

WILEY



The Distribution of Early Bronze Age Settlements in Britain

Author(s): O. G. S. Crawford

Source: *The Geographical Journal*, Vol. 40, No. 2 (Aug., 1912), pp. 184-197

Published by: geographicalj

Stable URL: <http://www.jstor.org/stable/1778466>

Accessed: 27-06-2016 10:04 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://about.jstor.org/terms>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Wiley, The Royal Geographical Society (with the Institute of British Geographers) are collaborating with JSTOR to digitize, preserve and extend access to The Geographical Journal

THE DISTRIBUTION OF EARLY BRONZE AGE SETTLEMENTS IN BRITAIN.*

By O. G. S. CRAWFORD.

IN this paper I propose to isolate a single culture period and to examine it from a geographical point of view. The period selected is the earliest phase of the British Bronze Age, when metal implements were known, but still comparatively rare and confined to a few simple types. By studying the distribution of certain objects which characterize the period, I hope to throw some light on the people who introduced them, and to connect them with contemporary migrations on the continent.

Amongst the objects which Sir Richard Colt Hoare discovered in the barrows round Stonehenge at the beginning of the last century, there was a class of pottery vessels which were seen even then to belong to a clearly distinct type. They were smaller and of a finer texture than ordinary ones, and were generally found with skeletons. Sir Richard called them "drinking-cups," and Mr. Abercromby has recently suggested the alternative name of "beakers." From the evidence of associated finds, it is clear that these beakers are contemporary with one of the earliest forms of metal implement known, the flat celt or axe of copper or bronze.

On the two accompanying maps I have shown by a dot every site where beakers or flat celts have been found.† The maps may therefore be taken to indicate with fair precision the areas occupied by the people of whom this pottery and these implements are characteristic. It will be seen at once that the dots cluster thickly together in certain regions, leaving others bare. It will also be seen that the clusters on the beaker-map usually coincide with those on the flat celt map. We will consider each of these groups in order.

The first region stands along the east coast of North Britain from Cromarty Firth to the mouth of the Tees. There is but a single break where the Kincardine hills come down to the sea immediately south of Aberdeen. It is bounded very roughly by the 500-foot contour line. The second region comprises the Yorkshire wolds, south of the Vale of Pickering and East of the Vale of York. The third is the Peak District of Derbyshire. The fourth is the south-eastern "shore-line" of the Fens between Stoke Ferry and Newmarket. The fifth consists of a series of nearly continuous groups between the Thames at Oxford and the chalk hills of Southern Dorset. There are a few small groups indicated on one or other of the maps, one round Penrith on the borders of Cumberland and Westmoreland, another at the mouth of the Mersey, and a third at Weymouth.

These groups (which must be regarded as indicating, not the total extent of the population, but only that portion of it which used flat celts and beakers) are capable of being explained by geographical factors. If we take the Peak District and draw a line round it to mark the limit of the outcrop of Carboniferous limestone, we shall see that it exactly encloses all the beakers, and all but one

* Royal Geographical Society, Research Department, February 14, 1912.

† For the data contained on the beaker map I am indebted to the Hon. John Abercromby, F.S.A. SCOT., who has most kindly allowed me to see the proof-sheets of his work on *Bronze Age Pottery*. A few additional sites are marked. The flat celt map is from data which I have compiled myself from published notices of finds and from my museum notes.

or two of the flat celts which have been found in it. If we draw a similar line to show the bare chalk of the wolds, we shall find that it likewise shows the limits of beakers and flat celts. The Fen margin is less obvious at first sight, but that is only because the control is more geographical. The finds are all sandwiched between the "drift" country in the south-east and the alluvium of the Fens on the north-west. They occupy just that region where the "shore-line" of the Fens is formed of chalk. Near Newmarket the boundary-line of the alluvium turns from south-west to north-west, running across the outcrop of strata at right angles, while the chalk scarp continues its course



FIG. 1.—FLAT CELT FOUND NEAR NEWBURY.*

south-westwards. Similarly, north of Stoke Ferry, secondary rocks crop out and separate the chalk from the alluvium. We thus get a tract of between 20 and 30 miles where an invader sailing up the Ouse and its tributaries could land straight on to the chalk instead of on to Greensand scrub or Gault forest. Following the chalklands south-westwards, we find a large gap on both maps until we reach the Thames. This gap coincides with the region where the chalk is for the greater part covered in drift, and was hemmed in by Gault forest on the north-west, and on the south-east by barren Tertiary heaths passing through scrub into the low-lying forest of London Clay. Beyond the Thames the

* Reproduced by kind permission of Mr. Harold Peake, Hon. Curator of the Newbury Museum.

chalk stretches without a break to the Dorset coast. It is, moreover, accessible by boat at both ends. It would be easy for invaders to sail up the Thames on the look-out for suitable camping-grounds, and there would be little to invite them until they reached the Goring gap. They could then spread out over the

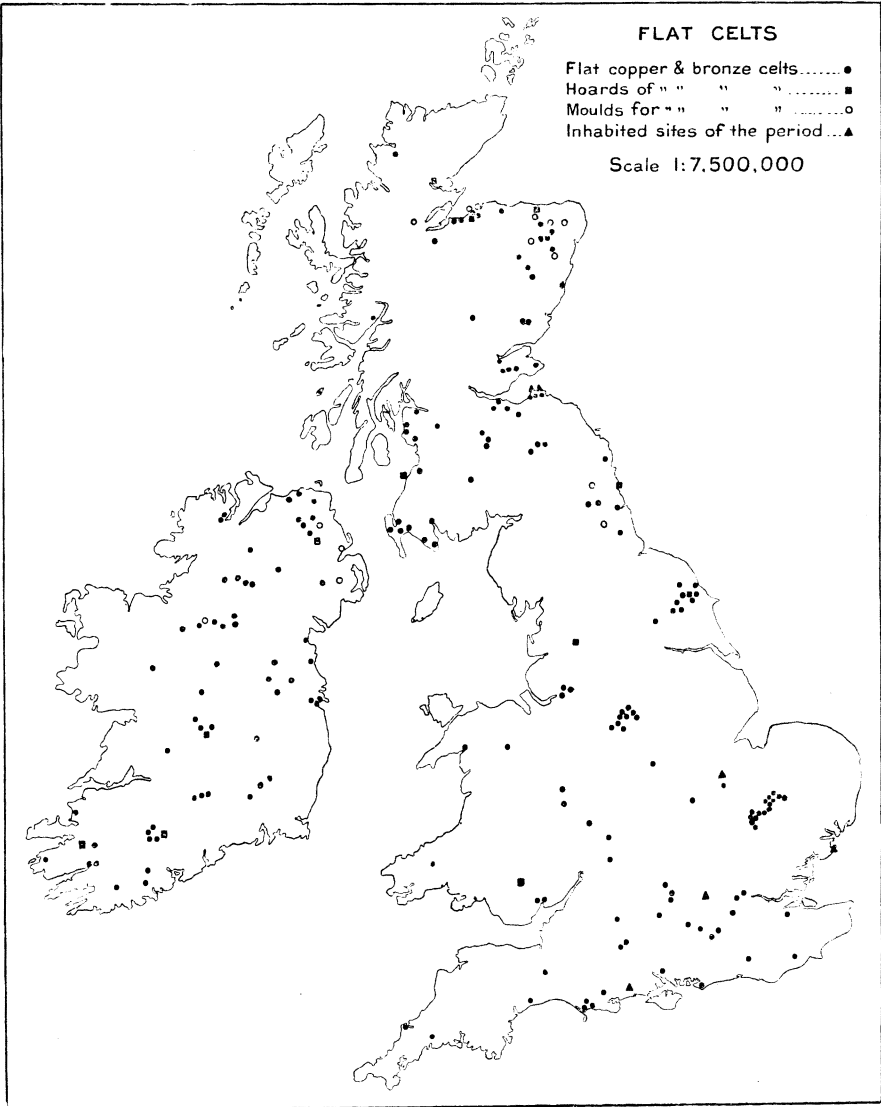


FIG. 2.

Berkshire and Marlborough downs, leaving the forested Chilterns unmolested. Or, if they landed on the south coast, they could either reach the chalk at once from Weymouth, or, by an easy passage over open country, up the Avon valley from Christchurch, or up the Itchen from Southampton. There is here no

great forest barrier, because, owing to the greater angle of dip, the outcrop of London Clay is much narrower. Here, too, the rivers form better routes for marching along, since they are generally flanked by a level stretch of hard gravel.

It remains to consider the North British coastal region. To take the northern portion first, we see that there is a large area in the north and east parts of Aberdeenshire. This is a lowlying region of great fertility. At the present day it contrasts strangely with one's preconceived notions of Scotland. It is a region of Archæan rocks whose coastal margin is covered round the Moray

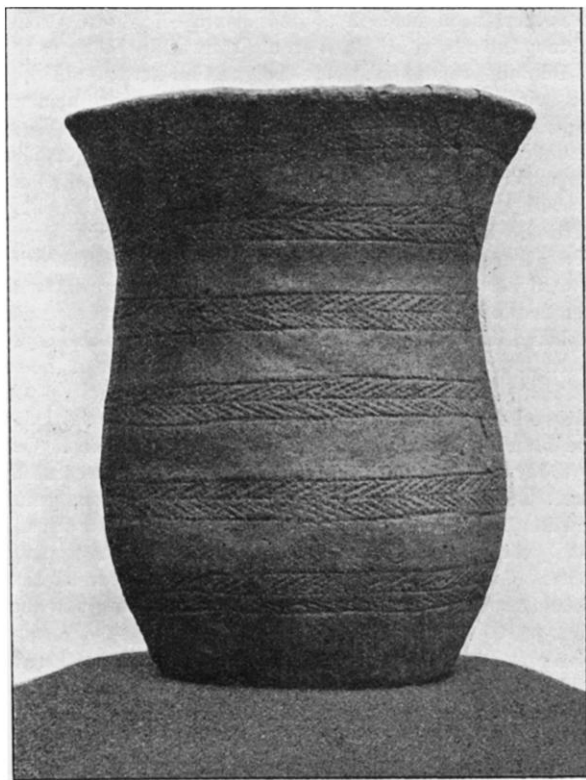


FIG. 3.—BEAKER FOUND JULY 2, 1909, ABOUT 4 FEET BELOW THE SURFACE AT FURZY, A GRAVEL SPUR ON THE RIGHT BANK OF THE AVON, FORMING PART OF LATCHFARM, CHRISTCHURCH, HANTS. SCALE ABOUT $\frac{1}{2}$.*

firth with a layer of Devonian sandstone. The whole region as far south as Durham is one of relative warmth and dryness. When, moreover, we take into account its inviting position with relation to the opposite shores of the continent, we shall understand how desirable a region it must have seemed to an invading people.

Before leaving the subject of beaker regions, we may pause a moment to consider the blanks on the map, which are no less instructive. The first big

* This photograph was kindly given me for reproduction by Mr. Herbert Druitt, Christchurch, who owns the beaker.

blank which strikes one is that of Ireland. With two possible exceptions, no beakers have been found in Ireland.* When we turn to the flat celt map and see what a large number of dots there are in Ireland, and when we bear in mind that a far greater number are not inserted because the sites of discovery are not known, we are confronted with a difficult question. If it was the beaker people who brought with them the knowledge of bronze, how did it reach Ireland, where beakers are not found, and where we have no reason to suppose the beaker people ever settled? I suggest that the knowledge of bronze reached Ireland through trade, mainly the gold trade, and that the abundance of copper ores there soon made it a great centre of bronze production. The tin required may have been obtained from Cornwall, perhaps from the Iberian peninsula. I do not propose to discuss the question here; but I might add that some of the evidence in favour of Cornwall will appear incidentally in the paragraphs dealing with the gold trade.

Another big blank covers the Midland district of England. This is for the most part a region of clays and sands, and would be either dense forest or uninviting scrub, and it seems to have been the last part of England to be permanently settled. Hunting bands in a Stone Age culture may have roamed in it and survived there until very late times, but even of this there is, so far as I know, little evidence. Wales and the Scotch highlands are likewise regions of refuge rather than of settlement. The rarity of flat celts in Cornwall and Devon I cannot explain; it is contrary to what one would expect, and especially when compared with the amazing richness of Brittany in remains of the early Bronze Age.

Now that we know where in Britain the beaker people settled, we will see what can be found out about their physical characteristics. Certain skulls found in round barrows and associated with beakers have been carefully examined and measured. Most of them have a high cephalic index, generally about 81 or 82, and in almost every case over 80. "The eyebrows must have given a beetling and probably even formidable appearance to the upper part of the face, whilst the boldly outstanding and heavy cheek-bones must have produced an impression of raw and rough strength."† Their stature was about 5 feet 9 inches.

They are represented at the present day in certain parts of England by such types as Beddoe's Bronze Age Cumbrian.‡ I have noticed a man of this type living in Oxford. Both these regions were settled in small numbers by the beaker people, and they lie sufficiently off the main "invasion districts" to allow the type to survive. This tall, round-headed race is the one which is usually called

* One exception is from Mount Stewart, co. Down (see *Dublin Penny Journal*, 1832). Situated on Strangford Lough, the beaker (if a true beaker) could quite easily have come across from the opposite shore of Scotland. That this was the regular crossing-place at the time is shown by the map of *lunulæ*. Coffey, however (*Journ. Anthr. Inst.*, 32, 396), does not consider that this example belongs to the beaker class; the only record of it which survives is a figure in the journal quoted, and others also figured there which *do* survive are seen to be inaccurately drawn. The other exception is "fragments of at least three distinct vessels of the beaker class" from Moytirra, Sligo (Wood Martin, 'Rude Stone Monuments of Ireland,' figs. 146-148; Coffey, *loc. cit.*). These, says Coffey, are "the only examples which can at present be referred with certainty to Ireland." They are in the Dublin Museum.

† Greenwell, 'British Barrows,' pp. 644-5.

‡ 'Races of Britain,' Plate III.; Ripley, 'Races of Europe,' No. 109. Compare Ripley, Nos. 103 and 111.

the Bronze Age race. But this is incorrect, as the latest phase of the British Bronze Age was undoubtedly introduced by a fresh set of invaders, as I hope to be able to show some time. It has also been called Goidelic, but this again

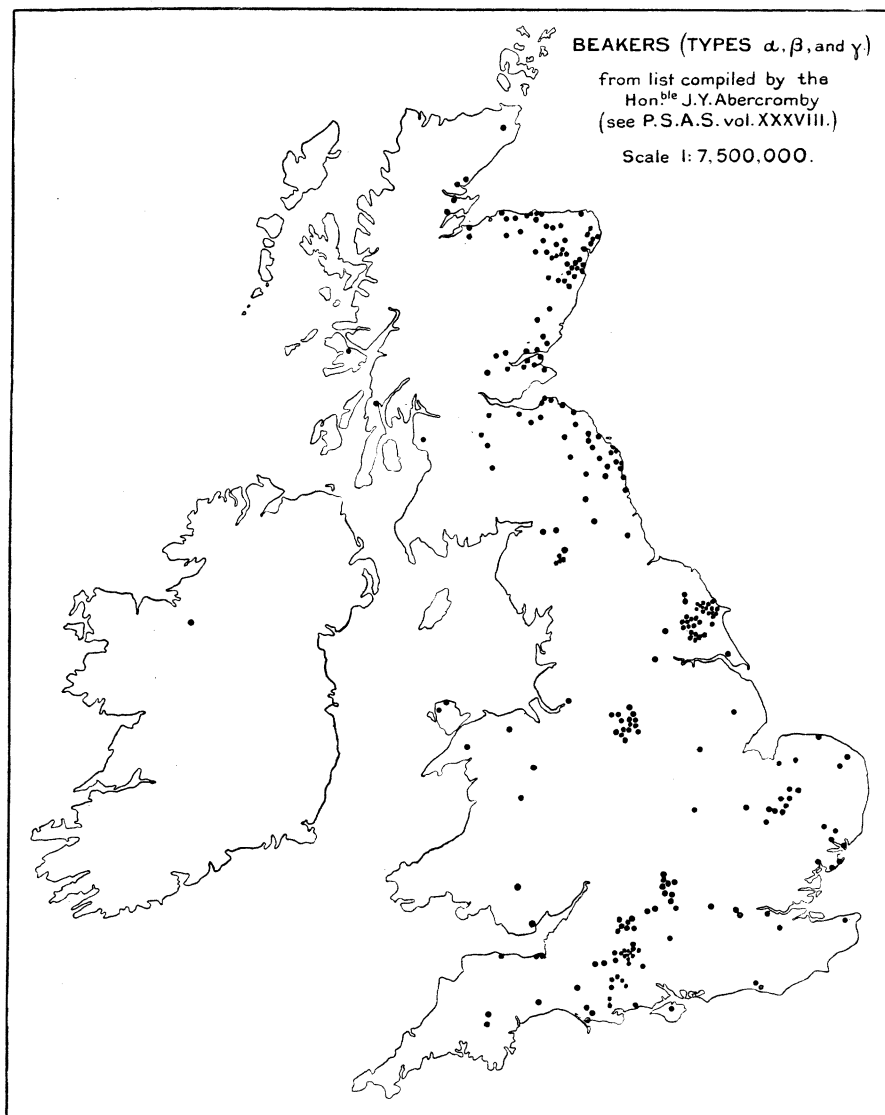


FIG. 4.

is impossible, since practically no beakers are found in Ireland, and, according to Rice-Holmes, not a single skull of the characteristic Round Barrow type has ever been found in Ireland, and only four brachycephalic skulls which can be referred to prehistoric times.*

* 'Ancient Britain' (1907), p. 432, where numerous references are given.

Leaving the question of physical affinities to be dealt with by others, we will see what light is thrown by archæology on the origin of the round-headed invaders. In this I am only following out the discovery made by Mr. Abercromby, who was the first to run the beaker people to earth.* On the accompanying map I have marked in black the chief continental beaker areas.† There are seen to be seven large groups: one in the Veluwe and in Drente round the Zuyder Zee; one in Hesse at the confluence of the Rhine and Main, with a small region to the south between the Rhine and the Neckar; a large region in the basin of the Saale, with an offshoot in Havelland; and one round Stettin and the mouth of the Oder; and two regions, the one centring round the confluence of the Bohemian tributaries of the Elbe, and the other round the Moravian tributaries of the March. The continental distribution so indicated is not quite exhaustive, but it brings out clearly some at least of the regions from which the invaders came. This grouping is confirmed by the distribution of flat celts which has been mapped by Lissauer,‡ and with which should be compared the distribution of certain contemporary types of bronze pins. From these regions, down the Rhine and the Elbe, came the round-headed invaders. Probably they left their homes before the knowledge of metal had arrived; but that this knowledge followed close on their tracks is highly probable. Certain types of metal§ objects, especially crutch-shaped pins and pins with ring-heads, can be traced from Britain across into Germany and up the Rhine and Elbe to Bohemia. We can likewise trace to Bohemia the curious little conical buttons with V-shaped perforations which are found all over Great Britain, and indeed wherever else beakers are found.

To account for the invasion of the round-heads, I will develop the following hypothesis, which I think agrees with the existing evidence. At any rate, it is an attempt to connect events in Britain with those which were taking place at the same time in Central Europe and the Mediterranean. It is, I think, in accord with the ideas current on the Continent, but has not, so far as I am aware, been worked out in detail from a purely British point of view.

To whatever part of Europe and the Northern Mediterranean we may turn, we find, entering in with the first knowledge of metal, a certain disturbing element. Northern Italy felt the shock of two sets of invaders. The first horde came from Switzerland and founded the western group of Italian pile-dwellings, with their centre probably about the Lake of Varese. The second came from the east, and that branch of it which reached Italy founded the eastern group of pile-dwellings round the Lago di Garda; eventually the pile-dwellers crossed the Po and built the Terremare.|| Perhaps the same impulse drove another horde south-eastwards to build the second city of Troy, whose material has analogies with Europe rather than with the Mediterranean. An infiltration of broad-heads is noticed in Crete from the beginning of the Bronze Age, but the wave had probably spent itself, and the immigrants came in peace and perhaps to trade. In Egypt the knowledge of metal coincides with the

* *Journal of the Anthropological Institute*, vol. 32, 1902, pp. 373-397.

† See Fig. 6. For notes of some additional beakers I am indebted to Mr. E. Thurlow Leeds, M.A., F.S.A.

‡ *Zeitschrift für Ethnologie*, 1904.

§ "Metal" is used in this paper to denote objects which may be of copper or of bronze. The probability that all such primitive forms as awls, flat daggers, and beads are of pure copper, increases with every fresh analysis.

|| Peet, 'Stone and Bronze Ages in Italy,' ch. xviii. Clarendon Press: 1909.

Scale 1: 750,000.



FIG. 5.—MAP OF THE FEN DISTRICT TO SHOW THAT FLAT CELTS AND BEAKERS ARE MOST FREQUENT WHERE THE “SHORE-LINE” IS OF BARE CHALK.*

* The large white square represents a find of three flat celts at Fordham; they are not known to have been found together.

appearance of an intrusive round-headed element—the “Giza people” of Elliot Smith.*

If we compare the material of these different cultures, we shall find a remarkable similarity between them. Some of the Terramara pottery is remarkably like that from the second city of Troy, so far as one can judge from illustrations. A special form of round-bottom saucer-like vessel occurs in Spain, the Terremare, Germany, and Yorkshire. Everywhere the arrowhead of flint and the slate or bone wrist-guard are found, denoting a hunting people. And if we search for a region where these and other characteristic features of the culture are found, we shall find it in Bohemia. Here is probably the home of the beaker. The little copper awls, so common with female skeletons in England† and, curiously, under similar conditions in Italy,‡ are common in Bohemia.

Such, stated in barest outline and with scores of telling resemblances omitted or left unproved for lack of space, is my view of the first invasion of Britain of which we know anything definite. I regard it as the last ripple of a great wave starting in the East and affecting every culture in Europe and Western Asia. The impetus probably came ultimately from the desiccation of Asia. We cannot as yet distinguish the beaker culture beyond Bohemia and Moravia, but we may before long be able to see signs of it further east. In any case, Bohemia was probably a secondary centre of diffusion. Its geographical position makes it such. It is quite likely that this unrest in Central and North-West Europe was due to pressure of emigration from the grasslands stretching eastwards from Hungary. This may have caused each of the groups from Bohemia westwards to “shift up” one or more places.§

However, whatever may have happened, there can be no doubt that the beaker culture has close analogies with that of the Rhine and the Elbe. These relations were continued after the arrival of the round-heads through the medium of trade intercourse. I do not propose to consider such problems as whence the people of Aberdeenshire obtained copper and tin for making their flat celts. That it was by trade and from afar is proved by the absence of suitable ore in Scotland;|| the nearest tin was to be found in Cornwall and Wicklow,¶ but the tin of the Erz Gebirge is quite as accessible. I have chosen

* ‘Ancient Egyptians,’ p. 151 (Harper’s “Library of Living Thought,” 1911). The author says that he detects a marked resemblance between the traits of the “Giza” skulls and those of the Round Barrow people of Britain, and the hypothesis by which he accounts for this resemblance is substantially the same as the one here developed.

† Amongst instances which I have collected, out of ten where the sex could be determined with certainty, nine were females.

‡ Compare Peet, p. 242.

§ Peet, p. 261.

|| Cassiterite has recently been discovered in the granite gneiss of Carn Chuinneag in Ross-shire, but it is highly improbable that the deposit, even if it was ever present in sufficient quantity, would have been known or worked in prehistoric times in so inaccessible and then uninhabited a region (‘Summary of Progress, Geol. Survey,’ 1903, p. 58).

¶ Tin-stone was also found in Wicklow during the gold streaming of the end of the eighteenth century. Its occurrence was noted by Weaver (*Trans. Geol. Soc., Lond.*, 1 S., vol. 5, 1821, p. 135), but little attention was then given to it. In 1850 William Mallet wrote as follows: “From the comparatively small portion of sand [not more than 150 lbs.] which I had an opportunity of examining, I obtained about 3½ lbs. of stream tin, a portion of which, being reduced, yielded an ingot

another metal—gold—as showing more clearly the course of trade. Amongst the objects which can be assigned to the Early Bronze Age in Britain* are certain crescent-shaped objects of gold of paper thickness. The accompanying

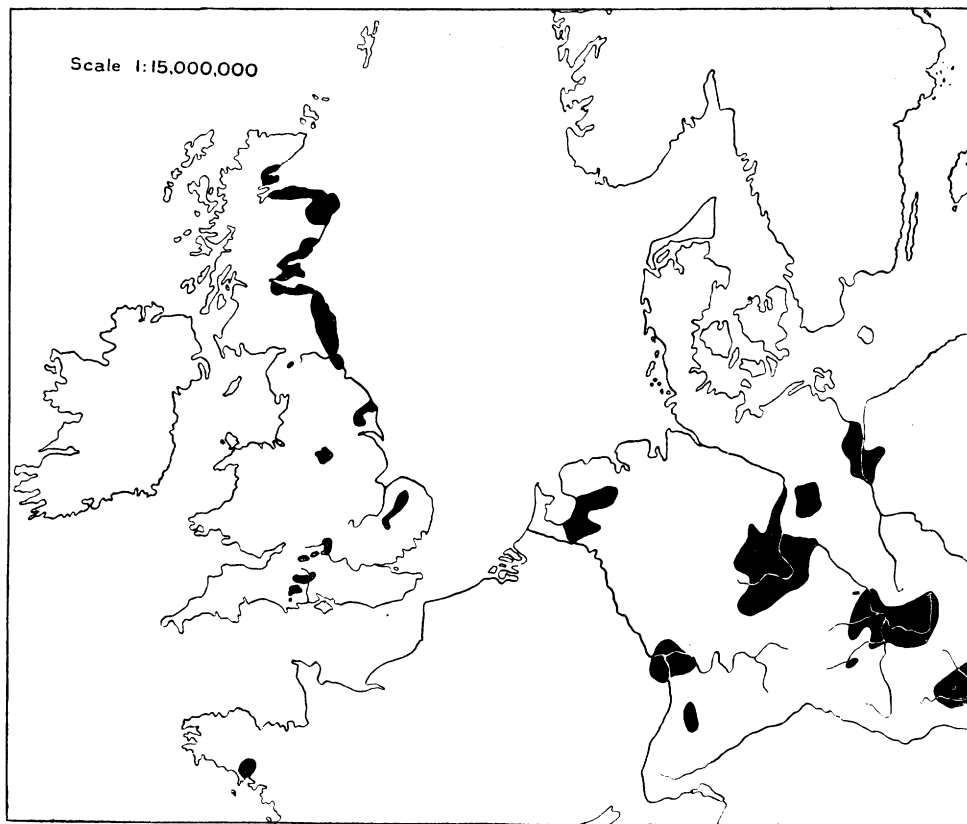


FIG. 6.—THE PRINCIPAL SETTLEMENT AREAS OF THE BEAKER PEOPLE IN BRITAIN AND ON THE CONTINENT.†

map sufficiently explains their range of distribution. It will be seen that by far the greater number have been found in Ireland. A few, however, have

which, when refined by a second fusion, is hardly inferior to the finest grain tin. Should this mineral be found in the mass of the sand in a quantity at all approaching that in which it existed in the specimen from which this tin was obtained, it would probably richly repay the labour and expense of its collection and smelting. . . . The mineral itself occurs in grains varying in size from fine sand up to pebbles of half an inch in diameter" (*Jour. Geol. Soc., Dublin*, vol. 4, 1851, p. 272). If it can be shown that other valleys in the Wicklow mountains were once, or still are, equally rich in tin, it will become highly probable that the discovery of alloying copper was made here, since we now know that gold was mined in Ireland at least as early as the first phase of the Bronze Age.

* Two of them were found associated with a flat celt at Harlyn, in Cornwall. See *Archæological Journal*, vol. 22, 1865, p. 277, and most text-books.

† The Continental regions are founded upon map B in Pič's 'Starozitnosti,' vol. 1, part i. 1889, and the British regions upon lists in Mr. Abercromby's work on Bronze Age pottery.

No. II.—August, 1912.]

o

been found in Britain and on the Continent, and these resemble the Irish specimens both in shape and ornament. It is rather a specialized type, and independent invention is inconceivable. We are therefore driven to the conclusion that the gold lunulæ have been spread, probably through trade, but certainly by persons in close touch with the culture of Ireland.

That Ireland was once rich in alluvial gold is beyond question.* It is now worked out, but in 1795 gold was found in a secluded valley of the Wicklow hills, and a miniature gold-rush occurred. A large amount was obtained by the peasants before the Government took over the workings. Several thousand

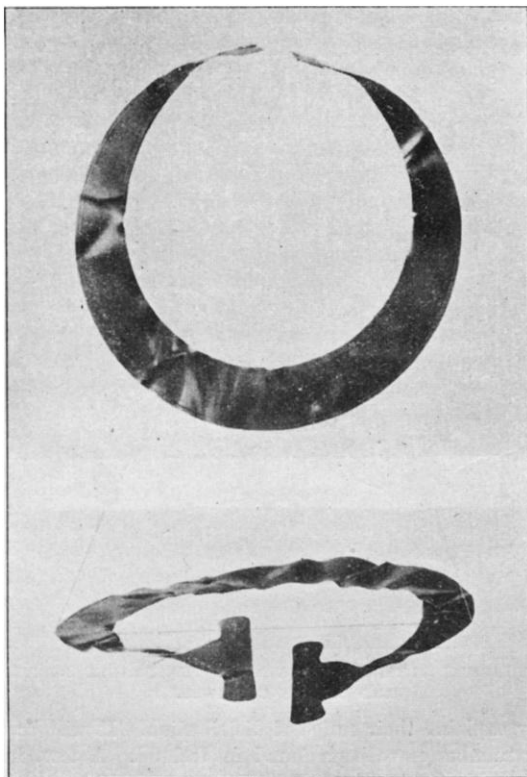


FIG. 7.—GOLD LUNULA, FOUND NEAR SCHULENBURG, ON THE RIVER LEINE, HANOVER.†

* The subject of the Irish gold trade was first broached by Montelius in 1891 (*Archiv für Anthropologie*, xix. 1-21). It was discussed by Coffey (*Proc. R. Soc. of Antiquaries, Ireland*, 1895), by Sir Arthur Evans in the Rhind Lectures in 1895, and in his Presidential Address at the British Association Meeting in 1896. M. Salomon Reinach introduced it to France in a review of Sir Arthur Evans's address in the same year (*L'Anthr.*, vol. 7, 688-9), and subsequently developed it in two articles dealing chiefly with gold lunulæ (*Revue Celtique*, vol. 21, 1900). At the meeting of the French Archaeological Congress at Beauvais in 1905, Comte Costa de Beauregard read a paper on Lunulæ and Gold Torques, both of which he derived from these islands.

† This photograph was kindly sent me by the Director of the Hanover Museum, to whose courtesy I am indebted for permission to publish it.

pounds' worth of gold were obtained, and a nugget weighing 22 ozs. This stream was evidently overlooked by the prehistoric people, who washed the gold from the gravels of all the others.

That gold was obtained in Ireland during the Bronze Age is made certain by the extraordinary number of datable gold objects which have been found in Ireland. In the Museum of the Royal Irish Academy at Dublin, one wing of a long gallery is filled with cases containing the gold ornaments which have been found in Ireland; and the number which have been consigned to the crucible is probably still greater.* In fact, Ireland has well been called the

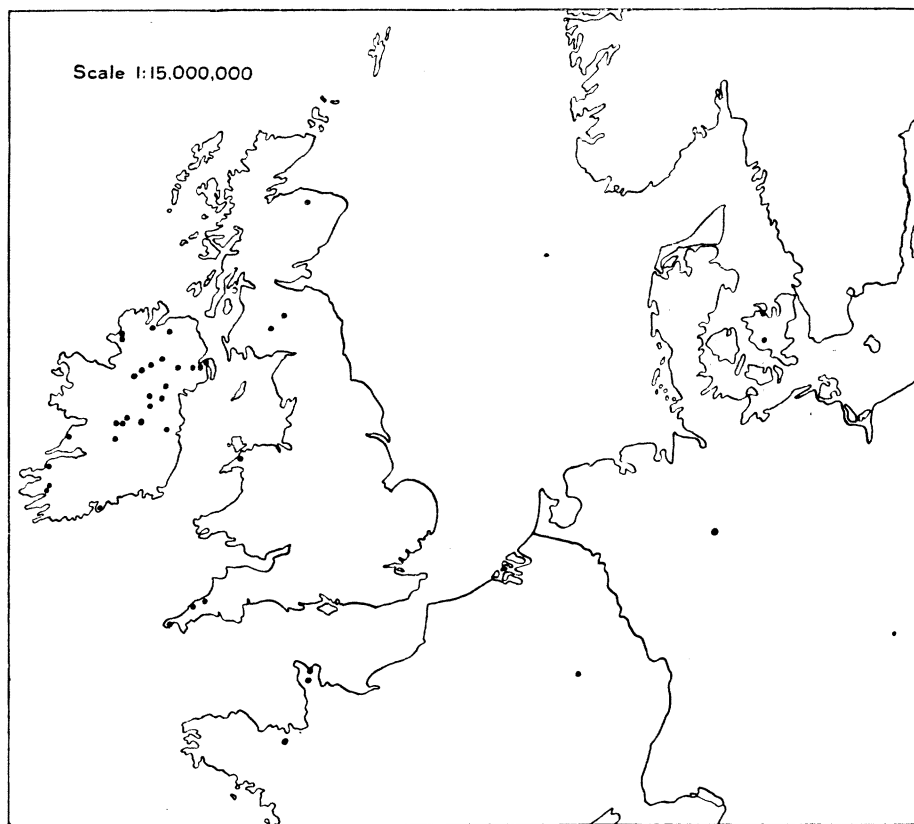


FIG. 8.—THE DISTRIBUTION OF GOLD LUNULÆ OF THE EARLY BRONZE AGE.†

El Dorado of the ancient world. Its extraordinary wealth—in copper ore, as well as in alluvial gold—situated for the most part near the sea, must have made it one of the most wealthy countries in North-Western Europe.

* In 1862 some jewellers estimated that they had received as much as £10,000 worth of such ornaments: see Wilde, 'Catalogue of Gold Antiquities,' p. 4.

† Every lunula whose site of discovery has been recorded is marked upon this map. The gold of Wiltshire is traced to Ireland by Rice Holmes in 1907 ('Ancient Britain,' p. 168), and the distribution of lunulæ is discussed by Coffey in 1909 (*Proc. R. Irish Acad.*, p. 251). Finally, the question of the route followed by the gold traders across England was treated by Mr. Peake in 1911 ('Memorials of Old Leicestershire,' pp. 31-45).

What was the course of the trade which the Irish goldfields created? The distribution of lunulæ shows us that there was intercourse in two directions—to Denmark and Northern Germany on the one hand, and southwards across Western France on the other. The shortest route from Wicklow to Denmark would be across England from Carnarvonshire or the mouth of the Mersey to the Wash. Now, if we look at the flat celt map we shall see that there is a cluster of three celts round Warrington on the Mersey, pointing to the existence of a port there. I would further suggest that, apart from geological considerations, the reason why the Peak District has provided so many more flat celts than any other English region of Carboniferous limestone is because it lay right on the course of this trade-route between Ireland and Denmark. The eastern terminus of the road may well have been at Peterborough, where an undoubted beaker settlement has been found,* and two beautifully worked flint daggers of a type frequently found with beakers.† The course of the southern gold route is indicated by the group of two separate finds of gold lunulæ round Cherbourg. The Cotentin peninsula projects into the Channel towards the opposite and roughly equidistant harbours of Weymouth, Christchurch, and Southampton. At all of these there is evidence of occupation on one or other of the maps—three celts‡ at Weymouth, a probable settlement and a beaker at Christchurch, and a flat celt at Southampton.§ Christchurch is the natural port of Wiltshire, and corresponds to Peterborough on the northern route; and just as a large settlement area grew up on the one in the Peak District, so the region round Stonehenge became the metropolis of the Chalk uplands. The abundance of gold found by Sir Richard Colt Hoare in the Wiltshire barrows is almost certainly due to its position on this gold-route.

It is even possible to trace the exact course followed. If we look once more at the flat celt map, we shall see a line of finds stretching from North Wales to Christchurch and the neighbouring harbours. All of these finds are *isolated* finds, unaccompanied by any traces of settlement and generally at fords. This is just where we should expect them to be lost by a travelling pedlar. An exception which confirms this is the rarity of beakers outside their respective groups. A traveller would not take a clumsy thing like a beaker with him, but he would be very likely, on such a long journey, to take—and use—his bronze axe.

A few suggestive finds of lunulæ are recorded in Cornwall. They are interesting because they raise the question of the existence of isthmus roads in Britain at this time.|| The fact that Cornwall is a peninsula makes it dangerous to rely too much on this evidence, but it is a peninsula that would not have been rounded by early navigators without sufficient cause. The finding of a

* *Archæologia*, vol. 62 (1910), pp. 333-352.

† As, for instance, in the Wick Barrow in Somerset (see the report on its excavation by H. St. G. Gray [Taunton, 1908], p. 31, where five other associated discoveries of beakers and flint knives are cited).

‡ The number is probably greater, as many of those in the Dorchester Museum have no locality, but are almost certainly local finds.

§ There is more unpublished evidence, especially for Christchurch, which cannot be given here.

|| On the subject of isthmus-roads in the Mediterranean see Victor Bérard, 'Les Phéniciens et l'Odyssée,' vol. 1 (1902), bk. ii., ch. i. The author attributes the importance of Mycenæ, Troy, Sybaris, Decelea to their situation on isthmus-roads, which enabled them to take toll of the merchandise.

solitary flat celt in the Pembroke peninsula and another at the port of Swansea suggests that there was a third route from Wicklow to the south, partly by land and partly by sea.

Before concluding I would point out that the evidence of the later Bronze Age, so far as I have examined it, fully confirms the above outlines of the

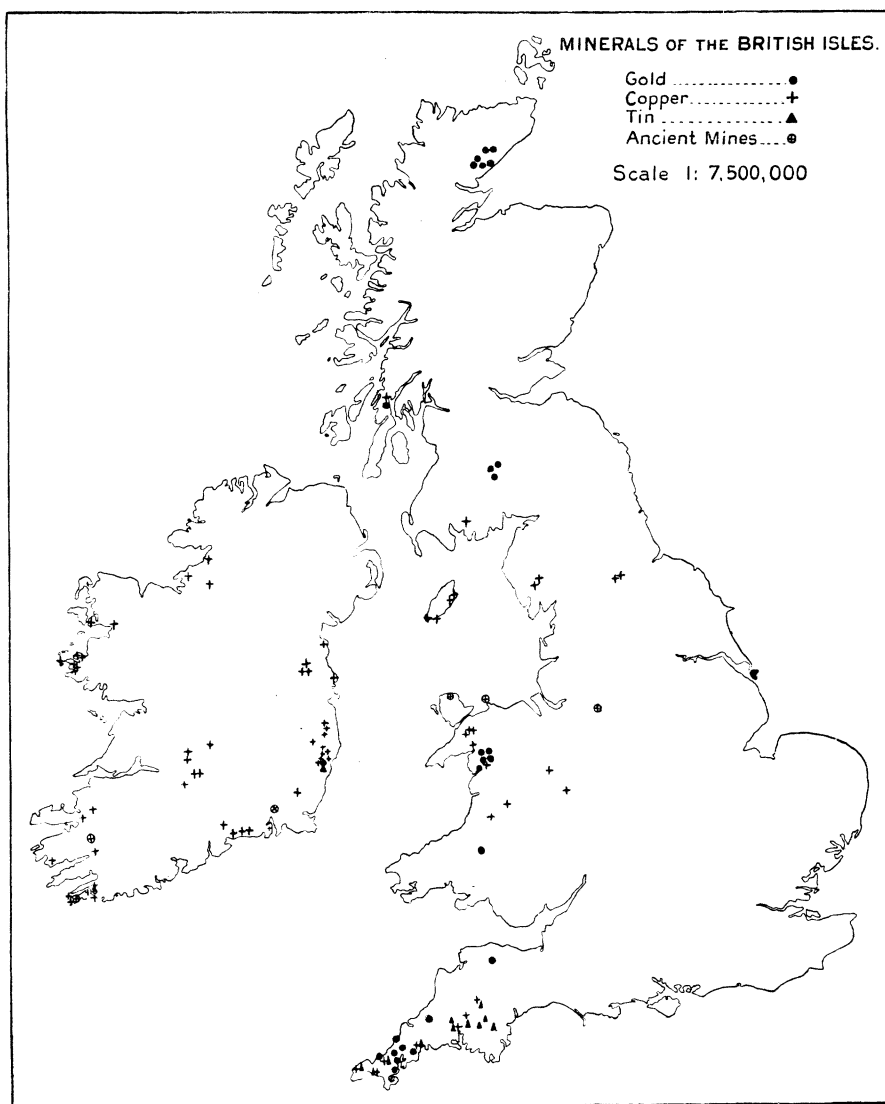


FIG. 9.

gold trade, while it appears that the settlement-areas had shifted considerably. It is only by the laborious process of collecting notes of finds—finds which often lie neglected in remote museums—and by mapping the distribution of these finds that we can hope to attain certain and exact knowledge of a period like the Bronze Age.