Bisket, Swords and other such like, Gathering to some hundreds in a body in order to Seize them (tho' the Provost of Drumfries object'd against it), And went in pursuit of them whom they overtook at Ecclefechan, seized 8 [and] carried of[f] all."[74] The eight guards were not the only rebels to have been captured at Ecclefechan. On 9 November, the day when the Highlanders left Lockerbie, a quartermaster named Brand, a single horseman riding " about a mile before the Rebel Army," was made prisoner by a party of the Cumberland militia and taken to Carlisle. His story is recorded by Baron Clarke, one of the judges at the Carlisle Jacobite Trials, in the notes he made when he tried and sentenced Quartermaster James Brand to death for High Treason in September 1746.[75]

At the trial the prosecution produced witnesses who stated that Brand was acting as quartermaster to Lord Strathallan's Horse, called the Perthshire Squadron, though when he was captured he admitted to being in Lord Kilmarnock's Horse.[76] They testified that the accused had commandeered horses, had demanded arms for the Prince, and described him as being " armed with Back Sword and Pistols, in a Highland Dress, blue Bonnet and White Cockade." Important evidence was given by David Logan, a " Dragoon," who had obviously turned King's Evidence, that at Lockerbie the accused " came forward to take Billets for the Horse; we were going to Egles Fakill." Baron Clarke added a special note that Logan had " heard Kilmarnock give orders to go forward and take Billets."

On the same day a patrol of light horse had been sent out from Carlisle towards Scotland to get intelligence of the rebels. It was led by Lieutenant Kilpatrick, with Christopher Harding, William Curry, James Dalton and Richard Carruthers. All these men gave evidence, with the exception of Kilpatrick who was in the army in Scotland and could not be traced.[77] Harding's evidence is the most important and the abridgement thereof as noted by Baron Clarke is as follows. His spelling of Ecclefechan and Burnswark is excusable.

" . . . we went to Egle Fakin & went up Bourgensswork hill — & we saw the Rebels were coming all toward us — about 100 of them were at the bottom of the Hill — the Prisoner was before all the rest and Kilpatrick and I were standing on the mountain & he bid me go down and see who this was — I went down & saw the White Cockade—came back & told Kilpatrick & he sent me to our other two — & we all went up to him with our Guns ready & ask'd who he was, he said he belonged to Prince Charles — he laid his hand on one of his Pistols & said he would fight for his Prince as long as he could stand — we surrounded him & told him we would Shoot him if he didn't Surrender — he did Surrender & told us he was a Gentleman & hoped we would use him as such — Kilpatrick wouldn't let us rifle him — he had several pistols — a tartan Wastecoate — Dragoon Boots — Broad Sword he took from Dragoon at Preston

Pans — said he was a Quarter Master & coming to take Quarters for the army at Egle Fakin — rode a White Horse — brought him to Carlisle that Night & staid two hours at the Gates before we could get in — Rebel army when we took him was near a Mile behind."

The prisoner's defence was unconvincing and it is only necessary to quote from the evidence of Hugh Roy, a prisoner indicted, who swore that the first time he saw the prisoner he was taken near Lockerbie and put into a barn. The Duke of Perth told him he was to be tried by Court Martial next day for desertion and told them to take special care of him. " Two Centinels set over him, one at the fore door — one at the back door. He came out to make water — Slipp'd his horse, [tied there at the Door], mounted & rode off — this all in a few minutes."

Further incriminating evidence was found in a pocket book where a memorandum under date 27 October 1745 recorded that " James Brand joined Lord Strathallan's Squadron," and this was proved to be in Brand's own handwriting. However, apart from the evidence submitted by the prosecution, Brand is included in a " List of Prisoners concerned in Raising Funds," and this alone was enough to damn him.[78] He was found guilty by the Carlisle jury, and he and eight other Jacobites suffered the dreadful death reserved for traitors, on Gallows Hill,[79] Carlisle, on 18 October 1746.

ACKNOWLEDGMENTS

I am grateful to Mr A. E. Truckell and to Dr J. B. Wilson for their helpful suggestions and information. I am particularly obliged to the Rev. Robert Brown for numerous notes based on information supplied by Mr J. W. Brown, former Session Clerk of Gretna Old Parish Church.

REFERENCES

1. Scottish Record Office, Clerk of Penicuik Muniments (GD 18), Letter 17 Oct 1745. W.C. Dumfries.
2. William Murray, styled Marquis of Tullibardine, 1689-1746, was attainted for his share in the " Fifteen." He lived in France and returned to Scotland with the Prince on 25 July 1745. On 31 August he and the Prince took up their quarters at Blair Castle and having assumed the title of Duke of Atholl, he took possession of the family estates. He was styled Duke of Atholl by the Jacobites. **Scots Peerage,** i, 480.
3. Atholl, John, 7th Duke of. **Chronicles of the Atholl and Tullibardine Families** (1908), iii, Addenda xxxiii.
4. W. D. Norie, **The Life and Adventures of Prince Charles Edward Stuart** (1903), ii, 157.
5. G. G. Mounsey, **Carlisle in 1745** (1846), 35.
6. Tomasson and Buist, **Battles o fthe '45** (1967), 83184.
7. Sir Bruce Seton, **Orderly Book of Lord Ogilvy's Regiment,** 12.
8. James Drummond, third titular Duke of Perth, and but for his father's attainder sixth Earl of Perth. Born 11 May 1713 and died 13 May 1746 on board a French ship after his escape from Moidart. **Scots Peerage,** ii, 55.
9. Elcho's **Short Account of the Affairs of Scotland** (1907), 308.

10. Atholl **Chronicles,** op. cit., iii, Addenda xxxi.
11. Maxwell of Kirkconnell, **Narrative of Charles Prince of Wales' Expedition to Scotland,** Maitland Club (1841), 60. See Norie, op. cit., ii, 156, with a list of units and numbers of men in each.
12. Atholl **Chronicles,** op. cit., iii, Addenda xxxi.
13. R. Chambers, **History of the Rebellion of 1745/46,** Seventh Edition, 174.
14. Broughton House, formerly called Little Hope, the seat of Secretary Murray, burnt down in 1773. Pennecuik's **History of Tweeddale,** 264.
15. Mounsey, op. cit., 36. Letter "Moffat 3 Nov 1745. 8 o' the morning," J. Graham to the Provost of Annan.
16. **Gentleman's Magazine,** Nov 1745, 603, gives the number of rebels at Peebles as being between 4-5000.
17. **A History of Peeblesshire.** Ed. James Walter Buchan, ii, 87.
18. Colonel James Alexander Grante or Grant, the Rebel's principal artillery officer, was a member of the staff of the French Royal Observatory. He planned the siege of Carlisle and was disabled at the siege of Fort William.
19. Atholl **Chronicles,** op. cit., iii, Addenda xxxiv.
20. Pretend, under any pretence.
21. Seton, op. cit., 13.
22. Alexander Mackintosh, **Forfarshire or Lord Ogilvy's Regiment 1745/46.** See itinerary.
23. Seton, op. cit., 14.
24. Mounsey, op. cit., 39. 2000 foot, according to the **Gentleman's Magazine,** Nov 1745, 603.
25. Atholl **Chronicles,** op. cit., 87, 301.
26. TDGAS, 3, vii, 194. "Some Letters anent the Rebellion of 1745." Ed. G. W. Shirley.
27. **Memorials of John Murray of Broughton,** Scottish Hist. Society (1898), xxvii, 237.
28. Mrs Thomson, **Memoirs of the Jacobites** (1846), iii, 87.
29. **Scots Magazine,** Dec 1745, 578.
30. Smith gives 5 November which must be wrong.
31. Donald Nicholas, **Intercepted Post** (1956), 116. Published by the Bodley Head to whom I am indebted for permission to quote.
32. Atholl **Chronicles,** iii, Addends xxxvi, xxxvii.
33. Ibid. Addenda xxxv.
34. Seton, op. cit., 15.
35. **Scots Magazine,** Nov 1745, 529.
36. Seton, op. cit., 15.
37. Atholl **Chronicles,** op. cit., 87, 301.
38. Ibid, iii, 88.
39. Scamper, to decamp, to bolt. Seton, op. cit., 15.
40. R. Chambers, op. cit., 176.
41. Andrew Henderson, **The Edinburgh History of the Late Rebellion,** 4th Edition (1752), 55.
42. Clerk of Penicuik, op. cit., 5697. Letter 29 Jan 1728. John Dickson, Dumcrieff, to Sir John Clerk.
43. TDGAS, 3, xxxviii (1961), 130. "Sir John Clerk's Journey to Carlisle and Penrith in 1731."
44. CW2, lxii, 247, 252. "Sir John Clerk's Trip from Drumcrief to Carlyle in 1734."
45. Grante's Map. National Library of Scotland, EMGB, s, 3.
46. Atholl **Chronicles,** op. cit., iii, Addenda xxxvii-viii.
47. I am indebted to Mr David Cormack, W.S., and to Mr W. F. Cormack, W.S., for this

information W.A.J.P. The Carruthers family were long in Wamphray, for which see J. Paterson, **Wamphray**, 50-55; and A. Stanley Carruthers and R. C. Reid, **Records of the Carruthers Family,** 75-76.

48. Seton, op. cit., 16.
49. John Brown, **Moffat Past and Present** (1873), 64.
50. Capt James Stuart, **March of the Highland Army** (Miscellany of the Spalding Club 1841, i, 292/3). Seton, op. cit., 16.
51. Hope-Johnstone of Raehills MSS. Edinburgh Record Office, National Register of Archives (Scotland) RHP 10045.
52. W. B. Blaikie, in the map in the end folder of his **Itinerary . . .**, shows the route of the western division crossing the Annan near Beattock to join the Carlisle road. Then on to Jardine Hall.
53. Seton, op. cit., 16.
54. John Brown, op. cit., 64.
55. Agnes Marchbank, **Upper Annandale** (1901), 131.
56. O.P.R. Kirkpatrick-Juxta, New Register House.
57. Letter 29 Dec 1897. George Carruthers, Stenrieshill, in the Carruthers-Thomson MSS, Ewart Library, Dumfries. Milne, Girthhead and Levenhay, were then owned by Carruthers of Milne.
58. Sir George Douglas, **A History of the Border Counties** (1899), 397.
59. J. T. Johnstone, **A Talk on Moffat** (1922). Privately printed?
60. Dr Singer, Kirkpatrick-Juxta, **New Statistical Account,** Dumfriesshire, 133. For Mr Taylor and his death in November see **Fasti.**
61. **Scots Magazine,** November 1745, 529.
62. Ibid.
63. Mounsey, op. cit., 42.
64. Henderson, op. cit., 55.
65. Wath, a ford across a stream. The Stoney Wath or Bowness Wath was an important route used by drovers. See A. R. B. Haldane, **The Drove Roads of Scotland,** 166.
66. Rev. James Gatt, buried in Graitney Kirkyard. The inscription on his tombstone records that he died 31 Oct 1787 in the 88th year of his age, and was for 60 years minister of the parish.
67. **Fasti.**
68. M'Dowall, **History of Dumfries,** 535.
69. Presbytery of Annan Minute Book, 17 Oct. 1745, CH 2/13/1, Scottish Record Office.
70. Presbytery of Lochmaben Minute Book, CH 2/247/4, Scottish Record Office.
71. **Caledonian Mercury,** 22 November 1745.
72. **Scots Magazine,** November 1745, 533.
73. Lockhart Papers, ii, 455.
74. Letter 19 Nov 1745. John Dun, Wigton, to H. H. of Castlewig. "Some Letters anent the Rebellion of 1745." Ed. G. W. Shirley. TDGAS 3, vii, 197.
75. Baron Clarke's notebook. Tullie House Library, Carlisle.
76. W. B. Blaikie, on page 24 of his **Itinerary . . .** shows the different regiments in the Duke of Atholl's column which include "The Perth Horse (Kilmarnock's)."
77. R. C. Jarvis, "The Carlisle Jacobite Trials and the Clarke notebook." CW2, liii, 125, 126-129.
78. Seton and Arnott, **The Prisoners of the '45,** i, 142.
79. **Carlisle,** 1957 Edition, 43. Published by Carlisle Corporation.

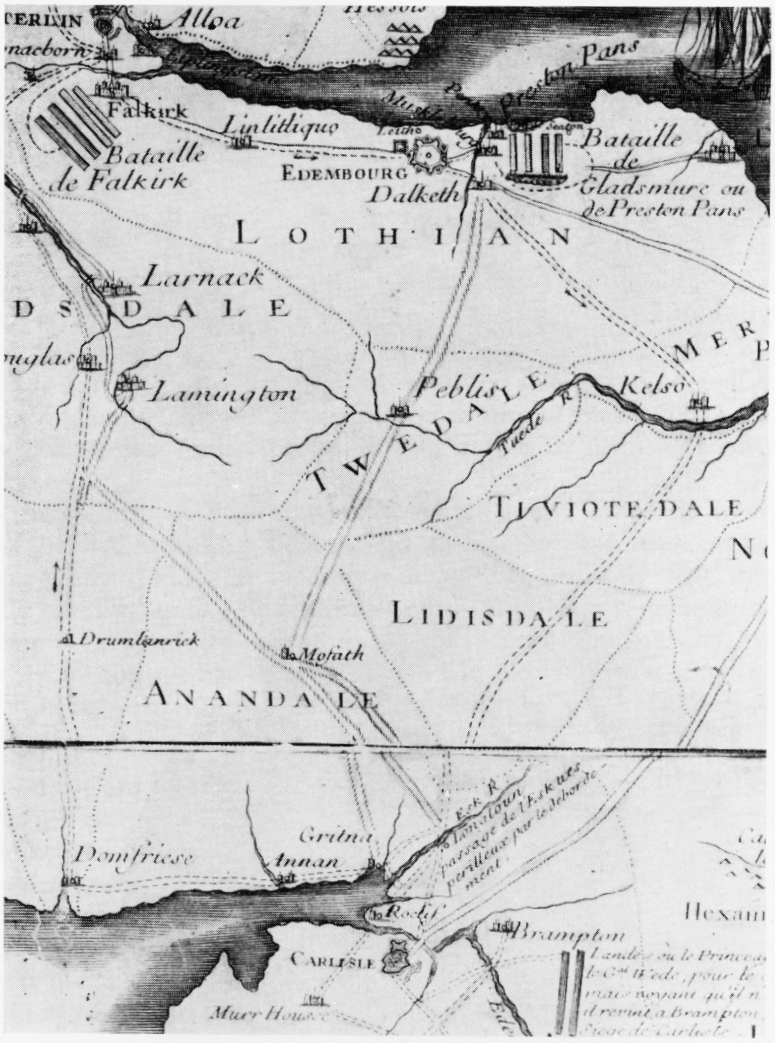


Plate X—From Col. Grant's map (1747). See " The March of the Jacobites through Annandale."

SOME NEW MINERALS FROM BEESWING, EAST KIRKCUDBRIGHTSHIRE WITH FURTHER ADDITIONS TO THE MINERALOGY OF S.-W. SCOTLAND

By JAMES WILLIAMS, F.S.A.Scot.

Since "Further Notes on Mineralogy in Dumfries and Galloway" was printed in Volume XLII of these Transactions many localities have been visited and some new mineral locations recorded. Many of the more difficult and doubtful specimens have been identified, or confirmed, using X-Ray Diffraction techniques—for this service the writer wishes to acknowledge his thanks to Mr B. R. Young of the Institute of Geological Sciences, London. Mr G. H. Collins, Edinburgh Office of the Institute, has kindly assisted in the identification of some material in the form of thin-sections. The minerals to be described are, in the main part, scattered throughout south-western Scotland. However, during a detailed examination of the disused granite Quarry at Beeswing an interesting suite of minerals was obtained in relation to the large fault that exists there. This fault is traceable from Grid. Reference NX89806865 to NX90206665 as a distinct trough or steep-sided gash—on average this is some 25-30 feet in width and the depth varies from 2-10 feet. After NX90206665 the fault becomes less obvious but it is felt that it may continue over the east side of Long Fell and across the Kinharvie Burn at Hawkhill (Grid. Ref. NX928654). From Hawkhill it appears to cross the Glen Burn at NX952642 and then passes between Knockendoch and Criffel. This extended course of the fault does not concern us here—the main area of mineralization lies in the area between the Quarry at NX89726850 and just below the summit of Lotus Hill at NX90256760.

Minerals at Lotus Hill, Beeswing

The granodiorite is of a pale colour and contains abundant horn—blande, sphene, and pyrites—the latter occurs normally in the simple form of the cube but combinations of the cube and octohedron also occur rarely. The rock is crossed by small pegmatites, aplites, and coarse quartz veins all of which tend to be mineralized. The rocks from within the quarry have yielded specimens of epidote and fluorspar. The fluorspar occurs honey-yellow, colourless, and lilac—the lilac material is the thermoluminescent variety "chlorophane."

The following new minerals have been identified:

Beryl. Dull blue-green crystalline material in fine-grained aplite. This is the first Scottish record south of the Highlands.

Bismuthinite. Silver-grey massive material associated with pyrites in quartz veins. Approximate location—NX89946829.

Molybdenite. A little molybdenite may be associated with the bismuthinite mentioned above.

APPENDIX

NEW MINERAL LOCALITIES FOR SOUTH-WEST SCOTLAND

Allanite. Trostan Hill, New Abbey. Grid. Ref. NX934684. Single corroded crystal, 4 mm. x 0.5 mm., of simple habit, in granite—associated with sphene.

Allanite. Craignair, Dalbeattie. Grid. Ref. NX818608. Single corroded crystal, of simple habit, in granite close to a small pegmatite—associated with sphene.

Apatite. Dundonald Quarry, near Dundonald. Grid. Ref. NS345341. Apple-green massive material in xenoliths near the contact with the country-rock—on the west side of the quarry floor.

Garnet. Clatteringshaws. Grid. Ref. NX546754. The garnets reported from this locality in

" Further Notes " have been proved to have cell dimensions between those of Almandine and Spessartine.

Hemimorphite. Garryhorn Lead Mines, Carsphairn. Grid. Ref. NX532937. White to buff mammillated crusts on sphalerite.

Lanarkite. Pibble Mine, Creetown. Grid. Ref. NX525607. Waxy-white crystals in cavities within rotted galena. A pale-blue incrustation, associated with the Lanarkite, has been identified as Anglesite—at present the source of the blue colour is unknown.

Mixite. (Hydrated copper bismuth arsenate) Southwick Needle's Eye. Grid. Ref. NX914563. Dark-green botryoidal coating on smoky quartz. This is, as far as can be determined, the first record of this mineral for Great Britain.

Molybdenite. Lower Porterbelly Quarry, Kirkgunzeon. Grid. Ref. NX858656. Small crystals as a surface coating, with pyrites, on hornfels.

Montmorillonite Group . . . Nontronite. Balcary Copper Mine and Balcary Barytes Mine. Grid. Ref. NX818484. Lime-green encrustation on quartz—belongs to the Montmorillonite group and is almost certainly Nontronite.

Natrolite-Mesolite-Scolecite Group. Bail Hill, Sanquhar. Grid. Ref. NS756143. Small pink to white radiate crystals in cavities within the well-known auto-brecciated Augite basalt.

Scheelite. Craignair, Dalbeattie. Grid. Ref. NX819609. Pale blue to green massive material in granite with (?) Wolfram. Shows the normal bluish-white fluorescence under long-wave U.V. sources.

Thomsonite. Girvan. (On the shore just to the south of the 5th milestone South of Girvan). Grid. Ref. NX135909. Radiate groups of cream to white Thomsonite associated with pyrites.

Rodingite group. Shore exposure to the north of Lendalfoot Village, Ayrshire. Grid. Ref. NX134904. Fine-grained grey rock, composed of garnet, pyroxene, zoisite and chlorite, in Serpentine. This material probably represents a basaltic vein which has been hydrothermally altered upon injection into the Serpentine. Similar, but coarser grained, rocks are described by T. W. Bloxham: " Rodingite from the Girvan-Ballantrae complex, Ayrshire " Min. Mag. 1954, Vol. XXX, p. 525 (This rock first attracted my attention as it possibly represents raw material for the manufacture of Neolithic polished stone axes).

Tourmaline. var. Schorl. Auchengray Hill, New Abbey. Grid. Ref. NX927673. Black lustrous crystals in cavities within quartz veins through granite—crystals are up to 3 mm. in length and show the characteristic curved triangular section.

Tourmaline. var Schorl. Craignair Quarry, Dalbeattie. Grid. Ref. NX818608. Dull black radiate crystals in quartz from a pegmatite.

Tourmaline. var. Schorl. Long Fell, New Abbey. Grid. Ref. NX913641. Black lustrous massive material from a small pegmatite—intimately associated with Muscovite.

Tourmaline. var. Schorl. Low Fell Quarry, Creetown. Grid. Ref. NX479564. Dull greenish-black to brown " paint-brush " Tourmaline occurs as tufts in quartz veins.

A DISCOIDAL FLINT KNIFE FROM DUMFRIESSHIRE

By CLARE FELL, F.S.A.

Among the most attractive artefacts of the Neolithic period are flint knives with polished edges. Their comparative rarity makes it worth while to record fresh finds, particularly in areas where they rarely occur. A fine specimen is now in Carlisle Museum (Tullie House), registration No. 87.1947-1, and I am indebted to Mr Robert Hogg,

Curator, for permission to publish. It was presented to the Museum by Mrs Tweddle and was found in 1947 in a field on the north bank of the Tarras Water, close to Tarras Tile Works, Langholm, the first time the field was ploughed within living memory (Approximate map reference NY/380812). No associated finds were reported.

This discoidal knife (Fig. 1, drawn by Miss M. E. Burkett) is of brown flint, with careful secondary flaking on both surfaces and has one convex edge ground to a cutting edge, the other blunted. There is no discoloured shadow to show how it had been mounted for use. The large size of the implement — 9.9 cms. long, 7.1 cms. wide and a maximum of 1.2 cms. thick —suggests that it was made from mined flint and its presence in Dumfriesshire may indicate trade with one of the flint-bearing districts — Antrim, Yorkshire, or East Anglia. The knife is of Clark's Type III,[1] lozenge shaped, a type which he considered to be confined to East Anglia when he described these tools and their distribution forty years ago. He ascribed the type to the Beaker cultures on grounds of distribution, but it is now felt that they are part of the equipment of Piggott's Secondary Neolithic groups. More recently R. J. C. Atkinson published the distribution of flint discoidal knives in Scotland.[2] This is predominantly eastern, only two finds were recorded by him from the west, both in the Solway area,[3] while J. G. Scott has illustrated a polished edge knife of rectangular form (Clark's Type IV) from Leswalt, Wigtownshire.[4] The site of the present find could easily have been reached up the River Esk from the route by which Neolithic cultures are thought to have spread from Yorkshire, northwestward to the Solway and ultimately to northern Ireland.

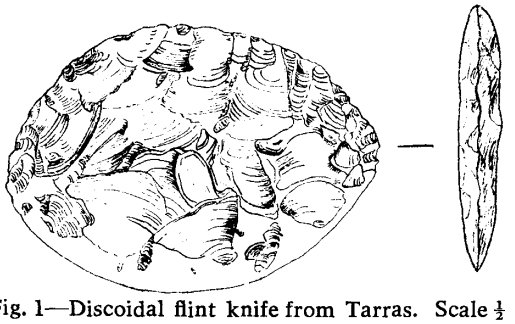


Fig. 1—Discoidal flint knife from Tarras. Scale ½

EXCAVATIONS AT WAUCHOPE CASTLE, 1966. (ref. NY 355841.)

By ALEX McCRACKEN, B.Sc.

A preliminary excavation was undertaken on the site of Wauchope Castle in an attempt to establish the form and extent of the castle, of which nothing is visible on the surface of the ground. Hyslop, in "Langholm As it Was," mentions an excavation towards the end of last century, but gives no details of any discoveries then made. It is from this site that the famous "Wauchope Hasp" came, now in the National Museum of Antiquities, Edinburgh.

The castle has been erected on the site of a motte and bailey, on the N. side of a deep rocky gorge, through which runs the Wauchope Water. The motte has been levelled (either by nature or by man) before the stone castle was erected. The lands of Wauchope were granted to the Lindsay family in 1285, and it is likely that the

1 Proc. Prehist. Soc. E. Anglia VI Part 1 (1928) 40-54.
2 **The Prehistoric Peoples of Scotland** (1962) Ed. Stuart Piggott, 25, 37-38, F. 4.
3 Luce Sands Wigtownshire, Proc. Soc. Ant. Scot. XXIII (1888-89) 204; Milton Loch, Kirkcudbrightshire, Proc. Soc. Ant. Scot. XLVI (1911-12) 181, Fig. 3. I am indebted to D. V. Clarke, National Museum of Antiquities of Scotland for the latter reference.
4 **South-West Scotland** (1966). Jack G. Scott, 25, Fig. 13e.

castle would be built soon after that date. It had fallen into ruin by 1580, but the nearby chapel remained in use until about 1700. The post-Reformation manse of the parish was built on the castle ruins, and remained in use until the mid-18th century. William Julius Mickle, the poet, was born in this manse.

Most of the remains uncovered were, in fact, of this old manse. It had walls some 2 feet thick, placed 20 feet apart, which were carefully plastered on the inside. From the manse itself and from some of the outbuildings, whose foundations can be seen just under the turf, was recovered pottery dating from c.1680-1750, together with numerous nails, fragments of bottle and window glass, three whetstones, and many roofing slates. (Langholm was an important centre of the slate industry, slates being shipped from Wales to Annanwaterfoot, carted from there to Langholm and then distributed to the surrounding district).

Under the old manse walls was the foundation of the castle wall, 4 feet thick, and built of stones taken from the river. The vast majority of these stones were unworked, but one, which had been broken and built into the manse, was part of a worked sandstone window lintel, and had sockets to accommodate bars. Unfortunately, the wall was fragmentary and could not be traced for any distance. Oyster shells were recovered from among the debris, and must have provided the lime for the wall mortar (Oysters were a common and popular food in mediaeval Scotland).

Further excavations revealed an area of very large, finely set cobbles, which from its position just under the turf, must be the courtyard of the manse buildings.

The only find which can be definitely declared mediaeval is a single sherd of pottery base, datable to 1250-1300. Nearby was found a small chisel-like implement, curiously bent.

All finds are in the Dumfries Museum.

AN EXAMPLE OF THE STIRLING PINT OF 1622

By JAMES WILLIAMS, F.S.A.Scot., F.R.S.A.I.

Dumfries Museum has among its collection of Standard Measures an example of the "Stirling Pint" of 1622. As this is the oldest (all the others date from the Union of 1707) of all the liquid measures we now possess in Dumfries a few short notes on the origin of the Standard may be of some interest.

The Stirling "Jug," "Pint," or "Stope" was deposited in Stirling in accordance with an Act of the Scottish Parliament of 1457. This measure is therefore the oldest standard measure in Scotland and the foundation of all Scottish measures of capacity. The Measure's capacity was stated to be "three pundis and seven unces of French Troyes wechte of cleir running water of the Water of Leith." The Act, which established the Stirling Jug as a universal standard, runs thus:

"Anent mettes and measoures, it is seene neidful, that sene we have bot a King and a Law universal throw-out the Realme, we suld have bot a mette and measour general to serve all the Realme, that is to say, ane pynt, a quart; quhilk was given be the ordinance of the three Estaites, Schir John Forester that time beand Chalmerlane into the Burgh of Striviling: as for the Standart, they to remaine universallie throw-out the Realme. And the firlot sall be maid thereafter, that is to say, ilk firlot sall conteine eightteene pyntes of the samin measour round and in like wyde under and abone, the twa buirdes conteinand even over in thicknes ane inch and a halfe and the breadth over within the buirds sextene inche and a half: and the halfe firlot and peck to follow in the samin kinde. And of thir said measures, that is to say, pynt, quart, and firlot, sal be maid new three standarts:

Plate XI—The Stirling Pint of 1622—see Addenda Antiquaria.
[photos, David Hope]

Ane to send till Aberdeene, ane uther to Perth, and the thrid till Edinburgh, to remaine, and now to be proclaymed there fra the feast of Saint Michael nixt-to-cum, That they measures, pynt, quart, and firlot have course, and nane others."—James II xiv Parliament, c.74, 6th March, 1457.

As stated in the Act three duplicates were prepared in 1457; however, this not being found sufficient others were made at later dates—an example dated 1574 is retained by the city authorities of St. Andrews. Finally in 1622 the Town Council of Stirling supplied no fewer than thirty-four duplicates to the various burghs of Scotland and it must be one of these that is the subject of this note.

The measure is roughly-cast handled vessel of copper based alloy (probably not bronze) bearing on the front two shields. The only decoration apart from the shields is a simple raised line around the centre of the jug. On the upper shield is the Scottish lion (rampant) and on the lower a leopard-like figure with the letter " S)" (See plate XI).

Weight = 6.8095 Kg.; Height = 17.1 cms.; Depth = 15.4 cms;
Internal Diameter (at mouth) = 10.0 cms;
External Diameter (at mouth) = 11.5 cms;
(At Base) = 16.0 cms; Capacity = 1735 ccs or 3.05 Imperial pints.

SOME INCIDENTS AT MOORHEAD'S HOSPITAL DURING FEBRUARY-MARCH, 1809

By Miss P. G. HAMPSON[1] and J. WILLIAMS, F.S.A.Scot.

During the study of eighteenth century record volumes relating to the Weekly and General Meetings of the Moorhead's or Poor's Hospital two loose documents were found. These documents describe incidents in and about the affairs of the Hospital during February and March 1809. The documents, apparently notes for presentation to a General Committee meeting, are of two types:—

(1) A report of the work done by the Weekly Committee during the previous weeks —this gives an insight into the administration of the Hospital. As such it is an excellent example of the 'modus operandi' of institutions of this nature. It is pleasing to note that the education of the Children was one of the items uppermost in the minds of the Committee—a happy state of affairs which prevailed from the commencement of the Hospital in the 1750's.

(2) A document related to (1); this being an investigation into the stealing of " valuable knives." The effects of being placed in "the Pit " (whatever horrors that held), " Whipt before all the Children," and being labelled Thief for an indefinite period are to be wondered at—it is only to be hoped that the two Boys were deterred from any future misdemeanours.

The documents are of additional interest to this Society in being penned by William Grierson the Diarist and father of Thomas Boyle Grierson, a founder member of this Society.

We are indebted to John Henderson & Sons, Solicitors to the Hospital, for making the two documents available for publication.

1 Now Mrs J. Williams.—Ed.

DOCUMENT I

Report to the General Meeting Of the affairs of the Hospital during the direction of the last weekly Committee.

Dumfries 30th March 1809.

The Weekly Committee report that during their direction Three old people have Died. they have admitted into the house Five old women and four children, and have granted Ten weekly pensions one at 6d pr. week, seven at 1/- pr-week and two at 1/6 pr-week— that all the weekly pensioners have been visited by two of the directors and a report given in of their situation, their pensions were regulated accordingly—Recommend that the pensioners be visited in future by every committee in order to prevent any fraud—the committee have allowed 5/- to a poor destitute family and £1 10- for the support of an orphain Child— One man has been punished by confinement for Misconduct—two Boys have been confined and Whipt for a petty Theft—the following donations have been received and paid to the Treasurer viz Six pounds from the Revd Dr Scot, Seven pounds six shillings from the Revd Mr Duncan being a Sum of money which the last general Meeting ordered to be paid him for the Maintenance of a foundling Child but which he has presented to the Hospital, Three Guineas pr- Revd Mr Duncan being a donation from Shireff Craigie, One pound one shilling from Mr Forsyth to be apply'd to the purpose of improving the children in Church Music, one pound one Shilling from Mr Richardson in Dargavile pr- Dr Scott, one pound one shilling from Mr Boyle of Liverpool pr- Mr Grierson, Five Guineas from John Napier Esqr pr Dr Scot and one pound from Mr Broom being a fine imposed on a Servant for leaving her place ————————

A Committee appointed for the purpose examin'd the School and gave in their report —in which they are very much pleas'd with the progress the Children have made, and approve highly of the manner in which their education is in general conducted by Mr McKnight. An exhibition of the progress which the Children had made in Singing was proposed by Mr Well—which took place in the Schoolroom before a large and respectable company who were very much pleas'd with their performance — A regulation has been adopted of granting precepts for Accts due by the Hospital only on the last Thursday of Febry, May, August & November—which will save much trouble to the Treasurer and keep the affairs of the house more regular —— A considerable disturbance having taken place between the Sick Nurse (Margt Howat) and the old people in the house an investigation took place when it appeared there was faults on both sides but upon the whole the committee did not think her a proper person to be continued in the Situation and ordered another to be engaged in her place at WhitSunday . . . The Boy Thos Lochey who had been apprenticed to the late Bailie Wilson not having compleated his time his indenture was transfer'd to Mr John Johnstone which the committee approved of ———— The Ladys who were appoint'd to visit the house have been Mrs Scot, Mrs Gordon, Mrs W. Boyd, Mrs Morrine, Mrs M'Vitie & Mrs Jas. Crosbie ——— who have made some very proper remarks, which have been attended to ——— A Question was put to Mr McKnight if he intended to continue Master of the house to which he assured he had no objections and gave in a Letter submitting some circumstances to the committee which they refere to the consideration of the General Meeting—they also refere to the attention of the Meeting his disobedience of their orders as mentioned in the minutes of the 23d inst. —— The Committee recommend to the General Meeting to take into consideration the 5th article in the Rules respecting the Poor that some plan may be adopted with the Support and approbation of the Magistrates to put a stop to the great influx of Vagrants. . .

The providers have purchas'd and received into the House 300 Stones of Oat Meal, 15 Bushels Barley—a Leg of Beef—the Swine which was fed by the house was killed last

week which weighed about 17 Stone, the hams were sold for £1-19 —— and the remainder kept for the use of the family.

The Hospital being full canot admit any more at present — the number of the family supported in the house at this time is 50 including Master, Mistress, & Servants.

Thomas T. Duncan Prs.
extd pr Wm Grierson Jur.

DOCUMENT II

Dumfries 20th Febry 1809.

It having been mentioned that some of the Boys had valuable knives and money in their possession ————

John Williamson stated that he had seen the boys Imery & Kerr having Knives which he had every reason to supose they had got in an improper way —— Roland Thomson stated that he had seen G. Kerr have a Knife and upon enquiring how he had got it — he said he had taken it out of a hardware shope —— G. Kerr said he had got two Knives from R. Imery —— which being produced and R. Imery being questioned how he got the knives confess'd that he had stolen one of them from from a stand on the street: and he bought the other from Mrs Wilson for 3/- — the stolen knife he gave to G. Kerr to take to the person he had stolen it from as he had repented of what he had done. Kerr promised to return the knife but did not do so, but kept it to himself and said he had given it to the man who gave it to himself again— Ordered the two Boys Kerr & Imery to be confined in the Pit till further consideration.

Wm. Grierson, Junr.

Tuesday evening.

The above having been again investigated in presence of Dr Scot, Mr M'Whir and Mr Armstrong who being satisfied of the bulk of the above, and find them both guilty — they therefor order them to be Whipt before all the children — which was immediately done and the Master is requested to confine the Boys tomorrow out of school hours — and the School to affix a lable upon their breast as a mark of disgrace—and to continue till further orders.

Wm Grierson.

WESTWATER LEAD MINE (REF. NY 293824)

By ALEX. M'CRACKEN, B.Sc.

The Old Statistical Account of Scotland, Vol. XIII, Parish of Langholm, mentions that lead had been discovered on the farm of Westwater some five miles from Langholm, and that a company had been formed to work the mine. No further information is given in any subsequent books on the district.

The site of the mine was discovered with the help of the farmer, Mr R. Douglas. It is situated on the W. bank of a small burn, the Mine Syke. Nearby is a small quarry, which has been used as a source of road-metal. No shaft has been sunk, but there are indications that the top-soil has been removed over a fairly wide area, presumably in search of a vein of ore.

There are no rock exposures remaining here, or in the bed of the Syke. However, from the peat were recovered several limonite-covered nodules, which were found to be

composed of calcium carbonate, pinkish in colour, and containing varying amounts of lead sulphide (galena), with traces of iron pyrites. The galena appears to be fairly pure. The nodules were of various sizes, the largest being some 6 inches across.

From this information, it would appear that no actual mining was undertaken on the site, apart from an open-cast trial. The ore had occurred in a vein, together with calcite and pyrites, in the Birrenswark lavas, which are exposed in the nearby quarry face. This quarry shows no sign of mineralisation in the lavas, but an exposure of the same rock at Skipper's Bridge, 1 mile S. of Langholm, shows a small vein of calcite with galena and pyrites. (See Transactions Vol. XL 1961-62, p. 51.) This is probably the lead mentioned in the same Statistical Account as being discovered on the land of Mr Maxwell of Broomholm.

OBITUARY

The sudden death on 12th November, 1970, of Mr James C. Gair deprived the Society and its Council of one of its most active and helpful members.

Mr Gair, a native of Edinburgh and educated at George Heriot's School, took up photography as a career and after service in Edinburgh and in Perth set up in business in Dumfries close on forty years ago. He became widely known and much in demand throughout South-West Scotland as a highly-skilled Press and commercial photographer. He was a founder member and past President of Dumfries Camera Club where his expert professional knowledge and his helpful guidance and advice to members was highly valued and appreciated.

In 1946 he joined our Society, became a member of Council in 1952, served as a Vice-President from 1960 till 1965 and resumed and continued as a member of Council thereafter and thus completed eighteen years of continuous Council service. He will best be remembered by our members for his regular attendance at out meetings, and for his meticulous care and advice on visual aids in the presentation of papers to the Society.

Our sympathy is offered to Mrs Gair, his widow, and his two sons.

J. R.

PROCEEDINGS 1969-70

1969

10th October — The Annual General Meeting of the Society was held at 7.30 p.m. in the Ewart Library, Dumfries. The President, Mr James Robertson, was in the Chair. The Accounts of the Interim Honorary Treasurer were adopted. The list of Office-bearers nominated by Council was confirmed. Fourteen Adult and two Junior Members were elected. Dr Sheina Marshall of the Marine Biological Association, lectured on the theme "A Biologist goes round the World." The lecture was illustrated with slides.

24th October — Mr A. E. Truckell, Curator of the Burgh Museum, Dumfries, lectured on the "Kingdom of Galloway." Three Adult Members were elected.

7th November — Dr Nicoll of the Eyemouth and District Sub-Aqua Club, lectured on "Skin-diving an aid to Archaeology," his talk being illustrated by films. Six Adult and one Junior Member were elected.

21st November — Dr J. Lockie of the Department of Forestry and Natural Resources of the University of Edinburgh, lectured on "Stoats and Weasels in the Country-side," his talk being illustrated with slides and diagrams. Two Adult Members were elected.

5th December—Professor Thom, Emeritus Professor of Engineering at Oxford University, lectured on "How Advanced was Megalithic Man's Mathematical Knowledge." his lecture being illustrated by diagrams and slides. Three Adult Members were elected.

1970

9th January — Mr Howard Nelson, of the Department of Oriental Literature and Manuscripts at the British Museum, lectured on "The New Territories—A fragment of China," his lecture being illustrated by colour slides.

23rd January — Dr T. C. Smout, Reader in Economic History at the University of Edinburgh, lectured on "The Search for the History of the Scottish Population." Two Adult Members were elected.

6th February — Mr Lloyd Laing, Lecturer in Mediaeval Archaeology at the University of Liverpool, lectured on "Recent Mediaeval Excavations in Dumfriesshire," his talk being illustrated with slides and diagrams. Two Adult Members were elected.

20th February — Mr Jack Scott, Curator of the Archaeology, Ethnography and History Departments of Glasgow City Museums, lectured on "The Clyde Cairns of South-West Scotland," his talk being illustrated with colour-slides and distribution maps. One Adult Member was elected.

6th March — Mr C. Ball, Fellow and Tutor at Lincoln College, Oxford, lectured on "The Ruthwell Cross," his talk being ilustrated by photographs. One Adult Member was elected.

Membership List as at 6th March, 1970

Fellows of the Society under Rule 10 are indicated thus *

Members are requested to notify the Hon. Secretary of any errors

LIFE MEMBERS

Birley, Eric, M.B.E., M.A., F.S.A., F.S.A.Scot., Observatory House, Durham City 1935
Blackwell, Philip, Lt.-Commander, R.N. (Ret.), Ramshill, Upper Easebourne, Midhurst, Sussex 1946
Breay, Rev. J. The Vicarage, Shepreth, Cambridge 1950
Brown, J. Douglas, O.B.E., M.A., F.Z.S., Roberton, Borgue 1946
Buccleuch and Queensberry, His Grace the Duke of, K.T., P.G., G.C.V.O., Drumlanrig Castle, Thornhill 19
Burnand, Miss K. E., F.Z.S.Scot, Calderbank, Laurieknowe, Dumfries 1943
*Cunningham, David, M.A., Lamorna, Georgetown Road, Dumfries 1945
Cunningham-Jardine, Mrs, Jardine Hall, Lockerbie 1943
Geddes, Nathan, Boghall, Buittle, Castle-Douglas 1955
Gladstone, John, Capenoch, Penpont 1935
Rainford-Hannay, Dr D., 26 Colquhoun Drive, Bearsden, Glasgow ..... —
Kennedy, Alexander, Ardvoulin, South Park Road, Ayr 1943
Kennedy, Thomas H., Blackwood, Auldgirth, Dumfries 1946
Lockhart, John, Suite 316, 1135 18th Avenue, S.W. Calgary, Alberta, Canada 1948
M'Culloch, Walter W. S., Ardwall, Gatehouse-of-Fleet 1946
*M'Lean, Angus, B.Sc., Wayside, Edinburgh Road, Dumfries 1953
Mansfield, The Rt. Hon. the Earl of, F.Z.S., M.B.O.U., J.P., Comlongon Castle, Ruthwell, Dumfries 1939
Paterson, E. A., Lavender Bank, Curlew Green, Saxmundham, Suffolk 1945
Perkins, Dr E. J., Biology Annex, University of Strathclyde, Glasgow 1964
Perkins, F. Russell, Duntisbourne House, Cirencester 1946
Phinn, Mrs E. M., Imrie Bell, Castle-Douglas 1943
Porteous, Miss M., Glencairn, Broom's Road, Dumfries 1954
Runciman, The Hon. Sir Steven, Elsieshields, Lockerbie 1967
Rynne, Etienne, University College, Galway, Eire 1964
Shaw, R. C., M.Sc., F.R.C.S., F.S.A., F.S.A.Scot., Orry's Mount, Kirkbride, Isle of Man 1964
Skinner, James, M.A., The Corner House, Closeburn 1950
Spragge, Commander H. E., Pincod, Eaglesfield, Dumfriesshire 1947
Stuart, Lord David, M.B.O.U., F.S.A.Scot., Old Place of Mochrum, Port William 1948
Thomas, C. H., Southwick House, Southwick, by Dumfries 1950
Thomas, Mrs, Southwick House, Southwick, by Dumfries 1950

ORDINARY MEMBERS

Adam, Mrs W. A., Gardinia, Crocketford Road, Dumfries 1963
Adamson, D., Doonholm, Castle-Douglas Road, Dumfries 1958
Adamson, Mrs D., Doonholm, Castle-Douglas Road, Dumfries 1958
Agnew, F. D., Ellenbank, Kirkcudbright ... 1969
Aitkenhead, J., Kilquhanity House, Castle-Douglas 1969
Anderson, A., Invermeran, Stirling Acres Road, Kirkcudbright 1962
Anderson, Mrs E., 14 Oaklands, Chapelcross, Annan 1960
Anderson, Miss Mosa, Charlton Cottage, Peaslake, Guildford, Surrey 1953
Angus, Rev. J. A. K., 90 Albert Road, Gourock 1956
Angus, Mrs J. A. K., 90 Albert Road, Gourock 1956
Ansell, M., Rannoch, Glenlee, New Galloway 1965
Aperghis, Mrs I., Sprotboro' Road, Doncaster 1966
Appleby, Mrs S., 8 Noblehill Drive, Dumfries 1969
Archer, Mrs E. M., M.A., 9 Ednam Street Annan 1967
Armstrong, Mrs E., Briery Hill, Ewes, Langholm 1946
Armstrong, W., Thirlemere, Edinburgh Road, Dumfries 1946
Banks, J., B.Sc., Scarknowe, St Anne's Road, Dumfries 1960
Bartholomew, G., A.R.I.B.A., Dumyat, Morton Place, Noblehill, Dumfries 1945
Bell, Mrs A., 12 Castle-Douglas Road, Dumfries 1967
Biggar, Miss E. I., Corbieton, Castle-Douglas 1947
Black, Miss A. G., Burton Old Hall, Burton, Westmorland 1947
Blackett, Major C. W. S., Arbigland, Kirkbean, Kirkcudbrightshire 1960
Blake, B., 34 Harboro Road, Sale, Cheshire 1953
Bone, Miss E., Stable Court, Castle-Douglas 1937
Bown, C. J., Melbury, Georgetown Crescent, Dumfries 1967
Bown, Mrs C. J., Melbury, Georgetown Crescent, Dumfries 1967
Boyes, Miss E., Nelvil, Greenlea Crescent, Collin 1969
Brewis, Mrs R., Ardwell, Stranraer
Brown, D. A. G., Cairnsknowe, Whinnyhill, New Abbey 1963
Brown, Mrs D. A. G., Cairnsknowe, Whinnyhill, New Abbey 1963
Brown, Miss E., Glencotho, Broughton, Biggar 1960
Bryden, T., 100 Wallamhill Road, Locharbriggs 1968
Bryson, Mrs M. D., Craigmullen, Dundrennan, Kirkcudbright 1966
Buchanan, A. G., The Hermitage, Bridge Street, Beccles, Suffolk 1963
Buchanan-Jardine, Lady P A., Castlemilk, Lockerbie 1964
Buchanan, J., c/o 14 Alderman Place, Glasgow W.3 1957
Burwell, Mrs Mea, Nithhill, Lovers' Walk, Dumfries 1964
Buwert, H., Fairshields, Westfield Road, Dumfries 1969
Campbell, Mr and Mrs Eoin, St Nicolas, Ballplay Road, Moffat 1960
Campbell, Robert R., 98 West George Street, Glasgow C.2 1969

Carlyle, Miss E. M. L., Templehill, Waterbeck, Lockerbie 1946
Carroll, Miss K. M., A.R.I.B.A., Meadowside, 14 Summergate Road, Annan 1961
Carruthers, J. D.. 26 Glencaple Avenue, Dumfries 1968
Carruthers, Mrs J. D., 26 Glencaple Avenue, Dumfries 1968
Carruthers. Miss D. J., Mosside, Troqueer, Dumfries 1967
Cessford, G. A., 10 Almond Court, East Braehead Park, Edinburgh 4 1956
Cheshire, B., B.Sc., Whitelea, 17 Loch Road, Dumfries 1966
Chinnock, J. E., 63 Albert Road, Dumfries 1968
Clavering, Miss M., Clover Cottage, Moffat 1949
Clayson, Dr C., Cockesknowe, Lochmaben 1965
Cluckie, James, Carsethorn 1955
Cochrane, David, 13 Bloomfield, Dumfries 1965
Cochrane, Miss M. S., 119 Lockerbie Road, Dumfries 1946
Coles, Dr J. M., Faculty of Archaeology and Anthropology, Downing Street, Cambridge 1964
Beresford-Cooke, Miss K., Castle Cottage, Glencaple Road, Dumfries 1962
Cooper, Mrs M., Evan View, Auchencastle, Moffat 1966
Corcoran, Dr J. X. W. P., High Langmuir House, Kilmaurs 1964
Cormack, W. F., M.A., LL.B., W.S., Starney, Dryfe Road, Lockerbie 1951
Cormack, David, LL.B., W.S., Dunlaverock, Coldingham, Eyemouth 1913
Corsan, John Charles, M.C., F.R.S.A., 110 College Road, Dulwich, London, S.E.21 1961
Coulthard, William, Wellholme, Scotby, by Carlisle 1959
Cowan, Mrs H., Chapelhill, Caerlaverock ... 1958
Cowan, Dr Ian, Ph.D., 119 Balshagray Avenue, Glasgow, W.1 1962
Craven, Miss H. N., 7 Queen Street, Lochmaben 1967
Crawford, Colonel M., D.S.O., J.P., Dalgonar, Dunscore 1963
Crawford, Mrs M., Dalgonar, Dunscore ... 1963
Croall, M. L., Upper Balmaine, 15 Dalbeattie Road, Dumfries 1964
Cruikshank, A. B., 20 West Burnside, Dollar 1964
Cunningham, Mrs C., Lamorna, Georgetown Road, Dumfries 1948
Daniels, Charles, M.A., F.S.A., Museum of Antiquities, The Quadrangle, The University, Newcastle-upon-Tyne 1961
Darke, Mrs Helen, 12 Lakeview, Powfoot, Annan 1966
Davidson, Dr James, F.R.C.P., F.S.A.(Scot), Linton Muir, West Linton, Peebles 1938
Desbruslais, Mrs M., Riding Hill, North Street, Annan 1965
Dickie, J. Wallace, Glenlee, 17 Palmerston Drive, Dumfries 1954
Dickie, Rev. J. W. T., 6 Hannay Street, Gatehouse-of-Fleet 1951
Dinwiddie, N. A. W., M.A., B.Com., 27 Newall Terrace, Dumfries 1937
Dobie, Percy, B.Eng., Sharon, 122 Vicars Cross Road, Chester 1943
Donaldson, D., 1 Castledykes Road, Dumfries 1968
Douglas, Miss Madge, Uplands, Edinburgh Road, Dumfries 1968
Douglas, Miss May, Uplands, Edinburgh Road, Dumfries 1968
Dumville, David, 65 Bolton Road, Harrow, Middlesex 1969
Dunbar-Lidderdale, John, 21 Withyholt Park, Charlton Kings, Cheltenham 1966
*Duncan, Sir Arthur, B.A., Gilchristland, Closeburn 1930
Duncan, Walter, Newlands, Duncow, Dumfries 1926
Dundas, Miss Ruth, Kinnaniel, Kirriemuir, Angus 1966
Dunlop, Mrs A. J., C.B.E., D.Litt., Torwood, 73 London Road, Kilmarnock 1952
Drew, Dr R. L., B.Sc., Ph.D., 20 Brackenroyde, Langley, Bucks. 1959
Edwards, F. J., M.A., 121 Lockerbie Road, Dumfries 1953
Fairbairn, Miss M. L., The Lymes, Nelson Street, Dumfries 1952
Farries, T. C., Craigshields, Newall Terrace, Dumfries 1948
Farries, Mrs T. C., Craigshields, Newall Terrace, Dumfries 1969
Ferguson, Miss Elizabeth, 14 Gordon Street, Dumfries 1968
Ferguson, Ronald, Woodlea House, High Bonnybridge, Stirlingshire 1953
Fleming, Miss Margaret, 7 Charnwood Road, Dumfries 1968
Forman, Rev. Adam, Dumcrieff, Moffat 1929
Forrest, Mrs M. S., Ashmount, Dalbeattie Road, Dumfries 1953
Forrest, J. H. Ashmount, Dalbeattie Road, Dumfries 1953
Forrest, Mrs J. H., Ashmount, Dalbeattie Road, Dumfries 1953
Frain-Bell, Dr L., Highfield, Netherwood, Glencaple Road, Dumfries 1967
Fraser, Dr I., Westerlea, 39 Roberts Crescent, Dumfries 1963
Fraser, Mrs, Westerlea, 39 Roberts Crescent, Dumfries 1963
Fraser, Brigadier S., M.C., 20 Abercromby Road, Castle-Douglas 1947
Fraser, Elliot, Burnside, Cummertrees, Annan 1964
Fullen, Miss Anne, Carlyle Cottage, Hightae, Lockerbie 1961
Gair, J. C. Dorland, Pleasance Avenue, Dumfries 1946
Gair, Mrs J. C., Dorland, Pleasance Avenue, Dumfries 1960
Gair, John, Linden Lea, 23 Rotchell Park, Dumfries 1945
Galloway, The Countess of, Cumloden, Newton Stewart 1955
Gardiner, E., Agra House, 12 Averill Crescent, Dumfries 1968
Gemmell, Adam, 106 Loreburn Street, Dumfries 1966
Gemmell, Mrs, 106 Loreburn Street, Dumfries 1967
Gerdes, Miss Bridget, 27 Ardwall Road, Dumfries 1967
Gibbs, Allan, Auchlewan, Landheads, Annan 1968
Gibson, Dr John, M.B., Ch.B., Foremount House, Kilbarchan, Renfrewshire 1968
Gilchrist, G., F.S.A.Scot, 6 Station Road, Annan 1964
Gillam, J. P., M.A., F.S.A., Lloyds Bank House, Middle Street, Corbridge, Northumberland 1953
Glendinning, Mrs Mary, 26 Brooke Street, Dumfries 1957
Gordon, James, Underwood Farm, Kirkcudbright 1969
Gordon. Miss S., Krithia, 158 Annan Road, Dumfries 1968
Graham, Mrs E. H., Mossknowe, Kirkpatrick-Fleming, Lockerbie 1947
Grant, G. D., Kelvin, 7 St Anne's Road, Dumfries 1962
Grant, Mrs G. D. Kelvin, 7 St Anne's Road, Dumfries 1962
Gray, D. H., Glen Helen, Templand Road, Lockerbie 1970
Greeves, Lt.-Col. J. R. H., B.Sc., A.M.I.E.E., Altona, Strandtown, Belfast 1947
Haggas, Miss E. M., Terraughtie, Dumfries 1944
Haggas, Miss, Terraughtie, Dumfries 1944

Halbert, William, Wendover, 4 Castle-Douglas Road, Dumfries 1965
*Harper, Dr J., M.B.E., Rensbury, Jayton, Northamptonshire 1947
Harris, Mrs A. F., Cleveleys, 30 St Anne's Road, Dumfries 1969
Harris, Bernard F. D., Benmore, 56 Pleasance Avenue, Dumfries 1955
Harrison, Mr, Grennan Mill, Dalry 1968
Harrison, Mrs, Grennan Mill, Dalry 1968
Hawley, H. N., 6 Keble Road, Oxford ... 1962
Henderson, I. G., Beechwood, Lockerbie ... 1951
Henderson, Mrs J. H., Braeside, Moffat Road, Dumfries 1964
Henderson, Miss J. M., Ardgowan, 5 Lockerbie Road, Dumfries 1945
Henderson, Mrs Lorna, M.A., Catherinefield Farm, Dumfries 1967
Higgs, G. R., B.Sc., F.I.E.E., The Cleuch, Kirkcudbright 1967
Higgs, Mrs G. R., The Cleuch, Kirkcudbright, 1967
Hunter, Miss D. M., 74 Trinity Road, Edinburgh, 5 1967
Hunter, Miss Irene, Dudgeon Flat, Crichton Royal, Dumfries 1962
Hunter-Blair, E. T., Parton House, Castle-Douglas 1965
Huntly, Mrs M., 10 The Grove, Edinburgh Road, Dumfries 1966
Irving, E. J. B., A.I.E.E., Balgownie, Bellevue Road, Kirkintilloch 1959
Irving, Miss J. P., 14 Rotchell Park, Dumfries 1962
Irving, J. W., Kirkbrae, Lochrutton, Dumfries 1957
Jameson, Mrs A. M., Ardmor, Gatehouse-of-Fleet 1946
Jardine, Dr W. G., 22 Bute Crescent, Bearsden, Glasgow 1966
Jobey, G., D.S.O., M.A., F.S.A., 44 Parkside Crescent, Tynemouth 1965
Johnston, Alex, 43 Moffat Road, Dumfries 1968
Johnstone, Miss E. R., Cluden Bank, Moffat ——
Johnston, Major F. J., 61 Chester Square, London, S.W.1. 1957
Johnstone, James, 20 Langlands, Edinburgh Road, Dumfries 1955
Johnstone, Major J. L., Amisfield Tower, Dumfries 1945
Johnston, Miss M. D., Nurses Home, Thornhill, Dumfries 1964
Johnston, Lt.-Col. P. J., Bury Hall, Therfield, Royston, Hertfordshire 1956
Kennedy, Ian, 22 Ashburnham Drive, Mayals, Swansea 1965
Kerr, Charles I., Ravelston House Loan, Edinburgh 1961
Kirkpatrick, H. S., Strathyre, 2 Marchhill Drive, Dumfries 1964
Kissling, Dr Wernher, Ashbank Hotel, Dumfries 1969
Knott, Miss H. M. A., M.A., The Lymes, Nelson Street, Dumfries 1964
Koller, Mrs C., 2631 Woolsey Street, Berkeley, California, United States of America ... 1965
Lambie, I. R., 10 Endover Grove, Burley-in-Wharfedale 1965
Lambie, Mrs I. R., 10 Endover Grove, Burley-in-Wharfedale 1965
Landale, David, Dalswinton, Dumfries 1955
Lauder, Miss A. T., Craigiebank, Moffat Road, Dumfries 1932
Laurence, D. W., St Albans, 43 New Abbey Road, Dumfries 1939
Little, Robert, East Hayrigg, Lockerbie ... 1961
Lord, Brian, Castlehill, Kirkmahoe 1960
M'Adam, Dr William, The Tower, Isle of Whithorn 1952
M'Adam, Mrs, The Tower, Isle of Whithorn 1952
M'Clellan, Mr, 2122 Holly Oaks River Drive, Jacksonville, Florida, United States of America 1969
M'Clure, Miss Joan, Wellwood, New Galloway 1955
M'Connel, J. C. I., F.S.A.Scot., Pine Acre, Avon Avenue, Ringwood, Hampshire 1961
M'Cracken, Alexander, B.Sc., F.S.A.Scot., 3 Alexandra Place, Annan 1961
M'Culloch, A. J., W.S., 39 and 43 Castle Street, Edinburgh, 2 1963
Macdonald, James, Inversnaid, Cardoness Street, Dumfries 1968
Macdonald, Neville, Hazelwood, Laurieknowe, Dumfries. 1952
Macdonald, Mrs., Hazelwood, Laurieknowe, Dumfries. 1952
M'Dowall, Miss Pearl, Meadowpark, Dalswinton Road, Kirkton. 1957
M'Elroy, James, 7 Carlingwark Street, Castle-Douglas 1957
M'Ewan, Robert, B.Sc., Bromfield, Douglas Terrace, Lockerbie 1969
M'Ewan, Mrs. Bromfield, Douglas Terrace, Lockerbie 1969
M'Fadden, John, 88 Irish Street, Dumfries 1969
M'Fadden, Mrs. 88 Irish Street, Dumfries 1969
M'Ghie, Miss Mary, Fairleigh, Dunmuir Road, Castle-Douglas 1957
M'Gregor, Dr F., Crichton Royal, Dumfries 1968
M'Jannet, W. I., 10 Albany Place, Dumfries 1969
M'Jannet, Mrs. 10 Albany Place, Dumfries 1969
M'Kay, John, Scaurbridge, Penpont 1969
M'Kay, Mrs. Scaurbridge, Penpont 1969
M'Kerrow, George, Whiterne, 61 Albert Road, Dumfries 1953
M'Laren, Alaister, Royal Commission on the Ancient and Historical Monuments of Scotland, 52-54 Melville Street, Edinburgh ... 1965
M'Laren, W. G., Forita, Sherwood Park, Lockerbie 1964
*M'Lean, Mrs M. D., St Helens, 30 Albert Road, Dumfries 1946
M'lennan, Miss Mary, 11 Great King Street, Dumfries 1968
MacLeod, Innes, M.A., 91 St Mary Street, Kirkcudbright 1963
Macmillan, Nigel, Overton, Southwick Road, Dumfries 1963
Macmillan, Mrs Nigel, Overton, Southwick Road, Dumfries 1963
MacMillan-Fox, Mrs M. M. G., Glencrosh, Moniaive 1950
MacMillan-Fox, Miss J. M. G., Glencrosh, Moniaive 1950
M'Naught, James, M.A., Kilneiss, Moniaive 1965
M'Queen, John, M.A., 9 Learmonth Gardens Edinburgh 4 1952
M'Robert, Mrs F., Whistlebrae, Closeburn, Thornhill 1948
Mangles, Rev. J. S., Troqueer Manse, Dumfries 1966
*Martin, J. D., Old Bank House, Bruce Street, Lochmaben 1946
Martin, Mrs. Old Bank House, Bruce Street, Lochmaben 1946
Masters, L. J., B.A., F.S.A.Scot., 8 Lovers' Walk, Dumfries 1966
Matheson, Miss C., B.Sc., 38 Rae Street, Dumfries 1967
Maton, Miss J. M., C.B.E., M.A., The Old Tannery, Gatehouse of Fleet 1969
Maxwell, Major General Sir Aymer, C.B.E., M.C., R.A., Kirkennan, Dalbeattie 1946
Maxwell, Mrs B., Stedstone, Dalbeattie 1963
Maxwell, Mrs Sheena, 15 Gordon Road, Edinburgh 12 1954
Maxwell, Stuart, M.A., F.S.A.Scot., 23 Dick Place, Edinburgh 9 1966

Maxwell-Irving, A. M. T., F.S.A.Scot., 59 Allanvale Road, Bridge of Allan 1957
Meldrum, Martin, Sandon, 19 Moffat Road, Dumfries 1965
Meyler, Miss Ruth, Wells Cottage, Moniaive, Thornhill 1967
Micklewright, F. H. A., M.A., Bishops Folly, 228 South-Norwood Hill, London S.E.25 1967
Miller, J. C. Crannog, Annan Road, Dumfries 1963
Millar, James, M.A., B.Sc., Peacock Knowe, Closeburn, Dumfriesshire 1949
Miller, R. P., S.S.C., 13 Heriot Row, Edinburgh 3 1908
Miller, Lt.-Col., Ronald, V.R.D., R.N.R., Oakmere, South Street, Garlieston, Wigtownshire. 1963
Milligan, Donald, 601 South 9th Avenue, Yakima, Washington, U.S.A. 1969
Mills, A. W. F., Hamara, Dalry, Castle-Douglas 1957
Milne, Mrs G. M., Dunesslin, Dunscore, Dumfries 1963
Mitchell, Mrs E. J., 79 Great King Street, Edinburgh, 3 1953
Morrison, Alex., M.A., F.S.A. Scot., Department of Archæology, Glasgow University, W.2. 1966
Morton, Miss J. D., 35 George Street, Dumfries 1947
Muir, Miss A. N., 3 Janefield Drive, Dumfries 1965
Munro, Mrs I. M., Ae Schoolhouse, Ae, Dumfriesshire 1966
Murray, Athol, M.A., 33 Inverleith Gardens, Edinburgh 1957
Murray, Col. G., Mansefield, Thornhill, Dumfriesshire 1953
Murray-Brown, G. A., Kinnelhook, Lockerbie 1953
Murray-Brown, Mrs, Kinnelhook, Lockerbie 1953
Murray-Usher, Mrs E. E., J.P. Castramon, Gatehouse-of-Fleet 1946
Mushet, Andrew, M.A., Schoolhouse, Amisfield 1955
Newman, F. H., Gallabrae, Barnbarroch, Dalbeattie 1959
Niblock, Hugh, Garnock, Rotchell Park, Dumfries 1966
Niblock, Mrs H., Garnock, Rotchell Park, Dumfries 1966
Nielson, W. W., 33 Spen Road, West Park, Leeds 1957
Nimmo, Ian, Fairholm, Stepford Road, Dumfries 1960
Nimmo, Mrs I., Fairholm, Stepford Road, Dumfries 1960
Pate, Robert, F.S.A. Scot., The Schoolhouse, Gartcosh, Glasgow 1969
Paterson, David, Stenrieshill, Wamphray, Moffat 1965
Paton, James, Fairview, Rockcliffe, by Dalbeattie 1969
Paton, Mrs J., Fairview, Rockcliffe, By Dalbeattie 1969
Paulin, Mrs D. M., Drumrash, Parton 1950
Payne, Mrs D. M., Milnhead, Kirkmahoe, Dumfries 1953
Pearsall, A. W. H., 71 Parkside, Vanbrugh, London 1969
Pearson, Gordon, Blencathra, Rotchell Park, Dumfries 1960
Pearson, Mrs, Blencathra, Rotchell Park, Dumfries 1960
Pearson, James, Brynholm, 23 Ardwall Road, Dumfries 1963
Pearson, Mrs, Brynholm, 23 Ardwall Road, Dumfries 1963
Piggot, Lady Dorothy, Closeburn Castle, Thornhill 1945
Prentice, William, North Laurieknowe House, Dumfries 1966
Prentice, Mrs W., North Laurieknowe House, Dumfries 1966
Prevost, Major W. A. J., 26 Coates Gardens, Edinburgh 12 1946
Quinn, H. G., 65 Queen Street, Lochmaben 1966
Quinn, Mrs H. G., 65 Queen Street, Lochmaben 1968
Rae, Dr I. P. F., 2 Maitland Street, Helensburgh 1962
Readman, James, Dunesslin, By Auldgirth 1946
Rees, Dr Joan, B.Sc., Ph.D., 3 Hamilton Drive, Cambuslang, Glasgow 1961
Reid, Mrs H. M., Cleughbrae, Mouswald, By Dumfries 1963
Reid, Kenneth, M.A., F.S.A., 4 Drummond Place, Cargunnoch, Stirlingshire 1965
Reid, W., Dept. of Agriculture, 161 Broom's Road, Dumfries. 1969
Richardson, Rev. Harold, Rockcliffe Vicarage, Carlisle 1968
Robertson, Alexander, M.A., Kenyon, Albert Road, Dumfries 1957
Robertson, Dr Anne, Hunterian Museum, University of Glasgow 1965
Robertson, D., 253 Annan Road, Dumfries 1966
Robertson, Mrs D., 253 Annan Road, Dumfries 1966
Robertson, Ian, B.Sc., Sunningdale, 19 Hardthorn Crescent, Dumfries 1966
Robertson, James, B.Sc., J.P., O.B.E., Laneshaw, 38 Edinburgh Road, Dumfries 1936
Robertson, Gordon, Laneshaw, Edinburgh Road, Dumfries 1962
Robertson, James J., M.A., LL.B., 2 Peterson House, Roseangle, Dundee 1962
Robertson, Miss Jean, Ceol Mhor, Hardthorn Crescent, Dumfries 1966
Robertson, Mrs M. A. K., 11 Albany Place, Dumfries 1933
Rodgers, Dr J. B., Mountainhall, Bankend Road, Dumfries 1952
Rodgers, Mrs, Mountainhall, Bankend Road, Dumfries. 1952
Rome, J. J., 84 Heyes Lane, Blackburn, Lancashire 1969
Ross, Mrs E., Clifton, Rosemount Street, Dumfries 1962
Russell, H. M., Nara, Dalbeattie Road, Dumfries 1953
Russell, Mrs H. M., Nara, Dalbeattie, Road, Dumfries 1954
Russell, Ian, M.A., F.S.A.Scot., Corseridge, Cormaddie, Newbridge, Dumfries 1944
Sainty, David, M.A., LL.B., Waterside, Ringford, Castle-Douglas 1954
Scott, Walter, Academy House, Moffat 1968
Scott-Elliot Major-General, J. Allington, Duke Street, Micheldever, Winchester 1962
Scott-Elliot, Mrs, Allington, Duke Street, Micheldever, Winchester 1962
Simmons, Stewart, Hurkleville, Carlisle Road, Lockerbie 1967
Simpson, Derek, Dept. of Archaeology, The University of Leicester 1964
Skinner, T. G., 2 Woodman Avenue, Hecklegirth, Annan 1969
Smail, Miss I. M., 11 Erlington Avenue, Old Trafford, Manchester 1952
Smith, C. D., Laight, 17 N. Strand St., Stranraer 1944
Smith, Robert T., Applegarthtown, Lockerbie 1967
Spilling, R. H., Upper Clifton Cottage, Southwick, By Dumfries 1966
Spilling, Mrs R. H., Upper Clifton Cottage, Southwick, By Dumfries 1966
Stephen, Miss M., M.A., The Old Tannery, Gatehouse of Fleet 1970

Stewart, James, Rowanbank, 19 Victoria Road, Dumfries 1953
Stewart, Mrs J., Rowanbank, 19 Victoria Road, Dumfries 1965
Stinchcombe, Mrs J. W., Calidris, Cargenholm, New Abbey Road, Dumfries 1968
Stone, J. C., Trelill House, Trelill, Bodmin, Cornwall 1958
Sutherland, Miss B. D., 7 Queen Street, Lochmaben 1967
Straton-Ferrier, Mrs E. I., Bonshaw Tower, Kirtlebridge, By Lockerbie 1959
Sydserff, Peter M., Ruchlaw, 7 Lockerbie Road, Dumfries 1950
Tait, Dr A. C., Netherlea, Bankend Road, Dumfries 1960
Tate, E. W., 121 Carr Head Lane, Poulton-le-Fylde, Blackpool 1969
Taylor, Andrew, Broomwell, Lochmaben ... 1969
Taylor, Mrs A., Broomwell, Lochmaben ... 1969
Taylor, David B., Delvine, Longforgan, Perth 1969
Thomas, Prof. A. Charles, Dept. of Archæology, The University, Leicester 1961
Thomson, Mrs J. R., Lochpatrick Mill, Kirkpatrick-Durham 1969
Todrick, Dr A., Windrush, Rotchell Park, Dumfries 1958
Tolson, Arthur, Border Esk Cottage, Langholm 1964
Topping, Mrs C. H., 3 Castledykes Road, Dumfries 1970
Truckell, A. E. M.B.E., M.A., F.S.A.Scot., F.M.A., 12 Summerville Avenue, Dumfries 1948
Truckell, Mrs, 12 Summerville Avenue, Dumfries 1948
Turner, Brian, Eskbank, Dalbeattie Road, Dumfries 1967
Twidale, Mrs, Hillcrest, Lochmaben 1967
Urquhart, James, M.A., 35 Rosemount Street, Dumfries 1946
Vaughan, Mrs Maud, Broomside, Beattock 1962
Veitch, Mrs Sadie, Girthon-Kirk Farm, Gatehouse of Fleet 1967
Walker, Lt. Col. George, C.B.E., M.C., D.L., T.D., Morrington, Dumfries 1926
Walker, Dr Mary, Croft-an-Righ, Wigtown 1960
Walker, W. M., 17 India Street, Edinburgh 3 1960
Weeks, Dr D. J., 4 The Glade, Welwyn Garden City 1960
Weeks, Mrs, 4 The Glade, Welwyn Garden City 1960
Welsh, Adam, Dinwoodie, 1 Greenway Close, Weymouth, Dorset 1959
Wilkinson, William, Craiglochar, 10 The Crescent, Annan Road, Dumfries 1965
Williams, B. R. H., Longmynd, 8 Gollands Drive, Brixham 1965
Williams, James, F.S.A.Scot., Hillis Tower, Lochfoot 1964
Williams, Mrs J., Hillis Tower, Lochfoot 1968
Williamson, Miss Margaret, Stanedykes, Hardgate, Castle-Douglas 1961
Willis, Miss Violet, 10 Albert Road, Annan 1966
Wilson, A. W., Heston, 3 Alexandra Drive, Dumfries 1964
Wilson, Dr J. B., B.Sc., M.D., M.R.C.P.E., Lake House, Lochmaben 1967
Wilson, Mrs, Lake House, Lochmaben 1967
Wilson, Mrs J. Glenbo, Solway Drive, Dumfries 1957
Wilson, Paul, Fairfield, Lonton, Cockermouth 1961
Wishart, Eric, 3 Catherine Street, Dumfries 1959
Wolffe, A. Curtis, The Toll House, Gatehouse-of-Fleet 1959
Wolffe, Mrs A. C., The Toll House, Gatehouse-of-Fleet 1959
Wright, Mrs, 50 Princes Street, Lochmaben 1967
Wyse, Mrs, Glenbo, Solway Drive, Dumfries 1964
Young, John, Benvannoch, Wellington Street, Glencaple 1969
Young, J. F., Waterside Mains, Keir, Thornhill 1966
Young, Mrs M. W., Coppelia, Mile House Crescent, Dumfries 1961

JUNIOR MEMBERS

Anderson, Miss Christine, Invermeran, Stirling Acres Road, Kirkcudbright 1967
Burgess, Keith, Tinwald Downs Road, Dumfries 1969
Donaldson, Miss Elspeth, 1 Castledykes Road, Dumfries 1968
Donaldson, Ian, 1 Castledykes Road, Dumfries 1968
Halbert, Brian, Windover, 4 Castle-Douglas Road, Dumfries 1965
Johnstone, John, Strathurr, 47 Albert Road, Dumfries 1969
Mushet, Miss Angela, Schoolhouse, Penpont 1963
Robertson, Brian, Kenyon, 45 Albert Road, Dumfries 1969
Robertson, Miss M. H., Aldworth, Annan Road, Dumfries 1962
Taylor, David, Broomwell, Lochmaben ... 1969
Thomson, Adam, Lochpatrick Mill, Kirkpatrick-Durham 1969
Thomson, Richard, Lochpatrick Mill, Kirkpatrick Durham 1969

EXCHANGES

England—
Ashmolean Museum, Oxford.
British Museum (Natural History Dept.), South Kensington, London.
British Museum, Bloomsbury Square, London.
Cambridge University Library, Cambridge.
Council for Nature, The Intelligence Unit, 41 Queen's Gate, London, S.W.7.
Cumberland and Westmorland Antiquarian Society, Tullie House, Carlisle.
Durham and Northumberland Architectural and Archæological Society, Prebends Gate, Durham.
Oxford University, The Bodleian Library, Oxford.
Society of Antiquaries of London, Burlington House, London.
Yorkshire Archæological Society, Claremont, Clarendon Road, Leeds, 2.
Holland—
Rijksdienst Voor Het Oudkeidkundig, Bodemonderzoak, Amersfoort, Kleine Haag, Nederland.
Ireland—
Belfast Field Naturalists' Club, The Museum College, Belfast.
Royal Irish Academy, 19 Dawson Street, Dublin 2.
Ulster Journal of Archaeology, 14 San Souci Park, Belfast, 9.
University Library, Queen's University, Belfast.
Isle of Man—
Isle of Man Natural History and Antiquarian Society, Manx Museum, Douglas.
U.S.A.—
American Museum of Natural History, Central Park West, at 79th Street, New York 10024.
United States Geological Survey, Room 1033, General Services, Administration Building, Washington D.C. 25.
Scotland—
Archaeological Society of Glasgow, 4 Clifton Street, Glasgow.
Ayrshire Archaeological and Natural History Society, Carnegie Public Library, Ayr.

Botanical Society of Edinburgh, Royal Botanic Gardens, Edinburgh, 4.
Carnegie Trust for the Universities of Scotland, Merchants' Hall, 22 Hanover Street, Edinburgh, 2.
Edinburgh Geological Society, Grant Institute of Geology, King's Buildings, West Mains Road, Edinburgh.
Glasgow Geological Society, The Mitchell Library, North Street, Glasgow.
Hawick Archaeological Society, Public Library, Hawick.
National Library of Scotland, Edinburgh, 1.
Society of Antiquaries of Scotland, Queen Street, Edinburgh.
Sweden—
Lund University, Lund.
Stockholm Bibliotekt K. Vitterhetsakadamien, Storgarten, 41.
Uppsala Universitets, Biblioteket, Uppsala.
Wales—
National Library of Wales, Aberystwyth.

INSTITUTIONAL MEMBERS

Canada—
Redpath Library, M'Gill University, Montreal ...
University of Guelph, Guelph, Ontaria .....
University of Toronto Library, Toronto .....
England—
Birmingham University Library, Birmingham 1953
B.H., Blackwell Ltd., Broad Street, Oxford .....
Cumberland County Library, 1 Portland Square, Carlisle.
Exeter University, University Library, Prince of Wales Road, Exeter 1966
H.M. Ordnance Survey, Ramsey Road, Maybush, Southampton .....
Institute of Archaeology, London University, 31-34 Gordon Square, London, W.C.1 1953
Institute of Historical Research, University of London, Senate House, London, W.C.1 1961
Leicester University Library, University Road, Leicester .....
Liverpool University Library, Liverpool ... 1954
London Library, 14 St James Square, London, S.W.1. .....
National Reference Library of Science and Invention, 10 Porchester Gardens, London, W.2.
Nature Conservancy, 19 Belgrave Square, London, S.W.1.
Newcastle University Library, Queen Victoria Road, Newcastle-upon-Tyne 1953
Passmore Edwards Museum, Romford Road, Stratford, London .....
Sheffield University Library, Sheffield, 10 ... 1962
Society of Antiquaries, Black Gate, Newcastle-upon Tyne 1952
University of Southampton, Southampton 1959
Germany—
Niedersachische Staats Un Universtats, Prinzenstrasse I, Gottingen 1953
Ireland—
Belfast Library and Society for Promoting Knowledge, Linen Hall Library, Belfast 1954
National Museum of Ireland, Dublin .....
The Library, University College, Galway .....
Scotland—
Aberdeen University, King's College Library, Aberdeen 1938
Andersonian Library, Strathclyde University, Richmond Street, Glasgow, C.1. 1969
Douglas Ewart High School, Newton Stewart 1965
Dumfries County Council .....
Dumfries County Council Library Service, Ewart Library, Dumfries 1944
Edinburgh University Library, Edinburgh 1955
Edinburgh City Libraries, George IV. Bridge, Edinburgh 1953
Glasgow Corporation Libraries Department, the Mitchell Library, North Street, Glasgow, C.3. 1965
Glasgow Museums and Art Galleries, Kelvingrove, Glasgow, C.3 1955
Glasgow University Library, Glasgow 1947
H.M. Ordnance Survey, Archaeological Office, 43 Rose Street, Edinburgh, 2 1958
Kirkcudbrightshire Education Committee, Education Offices, Castle-Douglas 1944
Royal Scottish Museum, Chambers Street, Edinburgh, 1 1966
Scottish Record Office, per H.M. General, Register House, Edinburgh 1955
Society of Writers to H.M. Signet, The Signet Library, Edinburgh 1953
St Andrews University Library, St Andrews 1950
Trinity College Library, Lyndoch Place, Glasgow, C.3 1953
Wigtownshire Education Committee, Education Offices, Stranraer 1943
Sweden—
Kungl Vetenskapsakademicns Bibliotek, Stockholm 1961
U.S.A.—
California University Library, 405 Hilgard Avenue, Los Angeles, California ....
Cleveland Public Library, 325 Superior Avenue, Cleveland, Ohio 1950
Cornell University Library, Ithaea, New York.....
Illinois University Library, Urbana, Illinois 1966
Kentucky University Library, Lexington, Kentucky 1961
National Agricultural Library, U.S. Department of Agriculture, Beltsville, Maryland .....
New York Public Library, 5th Avenue and 42nd Street, New York 1938
Wisconsin Academy of Sciences, Arts and Letters, Memorial Library, University of Wisconsin 1967
Wisconsin University, Milwaukee Library, 2500E Kenwood Blvd., Milwaukee, Wisconsin ... 1969
Wales—
National Museum of Wales, Cardiff .....
South Wales University Library, Cathays Park, Cardiff 1953

Publications of the Society

Transactions and Journal of Proceedings: 1st Series—(a) 1862-3, (b) 1863-4*, (c) 1964-5*, (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—(i) 1912-3*, (ii) 1913-4, (iii) 1914-5,(iv) 1915-6*, (v) 1916-8, (vi) 1918-9, (vii) 1919-20*, (viii) 1920-1, (ix) 1921-2, (x) 1922-3*, (xi) 1923-4, (xii) 1924-5, (xiii) 1925-6* (xiv) 1926-8, (xv) 1928-9, (xvi) 1929-30, (xvii) 1930-1*, (xviii) 1931-3, (xix) 1933-5, (xx) 1935-6, (xxi) 1936-8, (xxii) 1938-40*, (xxiii) 1940-5, (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) 1962-3, (xlii) 1965 (new format), (xliii) 1966, (xliv) 1967, (xlv) 1968, (xlvi) 1969, ((xlvii) 1970.

Prices:

Series 1 and 2. On application to Hon. Librarian

	Members	Non-Members
Series 3, Vols. 1 to 27, each	50p	65p
28 to 33, each	75p	£1.05
34 to 43, each	£1.05	£1.25
44 to 47, each	£1.50	£1.75

Runs of Volumes—On application to Hon. Librarian.

A List of the Flowering Plants of Dumf. and Kirkcud. by James M'Andrew, 1882*.

Birrens and its Antiquities, by Dr J. Macdonald and James Barbour, 1897. 40p post free.

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 Steuart, W.S., 1932*.

Records of the Western Marches, Vol. III, The Upper Nithsdale Coalworks from Pictish Times to 1925, by J. C. I. M'Connell, 1962. 75p.

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 post free.

*Indicates out of print

REPRINTS (Selection)

ARCHÆOLOGY

Bronze Age Metalwork in Dumfries and Galloway, by Dr John M. Coles (1965), 38 pp. with 11 figs., 1 pl., and inventory of 233 finds. 20p post free.

Food Vessels in S.-W. Scotland, by D. D. A. Simpson (1965), 26 pp., 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 Clone, Wigtownshire, by W. F. Cormack and J. M. Coles (1968), 29 pp., 10 figs., 1 pl. 25p post free.

Cinerary Urns and Pygmy Vessels in S.-W. Scotland, by A. Morrison (1968), 61 pp., 139 pots inventoried, illustrated and fully discussed. 55p post free.

Excavation of Two Chambered Cairns (and two burial cairns) at Mid Gleniron Farm, Glenluce, Wigtownshire, by J. X. W. P. Corcoran, Ph.D., F.S.A. (1969), 71 pp., with 16 figs., 9 pl. 75p post free.

NATURAL HISTORY

Fish Fauna of the Castle and Mill Lochs, Lochmaben, with special reference to the Lochmaben Vendace, Coregonus Vandesius Richardson, by Dr P. S. Maitland (1966), 18 pp., 2 pls., 2 figs. 15p post free.

Echo Sounding Observations on the Lochmaben Vendace, Coregonus Vandesius Richardson, by Dr P. S. Maitland (1967), 18 pp., 2 figs., 5 pls. 15p post free.

Printed by Geo. Outram & Co., Ltd., 133 High Street, Dumfries