SCOTTISH MIDDLE BRONZE AGE METALWORK[1]

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INTRODUCTION

THE metalwork of the Scottish Middle Bronze Age, *c.* 1400 to *c.* 800 B.C., has not received any overall treatment since Anderson's work in 1886.[2] In his book, Anderson drew particular attention to the gold objects of the period, but he also did not neglect the range of bronze equipment. Since this date, the amount of material has been augmented by new finds, and our understanding of its chronological implications has also been expanded. In 1923 the associated finds were published in a corpus by Callander as his Period III of the Scottish Bronze Age.[3] Of his 7 hoards, only 5 are now considered to be of the Middle Bronze Age, as he divided one hoard into two, and included some of the metal from Traprain Law now believed to be wholly of the Late Bronze Age. In the following years, Childe's two surveys of Scottish prehistory touched briefly upon Middle Bronze Age metalwork, as does Piggott's recent study of the prehistoric peoples of Scotland.[4] Nevertheless no specific study of this period has been published, and no corpus of the available material exists. The present work was designed to include all of the material, but in fact is probably only 95 per cent complete.

The arrangement of the material is slightly different from that adopted in a previous paper on the metalwork of the Late Bronze Age.[5] Instead of a more or less continuous narrative, here the different metal types are examined in isolation, before an attempt is made to group the traditions into a chronological scheme. The major difficulty in this study is the lack of associated finds, which forces us to rely on typology to a great extent, unlike the earlier and later Bronze Age where hoards or other associations are more numerous. Where possible, both qualitative and quantitative methods have been used to divide the material into groups. The other major gap in our knowledge, which is not bridged here, is the absolute lack of cohesion between the metalwork of the Middle Bronze Age and the contemporary cinerary pottery. Only the razors, awls and miscellaneous blades can be associated with such pottery, and the bulk of heavy equipment hardly impinges upon this development. Until the Middle Bronze Age pottery of Scotland is published in full, and regional groups distinguished, we are unable to attempt to correlate the regional metal industries with this aspect of culture in the late second millennium B.C.

The bulk of the paper consists of a detailed discussion of specific industrial equipment and ornaments, which is followed by a summary of the major industrial traditions in Scotland. The corpus following contains lists of objects by type and

[1] The Society gratefully acknowledges a grant from the Council for British Archaeology towards the cost of producing this paper.

[2] J. Anderson, *Scotland in Pagan Times. The Bronze and Stone Ages* (1886).

[3] *P.S.A.S.*, LVII (1922–3), 134.

[4] V. G. Childe, *The Prehistory of Scotland* (1935); *Scotland before the Scots* (1946); S. Piggott (ed.) *The Prehistoric Peoples of Scotland* (1962).

[5] *P.S.A.S.*, XCIII (1959–60), 16.

county, and a separate catalogue of associated finds. In these latter respects the material is presented in the same fashion as the Late Bronze Age metalwork, and it is hoped to complete the series by a comparable work on the Early Bronze Age. It should be noted that this threefold division of the Bronze Age is arbitrary, and the dividing lines are indistinct, as the Middle to Late transition demonstrates. We should expect the same situation for the earlier boundary.

Flanged Axes and Palstaves

The flanged axes of the late second millennium B.C. in Scotland exhibit great variation in their form, size and decoration. Indeed, this is one of the most striking features of the material, and points more to a fairly large number of industries than to only a few highly-organised centres from where axes were sent out in trade. Although there is only one 'matched set' of axes, from the same mould, there do seem to be a number of fairly restricted regional styles and types.

As there are very few associated finds incorporating this material, we must rely upon typology to a great extent to assist in determining the relative chronology of the bronze industries. As far as possible, both qualitative and quantitative methods have been combined to produce this classification of flanged axes.[1] Such aspects as decoration, loops and blade recurvature have been recorded merely as present or absent, while other elements are more susceptible to a quantitative approach; these include flange length, blade width, axe width at the centre, thickness within the septum and below the septum, height of flanges, as well as other definable aspects. Although the flanged axes exhibit considerable variation, by combining certain specific observable features, it has proved possible to divide the material into homogenous classes, with as little overlap as possible. It must not be forgotten however that the evolution of these axes was not to a set and regular stepped pattern, but was more an 'organic' development with minor and major improvements occurring sporadically. We should therefore expect to find considerable overlap between the classes although in fact by using rather broad divisions we can eliminate some problems of hybrid or transitional types. The shape and height of the flanges has proved the best feature for this broad division in the earlier material.

The flanged axes of the British Isles have never received full typological study. In Ireland, Eogan has touched upon this problem,[2] Burgess has studied the Welsh material,[3] while for England only Smith has considered the evidence.[4] Recently an overall typology has been devised by Butler on the basis of his work on the relations between the British Isles and north western Europe.[5]

Butler describes five basic types of flat and flanged axe, and some of these have an important bearing upon the Scottish material as far as typological classes are concerned. The first of his types is the *developed flat axe*, which may also be called narrow butted flat axes of the Migdale group, and which do not directly concern us here. His second type is the *low-flanged axe*, an axe with flanges only one or two

[1] A classification of the Scottish flanged axes by a form of multivariant analysis is at present being attempted.

[2] *J.R.S.A.I.*, XCII (1962), 45; *P.P.S.*, XXX (1964), 268.

[3] *J. Flintshire Hist. Soc.*, XX (1962), 92.

[4] *P.P.S.*, XXV (1959), 144.

[5] *Palaeohistoria*, IX (1963), 27.

millimetres high and probably hammered up, although Butler believes that the technique is often difficult to decipher. This type too only concerns us in the question of the origins of the Middle Bronze Age flanged axes, but it may be noted that our term 'low-flanged axe' does not mean the same as Butler's. His third type is called the *high-flanged axe*, an axe with cast flanges, and also of the Early Bronze Age. In southern Britain this is a part of the Arreton tradition. The problem of calling these axes 'high-flanged' is that certainly in Scotland there are 'higher-flanged' axes. Butler's high-flanged axes are, for Scotland, equivalent to our low-flanged class! The correlations are as follows:

Butler	*Britton*[1]	*Coles* (fig. 1)
developed flat axes	Migdale group	narrow butt flat axes (1)
low-flanged axes	Migdale group	hammer-flanged axes (2, 5–6)
high-flanged axes	Arreton tradition	low-flanged axes (7)

Butler's fourth type is the *stopridge* axe, an axe with a 'distinctly raised transverse rib in the centre'; this is not a palstave according to Butler who believes that the palstave should be 'distinctly thicker' below the stopridge than above it. This seems to be a rather loose definition especially when we apply the defining terms to his fig. 10, 2 which has no apparent transverse rib of any appreciable height, or to the Bethys-yn-rhos, Denbighshire, axe, apparently of a 'North-west European' type, which has no trace of any stopridge at all. Butler's fifth and last type is the *haft-flanged axe* as defined lately by Smith, and which is a common form in north Britain.

Butler's British-Irish *palstave* groups are divided into two main classes, *broad-bladed* (class I) and *narrow-bladed* (class II).[2] The former has a blade widening from the stopridge to a splayed cutting edge which is generally 2·5 times as wide as the width of the palstave at the stopridge. The latter's blade is generally no more than 1·5 times the width at the stopridge. Within these two classes, there are about twenty sub-classes dependent upon decoration and length of flanges. Butler stresses that his classification was devised to allow comparisons with the north European material, and does not pretend to be all-inclusive of British palstaves. It has not been adapted for Scotland principally because the broad-blade and narrow-blade division does not seem to apply to this material, and because the definition of a palstave seems still rather imprecise. We do not know how much thicker the axe must be below the stopridge to qualify as a palstave. What is valuable for the Scottish material is, however, Butler's work on the trade in these axes to the continent, because, in the absence of many associated finds, we rely upon continental analogues for chronology.

In this paper we take as defining features for the flanged axe and palstave classes (1) flanges, (2) stop, (3) blade, (4) decoration, (5) size.

(1) The flanges of the Scottish Middle Bronze Age axes are as important a feature as the blade in Butler's classification. With very few exceptions, if any, flanges for the earlier classes here proposed are of two major forms, which may best be called *convex* and *angled*, descriptive terms requiring little explanation. In side view, convex

[1] *P.P.S.*, XXIX (1963), 258.

[2] *Palaeohistoria*, IX (1963), 48.

flanges show an even curve from butt towards the central part of the axe, contrasting with angled flanges which rise from the butt to a point (generally midway between the butt and the central part of the axe) where the flange line abruptly turns down towards the central area. In some cases the 'angle' thus produced is not so much a

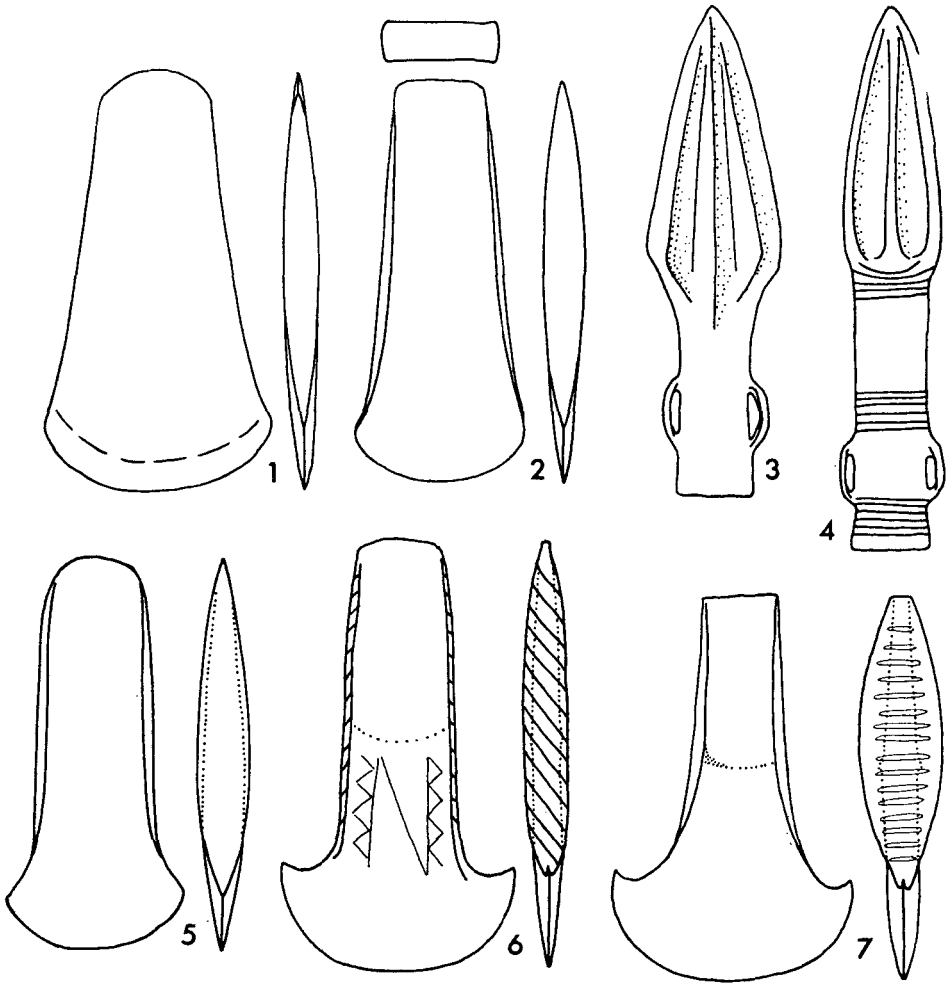

FIG. 1. Early Bronze Age metalwork. 1. no provenance, N.M.A. DA 41; 2. Lanarkshire, N.M.A. DA 17; 3. no provenance, N.M.A. DG 10; 4. Douglas, Lanarks, N.M.A. DG 36; 5. Old Meldrum, Aberdeen, Reg. Mus. Aberdeen 52.10.4; 6. Rosskeen, Ross, Ashmolean 1927.2720; 7. Barcaldine, Argyll, N.M.A. DC 39. ($\frac{1}{2}$)

junction of two straight lines as a sharp curve, but in all cases the angled flange should be distinct from the convex flange which is above all an *even* and regular curve (compare figs. 2–3 with figs. 5–6). In quantitative terms, it has been found that an index based upon the ratio $\frac{\text{stop width}}{\text{flange height}}$ provides a very close guide to the

division of flanged axes into *convex-flanged* and *angle-flanged.* The measurement of Stop Width is self-explanatory, but it might be pointed out that this is the maximum width of the axe at the stop, and not the width of the septum. The Flange Height is the maximum distance from one flange to its opposed flange. The line between the two groups, groups which independently stand on the definition of convexity and angularity of the flanges, comes at about 100, that is, the maximum height of the convex flanges is generally less than the width of the axe at its stop, while the height of the angle flanges is almost always greater than the stop width. The angle-flanged index mean is 80 (range: 58–107; sample: 100), the convex-flanged index mean is 117 (range: 87–180; sample: 60). A third difference between convex- and angle-flanged axes is in the varied provision for the stop (see page 96).

(2) The stop varies greatly in its form and functional capacity. It should be an important defining feature of the palstave, because it is the basic *functional* aspect of these tools. The use of the term stopridge is not appropriate, as in many cases there is no ridge but instead a septum (between the flanges) sunk below the ordinary plane of the axe. The stops on Scottish axes take the form of a low ridge or wall, or a sunken septum, or a socket-like stop where the tip of the haft would be hidden by the overhang of the acutely-angled stop. The last of these is completely functional, and is taken here as characteristic of palstaves, but the others vary, a curved approach from septum to stop being not functionally adequate, a right-angled stop (whether wall or sunk) being more so. The difficulties of casting a right-angled wall or sunk stop in a stone mould must have been formidable.

The definition of a palstave is partly dependent upon the stop, and a wall or sunk stop is not considered characteristic, but only the socket-like stop. Two other features that distinguish the palstave from the flanged axe may also be noted here. The flanges of the palstave do not extend past the stop but disappear into the stop, unlike those of flanged axes. The thickness of the palstave blade below the stop is appreciably greater than the thickness of the flanged axe when expressed in relation to the thickness of the septum. When these considerations are made, it will be seen that there can be no confusion over the definitions of the flanged axe and the palstave – these are distinct and separate tools. The palstave has a 'shelter-stop', no flange extension below the septum, and a $\frac{\text{septum thickness}}{\text{blade thickness}}$ mean of about 40 for Scotland (range: 25–50; sample: 20), admittedly on a very small sample but nevertheless useful as a guide for comparison with the mean of 70 for flanged axes (range: 28–100; sample: 150). Those few flanged axes with a 'palstave' index do not qualify as palstaves on other grounds, i.e. the absence of a 'shelter-stop' and the presence of flange extensions. The definition of a palstave is stressed here, because there seems to be so much uncertainty about it. It would only be important in areas where palstaves were introduced rather than developed. In the latter there are bound to be some forms that will partake of features of both flanged axes and palstaves. The definition adopted here is rather more curtailing than other inferred definitions, but seemed to be necessary to distinguish the flanged axe development from a small and not certainly related group of palstaves.

Butler has recently suggested that the shield-decorated palstave of western Europe was developed in Ireland from certain types of flanged axes, and that among the earliest British palstave groups is the Acton Park group of North Wales.[1] These early groups are dated to *c.* 1400 B.C., and subsequently provide the impetus for other palstave groups in the later second millennium. In the absence of a comprehensive study of the Irish Middle Bronze Age industries, it is difficult to determine the exact forms and distribution of these early palstaves, but there is little evidence in Scotland that this area played a major part in the development of the palstave.

(3) The blades of the Scottish axes vary in their width, although not consistently enough to permit us to adopt Butler's scheme. Broad blades are generally more than twice the width of the axe at its stop; narrow blades are generally well below this, nearer to 1·5 times the width at the stop. A feature of many of these axes are their recurved blades, with the splayed tips turned upwards towards the butt.

(4) The decoration of these axes includes the shield pattern, the shield with internal bar or lozenge or 'rain', the trident, and the vertical bar or rib. In some cases the shield is formed by a continuation of the flanges which curve in and join as a low bar on the blade face. In others the shield is merely a raised area on the face, or completely independent bars or ridges. Only in rare cases does flange decoration in Early Bronze Age fashion occur, generally allied with 'rain' pattern on the blade faces. However, some of the axe flanges are quite elaborately faceted, and may have a shoulder, an outward kick of the flange as seen from the axe face. This occurs on many axes with shield decoration, and may be related to the north European nicked-flanged axes of the Ilsmoor phase.

(5) The size of the Scottish flanged axes naturally varies, but where distinct variations occur within classes of tool these have been used as a characteristic feature of certain sub-classes

The axes belonging to the Scottish Middle Bronze Age divide into three major, and in part contemporary, groups. Two of these groups consist of all the flanged axes, the third consists of palstaves. Within these groups various regional industries can be distinguished. For convenience, flanged axes are called Classes II and III, but the palstaves do not require such a subdivision. The numbering of the flanged axe classes should not be taken to presuppose any typological or chronological progression between the two, but only as a convenient way to handle the material. Class I flanged axes are of the Early Bronze Age, and are not catalogued or mapped here. As, however, they clearly played some part in the development of the Middle Bronze Age axe, a short note is required here, pending future publication.

Class I axes in general consist of axes with recognisably cast flanges that rise from about 4 to 6 mm. above the septum (fig. 1, 7). These flanges extend along almost all of the axe side, are of maximum height near their mid-point, are often worked into longitudinal facets, and are sometimes decorated. The face of the axe too is often decorated, and has no stop but only a very slight thickening or merely a bevel near the mid-point. The blade is almost always wide and crescentic, often recurved. Such axes occur in Early Bronze Age hoards and graves over much of

[1] *Palaeohistoria*, VIII (1960), 120.

the British Isles, but are more common in the south. They are of a form developed in these islands from continental prototypes from *c.* 1550 to *c.* 1400 B.C.

These axes are often considered to lie behind the development of the Middle Bronze Age flanged axes, but their distributions, while not complementary, could hardly be termed coincident. Smith's maps of Middle Bronze Age flanged axes for England and Wales show a markedly northern emphasis, and she remarks on their absence from Kent and the southern counties, a vacuum filled in fact by the hoards of Class I axes.[1] This surely points to two suggestions, first, that such Class I flanged axes did not necessarily play the entire rôle of ancestor for the Middle Bronze Age flanged axes, second, that certain group. of the latter may be contemporary with the former. Typologically, both these suggestions are supported. It has been stated on several occasions that the Early Bronze Age flanged axe is structurally close and antecedent to the Middle Bronze Age flanged axe. A shortening of the flanges to economise on metal is believed to be the principal development necessary to produce this change. There are other features, however, of the Class I axes which might be expected to have left their trace on their successors. These are the widely splayed blade, constant on Class I axes, and the decoration that is often present. It is certainly true that some Middle Bronze Age axes show clear typical relationships with these axes, but it is equally true that many axes have no demonstrable connection at all. The latter have very narrow blades and are never decorated, yet they seem to fall within the earliest groups of Class II and III axes. It is easy to find ancestral forms for these within the other major group of Early Bronze Age axes, the flat and hammer-flanged axes. A majority of these do not have widely-splayed blades, and a great many are undecorated. They exist as flat axes or as axes with very low flanges hammered up after casting (fig. 1, 2, 5), and are believed to belong in general to a period earlier than the Class I flanged axes, in southern England from *c.* 1650 to *c.* 1550/1500 B.C. Their hoard distribution is markedly northern, and therefore more appropriate to the succeeding Middle Bronze Age flanged axes.[2] Certain of these early axes, particularly those with hammered flanges, are similar in most respects to some Class II and III axes. Clearly the indigenous development of Middle Bronze Age flanged axes was not a straightforward process, but a complex series. On the above argument such axes may have been devised during the later Early Bronze Age (in southern English terms). What this means in terms of chronology for Scotland is difficult to say, but one suspects that certain Class II and III flanged axes were in production in Ireland and Scotland by *c.* 1500 B.C., or else the flat and hammer-flanged axes of the north continued in use through the full Early Bronze Age.

The flanged axes of the Scottish Middle Bronze Age may be divided into those with convex flanges (Class II) and those with angled flanges (Class III). The flange differences have already been outlined. If the suggested date in the fifteenth or fourteenth century for the inception of these flanged axes is correct, their span of popularity must be of the order of five or six centuries. This estimate is based on three features. First, although associated finds are very rare, certain (typologically

[1] *P.P.S.*, XXV (1959), 173; *P.P.S.*, XXX (1964), 290.

[2] *P.P.S.*, XXX (1964), 265.

rather developed) forms occur in twelfth-century hoards, second, the palstaves that early became dominant in the south never achieved much popularity in the north as a potential replacement for flanged axes; third, the final replacement of flanged axes occurred in Scotland only with the successful marketing of the lighter socketed axe, from the eighth century B.C. onwards.

In the absence of many associated finds, we cannot do more than outline in broad terms those features that seem to be significant for the chronological phasing of the Scottish flanged axe industries.

Class II flanged axes, or convex flanged axes, may be first considered, as certain of these bear a close relationship to earlier forms of axes. It has been possible to distinguish five groups within this class, on the basis of certain quantitative and qualitative features. One of the earliest of these is the Auchendrane group named after a find in Ayrshire (fig. 2, 1–3, 5). The axes of this group are very widely distributed in Scotland, and in fact are almost the only type of flanged axe that has been found on the west coast north of Galloway (fig. 4). They are not decorated, they have relatively narrow blades and rather short flanges. There is little in these features that suggests a development from Early Bronze Age low-flanged axes, yet very few of the Auchendrane axes have any appreciable degree of 'stop', and are thus typologically and functionally early in the series of flanged axes. Their origin should be sought in the Early Bronze Age flat and hammer-flanged axes, the distribution of which is much more analogous to the Auchendrane axes than is the limited spread of the Early Bronze Age low-flanged axes. One of the hammer-flanged groups in Scotland is typified by an axe from Old Meldrum, Aberdeenshire (fig. 1, 5). A number of the diagnostic features of the Auchendrane group are found in the Old Meldrum type, and this may be taken to suggest a date within the Early Bronze Age for the inception of this flanged axe form.

Also early in the Class II flanged axe development is another group, called, after a characteristic find, the Caverton group (fig. 2, 4, 6–7). The axes are quite clearly derived from the second major group of axes of the Early Bronze Age, the low-flanged axes (Scottish Class I) of Britton's Arreton tradition, dated in the south from *c.* 1550/1500 to *c.* 1400 B.C. As stated, such axes are relatively rare in north Britain, but those that are present exhibit most of the features present in the Caverton group. The flanges of the Early Bronze Age axes are long and often decorated, the axe faces are also quite commonly ornamented with incised and hammered designs, the blade is always wide and crescentic. In Scotland such Early Bronze Age axes may be called after a find at Barcaldine, Argyll (fig. 1, 7).

The Caverton group of flanged axes must be related to this form, as it shares certain diagnostic features such as long flanges, wide blades, very low or incipient 'stops', and, most important, Early Bronze Age decoration on both faces and flanges. Caverton axes have been found in southern and eastern Scotland, but are not particularly common (fig. 4).

A third group of flanged axes also shows certain typological relations with the Caverton and Early Bronze Age groups, and thereby may belong to an early phase within the flanged axe series. The group is centred in north-eastern Scotland, in

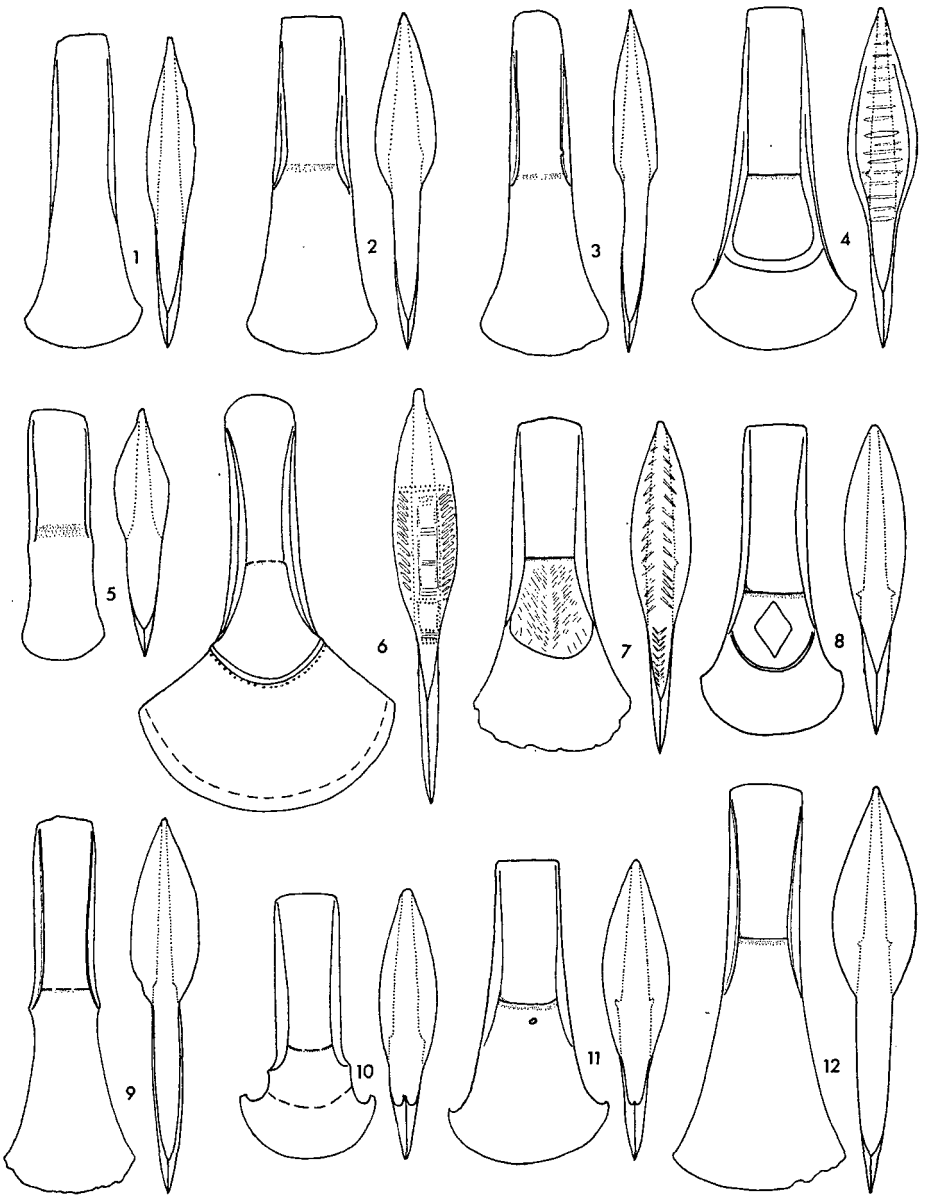

FIG. 2. Class II Axes. Auchendrane group: 1. Ayrshire 1; 2. no provenance N.M.A. DC 67; 3. Midlothian 3; 5. Ross 1. Caverton group: 4. Aberdeen 28; 6. Stirling 1; 7. Roxburgh 1. Belhelvie group: 8. Aberdeen 1; 10. Kinross 2; 11. Dumfries 14. Corstorphine group: 9. Aberdeen 23; 12. Midlothian 1. (⅓)

the Aberdeenshire region, but is not very well represented in quantity (fig. 4). It is called after a find at Belhelvie, and is characterised again by long flanges of Early Bronze Age types, and also by wide and often recurved blades (fig. 2, 8, 10–11). There is no decoration of faces or flanges in Early Bronze Age style, and the 'stops'

are better developed and more functional. The decoration that occurs takes the form of a curved rib enclosing an area below the stop, and is often called 'shield decoration'. This style was foreshadowed to a great extent in Early Bronze Age axes, both hammer-flanged and low-flanged, in the arrangement of facial decoration in arcs, and is present in shield form on some Caverton axes. Butler has demonstrated

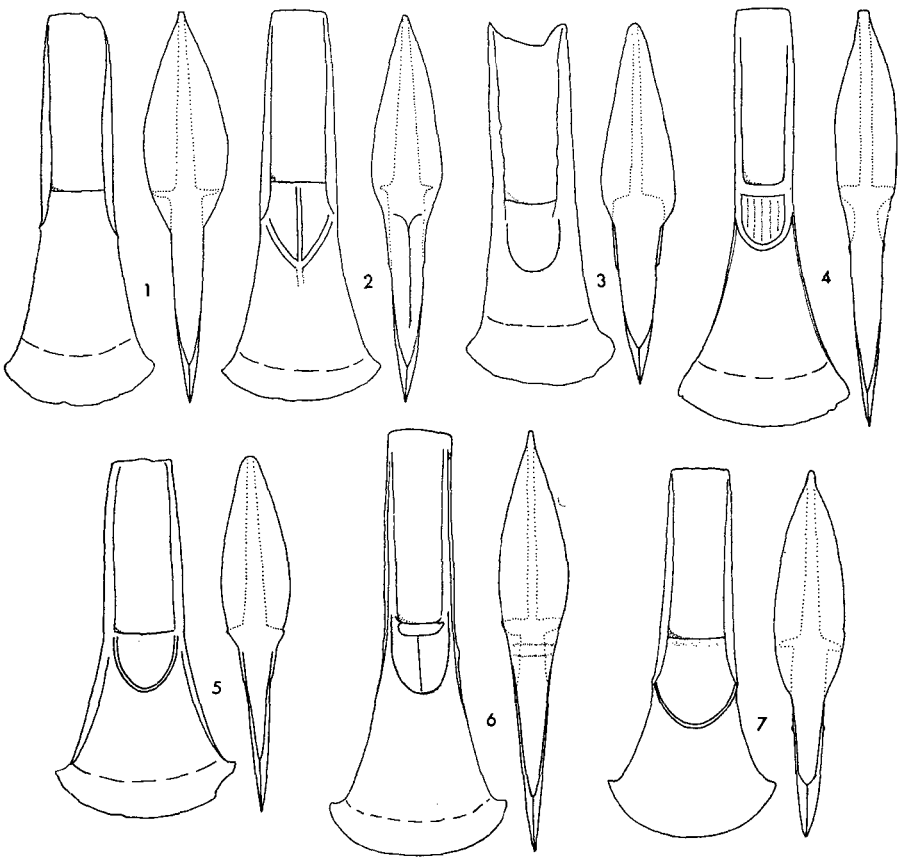

FIG. 3. Class II Axes. Haddington group: 1. East Lothian 1; 2. no provenance Hunterian B1951.2128; 3. Fife 5; 4. Perth 18; 5. no provenance, N.M.A. DC 29; 6. Kinross 3; 7. no provenance, N.M.A. DC 81. (⅓)

that the shield-pattern was present on 'palstaves' in north Wales, and on the Continent, by *c.* 1400 B.C. and he believes that the prototypes for such axes were Smith's 'haft-flanged' axes of north Britain and Ireland, in fact, the flanged axes of our Class II and III. This argument ties in well with the proposed early dating of the Caverton, and Auchendrane, groups. The Belhelvie axes, while exhibiting fewer early features, do not show much evidence of an ability to cast a high wall-stop, and in this, as in their length of flanges, they must be considered as forming a relatively early group with the Class II series, perhaps in the fourteenth and thirteenth centuries.

Allied to the Belhelvie group in its lack of a developed wall-stop is the Corstorphine group of flanged axes (fig. 2, 9, 12). It has been argued that the stop in an operative form should be an important chronological feature, because it makes a great functional advance on the earlier forms of flanged axe. The Corstorphine group seems in fact to represent a phase of experimentation, wherein various methods of stopping the haft from splitting were being tried. These include low wall-stops and sunk-stops, but in no case are these wholly successful because the curving surfaces of each would tend to perpetuate the movement of the haft. The axes of this group however, while exhibiting this early feature, also show certain improvements in higher and shorter flanges, mostly confined to the septum area. Corstorphine axes are long, averaging 15 cm., and have rather narrow blades never widely splayed. Rarely decorated, they seem in fact to represent features both of the Auchendrane group (plain: short flanges) and the Belhelvie group (low wall-stop). Their distribution is eastern, rather like that of the Belhelvie group (fig. 4). At Lilliesleaf, Roxburghshire, a Corstorphine axe was apparently found with a sherd of an Encrusted Urn, not itself datable with any greater precision than the axe on purely typological grounds.

The last of the definable groups of Class II flanged axes is named after a find near Haddington (fig. 3). These axes might in some cases be called palstaves, but the definition adopted here excludes these axes from the palstave class on several grounds (see page 86, and page 100). In any case they show rather close connection with the typologically earlier Corstorphine group of flanged axes. Haddington axes are again long, averaging about 15 cm., and their flanges too are of approximately the same height and length as those of Corstorphine axes. Differences however are apparent in a wider splayed blade, often recurved, and particularly in the presence of a high and truly functional wall-stop which in many examples reaches the top of the flanges at this point. The wall-stops attest a high degree of skill in casting, although in a few cases the same effect was achieved by casting a right-angled sunk-stop, between inturned flanges. The Haddington group, on functional features and on decoration, should be contemporary with the appearance of true palstaves in north Britain, and in fact one was found with two palstaves at Kirtomy (Sutherland) (fig. 17, 10–12). Although the group retains convex flanges, with their highest point approximately midway between butt and stop, in a few cases the flange-line, too, shows an approximation towards the straight-flanged palstaves. Haddington axes are found mainly in east-central Scotland, and possibly represent a local industry in the Forth area (fig. 4). Of a number of unprovenanced examples, there is some evidence that at least three may in fact have been found in this central region.

In summary, Class II flanged axes are mainly concentrated in eastern Scotland, with a scatter of early forms in the south and west. These early forms may have been in production as early as *c.* 1500 B.C., and the succeeding groups seem to develop through the later second millennium down to at least the twelfth century, when palstaves are first documented in Scotland. The influence of the latter is seen in the Haddington group, which may well have been in vogue at the end of the mil-

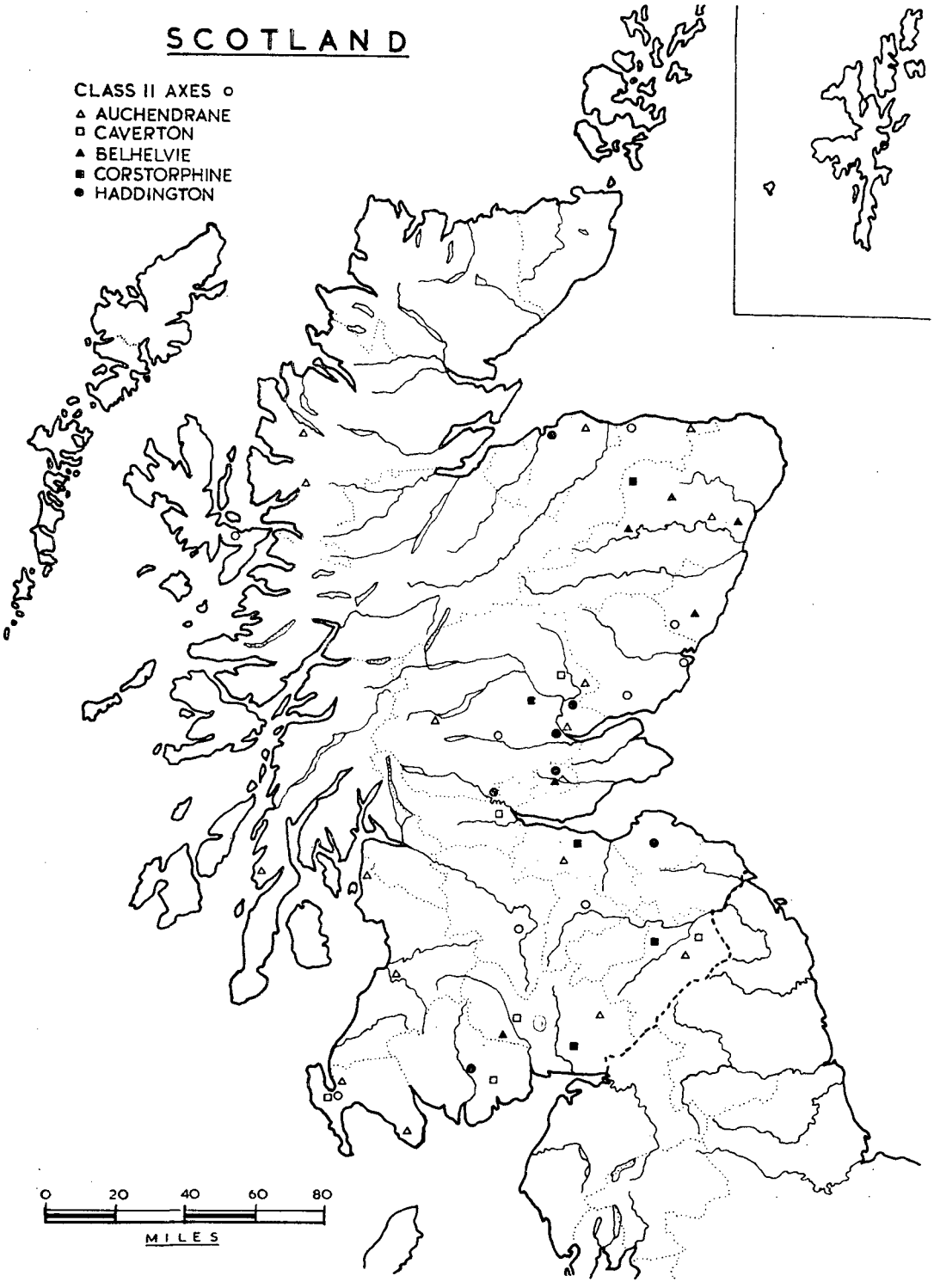

FIG. 4. Distribution of Class II axes.

lennium. The fact that only the earliest group, Auchendrane, is appreciably represented in the west and south, while suggesting that it was the Irish schools that prompted the establishment of local Scottish industries, overlooks the case that a relatively large number of Early Bronze Age axes and moulds are known from Scotland. One should not, however, neglect the Irish evidence and it seems evident, from the published material, that stylistically the flanged axes from the two regions are closely related. Strangely enough, however, there is little evidence for either the Great Glen or Galloway as a point of entry for Irish trade.

The other class of Middle Bronze Age flanged axes is Class III, distinguished from Class II by its angled flanges (see p. 84). Again this major class can be subdivided into a number of groups. Certain of these are closely related to Class II groups in features other than the flange form.

Typologically the earliest group is represented by an axe from near Premnay in Aberdeenshire (fig. 5, 1–4). The axes in this group are narrow-bladed, in the same degree as the analogous Auchendrane group of Class II. The blades of the Premnay axes are often straight-sided and never widely splayed. The other feature of this group is the inturned flanges, which curve over the septum in what may be called a concavo-convex line, the flange edge near the butt forming a slightly concave line, the edge sloping towards the blade in a convex line. This feature is quite characteristic of certain other groups of Class III flanged axes. The flanges, being high, could be hammered over the haft to grip it tightly, a necessity if the haft was not to split, because the Premnay axes have no stop and rarely even a suggestion of one. The group is concentrated in the Aberdeen area, with none known south of the Forth (fig. 7). On the basis of the features in common with the early Class II group (Auchendrane), it is suggested that the Premnay group should be considered as a local North British development from the Auchendrane type of flanged axe, reproducing all its features with the addition of higher flanges which could be hammered over to assist in the hafting of the axe. Indeed, the Premnay axes demonstrate that at an early stage in the native development of the flanged axe, two major classes were already beginning to emerge, one with low flanges and eventually adopting the wall-stop, the other with high flanges and gradually developing the sunk-stop. The flange forms of Classes II and III have already been emphasised, but the wall-stop and sunk-stop differences are of almost equal importance. If we compare the two classes in this way, it is evident that the Class II development, after an uncertain start (Auchendrane) is almost completely reliant upon wall-stops, whereas Class III axes, although more varied, relied upon the sunk-stop to a great extent. The figures by Class and Group are given on p. 96.

Typologically, the next stage of development of Class III flanged axes is represented by a group named after a find at Kirriemuir, Angus (fig. 5, 5–7). A number of these retain the narrow blade, while others have wider splayed blades not, however, recurved. Most of the Kirriemuir axes are rather short, under 12 cm. in length. None are decorated. Their flanges are not only commonly inturned by hammering, but some have been cast in constricted form, so that the septum itself is narrowed. This is a feature that has its final stage of development in the 'wing-flanged' axes

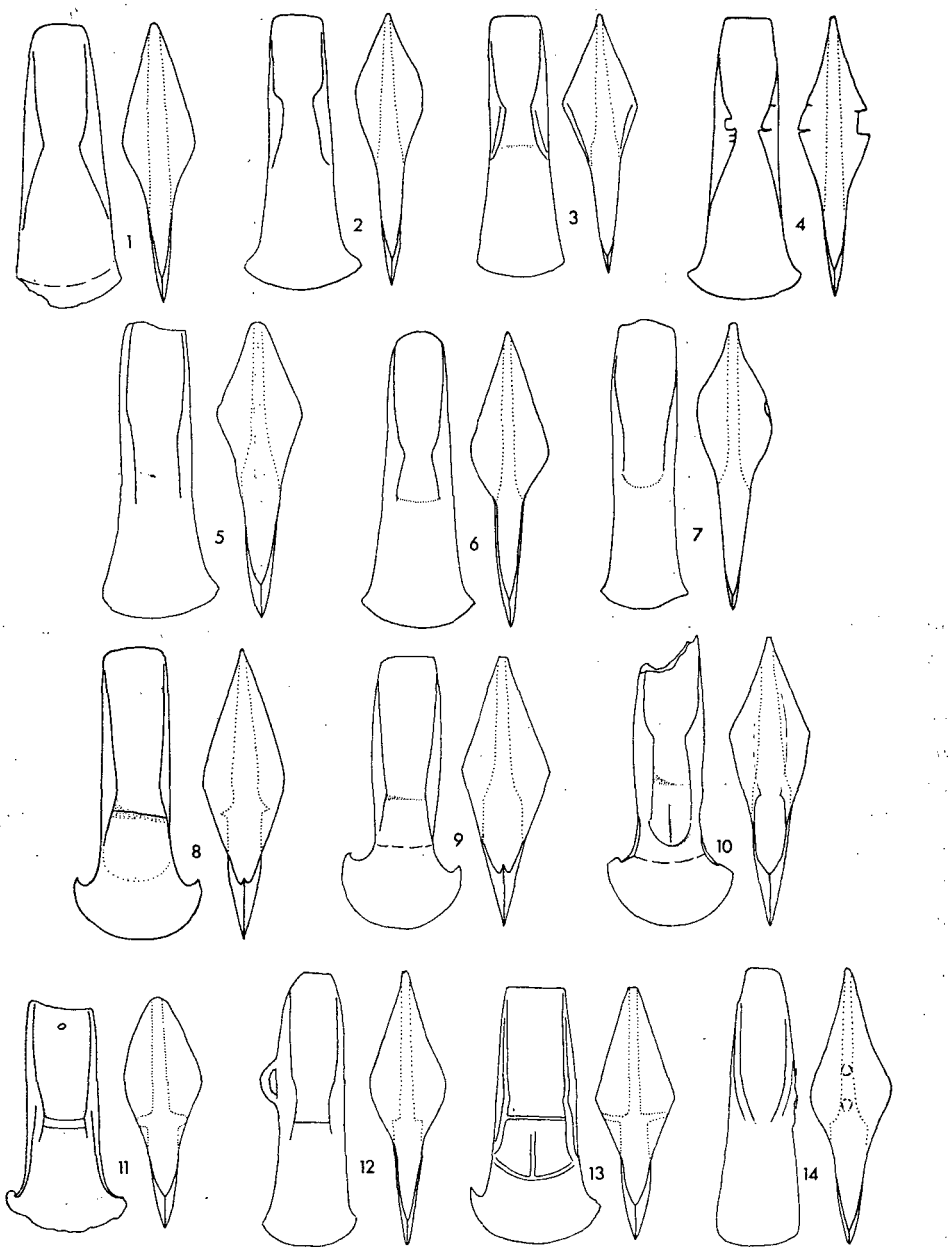

FIG. 5. Class III Axes. Premnay group: 1. Aberdeen 20; 2. Perth 5; 3. Perth 17; 4. Aberdeen 15. Kirriemuir group: 5. Angus 3; 6. Aberdeen 17; 7. Roxburgh 2. Kirkless group: 8. Caithness 3; 9. Dumfries 10; 10. Dumfries 5; 11. no provenance, N.M.A. DC 11; 12. Aberdeen 9; 13. Dunbarton 1; 14. Angus 6. (⅓)

Class	*Group*	*No stop*	*Wall-stop*	*Sunk-stop*
II	Auchendrane	7	4	6
	Caverton	0	9	0
	Belhelvie	0	7	0
	Corstorphine	0	6	1
	Haddington	0	12	1
	other	3	7	2
	total	10	45	10
III	Premnay	5	1	5
	Kirriemuir	2	2	10
	Kirkless	0	8	7
	Auchterhouse	1	9	21
	Balcarry	0	0	14
	other	8	8	19
	total	16	28	76

described below. Most of the Kirriemuir axes have a sunk-stop, but in almost all cases this takes the form of a very smooth curve from the septum to the upper blade. Combined with constricted flanges, the developed forms of these would produce a reasonably functional stop. Several axes are flat, without any stop, but are otherwise of Kirriemuir type. The distribution of the group is eastern, and there are few known from the west or south-west (fig. 7).

The development of Class III flanged axes at this point seems to divide, one industrial group utilising many of the ideas of certain groups of Class II axes, the other more dependent upon the preceding Class III groups. The former of these new groups is called after a find at Auchterhouse in Angus (fig. 6, 1–8). These axes are quite long, over 13 cm., and have wide blades. Their decoration too, in shield or trident motif, suggests an affinity with the long, wide and decorated Class II groups. The flanges of Auchterhouse axes are inturned over the septum, and in some cases are very high and triangular. The constricted stop is present but not common. The septum is generally sunk below the blade, but the stop thus produced is rarely sufficiently acute to be of great practical use. Significantly, however, a number of these axes have wall-stops, another feature in common with Class II axes. Auchterhouse axes are quite widely distributed over eastern and southern Scotland, particularly in the Fife, Angus and Perth region (fig. 7). The date of this group is not at all easy to determine, but the presence of decoration on the flanges of three axes, in Early Bronze Age style, suggests that certain axes of the group may be contemporary with the Caverton group of Class II. These three axes have very rudimentary stops or none at all. The tradition of the Auchterhouse style of axes may have begun as early as *c.* 1300 B.C., but it is probable that these axes continued in production for some considerable time after this.

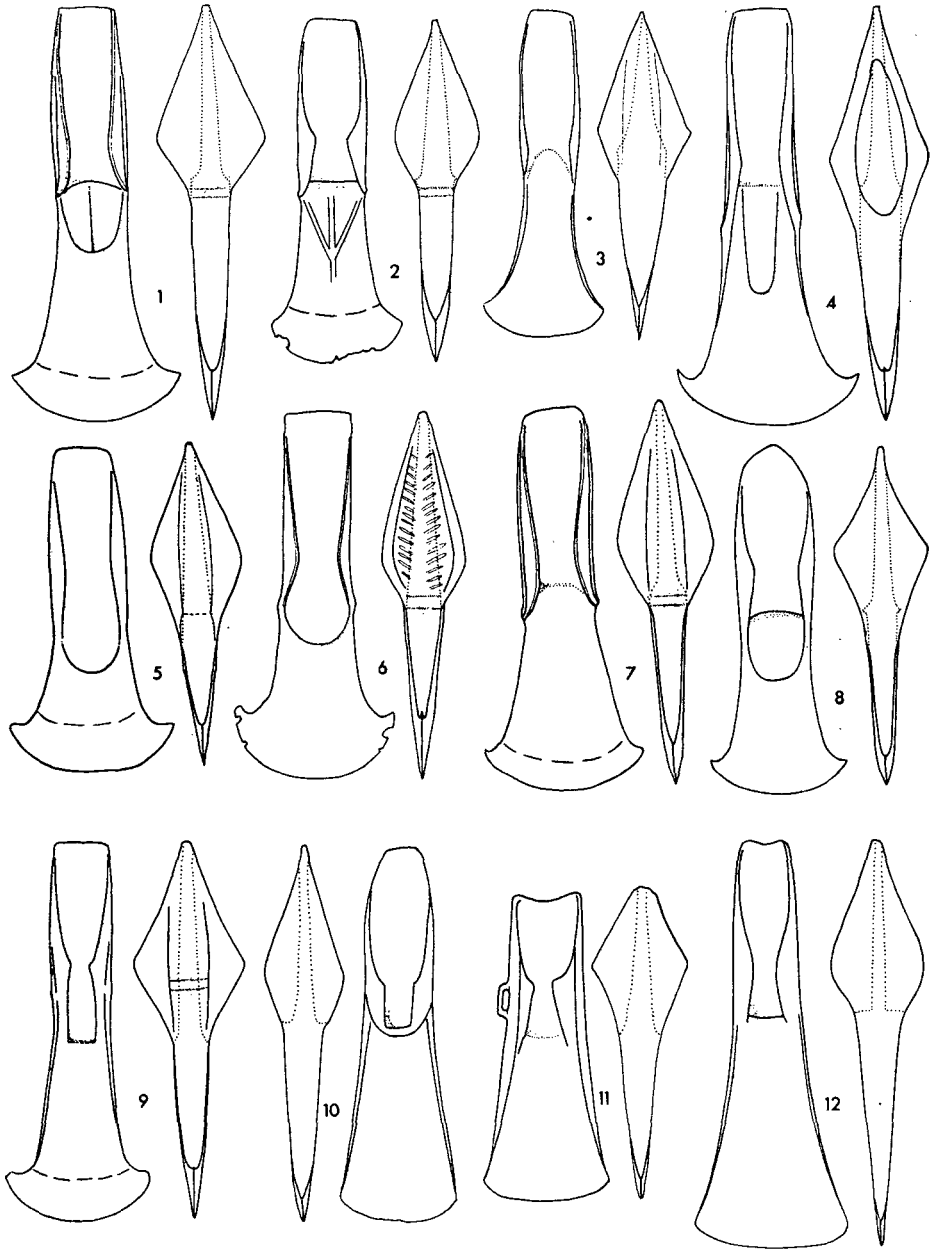

FIG. 6. Class III Axes. Auchterhouse group: 1. Angus 1; 2. Banff 5; 3. Dumfries 3; 4. Wigtown 5; 5. Peebles 6; 6. Aberdeen 10; 7. Peebles 5; 8. Perth 13. Balcarry group: 9. Lanarks 3; 10. Fife 3; 11. Angus 7; 12. Kirkcudbright 1. ($\frac{1}{2}$)

The second group, which is primarily a development from the earlier Class III axes, is named after a find from Kirkless in Dumfriesshire (fig. 5, 8–14). There are several sub-varieties present in this group, but these are only of minor importance. Kirkless axes are short, mostly under 11 cm. in length, and have wide and often recurved blades. The flanges are often constricted, and the stop may be either of the sunk or wall variety. Some of the latter are high, and in this reproduce a feature of Haddington axes. It has already been suggested that the latter may be contemporary with palstaves, and another pointer to this is the presence of loops on several Kirkless axes. As such, these indicate a date for the Kirkless group in the twelfth century or later, and support comes from an axe of this group in the Greyfriars, Dumfries, hoard where it was associated with material of the twelfth or eleventh century (fig. 18, 6). Although a small group, Dumfriesshire has yielded one-third of known and provenanced axes of this group (fig. 7).

The final group of Class III axes consists of a number of axes with rather specialised features. These form the Balcarry group (fig. 6, 9-12). All of the axes would also be included in any series of 'wing-flanged' axes,[1] but this term has not been adopted here. The characteristic features of wing-flanged axes have never been outlined in sufficient detail to exclude those axes with inturned flanges but specialised in other ways. A large number of Kirkless axes, and some Kirriemuir and Auchterhouse axes too, would be normally included as 'wing-flanged' axes, but this blanket term seems to disguise specific types as well as drawing an unjustified line within certain groups. The basic division in the Scottish flanged axes, other than Class I, is in the form of the flange (see page 84), and whether or not the groups detailed above are accepted or considered valid, this dichotomy remains. A twofold division into haft-flanged and wing-flanged cannot be supported because there seems to have been no difference drawn between those flanges that rise to a peak (Class III) and those that are convex (Class II) but hammered over.[2] It has therefore been felt that the terms haft-flanged and wing-flanged are better omitted for the time being. In any case, wing-flanged axes are liable to be confused with winged axes.[3]

The Balcarry group is characterised by long axes, averaging 15 cm., with rather short flanges that rarely extend past the stop, and particularly by a constricted septum. The septum width rarely exceeds 50% of the axe-width at this point, and contrasts with the other groups of Class III with wider septums. Several Balcarry axes have loops but decoration is rare. On four occasions such axes have been found in hoards. At Balcarry, three were found (fig. 17, 1–3); at Findowrie, one was associated with a short dirk (fig. 18, 9–10); at Caldonshill, one occurred with palstaves (fig. 17, 4–9); one was in the Glentrool hoard (fig. 16). The associated material in the latter two suggests a date for Balcarry axes from *c.* 1200 to *c.* 1000 B.C., but it is uncertain how long thereafter such a form was in use. The distribution of Balcarry axes extends in a line from Galloway to Angus (fig. 7), a distribution that recalls the north-eastern limit of Irish gold objects in the Late Bronze Age. It is possible that these two events were contemporary, although this would allow a life for Bal-

[1] V. G. Childe, *The Prehistory of Scotland* (1935), 143; *P.P.S.*, xxv (1959), 172. Map in *P.S.A.S.*, xciii (1959-60), 56 now superseded. [2] *P.P.S.*, xxv (1959), 172, fig. 6, 9. [3] ibid., 173, n. 1.

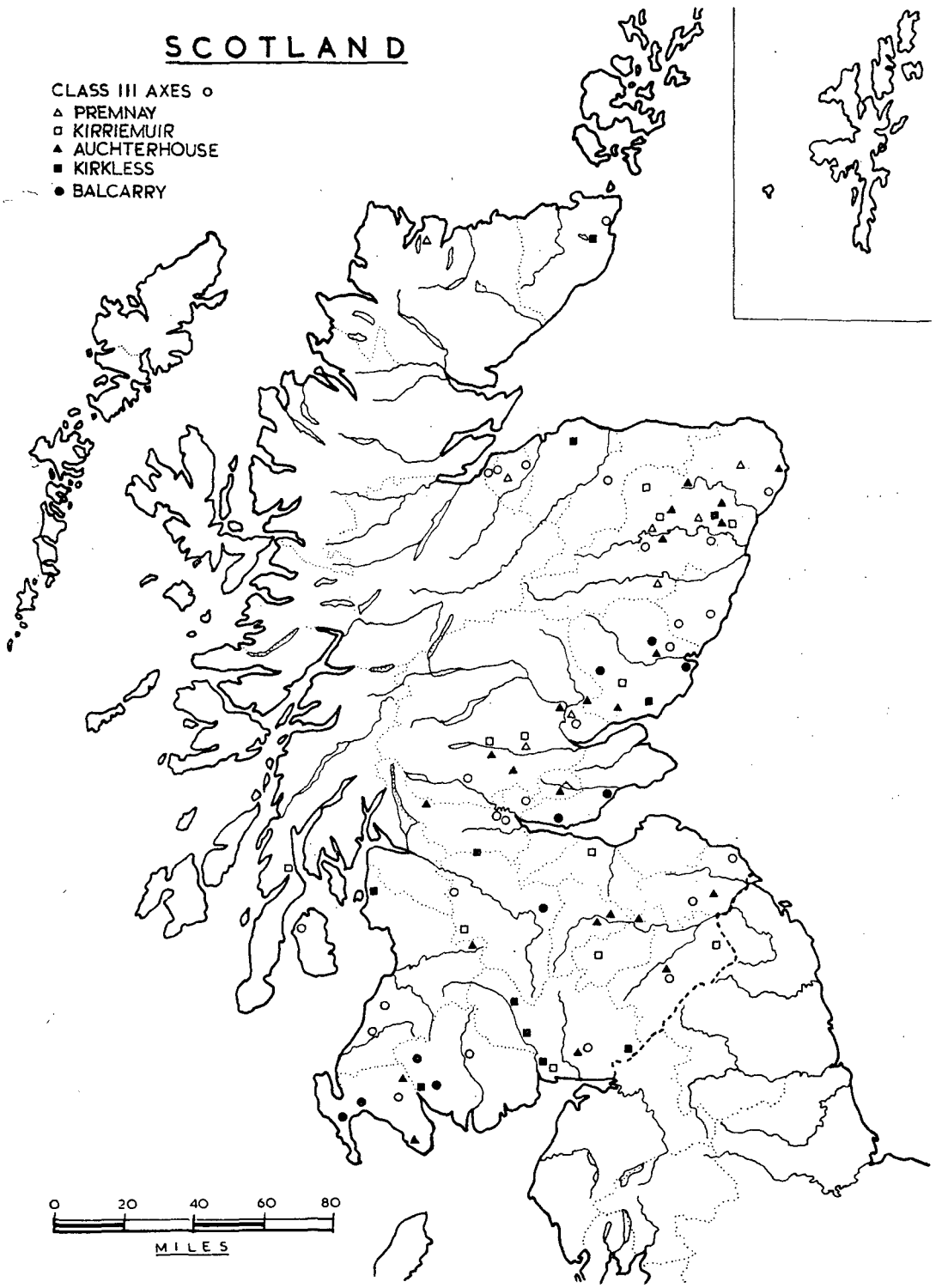

FIG. 7. Distribution of Class III axes.

carry axes of about 400 years. Our knowledge is not precise enough to dismiss this theory out of hand.

Butler has recently reiterated the view that the haft-flanged axes of Ireland, as defined by Smith, lie behind the development of the palstave with shield decoration. The Acton Park hoard of north Wales represents one of the first British manifestations of this palstave emergence. Immediately we are against a problem in that Butler's definition of a palstave is completely different from that adopted in this paper. According to his recent work, our flanged axes would be divided as follows:

Class II Auchendrane; Smith's haft-flanged axes
II Caverton and Belhelvie; Megaw and Hardy's Type IV, Butler's stopridge axes
II Corstorphine and Haddington; Butler's broad-bladed palstaves
Class III Premnay; Smith's haft-flanged axes
III Kirriemuir; Butler's stopridge axes
III Auchterhouse; Butler's broad-bladed palstaves
III Kirkless and Balcarry; Smith's wing-flanged axes

The palstaves of Scotland are not particularly common, and seem to represent an appreciable break with the flanged axe development outlined above. Because of the limited material, it is not possible to assess accurately the rôle that the flanged axes played in the palstave development, but it is clear that continuity can be seen between the early convex-flanged axes, represented by the Class II Caverton and Belhelvie groups, and the later groups such as Corstorphine and Haddington, and the late Class III Auchterhouse group. Butler's palstaves would include these three groups, and it seems clear that, as far as this material is concerned, the evidence points to a north British, and presumably Irish, development of certain decorated axes that played an important part in the appearance of 'Atlantic' palstaves. Butler's suggestion of a parent industry in the west is therefore justified.

But there is still another group of axes to examine, this time recognisably palstaves on any definition (see page 86, and fig. 8). As far as the Scottish material is concerned, it is of some interest to see if these palstaves could have been locally developed from the flanged axe series. The differences are apparent, and consist of a dissimilar treatment of both the stop and the flanges. The stop is of the shelter-type, the blade behind the stop is therefore thick and solid, and the flanges are no longer convex or angled, but are straight and limited to the septum area. In a few cases the flange line continues as a slight ridge outlining the blade. The decoration on all these palstaves ranges from a single median rib to a trident. These decorative motifs recall the flanged axes, but in physical respects there seems to be a considerable number of new elements present in the Scottish palstaves. Without recourse to the south British and Irish material it is impossible to be dogmatic; but the Scottish evidence suggests that all these palstaves are intrusive, and represent a parallel development in another region. Probably the south English – north-west French industries played some part in this, but Ireland too cannot be dismissed. The Scottish palstaves can be divided on the basis of their blade form, but it has not been con-

sidered necessary to formalise these. The two major traditions present are the broad-blade and the narrow-blade palstave, Butler's Classes I and II. It is likely that quantitative work on blade proportions would allow a valid distinction to be drawn within the former group, between straight-sided (crinoline) blades and concave-sided blades. The number of Scottish palstaves is too small to allow such distinctions. Over six wide-bladed palstaves were found at Caldonshill, with a Balcarry axe (fig. 17, 4–9). Stylistically these palstaves are comparable to some in

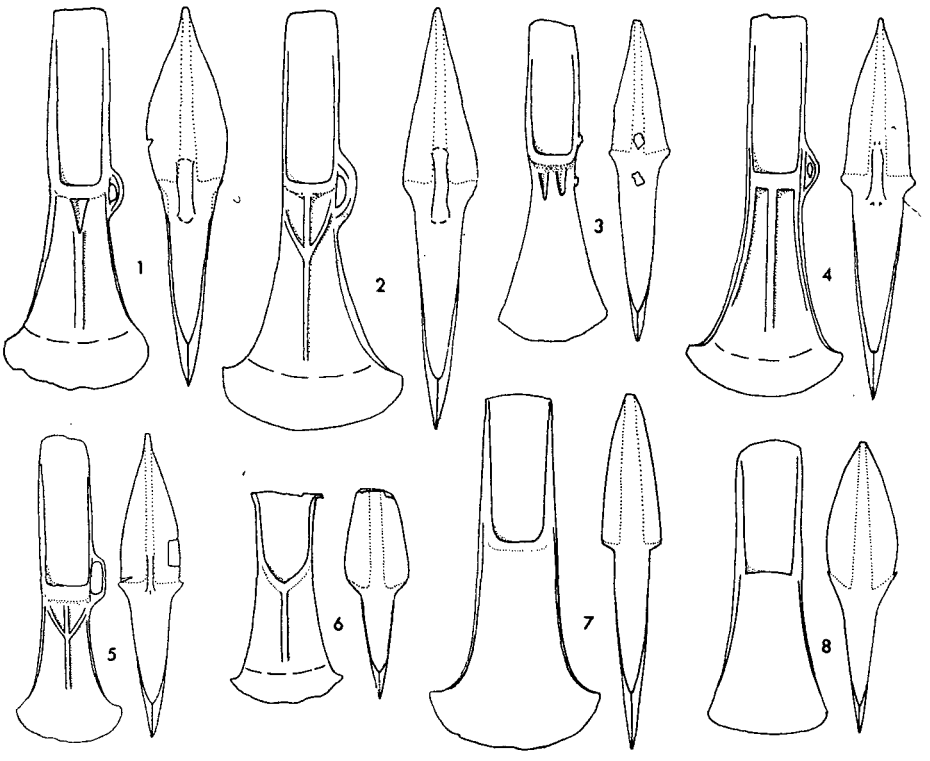

FIG. 8. Palstaves. 1. no provenance, N.M.A. DC 119; 2. Argyll 3; 3. Roxburgh 5; 4. Berwick 1; 5. Dumfries 1; 6. no provenance, N.M.A. DC 13; 7. Caithness 2; 8. no provenance, Smith Inst. AJ9. (⅓)

Smith's Somerset hoards.[1] Other forms occurred in the Greyfriars, Dumfries, hoard with a looped and an Early Bronze Age spearhead (fig. 18, 1–6), and one at Gospertie (Fife) seems to have been associated with Late Bronze Age material. Two small hoards from Farr, Sutherland, also contained palstaves. The Kirtomy hoard had a narrow-bladed palstave, a palstave with splayed blade, and a Haddington axe (fig. 17, 10-12), while the Craig-a-Bhodaich hoard had two narrow-bladed palstaves (fig. 18, 7-8).

The chronology of the flanged axe and palstave industries in Scotland is dependent upon typological development and upon external material, in particular, the

[1] *P.P.S.*, XXV (1959), 144.

appearance of similar axes in archaeologically datable contexts on the continent. In this, the work by Sprockhoff and Butler is predominant.[1]

We have suggested on typological grounds that the Caverton and Belhelvie groups should belong to a time not far removed from Wessex II in southern England, i.e. from 1400 B.C., and that the Auchendrane axes may well be of an earlier time, stemming as they do from flat and hammer-flanged axes. The Caverton and Belhelvie axes are considered to stand behind the development of the Corstorphine and the Haddington groups. The plain Corstorphine axes are of Butler's Class IA4, the shield-decorated are Class IA1C. The plain Haddington axes are Butler's Class IA4, shield-decorated IA1C, bar-decorated IB1b, shield and trident-decorated IA1f. Two of these stylistic forms, IA4 and IA1C, are included in the Ilsmoor phase of axe trade to the continent, to an area stretching from southern Holland to east of the Oder, and as far south as Alsace. Although some of the axes found in this area were locally cast by itinerant smiths, others were quite certainly imported from the west, from Britain and north-western France. Their associations in northern Europe are predominantly material of Montelius IIa, according to Sprockhoff, which is equivalent in time to Tumulus B2, Hachmann's Horizon 4. In absolute terms this should mean the fourteenth century B.C. It may be noted that 'stopridge axes' were also associated with this complex in northern Europe. The Caverton and Belhelvie groups would be included in this term.

The Auchterhouse group of our Class III also contains axes of Butler's IA1C and IA4 types. The other decorative patterns include the trident (IA1f and/or IA2), and this may be taken to fall also within the Ilsmoor phase of axe trade in the fourteenth century, although the straight-sided trident (IA2) is a part of a later trade complex. On typological grounds the Kirriemuir group is ancestral to Auchterhouse, and in fact would be included as 'stopridge axes', broadly contemporary with the Caverton and Belhelvie groups. This would place the typologically earlier Class III axes, the Premnay group, as a local version of flanged axe stemming from Early Bronze Age hammer-flanged axes and the Auchendrane group. On the basis of form, the Kirkless axes are developments from the angled-flange Kirriemuir group but contemporary with the Auchterhouse group with shared decorative motifs. Very few of the Class III groups fall within the phases of continental trade, and must have been local north-British and Irish forms outside the realm of trade at this time. The logical development of Class III axes is the Balcarry group, at which point independent dating evidence is provided through associations of the twelfth and eleventh centuries. That such flanged axes were contemporary with developed palstaves is demonstrated by the continental dating evidence for the latter, and by internal associations. The broad-bladed and narrow-bladed palstaves in Scotland both bear single-bar and trident decoration. Stylistically these fall within Butler's broad-bladed IA2 and narrow-bladed IIA2 (trident), and a rather uncertain IB1b and IIB (bar) classes. Narrow-bladed palstaves are of a later trade phase in continental terms, as is the true trident decoration on both broad- and narrow-bladed axes. This phase is Butler's Ostenfeld, Brohom II of Denmark, and Kersten's IIA

[1] *Ber. Röm.-Germ. Komm.*, XXXI (1941); *Palaeohistoria*, IX (1963).

and IIB in northern Germany. The accepted date is the thirteenth century, and this marks the last episode of palstave trade to northern Europe. There follows, in Britain, the development of palstaves of, for example, Smith's 'low-flanged' type and 'south-western' type, of the twelfth and eleventh centuries, the 'transitional' types and finally the 'late' type of the full Late Bronze Age.[1] The tendency through this development is towards a narrower and straighter blade. Without recourse to the bulk of Irish and English palstaves, it is difficult to place the Scottish palstaves noted above in any certain order, other than individual specimens. The Caldonshill palstaves are probably of the centuries around 1100 B.C. because of their similarities to axes in the Somerset hoards. The concave-sided palstaves, with comparable trident and bar decoration, may be considered as north British-Irish contemporaries. The narrow-bladed palstaves, with similar decoration, are comparable to forms in late second-millennium contexts, such as Grunty Fen (Cambs.), but the span of both the flanged axes and the palstaves of the Scottish Middle Bronze Age must be extended to allow for the adoption of the socketed axe on a large scale in Scotland only from *c.* 850 B.C. A considerable prolongation of the popularity of certain flanged axes and palstaves is indicated.

Spearheads

In this paper are included all the spearheads with loops on their sockets or at the base of their blades, except those few which can now be shown to belong to the Early Bronze Age. It should be noted that this new grouping of looped spearheads replaces that provided in a previous paper on Late Bronze Age metalwork.

The recent collection of material of Early Bronze Age character and association in Britain has emphasised the great range of spearhead forms present at this early date, the mid-first millennium B.C.[2] These spearheads include not only the tanged form, which duplicated in its blade the late Wessex ogival dagger, but also socketed varieties based upon the same dagger, and known from the Arreton Down hoard. Another form of socketed spearhead had loops set upon the socket near its mouth, and the blade again showed its relationship to the daggers of this time. A number of these spearheads, which can be grouped for the present as the 'Ebnal type' after its sole association, are known from Scotland but are not included in this paper. Two are illustrated, however, to show how closely the type lies behind the development of the looped spearheads of the Middle Bronze Age (fig. 1, 3–4). Most of these Early Bronze Age spearheads have a triangular blade and can therefore be compared with the kite-bladed looped spearheads of the Middle Bronze Age. The other small spearhead of this time had a leaf-shaped blade, and this has been considered to demonstrate a hybridisation of the looped spearheads of the Early and Middle Bronze Age with the leaf-bladed unlooped form that was present on the continent in suitably early contexts, and was introduced into Britain. The only example of this form known to have existed in the British Early Bronze Age is from the Arreton Down hoard, but in view of the attested connections between Britain and the continent in the Early Bronze Age, it seems likely that the leaf-bladed form was present

[1] *P.P.S.*, xxv (1959), 164–78.

[2] *P.P.S.*, xxix (1963), 286–9.

in sufficient quantities to contribute to the development of the looped and leaf-bladed form. That the kite-bladed type need not have any great chronological difference from the leaf-bladed form, is however, indicated by the presence of leaf-bladed spearheads (fig. 1, 4) otherwise of Early Bronze Age 'Ebnal type' (fig. 1, 3) and it may be that this early form played a major rôle in the development of the Middle Bronze Age leaf-bladed type.

For convenience, the spearheads of the Scottish Middle Bronze Age have been combined into four main groups, each of which has been given a designating letter. This is purely an internal arrangement, and can easily be converted into any scheme eventually devised for the British and Irish material. Within these four groups, there can be recognised specific types which may have some regional significance. The classes of Middle Bronze Age spearheads are called C, D, E and F, with preceding and succeeding letters to be applied to Early and Late Bronze Age spearheads.

Class C spearheads are the 'socket-looped' type of Hodges and Smith, Class III of Greenwell and Brewis.[1] The former term seems misleading, as it could be applied to spearheads of class D as well, and the latter numerical system is liable to confusion with its sub-numbers IIIA, IVB etc. Class C spearheads are distinguished by their kite-shaped blade, generally decorated with ribs which converge towards the socket (fig. 9, 5, 7–8, 11-12). The loops on the socket below the blade are flattened, and lie about midway between socket-mouth and blade-base. The basal angles of the blade are often blunted. Class C spearheads range in length from 3½ in. to 9 in. On the Scottish evidence, and the published material from Ireland and England, a number of varieties can be distinguished by the presence or absence of ribs on the blade and socket. The four potential combinations are illustrated in fig. 9, the most common being those with ribs on both blade and socket (5 and 12), a few with blade rib only (7), or socket rib only (11), and several without ribs (8).

The distribution of Class C spearheads is too sparse in Scotland to allow any significant conclusion (fig. 11), but when combined with the mass of Irish examples[2] (perhaps 400 in all) and the rarity of the type in southern England, it seems clear that this is yet another metal form of Irish production and trade. The only moulds for the casting of Class C spearheads are of Irish provenance.[3] Associated finds with these spearheads are not common, and in two hoards the type was found with Late Bronze Age objects, at Ballinlis (Co. Armagh) with a socketed axe,[4] at Corsbie Moss (Berwickshire) with a sword. That such spearheads were being manufactured early in the Middle Bronze Age, from the fourteenth century, is suggested only by their typological similarities to Early Bronze Age grooved daggers and spearheads.

Class D spearheads are the 'side-looped' type of Smith, and Class IV of Greenwell and Brewis.[5] They are characterised by leaf-shaped blades curving from tip to base, and by loops on the socket midway between socket-mouth and blade-base (fig. 9, 1–4, 6, 10). These loops are generally flattened; but some 'string-type' loops also occur. The spearheads range from under 3 in. to about 8 in. in length, but a small

[1] *P.P.S.*, XXV (1959), 180.
[2] *P.R.I.A.*, XLVI C (1941), 291.
[3] *Sibrium*, VI (1961), 223.
[4] *P.P.S.*, XXX (1964), 332.
[5] *P.P.S.*, XXV (1959), 180.

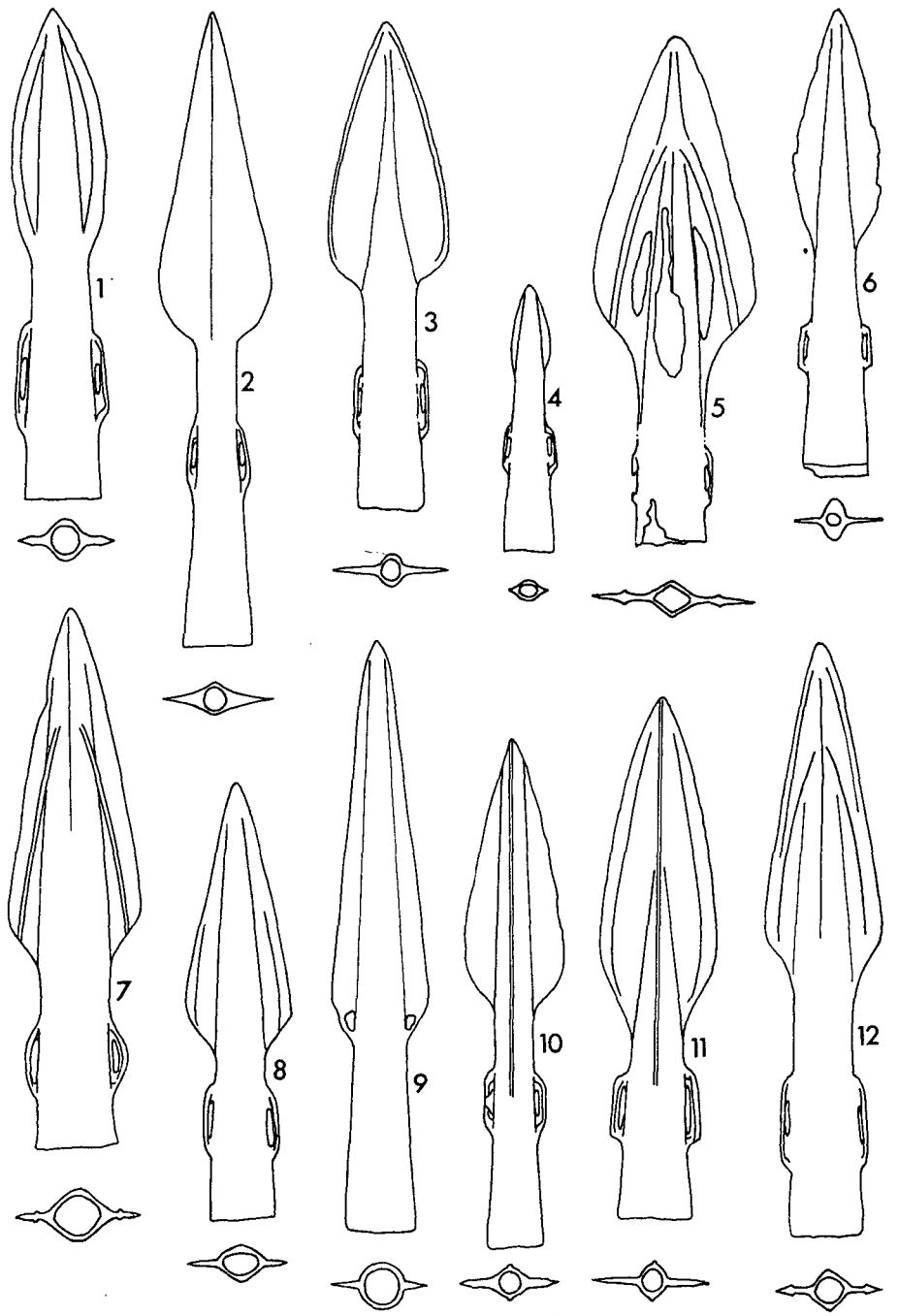

FIG. 9. Spearheads. Class C: 5. Ettrick Forest, Selkirk; 7. near Doune, Perth; 8. no provenance, N.M.A. DC 8; 11. Nethermuir, Aberdeen; 12. Ellon Moss, Aberdeen. Class D: 1. Inverness; 2. Castlecraig, Peebles; 3. no provenance, N.M.A. DG 9; 4. Glentanner, Aberdeen; 6. Comlongan, Dumfries; 10. Cruden, Aberdeen. Class E: 9. Swinton, Berwick. (½)

sub-class is much longer. The blade of Class D spearheads may take the form of an evenly-curved arc, or may be ogival in outline, with a maximum width near the blade base. The sockets are either circular or angled, and only a few of these spearheads have a rib along the socket, presumably a borrowing from Class C spearheads. Another sub-class consists of large leaf-bladed spearheads with asymmetrical loops, either one loop only on the socket, or two loops not opposed (fig. 10, 4). These spearheads may not, in fact, be correctly placed in Class D, but until more knowledge about their typological position is obtained, it seems reasonable to include them as a variety of Class D.

The distribution of Class D spearheads is quite widespread in Scotland (fig. 11). Smith has pointed out that in southern Britain this form was common, and that Class C spearheads were rare. Scotland clearly is a part of this aspect of the British Middle Bronze Age, and was not partaking of the Irish alternative, the Class C spearhead. A number of moulds for Class D spearheads are known in the north, two from Aberdeenshire and one from Argyll. The latter has matrices for a small oval tanged blade, and one of the Aberdeenshire moulds was also used for producing a leaf-shaped spearhead without loops. Such a spearhead would normally be considered as of the Late Bronze Age. The class D spearhead from Brackla Farm, Abriachan (Inverness) had provision for rivets to hold the spearshaft, possibly another indication of the Late Bronze Age. Earlier indications are provided by the association of Class D spearheads in southern hoards such as Taunton Workhouse and Burgesses' Meadow, and on Deverel-Rimbury sites.[1] The date of this material is considered to lie in the twelfth or eleventh centuries B.C.

In Scotland, the Inshoch Wood (Nairnshire) hoard contained a damaged Class D spearhead with a socketed hammer and an anvil (fig. 18, 11–13). The hammer may be compared with one in the Bishopsland (Co. Kildare) hoard, another at Burgesses' Meadow (Oxford), and north German and French socketed hammers of the later second millennium B.C. The anvil is again matched in the Bishopsland hoard, and Eogan notes that north-western France has yielded a number of anvils in hoards of the same period, from the thirteenth century B.C.[2] The only other association for a Class D spearhead in Scotland is in the Greyfriars (Dumfries) hoard where the axes tend to suggest a date in the late second millennium B.C. (fig. 18, 1–6).

Class E consists of basal-looped spearheads, Class IIIA of Greenwell and Brewis. Two main forms have been identified, those with leaf-shaped blades (fig. 10, 1, 3) and those with triangular-shaped blades (fig. 10, 2). Both types of spearhead are generally long, up to 20 in., but a few are as small as 4 in. The average length of the Scottish spearheads is about 12 to 15 in. The leaf-bladed spearheads may be ogival in outline, or evenly curved, but the two forms merge into one another. Most of the Scottish specimens have internally bevelled blades, but some of the smaller ones are plain. Spearheads with distinctly triangular blades are limited in Scotland to one example, that from Pyotdykes (Angus), but there are one or two other spearheads that seem to show a progression or combination of both a curved base and a sub-triangular outline. In these, the line of the blade base still runs more or less at

[1] *P.P.S.*, xxv (1959), 180.

[2] *P.P.S.*, xxx (1964), 276.

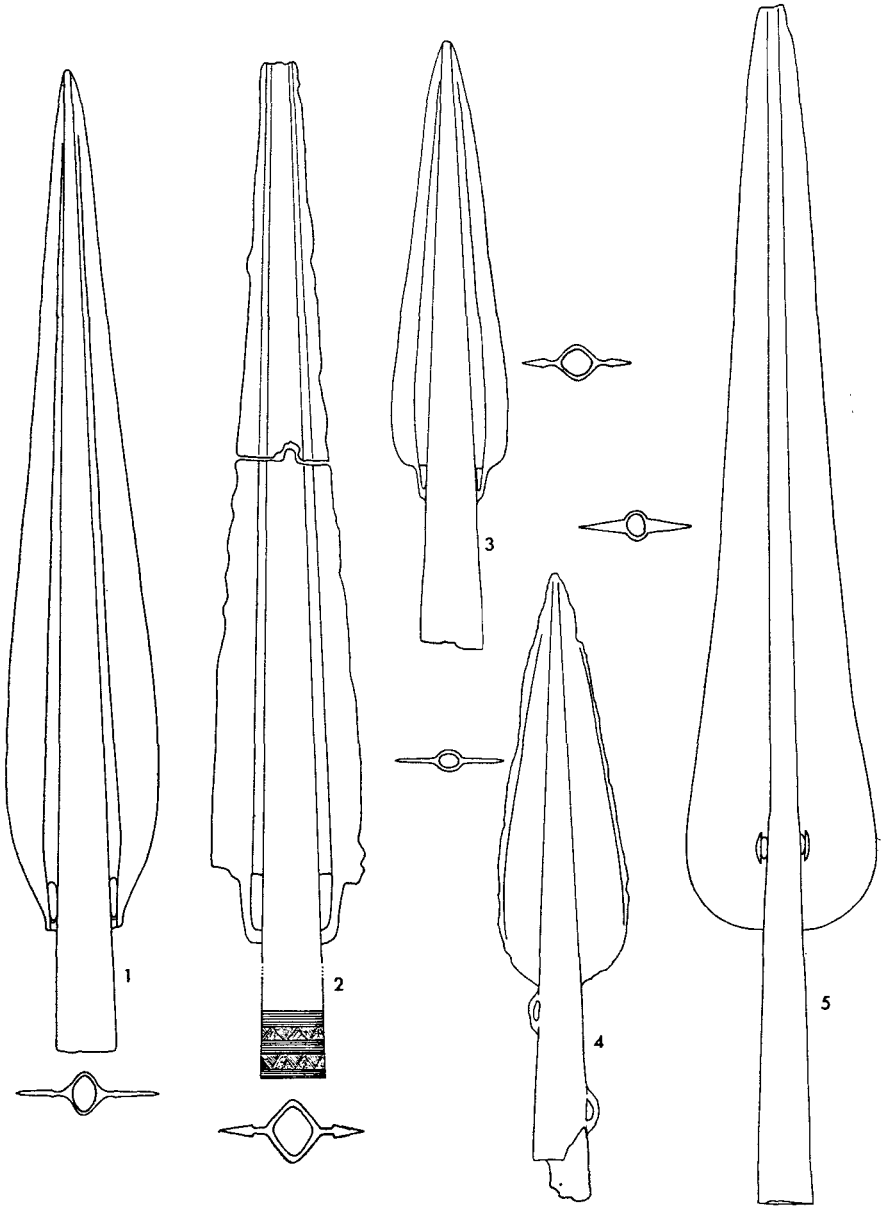

FIG. 10. Spearheads. Class D: 4. near Callander, Perth. Class E: 1. Belhaven, East Lothian (N.M.A. DG 4); 2. Pyotdykes, Angus; 3. Merton Hall, Wigtown. Class F: 5. Hill of Roseisle, Moray. ($\frac{1}{3}$)

right angles into the socket, but the angle of blade-edge and blade-base is not acute but rounded. With the loss of the important right-angled junction of blade and socket, the type merges with the leaf-bladed form of Class E spearhead, some of which possess a distinct break in outline between blade and loop, while others have incorporated the loop into the blade curve.

Two other varieties should be noted here. One is marked by the presence of a beading or rib on the socket, running from the tip to the loops, and accompanied often by other decoration (fig. 16). Both Scottish spearheads with this beading also have socket-mouth decoration, and the New Downie (Angus) spearhead has lines of dots running on the socket and at its junction with the blade. The other variety of Class E spearhead is small and its loops take the form more of a simple perforation of the blade base than of a flattened loop (fig. 9, 9). The Swinton (Berwickshire) spearhead has narrow loop 'flaps' unlike the wide oval or lozenge-shaped loops of the normal Class E spearheads.

According to Evans, the distribution of these spearheads is predominantly English, with notable concentrations in the Thames and East Anglia.[1] Ireland, too, has yielded a considerable quantity of basal-looped spearheads, but the Scottish distribution in the south-east and south-west points more to England than to the west in view of the general rarity of objects in the Border Counties (fig. 11).

There are only two associated finds in Scotland containing Class E spearheads, and these provide rather divergent dating. The Glentrool hoard (fig. 16) suggests a date *c.* 1100 B.C. on the basis of its torc and pin, and its general suggestion of a link with hoards in the south of England. The Glentrool spearhead is of the leaf-bladed variety, and comparable spearheads with internally bevelled blade come from Taunton Workhouse, Sherford (Somerset) and Stibbard (Norfolk) hoards of the later second millennium.[2] But there are a considerable number of leaf-bladed Class E spearheads on the Continent, presumably, although not certainly, traded from Britain, that indicate their production in the thirteenth century if not even a century earlier. The Liesbüttel and the Wiesloch spearheads provide this dating, the former of Broholm's Period II, the latter of Hallstatt A1.[3]

The other Scottish association for a Class E spearhead (fig. 10, 2) is in the Pyotdykes (Angus) hoard where it was found with two swords of the Late Bronze Age.[4] These swords provide a date hardly before the eighth century B.C. on current chronology and suggest that some basal-looped spearheads were in use well into the Late Bronze Age. A number of these, including Pyotdykes, have rivet holes as well as the loops, and this may indicate influence from the riveted spearheads of the Late Bronze Age. The Pyotdykes spear has a gold band around its socket-mouth decorated with a triangular motif. Gold bands are known from two other spearheads, one from Lough Gur (Co. Limerick), the other from near Harrogate (Yorkshire).[5] The decoration on the latter is almost identical to the Pyotdykes band, and a comparable design occurs on a bronze collar around a spearhead from Athenry (Co. Galway).[6]

[1] *Archaeologia*, LXXXIII (1933), 197.
[2] *Inv.Arch.* GB 43, 45 and 50 resp.
[3] *Palaeohistoria*, IX (1963), 104–5.
[4] *P.P.S.*, XXX (1964), 186.
[5] ibid.
[6] J. Evans, *Ancient Bronze Implements* (1881), fig. 393.

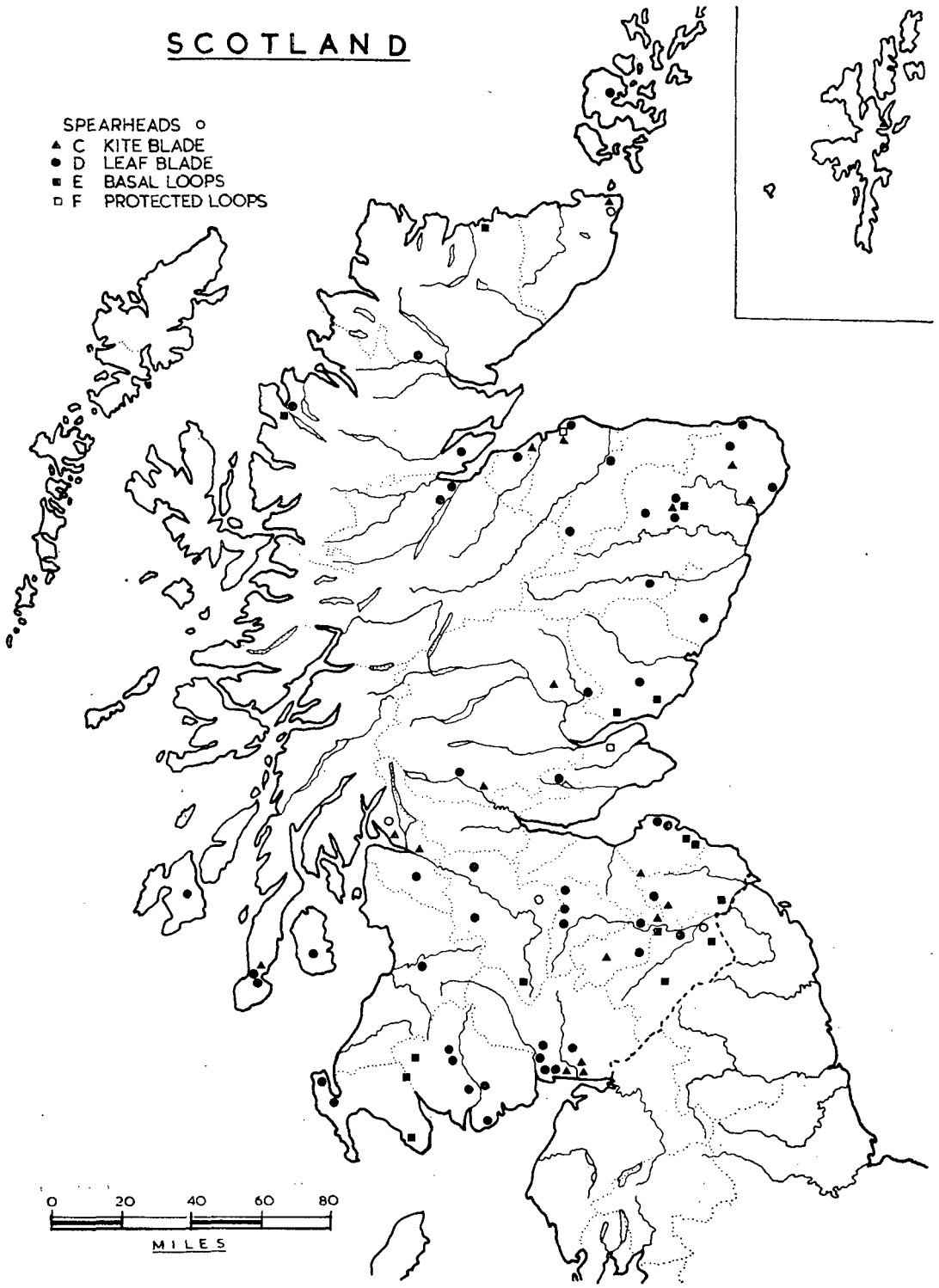

FIG. 11. Distribution of looped spearheads.

All of these spearheads are of Late Bronze Age type, with rivet holes and no loops. The Pyotdykes spearhead has a triangular blade and is comparable to a number of such spearheads from southern England. Most of these are of considerable length, and some have rivetholes. By association, these triangular-bladed spearheads seem to lie in the late-Middle and the Late Bronze Age. Pyotdykes has Late Bronze Age swords, and a spearhead from Harrogate is associated with a sword and the gold-band riveted spearhead. An earlier date is suggested by the Ambleside hoard where Salta Moss rapiers and a palstave indicate the twelfth or eleventh century B.C.[1] The influence of these triangular blades is seen on riveted spearheads of the earlier part of the Late Bronze Age, in which the blade, although leaf-shaped, joins the socket at a right angle. The gold-bound Lough Gur spearhead, and some plain ones in the Wilburton (Cambridge) and other Late Bronze Age 1 hoards of the south, have this diagnostic angled junction.

The evidence therefore suggests that the leaf-bladed Class E spearheads were the first to be produced in Britain and Ireland, and were followed by the triangular-bladed form which continued in use into the Late Bronze Age. The small perforated type of Class E spearhead may also have appeared or persisted well into the first millennium, as the associations at Nettleham (Lincoln) and Kish (Co. Wicklow) included Late Bronze Age objects.[2]

The origin of basal-looped spearheads is generally considered to be the result of a hybridisation of the spearheads with loops on the socket, and the continental-inspired leaf-bladed unlooped spearhead, but this does not account for the great divergency in length between the Class C and D spearheads on one hand, and Class E on the other. Although it seems that the earliest Class E spearheads, on the basis of dated continental examples, are rather smaller than average,we are still hampered by the absence of early Middle Bronze Age hoards in Britain and Ireland. Certainly those Class E spearheads with Late Bronze Age connections are extremely large, and sometimes of non-functional appearance according to weight, balance and narrowness of socket, and it may be that the increase in length was a late feature, allied to a presumed but undemonstrated increase in the length of rapiers, resulting in the production of prestige objects such as the Pyotdykes spearhead and the Dalbeattie (Kirkcudbright) rapier.

Class F spearheads are rare in Scotland and have no associations here. They are Greenwell and Brewis' Class IVB, and are known as protected-loop spearheads (fig. 10, 5). Like Class E, these spearheads are long, sometimes exceeding 24 in., and by their extremely narrow sockets it seems unlikely that such spearheads could ever have served as weapons. Some experiments suggest that the only way to manoeuvre these weapons is by holding them upright. Possibly the long examples of Class F spearheads served the same parade purposes as did certain other Middle Bronze Age weapons.

The 'loops' in these spearheads are small and are set about 1 in. from the blade-

[1] *T. Cumb. & West. Ant. & Arch. Soc.*, LXV (1965), 38.

[2] T. D. Kendrick and C. F. C. Hawkes, *Archaeology in England and Wales, 1914–1931* (1932), fig. 55; *J.R.S.A.I.*, LXX (1940), 94.

base. The blade itself is almost always ogival, with its maximum width near the blade-base. Covering these perforations in the blade are straight or arced flaps, deliberately cast and presumably a relic of the flattened loops on Class E spearheads, from which Class F is generally considered to have developed.[1] It is unlikely that a derivation from Late Bronze Age lunate spearheads is seriously to be entertained.[2]

The distribution of Class F spearheads, described by Evans in 1933, does not indicate any specific concentrations. The dating for the type is dependent upon its presumed typological development from Class E spearheads, and, judged by the ogival-bladed basal-looped form, this should indicate a date near the end of the second millennium B.C. The only associations for Class F spearheads are in northern England, where three hoards contain these as well as Middle and Late Bronze Age objects. The Wallington hoard has riveted spearheads and socketed axes as well as palstaves and a rapier.[3] The date suggested for Class F spearheads must therefore be from *c.* 1000 to 800 B.C., as there is no reason to consider all three associated finds as scrap hoards.

Dirks and Rapiers

The stabbing weapons of the Scottish Middle Bronze Age have recently been collected and studied by Trump in two papers,[4] but no excuse is offered here for a re-examination of the material. Trump described 26 rapiers and related weapons from Scotland, and showed how these could be fitted into her scheme of development for Britain and Ireland. She devised three main groups, the first containing those weapons considered to be closest to the proposed continental ancestral forms, the other two containing the main developments of regional styles in Britain and Ireland. Each of these last two groups had five classes of dirk and rapier.

The number of Middle Bronze Age weapons of the dagger, dirk and rapier types collected in this paper, and listed in the corpus, is 45, of which only 6 cannot now be found. There are also a number of unprovenanced finds. This total, while still nowhere approaching the quantities from England and Ireland, does however allow some further considerations to be made about distributions and types.

Two suggestions have been made about the origin of the Middle Bronze Age dirk and rapier. The first of these involves a purely indigenous development of Early Bronze Age daggers into longer and stronger weapons. Trump considers that the differences between these weapons are too great to allow a simple derivation, and supports the theory that connections across the North Sea were responsible for the British-Irish dirk and rapier appearance. Butler has recently advanced the continental view independently, although he points out that it is only in the hilt form, and not in the midrib and rivets, that the British-Irish rapiers match the Tumulus Bronze Age examples of central Europe.[5] It is not the purpose of this section to try to demonstrate the origins and developments of west European rapiers, but even from the limited Scottish evidence, a reasonable case can be made for some contri-

[1] *Archaeologia*, LXXXIII (1933), 187.
[2] *U.J.A.*, XIX (1956), 35.
[3] *Archaeologia*, LXXIII (1900), Pl. XXXVII, fig. 13.
[4] *P.S.A.S.*, XCIII (1959–60), *P.P.S.*, XXVIII (1962), 80.
[5] *Palaeohistoria*, IX (1963), 114.

bution from Early Bronze Age daggers. It is unlikely that the metal-workers of southern Britain would have completely abandoned their stylistic preferences and traits. The early Bronze Age daggers found in Scotland are of varying types, and many do not indicate any real resemblance to the succeeding weapons at all. But it is not correct to describe all Early Bronze Age daggers as having three or more rivets, and ornamental hilts.[1] There are a number from Scotland that do, in fact, indicate a fairly close relationship with certain dirks of the succeeding period, and other examples from southern Britain and Ireland might be taken to show even earlier connections. The daggers in question are large, often have grooved or ribbed blades, and have two rivets.[2] In all these respects they can be considered to contribute something to the subsequent emergence of the dirk and rapier groups. Certain of the late Early Bronze Age daggers in particular are without doubt related to the dirks of Trump's Group I. That the widened hilt of certain continental rapiers may have also played a part in the development of the British-Irish series is not denied, and the Tumulus-derived Wohlde dirks may be important for this,[3] but it seems worth pointing out that part of Trump's argument about continental contributions to the British Middle Bronze Age industries is no longer valid.[4]

Typologically the earliest Scottish Middle Bronze Age weapons are those from Pitcaithly (Perthshire), Kilrie (Fife) and Gretna (Dumfriesshire) (fig. 12, 6). The Pitcaithly dirk has been compared with Irish weapons, but also shows a very close relationship with a dagger in the Ebnal (Shropshire) hoard.[5] Its date should therefore lie not far from 1400 B.C. The Kilrie weapon (fig. 12, 7) is short and broad, but its rounded hilt and grooved blade may be compared with the Pitcaithly dagger. Other short weapons, without such blade decoration, have either rounded or trapeze-shaped hilts, and could with reason be placed in a typological progression leading to the development of full trapeze-hilted dirks and rapiers.

Trump has grouped the developed dirks and rapiers of Britain and Ireland into two main assemblages, her Groups II and III. The detailed subclassification of these groups appears in her papers. The Scottish evidence for rapier production is relatively slight (fig. 13), and it does not seem desirable to reiterate the groups and classes devised by Trump. We have only one associated find in Scotland that contains anything other than a rapier, Glentrool, and this suggests a date in the twelfth or eleventh century B.C. Associated finds with rapiers are, in fact, quite rare in Britain and Ireland, and only one of Trump's rapier classes, Lisburn, has been found in more than one reputable hoard.

The Scottish weapons exhibit considerable variation in the treatment of their hilts and their blades, and these, along with the range of lengths, presumably indicate some differential functions as well as styles (fig. 12). The hilts may be rounded, trapezoidal or cruciform, and their attaching rivets seem to have been set through holes or merely notches in the edge of the hilt. It is sometimes difficult to decide whether a weapon had notches or rivet holes, if the hilt has been damaged. The

[1] *P.P.S.*, XXVIII (1962), 80.
[2] *P.P.S.*, XXIX (1963), 287, fig. 17.
[3] *Ber. Röm.-Germ. Komm.*, XL (1959), 32; *Palaeohistoria*, IX (1963), 214.
[4] *Palaeohistoria*, VIII (1960), 120.
[5] *P.P.S.*, XXIX (1963), 287, fig. 17.

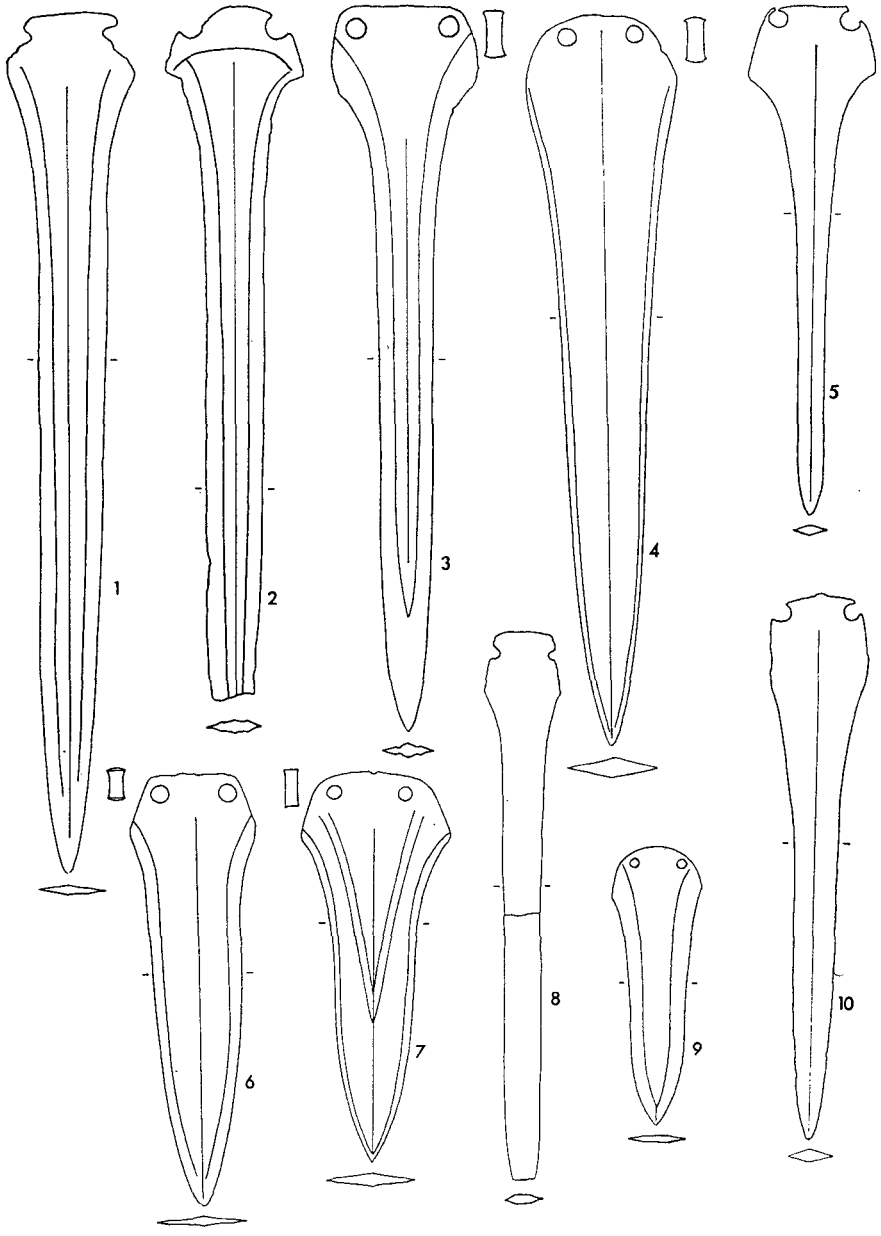

FIG. 12. Daggers, Dirks and Rapiers. 1. River Cree, Kirkcudbright; 2, near Callander, Perth; 3. Lower Nunton Kirkcudbright; 4. Bog Park, Kelso, Berwick; 5. Kells, Kirkcudbright; 6. Gretna, Dumfries; 7. Kilrie, Fife; 8. Maqueston, Dumfries; 9. Seggie, Kinross; 10. Turnercleugh Law, Selkirk. ($\frac{1}{3}$)

blades may be pointed-oval in section, or lozenge-shaped, or multi-ribbed. One of the reasons why Trump's scheme has not been adopted is that certain of her published rapiers do not seem to indicate any resemblance to each other, although they are of the same class. The short weapon from Auchtermuchty, Fife, and the rapiers from Drumcoltran, Kirkcudbrightshire (fig. 19), are completely different yet all are of Trump's group II, Thetford class. The Drumcoltran rapiers too seem to be of two distinct types but are classed together.

In the present review, it has seemed evident that such detailed subdivision is not possible, because of the limited quantity of the material, but it is conceivable that a classification could be developed from both hilts and blade sections. Where certain weapons indicate it, a smaller grouping of identical rapiers may be possible. The Drumcoltran rapiers, for instance, are of two distinct forms, one with trapezoidal hilts and moulded blades, the other with rounded cruciform hilt and lozenge blade-section (fig. 19). But the Glentrool rapier has a moulded blade and a cruciform hilt (fig. 16). It has therefore not been considered advisable to distinguish minor and possibly undiagnostic classes in the corpus or on the map.

The time-range of dirks and rapiers must run from *c.* 1400 B.C. and well into the first millennium B.C. The earliest weapons are likely to be those that exhibit features of Early Bronze Age daggers. A mid-point in the time range is provided by the Glentrool rapier, associated with twelfth- or eleventh-century objects. The lower limit is probably marked by the acceptance and availability of the slashing sword of the eighth century in most of Scotland.

Socketed Axes

Only two socketed axes of the Middle Bronze Age have been found. One of these comes from Annan (Dumfries) (fig. 14, 4), the other is from Kingoldrum (Angus) (fig. 14, 3). They are characterised by a square section with narrow blade, and by a flat collar at the socket mouth. The loop is generally rather thin as are the walls. Hodges in 1956 noted that most of the examples from these islands came from southern England, and could only cite one Scottish and one Irish axe.[1] Smith in 1959 outlined the similarities of these axes with a group in northern Germany, where they are on two occasions found in Period III associations, once in a Period IV hoard.[2] On current chronology, the dating of the axes should be from *c.* 1300 to 1000 B.C., or even later. It was suggested in 1960 that the Kingoldrum axe was a member of the south English group, typified by the Taunton Workhouse axe which is very slender and slightly tapered from socket-mouth towards the expanded blade, while the Annan axe was more closely related to the north German form, without this tapered effect.[3] More recently, Butler has brought all the evidence together and has pointed out that most of the English axes are from the south-east, and the continental axes from north-eastern Germany.[4] Only the Bishopsland axe is recognised as being of this early type in Ireland. The form represents the earliest socketed axe produced in Britain. A mould for one of these axes is reported from Gwithian in Cornwall.[5]

[1] *U.J.A.*, XIX (1956), 33. [2] *P.P.S.*, XXV (1959), 150. [3] *P.S.A.S.*, XCIII (1959–60), 17.
[4] *Palaeohistoria*, IX (1963), 75. [5] *P. West Cornwall Field Club*, II, No. 5 (1961).

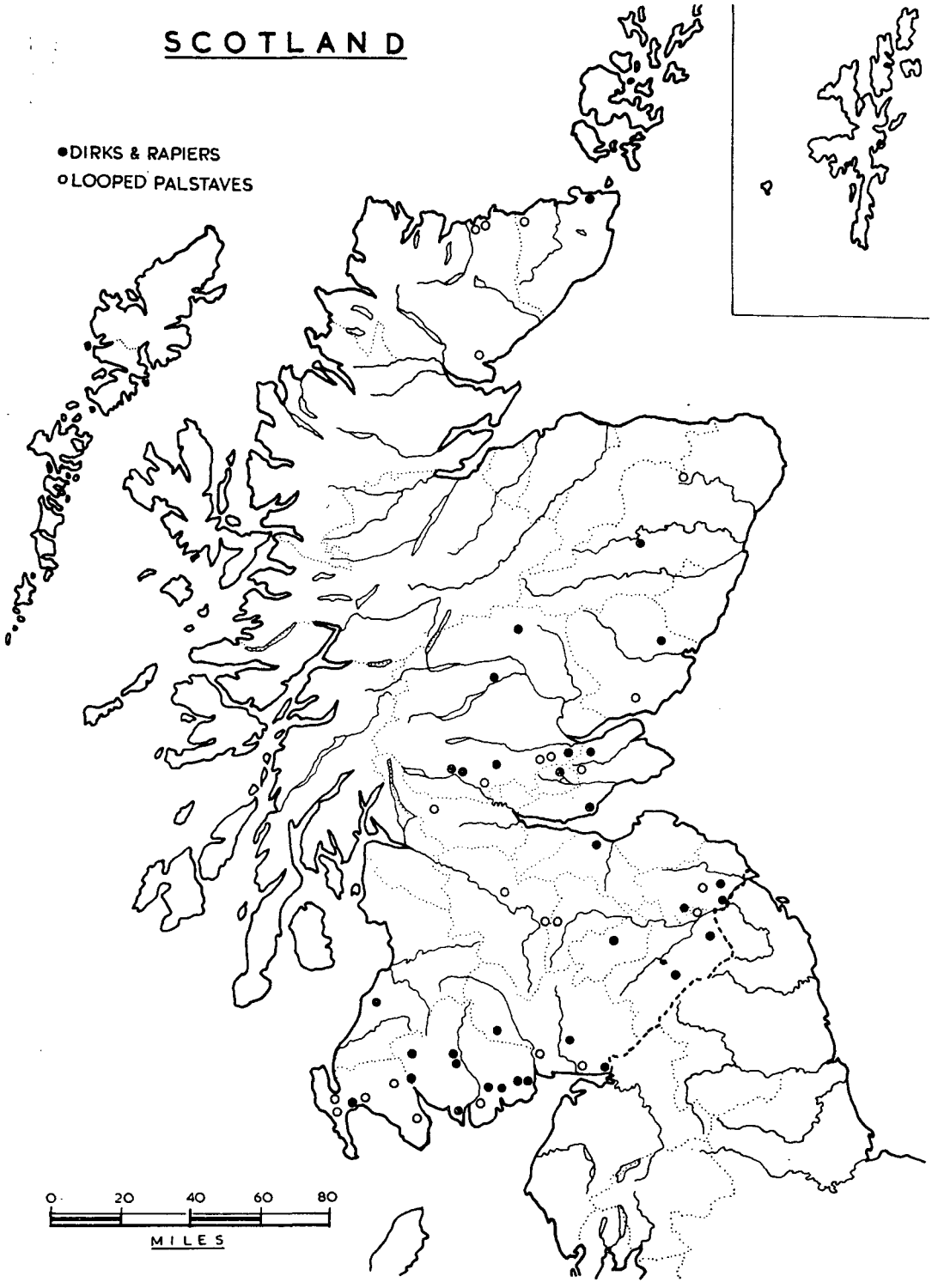

FIG. 13. Distribution of Dirks and Rapiers, and looped Palstaves.

Knives

There are two tanged knives known from Middle Bronze Age Scotland. One of these occurs in the Glentrool hoard (fig. 16), the other is a stray find from Mid-Calder (Midlothian). They are characterised by a flat broad tang with perforation

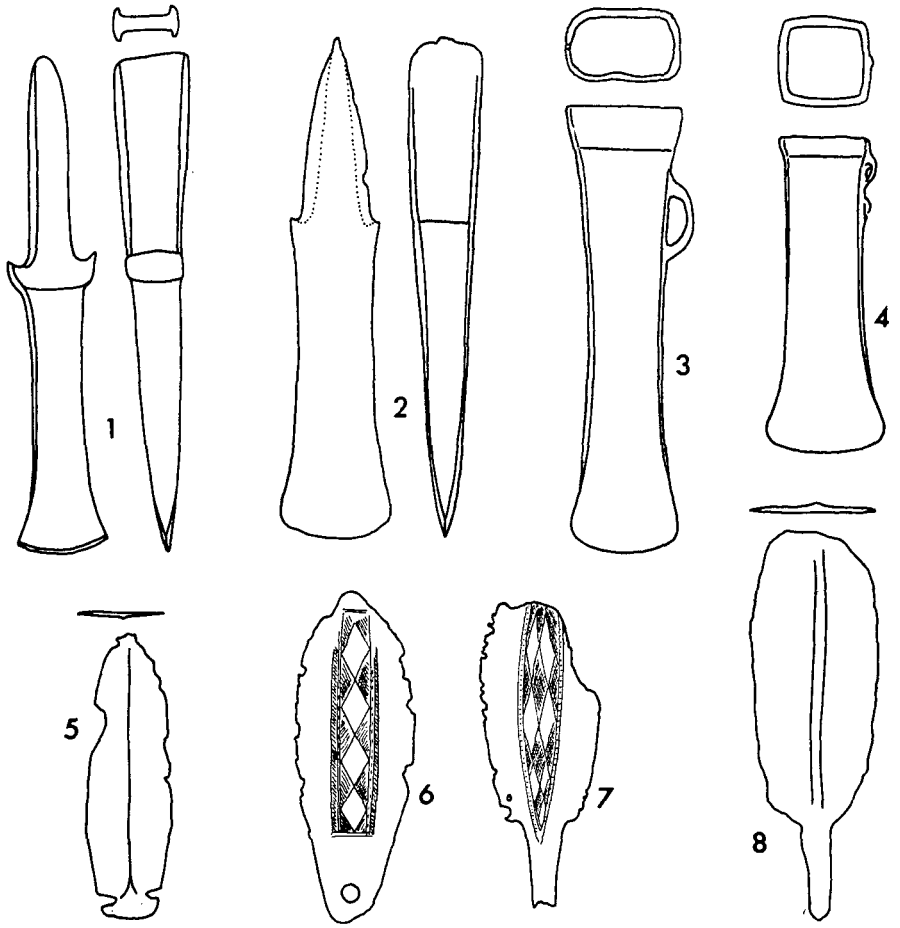

Fig. 14. Chisels, Socketed Axes and Razors. 1. Kirkconnel, Dumfries; 2. near Perth; 3. Kingoldrum, Angus; 4. Annan, Dumfries; 5. Gilchorn, Angus; 6. Shanwell, Kinross; 7. Balblair, Sutherland; 8. Laughton's Knowe, Orkney. (½)

near its base, and a widely-bevelled blade. The type is duplicated in the Monkswood (Somerset) hoard of the late second millennium.[1]

The one-edged knife from Crossraguel Abbey (Ayrshire) is probably better considered as a Late Bronze Age form.[2] Its continental analogues range from Hallstatt A2 to B3, from the eleventh to the eighth century B.C.

[1] *Inv. Arch.* GB 42.

[2] R. Munro, *Prehistoric Scotland* (1899), fig. 89.

Chisels

Although a number of different forms of chisels are described here, and listed in the catalogue, only one or two of the varieties can be certainly ascribed to the Middle Bronze Age. The simplest type is the flat chisel, a form perhaps derived from flat axes, but which occurs in Middle Bronze Age hoards at Bishopsland (Co. Kildare) and Sparkford (Somerset).[1] The two Scottish examples come from the south-west.

Another type of chisel is represented by the Balneil (Wigtownshire) find, where a cremation in a Cordoned Urn was associated with a faience bead, a bone crutch-headed pin and a heavy tanged and shouldered chisel.

The most common form of Middle Bronze Age chisel was the flanged type, as represented by the Kirkconnel (Dumfries) example (fig. 14, 1). These chisels are large, averaging nearly 5 in. in length. They have low or high flanges enclosing a short septum, with a distinct stop in most cases, and a blade set in adze-fashion in the same alignment as the flanges. None come from associated finds in Scotland, although one is in the reputed hoard from Islay. This group, of socketed axes, halberd, spearhead and chisel, is probably a collector's hoard. The flanged chisel is not particularly common in Britain and Ireland, but examples comparable to the Scottish chisels are known.[2] Their date should lie within the range of flanged axes, in the Middle Bronze Age. The chisels of the Late Bronze Age, by association, are generally socketed.

Punches

The bar punches in the Glentrool hoard are the only attested examples of this type in a Middle Bronze Age context. They are made from a rectangular-sectioned bronze bar with one rounded end and one flattened end (fig. 16). The Bishopsland hoard has several bar punches or gravers.[3] They were probably used in the decoration of metal objects, such as the traced lines on the Glentrool spearhead. Presumably the rounded end was set into a wooden knob which would receive the hammer blow.

Hammerheads

Only one socketed hammerhead is known from Middle Bronze Age Scotland, occurring in the Inshoch Wood (Nairn) hoard along with an anvil and Class D spearhead (fig. 18, 11–13). Unlike most of the socketed hammerheads from Britain and Ireland, this example has no collar or grooving around the mouth. The tool first appears in Britain in the late second millennium, in hoards such as Taunton Workhouse (Somerset) and Burgesses' Meadow (Oxford), and in Ireland at Bishopsland (Co. Kildare),[4] but continues in similar form to be deposited in Late Bronze Age hoards. Comparable hammerheads are known in north German contexts of the later second millennium, and in similarly dated association in northern France.[5]

[1] *P.P.S.*, xxv (1959), 145.
[2] J. Evans, *Ancient Bronze Implements* (1881), 105.
[3] *P.P.S.*, xxx (1964), 275.
[4] *Inv.Arch.* GB 6; *P.P.S.*, xxx (1964), 275.
[5] *Travaux du Lab. d'Anth. et de Préh. de la Fac. des Sci. de Rennes* (1959).

The type may therefore have been introduced into Britain along with the other elements of the mainly Nordic-inspired trade in the twelfth or eleventh centuries B.C.

Anvils

Two Bronze Age anvils have been found in Scotland. One of these, from the Kyle of Oykel (Sutherland), is unassociated, but the other belongs to the Inshoch Wood (Nairn) hoard (fig. 18, 12). This anvil consists of a solid block of metal, slightly asymmetrical, from two narrow edges of which there extend projections, one circular and tapered to a round point, the other rectangular with concave and angled sides. Either of these projections could have served as supports for the positioning of the anvil. This is among the simplest forms of British and Irish anvils, and lacks any elaboration of the top that would allow the swaging of wire, such as the Sutherland anvil possesses. The Sutherland anvil consists of a flattened conical block from which there extends a supporting projection, and upon the top of which there are fine grooves for the shaping of bronze wire or for gold-working. Such grooves are present on certain other anvils of the Bronze Age, including one in the Frésne-la-Mère hoard.[1] The plain anvil from Inshoch Wood seems to be closer to the Bishopsland specimen which lacks grooves although it has a flattened top.[2] Anvils are apparently not common in northern Europe, but one from Vadsby, near Copenhagen, is of the Inshoch Wood type with two projections from a small block.[3] This is dated by Broholm to Period III. A number of comparable anvils are known from north-western France.[4]

The distribution of these anvils, and socketed hammerheads, is limited in Scotland to the north, to Nairn, Sutherland and Lewis (Late Bronze Age hammerhead). Although the numbers are small, the contrast with the relatively metal-rich south-west and east may mean that the north was not reached by traders, and the local craftsmen had to fashion their own beaten metalwork of bronze and gold. The Helmsdale gold-field at once springs to mind, although there is no evidence that this area was worked in prehistoric times.

Moulds

Three moulds for the production of looped spearheads are known from Scotland. The material of these moulds is varied, mica schist, sandstone, and serpentine. The spearheads to be produced from these moulds are all of Class D, but matrices on both the Aberdeenshire and Kintyre moulds also make provision for leaf-shaped blades. A similar blade, but with a tang, would have been produced from a sandstone mould found in the Culbin Sands, and from a steatite mould found in Strathnaver. Hodges has commented upon the use of different rocks for some of these moulds, particularly those of steatite. Only two moulds are known from Scotland for the manufacture of flanged axes, but both are incomplete, and it has not been found possible to relate these to specific axes. The moulds are of steatite and sandstone.

[1] J. Evans, *Ancient Bronze Implements* (1881), fig. 217-8.
[2] *P.P.S.*, xxx (1964), 275.
[3] H. Broholm, *Danske Oldsager IV* (1953), No. 425.
[4] J. Déchelette, *Manuel d'Archéologie* (1924), 275.

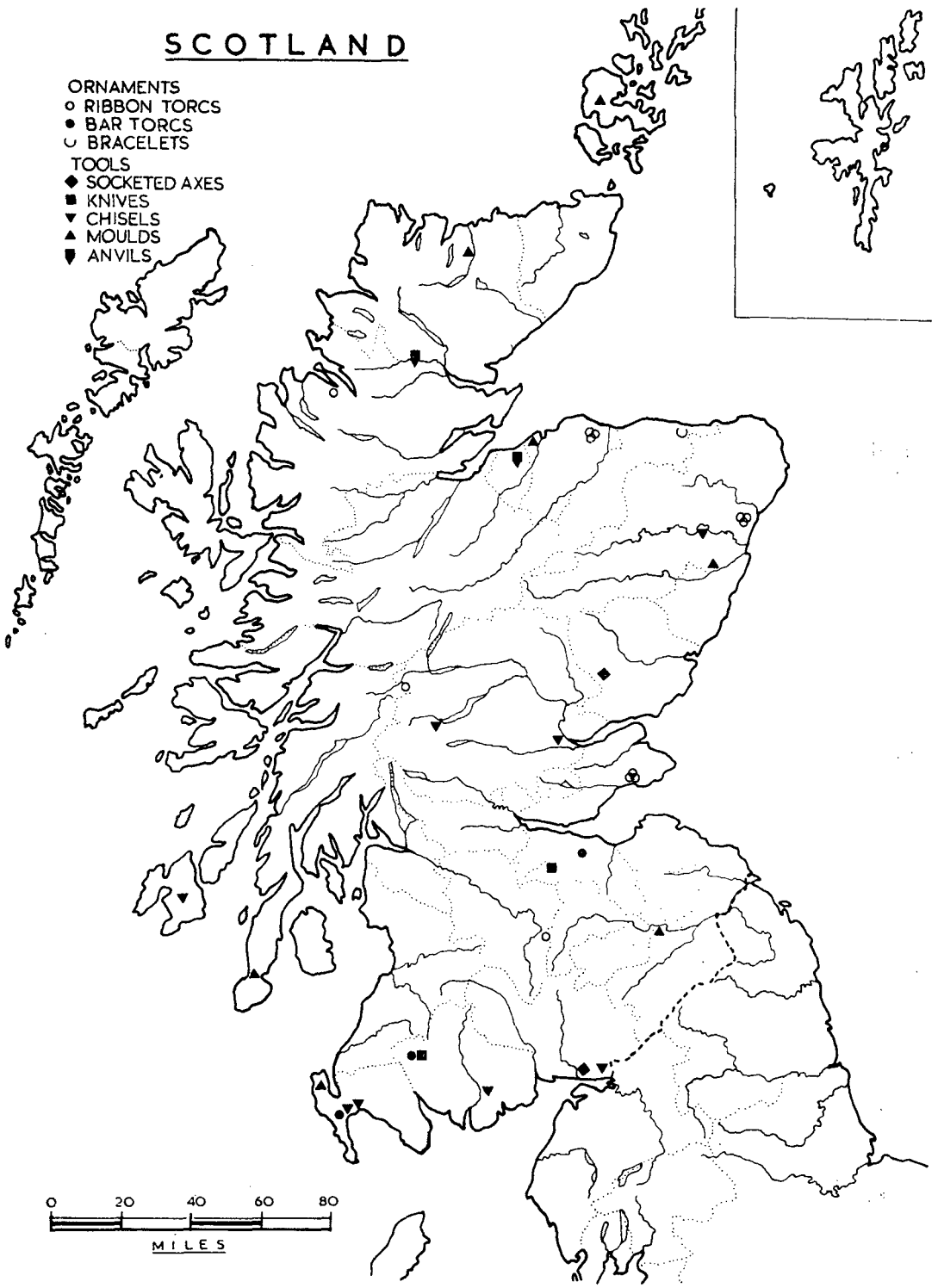

FIG. 15. Distribution of Ornaments and Tools.

The last mould to be noted here is in steatite, from Kirkcolm (Wigtown), and according to Childe was originally for the production of palstaves, later amended for anvils. There are no known Scottish moulds for dirks and rapiers, or Classes C, E and F spearheads; Ireland has yielded moulds for all of these save the last,[1] and this evidence fits well with the distributional evidence for the bronze objects. It is unfortunate that we know so little about the Scottish moulds for flanged axes, because these might serve to distinguish certain regional industries.

Razors and Blades

The razors of the Middle Bronze Age were first studied as a group by C. M. Piggott, when two separate classes were distinguished.[2] Class I razors have a leaf-shaped blade, often lacking any midrib, with a tang commonly perforated at its end. Class II razors are of the bifid type, with a notched and perforated blade, generally a strong midrib, and unperforated tang. Although both classes were dated to the Late Bronze Age, revision of our understanding of the content of the Middle Bronze Age has prompted the opinion that all Class I razors are of the earlier period, and that a number of Class II razors likewise are pre-Late Bronze Age in southern England. Those Scottish Class II razors with Late Bronze Age associations have been listed and described recently,[3] and the present discussion is limited to those blades of certain or probable Middle Bronze date.

The razors and blades of the Middle Bronze Age in Scotland are varied in their form, and in their associations. Class I flat razors may have long tangs, perforated or not, or have squat tangs with rivethole (fig. 14, 6–7). A number are decorated with lozenge or squared hatched patterns. The other basic form, Class II Middle Bronze razors, is wider and more rounded in the blade, which has a midrib or series of fluted surfaces. The blade joins the tang in an obtuse angle, unlike the barbed acute outline of the junction on Late Bronze Age razors. These make up the principal forms of second-millennium razors, but a few other blades, with comparable associations, can be included here. The Gilchorn (Angus) blade is one of these (fig. 14, 5). The leaf-shaped blade is sharply ridged on one surface, and the base is notched.

A sub-classification of these blades and razors is not attempted here, as basically this material should fall within the scope of the study of their associated material, the cremation urn. Almost all of the razors and blades listed in the catalogue were found with Collared or Cordoned Urns, and in many cases the remains of the metal-blade are so fragmentary as to make any specific identification impossible. This section of the catalogue is without doubt incomplete, but it may provide a guide for further collection.

Associated material suggests a time range from *c.* 1400 to 1000 B.C. for Class I razors and blades. There is no evidence for their continued popularity into the first millennium. Until the sequence of cremation urns in Scotland is dated accurately, no closer chronological position can be suggested. Class II razors do not appear until about 1200 B.C., although they persist well into the first millennium. The form

[1] *Sibrium*, VI (1961), 223.
[2] *P.P.S.*, XII (1946), 121.
[3] *P.S.A.S.*, XCIII (1959-60), 47, 88; *P.S.A.S.*, XCVI (1962–3), 25.

is a basic west European one, and is documented in Britain in a Deverel-Rimbury context at South Lodge Camp (Dorset), and in a typologically early form at Taunton (Somerset) and Glentrool (Kirkcudbright).[1] Several other Scottish razors are probably to be connected to these late second-millennium forms, including the Laughton's Knowe (Orkney) (fig. 14, 8) and Embo (Sutherland) examples. The Gilchorn notched blade is unique in Scotland, but has analogues in Ireland at Harristown (Co. Waterford) where associations included a faience quoit bead and a bone ring-headed pin,[2] and in south-west European contexts too. The date of the Gilchorn blade probably lies in the mid-second millennium.

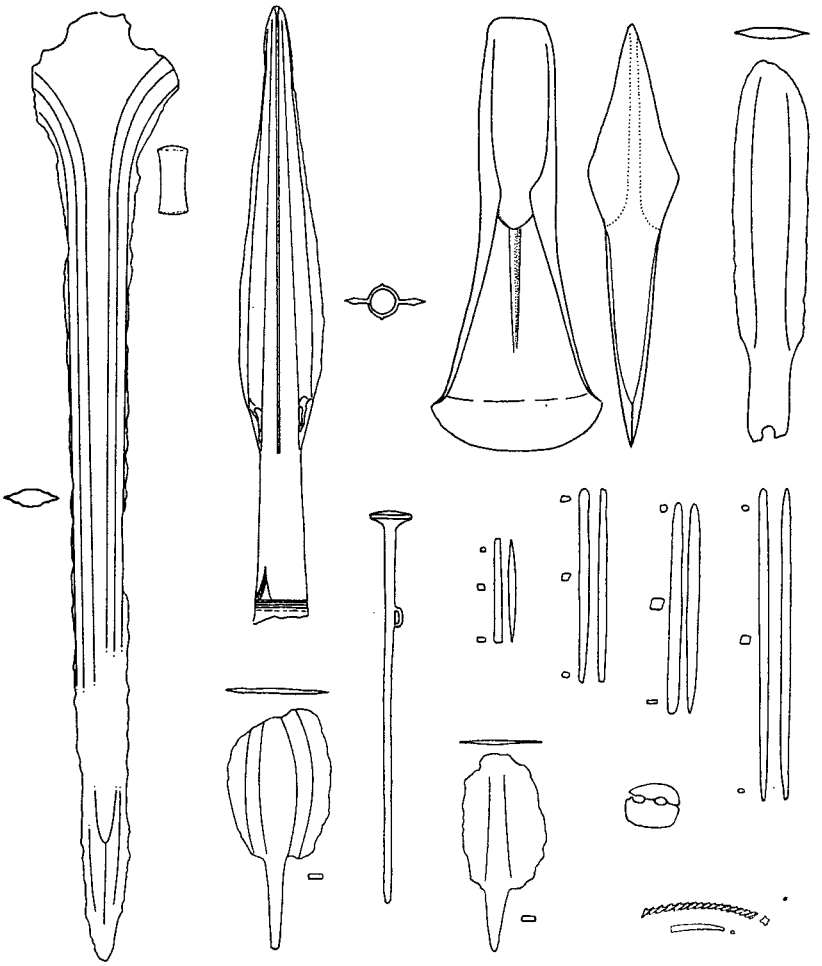

FIG. 16. The Glentrool hoard. (⅓)

[1] *P.P.S.*, XXV (1959), 158.
[2] *J.R.S.A.I.*, LXXI (1941), 139.

Ornaments

Pins. Only one Middle Bronze Age pin is known from Scotland. This is the nail-headed pin with stem loop in the Glentrool hoard (fig. 16). This type of pin has no decoration, and has the loop placed well down the shaft. The only other representatives of this pin are two from Ireland, and three from the middle Elbe area in Germany.[1] These were published by Janssen in 1935, and dated to Period II and III.[2] No looped pins of any sort are claimed for northern Europe after Period III. It is therefore reasonable to assume that the Glentrool pin, and the Irish examples, were a part of north European trade with Britain in the late second millennium B.C. The tradition of looped pins is clearly a central European one, and not of British-Irish origin. The decorated pins with loops of southern England belong to a different tradition, derived ultimately from central Europe, but appearing in the west at the same time as the Glentrool form.[3]

Rings and Bracelets. Among the many gold bracelets of the Scottish Bronze Age, only two may be assigned with any confidence to the second millennium. These two are a part of the Duff House (Banff) find. The bracelets are penannular, and consist merely of a round-sectioned bar with plain terminals (Pl. VI). They thus differ from the expanded terminal forms of the Late Bronze Age. The Duff House bracelets are probably of Irish manufacture, as a number of comparable armlets are known from that island,[4] including one in the Saintjohns hoard (Co. Kildare). Here the bracelet was associated with two twisted penannular armlets and two tress rings of gold.[5] The type also occurs in the Downpatrick hoards, at Cappeen (Co. Cork) and other finds. Eogan has recently described these and dated them all to his Bishopsland phase, from *c.* 1200 to 900 B.C., on the basis of their relationship with objects of north European inspiration that occur in certain south English hoards. All however are probably of Irish manufacture.

Associated with the Duff House bracelets were three penannular gold rings, one of circular section, the others formed by the joining together of three and six strands of gold (Pl. VI). These small rings are probably related to Irish finger-rings and to the bronze example from the Edington Burtle (Somerset) hoard.[6] The Duff House gold objects were found with part of a bronze blade, in a coarse pottery vessel, which contained some human remains. The vessel does not possess sufficient characteristics to enable any worthwhile comparisons to be made, but it might be considered as having some relationship to the Flat-Rimmed pottery of north Britain and Ireland. Some of this is of first-millennium date.

Bar torcs. The Glentrool hoard contains a square-sectioned bronze bar, twisted and curved to form a necklet. The object is now in 13 pieces, which combine to a length of about 17 in. One of the pieces is not twisted, and is more rounded and thinner in section (fig. 16). This is possibly part of a terminal. The original necklet

[1] *P.S.A.S.*, XCIII (1959–60), *P.P.S.*, XXX (1964), 282; *Palaeohistoria*, IX (1963), 148.
[2] *Praehist. Zeitschrift*, XXVI (1935), 208.
[3] *P.P.S.*, VIII (1942), 26.
[4] E. C. R. Armstrong, *Catalogue of Irish Gold Ornaments in the Collection of the Royal Irish Academy* (1933) (hereafter, Armstrong, *Catalogue*), Pl. xviii, 370, 376.
[5] *P.P.S.*, XXX (1964), 278.
[6] Armstrong, *Catalogue*, Pl. xiv, 235–6; *J.R.S.A.I.*, XCII (1962), 52; *Inv. Arch.* GB 44.

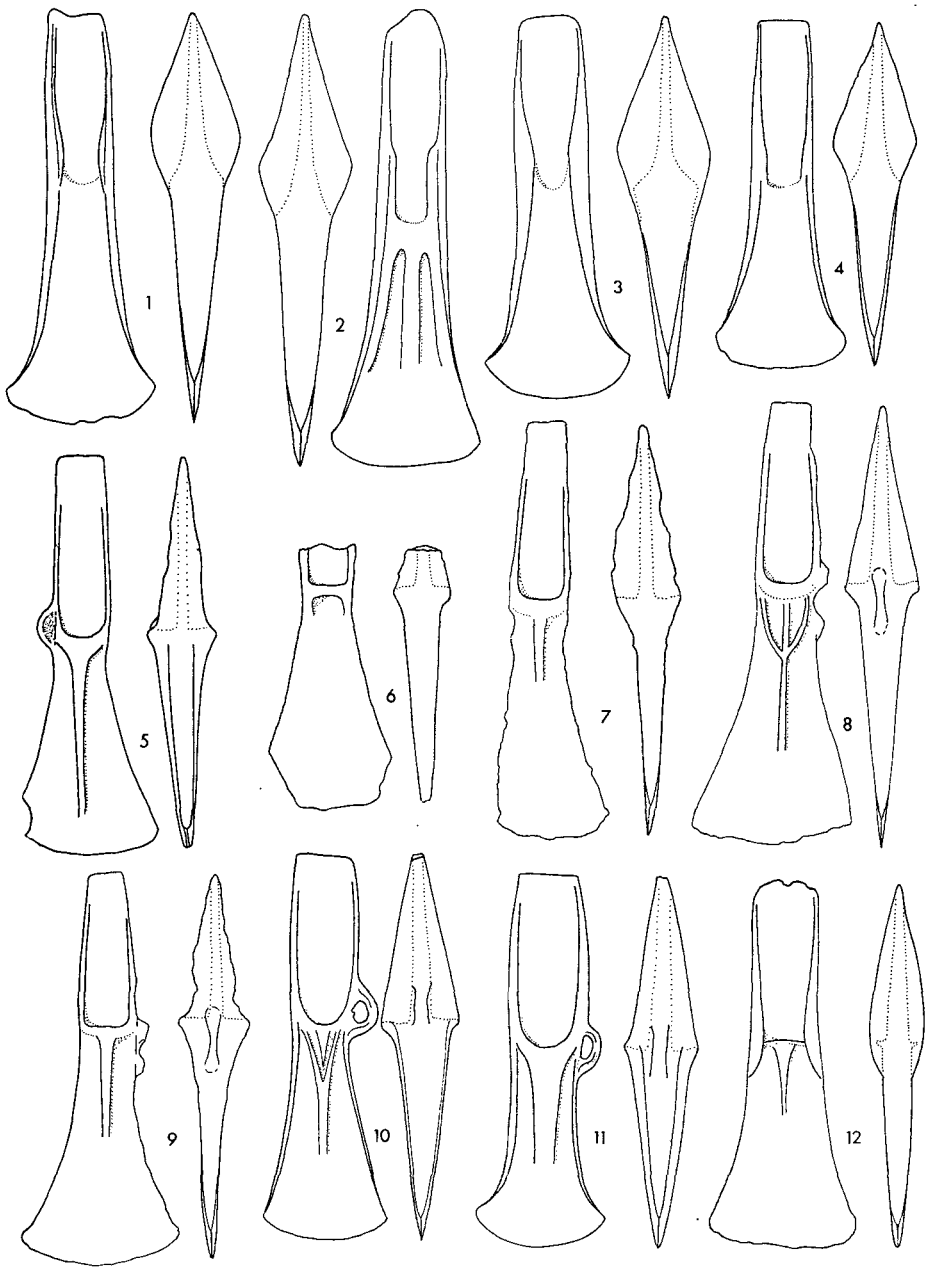

FIG. 17. Hoards. 1–3. Balcarry, Wigtown; 4-9. Caldonshill, Wigtown; 10–12. Kirtomy, Sutherland. (⅓)

was without doubt similar to one in the Annesborough (Co. Armagh) hoard,[1] and to others in south English hoards including Taunton Workhouse. The form is north European in origin (Kersten's Form 2) where it occurs mainly in Period III associations. Denmark and Schleswig-Holstein are the principal areas from which these twisted bar torcs have come. Trump's distinction between cast and twisted torcs is only partly valid,[2] as both techniques appear in Britain, and it is certain that the 20 torcs of this form from England are to be related to the north European examples. As such, they must be dated from about 1200 to 1000 B.C. The Glentrool torc may be an actual import from northern Europe, with perhaps the looped pin, and the Annan socketed axe, or it may been have produced in the Somerset area where most of the British bar torcs have been found.

Allied to these bronze bar torcs are those made in gold. The various sub-classes of these have been described by Hawkes and others.[3] The simple 'bar-twisted' torcs are the closest to the Somerset and north European bronze torcs and must represent the Irish version of this form. Only one bronze bar torc is known from Ireland, and the medium chosen by the Irish metalsmiths was gold. The dating of these gold torcs has been examined on many occasions, and suggests that the type was being produced as early as the twelfth century, but continued in use certainly into the tenth century; one association in southern England is not earlier than the eighth century, but the torc had been reworked, possibly in antiquity.[4] In Scotland, only the torc from Slateford (Midlothian) is certainly of the Irish gold form. This exists now only as a cast, the original having been melted down soon after discovery (Pl. VI). Possibly a gold torc from Stoneykirk (Wigtown) was also of this general type. It was made of a golden bar of triangular section, with rounded recurved terminals. It too is lost, as is a probable bar torc from near Culloden (Inverness).

Ribbon torcs. Six finds of gold ribbon torcs have been made in Scotland (fig. 15), but the actual number of torcs from these was probably about 50. At Lower Largo (Fife), four torcs were found, five may have been recovered from a single hoard at Belhelvie (Aberdeen), and the Law Farm (Moray) hoard had over three dozen. There are three single finds from which the torcs have been preserved, although many other reports suggest that ribbon torcs were even more abundant in Scotland. The ornament is made from a strip of gold, twisted tightly and ending in rod-like recurved terminals (Pl. VII). One of the Scottish torcs, from the Moor of Rannoch (Perth), is loosely twisted and recalls a number of Irish ribbon torcs,[5] although most of the Irish finds are tightly twisted. The type is presumably a British-Irish invention, as continental analogues are rare. Ribbon torcs in bronze occur in the south of England, in hoards such as Edington Burtle (Somerset),[6] and a few gold torcs are known from this area, in contemporary associations of the late second millennium B.C. The only association of gold and bronze ribbon torcs is in the Law Farm hoard.

The Irish ribbon torcs are numerous and of varied associations. Only one association, at Largatreany (Co. Donegal), suggests a date in the Middle Bronze Age, and

[1] *P.P.S.*, XXX (1964), 274.
[2] *P.S.A.S.*, XCIII (1959–60), 10.
[3] *Man*, XXXII (1932), 177; *Arch. Camb.*, CVII (1958), 3.
[4] *Antiquity*, XXXVII (1963), 132.
[5] Armstrong, *Catalogue*, Pl. xiii, 117, 115.
[6] *Inv. Arch.* GB 44.

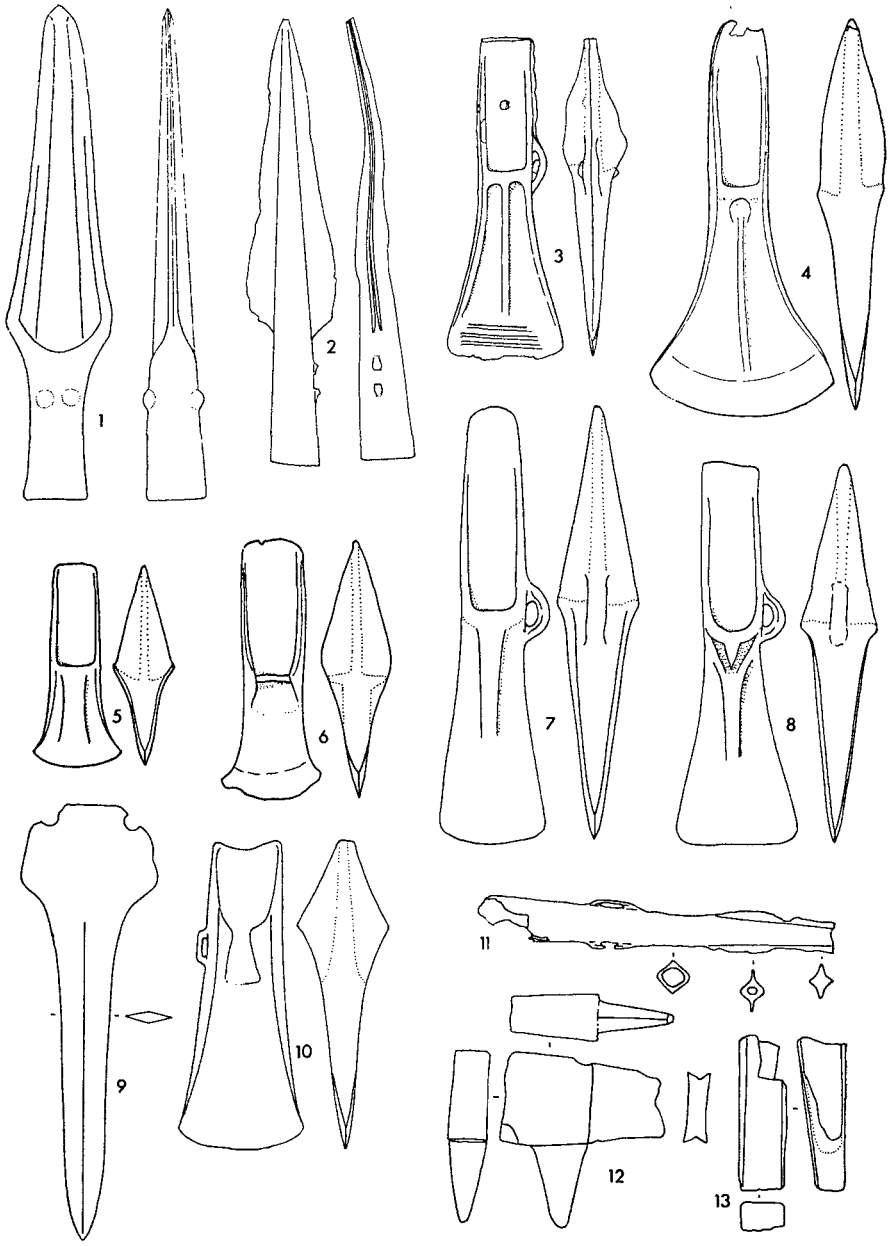

FIG. 18. Hoards. 1–6. Greyfriars Church, Dumfries; 7–8 Craig-a-Bhodaich, Sutherland; 9–10. Findowrie, Angus; 11–13. Inshoch Wood, Nairn. (⅓)

two other hoards contained Iron Age objects.[1] These late associations are rather surprising, but there is no reason to doubt the fact that the use of gold ribbon torcs extended down to the closing centuries B.C. Eogan has suggested that the appearance of the twisted bar torc led the Irish metalworkers to experiment with their usual medium, sheet gold, and the ribbon torc was the result.

The only apparent difference between the Scottish and the Irish ribbon torcs lies in the treatment of the terminals. The Largatreany hoard has torcs with knobbed terminals, and one with flattened bar terminals. Other Irish torcs have knobbed or disc terminals, the latter perhaps flattened knobs, and this Irish form is matched in only one Scottish find, the four torcs from Lower Largo (Fife). The Little Loch-broom (Ross) torc has slightly knobbed ends as well.

The Coulter (Lanark), Rannoch Moor (Perth) and Belhelvie (Aberdeen) torcs have bar terminals, either of rectangular or round section, and this form is matched by the Heyope (Radnorshire) ribbon torc terminals. The torcs at Heyope are particularly thick and their terminals are suggestive of the bar torc terminals. This fact, taken in conjunction with the elaborately knobbed terminals of one of the Iron Age Irish torcs at Clonmacnois, suggests that the simple flattened bar or round bar terminals of ribbon torcs may be earlier in date than the knobbed variety. If so, the Scottish finds, except Lower Largo, would fall within the early phase. The Law Farm ribbon torcs do not, however, support this rather simple scheme without some doubt. Of about 24 torcs that are reasonably well-attested for provenance, one or two have knobbed terminals. All the rest, all of those with certain provenance, have rounded or rectangular bar terminals. The find also had part of a bronze ribbon torc, which, by association in the Edington Burtle and Wedmore (Somerset) hoards, helps to support the suggested date for the Law Farm hoard in the late second millennium B.C.

Industrial Traditions in the Scottish Middle Bronze Age

The Middle Bronze Age of Britain is marked by the disappearance of the Wessex Culture as a force that controlled much of the industrial output of the north and west. It is the end of the 'High Bronze Age' of Britain, and the beginning of the 'Insular Bronze Age'. As Butler has shown, certain contacts with north-western Europe were maintained,[2] but the great mass of material equipment is locally developed from local forms. The time of wide-ranging and exciting imports that could stimulate the local craftsmen is over. Without extensive study of the post-Wessex material in southern Britain, and particularly Ireland, it is difficult to draw broad conclusions about the organisation and development of industries in the late second millennium B.C. In a recent review of the later Bronze Age in Ireland, Eogan briefly touched upon the preceding period, but, after indicating that many of the Middle Bronze Age forms must have been under way by *c.* 1400 B.C., his next fixed point was the twelfth century, in his Bishopsland phase.[3] In the absence of hoards of objects other than Bishopsland types, the preceding centuries still remain a blank, and typological development must still play the major rôle.

[1] *P.P.S.*, xxx (1964), 280. [2] *Palaeohistoria*, ix (1963). [3] *P.P.S.*, xxx (1964), 268.

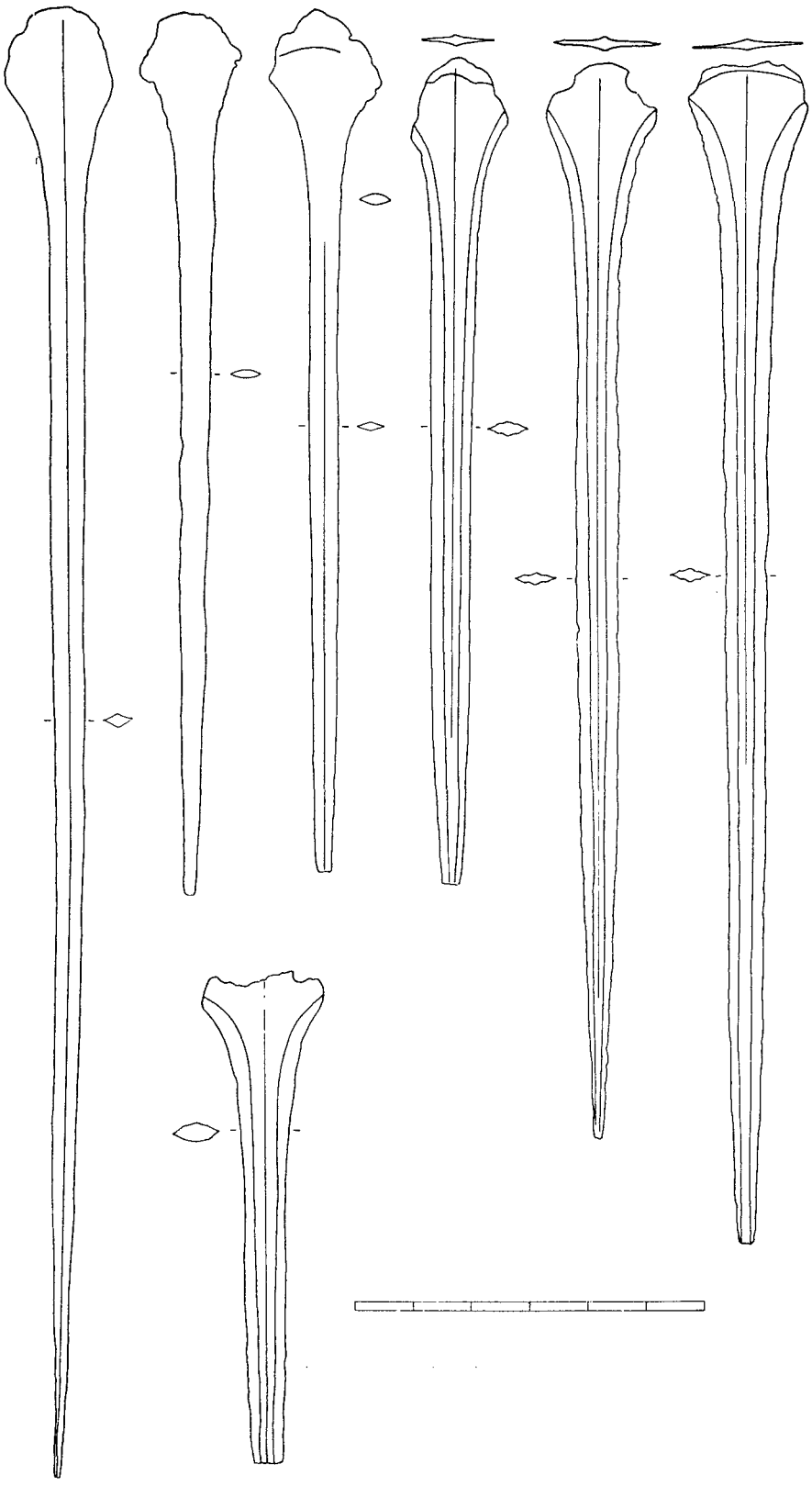

FIG. 19. The Drumcoltran, Kirkcudbright, hoard. (Scale in inches).

For southern England, the scheme developed by Hawkes, and a recent study by Butler, may be of interest.[1] Hawkes divides the Middle Bronze Age into three parts, beginning *c.* 1400 B.C. and ending *c.* 900 B.C. His divisions are based upon the Somerset hoards of Smith (twelfth century) and a transitional phase to the Late Bronze Age (tenth century). Butler's scheme provides three trade phases for the British material, the Ilsmoor phase of Hachmann's horizon 4, the Ostenfeld phase of Broholm II, and the Taunton phase of Montelius late III and early IV. In absolute terms, the phases are of the fourteenth, thirteenth, and twelfth/eleventh centuries respectively. This chronology depends upon certain correlations with central Europe, and it seems evident, from the conflicting dates proposed by various authorities, that we can only speak in broad terms, in centuries at best, for most of the later second millennium.

The Scottish Middle Bronze Age industries can be combined into three broad and overlapping groups. The first of these is characterised by forms immediately derived from Early Bronze Age types, and may be called the *Caverton* phase. The objects represented in this phase include early forms of Class II and III flanged axes, early Class C and D spearheads, and early daggers and dirks. The Auchendrane and Premnay axes are perhaps as early as any material in this phase, as they seem to be a development from the Early Bronze Age flat and hammer-flanged axes, generally dated to the sixteenth century B.C. in the south on the basis of the Wessex Culture. The Caverton and Belhelvie groups, derived from low-flanged axes of the later Wessex culture, might therefore be considered to be under way by the fourteenth century at the latest. To this time the earliest Middle Bronze spearheads must belong, as they too are developments from forms in late Wessex contexts. The two-rivet daggers and dirks, too, must follow on from Early Bronze Age types, with perhaps some continental Tumulus influence.

The second phase of industrial activity represented in the Scottish Middle Bronze Age is called after the *Auchterhouse* group of axes. The axes of this group, and of the Corstorphine and Haddington groups, are of forms occurring in the Ilsmoor phase of the Low Countries, dated by Butler to the fourteenth century. Class E spearheads must have been in production by this time. By decoration, the Kirkless axes of Class III should also come within this Auchterhouse phase. The dating of Ilsmoor is dependent upon correlations with central Europe. In view of the Reinecke A2 – Mycenae Shaft Grave connections,[2] the sixteenth century, the Tumulus Bronze Age should run through the fifteenth and fourteenth centuries down to, and probably well into, Reinecke D and early Urnfields. The relationship of the Ilsmoor phase of the Low Countries with Hachmann's horizon 4 of the north, and with certain metal industries of Britain, provides a general time-range within the later Tumulus Bronze Age, for this horizon has clear links with Tumulus B2. In absolute terms this means a date in the centuries bracketing 1400 B.C., and on this basis the Auchterhouse phase of Scottish Middle Bronze Age industry may have been under way by the

[1] Review, *Antiquity*, XXXV (1961), 63; *Palaeohistoria*, IX (1963), 211.

[2] R. Hachmann, *Die frühe Bronzezeit im westlichen Ostseegebiet und ihre mittel- und südosteuropäischen Beziehungen* (1957).

fourteenth century. Its length of life is of course open to question, and certain of the types produced within this phase typologically are later than others. The Haddington axes, for instance, are clearly more developed than the Corstorphine axes.

The third phase in the Scottish Middle Bronze Age industry is the *Glentrool* phase. To this belongs a great range of equipment, including socketed tools and developed palstaves, Balcarry axes, rapiers and gold ribbon and bar torcs. This material has close connections with the Somerset hoards and with Irish goldwork. The south-west English links include socketed axes and hammers, tanged knives, bar and ribbon torcs in bronze, while the Irish relations are seen in looped pins, Balcarry axes, rapiers and gold torcs. The ultimate connections are with northern Europe, Butler's Taunton phase, where the material belongs to Montelius III on average, and the latest time at which Britain could receive the new elements is Montelius III/IV. The absolute age of this latter point is crucial for the Glentrool phase. Montelius II is generally agreed to run with the late Tumulus (C) of south Germany (if one can still speak of Tumulus C), and to overlap into D. The succeeding period, III, then should correlate with late D and early Urnfields (Ha A1). On certain chronologies the end of Period III would be 1100 B.C., and this would be a central date for the Glentrool phase. Recently, however, Baudou has examined the connections of the north European later Bronze Age[1] with the central European stages as devised by Müller-Karpe.[2] Baudou demonstrates that Period IV correlates with Hallstatt B1 and B2, and Period V with B3. In absolute terms this means that Period IV commences about 1000 B.C., a century later than was generally believed. Such a date for Glentrool would certainly help to fill the gap in datable finds of the tenth and ninth centuries. Baudou's work unfortunately does not encompass Period III, and until the central European correlations with this vital period are examined in detail, perhaps we should not embrace his late dating unreservedly. Another point worth noting is that such a scheme involves three centuries for Period III, only one for Period V. The latter is sometimes regarded as one of the major periods of achievement in metal-working, just as is its equivalent to the south, Hallstatt B3. The answer must be that it is not Baudou who is wrong, but Müller-Karpe's scheme in allowing only one century for his last phase. This is not the place for a detailed discussion, but one suspects that Müller-Karpe's dated grid has been misplaced. For purposes of the Scottish material, it seems better to accept a Period III/IV transition as falling *c.* 1100 B.C., not forgetting of course that such a transition was not an abrupt change as all periodisation tends to imply. The Glentrool phase, with its assorted material, must therefore be of over 300 years' duration, until Late Bronze Age socketed axes, spearheads and swords were finally available in quantity in the later eighth and seventh centuries B.C.

Fig. 20 attempts to show the industrial phases of the Scottish Middle and Late Bronze Age, from *c.* 1500 to *c.* 500 B.C. These are purely internal divisions, and are concerned only with metalworking groups and traditions. It is to be hoped that

[1] E. Baudou, *Die regionale und chronologische Einteilung der jüngeren Bronzezeit im Nordischen Kreis* (1960).
[2] H. Müller-Karpe, Beiträge zur Chronologie der Urnenfelderzeit nördlich und südlich der Alpen. *Römisch-Germanische Forschungen*, XXII (1959).

allied work on other aspects of the Bronze Age, such as pottery, may eventually allow us to incorporate all the material remains within an overall scheme of cultural development. With increased use of absolute dating methods, and detailed work on the pottery and burial traditions, such a scheme may not be too far removed in time. The first aspect to be added is of course the remainder of the Bronze Age metalwork, the Beaker and Early Bronze Age industries. This work is at present

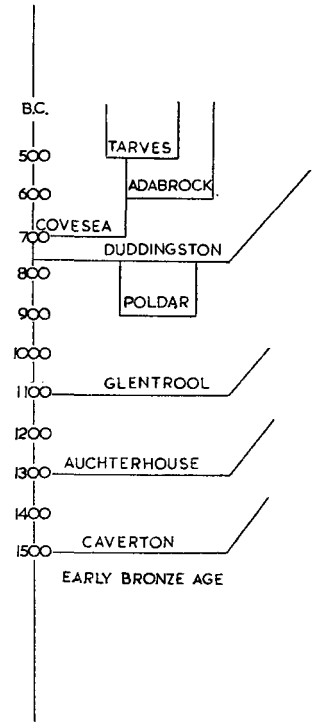

FIG. 20. Phases of industrial activity in the Scottish Middle and Late Bronze Age.

under way, but a broad guide to the major traditions present in the earlier periods is provided in Britton's recent work.[1] Whether or not his Migdale-Marnoch and Arreton 'phases' can be accepted for the Scottish material remains to be seen. For the later period, the Middle and Late Bronze Age, the scheme here presented can be placed alongside Hawkes' unpublished periodisation of the Bronze Age, and Eogan's recent work on the Irish material, although the latter only deals with the later Middle and Late Bronze Age.[2] It seems logical, and obvious now, that traditions of material culture do not change abruptly, and a great deal of typologically 'early' material must overlap in time with 'late' material. The scheme presented here must serve only as a general guide to industrial developments, and *not* as a

[1] *P.P.S.*, XXIX (1963), 258.

[2] *P.P.S.*, XXX (1964), 324; it should be noted that the 'Scotland' column in the correlation table is incorrect in the dating and extent of the Poldar phase of the Late Bronze Age.

particular guide to isolated specimens. Without doubt the metalwork of the Middle Bronze Age is the most difficult to incorporate into any overall scheme, because of the extreme rarity of associated finds, particularly in the initial stages. For the Early, and for the Late Bronze Age, we are on much firmer ground because of the abundant associations of varied and sometimes datable material. The scheme presented here is based only upon one aspect of the Middle Bronze Age, and has been designed primarily to show the development of metalworking traditions. It remains to be seen whether or not these three phases can be incorporated into any future overall presentation of the Bronze Age in all its aspects.

ACKNOWLEDGMENTS

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APPENDICES

Abbreviations used in the Appendices

N.M.A.: National Museum of Antiquities of Scotland, Edinburgh
B.M.: British Museum, London
Marischal: Marischal College, Aberdeen
Stewartry: Stewartry Museum, Kirkcudbright
B.A.C.C.: Council for British Archaeology, Bronze Age Card Catalogue
Palace of History: *Scottish Exhibition of National History, Art and Industry, Glasgow* (1911)
Wilson (1863): D. Wilson, *Prehistoric Annals of Scotland* (1863), vol. 1
Evans (1881): J. Evans, *The Ancient Bronze Implements of Great Britain and Ireland* (1881)
Thornhill: now in Dumfries Burgh Museum

APPENDIX I

FLANGED AXES AND PALSTAVES

ABERDEENSHIRE

No.	*Site*	*Class*	*Group*	*Reference*	*Museum*
1	Belhelvie	II	Belhelvie		Marischal 245
2	Brux, Kildrummy	II	Belhelvie		J. Walker, Aberdeen
3	Burreldale Moss, Keith Hall	II	Auchendrane	*P.S.A.S.*, XI (1874–6), 153	N.M.A. DC 36
4	Clova estates, Auchendoir and Premnay	III	Auchterhouse	*P.S.A.S.*, LXXII (1937–8), 69	N.M.A. DC 122
5	Cruden	III			Hunterian B 1951.97
6	Cushnie, Alford	III	Auchterhouse	*Palace of History*, 854	Marischal 247[15]
7	Fyvie	III	Auchterhouse	*P.S.A.S.*, LX (1925–6), 17	N.M.A. DC 106
8	Fyvie	pal.			Marischal 245[1]
9	Hill of Barra	III	Kirkless		Marischal 247[8]
10	Home Farm, Keith Hall	III	Auchterhouse	*P.S.A.S.*, XXVII (1892–3), 12	N.M.A. DC 75
11	Insch	II	Belhelvie		Marischal 244
12	Kinstair, Alford	—		*P.S.A.S.*, IV (1860–2), 386	
13	Kintore	III			Marischal 247[24]
14	Lickleyhead, Premnay	III	Kirriemuir	*P.S.A.S.*, I (1851–4), 138	N.M.A. DC 37
15	Lord Arthur's Cairn, Tullynessle	III	Premnay	*P.S.A.S.*, V (1862–4), 30	N.M.A. DC 34
16	Lower Cabrach, Huntly	III	Kirriemuir		N.M.A. DC 127
17	Mameulah, New Machar	III	Kirriemuir		Reg. Mus. Aberdeen 52.10.2
18	Moss Maud	III	Premnay		Marischal 247[17]
19	Peterhead	III	Auchterhouse	*P.S.A.S.*, XVII (1882–3), 381	N.M.A. DC 45
20	Roquharold, Premnay	III	Premnay		Reg. Mus. Aberdeen 36.36.1
21	Savoch Farm	III	Auchterhouse	*P.S.A.S.*, XXII (1887–8), 366	Arbuthnot Mus. Peterhead 2786
22	Tomnaverie, Coull	III	Premnay		Marischal 247[16]
23	Upper Dorneath, Glass	II	Corstorphine	*P.S.A.S.*, XLV (1910–1), 14	N.M.A. DC 94
24	Whitehillock, Rhynie	III			Elgin
25	Aberdeenshire	II	Caverton	*P.S.A.S.*, LX (1925–6), 303; *P.S.A.S.*, LXI (1926–7), 21	N.M.A. DC 114
26	Aberdeenshire	II	Auchendrane	*P.S.A.S.*, LXXII (1937–8), 69	N.M.A. DC 124
27	Aberdeenshire	III			Marischal 247[6]
28	Aberdeenshire	II	Caverton		Marischal 247[7]
29	Aberdeenshire	III			Marischal 247[9]
30	Aberdeenshire	II			Marischal 247[26]
31	Auchendoun	III	Auchterhouse		Marischal 247[28]
32	Aberdeenshire	II	Corstorphine	*P.S.A.S.*, XL (1905–6), 11	N.M.A. DC 87

ANGUS

No.	*Site*	*Class*	*Group*	*Reference*	*Museum*
1	Auchterhouse	III	Auchterhouse	*P.S.A.S.*, LXVI (1931–2), 19	N.M.A. DC 115
2	Ballownie, Brechin	III		*P.S.A.S.*, LXVIII (1933–4), 412	Brechin
3	Caddam, Kirriemuir	III	Kirriemuir	*P.S.A.S.*, LXXII (1937–8), 69	N.M.A. DC 123
4	Cairnleith Farm, Kingoldrum	III	Balcarry	*P.S.A.S.*, XX (1885–6), 313	N.M.A. DC 54
5	Caterthun, nr. Brechin	III	Auchterhouse	*P.S.A.S.*, XXIV (1889–90), 13	N.M.A. DC 64
6	Fallaws Farm, Monikie	III	Kirkless	*Palace of History*, 854	Dundee
7	Findowrie	III	Balcarry		Brechin Mus.
8	? Rossie Island Road	II			Brechin, L 1950.15
9	? Rossie Island Road	III	Balcarry		Montrose
10	Tealing	II			Dundee
11	Tealing	pal.			Dundee
12	Angus	II		*P.S.A.S.*, XXVII (1892–3), 367	Royal Scot. Mus. 1890.49

ARGYLL

1	Cretshengan Farm, Kilberry	II	Auchendrane	*P.S.A.S.*, LXXXVII (1952–3), 202	N.M.A. DC 132
2	Stonefield, Tarbert Loch Fyne	III	Kirriemuir	*P.S.A.S.*, XXVI (1891–2), 171	N.M.A. DC 74
3	Argyll	pal.			City Museum, Bristol E.455

AYRSHIRE

1	Auchendrane	II	Auchendrane	*P.S.A.S.*, XXI (1886–7), 134	N.M.A. DC 55
2	Nr. Bardrochat, Colmonell	III			MacEwen Coll.
3	Craigdow Farm, Culzean	III			A. F. Gray
4	Largs	II	Auchendrane	*Ayr & Wigt. Coll.* IV, 1884, 49	N.M.A. DC 24
5	Largs	III	Kirkless	*P.S.A.S.*, XXXI (1896–7), 234	N.M.A. DC 78
6	Overmills[1]	II	Auchendrane		Ayr
7	West Glenbuck, Muirkirk	III	Auchterhouse	*P.S.A.S.*, LX (1925–6), 150; *P.S.A.S.*, LXI (1926–7), 269	N.M.A. DC 112
8	Ayrshire	pal.		*P.S.A.S.*, LVIII (1923–4), 141	N.M.A. DC 101

BANFFSHIRE

1	Dufftown	III		*P.S.A.S.*, XXI (1886–7), 8	N.M.A. DC 56
2	Longman, Macduff	II	Auchendrane	*P.S.A.S.*, VI (1864–6), 41	N.M.A. DC 35

[1] The following finds are not included on the maps as information about them was obtained too late for their inclusion: Axes: Ayr 6, Aberdeen 31, Bute 3, Dunbarton, 2 Inverness 1. Spearheads: Gourock. Dirk: Abernethy (Inverness). One class III axe from Stirlingshire, one rapier from Berwickshire and one chisel from Perthshire should be deleted from their relevant maps, figures 7, 13 and 15, as recent work suggests that these are not genuinely prehistoric objects (see footnote on p. 140).

No.	Site	Class	Group	Reference	Museum
3	Rathven Parish	II			Elgin 1860.1
4	Banffshire	III		*Palace of History*, 855	Hunterian B 1951.2127
Berwickshire					
1	Gavinston, Duns	pal.		*P.S.A.S.*, LXXXI (1946–7), 189	N.M.A. DC 129
2	Gordon Bank, nr. Greenlaw	III		*P.S.A.S.*, LXXI (1936–7), 250	N.M.A. DC 121
3	Renton Barns, Coldingham	III		*B.A.C.C.*	Hunterian B 1951.411
4	Windshiel, nr. Duns	III	Auchterhouse	*P.S.A.S.*, IX (1870–2), 79	N.M.A. DC 23
Bute					
1	Pirnmill, Arran	III		*P.S.A.S.*, LIX (1924–5), 254, fig. 3 (left)	McMillan Coll.
2	Pirnmill, Arran	III		*P.S.A.S.*, LIX (1924–5), 254, fig. 3 (right)	McMillan Coll.
3	Ballymeanochglen Farm, Arran	III			Kelvingrove A 6534
Caithness					
1	Nr. Keiss Broch	III		*P.S.A.S.*, XLIII (1908–9), 20	N.M.A. DC 85
2	Upper Dounreay, Reay	pal.		*P.S.A.S.*, LXX (1935–6), 24	N.M.A. DC 120
3	Watten Parish	III	Kirkless	*P.S.A.S.*, IX (1870–2), 183; *P.S.A.S.*, XIX (1884–5), 163	N.M.A. DC 31
Clackmannanshire					
1	Devon, nr. Tillicoultry	III			N.M.A. DC 19
Dumfriesshire					
1	Nr. Annan	pal.		*P.S.A.S.*, LV (1920–1), 11	N.M.A. DC 98
2	Birrenswark Camp	II	Corstorphine	*P.S.A.S.*, XXII (1887–8), 390	N.M.A. L 1933.2110
3	Nr. Birrenswark	III	Auchterhouse		N.M.A. DC 27
4	Nr. Birrenswark	III			N.M.A. L 1933.2109
5	Canonbie	III	Kirkless	*P.S.A.S.*, XIX (1884–5), 163	N.M.A. DC 52
6	Greyfriars Church, Dumfries	III	Kirkless	*P.S.A.S.*, LX (1925–6), 27	Dumfries 9018
7	Greyfriars Church, Dumfries	pal.			Dumfries 9014
8	Greyfriars Church, Dumfries	pal.			Dumfries 9017
9	Greyfriars Church, Dumfries	pal.			Dumfries 9015
10	Kirkless, Durrisdeer	III	Kirkless	*P.S.A.S.*, XXII (1887–8), 376	Thornhill 2
11	Mouswald	III	Kirriemuir	*P.S.A.S.*, XXIII (1888–9), 121	N.M.A. DC 63

No.	*Site*	*Class*	*Group*	*Reference*	*Museum*
12	Park of Closeburn	II	Caverton	*P.S.A.S.*, XXII (1887–8), 376	Thornhill 4
13	Raeburn Bog, Eskdale	II	Auchendrane	*P.S.A.S.*, XXII (1887–8), 376	Thornhill 1
14	Springfield Hill, Dunscore	II	Belhelvie	*P.S.A.S.*, LX (1925–6), 10, 31	N.M.A. DC 109
15	Townsfoot Loch, Closeburn	III	Kirkless	*P.S.A.S.*, XXII (1887–8), 376	Thornhill 3
DUNBARTONSHIRE					
1	Croy	III	Kirkless		Kelvingrove 97–183
2	Port Kiln, Roseneath	III	Premnay		Inveraray Castle
EAST LOTHIAN					
1	Grant Braes	II	Haddington		N.M.A. DC 15
2	East Lothian	II	Haddington	*P.S.A.S.*, XXXV (1900–1), 278	N.M.A. DC 80
FIFE					
1	Gospertie (Gospetrie)	pal.		see App. II	
2	Nr. Leven	III	Balcarry		Smith Inst. AJ 12
3	Wellwood, nr. Dunfermline	III	Balcarry		N.M.A. DC 140
4	Cairn in Fife	II		*P.S.A.S.*, V (1862–4), 127	N.M.A. DC 30
5	Fife	II	Haddington	*P.S.A.S.*, XXII (1887–8), 351	Kelvingrove
INVERNESS-SHIRE					
1	Glenurquhart	III			Inverness
2	Broadford, Skye	II		*Trans. Glasgow Arch. Soc.*, n.s. X, 1941, 73	Hunterian A 1942.1
3	Probably nr. Clava and Cantray	III			N.M.A. DC 125
4	Fort William	—		*P.S.A.S.*, XXXIX (1904–5), 378	
KINCARDINESHIRE					
1	Arbuthnot	III		*P.S.A.S.*, XXII (1887–8), 402	Montrose 66
2	Arnhall Bog	II		*P.S.A.S.*, XXII (1887–8), 402	Montrose 67
3	Fettercairn	III			N.M.A. DC 26
4	Fordoun	—		*P.S.A.S.*, XXII (1887–8), 372	Arbroath (1888); lost
5	Nether Craighall, Arbuthnot	II	Belhelvie		N.M.A. DC 84
KINROSS					
1	Goudierannet	III	Auchterhouse	*P.S.A.S.*, LXVI (1931–2), 103	N.M.A. DC 116
2	Loch Leven	II	Belhelvie		Kinross
3	Tilliery Hill	II	Haddington	*P.S.A.S.*, LIX (1924–5), 11	N.M.A. DC 103

KIRKCUDBRIGHTSHIRE

No.	*Site*	*Class*	*Group*	*Reference*	*Museum*
1	Cairnsmore of Fleet	III	Balcarry		Dumfries 52
2	Dalry	III		*P.S.A.S.*, VI (1864–6), 332	N.M.A. DC 33
3	Drigmorn, Minnigaff	III	Kirkless	*P.S.A.S.*, XXXIX (1904–5), 117	N.M.A. DC 83
4	Glentrool	III	Balcarry	*P.S.A.S.*, LV (1920–1), 29; *P.S.A.S.*, XCIII (1959–60), 9, 113–14	N.M.A. DQ 240
5	Kilnotrie, Crossmichael	II	Haddington	Wilson (1863), 382, fig. 56	N.M.A. DC 17
6	Little Sypland Farm	pal.		*Palace of History*, 856	Stewartry 3244
7	Millpool, Kirkpatrick-Durham	II	Caverton	*P.S.A.S.*, XLVI (1911–12), 179, fig. 1	
8	River Dee, nr. Hensol	—		*P.S.A.S.*, XLV (1910–11), 223	

LANARKSHIRE

1	Busby	III		*P.S.A.S.*, XXIII (1888–9), 9	N.M.A. DC 62
2	Nr. Craignethan Castle	pal.		*P.S.A.S.*, LXXXII (1947–8), 321	N.M.A. DC 130
3	Kerswell, Carnwath Parish	III	Balcarry	*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 3
4	Tinto (Tinto-top)	II		*Arch.* V, 1779, 113, Pl. VIII No. 2; Minute Book, Soc. Ant. Lond., Vol. 1, 117, 15th April 1724	
5	Betw. Strathaven and Newmilns	III	Kirriemuir		Pittencrieff Glen Mus., Dunfermline

MIDLOTHIAN

1	Nr. Convalescent Home, Corstorphine	II	Corstorphine	*P.S.A.S.*, XL (1905–6), 11 *P.S.A.S.*, LI (1916–17), 236	N.M.A. DC 86
2	Nr. Edinburgh	III	Kirriemuir	*P.S.A.S.*, LXXXIX (1955–6), 463	N.M.A. DC 133
3	Harlaw Farm, Balerno	II	Auchendrane	*P.S.A.S.*, LII (1917–18), 172	N.M.A. DC 97

MORAYSHIRE

1	Aultonside, Llanbryd	II	Auchendrane	*P.S.A.S.*, XXXVIII (1903–4), 11	N.M.A. DC 82
2	East Grange, Kinloss	II	Haddington	*P.S.A.S.*, XXII (1887–8), 342	Elgin Mus. 113 $\frac{4}{3}\frac{12}{9}$, (48)
3	Elgin	III	Kirkless		B.M. WG 1879
4	Morayshire	III	Kirkless		Hunterian B 1951.1012

NAIRN

1	Bothywells, nr. Darnaway	III			Forres
2	Clunas	III	Premnay		N.M.A. DC 143
3	Brackley	III			B.M. WG 1826

PEEBLESSHIRE

No.	*Site*	*Class*	*Group*	*Reference*	*Museum*
1	Aikbrae	pal.		*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 2
2	Kilbucho, Biggar	pal.		*B.A.C.C.*	A. Fitz Herbert Wright
3	Neidpath Castle	II			Yorkshire Mus.
4	Neidpath Castle	II			Yorkshire Mus.
5	Nr. Peebles	III	Auchterhouse		N.M.A. DC 20
6	Nr. Peebles	III	Auchterhouse		N.M.A. DC 21

PERTHSHIRE

1	Nr. Alyth	II	Auchendrane	*Disc. & Excav. Scot.* 1957, 23	Kelvingrove LA 5737b
2	Bowhouse Farm, Balbeggie	III			Perth
3	Blair-Drummond Moss	—		*P.S.A.S.*, XXII (1887–8), 355	Formerly Alloa Mus. (lost)
4	Nr. Callander	III			N.M.A. DC 134
5	Nr. Craig Makerran	III	Premnay		N.M.A. DC 38
6	Dalginross, Comrie	III	Kirriemuir		Kelvingrove 02–93KO
7	Doune	pal.			Hunterian B 1914.279
8	Drumfad, Blackford	III	Auchterhouse	*P.S.A.S.*, XVII (1882–3), 380	N.M.A. DC 46
9	Drumlanrig, Comrie	II		*P.S.A.S.*, XXII (1887–8), 338	Perth $3\frac{1}{46}$
10	Nr. Dunning	pal.		*B.A.C.C.*	Perth 128
11	Dunning	pal.			Perth
12	Fornought Farm, Fowlis Wester	III	Kirriemuir		W. Alex Ramsay
13	Glackley Moor, Drumlanrig, Comrie	III	Auchterhouse		Perth $4\frac{1}{46}$
14	Keillon Moss	III	Auchterhouse		Smith Institute AJ 1
15	Killin	II	Auchendrane		Smith Institute AJ 13
16	Kinnoull	II		*B.A.C.C.*	Ulster Mus. 181.1913
17	Madderty	III	Premnay		Dundee
18	Nr. Perth	II	Haddington	*P.S.A.S.*, LX (1925–6), 303; *P.S.A.S.*, LXI (1926–7), 21	N.M.A. DC 113
19	Stobhall	III	Auchterhouse	*P.S.A.S.*, XLIV (1909–10), 9	N.M.A. DC 92
20	Strelitz Wood, Cargill	II	Haddington		Dundee
21	Tullybeagles Moor	II	Corstorphine		Perth 124
22	Perthshire	III		*P.S.A.S.*, LIX (1924–5), 234	N.M.A. DC 104
23	Perthshire	III	Kirkless	*P.S.A.S.*, LIX (1924–5), 234	N.M.A. DC 105
24	Blairgowrie	II	Caverton		Dundee
25	Bankhead Farm, Alyth	III	Auchterhouse		Meffan Inst., Forfar

RENFREWSHIRE

1	Renfrewshire	II	Haddington	*P.S.A.S.*, XVIII (1883–4), 15	N.M.A. DC 47

ROSS AND CROMARTY

No.	*Site*	*Class*	*Group*	*Reference*	*Museum*
1	Loch Dhugaill Auchnashellach	II	Auchendrane	*P.S.A.S.*, LX (1925–6), 96	N.M.A. DC 110
2	Poolewe, S. side of R. Ewe	—		*P.S.A.S.*, XIV (1879–80), 48	
3	Slattadale, Loch Maree	II	Auchendrane		N.M.A. L 1958.14
4	Ross	pal.		*B.A.C.C.*	Cambridge. PB 37

ROXBURGHSHIRE

1	Caverton	II	Caverton	*P.S.A.S.*, XXII (1887–8), 390	N.M.A. L 1933.2108
2	Graden nr. Yetholm	III	Kirriemuir	*P.S.A.S.*, XXII (1887–8), 390	N.M.A. L 1933.2111
3	Nr. Hawick	—		*Trans. Hawick Arch. Soc.* 1956	Primrose, Hawick
4	Jed Water	—		*P.S.A.S.*, XIII (1878–9), 310	
5	Nr. Kelso	pal.		*P.S.A.S.*, XXVIII (1893–4), 333	Hunterian B 1951.1416
6	Lilliesleaf, Clerklands	II	Corstorphine	*Trans. Glasgow Arch. Soc.*, XIV (1956), 30	Hunterian B 1914.277
7	Myredykes Muir, Hobkirk	III			N.M.A. DC 141
8	Nether Tofts, Kirkton	III	Auchterhouse	*P.S.A.S.*, XCIII (1959–60), 252	N.M.A. DC 136
9	Southdean	—		*P.S.A.S.*, XXII (1887–8), 381	Formerly Jedburgh (lost)
10	Southdean	—		*P.S.A.S.*, XXII (1887–8), 381	Formerly Jedburgh (lost)
11	Sudhope, nr. Jedburgh	—		*P.S.A.S.*, XXVIII (1893–4), 333	
12	Timpendean Farm, nr. Jedburgh	II	Auchendrane	*P.S.A.S.*, LXXXII (1947–8), 315	N.M.A. DC 131
13	Roxburghshire	III			Hunterian B 1914.275

SELKIRKSHIRE

1	Clintshill, nr. Stow	III	Auchterhouse	*P.S.A.S.*, XVIII (1883–4), 365	N.M.A. DC 48
2	St Mary's Loch	III	Kirriemuir	*P.S.A.S.*, XXII (1887–8), 395	Hawick

STIRLINGSHIRE

1	Bannockburn	II	Caverton	*P.S.A.S.*, LXXXIX (1955–6), 459	N.M.A. DC 135
2	Bridge of Allan	II	Haddington		Smith Inst. AJ8
3	Gartmore	III	Auchterhouse		N.M.A. DC 25
4	Nr. Stirling	III			B.M. WG 1888
5	Stoneyacre, Balfron	pal.		*Disc. & Excav. Scot.*, 1962, 42	Kelvingrove LA 6232

SUTHERLAND

No.	*Site*	*Class*	*Group*	*Reference*	*Museum*
1	Craig-a-Bhodaich, Farr	pal.		*P.S.A.S.*, XLIII (1908–9), 240, 293	N.M.A. DC 90
2	Craig-a-Bhodaich, Farr	pal.		*P.S.A.S.*, XLIII (1908–9), 240	N.M.A. DC 91
3	Nr. Dalmore Rock, Rogart	pal.		*Palace of History*, 856	Dunrobin Castle
4	Kirtomy, Farr	pal.		*P.S.A.S.*, XLIII (1908–9), 242	Dunrobin Castle
5	Kirtomy, Farr	pal.		*P.S.A.S.*, XLIII (1908–9), 242	Dunrobin Castle
6	Kirtomy, Farr	II	Haddington	*P.S.A.S.*, XLIII (1908–9), 242	Dunrobin Castle
7	Loch Hope, Durness	III	Premnay	*P.S.A.S.*, XIX (1884–5), 320	N.M.A. DC 73
8	Wordburn Farm, Rosehall			*Palace of History*, 855	

WIGTOWN

1	Balcarry Farm, Old Luce	III	Balcarry	*P.S.A.S.*, XIV (1879–80), 131–2; XXVII (1892–3), 349	B.M. 75.11–13.1
2	Balcarry Farm, Old Luce	III	Balcarry		B.M. 75.11–13.2
3	Balcarry Farm, Old Luce	III	Balcarry	Evans (1881), 98, fig. 91	B.M. 75.11–13.3
4	Barhullion, Glasserton	II	Auchendrane	*P.S.A.S.*, XIV (1879–80), 131	N.M.A. DC 60
5	Barr, Penninghame	III	Auchterhouse	*P.S.A.S.*, XXIII (1888–9), 220	N.M.A. DC 58
6	Barskeoch Moss, Kirkcowan	pal.			Dundee
7	Caldonshill, Stoneykirk	pal.		*P.S.A.S.*, XL (1905–6), 11–12; LVII (1922–3), 135; LXIV (1929–30), 297	N.M.A. DQ 206
8	Caldonshill, Stoneykirk	pal.			N.M.A. DQ 207
9	Caldonshill, Stoneykirk	pal.			N.M.A. DQ 208
10	Caldonshill, Stoneykirk	III	Balcarry		N.M.A. DQ 209
11	Caldonshill, Stoneykirk	pal.			N.M.A. DQ 210
12	Caldonshill, Stoneykirk	pal.			Kelvingrove
13	Caldonshill, Stoneykirk	pal.		*P.S.A.S.*, LXIV (1929–30), 297	
14	Culnoag, Sorbie	pal.		*P.S.A.S.*, XXIII (1888–9), 221	N.M.A. DC 61
15	Derry, Kirkcowan	III		*P.S.A.S.*, XXIII (1888–9), 150	N.M.A. DC 59
16	Genoch, Inch	pal.		*P.S.A.S.*, XXXV (1900–1), 12	N.M.A. DC 79
17	Glasserton	III	Auchterhouse	*Palace of History*, 854	Hunterian B 1914.276
18	Innermessan	II	Auchendrane	*P.S.A.S.*, XLVI (1911–12), 90	N.M.A. DC 95
19	Stair estates, west Wigt.	pal.			Stranraer 1964–12
20	Stair estates, west Wigt.	II			Stranraer 1964–13
21	Stair estates, west Wigt.	II	Caverton		Stranraer 1964–15

NO CERTAIN OR SPECIFIC PROVENANCE[1]

Site	*Class*	*Group*	*Reference*	*Museum*
No loc.	pal.			N.M.A. DC 1
? Clyde-Tweed	II	Corstorphine	*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 4 (Sim)
? Clyde-Tweed	II	Haddington	*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 5 (Sim)
? Clyde-Tweed	III	Auchterhouse	*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 7 (Sim)
? Clyde-Tweed	pal.		*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 8 (Sim)
? Clyde-Tweed	pal.		*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 9 (Sim)
? Clyde-Tweed	II		*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 10 (Sim)
? Clyde-Tweed	III	Kirkless	*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 11 (Sim)
? Clyde-Tweed	pal.		*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 12 (Sim)
? Clyde-Tweed	pal.		*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 13 (Sim)
? Clyde-Tweed	pal.		*P.S.A.S.*, XVI (1881–2), 146	N.M.A. DC 14 (Sim)
? Ayrshire	III	Auchterhouse		N.M.A. DC 18 (Ardmillan)
No loc.	III	Auchterhouse		N.M.A. DC 28
No loc.	II	Haddington		N.M.A. DC 29
No loc.	III	Kirriemuir		N.M.A. DC 42
No loc.	III			N.M.A. DC 43
No loc.	III			N.M.A. DC 44
West of Scotland	III		*P.S.A.S.*, XIX (1884–5), 9	N.M.A. DC 49
No loc.	II	Haddington		N.M.A. DC 81 (Duns)
? Orkney	II	Haddington	*P.S.A.S.*, XLIII (1908–9), 9	N.M.A. DC 89
No loc.	II	Haddington	*P.S.A.S.*, L (1915–16), 12	N.M.A. DC 96
? Berwickshire	III	Auchterhouse	*P.S.A.S.*, LV (1920–1), 16	N.M.A. DC 99
? Aberdeenshire	III	Auchterhouse	*P.S.A.S.*, LX (1925–6), 19	N.M.A. DC 107
? Aberdeenshire	III	Auchterhouse	*P.S.A.S.*, LX (1925–6), 19	N.M.A. DC 108 (Alford)
No loc.	III	Auchterhouse	*P.S.A.S.*, LX (1925–6), 98	N.M.A. DC 111
? South of Scotland	III	Auchterhouse	*P.S.A.S.*, LXIX (1934–5), 440	N.M.A. DC 117
? South of Scotland	pal.		*P.S.A.S.*, LXIX (1934–5), 440	N.M.A. DC 118
? South of Scotland	pal.		*P.S.A.S.*, LXIX (1934–5), 440	N.M.A. DC 119
No loc.	pal.			N.M.A. DC 138
No loc.	III	Kirriemuir		N.M.A. DC 139
No loc.	—			N.M.A. DA 50
? Perthshire	III	Balcarry		N.M.A. DC 142
No loc.	II	Haddington		N.M.A. Dunstaffnage 2
No loc.	III	Auchterhouse		N.M.A. Dunstaffnage 3
No loc.	pal.			N.M.A. Dunstaffnage 4
No loc.	pal.			N.M.A. Dunstaffnage 5
No loc.	pal.			N.M.A. Dunstaffnage 6
No loc.	III		*P.S.A.S.*, XXVII (1892–3), 366	Royal Scot. 1886.192
No loc.	III		*B.A.C.C.*	Royal Scot. 1890.508
? Aberdeenshire	III	Premnay		Marischal 252
No loc.	III			Reg. Mus. Aberdeen 45.2.239
No loc.	III			Reg. Mus. Aberdeen 45.2.240

[1] The following axes and spearheads have been omitted as they are believed to represent the nineteenth-century activities of a dealer in fake antiquities. Details will be published of these forgeries. I am grateful to Mr Robert Stevenson for much assistance with these objects. One is illustrated in fig. 2, 2.
Axes: N.M.A. DC 51, 57, 65–71, 77, 100; DQ 120–122, 124, 127; Smith Inst. Stirling AJ 2–7, 10–11, 14–15; Hunterian B 1914.278; Roy. Scot. Mus. 1890.503; Falkirk Museum. Spearheads: Smith Inst. Stirling AL 2–3.

Site	*Class*	*Group*	*Reference*	*Museum*
No loc.	III			Reg. Mus. Aberdeen 56.10.1
No loc.	—		*P.S.A.S.*, XXII (1887–8), 372	Formerly Arbroath (lost)
No loc.	III	Kirkless		Banff
No loc.	III		*Palace of History*, 854	Elgin
? Angus	II	Haddington		Meffan Inst., Forfar
No loc.	II	Haddington		Hunterian B 1951.2128
No loc.	III	Premnay		Hunterian B 1951.2131
No loc.	II	Belhelvie		Hunterian B 1951.2132
No loc.	III	Premnay		Kelvingrove 40–50c
West Highlands	III	Balcarry		Kelvingrove (Mann)
No loc.	III			Kirkcaldy
No loc.	II			Stewartry 2596
No loc.	—		*P.S.A.S.*, XXII (1887–8), 407	Paisley
No loc.	III	Auchterhouse		Perth 125
No loc.	pal.			Perth 127
No loc.	pal.			Smith Inst. AJ9
? Wigtownshire	pal.			Stranraer 1951.18
No loc.	II	Caverton		Thornhill (fake?)
? Aberdeenshire	III	Auchterhouse		Ashmolean 1927.2719
No loc.	II			Ulster 242-1937
No loc.	—		Gordon, *Itin. Sept.*, 116, Pl. L, 4	
No loc.	—		Gordon, *Itin. Sept.*, 116, Pl. L, 6	
? Dumfriesshire	II			Wilson, Thornhill
? Perthshire	III		*B.A.C.C.*	Willis, Basingstoke (1920)

SPEARHEADS

ABERDEENSHIRE

Site	*Class*	*Reference*	*Coles No.*[1]	*Museum*
Cruden	D	*P.S.A.S.*, LIV (1919–20), 149	4	N.M.A. DG 79
Ellon Moss	C	*P.S.A.S.*, XXVII (1892–3), 12	5	N.M.A. DG 62
Freefield, Old Rayne	E		8	Aberdeen 55.2.1
Glentanner	D	*P.S.A.S.*, XXIV (1889–90), 14	9	N.M.A. DG 58
Lesmoir, Rhynie	D		10	DG 101
Lickleyhead, Premnay	D		11	DG 98
Nethermuir, New Deer	C	*P.S.A.S.*, XXXIII (1898–9), 412	15	DG 73
Pitsligo	D	*P.S.A.S.*, XXII (1887–8), 346	16	Hunterian B 1951.208
Premnay	E		17	N.M.A. DG 100
Aberdeenshire	D		18	DG 99
New Pitsligo	D	*Palace of History*, 849	21	Marischal C24
Dunnideer Hill	C		23	B.M. 56.11–4.5

ANGUS

New Downie, Panmure	E	*P.S.A.S.*, XXVI (1891–2), 262	7	N.M.A. DG 61
Pitscandley Hill	D		8	DG 42
Pyotdykes	E	*P.P.S.*, XXX (1964), 186		Dundee

[1] *P.S.A.S.*, XCIII (1959–60), 75–82.

Site	*Class*	*Reference*	*Coles No.*	*Museum*
ARGYLL				
Nr. Campbeltown	D	Wilson (1863), 390	8	
Nr. Campbeltown	C	*Palace of History*, 849	9	Inveraray
Islay	D	*P.S.A.S.*, XVI (1881–2), 409	12	N.M.A. DQ 46
Islay	C		18	N.M.A. L155
Aros Moss	D		19	Campbeltown
AYRSHIRE				
Ochiltree, nr. Dalry	D	J. Smith, *Prehistoric Man in Ayrshire* (1895), 142	1	Hunterian A 1928.2
BANFFSHIRE				
Avon, nr. Inverlochy	D	*P.S.A.S.*, LXXIII (1938–9), 333	1	N.M.A. DG 103
Carlusk, Boharm	D	*P.S.A.S.*, XVI (1881–2), 409	3	DG 31
BERWICKSHIRE				
Corsbie Moss	C	*P.S.A.S.*, XIII (1878–9), 333	2	N.M.A. DQ 253
Newmills Farm, Lauder	D	*P.S.A.S.*, LXX (1935–6), 399	4	DG 96
Swinton	E	*P.S.A.S.*, XXXVI (1901–2), 67	5	DG 75
BUTE				
Clayyard, Arran	D	*P.S.A.S.*, XXIV (1889–90), 143	1	N.M.A. DG 54
CAITHNESS				
Canisbay	C	*P.S.A.S.*, LXVII (1932–3), 241	1	
Nr. Freswick	—	*P.S.A.S.*, XLV (1910–11), 15	2	
DUMFRIESSHIRE				
Nr. Annan	C	*P.S.A.S.*, LV (1920–1), 12	1	N.M.A. DG 83
Nr. Annan	C	*P.S.A.S.*, LV (1920–1), 11	2	82
Nr. Annan	C	*P.S.A.S.*, LV (1920–1), 11	3	81
Caerlaverock	D	*P.S.A.S.*, XXII (1887–8), 376	4	Thornhill 9
Fairholme, Lockerbie	D	Evans (1881), 322	8	B.M. 71.12–19.1
Greyfriars, Dumfries	D	*P.S.A.S.*, LX (1925–6), 27	10	Dumfries (cast)
Tinwald	D	*P.S.A.S.*, XXII (1887–8), 376	11	Thornhill 10
Comlongan Castle	D			Ashmolean 1927.2722
DUNBARTONSHIRE				
Cardross	C		1	N.M.A. DG 24
Nr. Glenfruin	—	*P.S.A.S.*, I (1851–4), 144	2	
Old Kilpatrick	C	Evans (1881), 324	3	Ashmolean 1927.2865
EAST LOTHIAN				
Belhaven	E		1	N.M.A. DG 3
Belhaven	E	*P.S.A.S.*, XVII (1882–3), 94	2	DG 4
Cauldshiels	D	*P.S.A.S.*, XL (1905–6), 10	4	DG 76
Soutra Hill	C		5	L1913.1
Tusculum, N. Berwick	D	*P.S.A.S.*, LXXIII (1938–9), 332	7	DG 102
FIFE				
Nr. Lordscarnie	F	*P.S.A.S.*, XX (1885–6), 318	4	DG 48

Site	*Class*	*Reference*	*Coles No.*	*Museum*
INVERNESS-SHIRE				
Inverness	D	*P.S.A.S.*, LXIII (1928–9), 152	2	N.M.A. DG 91
Brackla, Abriachan	D		6	B.M. WG 2042
Cairngorm	D		7	Roy. Scot. 1905.946
KINCARDINESHIRE				
Auchindneich	D	*P.S.A.S.*, XXIV (1889–90), 14	1	N.M.A. DG 56
KINROSS				
Craigton	D	*P.S.A.S.*, XI (1874–6), 168	1	
KIRKCUDBRIGHTSHIRE				
Barend Moss, Balmaghie	D	*P.S.A.S.*, XXII (1887–8), 399	2	Stewartry 448
Glenkens	D	*Archaeologia*, X (1792), 480	4	
Glentrool	E	*P.S.A.S.*, LV (1920–1), 29	5	N.M.A. DQ 239
Kells	D	*P.S.A.S.*, XXII (1887–8), 399	6	Stewartry 845
Rerrick	D	*P.S.A.S.*, XXII (1887–8), 399	8	Stewartry 510
Spearford Bridge	D	*P.S.A.S.*, XXII (1887–8), 376	9	Thornhill 8
LANARKSHIRE				
Crawford	E	*P.S.A.S.*, XVI (1881–2), 147	1	N.M.A. DG 40
Gartsheugh, Millerston	D		4	Kelvingrove 52–149
Strathaven	D	*P.S.A.S.*, XXII (1887–8), 9	6	N.M.A. DG 51
Nr. Carnwath	—	*Palace of History*, 850	2	
MORAYSHIRE				
Alves	C	*P.S.A.S.*, XXV (1890–1), 494	1	
Hill of Roseisle, Duffus	F	*P.S.A.S.*, XX (1885–6), 318	9	Elgin 1888.3
Nr. Hopeman	D		11	Dundee
Dyke	C		12	Marischal C25
NAIRNSHIRE				
Inshoch Wood	D	*P.S.A.S.*, LXXX (1945–6), 8	3	N.M.A. L1962.124
ORKNEY				
Nether House, Firth	D	*P.S.A.S.*, LXXXIII (1948–9), 239	3	Nether House
PEEBLESSHIRE				
Broughton	D	*P.S.A.S.*, LXVI (1931–2), 15	1	N.M.A. DG 93
Castlecraig	D	*P.S.A.S.*, XLVIII (1913–14), 16	2	N.M.A. DG 77
West Linton	D	*P.S.A.S.*, LXXXVIII (1954–6), 241	3	N.M.A. DG 107
PERTHSHIRE				
Blacklaw, Bendochy	D		1	N.M.A. DG 43
Nr. Callander	D		4	N.M.A. DQ 324
Craigielee	C	*P.S.A.S.*, XXIV (1889–90), 14	5	N.M.A. DG 57
Nr. Doune	C	*P.S.A.S.*, LXIII (1928–9), 362	7	N.M.A. DG 92
Perthshire	D		11	N.M.A. L1955.73
Perthshire	D			Kingussie
RENFREWSHIRE				
Linwood Moss	D	*P.S.A.S.*, XXII (1887–8), 407	1	Paisley
Gourock	E	*Palace of History*, 850		Greenock

Site	*Class*	*Reference*	*Coles No.*	*Museum*
ROSS AND CROMARTY				
River Ewe, Poolewe	E	*P.S.A.S.*, XIV (1879–80), 48	2	
Nr. Inverewe House	D	*P.S.A.S.*, XIV (1879–80), 48	6	Inverewe House
Black Isle	D		7	N.M.A. DG 109
ROXBURGHSHIRE				
Craigfordmains	C	*P.S.A.S.*, XXVIII (1893–4), 333	1	
Easter Wooden, Eckford	—	*P.S.A.S.*, XXVIII (1893–4), 334	2	Hawick
Nr. Eildon Hills	E	*P.S.A.S.*, LXIX (1934–5), 439	5	N.M.A. DG 95
Langburnshiels	E	*P.S.A.S.*, V (1862–4), 214	6	N.M.A. DG 25
Linton	E	*P.S.A.S.*, XVII (1882–3), 96	7	N.M.A. DG 45
Rutherford Farm	D	*P. Berw. Nat. Club*, XVII (1899–1900), 126	8	Kelvingrove
SELKIRKSHIRE				
Ettrick Forest	C		1	Dunrobin Castle
Nr. Galashiels	D	*P.S.A.S.*, LXI (1926–7), 17	2	N.M.A. DG 89
Synton Parkhead, Ashkirk	D		3	Hunterian B 1914.328
SHETLAND				
Lunnasting (Nesting)	C	*P.S.A.S.*, XIX (1884–5), 139	1	
SUTHERLAND				
Kirtomy	E	*Palace of History*, 849	2	Dunrobin; N.M.A. DG 17 (cast)
Rosehall	D	*Palace of History*, 849	3	Hawick
WIGTOWNSHIRE				
Balgown Moss	D	*P.S.A.S.*, XVII (1882–3), 283	1	N.M.A. DG 47
Fell of Barhullion	E	*P.S.A.S.*, XIV (1879–80), 113	2	N.M.A. DG 52
Merton Hall	E	*P.S.A.S.*, XIV (1879–80), 137	3	N.M.A. DG 19
Stranraer	D		8	St Albans
NO PROVENANCE				
	D		Aberds. 20	Aberdeen 48.7.3
? Fife	D		Fife 6	Kirkcaldy
? Ayr	—	*P.S.A.S.*, XXII (1887–8), 36	Ayr 7	
? Ardmillan	F		Ayr 3	N.M.A. DG 18
? Burghead	E	*P.S.A.S.*, LIV (1919–20), 149	Moray 10	N.M.A. DG 80
? Linlithgow	D		West Lothian 1	Falkirk
	E	*P.S.A.S.*, XCIII (1959–60), 81		N.M.A. DG 2
	C	*P.S.A.S.*, XCIII (1959–60), 81		DG 6
	D	*P.S.A.S.*, XCIII (1959–60), 81		DG 7
	C	*P.S.A.S.*, XCIII (1959–60), 81		DG 8
	D	*P.S.A.S.*, XCIII (1959–60), 81		DG 9
	C	*P.S.A.S.*, XCIII (1959–60), 81		DG 11
	E	*P.S.A.S.*, XCIII (1959–60), 81		DG 12
	E	*P.S.A.S.*, XCIII (1959–60), 81		DG 14
	D	*P.S.A.S.*, XCIII (1959–60), 81		DG 16
	D	*P.S.A.S.*, XCIII (1959–60), 81		DG 32
	D	*P.S.A.S.*, XCIII (1959–60), 81		DG 35

Site	*Class*	*Reference*	*Coles No.*	*Museum*
	C	*P.S.A.S.*, XCIII (1959–60), 81		DG 50
	D	*P.S.A.S.*, XCIII (1959–60), 81		DG 68
	C	*P.S.A.S.*, XCIII (1959–60), 81		L 1957.5
	D	*Palace of History* 850		
		Palace of History 849		
		Palace of History 849		

DIRKS AND RAPIERS

Site	*Length in inches*	*Reference*	*Trump No.*[1]	*Museum*
Morlich, Towie, Aberdeenshire	7·5 +	*P.S.A.S.*, LXXI (1937–8), 69	376	N.M.A. DJ 35
Findowrie, Angus	7			Brechin
Kirkoswald, Ayr	15	*P.S.A.S.*, XIV (1879–80), 96		
Milne Graden, Berwickshire	11·5	*P.S.A.S.*, XX (1885–6), 320	378	N.M.A. DJ 23
Newton Don, Berwickshire	11·5	*P.S.A.S.*, LV (1920–1), 150	377	N.M.A. DJ 31
Mey, Caithness	7 +	*P.S.A.S.*, XLV (1910–11), 15		
Fairholme, Dumfriesshire	10·75 +	*P.S.A.S.*, LXII (1927–8), 142	380	N.M.A. DJ 17
Gretna, Dumfriesshire	7	*P.S.A.S.*, XIV (1879–80), 96	379	N.M.A. DJ 22
Macqueston, Tynron, Dumfriesshire	9 +	*P.S.A.S.*, LXI (1926–7), 163		Dumfries
Den Shilt, Auchtermuchty, Fife	8·25	*P.S.A.S.*, LXII (1927–8), 143	381	N.M.A. DJ 18
Kilrie, Fife	6·25		382	N.M.A. DJ 21
Abernethy, Inverness	5 +			Kingussie
Seggie, Milnathort, Kinross	4·5	*P.S.A.S.*, LV (1920–1), 152		N.M.A. DJ 32
Arieland Moss, Kirkcudbrightshire	5 +	*P.S.A.S.*, LXXXII (1947–8), 321		N.M.A. DJ 41
River Cree, Kirkcudbrightshire	13·5	*P.S.A.S.*, LVII (1922–3), 138	391	N.M.A. DJ 29
Dalbeattie, Kirkcudbrightshire	27	Evans (1881), 252	383	B.M. WG 1236
Drumcoltran, Kirkcudbrightshire	18·25	*P.S.A.S.*, XXVII (1892–3), 105	386	N.M.A. DJ 30
Drumcoltran, Kirkcudbrightshire	20 +	*P.S.A.S.*, XLVIII (1913–14), 12, 333	384	N.M.A. DQ 319
Drumcoltran, Kirkcudbrightshire	14 +	*P.S.A.S.*, LXII (1927–8), 140	385	N.M.A. DQ 320
Drumcoltran, Kirkcudbrightshire	15 +		387	Thornhill 12
Drumcoltran, Kirkcudbrightshire	14·5		388	Thornhill 13
Drumcoltran, Kirkcudbrightshire	8·5		389	Thornhill 14
Drumcoltran, Kirkcudbrightshire	—			3 (lost)
Prob. Drumcoltran	25		390	Stewartry 2870
Glentrool, Kirkcudbrightshire	15	*P.S.A.S.*, LV (1920–1), 29		N.M.A. DQ 238
Kells, Kirkcudbrightshire	8			Stewartry 844
Kells, Kirkcudbrightshire	9·75			Stewartry 844A
Lower Nunton, Doon Bay, Kirkcudbrightshire	11·5			Stewartry 5092
Newabbey, Kirkcudbrightshire	15			Dumfries

[1] *P.P.S.*, XXVIII (1962), 101.

Site	*Length in inches*	*Reference*	*Trump No.*	*Museum*
Duddingston Loch, Midlothian	5·75 +	*P.S.A.S.*, LXII (1927–8), 141		N.M.A.
Midlothian	18·75	*P.S.A.S.*, XXXVII (1902–3), 348	392	N.M.A. DJ 26
Midlothian	15·25	*P.S.A.S.*, XXXVII (1902–3), 348	393	N.M.A. DJ 27
Aird, Weem, Perthshire	7			Perth
Blair estates, Perthshire	6 +			Blair Castle
Buttergask, Perthshire	12·5	*P.S.A.S.*, III (1857–60), 362	394	N.M.A. DJ 16
Nr. Callander, Perthshire	11 +	*P.S.A.S.*, LXXXIX (1955–6), 463	395	N.M.A. DQ 322
Nr. Callander, Perthshire	5·25 +	*P.S.A.S.*, LXXXIX (1955–6), 463	396	N.M.A. DQ 323
Glen Tilt, Perthshire	7·75 +			Blair Castle
Pitcaithly, Perthshire	7	*P.S.A.S.*, XVII (1882–3), 7	397	N.M.A. DJ 20
Morebattle, Roxburghshire	15·75	*P.S.A.S.*, LXII (1927–8), 144	399	N.M.A. DJ 28
Southdean, Roxburghshire	4·5 +	*P.S.A.S.*, XXII (1887–8), 381		Jedburgh (lost)
Turnercleugh Law, Selkirkshire	8·75	*P.S.A.S.*, LXVI (1931–2), 104	400	N.M.A. DJ 33
Low Torrs, Luce Bay, Wigtownshire	6			St Albans
No provenance	9·75			Stewartry
No provenance	6 +			N.M.A. DJ 12
No provenance	12·5	*P.S.A.S.*, LXII (1927–8), 145		
No provenance	11	*P.S.A.S.*, X (1872–4), 196		
No provenance	10	*P.S.A.S.*, LXII (1927–8), 145		
No provenance	16·5 +		431	N.M.A. DJ 37
No provenance	9·5 +		432	N.M.A. DJ 38
No provenance	18.25		445	N.M.A. DJ 16
No provenance	11·25		446	N.M.A. DM 39
No provenance	17·75		499	N.M.A. DM 15
No provenance	21·5		513	N.M.A. DM 17

MISCELLANEOUS TOOLS

FLANGED CHISELS

Site	*Reference*	*Museum*
Nr. Picts Dyke, Kirkconnel, Dumfries	*P.S.A.S.*, LXII (1927–8), 150	N.M.A. DO 39
South Cotton, Kintore, Aberdeen		Reg. Mus. Aberdeen 36.36.2
Islay, Argyll	*P.S.A.S.*, XVI (1881–2), 409	N.M.A. DQ 49
Nr. Perth	*P.S.A.S.*, XXIV (1889–90), 446	N.M.A. DC 72
Scotland		N.M.A. DC 41
? Ayrshire		Ayr Museum

OTHER CHISELS (see page 117)

Balneil, New Luce, Wigton	*P.S.A.S.*, L (1915–16), 302	N.M.A.
Nr. Dungyle, Kelton, Kirkcudbright	*Dumf. and Galloway*, XXVII (1948-9), 206	
Mid-Torrs, Glenluce, Wigton	*P.S.A.S.*, XV (1880–1), 272	N.M.A.

BAR PUNCHES

Glentrool, Kirkcudbright	*P.S.A.S.*, LV (1920–1), 29	N.M.A. DQ 244–247

Site	*Reference*	*Museum*
	TANGED KNIVES	
Glentrool, Kirkcudbright	*P.S.A.S.*, LV (1920–1), 29	N.M.A. DQ 241
Mid-Calder, Midlothian	Munro, *Prehistoric Scotland*, 1899, fig. 88	
	SOCKETED HAMMER	
Inshoch Wood, Nairn	*P.S.A.S.*, LXXX (1945–6), 8	N.M.A. L1962.123
	ANVILS	
Inshoch Wood, Nairn	*P.S.A.S.*, LXXX (1945–6), 8	N.M.A. L1962.122
Kyle of Oykel, Sutherland	*P.S.A.S.*, XVI (1881–2), 23	N.M.A. DO 30
	SOCKETED AXES	
Kingoldrum, Angus	*P.S.A.S.*, XIV (1879–80), 171	N.M.A. DE 12
Annan, Dumfries	*P.S.A.S.*, LV (1920–1), 11	N.M.A. DE 80
	BRONZE RING	
Tinwald, Dumfries	*P.S.A.S.*, XXII (1887–8), 376	Thornhill 11
	MOULDS (see page 118)	
Culter or Cromar, Aberdeen	*U.J.A.*, XVII (1954), 76	Ashmolean 1927/2723
Aberdeenshire	*P.S.A.S.*, LX (1925–6), 19	N.M.A. CM 31
Nr. Campbeltown, Argyll	*P.S.A.S.*, VI (1864–6), 48	N.M.A. CM 2–7
Culbin Sands, Moray		N.M.A. CM 21
Orkney	*P.S.A.S.*, XLIII (1908–9), 10	N.M.A. CM 25
Eildon Hills, Roxburgh	*P.S.A.S.*, LVII (1922–3), 142	Hunterian
Langdale, Strathnaver, Sutherland	*P.S.A.S.*, XL (1905–6), 129	N.M.A. CM 39
Low Glengyre, Kirkcolm, Wigton	*P.S.A.S.*, LXXX (1945–6), 11	N.M.A. CM 29
	ORNAMENTS	
	BAR TORCS	
Slateford, Midlothian	*P.S.A.S.*, IV (1860–2), 37	N.M.A. (cast) Gold
Glentrool, Kirkcudbright	*P.S.A.S.*, LV (1920–1), 29	N.M.A. DQ 248 Bronze
	RIBBON TORCS	
Belhelvie, Aberdeen (5)	*P.S.A.S.*, LXIII (1928–9), 22	N.M.A. (see App. II) Gold
Lower Largo, Fife (4)	*P.S.A.S.*, XVIII (1883–4), 233	N.M.A. (see App. II) Gold
Coulter, Lanark	*P.S.A.S.*, L (1915–16), 16	N.M.A. FE 75 Gold
The Law, Urquhart, Moray (*c.* 30)	*P.S.A.S.*, II (1854–7), 530	(See App. II) Gold, Bronze
Moor of Rannoch, Perth	*P.S.A.S.*, XVIII (1883–4), 233	N.M.A. FE 32 (cast) Gold
Little Lochbroom, Ross	*P.S.A.S.*, III (1857–60), 363	N.M.A. FE 34 Gold

TORCS (ALL OF GOLD)

Site	*Reference*	*Probable Type*
Leys, Culloden, Inverness	Wilson (1863), 163 fig. 7	bar
Stoneykirk, Wigtown	*Ayr and Wigton*, V (1885), 38	bar
Argyll	Wilson (1863), 466	ribbon
Galloway (2)	Wilson (1863), 465	ribbon
Carmichael, Lanark (2)	Wilson (1863), 466	ribbon

BRACELETS AND RINGS

Site	*Reference*	*Museum*
Duff House, Banff	*P.S.A.S.*, XVII (1882–3), 446	N.M.A. (see App. II) Gold

PIN

Glentrool, Kirkcudbright	*P.S.A.S.*, LV (1920–1), 29	N.M.A. DQ 243 Bronze

RAZORS AND BLADES

Site	*Reference*	*Museum*	*Object*	*Association*
Alfrld, nr. Cunnins, Aberdeen	*P.S.A.S.*, IV (1860–2), 384		blade	urn
Bliomill, Aberdeen	*P.S.A.S.*, VI (1864–6), 217	N.M.A. EQ		urn
Bunreldales, Aberdeen	*P.S.A.S.*, IV (1860–2), 429		razor	urn
Hirl of Culsh, Aberdeen	*P.S.A.S.*, XXXV (1900–1), 248	N.M.A.	blade	urn
Hill of Tuack, Aberdeen	*P.S.A.S.*, II (1854–7), 230	N.M.A.	blade	urn
Tullochvenus, Aberdeen	*P.S.A.S.*, IV (1860–2), 384	Marischal 248	razor	urn
Balrownie, Brechin, Angus	*P.S.A.S.*, LXXV (1940–1), 209		stain	urn
Nr. Bell Hillock, Redhall, Angus	*P.S.A.S.*, XC (1956–7), 223		blade	urn
Gilchorn, Angus	*P.S.A.S.*, XXVI (1891–2), 57	N.M.A. EQ	blade	urn
Rye Hill, Stracathro, Angus	*P.S.A.S.*, III (1857–60), 33		blade	cist
Seamill, W. Kilbride, Ayr	*P.S.A.S.*, LXI (1926–7), 260		stain	urn
Achroisk, Banff	*P.S.A.S.*, VIII (1868–70), 341	N.M.A.	stain	urn
Duff House, Banff	*P.S.A.S.*, XVII (1882–3), 447		blade	urn, gold
Caithness,	*P.S.A.S.*, XXVII (1892–3), 367		blade	
Kirkburn Lockerbie, Dumfries	*P.S.A.S.*, XCVI (1962–3), 127	N.M.A.	2 blades	urns
Palmerston, Dumfries	*Dumf. & Gall.*, XVII (1930–1), 79		stain	urn
Shuttlefield, Dumfries	*P.S.A.S.*, XIV (1879–80), 281		blade	urn
Nr. Gullane, East Lothian	*P.S.A.S.*, LXII (1927–8), 230		blade	
Stobshiel, East Lothian	*P.S.A.S.*, XVI (1881–2), 9	N.M.A. EQ 164	blade	urn
Brackmont, Fife	*P.S.A.S.*, LXXXIII (1948–9), 229		blade	urn
Calais Muir, Pitreavie, Fife	*P.S.A.S.*, XX (1885–6), 244		stain	urn
Lawpark, St Andrews, Fife	*P.S.A.S.*, X (1872–4), 436	St Andrews	razor	urn
Lawpark, St Andrews, Fife	*P.S.A.S.*, X (1872–4), 436	St Andrews	razor	urn
Tentsmuir, Fife			blade	urn
Galloway	*P.S.A.S.*, XXVIII (1893–4), 239	N.M.A. DI 6	razor	cairn
Balnalick, Urquhart, Inverness	*P.S.A.S.*, XXII (1887–8), 42		razor	urn
Urquhart, Inverness		Inverness	blade	
Shanwell, Milnathort, Kinross	*P.S.A.S.*, XIX (1884–5), 114		razor	urn
Glentrool, Kirkcudbright	*P.S.A.S.*, LV (1920–1), 29	N.M.A. DQ 242	razor	hoard
Glentrool, Kirkcudbright	*P.S.A.S.*, LV (1920–1), 29	N.M.A. DQ 250	razor	hoard
Newlands, Glasgow, Lanarks.	*P.S.A.S.*, XXXIX (1904–5), 528		stain	urn
Chatelherault, Lanarkshire		Hamilton	blade	urn
Kirkpark, Musselburgh, Midlothian	*P.S.A.S.*, XXVIII (1893–4), 62		stain	urn
Magdalen Bridge, Midlothian	*P.S.A.S.*, XVI (1881–2), 402	N.M.A. DI 4	razor	urn
Newbigging, Penicuik Midlothian	*P.S.A.S.*, XLV (1910–11), 39		razor	urn
Pinkie, Midlothian	*P.S.A.S.*, LXXXI (1946–7), 174		stain	urn
Laughton's Knowe, Holm, Orkney	*P.S.A.S.*, LXXXI (1946–7), 173	N.M.A. L1947.3	razor	urn
Horsburgh Castle, Peebles	*P.S.A.S.*, LXIX (1934–5), 262	N.M.A. EQ 433	blade	urn
Dalmore, Alness, Ross	*P.S.A.S.*, XIII (1878–9), 256		razor	cremation

Site	*Reference*	*Museum*	*Object*	*Association*
Eddertoun, Ross	*P.S.A.S.*, v (1862–4), 311		blade	urn
Eddertoun, Ross	*P.S.A.S.*, v (1862–4), 311	N.M.A.	blade	cist
Housegord, Shetland			razor	urn
Midbrake, Shetland	*P.S.A.S.*, vii (1866–8), 425	N.M.A.	blade	cremation
Cambusbarron, Stirling	*P.S.A.S.*, xvii (1882–3), 453		blade	urn
Balblair, Creich, Sutherland	*P.S.A.S.*, vii (1866–8), 475		razor	urn
Embo, Sutherland	*P.S.A.S.*, xcvi (1962–3), 23	N.M.A.	razor	cremation
Embo, Sutherland	*P.S.A.S.*, xcvi (1962–3) 25	N.M.A.	razor	cremation
Lierabol, Kildonan, Sutherland	*P.S.A.S.*, x (1872–4), 433		razor	urn
Rogart, Sutherland	*P.S.A.S.*, x (1872–4), 431		razor	cist
Mid Torrs, Glenluce, Wigtown	*P.S.A.S.*, xxii (1887–8), 67	N.M.A. EQ 201	blade	urn
Sandmill Farm, Wigtown	*P.S.A.S.*, lxxvi (1941–2), 79	N.M.A. EQ 487	razor	urn
Scotland		Pitt Rivers	blade	
No provenance	Gordon, *Itin. Sept.*, Pl. L, 2		razor	

APPENDIX II

Associated Finds with Middle Bronze Age Material

Belhelvie, Aberdeenshire

1. Bibliography: *P.S.A.S.*, i (1851–4), 13; xviii (1883–4), 236; xxvii (1892–3), 371; xxxviii (1903–4) 11; lxiii (1928–9), 22.
2. Site: Two farms, Overshill and Cothill, in the parish of Belhelvie, Aberdeenshire.
3. Circumstances: Objects found sporadically from the early nineteenth to the early twentieth century. Most are in the National Museum of Antiquities. There is no certainty that these objects belonged to one hoard, but for convenience they are grouped here.
4. Description of Site: No further information.
5. Description of Objects:
   Ribbon torcs or armlets of gold, of flattened rectangular section, with oblong or rounded thicker recurved terminals.
   Overshill: N.M.A. FE 33, FE 59.
   Cothill: N.M.A. FE 66, FE 73.
   Belhelvie parish: two fragments.
6. Comparisons: The Law Farm (Morayshire); Largatreany (Co. Donegal) *P.P.S.*, xxx (1964), 280.
7. Dating: Glentrool phase.

Findowrie, Angus

1. Bibliography: —
2. Site: At Findowrie, near Brechin, Angus.
3. Circumstances: Reputedly part of a hoard of bronzes. Owned by W. B. Carnegy-Arbuthnot, Esq., on loan to Brechin Museum.
4. Description of Site: Unknown.
5. Description of Objects (fig. 18, 9–10):
   (1) Axe, length $4\frac{7}{8}$ in., angled flanges, loop.
   (2) Dirk, length $6\frac{7}{8}$ in., trapezoidal hilt, two notches.
6. Comparisons:
   (1) Class III, Balcarry group; ? Rossie Island Road (Angus) Montrose Museum.
   (2) Kells (Kirkcudbright) Stewartry Museum 844.
7. Dating: Glentrool phase.

PYOTDYKES, ANGUS

1. Bibliography: *P.P.S.*, xxx (1964), 186.
2. Site: The 'Old Road Field', Pyotdykes Farm, near Dundee, Angus.
3. Circumstances: Found during ploughing. The objects are now in Dundee Art Gallery and Museum.
4. *Description of Site: In plough soil, about 12 in. below the surface, and just above a hard-pan.*
5. Description of Objects:
   (1) Spearhead, length 15¾ in., tip missing, triangular blade with basal loops, gold band around socket mouth, rivet holes on socket (fig. 10, 2).
   (2) Sword, length 23¼ in., leaf-shaped blade, eight rivet holes.
   (3) Sword, length 21⅝ in., leaf-shaped blade, three rivet holes.
   (4) Scabbard, on (2), made of three layers: leather-wood-leather.
   (5) Cloth plug, in (1), of flax fibres.
6. Comparisons:
   (1) Freefield (Aberdeen), Reg. Mus. Aberdeen; gold band: Harrogate (Yorkshire), Royal Ontario Museum.
   (2–3) Dunsinane (Perth), N.M.A. L1957.2; Carlingwark (Kirkcudbright), N.M.A. DL 26.
   (4) *P.P.S.*, xxx (1964), 188.
   (5) *P.P.S.*, xvi (1950), 130
7. Dating: Not before the mid-eighth century B.C.

DUFF HOUSE, BANFFSHIRE

1. Bibliography: *P.S.A.S.*, xvii (1882–3), 446.
   Arch. Scotica, iv (1857), 298.
2. Site: Near Duff House, on the estate of the Earl of Fife, Banffshire.
3. Circumstances: The original account of the find is lost. The objects were presented to the Museum of the Society of Antiquaries of Scotland in 1832.
4. Description of Site: The urn was inverted over a stone slab; the objects and burnt bones were contained within the urn.
5. Description of Objects (Pl. VI):
   (1) Penannular armlet, gold, diameter 2⅝ in., D-sectioned rod, plain terminals (EQ 120).
   (2) Penannular armlet, like (1) but terminals slightly expanded (EQ 121).
   (3) Penannular ring, gold, oval shape ⅞ by ½ in., single rod of oval section (EQ 122).
   (4) Penannular ring, gold, diameter $\frac{9}{16}$ in., three round-sectioned rods (EQ 123).
   (5) Penannular ring, gold, diameter $\frac{7}{16}$ in., six round-sectioned rods (EQ 124).
   (6) Bronze blade, fragments, one with rivet hole (EQ 125)
   (7) Pottery vessel, coarse gritty clay, flat rim.
6. Comparisons:
   (1–2) Saintjohns (Co. Kildare) Armstrong, 1933, Pl. xviii, 376; *P.P.S.*, xxx (1964), 277.
   (3–5) Ballymacormick (Co. Down) *Cat. Irish Gold Ornaments*, 1933, Pl. xiv, 235.
   (6) Razors: *P.P.S.*, xii (1946), 121.
7. Dating: Glentrool phase.

CORSBIE MOSS, BERWICKSHIRE

1. Bibliography: *P.S.A.S.*, xciii (1959–60), 21, 107.
2. Site: Corsbie Moss, near Corsbie Tower, Berwickshire.
3. Circumstances: Found in peat during drain deepening. Objects presented to the National Museum in 1920 by Miss Alice Warrender.
4. Description of Site: In peat, within a foot or two of the surface.
5. Description of Objects:
   (1) Sword, length 23 in., leaf-shaped blade, slot in shoulders and tang (DQ 252).
   (2) Spearhead, length 8 in., kite-shaped blade with ribs, lozenge loops (DQ 253).
   (3) Chape, apparently of metal, destroyed.

6. Comparisons:
   (1) Montrose (Angus) Peebles Mus.; related to Wilburton type, C. Fox, *Arch. Camb. Region* (1923), Pl. X.
   (2) Class C: Ellon Moss (Aberdeen), N.M.A. DG 62; Ballinlis (Co. Armagh), *J.R.S.A.I.*, LXX (1940), 94.
7. Dating: Poldar phase of the Late Bronze Age, ninth century B.C.

PIRNMILL, ARRAN, BUTE

1. Bibliography: *P.S.A.S.*, LIX (1924–5), 254.
2. Site: At Woodside, Pirnmill, Arran.
3. Circumstances: Found by J. McMillan of Pirnmill in 1924. Present location of the objects unknown.
4. Description of Site: Halfway up a steep hill-face rising above the 25-ft. raised beach, in a slight hollow.
5. Description of Objects:
   (1) Axe, length $4\frac{1}{8}$ in., angled flanges, no stop.
   (2) Axe, length 3 in., angled flanges, no stop.
6. Comparisons:
   (1–2) Class III axes.
7. Dating: Caverton phase, from 1400 B.C.

GREYFRIARS CHURCH, DUMFRIES

1. Bibliography: *P.S.A.S.*, LX (1925–6), 27.
2. Site: Greyfriars Church, Dumfries.
3. Circumstances: Found in 1866 during excavations for the foundations of the church. The hoard was placed in the Crichton Royal Institution, and recently four axes from the Institution have been given to Dumfries Burgh Museum. Casts of two spearheads are also in the Museum, the originals in the Crichton having been lost. There is some evidence that the Institution possessed two axes and one spearhead before the hoard was placed there. It is therefore possible that the original Greyfriars hoard consisted of only two axes and one spearhead, but, if so, which of the six objects included here is not known.
4. Description of Site: Nothing further known.
5. Description of Objects (fig. 18, 1–6):
   (1) Palstave, length $3\frac{1}{4}$ in., wide rib on blade.
   (2) Palstave, length $5\frac{3}{8}$ in., narrow rib on blade, loop.
   (3) Palstave, length $6\frac{1}{4}$ in., narrow rib on blade below depression.
   (4) Axe, length $4\frac{1}{8}$ in., angled flanges, wall stop.
   (5) Spearhead, length $7\frac{1}{8}$ in., leaf blade, one loop on socket.
   (6) Spearhead, length $7\frac{7}{8}$ in., ogival blade, two false rivets on each side of socket.
6. Comparisons:
   (1) Sim Collection, N.M.A. DC 8; Smith Inst. AJ9.
   (2) Sherford (Somerset), *Inv. Arch.* GB45.
   (3) N.M.A. DC 119; Blackrock (Sussex), *Inv. Arch.* GB 47.
   (4) Class III Kirkless group: Croy (Dunbarts), Kelvingrove 97–183; Sim Collection, N.M.A. DC 11.
   (5) Class D: near Callander (Perth), N.M.A. DQ 324.
   (6) Arreton Down (I. of Wight), *P.P.S.*, XXIX (1963), Pl.XXVII.
7. Dating: Glentrool phase, from 1100 B.C.

GOSPERTIE, FIFE

1. Bibliography: Small, *Interesting Roman Antiquities recently discovered in Fife*, 1823.
   P.S.A.S., XCIII (1959–60), 109.

2. Site: On the lands of Gospertie or Gospetrie, at Pittenduich, Fife.
3. Circumstances: Found in 1822; one socketed axe donated to the Society of Antiquaries of Scotland by P. Skene, 1829.
4. Description of Site: At the side of a large stone in a damp bog.
5. Description of Objects:
   (1) Socketed axe, length 3¼ in., sub-rectangular section, two mouldings (N.M.A. DE 33).
   (2) Socketed axe, faceted section, collar.
   (3) Spearhead, leaf blade, rivet holes.
   (4) Palstave, looped.
   (5) About a dozen other socketed axes, and half a dozen spearheads.
6. Comparisons:
   (1–2) Dalduff (Ayrshire) N.M.A., and Horsehope (Peebles), N.M.A. DE 60.
   (3) Normal Late Bronze Age riveted spearhead.
   (4) —
7. Dating: From the eighth century B.C.

LOWER LARGO, FIFE

1. Bibliography: *P.S.A.S.*, XVIII (1883–4), 233.
   J. Anderson, *Scotland in Pagan Times*, 1886, 215.
2. Site: The Temple, in the village of Lower Largo, Fife.
3. Circumstances: Found in 1848 in some earth due to be carted away. Presented to the National Museum in 1883.
4. Description of Site: On the top of a steep bank which slopes down to the sea, among some loose earth.
5. Description of Objects:
   Ribbon torcs or armlets, of twisted rectangular-sectioned flat gold bands, about 11 in. in length, widest at the centre and tapering to the terminals which are oblong in section with conical knobbed ends (N.M.A. FE 53–56).
6. Comparisons:
   The Law Farm (Morayshire).
7. Dating: Glentrool phase.

DRUMCOLTRAN, KIRKCUDBRIGHTSHIRE

1. Bibliography: *T. Dumf. & Gall. Nat. Hist. & Ant. Soc.*, I (1862–3), 49.
   P.S.A.S., XXVII (1892–3), 105; XLVIII (1913–14), 12, 333.
   T. Dumf. & Gall. Nat. Hist. & Ant. Soc., XIV (1926–8), 51, 288.
   P.S.A.S., XCIII (1959–60), 11.
2. Site: On the farm of Drumcoltran, Kirkgunzeon.
3. Circumstances: Twelve rapiers were found in 1837, and another in 1867. After a complicated history of dispersal, the hoard is distributed as follows: 3 in the National Museum, 3 in the Grierson Museum (now at Dumfries Burgh Museum), 1 in the Stewartry Museum (probably from Drumcoltran), 3 others known to exist but lost to view.
4. Description of Site: According to the early reports, found 'in the trench where deepest' (primary silting of the ditch?) of a circular embanked fort, 225 ft. in diameter.
5. Description of Objects (fig. 19):
   (1) Rapier, length 18¼ in., ridged blade section (N.M.A. DJ 30).
   (2) Rapier, length 20 in., ridged blade section, two notches (N.M.A. DQ 319).
   (3) Rapier, length 14 in., ridged blade section (N.M.A. DQ 320).
   (4) Rapier, length 15 in., convex blade section (Thornhill 12).
   (5) Rapier, length 14½ in., angled blade section (Thornhill 13).
   (6) Rapier, length 8½ in., ridged blade section, two notches (Thornhill 14).
   (7) Rapier, length 25 in., angled blade section (Stewartry 2870).
   (8) At least three other rapiers.

6. Comparisons:
   (1–3, 6) Near Callander (Perth), N.M.A. DQ 322; *P.P.S.*, XXVIII (1962), 87.
   (4–5, 7) Buttergask (Perth), N.M.A. DJ 16.
7. Dating: Middle Bronze Age, from *c.* 1300 B.C.

GLENTROOL, KIRKCUDBRIGHTSHIRE

1. Bibliography: *P.S.A.S.*, LV (1920–1), 13, 29; LVI (1921–2), 20; XCIII (1959–60), 7, 18, 113. *T. Dumf. & Gall. Nat. Hist. & Ant. Soc.*, XLII (1965), 82.
2. Site: On Eschonan Fell, north of Loch Trool, Minnigaff.
3. Circumstances: Most of the objects found by Capt. Dinwhiddie in 1915; object (5) found by M. Scott, and object (14) and amber bead found by W. Adams. All presented to the National Museum in 1921–2.
4. Description of Site: Under a large overhanging boulder and embedded in stony peaty soil. The spearhead projected above the surface, and the hoard covered an area 3 by 2 ft.
5. Description of Objects (fig. 16):
   (1) Axe, length $6\frac{7}{8}$ in., angled flanges, sunk stop (DQ 240).
   (2) Spearhead, length $9\frac{3}{4}$ in., basal loops, midrib beading, decorated (DQ 239).
   (3) Rapier, length $15\frac{1}{8}$ in., faceted section, two rivets (DQ 238).
   (4) Razor, length $3\frac{7}{8}$ in., narrow tang (DQ 242).
   (5) Razor, length $3\frac{1}{8}$ in., narrow tang (DQ 250).
   (6) Knife, length 6 in., tanged and perforated (DQ 241).
   (7) Torc fragments, twisted square-sectioned wire with untwisted round-sectioned terminal piece, total length 17 in. (DQ 248).
   (8) Pin, length $6\frac{1}{4}$ in., disc head, loop on stem (DQ 243).
   (9–12) Chisels and punches, lengths $3\frac{3}{8}$ in., $1\frac{5}{8}$ in., 5 in., $3\frac{1}{8}$ in., square-sectioned (DQ 244–247).
   (13) Bronze pendant, $\frac{7}{8}$ in. by $\frac{11}{16}$ in., two oval perforations (DQ 254).
   (14) Glass bead, light blue, flat globular shape (DQ 251).
   (15) Amber beads, ten flat discs, two cones, half of a larger disc (DQ 249, 255).
6. Comparisons:
   (1) Class III, Balcarry group.
   (2) Sherford (Somerset), *Inv. Arch.* GB 45; Taunton Workhouse (Somerset), *Inv. Arch.* GB 43.
   (3) Drumcoltran (Kirkcudbright).
   (4–5) Taunton Workhouse, op. cit.
   (6) Monkswood (Somerset), *Inv. Arch.* GB42.
   (7) Monkswood, op. cit.
   (8) Ireland, Brit. Mus. 91, 4–20, 5; Ashmolean 1927/2853.
   (9–12) Monkswood, op. cit.
   (13) —
   (14) Knackboy (Scilly), *Ant. J.*, XXXII (1952), 30.
   (15) *J. Cork H.A.S.*, XLIX (1944), 122; *Palaeohistoria*, IX (1963), 159.
7. Dating: Glentrool phase, from 1100 B.C.

THE LAW FARM, URQUHART, MORAYSHIRE

1. Bibliography: *P.S.A.S.*, II (1854–7), 530; XVIII (1883–4), 236; XXII (1887–8), 342; XXV (1890–1), 66; XLV (1910–11), 11; LXXXVII (1952–3), 191; XCII (1958–9), 123.
2. Site: A small cairn 40 yds. from The Law, a tumulus on The Law Farm, Urquhart parish.
3. Circumstances: Found in the spring of 1857 by a ploughman; the objects were widely dispersed. Rev. Henry Walker of Urquhart reported that 'a good large gowpen full' had been found, amounting to more than three dozen.
4. Description of Site: Under a small cairn of stones.
5. Description of Objects:
   Ribbon torcs or armlets, all of gold except one of bronze, made by twisting a flattened sub-

rectangular band into a penannular form. The terminals are of thicker metal either flattened or rounded, rarely domed or knobbed, and turned back to provide a hook attachment.
N.M.A.: FE 35 – FE 38, FE 38A (bronze), FE 67, FE 68, FE 77, FE 87, FE 88.
Brit. Mus.: 57.7–29.1, 58.3–20.1 – 58.3–20.3, WG12–WG14.
Univ. Mus. Arch. & Eth. (Cambridge): Z 15077a – Z 15077c.
Elgin Museum: 1888.10.
(Probable) Pitt-Rivers Museum (Oxford) (2); Kelvingrove (2); Hunterian Museum. At least five others are known to exist. Full documentation with illustrations is in preparation.

6. Comparisons:
Belhelvie (Aberdeen); Lower Largo (Fife); Largatreany (Co. Donegal), *P.P.S.*, xxx (1964), 280; Edington Burtle (Somerset), *P.P.S.*, xxv (1959), 146–7.
7. Dating: Glentrool phase, from 1100 B.C.

BOTHYWELLS, NAIRNSHIRE
1. Bibliography:
2. Site: Bothywells, near Darnaway.
3. Circumstances: Unknown. Forres Museum.
4. Description of Site: Unknown.
5. Description of Objects:
(1) Axe, length 5¼ in., angled flanges.
(2) Three or four rings, coupled together.
6. Comparisons:
(1) Class III axe.
(2) Gight (Aberdeenshire), N.M.A. DQ 284
7. Dating: Middle Bronze Age.

INSHOCH WOOD, NAIRNSHIRE
1. Bibliography: *P.S.A.S.*, LXXIX (1944–5), 180; LXXX (1945–6), 8; XCIII (1959–60), 122.
2. Site: On the edge of Inshoch Wood, near Woodend, four miles from Nairn.
3. Circumstances: Found *c.* 1945 by a soldier, and presented to Inverness Museum.
4. Description of Site: Nothing further known.
5. Description of Objects (fig. 18, 11–13):
(1) Spearhead, length 5⅝ in. (fragment), leaf blade, loops on socket.
(2) Hammer, socketed, length 2½ in., rectangular section but circular socket.
(3) Anvil, central block 1⅜ in. square, conical and prismatic projections.
6. Comparisons:
(1) Burgesses' Meadows (Oxford), *Inv. Arch.* GB6.
(2) Burgesses' Meadows, op. cit.; Taunton Workhouse (Somerset), *Inv. Arch.* GB43.
(3) Bishopsland (Co. Kildare), *P.P.S.*, xxx (1964), 275.
7. Dating: Glentrool phase.
8. Remarks: the anvil contains 70% copper, 30% tin, traces of iron and lead.

NEIDPATH CASTLE, PEEBLESSHIRE
1. Bibliography:
2. Site: Neidpath Castle.
3. Circumstances: Unknown. Yorkshire Museum.
4. Description of Site: Unknown.
5. Description of Objects (fig. 18, 11–13):
(1) Axe, convex flanges, length 5⅛ in.
(2) Axe, convex flanges, length 3¾ in.
6. Comparisons:
(1–2) Class II axes.
7. Dating: Caverton phase, from *c.* 1400 B.C.

LILLIESLEAF, ROXBURGHSHIRE
1. Bibliography: *Trans. Glasgow Arch. Soc.*, XIV (1956), 30.
2. Site: At Clerklands Farm, Lilliesleaf.
3. Circumstances: Unknown. Presented to Hunterian Museum in 1914 and both objects labelled as being found together.
4. Description of Site:
5. Description of Objects:
   (1) Axe, length 5½ in., convex flanges, low wall-stop.
   (2) Pottery sherd of probable Encrusted Urn.
6. Comparisons:
   (1) Class II Corstorphine group; Corstorphine, N.M.A. DC 86; Birrenswark (Dumfries), N.M.A. L1933.2110.
7. Dating: Middle Bronze Age, from *c.* 1300 B.C.

CRAIG-A-BHODAICH, SUTHERLAND
1. Bibliography: *P.S.A.S.*, XLIII (1908–9), 240.
2. Site: About 140 yds. above the confluence of the Crask stream with the burn of Farr, near the base of a rock about 7 yds. from the east bank of the burn, at the north-west foot of Craig-a-Bhodaich, Farr.
3. Circumstances: Found by P. Mackay of Swordly in 1906 while repairing a dyke. Acquired by J. Macdonald for the National Museum in 1909.
4. Description of Site: In a rock shelter; the axes lay side by side on a small shelf near the base of the shelter, and in such a way that they could not have been hafted when deposited. A stone mould for a spearhead was found nearby in 1906.
5. Description of Objects (fig. 18, 7–8):
   (1) Palstave, length 6⅞ in., narrow blade with midrib, loop (DC 90).
   (2) Palstave, length 6 in., widened blade with trident decoration, loop (DC 91).
6. Comparisons:
   (1) Near Dunning (Perth), Perth Museum.
   (2) Kirtomy (Sutherland), Dunrobin Castle Museum.
7. Dating: Probably not earlier than the Glentrool phase.

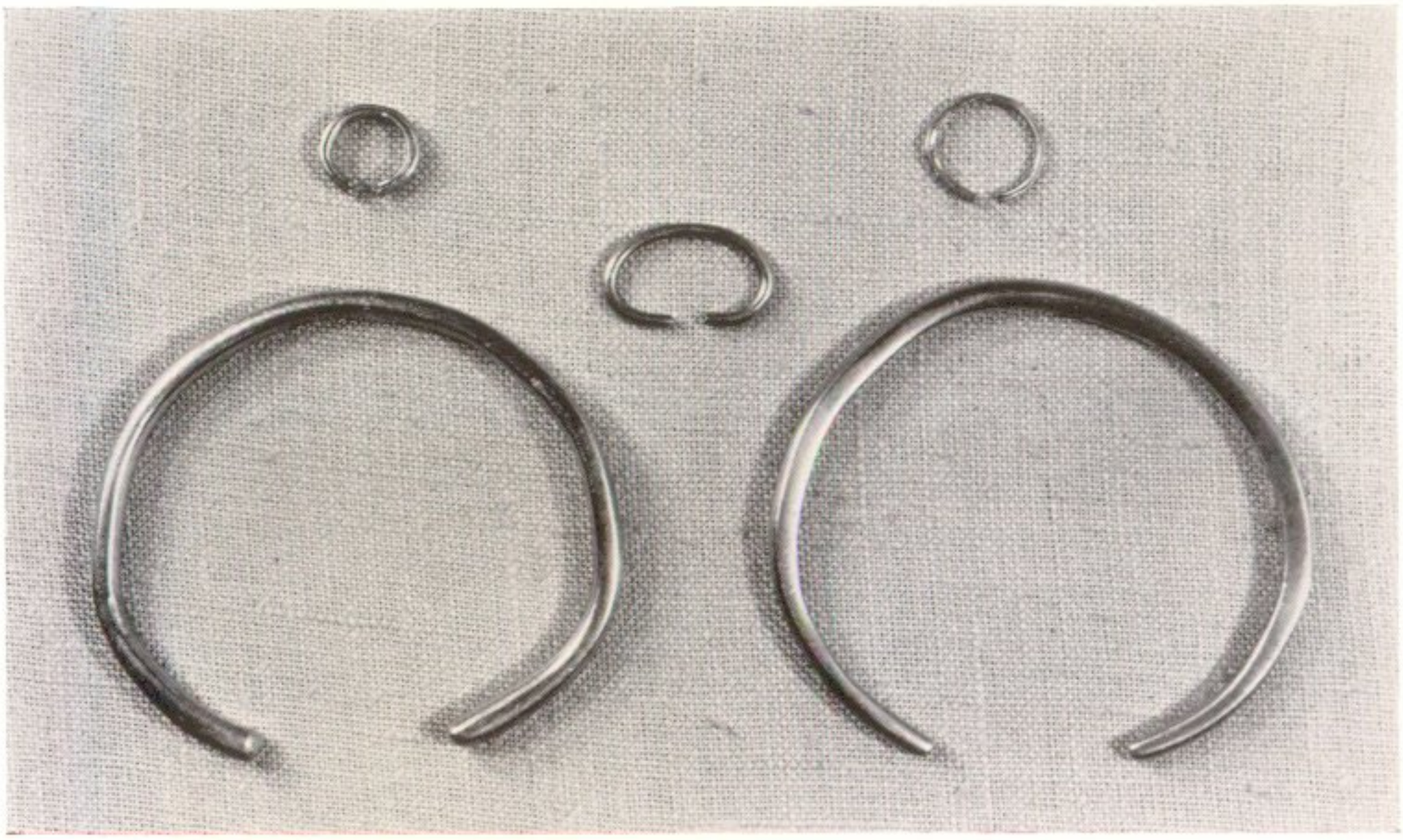
KIRTOMY, SUTHERLAND
1. Bibliography: *P.S.A.S.*, XLIII (1908–9), 242.
2. Site: A peat moss on a hill near the junction of the Kirtomy road and the main east-west road.
3. Circumstances: Found by P. Mackay of Swordly about 1895. Dunrobin Castle Museum.
4. Description of Site: A peat moss.
5. Description of Objects (fig. 17, 10–12):
   (1) Palstave, length 6⅛ in., slightly widened blade with trident, loop.
   (2) Palstave, length 6 in., splayed blade with midrib, loop.
   (3) Axe, length 5¾ in., convex flanges, low wall stop, midrib.
6. Comparisons:
   (1) Craig-a-Bhodaich (Sutherland), N.M.A. DC 91.
   (2) Dalmore (Sutherland), Dunrobin Castle; Stoneyacre (Stirling), Kelvingrove.
   (3) Class II Haddington group; Strelitz Wood (Perth), Dundee Museum.
7. Dating: Auchterhouse or Glentrool phase, from *c.* 1200 B.C.

BALCARRY, WIGTOWNSHIRE
1. Bibliography: *P.S.A.S.*, XIV (1879–80), 131; XXVII (1892–3), 349.
2. Site: On the south side of Balcarry farm, where the Pilrooty Burn drains a small loch, Old Luce.
3. Circumstances: Found in 1875 in deepening a ditch. Presented by Sir John Dalrymple Hay to the British Museum.
4. Description of Site: A marshy area.

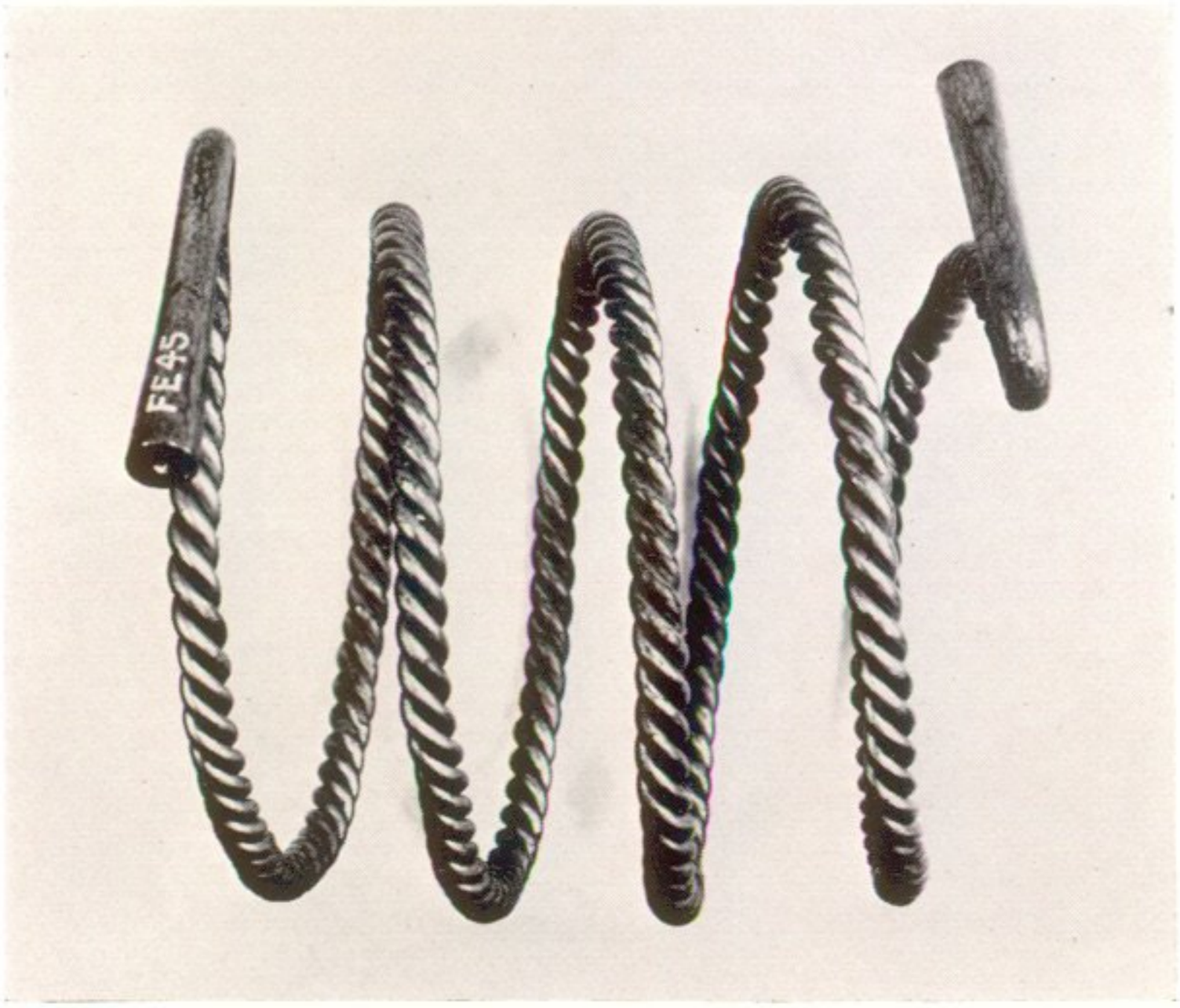
5. Description of Objects (fig. 17, 1–3):
   (1) Axe, length 6½ in., angled flanges, sunk stop, splayed blade (75.11–13.1).
   (2) Axe, length 7¼ in., like (1) but ribbed blade (75.11–13.2).
   (3) Axe, length 6 in., like (1) (75.11–13.3).
6. Comparisons:
   (1–3) Class III Balcarry group: Caldonshill (Wigton), N.M.A. DQ 209; near Leven (Fife), Smith Inst. AJ12.
7. Dating: Glentrool phase.

CALDONSHILL, WIGTOWNSHIRE

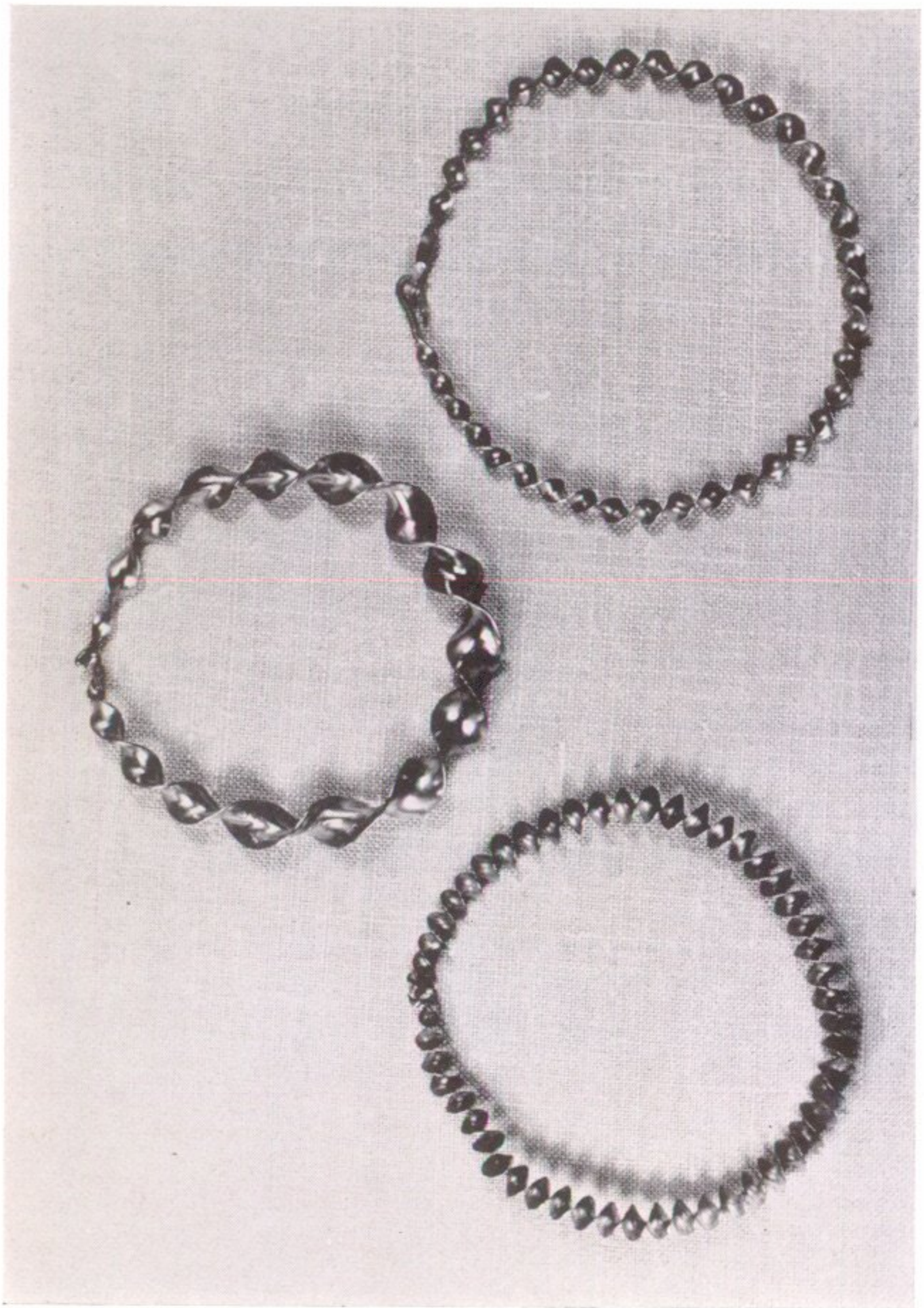
1. Bibliography: *P.S.A.S.*, XL (1905–6), 11; LXIV (1929–30), 297; XCIII (1959–60), 133.
2. Site: In front of the farmhouse of Caldonshill, Stoneykirk.
3. Circumstances: Found in 1905 during removal of a hedge; the objects were dispersed but five were eventually lodged in the National Museum, one in the Kelvingrove Museum, and one remains in private hands in Wigtownshire.
4. Description of Site: In earth, at a depth of about 1 ft.
5. Description of Objects (fig. 17, 4–9):
   (1) Palstave, length 6¼ in., wide blade with midrib, loop (N.M.A. DQ 206).
   (2) Palstave, length 5⅝ in., like (1) (N.M.A. DQ 207).
   (3) Palstave, length 6¼ in., like (1) (N.M.A. DQ 208).
   (4) Axe, length 5½ in., angled flanges, sunk stop (N.M.A. DQ 209).
   (5) Palstave, length 4¼ in. (fragment), wide blade (N.M.A. DQ 210).
   (6) Palstave, length 7 in., wide blade with trident, loop (Kelvingrove).
   (7) Palstave, length 6¼ in., wide blade with midrib and loop
6. Comparisons:
   (1–3, 5–7) Taunton Workhouse (Somerset), *Inv. Arch.* GB 43; Edington Burtle (Somerset), *Inv. Arch.* GB 44.
   (4) Class III, Balcarry group Balcarry (Wigton), Brit. Mus. 75.11–13.1–3; near Leven (Fife), Smith Inst. AJ12.
7. Dating: Glentrool phase.



1. Gold bracelets and rings from Duff House, Banff (*Nat. Mus. Ant. Scot.*)



2. Gold torc from Slateford, Midlothian (cast) (*Nat. Mus. Ant. Scot.*)



Gold ribbon torcs from (left) Lower Largo, Fife; (centre) Little Lochbroom; (right) Law Farm, Morayshire
(*Nat. Mus. Ant. Scot.*)