

II.

NOTES ON THE OBANIAN WITH SPECIAL REFERENCE TO
ANTLER- AND BONE-WORK.

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While visiting Scotland in December 1955, primarily to deliver the Dalrymple Lectures sponsored by the Glasgow Archæological Society and by the University of Glasgow, I took the opportunity to re-examine material from the Oban caves and from the Oronsay and Risga middens with the prime object of investigating the methods used to work antler and bone. As a result of this I have been led to certain conclusions about the origin and cultural context of the Obanian and these are set out in separate sections of this brief article. I am greatly indebted to the authorities of the National Museum of Antiquities at Edinburgh, the Hunterian Museum of Glasgow University, the Kelvingrove Art Gallery and Museum at Glasgow and the Stewatry Museum, Kirkcudbright for granting every help and facility in allowing me to examine material in their charge; and I am particularly grateful to Dr A. S. Clarke of the Royal Scottish Museum for so kindly identifying the bones from which a number of implements in the National Museum of Antiquities were made. In view of the fact that the material from Risga has yet to be published in full I have made no attempt to make a full-scale study and have confined myself to offering comments under the following three heads.

I. ANTLER- AND BONE-WORK.

The most important specimens for reconstructing methods of work are pieces discarded as waste during prehistoric times and it is understandable that as a rule these have not been preserved so carefully as finished artifacts. Whereas the latter are mounted or at least displayed, much of the former have been kept loose in containers and suffered abrasion precisely at the places where one might have expected to find the clearest traces of ancient workmanship. Yet, while it may be emphasised that a detailed picture can only be expected to emerge from study of the total material from an extensive excavation while still in a fresh unabraded condition, sufficient can be learnt from what remains to reveal at any rate the main lines on which the Obanians worked.

The most important source of raw material for implements and weapons—apart from flint and stone—was red deer, the main quarry in the chase, and the Obanians made use both of their antlers and certain of their bones, notably their lower leg (metacarpal and metatarsal) bones. The leading products were: (a) harpoon-heads, (b) punches or rubbers, (c) awls and miscellaneous bone points, (d) scraping tools and (e) perforated mattock heads.

(a) *Harpoon-heads*.¹ These objects, which have long featured as type fossils of the Obanian culture, were finished too completely to furnish clues about the initial stages in their manufacture. It may, however, be noted that, although all those from *Druimvargie*, *Caisteal-nan-Gillean* (and butt-end) and *Risga* (in *Lacaille*; others, unpublished, in the Hunterian), and six out of seven of those from *Cnoc Sligeach*, were made of bone, all seven of those from *MacArthur's Cave* were of antler. Since *MacArthur's Cave* is considered on geological grounds to be the earliest of the series,² this supports the notion of a progression from antler to bone such as we know to have taken place as between the Proto-Maglemosian and the mature Maglemosian cultures. It may be significant that each of the harpoon-heads of "Obanian" affinities from the territories south of the main Obanian distribution—those from the *Dee* at *Cumstoun*, near *Kirkcudbright* (Pl. XII, 2); from the *Irvine* at *Shewalton*; from the *Victoria Cave*, *Settle*; and from *Whitburn, Co. Durham*—is made from stag antler.

(b) *Punches or rubbers*.³ These were by far the most numerous tools from the middens. A majority of those from *Cnoc Sligeach*—four-fifths of those from the first season—were made from elongated pebbles of schistose stone, but at *MacArthur's Cave* there were only three stone ones against 140 of antler and bone. Regardless of the material, they are narrow and show signs of pronounced wear at one and occasionally at both ends. As to what produced this there is considerable diversity of opinion. *Breuil*⁴ held that it was caused in the main by flaking flint, though allowing that some of the tools were used, as originally suggested by *Grieve*⁵ for detaching limpets from rocks. *Movius*,⁶ on the other hand, followed the present writer⁷ in maintaining that flint was too scarce on the sites to support the notion that their main use was as flaking-tools, and held that they were used partly as rubbers for working animal skins, partly for detaching limpets from rocks and partly for working wood, a function for which their working edges would hardly seem to be adapted. *Lacaille*⁸ discards the improbable wood-working theory and clings to the idea that they were used in part as "scrapers, rubbers and polishers in the treatment of skins" and in part for the traditional function of detaching limpets. What is common ground is that the characteristic rubbing was due to use. Those of antler and bone consisted as a rule of nothing more than splinters broken out of the parent material, though

¹ A. D. *Lacaille*, *The Stone Age in Scotland*, fig. 81, nos. 9-11; fig. 82, nos. 11-12; fig. 86; fig. 97 and fig. 104, nos. 18-19. Oxford, 1954.

² *Ibid.*, p. 243.

³ *Ibid.*, fig. 81, nos. 1-8; fig. 82, nos. 1-8; fig. 93; fig. 102, nos. 1-8.

⁴ H. *Breuil*, "Observations on the Pre-Neolithic industries of Scotland," *P.S.A.S.*, LVI (1922), 261-81. See pp. 267-71.

⁵ S. *Grieve*, *J. Linnaean Soc.*, XVI (1882), 485-7.

⁶ *Hallam L. Movius*, *The Irish Stone Age*, 183-5. Cambridge, 1942.

⁷ J. G. D. *Clark*, *The Mesolithic Age in Britain*, 15. Cambridge, 1932.

⁸ A. D. *Lacaille*, *op. cit.*, 200.

in a few examples of bone, retaining one articular end, they comprise in effect the residue from which other pieces have been detached. The important point for our purposes is that in no case is there any trace of longitudinal grooving: the margins are formed by the fractures effected when the raw material was split up, save that in one or two rare instances they have been regularised by local working.

(c) *Awls and miscellaneous pointed tools.*¹ These appear to have been made exclusively of bone, e.g., from MacArthur's Cave, Druimvargie Distillery Cave, Oban, and from Cnoc Sligeach, and to have been shaped by rubbing and polishing down either the ends of small bones or narrow splinters from larger ones.

(d) *Scraping-tools.* Under this heading are included short broad objects of stag antler,² bone and, rarely, of boar's tusk,³ bevelled and rubbed smooth at one end, the working edge convex and often slightly hollow, resembling a type of Eskimo skin-scraper.

(e) *Mattock-heads.* As Lacaille⁴ was the first to point out, the Obanian deposits have yielded parts of perforated antler mattock-heads similar to those from the carse deposits of the Firth of Forth. Not all the pieces to which Lacaille drew attention can, in the present writer's view, be accepted as belonging to this class: for example, fragments with convex working-edge like one from Risga⁵ and others from Cnoc Sligeach⁶ would appear to relate more to the preceding category (d). On the other hand Lacaille has hardly made enough of the splendid and substantially larger piece from Risga, one end of which he declares "may have been perforated for hafting" and which he illustrates⁷ in such a way that the perforation is barely visible: in order to bring out the true character of this significant piece the present author has drawn it from three aspects (fig. 1), in each of which the profile of the complete implement, as deduced from that of the Meiklewood specimen (fig. 2), has been indicated. Again, Lacaille notes⁸ the occurrence at Druimvargie of a piece of stag antler broken across the perforation and rightly compares this with examples from the carse clays, but he makes no mention of the complete, though small, specimen from Cnoc Sligeach, preserved in the Hunterian Museum (fig. 3), which was kindly pointed out to the present author by Mr Robin Livens.

From a careful study of these objects and of the associated waste, and by taking into account the flint and stone implements available to the Obanian craftsmen, it has been possible to reach certain conclusions about the manner in which they utilised antler and bone and obtained the material they needed. To begin with one may note that burins played only a subsidiary role, if indeed they were included at all in the Obanian tool-bag: such few examples as Lacaille claims from Risga are described by him⁹ as "poor" and indeed they are so miserable as to make their interpretation a matter of some uncertainty. What is quite sure is that by comparison with Upper Palæolithic and with many Mesolithic industries the Obanian is markedly

¹ *Ibid.*, fig. 81, nos. 7-8; fig. 82, nos. 8-9; fig. 83, no. 2 and fig. 96.

² E.g., from Caisteal-nan-Gillean (Lacaille, *op. cit.*, fig. 87) and from Risga.

³ E.g., from MacArthur's Cave (*Mus. Nat. Ant. Scot.*, HL 117).

⁴ *Op. cit.*, 200, 208 ff.

⁵ *Ibid.*, fig. 104, no. 16.

⁶ *Ibid.*, fig. 95, left and middle.

⁷ *Ibid.*, fig. 103.

⁸ *Ibid.*, p. 208.

⁹ *Ibid.*, p. 239.

deficient in burins. This is highly significant from the point of view of this study, because the most diligent examination of the antler and bone material from Obanian sites has failed to reveal any indication that burins were employed, at any rate in the task of detaching portions of raw material from their parent bones and antlers: in other words it appears that, *pace* my friend Dr Therkel Mathiassen,¹ the Obanians managed to work these

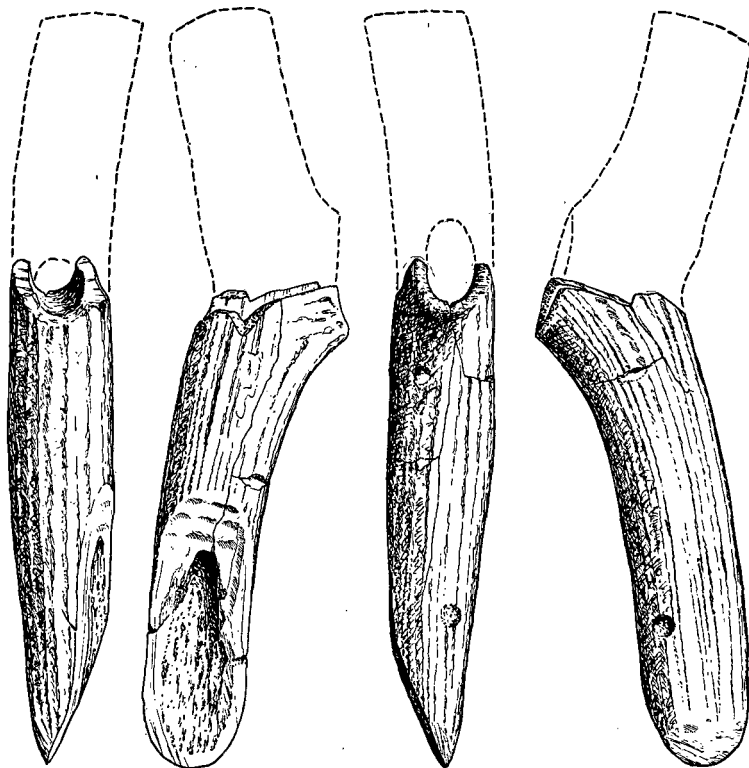


Fig. 1. Lower portion of socketed mattock-head of stag antler from Risga. (Kelvingrove Museum and Art Gallery, Glasgow.) ($\frac{1}{2}$.)

materials quite well without employing the groove and splinter technique involving the use of burins, a technique widely used among the Upper Palæolithic peoples and by them transmitted to many communities of Post-glacial Europe.

The Obanian method was evidently to cut antlers into sections (fig. 4). The craftsmen apparently divided up the antler by "nibbling" through the hard outer wall of the antler at an oblique angle, a method used to remove tines by the Proto-Maglemosian and Maglemosian peoples. Subsequent abrasion has made it difficult to photograph the characteristic

¹ *Antiquity* (1955), 172.

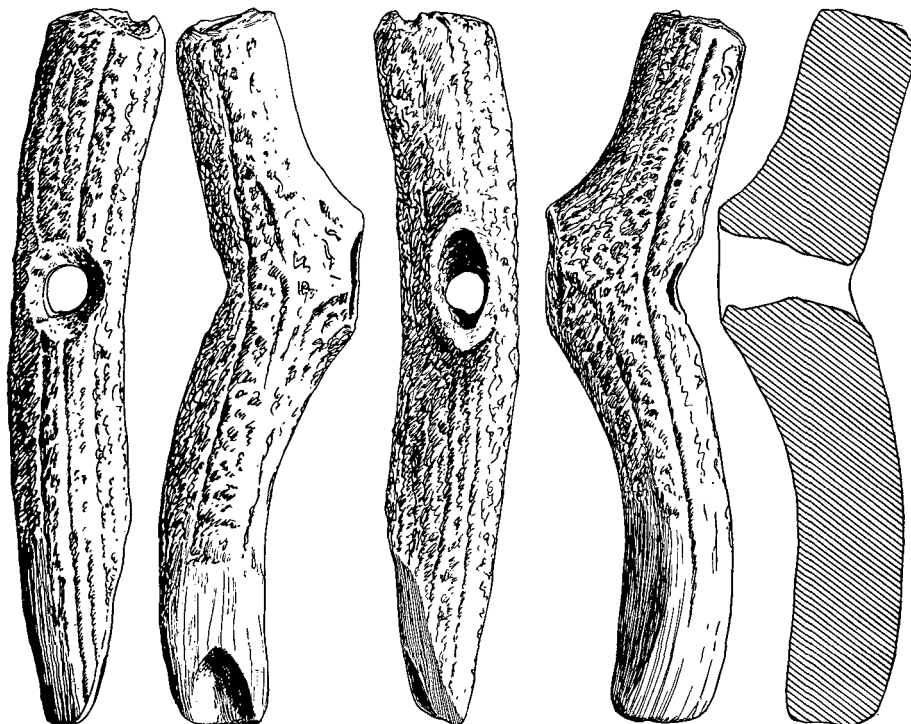


Fig. 2. Socketed mattock-head of stag antler from Meiklewood. ($\frac{1}{2}$.)

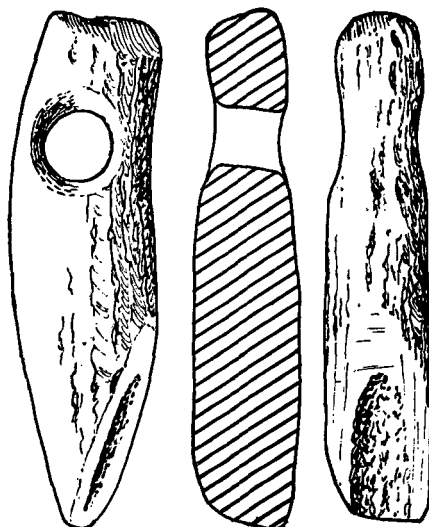


Fig. 3. Mattock-head of stag antler from Cnoc Sligeach.
(Hunterian Museum, Glasgow. B.1914.516.) ($\frac{1}{2}$.)

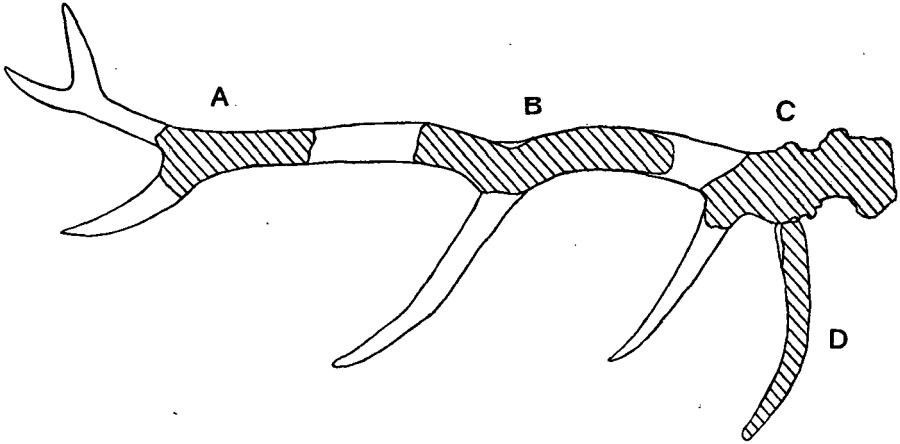


Fig. 4. Key to the utilization of stag antler by the Obanians.
 A = fig. 5A; B = fig. 2; C = fig. 6; D = MacArthur's Cave. Nat. Mus. Ant. Scot. HL 287.

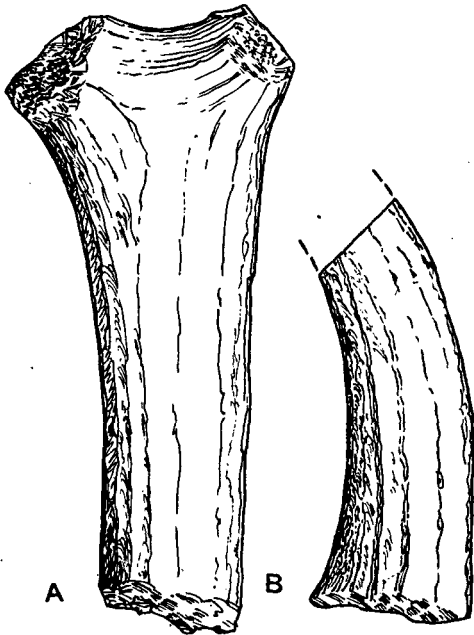


Fig. 5. Portions of antler detached from beam by the "nibbling" technique. A = top of beam and base of crown; B = tine, Risga (Hunterian Mus.). Caisteal-nan-Gillean (Nat. Mus. Ant. Scot. HP 351). ($\frac{1}{2}$.)

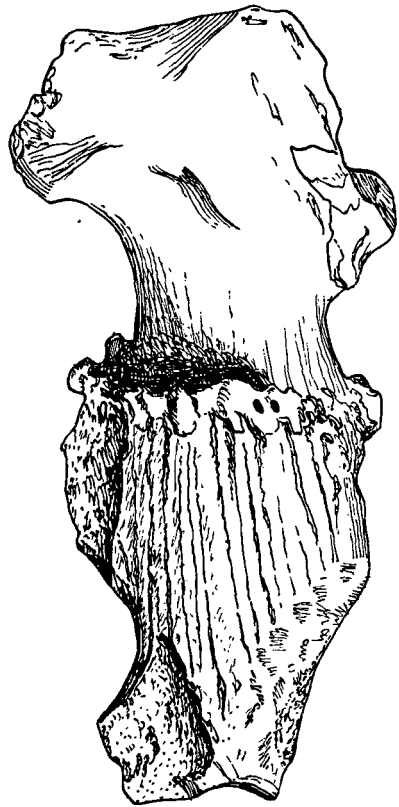


Fig. 6. Base of antler broken out of skull, the beam detached by the nibbling technique, from Drummargie, Oban. (Nat. Mus. Ant. Scot. HL 430.) ($\frac{1}{2}$.)

marks of this "nibbling" technique¹ on the Obanian pieces and the lower end of a tine from Star Carr, evidently detached by the same technique, is included on our Pl. XII, C, for comparison, since the marks are particularly

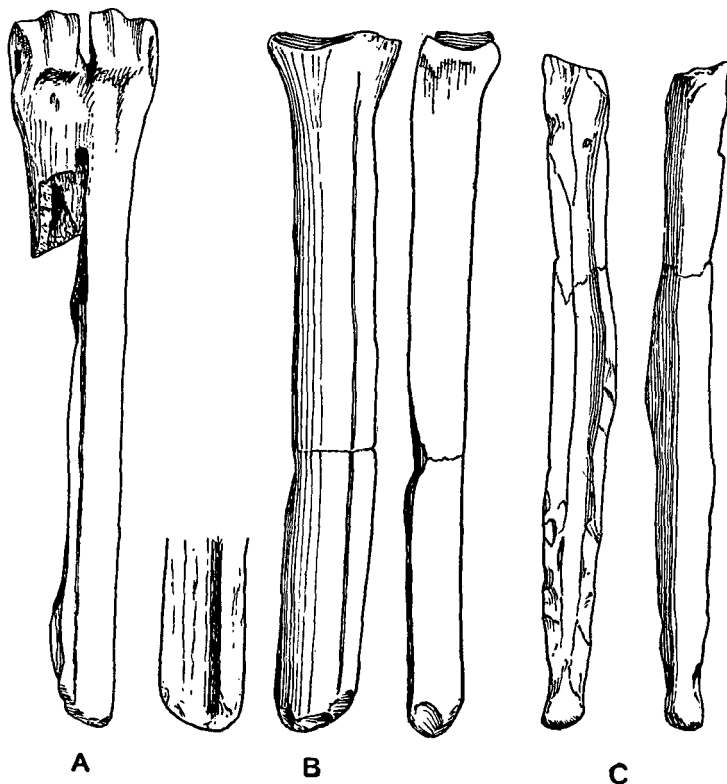


Fig. 7. Punches (or "limpet-scoops") made from metacarpal (A, C) and metatarsal (B) bones of Red Deer.
 A. MacArthur's Cave. (Nat. Mus. Ant. Scot. HL 181.)
 B. Druimvargie. (Nat. Mus. Ant. Scot. HL 396.)
 C. Druimvargie. (Nat. Mus. Ant. Scot. HL 397.) (½.)

well preserved. It can be seen that the traces of work comprise sub-rectangular facets striated along the line of action and that at least in the case of the Star Carr specimen there are two zones of facets, showing that the outer walling was not worked through at the first round.² The tool used for such work can only have been of flint and its working edge must have been robust to do the job and slightly uneven to produce the striæ. Numerous tines or fragments of such, bearing traces of the characteristic markings at the

¹ Cf. J. G. D. Clark, *Excavations at Star Carr*, I, 136. Cambridge, 1954.

² The same technique was used by the Danish Maglemosians, for example for detaching tines from stag antlers. Tines with the characteristic "nibble" marks may be cited from Holmegaard (Nat. Mus. D. 751, 783, 785-6, 1083), Lundby (L 25, 404) and Svaerdborg (X 4144).

lower end, could be identified, for example from MacArthur's Cave¹ and from Risga² (fig. 5B). Moreover the same method was used to detach the beam from the base of the antler. The base of a fine antler broken out of a skull from Drúimvargie³ shows that the beam was cut off by this means somewhat obliquely above the bez tine: the situation is illustrated by fig. 6 and details of the "nibbling" marks, so far as these have survived, can be seen on Pl. XII, A1 taken from a slightly different angle. From the beam it was possible to obtain "blanks" for two types of perforated mattock-head, as well as scraping tools, and to obtain narrow pieces for punches and harpoon-heads by splitting sections of antler. Large mattocks of the Meiklewood-Risga type were taken from the middle part of the beam in such a way that the perforation could be made through the base of the bez tine, which itself served as a socket to give added security to the handle. A rather lighter type could have been obtained from the upper end of the beam and the base of the crown, and what may well be a "blank" for such is indeed preserved in the National Museum of Antiquities, deriving most probably from Caisteal-nan-Gillean: such a piece (fig. 5A) would have been finished off by perforating the expanded area at the base of the crown and bevelling the lower end to form a working edge. Miniature ones like that from Cnoc Sligeach (fig. 3), on the hand, were presumably cut from sections of large tines.

In utilising the long bones of Red Deer, particularly the lower leg bones (metacarpals and metatarsals), the procedure was presumably to snap off one end and then split the bone (fig. 7). Not a single trace of a cut or a groove was found on the edges of the numerous punches examined.

II. THE ORIGIN OF THE OBANIAN.

When in 1895 Dr Joseph Anderson published the finds from MacArthur's Cave, Oban, discovered during the previous year, he compared the antler harpoon-heads with ones from the Upper Palæolithic of France and from the neolithic lake-villages of Switzerland.⁴ That same year Piette published his discoveries from a layer intermediate between Upper Palæolithic and Neolithic in the cave of Mas d'Azil, Ariège,⁵ and it was to Azilian harpoon-heads that Anderson turned in 1898 when he sought comparisons for those from the sites near Oban and on Oronsay.⁶ In his classic survey of 1922 the Abbé Breuil, though noting differences, including the frequent use of bone rather than antler, had no hesitation in describing the material as Azilian.⁷ Childe, writing in 1935, noted that the harpoon-heads from

¹ Nat. Mus. Ant. Scot., HL 287.

² Nat. Mus. Ant. Scot., HL 430.

³ E. Piette, *L'Anthropologie*, VI (1895).

⁷ *Op. cit.*, pp. 279-81.

² Hunterian Mus., Glasgow.

⁴ *P.S.A.S.*, XXIX (1895), 226.

⁶ *P.S.A.S.*, XXXII (1898), 313.

Oban (fig. 8) "resemble the Azilian of the Continent too closely for an independent origin to be plausible"¹ and in that opinion he was followed by Movius.²

The analogy is rendered all the more striking from the circumstances that the techniques employed to make the blanks, from which the harpoon-heads were fabricated, differed radically in the two areas. Whereas, as the present writer has pointed out, the Azilians employed the ancient Upper

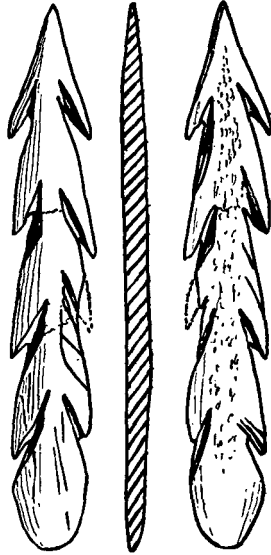


Fig. 8. Harpoon-head of stag antler from MacArthur's Caves, Oban.
(Nat. Mus. Ant. Scot. HL 188.) ($\frac{3}{8}$.)

Palaeolithic groove and splinter technique, involving the use of flint burins, the Obanians made do with altogether ruder methods. Yet, differing as they did in the initial phases of their production, the finished harpoon-heads are so similar that our leading authorities found it impossible to regard them as belonging to wholly distinct traditions.

It is significant that in dissenting from the Azilian connection Mr Lacaille does so, not on typological, but on chronological and geographical grounds.³ To take the geographical objection first, it is true that there is apparently a wide gap in the distribution of the Azilian and Obanian cultures, but there are two factors which need to be taken into consideration here. For one thing hunter-fishers are capable of spreading over very extensive distances and particularly where water-transport is available they do not necessarily leave a continuous trail behind them: for example, if Freundt

¹ V. G. Childe, *The Prehistory of Scotland*, 16. London, 1935.

² Movius, *op. cit.*, 185.

³ *Op. cit.*, 95-96, 241.

is correct,¹ it would appear that hunter-fishers akin to the Ertebølle people of Denmark spread up the Norwegian coast as far north as Finnmark, a distance approximately twice as great as that separating the Gironde Estuary from the Obanian habitat in south-west Scotland: and to judge from the existing pattern of finds it would appear that they by-passed extensive tracts of coast which for one reason or another were unfavourable for settlement. Then, as Professor Childe long ago pointed out,² the mesolithic coasts of France and south-western Britain are no longer available for study and it is therefore impossible to be sure that the gap in finds really indicates a break in the distribution of settlement.

As to chronology, there is certainly a wide disparity in age between the continental Azilian (though hardly so great as in the case of the Creswellian) and the Obanian in the matter of age: whereas the former followed close on the final Magdalenian and must, therefore, belong to a very early stage of the Post-glacial period (presumably to the early Pre-Boreal, equivalent to zone IV in the Jessen and Godwin schemes), the latter appears to belong to a late stage of the Atlantic (Jessen and Godwin zone VII). Yet in a sense the geographical distance between the two groups diminishes the chronological difficulty, since it may well have happened that the northward spread was only achieved slowly; moreover if, as is argued below, the Obanian is an outgrowth of the Larnian, the gap is narrowed still further, since the latter was present in Northern Ireland already by the beginning of zone VI.

This is consistent with some important differences in economy and material culture. As is well known the Azilians were inland hunters directly descended from the Late Magdalenians, whereas the Obanians were to some degree adapted to coastal settlement. Unfortunately the submergence of the coasts of France and of southern Britain prevents us from discovering whether and, if so, when and where the Azilians adopted a coastal way of life. One might, as a hypothesis, assume that they did so when their inland hunting grounds were overrun and that they moved northward along the former shore-line of western France. During their life on the coast they may have taken to skin-boats for hunting and fishing, such as the Obanians most probably³ and the Arctic people of Western Norway certainly used.⁴ With these boats they may have worked their way up the western shores of Britain to the North Channel much as the bearers of the Clyde-Carlingford were to do in later times. The initial process, involving some adaptation in the way of life, could well have taken a long time, and this may account for a certain impoverishment in the culture instanced by the loss of the groove

¹ E. A. Freundt, "Komsa-Fosna-Sandarna," *Acta Arch.*, XIX (1948), 1-68. See map p. 3.

² *Op. cit.*, 17.

³ Their occupation of islands such as Oronsay and Risga indicates boats and their lack of wood-working tools (see p. 93) argues against these having been dug-outs.

⁴ Such are frequently represented on the Arctic rock-engravings of NW. Norway in a context of hunting and fishing. See J. G. D. Clark, *Prehistoric Europe. The Economic Basis*, 283 and Pl. IV (b). London, 1952.

and splinter technique and the adoption of a cruder method of working bone and antler. Again, it is tempting to explain the punches or rubbers of stone, bone and antler, so strongly characteristic of the Obanian, in terms of specifically coastal activities such as detaching limpets from rocks.

It is thus arguable that neither the geographical nor the chronological argument is decisive against the Azilian connection of the Obanian, and indeed, that both are consistent with a theory of gradual spread. Latterly, it is true, Movius¹ has followed Lacaille in arguing against the Azilian connection, but the typological objections which he adduces are not very cogent and if anything strengthen our case: his contention that the Obanian points are longer than these of the Azilian is hardly supported by the facts recently presented by Thompson;² and the fact that the Scottish heads are mainly of bone, whereas those of the Azilian are characteristically of antler, merely reminds us of the parallel situation as between the Proto-Maglemosian of Star Carr and the Maglemosian proper. Movius himself, indeed, speaks of the Scottish harpoon-heads being "more evolved" than the Continental examples. Such an evolution is, surely, just what might be expected in view of the difference of time between the two: if the harpoon-heads from two cultures so widely separated in time were identical one might be driven to invoke convergence; as it is, the differences noted by Movius only confirm the hypothesis of an historical connection between the two. If such a persistence may seem hard to credit in terms of our own or even of later prehistoric cultures, subject to increasingly rapid change, it should hardly do so in the context of the Old Stone Age during which the tempo of change was correspondingly slow. Further, the harpoon-head was not merely the type-fossil of the Azilian culture from the point of view of the prehistorian; it was in very fact crucial to the Azilians as people, in the sense that their whole economy was built around it. Hunting peoples are notoriously conservative about their gear—boys would learn to master their elders' weapons and methods of hunting long before they began to think for themselves and in later life considerations of luck and magic would militate strongly against change—and unless conditions altered drastically one would expect the form of weapons to persist. In view of the very considerable changes of habitat involved in the long migration from the south, as well as in the mode of life, the only wonder is that the basic form should have been retained with such relatively minor change.

As regards the immediate source of the Scottish Obanian it was argued by Movius as early as 1942 (1936)³ that the colonisation proceeded from the North of Ireland. Yet it is suggestive that the Early Larnian occurs on both

¹ Hallam L. Movius, "Curran Point, Larne, County Antrim: the type site of the Irish Mesolithic," *P.R.I.A.*, LVI, sect. C, no. I, 98-99. Dublin, 1952.

² M. W. Thompson, "Azilian Harpoons," *P.P.S.*, xx (1954), 193-211. Thompson illustrates examples substantially longer (*e.g.* nos. 37-38, 86) than the longest from MacArthur's Cave.

³ *Op. cit.* 178.

sides of the North Channel and it would seem at best premature to allot priority of settlement to either, even though the wealth of flint of Antrim led to a much greater development of the flint industry on the western side of the Channel. Frank Mitchell is surely nearer the mark when he stressed the existence during mesolithic times of a common population round the shores of the North Channel.¹ In seeking clues to the origins of this population the only relevant material is the Early Larnian, which, as Mitchell emphasises, is represented only by its lithic component. Lacaille sought to derive this Early Larnian industry from the Upper Palæolithic Crewellian,² but this has been somewhat overworked as a source of mesolithic industries: apart from the Obanian, it has been held by Armstrong to be the progenitor of microlithic industries like that investigated by him at Sheffield's Hill on the North Lincolnshire Cliff³ and by Schwabedissen to provide an origin for his *Federmesser* industries of the North German Plain.⁴ Until Armstrong's industries can be positively dated, it is hardly possible to judge whether they are in fact descended from the Creswellian, but on purely typological grounds they conform much more closely to a devolved Creswellian than do the flint industries associated with the Larnian and Obanian groups. In any case present evidence suggests that Britain was only scantily populated during the Late Glacial period and that by comparison with many parts of the Continent our native Upper Palæolithic was but a feeble growth. On purely a priori grounds the presumption is that the main elements in the mesolithic population of Britain reached us from the Continent as part of the general northward march of flora and fauna that marked the transition to Post-glacial times.

The flint implements of the Early Larnian and of the Obanian are fully consistent with a derivation from a devolved and impoverished Azilian: indeed the predominance of "thumb-nail" scrapers and the presence of microliths not made by the "micro-burin" process are specific typological pointers; and the main distinction—the lack of burins and the associated absence of the groove and splinter technique of working antler and bone—applies equally vis-à-vis the Creswellian and is easily explicable, if we accept an Azilian ancestry, in terms of the remoteness of the North Channel area in relation to the original centre. Movius⁵ formerly and Mitchell⁶ latterly accept an Azilian element, but wished to associate this with a native Upper Palæolithic basis, for which there is no very obvious evidence. The most economic hypothesis is that we are confronted with a single spread of a devolved Azilian, though a native element cannot be excluded.

¹ *J. County Louth Arch. Soc.*, XII (1949), 19.

² Lacaille, *op. cit.*, 124, 142.

³ A. L. Armstrong, *P.P.S.E.A.*, VI (1931), 339.

⁴ H. Schwabedissen, *Die Federmesser-Gruppen des nordwesteuropäischen Flachlandes*. Neumunster,

⁵ *Op. cit.*, 207-8. Movius has since, *op. cit.*, 1952, 99, given up this idea.
1954. See Taf. 102 b.

⁶ G. F. Mitchell, "The Larnian" Culture: A Review, *J. Roy. Soc. Ant. Ireland*, LXXIX (1949), 170-81. See p. 177.

This implies that the Obanian is to all intents and purposes an integral part of the Larnian—the precise conclusion reached by Mitchell in his notable review of the question in 1949¹—or, at least, that both form part of a unitary, intrusive culture. The occurrence in the Rockmarshall midden, Co. Louth, of stone “limpet-scoops” of “Obanian” type² associated with Larnian flint-work provides valuable support for his thesis, for which convincing proof may at any time be forthcoming when a Larnian site is found with a full complement of antler and bone artifacts. Meanwhile it seems doubtful whether the terms “Larnian” and “Obanian” can properly be used to designate more than facies of the unitary North Channel culture and its northern extension up the west coast of Scotland.

III. BALTIC CONTACTS.

It has for some time been recognised that influences from the West Baltic region penetrated the North Channel culture-area, but there is need for rather more precision in defining these. In 1922 Breuil attributed the preference for bone over antler for making harpoon-heads (a preference not shared by the earliest Obanians of which we have tangible traces from MacArthur's Cave) to Baltic and specifically Maglemosian influence; and he further claimed that the lightness and incurving of the barbs of one of the harpoon-heads from Cnoc Sligeach (fig. 9 A) might have been due to the same influence.³ Childe on the other hand was more critical and recognised that a valid analogy could hardly be drawn between the Cnoc Sligeach piece, which was presumably a harpoon-head—the base is missing—and certainly biserial, and the normal Maglemosian barbed point which was a spearhead attached to a shaft and biserial;⁴ instead he compared it with a piece of Atlantic age from the Early Coastal Culture layer of the Bloksbjerg settlement at Klampenbourg north of Copenhagen.⁵ But Childe's comparison is itself far from exact. The Bloksbjerg piece (fig. 9 B) belongs to a small but well-defined group of heads made from roe-deer antler:⁶ the Danish pieces are altogether larger and heavier (fig. 9 C); they are made from a different material; and the barbs, although placed on either side of the stem, which is markedly curved, are only two in number and asymmetrically placed. On close inspection, indeed, the Cnoc Sligeach piece differs in nearly every respect from that from Bloksbjerg and agrees far more with certain Magdalenian forms to which the Abbé Breuil made reference in his original paper.⁷

¹ G. F. Mitchell, “The Larnian” Culture: A Review, *J. Roy. Soc. Ant. Ireland*, LXXIX (1949), 170–81. See p. 177.

² *Ibid.*, fig. I G.

³ H. Breuil, *op. cit.*, 280.

⁴ A rare biserial form of elk antler from Bornholm is probably of Pre-Boreal age (*Danske Oldsager* I, 160).

⁵ V. G. Childe, *J.R.A.I.*, LXI (1931), 333.

⁶ In addition to the two shown on our fig. 9 A, B, there are other specimens in the National-museet at Copenhagen, including one from Horsens Fjord illustrated in *Danmarks Oldtid* I, no. 164.

⁷ Breuil, *op. cit.*, 280.

The real evidence for Baltic contacts is to be sought in the mattock-heads discussed earlier in this paper (pp. 93-8). Childe was the first to appreciate the significance in this respect of the specimen from under the carse clay

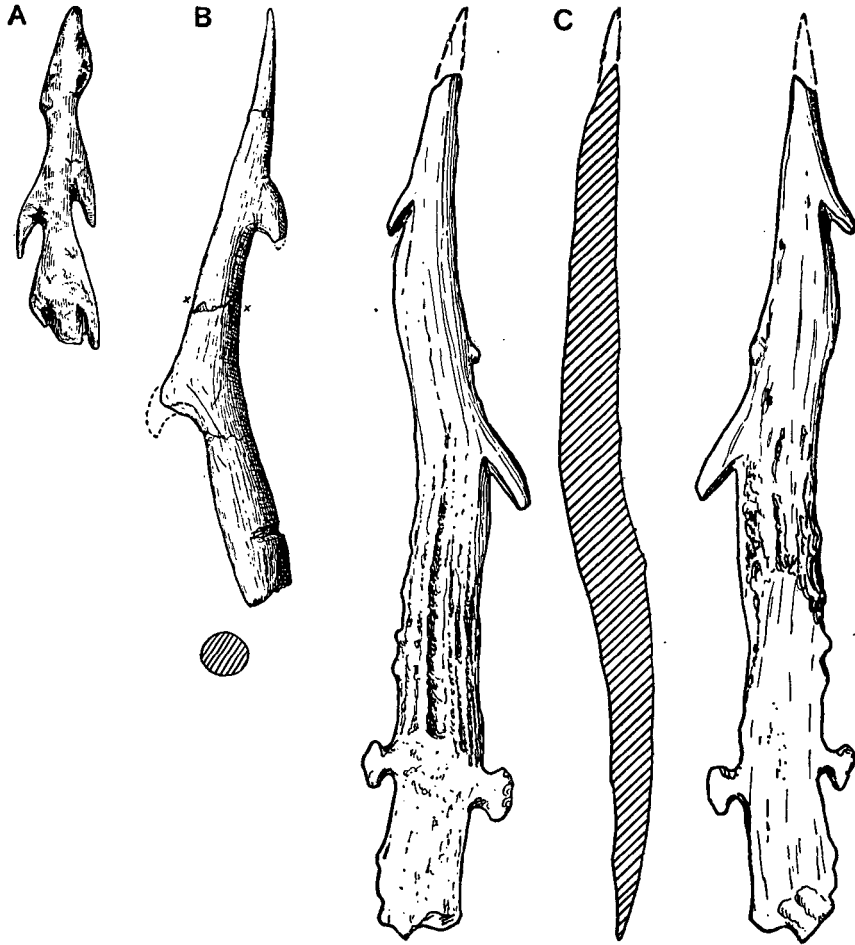


Fig. 9. Stag antler harpoon-head from Cnoc Sligeach (A), compared with examples made of roe deer antler from Bloksbjerg (B), Gudusø Vig, (C) Denmark. Eltung, East Jutland. ($\frac{1}{2}$.)

at Meiklewood and it is important to note that he specified that the closest parallels are to be sought in "sites occupied during Atlantic times in Denmark and North Germany, as well as in later Continental stations."¹ Movius followed Childe in agreeing that there was no Forest Culture influence in Scotland before Atlantic times and yet went on to compare the Meiklewood piece with Maglemosian ones² which differed basically in form. It needs to

¹ V. G. Childe, *op. cit.* (1935), 17-18.

² Movius, *op. cit.*, 192.

be emphasised once again that the Obanian mattock-heads belong to a well-defined type that is absent both from the Maglemosian and the Early Coastal Cultures and which first appeared in Denmark in the Ertebølle culture¹ (fig. 10 A), a type moreover which appears in fully neolithic and

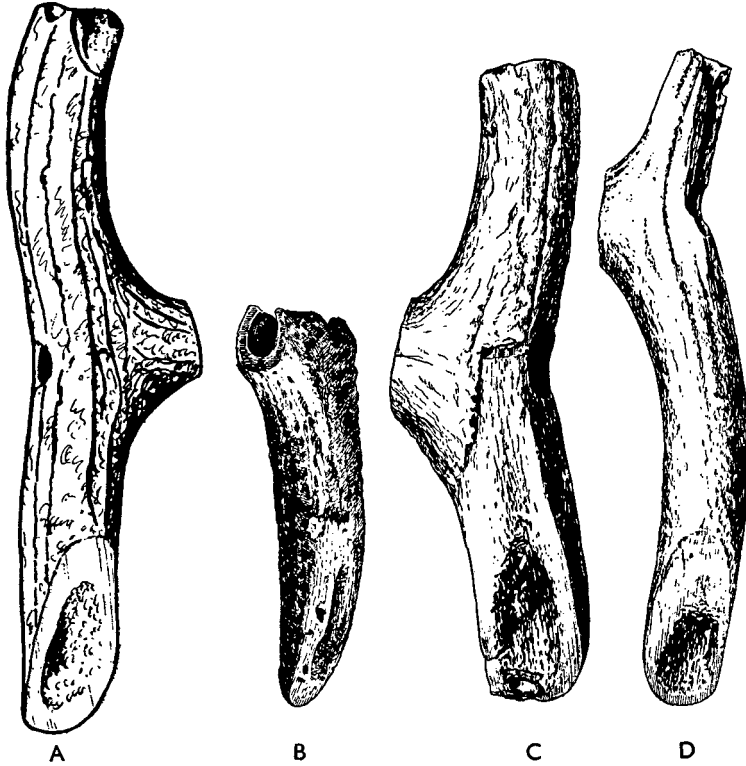


Fig. 10. Socketed mattock-heads of stag antler from various European contexts:
 A. From Ertebølle dwelling-place, Kolding Fjord, Denmark. (After *Danske Oldsager*, I, 125.)
 B. With Omalian pottery, Place Saint-Lambert, Liège. (After *Hamal-Nandrin*.)
 C, D. From graves XXXIV and XXXII in the Jordansmühl-type cemetery at Brzesc Kujawski, Poland.
 (After *Jazdzewski*.) (½.)

commonly chalcolithic cultures in neighbouring regions, for example in the Omalian (Danubian) of Belgium² (fig. 10 B) and the Jordansmühl cemetery at Brzesc-Kujawski in Poland³ (fig. 10 C, D).

The socketed mattocks of stag antler point to contacts between the North Channel culture-area and the mature Ertebølle culture marked by the appearance of pottery and the predominance of transverse arrows.

¹ T. Mathiassen *et al.*, *Dryholmen*, 71. Copenhagen, 1942; *Danske Oldsager* I, no. 125.

² J. Hamal-Nandrin, J. Servais and M. Louis, *Bull. Soc. Roy. Belge-d'Anthrop. et de Préhistoire* (1936) 49, fig. 42.

³ K. Jazdzewski, *Wiadomości Archeologiczne*, xv (1938), Taf. xxiii, I; xxvii, I.

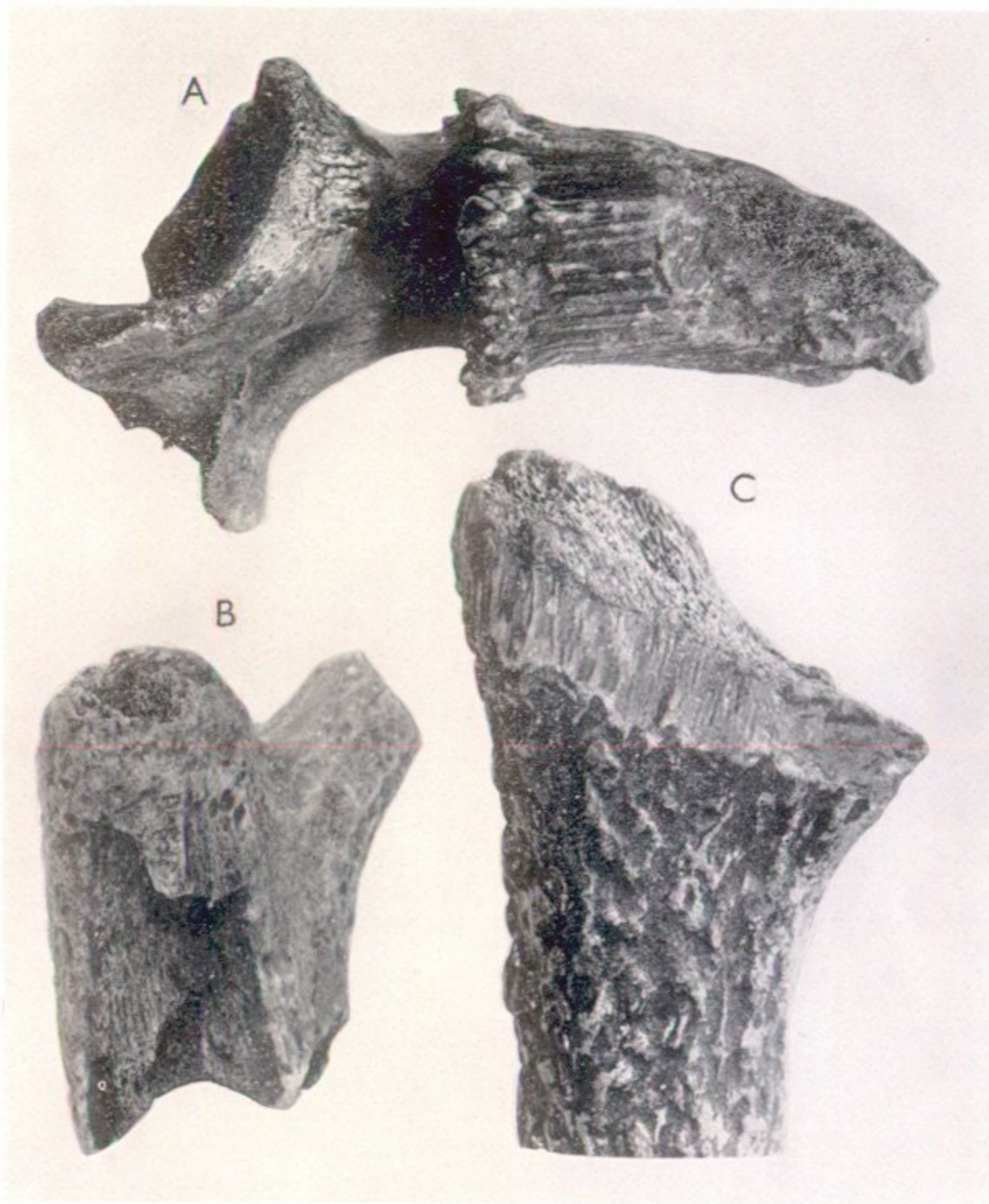
Geologically, this mature Ertebølle culture flourished during the Late Atlantic and Sub-boreal transgressions of the Litorina Sea, though many of its characteristic forms, including the socketed mattock-heads, first began to appear at the time of the High Atlantic transgression.¹ Making allowance for the distances involved, this points to an age for the Obanian facies equivalent to that of the Late Atlantic and the beginning of the Sub-boreal period. This agrees well enough with the accepted view² that the cave and midden deposits of the Obanian belong to the beginning of the regression from the Post-glacial raised beach, even though in the existing state of knowledge it is not possible to equate the geological sequence in the West of Scotland with the fine divisions established by Danish geologists. It is also consistent with the fact that flint core axes, another "Baltic" type, first appear in "Late Larnian" contexts both in the North of Ireland³ and in Kintyre.⁴

¹ Mathiassen *et al.*, *op. cit.*, 204-7.

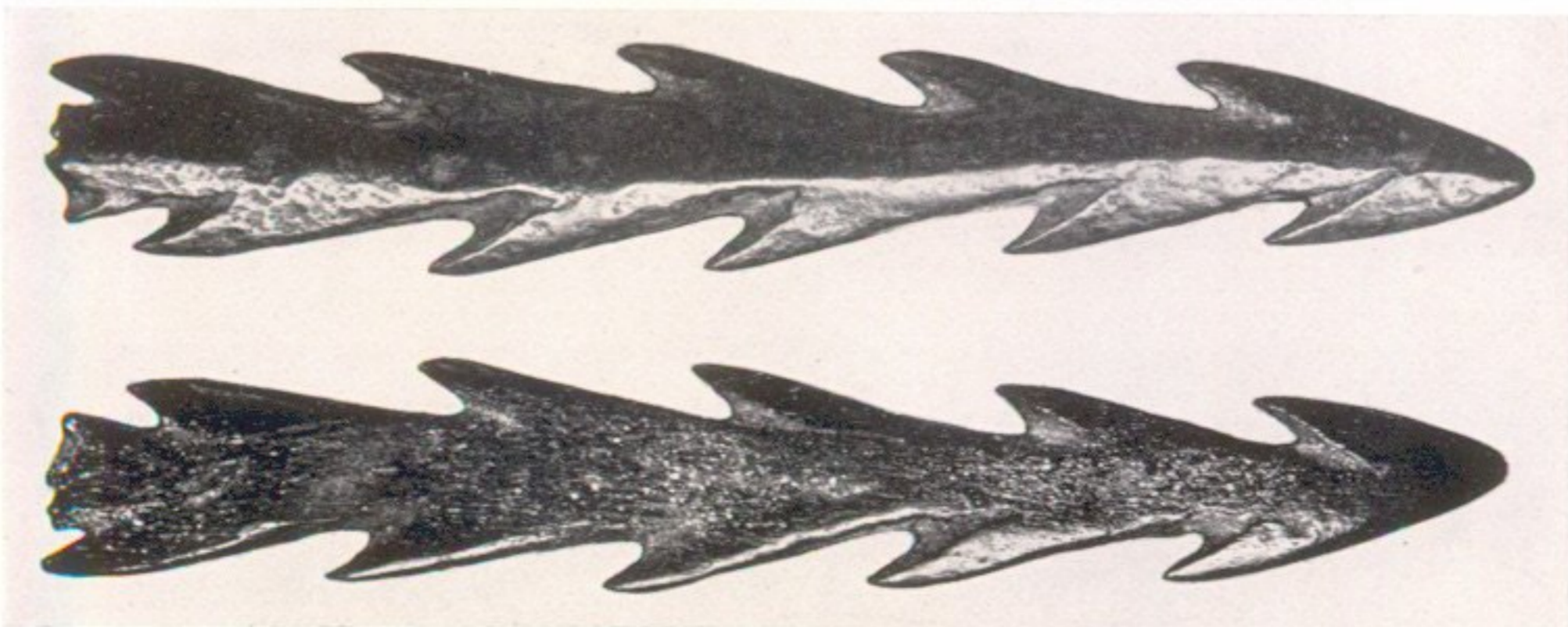
² Movijs, *op. cit.*, 180; Mitchell, "The Larnian Culture . . .," 171; Lacaille, *op. cit.*, 239.

³ Movijs, *op. cit.*, 166-70.

⁴ Lacaille, *op. cit.*, 149.



1. Stag antler showing traces of the "nibbling" technique.
A. Druimvargie. (Nat. Mus. Ant. Scot. HL 430.) ($\frac{3}{4}$.)
B. Druimvargie. (Nat. Mus. Ant. Scot. HL 431.) ($\frac{1}{2}$.)
C. Star Carr. (Seamer. Univ. Mus. Arch. and Ethn. Cambridge.) ($\frac{3}{4}$.)



2. Harpoon-head of stag antler from the River Dee at Cumstoun, Kirkcudbright.
(Stewarty Museum, Kirkcudbright.) ($\frac{1}{2}$.)

J. G. D. CLARK.