II.

MACE-HEADS OF "CUSHION" TYPE IN BRITAIN.

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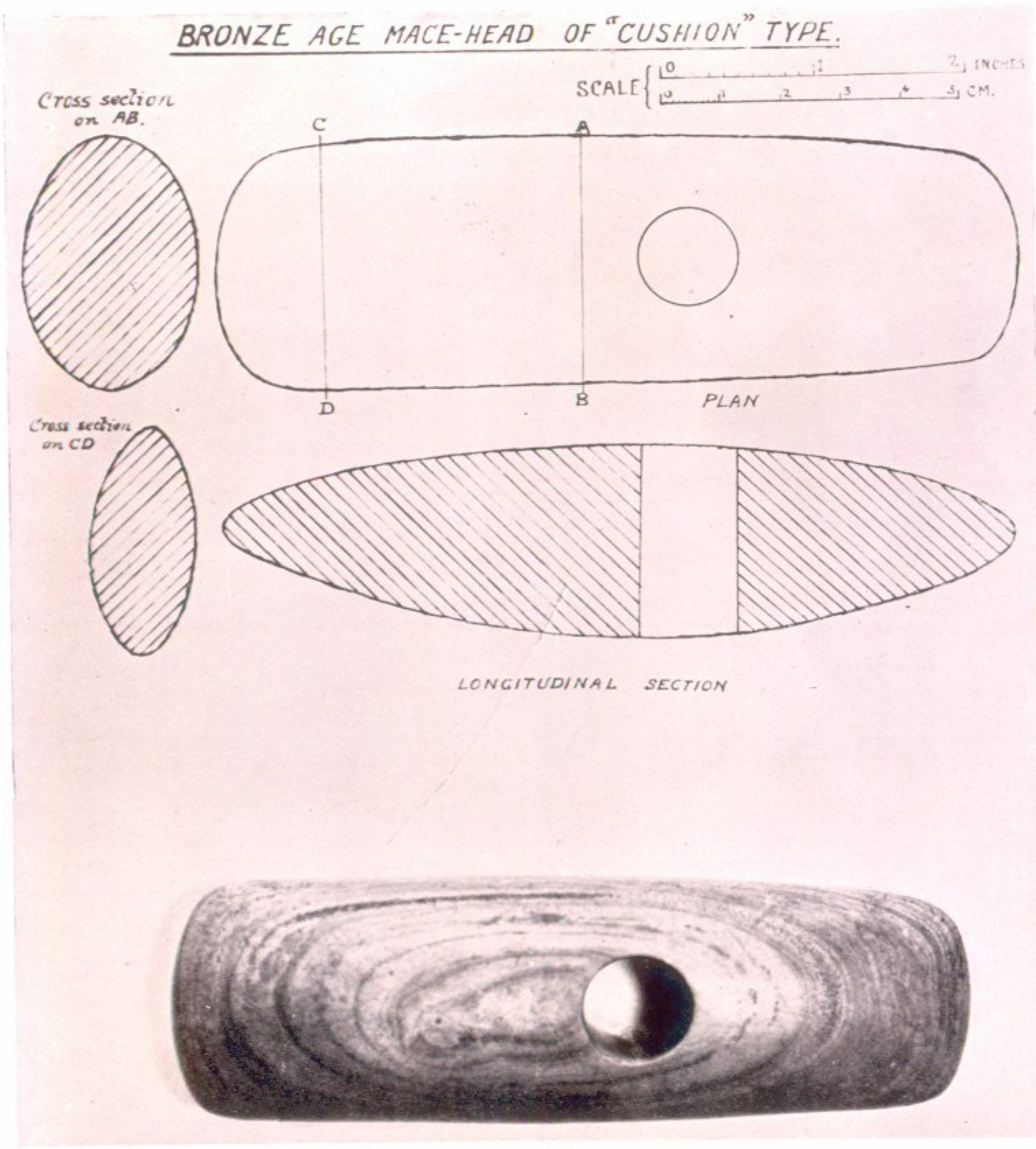
The perforated stone mace-heads of the Bronze Age show an interesting variety of forms, which fall into a number of fairly well-defined groups. In 1925 Mr Reginald A. Smith described and discussed the various shapes, and put forward a systematic classification of the main types.[1] One of the classes dealt with was that known as the "cushion" type.

Among certain prehistoric relics from the Outer Hebrides exhibited to the Society of Antiquaries of Scotland in 1934 was a specimen of this type of mace-head which had been found in the Isle of Lewis under five feet of peat. In a note on the exhibit I made comment on the distinctive and specific nature of this type of implement, and on its peculiar geographical distribution in Britain.[2] I have since given further attention to these points with the aim of examining more fully the details of shape and its variation in this type, the materials used and the limits of distribution; and of determining, if possible, the place of its origin and the purpose it was intended to serve.

The number of specimens in British collections is extremely limited.

[1] R. A. Smith, "The Perforated Axe-hammers of Britain," *Archæologia*, vol. lxxv. p. 77.
[2] *Proc. Soc. Ant. Scot.*, vol. lxviii. p. 430.



"Cushion" Mace-head, Knock, Isle of Lewis.

W. J. GIBSON.

[*To face p.* 17.

I have been able so far to trace only some 39. Twenty-six of these, through the courtesy of their custodians, I have had the opportunity of handling and measuring, and although the investigation cannot at present be completed owing to the circumstances of the war, it has seemed desirable that the details so far obtained should be recorded.

This further investigation has again emphasized the remarkably definite and clear-cut nature of the type. Not only is extraordinary fineness and accuracy of craftsmanship a constant feature, but at least a dozen specific characters, in dimensions, shape, and relation of parts, are invariably present. Some of these specific features are so unexpectedly subtle in refinements of detail as to be appreciated only after careful examination of the actual specimens (Pl. I).

The investigation has also confirmed the peculiarly extensive, and at the same time the restricted, character of the distribution of the type. Before discussing this, however, it will be well to describe the peculiarities of shape and material of the existing specimens.

Shape.—The form may be described generally as an oblong of pillow shape with convex curvature of sides, ends, and faces, and having at right angles to the faces a perforated cylindrical haft-hole, drilled with parallel sides (as contrasted with the hour-glass form in the perforated implements of the Neolithic culture). The ends are not sharp-edged but blunted by intentional rounding. The longitudinal section is a long ellipse, and the transverse section at any part a short ellipse. All these curvatures are extraordinarily exact. A curious refinement of the form, noticeable in careful examination, is a slight difference in the curvature of the two faces: one face is slightly more convex than the other, giving the implement a dorsal and a ventral aspect. This difference was of measurable amount in 20 of the specimens examined, probable in 4, and doubtful in 2. As regards breadth, all the complete specimens measured had one end narrower than the other, and the drilled haft-hole in all of them was nearer the narrower end.

The condition of the surviving specimens varies greatly. Some are as perfect as when they passed from the craftsmen's hands; others have suffered from exposure in the soil and show surfaces roughened by uneven weathering. Few show signs of use. In these few the ends are battered, probably by secondary use after their original purpose (whatever it was) had passed out of folk-memory. Of the 39 traced, 12 are broken (in some cases across the haft-hole), only half or less of the original length remaining. All specimens of the type are of relatively small dimensions, the largest less than 6 inches in length. Putting aside those of which the imperfect condition precluded exact measurement, 16 complete specimens (of which detailed particulars are tabulated below) gave the following dimensions. The range in length was from 9·3 to 14·5 cm., with an average of 11·8 cm.

The length as a rule is about $2\frac{1}{2}$ times the greatest breadth,[1] which averages 4·5 cm. There is rather more variation in the greatest thickness, which ranges from 2·8 to 3·8 cm., with an average of 3·3 cm. The diameter of the cylindrical haft-hole ranges from 1·4 to 2·2 cm., with an average of 1·75 cm. A typical specimen of medium size in perfect condition had a weight of 9 ounces.

Variations.—Variations in shape seemed worth considering, as a possible means of grouping some of the specimens. It has already been stated that the type is extremely definite, all the different points of design having been most carefully attended to in the making. In plan, one or two specimens have less rounding than others in the angles of the ends; and one specimen, from the Thames at Hammersmith, is rather wider in proportion to its length than the others. Outside these very slight differences only one easily recognized variation of shape occurs. This is in the position of the greatest breadth. In most of the specimens this is at or near the middle of the length, but in five of those examined it is at the wider end. These hail respectively from Skaill, Grind, and Orphir, all in Orkney, from Fife, and from the Thames. Further, the dimensions of three of these specimens show a surprising uniformity. These, taken to the nearest millimetre, are as follows:—

Specimen.	Total Length in Centimetres.	Greatest Breadth.	Greatest Thickness.	Diameter of Haft-hole.	Length from narrower End to nearer Edge of Hole.
A . .	14·5	4·6	3·8	{1·7 / 1·65}	5·3
B . .	14·5	4·6	3·3	1·8	4·6
C . .	14·5	4·6	3·8	1·8	5·1

The exactness of the agreement here in so many points seems too close to be a matter of chance. The three specimens, one is inclined to assume, must have come from the hands of the same maker, or have been fashioned by close copying of an identical model. Yet A is from Skaill, in Orkney, B was found in a cairn in Fife, and C in the Thames at Mortlake. All three are made of a compact dark-green stone, though not, I think, identical

[1] There is one marked exception to this—the small "cushion" mace-head found by Lt.-Col. W. Hawley in his excavation of Stonehenge in 1924 (*Ant. Jour.*, vol. v. p. 33). Of this specimen, the dimensions, kindly supplied by Mr Frank Stevens, are as follows: length 5·6 cm., greatest breadth 3·8 cm., greatest thickness 2·5 cm.

in material. All are most accurately finished, and the craftsmanship, including the difficult drilling of the haft-hole, is excellent.

Material.—As regards the material used, hard crystalline rocks have been invariably chosen. Gneiss, granite, porphyry, and various schists and igneous rocks are among those represented—all hard stones, and capable of fine polish. A preference on the whole seems to have been shown for green of various shades from grey to olive, sometimes relieved by crystals of darker minerals, such as augite and hornblende. Some specimens have the ground colour varied by greenish streaks or veins, probably of serpentine or chlorite. The natural colour-banding in some has been used to the best advantage for ornamental effect by the workman's direction of cutting. In sharp contrast with the green or dark colour that is usual, three examples, one from Caithness and two from the Thames, are transversely banded in black and white. The bearing of the selection of the rock material on the problem of distribution will be considered later.

Craftsmanship.—As already indicated, the fine quality of the craftsmanship put on these mace-heads is notable. The uniformity of the shape, with its careful observance of all the special features already pointed out, the accuracy of the dimensions, and the fine surface finish, all emphasize the care and skill bestowed by the makers. In particular one is struck, in measuring the specimens, with the unusually fine workmanship displayed in the drilling of the haft-hole. This, as said, is a cylindrical boring at right angles to the faces, and the exactness of its parallel sides is most striking. Whilst archæologists agree as to the skill shown in the boring of the hole, and accept its parallel-sidedness as presumptive evidence of Bronze Age date, they differ as to the nature of the boring tool—reed, wood, bone, or metal—used. "Rotatory abrasion" with a tubular instrument seems indicated by unfinished examples of other types of perforated axe-hammers.[1] To some observers a metallic tool is likely, though, in view of the perfection of Egyptian stonework executed with an abrasive but no metal tools, it is by no means proven. The "trueness" of the work, when the toughness and varying hardness of the material are considered, is remarkable. In the best specimens there is no measurable difference in the diameter of the hole throughout. In measuring them one finds that they fully warrant the admiration expressed by several archæologists for "the perfect boring of such hard stone."[2] Indeed, in all the highest qualities of craftsmanship the best of these mace-heads rival anything that the most skilful modern lapidary could be asked to produce.

Distribution.—As far as particulars are available, the geographic range of the type in Britain north and south is wide, but is very restricted east

[1] Sir John Evans has described in detail the various methods that have been suggested for the drilling of these perforated implements: *Ancient Stone Implements of Great Britain*, p. 47.

[2] R. A. Smith, *Archæologia*, vol. lxix. p. 8, and pl. i, fig. 8.

and west. Excluding one specimen of unknown locality, and taking the sites of the finds in order from north to south, the distribution (fig. 1) is as follows: Shetland 2 specimens, Orkney 11 (including 6 which I have examined, along with 2 figured identifiable fragments and 3 complete specimens described by Dr Callander which are probably of the type),[1] Outer Hebrides 2, Caithness 1, Aberdeenshire 1, Angus 1, Perthshire 1, Fife 2, Midlothian 1, Yorkshire 6, Lincolnshire 1, Kent 1, the Thames 5, Wiltshire 2. This gives 22 from Scotland and 16 (one of doubtful locality) from England. To these doubtless fall to be added a few, in collections or private hands, which I may have missed. It will be noticed that of those traced only two belong to the west side of Britain, and these to the extreme north-west corner, as if they had come round the north from the east coast or south from the Orcades. In number of specimens Orkney stands at the head of the list, followed by Yorkshire and the south of England (the Thames and Wiltshire). There is, however, not sufficient evidence to settle whether the distribution was from Yorkshire northward and southward, from the Thames and Wiltshire northward, or from Orkney and Shetland southward.

In all the specimens examined the stone chosen belongs to the older crystalline rocks, and would have been most easily obtained from the archæan types of the northern areas. But glacial transport has scattered boulders of the older crystalline rocks far and wide, and in any case, material for tools, weapons, and ornaments passed readily, from the earliest times, as objects of trade from place to place, as in the case of flint, pitchstone, obsidian, amber, and bronze. The qualities prized in the selection of the stone were evidently hardness, susceptibility to fine surface finish, and decorative appearance. Dr T. M. Findlay identified the material of the Hebridean and the Fife specimens as a porphyritic rhyolite of a kind found in Britain, as far as is known, only in Northmaven, Shetland.[2] One of the Thames specimens seems to be of a very similar material. In migratory drifts of implements and pottery into or through Britain, we are more familiar with movements from south to north than in the reverse direction: for example, the axe-heads and round-bottomed pots of the Neolithic culture, the goblets of the Beaker folk, Irish halberds, Yorkshire axes, and cut-and-thrust swords had a northward movement. But there is occasional indication of a drift in the other direction. Jet necklaces, for instance, and possibly the Encrusted Urns,[3] spread from the north southwards, and there can be no reasonable doubt, I think, that steatite

[1] Dr Callander called attention some years ago to the unusually large number of perforated stone hammers of various types that had been found in Orkney: "25 in all, broken or whole."—"Certain Prehistoric Relics from Orkney," *Proc. Soc. Ant. Scot.*, vol. lxv. pp. 93 *et seq.*

[2] *Proc. Soc. Ant. Scot.*, vol. lxviii. p. 432.

[3] Prof. V. Gordon Childe, *Prehistoric Communities of the British Isles*, p. 150; Sir Cyril Fox, *Ant. Jour.*, vol. vii. p. 123.

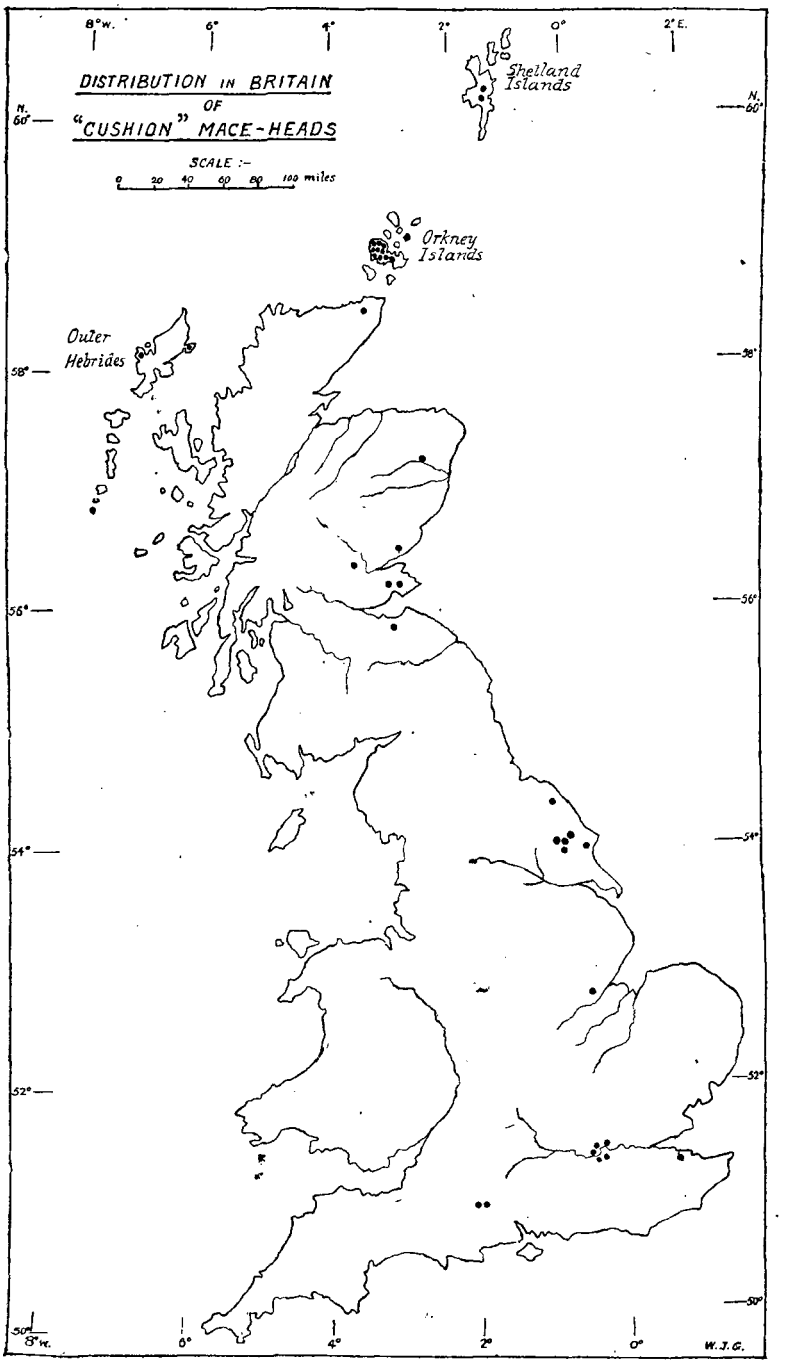


Fig. 1. Distribution map. Note: Position of sites approximate only

pots, found somewhat widely, travelled southward after having been carved, some of them at least, *in situ*, in the talc schists of Shetland rock faces. There is sufficient evidence to show that at sundry times and in various ways the far north has shown an originality and initiative of its own. Insularity may have had a bracing effect on communities that have had to adapt themselves to new environment or to the absence of familiar materials on which to operate. The treelessness of Caithness, Orkney, and Shetland, with their possession of land suitable for tillage by early wanderers, whose tools would not have enabled them to subdue primeval forests, may have had something to do with an early development of individuality. It certainly determined the use of stone instead of wood for structures and furnishing, as at Skara Brae.

On the other hand, even in face of the greater number of specimens of our type found in the north, the possibility of a spread northward from Wiltshire must be considered. The wealth of the Wessex overlords encouraged both far-flung trade and the services of skilled craftsmen capable of fine workmanship such as these objects display. On the whole, the data at present available do not warrant any dogmatic claim for either a northern, a central, or a southern origin of the type.[1]

Holiday visits to the Continent gave me the opportunity of examining collections first in Gascony and Provence, later in Finland, Denmark, Sweden, and Norway, with negative results, while Professor Bosch Gimpera tells me that the type does not belong to the Iberian Peninsula; hence the arrival of the type either from the Mediterranean region or from the Baltic area seems excluded. On the other hand, there is a specimen in the Liège Museum from Tongres which, diverging in several particulars from the type under discussion, must be regarded as related.[2] Professor Childe suggests that this specimen raises the possibility of an ultimate connection with the perforated adze or hoe blades of the Omalian culture on the Meuse and the whole Danubian Neolithic of central Europe.

Purpose.—When we come to the question of the purpose these implements were intended to serve, we enter the realm of speculation. One

[1] The existing British specimens are preserved in the following collections: National Museum of Antiquities of Scotland, 15; British Museum, 4; Mortimer Museum, Hull, 4; South Wilts and Blackmore Museum, Salisbury, 2; single specimens in various provincial museums, and a few in private collections. But the inquiry is incomplete as, owing to war conditions, several collections in the west and south-west of England have remained unvisited.

A single specimen in Ireland (in the National Museum, Dublin) is of unknown locality, and Dr Mahr was of opinion that it was not from an Irish source.

[2] This specimen is figured in the Liège catalogue with the accompanying description: "Marteau ou casse-tête perforé, en roche crystalline verdâtre (gneiss ou micaschiste). La face non representée est plane, et les extrémités sont arrondies et non tranchantes. Tongres."—*Liège Archæological Museum Catalogue* (1929), p. 124, fig. 116 (1). In these details, with the exception of the flat face, it agrees with typical British specimens; but as far as one can judge from the figure it differs from them in the proportion of breadth to length, and possibly in the absence of tapering in the width, and the position of the haft-hole.

negative may be stated with a good deal of assurance. They used to be called axe-hammers. Their shape would make them ill-suited either as hammer or axe. Further, with the exception of two or three specimens, there is no indication of their use as tools. Even the few exceptions which show some marks of abrasion are probably, as already suggested, to be accounted for as a later application to a use for which they were not designed, at a stage when the tradition of their original purpose had died out. The same explanation may account also for traces on three specimens of secondary grinding. Again, from their slight size and rounded edges, any use of them as weapons seems unlikely. These arguments, especially the absence in the best preserved specimens of any marks of use, combined with their decorative quality and the pains put upon the details of shape and fine finish, have led most recent archæologists to the conclusion that they were intended neither as tools nor as weapons, but were, instead, meant for some ritual or ceremonial use, or as insignia of authority. Mr R. A. Smith, Dr Callander, and others pointed this out some years ago for several types of such stone implements. Hafted, they could be conveniently handled as insignia, or borne aloft ceremonially in procession. If they were used in a religious ritual they need not have been actually hafted, although all have the haft-hole.

Symbolism.—The use of mace-heads as symbols of authority, both secular and spiritual, has been familiar from the days of the first Pharaohs and the earliest city kings of Sumer, and survives in the regalia of European sovereigns, University Chancellors, and South Sea chiefs.

In the grave of a Wessex chief at Bush Barrow, Normanton, was found, with a bronze axe and daggers and certain gold mountings, the stone head of a mace or sceptre, the perished shaft of which had been presumably about a foot in length.[1] This form of mace, with its short shaft and polished stone head, is a suggestive parallel for the kind of mace we are seeking as a ceremonial symbol of chieftainship, but the type of head here is unlike that which we are considering, and in particular the form is simple, with the haft-hole in the centre, and without any of the subtleties of shape that have been described.

In any case, the view that these mace-heads were symbolic is now generally accepted: since ancient and recent examples amply demonstrate that both tools and weapons may acquire symbolic significance (*e.g.* the Pharaoh's flail, the bishop's crozier, the square and compasses of free-masonry). For our type the farmer's hoe or the carpenter's adze might have provided the prototype.

[1] Stuart Piggott, "The Early Bronze Age in Wessex," *Proc. Preh. Soc.*, vol. iv. p. 62; a restoration of the mace is figured on p. 63, and also in Prof. Childe's *Prehistoric Communities of the British Isles*, p. 136; and an exact drawing of the stone head is given in Mr R. A. Smith's paper, *Archæologia*, vol. lxxv. p. 90, fig. 20. The original is in the Wiltshire Archæological Museum at Devizes.

Age.—No reliable associations fix the age of our type. While the technical considerations adduced above point to the Bronze Age, neither distribution nor other criteria enable us to associate the mace-heads with any of the several ceramic or metal types with the aid of which that long period is generally subdivided.

Some future discovery with authenticated associations may yet remove the reproach of such an inconclusive finding. The distribution of other well-defined types of Bronze Age mace-heads [1] that have a wider distribution and clear associations may also help to throw further light on the relation of these interesting objects to the other Bronze Age elements that indicate cultural drifts or migratory movements.

I am indebted to Mr Reginald A. Smith, Dr Elgee, and Dr Phillips for reference to specimens of the type that I might otherwise have missed, and to Professor V. Gordon Childe for helpful criticism. Thanks are owing also to Mr Edwards and the late Dr Callander, and to the Curators and Keepers of the various archæological museums I have visited in Britain and on the Continent, for their courtesy in granting me access to their collections or in answering inquiries.

[1] Such as, for instance, the double-axe forms, axe-hammers with truncated conical butt, the well-marked and persistent "pestle" type, or the dished forms with ornament like the Crichie and Chapelton specimens with incised lines, or those from the River Bann with raised flanges.

DETAILED MEASUREMENTS OF "CUSHION" MACE-HEADS.
(Stated in centimetres.)

No.	Where found.	Total Length.	Greatest Breadth.	Greatest Thickness.	Diameter of Haft-hole.	Distance from narrow End to nearer Edge of Hole.	Breadth ½ inch from narrow End.	Breadth ½ inch from broad End.	Dorsal and Ventral Difference of Curvature.	Rounded Edges.	Marks of Use Absent.	Where kept.
1	Shetland, Barrow in . .	10·0	3·5	2·8	1·7 1·8	3·7	3·3	3·4	×	×		Nat. Mus. Ant. Scot.
2	,, Scarpiegarth . .	10·2	4·9	3·0	2·2	3·0	4·2	4·6	×			N.M.A.S.
3	Orkney, Skaill . . .	14·5	4·6	3·8	1·7 1·65	5·3	4·3	4·5	×	×	×	,,
4	,, Grind . . .	13·7	4·7	3·8	2·2 2·1	5·3	4·4	4·7	×	×		,,
5	,, Orphir . . .	9·7*	4·6	3·3	1·3 1·5	3·9	4·3	4·6	×	×		,,
6	,, Smoogro. . .	10·8	4·5	3·2	1·7 1·8	4·1	4·0	4·1	×	×	×	,,
7	Isle of Lewis, Knock . .	13·1	4·2	3·2	1·7	4·6	3·7	4·0	×	×	×	Nicolson Institute, Stornoway.
8	Caithness	10·5	4·6	..	1·4	3·5	3·9	4·3	×	×	×	British Museum.
9	Angus, Monikie . . .	12·4	4·3	3·2	1·7	3·8	3·7	4·0	×	×		N.M.A.S.
10	Perthshire, Pitcairngreen .	11·2*	4·2	3·2	1·7	4·5	3·8	4·1	×	×		,,
11	Fife, Cairn in . . .	14·5	4·6	3·3	1·8	4·6	4·1	4·3	×	×	×	,,
12	Midlothian, Inveresk . .	12·6	4·4	3·7	1·7	4·2	4·0	4·2	×	×		,,
13	Yorkshire, near Whitby .	10·8	4·4	2·8	1·9	3·6	3·8	4·1	×	×		Yorkshire Museum, York.
14	River Thames, Mortlake .	14·5	4·6	3·8	1·8	5·1	4·3	4·6	×	×	×	London Museum.
15	,, Hammersmith	9·3	5·1	2·9	1·9	3·0	3·9	4·6	×	×	×	British Museum.
16	,, Twickenham .	11·3	4·7	3·1	1·7	4·0	4·0	4·3	×	×	×	,,
	Averages .	11·8	4·5	3·3	1·8							

* Too low; end abraded.