

## A LATE BRONZE AGE HOARD FROM WELBY, LEICESTERSHIRE

By T. G. E. POWELL

No precise record of the finding of the Welby hoard has survived, but there seems to be no reason to doubt that it was a genuine discovery. The hoard was deposited in the Leicester Museum in 1919 by Mrs. O. C. Hocart, and the museum records state that the discovery was made about 1875 when a farmer was digging for gravel in Welby parish.<sup>1</sup> There is a field in this parish known as the Gravel-hole field, and it seems likely that this was the find spot as gravel deposits do not seem to be known elsewhere in the parish.<sup>2</sup>

### I. ENVIRONMENT (fig. 1)

The small rural parish of Welby lies some two and a half miles North-west of Melton Mowbray. It stands on the edge of the Ironstone uplands of East

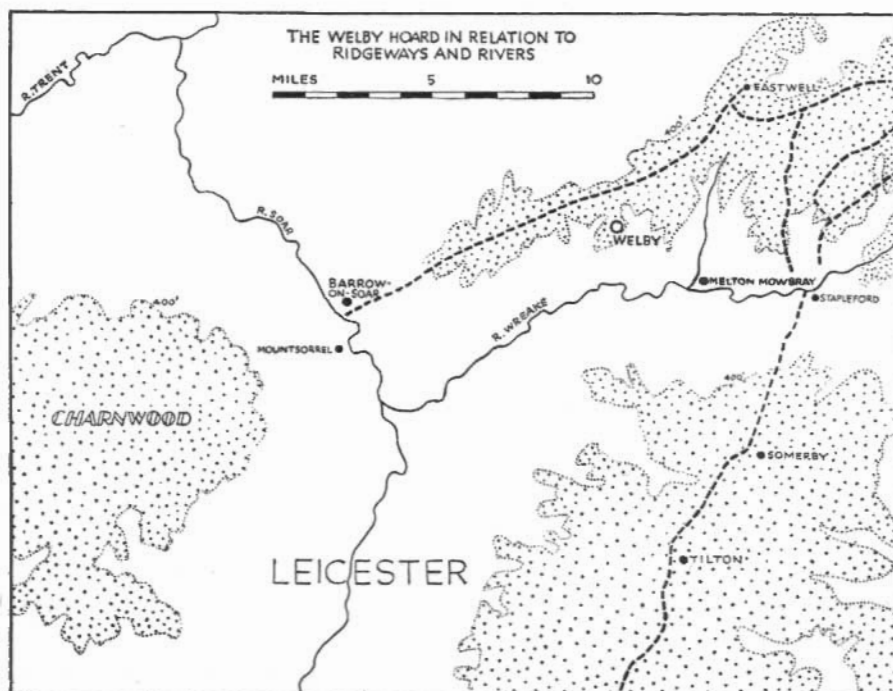


FIG. 1. SKETCH-MAP OF THE LEICESTER REGION, SHOWING THE ENVIRONMENT OF THE WELBY HOARD. LAND OVER 400 FT. STIPPLED; RIDGEWAYS IN BROKEN LINE

Leicestershire, which in this region form that part of the Jurassic Belt connecting the Northampton uplands with Lincoln Edge. The ground within the parish rises to 400 feet above sea level, and the Gravelhole field lies on about this contour.

<sup>1</sup> See note on p. 40 below.

<sup>2</sup> 6-inch O.S., Leicestershire XIX, N.E. (Probable position of find-spot: 13.7 in. East, 2.3 in. South, from top left-hand corner.)

The geographical position of Welby is of interest, for it lies in the vicinity of important routes crossing Midland Britain. The principal of these is the great route, following the Jurassic Belt, which connected the centres of prehistoric population in Wessex and the Upper Thames valley with the northern culture-province in Yorkshire. The course of this route in its stretch between the Cotswolds and Edge Hill to the south-west, and Lincoln Edge to the north-east, is somewhat obscure for lack of detailed study, but an important contribution on Leicestershire tracks was made by the late H. J. Peake.<sup>3</sup>

On the assumption that this was principally a Ridgeway route it seems possible to trace with some accuracy the line of country followed, especially as the alternatives are limited. From Edge Hill, a point which stands at the approaches to the Cotswolds, and directly to the Upper Thames valley, the highest ground north-eastwards leads along the top of the escarpment to the west of Daventry, and thence, still on the ridge, through West Haddon, Cold Ashby, and Welford, to Husbands Bosworth and the Avon-Welland watershed. Surviving roads and tracks follow this topographical feature over much of its length, and when it passes into Leicestershire, coming from Husbands Bosworth through the district of Knaptoft and the Kibworths to Tilton and Somerby, the old road and track system can be more easily traced.

The East Leicestershire Ironstone uplands provide a ridgeway at some 600 feet above sea level for a distance of about eight miles from south of Tilton to beyond Somerby, where the ground drops gradually to the valley of the small river Eye. The old roads show that this stream was forded at Stapleford, and several tracks climb to the higher ground around Waltham on the Wolds. From there progress was simple as far as the Witham Gap, and thence on to Lincoln Edge.

Within the Leicestershire-Rutland region, to deviate from the route just sketched would have been to forsake the Welland-Soar watershed for the more broken and stream-traversed country to the east. The distribution of Bronze Age finds indicates that the country through which the route ran did not support any considerable population; the densest area of habitation lay nearer the rivers Welland and Nene, on the high ground between these streams, and particularly overlooking the latter river. These areas were fed by the trade-routes of the Wash, and do not really depend on the existence of the Jurassic highway. The significance of the Jurassic Belt was that it provided a through route not dependent on a continuous local population for its prosperity; and the scarcity of finds, and of barrows, along much of its length in the Midlands can be the more easily understood for this reason.

The question of east-west communications across the Midlands in pre-Roman times is more elusive, and has hardly been explored. Peake drew attention to a probable route which may have been of some importance. An ancient track, known as the Salters Way, runs from near Eastwell, a village three miles north-west of Waltham on the Wolds, along the top of the Ironstone spur that projects south-west to Barrow-on-Soar. The Soar is deep here and must be ferried, but on the opposite side, in close proximity, is the hilly granite mass of Mount Sorrel, which gives access to the rocky outcrops of the Charnwood hills. Both Barrow and Mount Sorrel have produced objects of the Bronze Age. Charnwood might then

<sup>3</sup> *Memorials of Old Leicestershire*, ed. A. Dryden (1911), 31 ff.

have been traversed or skirted, and the nature of the terrain would have provided sufficiently open ground to within reach of the river Trent at Burton. Peake considered that there was an important crossing of the Trent at Burton, and from that point access might be had to the South Derbyshire hills, and eventually westward again to the Mersey, and the Irish Sea trade.

A third line of communication in the East Midlands is the extensive water-system provided by the Trent and its tributaries. Canoes on the Wreake and Soar could have travelled throughout the Trent system, and, across the Humber, they could have penetrated up the Ouse into Yorkshire. The number of Bronze Age finds from the valleys of the Wreake and Soar is sufficient to show that they were in use, even if their banks were not greatly settled.

The ironstone uplands of Northamptonshire and Leicestershire must have supported considerable forest growth until after the Anglo-Saxon settlement, and on the clay lands to the west forests must have grown until much later. A brief study of Midland archaeology suggests, however, that the great forest areas were sufficiently broken by minor topographical and geological features to allow prehistoric intercourse in many directions throughout the region, even if actual settlement was confined to isolated patches of dry ground. In any estimation of the availability of the Midland routes in the Bronze and Iron Ages, account must be taken of the Forest-Culture traditions of the Mesolithic that lay behind the users of stone axes in Charnwood, and behind the makers of collared urns with decoration of Peterborough origin in the Leicester region as a whole. Quite apart from the cumulative clearing agencies of primitive agriculture, and domestic animals, as first evidently introduced to the East Midland uplands by the Beaker people, an element of the population existed to whom forest and water can have been no greater obstacles than they are to-day to the primitive dwellers of the Congo.

These notes have been intended to provide some setting for the local conditions when the hoard came to be lost or abandoned. The objects comprising the hoard must now be described.

## II. DESCRIPTION

The hoard contains sixteen objects, and two small pieces of sheet bronze possibly fragments of a cauldron.

### 1-3. *Three socketed axes.* (Fig. 2, 1-3)

The two larger axes are 10.3 cm. long, and the smaller axe is 9.1 cm. in length. In all cases the socket-aperture in section is roughly square with rounded corners. The blades are widely splayed and curved. Details in the decoration and shape of the two larger axes show that they were not made in the same mould. The principle of decoration on all three axes is the same. On either face are three pronounced vertical ribs subtended from a horizontal collar moulding which runs round at the line of the socket end of the loop. The lip of the socket is roughly moulded to provide a slightly thickened and rounded neck. The casting-seams on the sides of the axes are pronounced, and there are no indications of steps having been taken to reduce them. The axe edges are much worn, the greatest wear in each case being on the portion of the blade farthest from the loop. This point

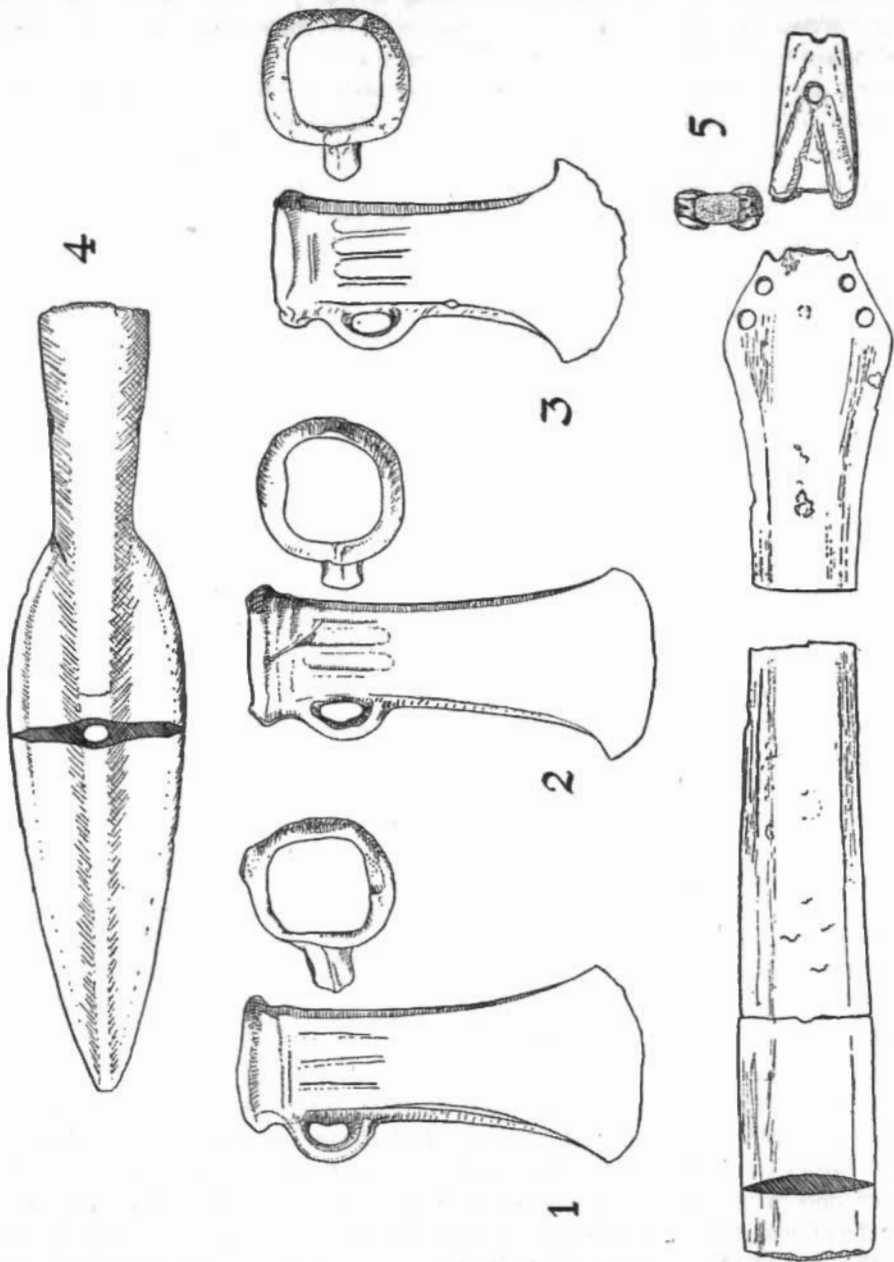


FIG. 2. THE WELBY HOARD: SOCKETED AXES (1-3), SPEARHEAD (4), AND SWORD (5). Scale,  $\frac{1}{2}$ .

supports the existing evidence for the mounting of socketed axes with the loop downwards; the axe being at 90 or less degrees to the line of the handle, the point of percussion on the edge during chopping would have been towards the upper part of the blade.

These axes call for no special comment, for they belong to a type common in British Late Bronze Age hoards. In style, the closest parallels come perhaps from East Anglia in such examples as the axes from Reach Fen, and Barrington.<sup>4</sup>

#### 4. *Spearhead*. (Fig. 2, 4)

The overall length of the spearhead is 20.6 cm. It is a fine example of the leaf-shaped type in which the socket runs the whole length of the blade. The blade is narrow in proportion to its length, and the curve of the edges is gradual from tip to base. The socket forms a pronounced central rib, and the faces of the blade bear a broad bevel to the edges. There are two opposed rivet- or peg-holes in the socket below the blade edges, and they are placed slightly more than half-way towards the socket-mouth.

This weapon is again a common type in hoards and is ultimately of intrusive, Continental, ancestry.

#### 5. *Sword*. (Fig. 2, 5)

There are four sword fragments. The two pieces forming the shoulders and the hilt fit together, and the two other fragments join and form part of the blade. Examination indicates that the blade fragments belong to the same sword as the upper portion.

The sword had a leaf-shaped blade (conjectured length from *ricasso* to tip, 28 cm.), and straight shoulders perforated by three pairs of rivet-holes. In section the blade is a plain pointed oval, and the surface is smooth, showing a low midrib, flanked by a slight shallow grooving, and a low bevel to the edges. A very slight *ricasso* exists below the shoulders.

Owing to a weakness in the design the upper half of the original hilt had been broken off. So, to make a stronger hilt the smith who repaired the weapon provided, in the mould for the new part, two pairs of strengthening ribs which ran a little way past the joint between the old work and the new, in order to stiffen the whole. The plan was sound, but failed in practice; for the amount of molten metal coming into contact with the broken part was too small in bulk, or too cool, to make a fused joint with the broken stump. The metal chilled instead, and a false joint resulted. The hilt broke a second time opposite the narrowest pair of rivet holes, which had in fact been covered by the ends of the ribs, and the sword was finally scrapped.

The sword may be considered to belong to a late form, and to be one of the hybrid types common in Britain during the transitional Bronze/Iron period. The straightness of the shoulders, the lack of angularity where they meet the blade, and the shape of the blade, all indicate a late typological position. The slightness of the *ricasso*, however, and the spindle form of the blade's section, are features of an earlier tradition, more clearly seen in swords from Central Europe.

<sup>4</sup> Evans, *Ancient Bronze Implements* (1881), 117, figs. 124-5. Fox, *Archaeology of the Cambridge Region* (1923), pl. IX, 9.

6. *Fragment of a Pommel.* (Fig. 3, 6)

This object is unusual. It consists of the greater portion of a hollow bronze cap or mount with a flat plain top, having straight parallel edges, and pointed ends. The length of the surviving portion of the top is 3.4 cm. (estimated complete length 4.4 cm.), and its width is 1.2 cm. The faces of the object are straight, and contain a pair of opposed rivet-holes which appear to be central. The base is open, and the edges of the sides are here slightly concave. The broken portion between the top and lower projection is of particular interest, as it has been observed that the edges at the extremities are properly finished, and only the inner part represents breakage. This means that the ends were intentionally left open, so that the cap as a whole fitted over something which in part was meant to be seen. Decoration consists of a slight moulding below the edge at the top, and another along the line of the lower projection. There are also the remains of a thin vertical groove running down the line of the breakage on either face, and traceable from top to base.

Various uses, including that of a chape, have been considered for this object, but its function as a pommel for a sword or knife seems the most probable. No parallel has been found, but there is a general likeness to metal sword-pommels, although these are usually round or oval in plan.

7. *Double-looped harness-fitting.* (Fig. 3, 7)

This fitting consists of a thick, roughly circular loop, cast on a clay core. The base on the outside is flat, and supports a small elongated loop made of a solid strip of metal. The object was cast in one piece, and the clay core can be seen on the inside of the larger loop where the metal was defective and has broken away, and also in the flat area between the attachments of the smaller loop, where the core was intentionally left exposed. The form of this fitting suggests that the smaller loop was intended for fixing into some piece of harness, leaving the round loop free for the passage of a thin trace or rein.

Double-looped objects are not uncommon in hoards of the period, although there is considerable variation in the details of their form. A close parallel to the present object is the one from the Parc y Meirch hoard, Denbighshire.<sup>5</sup>

8. *Perforated disc mount.* (Fig. 3, 8)

The disc is 5.5 cm. in diameter, and is slightly convex in section. The perforation is 0.95 cm. in diameter, and on the face it opens through the centre of a wide semi-conical depression. There are a pair of ordinary loops at the back of the disc through which a small strap might be threaded. The central perforation in this case is evidently intended to be decorative.

9-13. *Disc mounts with circular slides.* (Fig. 3, 9-13)

These are five objects identically alike, consisting of a thin cast disc 6.1 cm. average diameter, with moulded decoration on the face. At the back, four equidistant short flat tangs project backwards and unite in a flat ring approximately 8 mm. wide. It is not clear whether the ring was brazed on to the tangs, or whether

<sup>5</sup> *Arch. Camb.*, xcvi (1941), 1 ff., pl. vi, b.

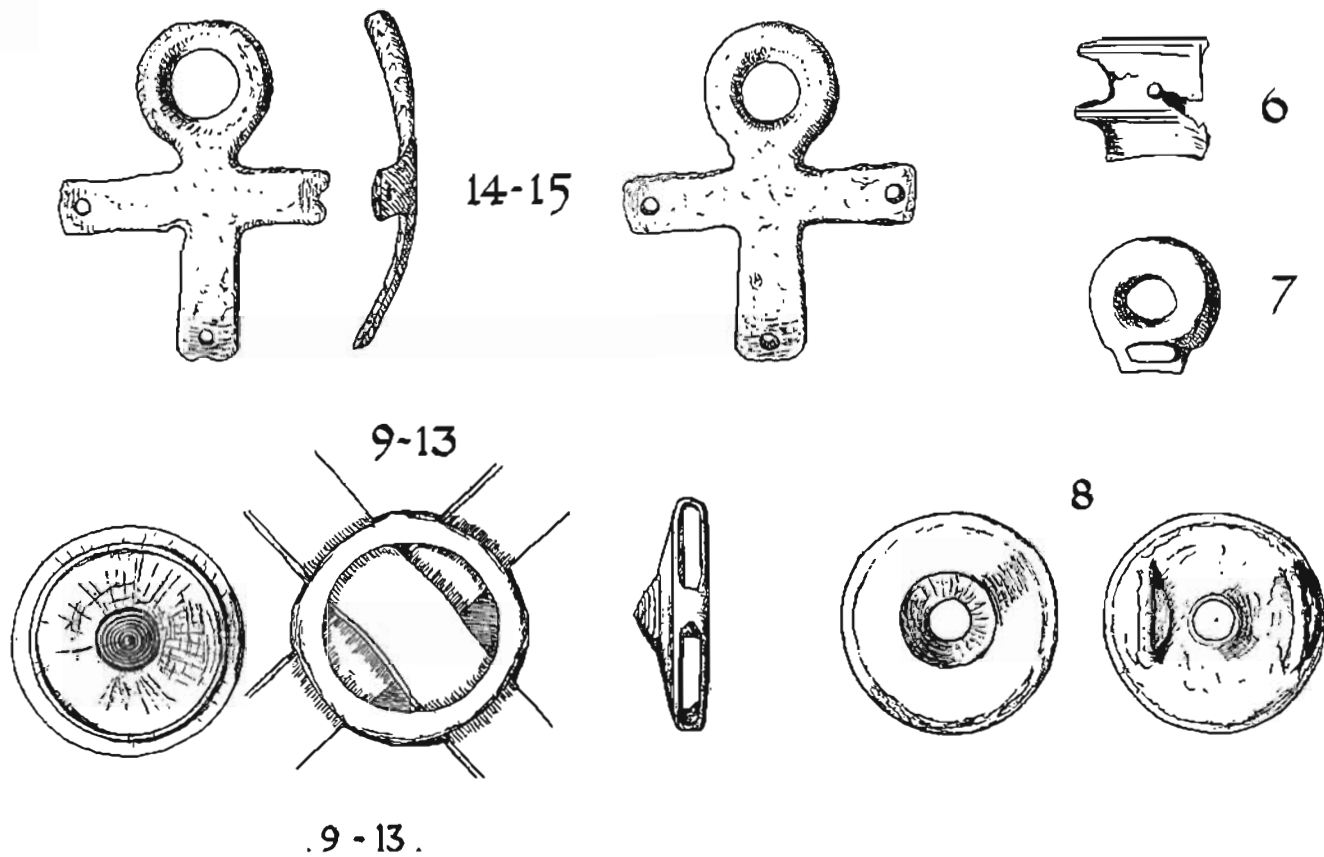


FIG. 3. THE WELBY HOARD: POMMEL FRAGMENT (6), HARNESS-FITTING (7), DISC MOUNTS (8, 9-13), AND CRUCIFORM HANDLE-ATTACHMENTS FOR CAULDRON (14-15). Scale,  $\frac{1}{2}$ .

it formed part of the original casting. The effect was to produce a slide arrangement, through which straps might be run at right angles. The decoration on the face consists of a raised band or rim, 0.5 cm. wide which runs round close to the edge, and in the centre is a conical boss decorated with four concentric ridges and surmounted by a pellet.

This kind of strap ornament, presumably used for the decoration of a warrior's equipment or a horse-harness, is rare. The only comparable objects known from the British Isles are eight smaller and more heavily made discs from the Parc y meirch hoard.<sup>6</sup> Four of the discs in this hoard are reported to be  $1\frac{1}{2}$  inches in diameter, and they have very low concentric mouldings over the whole face, there being no pronounced central boss. The other four discs are  $\frac{7}{8}$  inch in diameter and may be considered as buttons or studs. All eight have circular slides.

The most interesting feature of these discs is the slide arrangement at the back, the majority of strap mounts in the British Isles having loop attachments. The footed circular slide as found at Welby and Parc y Meirch is known from Hungary, where, in a hoard from Dinnyés, to be mentioned later in this paper, were found five discs almost identical in size and decoration to those from Welby;<sup>7</sup> a number of other places in Hungary have produced plain discs or buttons with circular slides, and from Hradenín in N.W. Bohemia a few discs of the same general type have been published by Dvořák.<sup>8</sup> Elsewhere to the north or west they appear to be very rare or non-existent. The associations of this type of slided disc will be returned to later in this paper. It is perhaps noteworthy that at both Dinnyés and Welby the number of discs was five, but it would be premature to suggest that this was the complement of a particular piece of equipment.

14-15. *Pair of cruciform handle-attachments for a cauldron.* (Fig. 3, 14, 15; cf. fig. 4)

These objects each consist of a single piece of strong metal with rectangular foot and arms, and a round loop head. The overall height is 8.75 cm., and the width across the arms is 7.5 cm. There is a small rivet-hole near the extremity of the foot and arms, and the objects are curved to take the shape of a globular vessel.

These handle-attachments belong to a well-recognized type known in Italy, Central Europe including Hungary, and Scandinavia. A few have been found in France, but so far the pair from Welby are the only known examples from the British Isles. The handle-attachments were generally mounted in pairs, on opposite sides of the lip of a cauldron (as fig. 4), and two handles of bent bronze rods were hooked through the attachment loops. The cruciform attachments were usually mounted with the inner arms overlapping so that they might share a common rivet, and in some examples the 'pair' were made in one piece with a continuous inner arm.

The cruciform handle-attachments have been studied by Sprockhoff,<sup>9</sup> and others, and it would appear that the Welby examples belong to his second type of cauldron, which was of hemispherical shape. The cultural setting of these cauldrons

<sup>6</sup> *Arch. Camb.*, xcvi (1941), pl. v, 74-81.

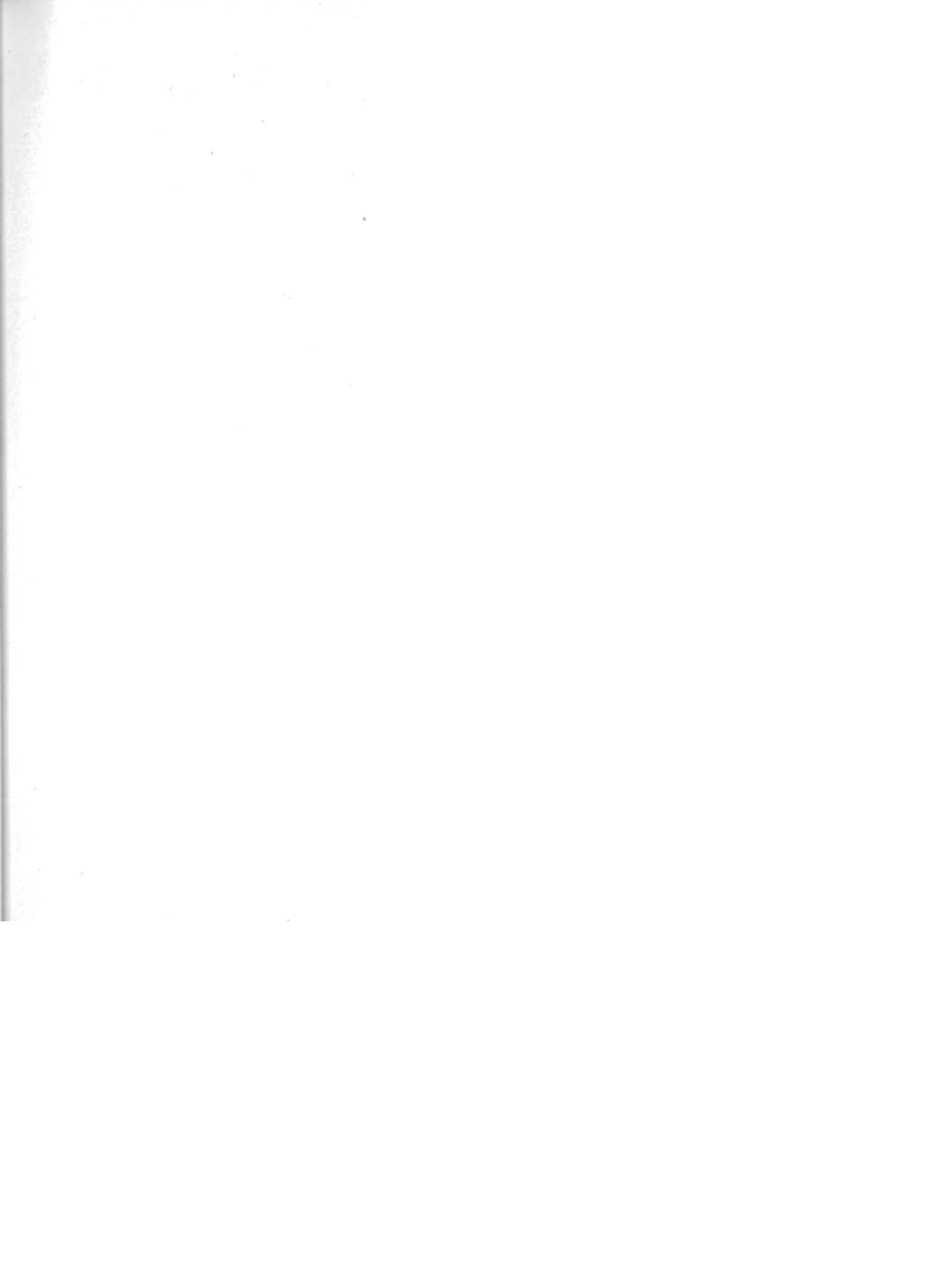
<sup>7</sup> Gallus and Horvath, *Un Peuple Cavalier Prescythique en Hongrie*, Dissertationes Pan-nonicae, Ser. II, 9 (1939), pl. ix.

<sup>8</sup> Dvořák, *Wagenbestattungen der Älteren*

*Eisenzeit in Böhmen*, Praehistorica, I (1939), pls. 26, 30, 44 (German resumé of paper in Czech).

<sup>9</sup> Sprockhoff, *Zur Handelgeschichte der Germanischen Bronzezeit* (1930), 120 ff.







THE WELBY HOARD  
TWO VIEWS OF THE BRONZE CUP

*Photo, Leicester Museum*

will be returned to in the concluding remarks. In detail of form, the closest parallel to the Welby handle attachments seem to be those on a cauldron from Unter-Glauheim, Bavaria,<sup>10</sup> reproduced here (after Sprockhoff) as fig. 4.

16. *Cup*. (Pl. VI)

The small carinated bronze cup with omphalos base is perhaps the most outstanding piece in the hoard. Its height is 4.4 cm., diameter across the mouth is 6.7 cm., greatest width 8 cm., and the diameter of the base is 2.25 cm. The cup was cast and is made of metal approximately 1.4 mm. thick at the base, and 0.8 mm. at the rim. The lower part of the body is plain, but above the shoulder the surface is covered by five horizontal and parallel grooves. The lip is plain and slightly everted. The surface of the cup was finely finished and is very smooth although there is no special evidence for polishing.

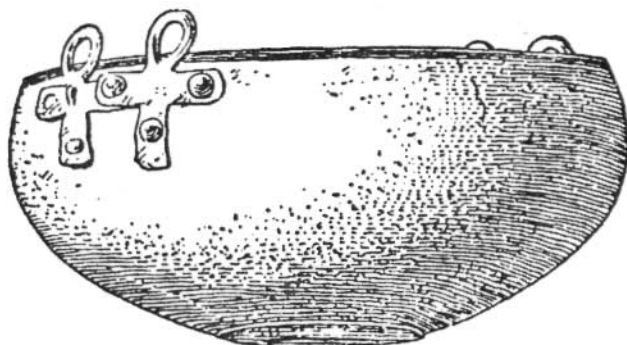


FIG. 4. BRONZE CAULDRON WITH CRUCIFORM HANDLE-ATTACHMENTS, FROM HOARD, UNTER-GLAUHEIM, BAVARIA (AFTER SPROCKHOFF). Scale,  $\frac{1}{2}$ .

No similar metal cups are known from the British Isles, nor apparently from the Continent. The form is well known in pottery vessels, and it has been generally assumed that these had a metal prototype. The pottery vessels, which may often be considerably larger than our cup, come from Switzerland, South Germany, Eastern France, and Catalonia, and they are best represented in Britain, mainly on a smaller scale, at All Cannings Cross.<sup>11</sup> A South German or Central European origin for the Welby cup is not impossible, in view of the number of other metal cup types which were produced and widely traded from that region.

### III. DISCUSSION<sup>12</sup>

The Welby hoard falls into the well-known type of Late Bronze Age founder's, or scrap-metal, collections. These were a feature of the economic system of the time, and betoken travelling merchants buying up old and worn objects for eventual

<sup>10</sup> Åberg, *Chronologie*, V, fig. 166, Childe, *The Bronze Age*, 223, fig. 27, 2.

<sup>11</sup> Cunington, *All Cannings Cross* (Devizes, 1923), pl. 40, no. 1; pl. 45, nos. 2-6.

<sup>12</sup> The papers recently published in *Proc.*

*Prehist. Soc.*, 1948, by Prof. V. G. Childe (No. 7), and by Prof. C. F. C. Hawkes (No. 8) are fundamental for the study of the periods under review. Their nomenclature and dating system have been followed in the present notes.

melting down, and for the production of new goods. The hoards rarely contain specifically foreign objects, and in this respect the Welby hoard is outstanding, for it includes both Continental types as well as a good representation of normal insular weapons which might be paralleled in the majority of founders' hoards in the Lowland Zone.

The Welby material may be divided into three groups :

1. The socketed axes, spearhead, sword, and perhaps the minor objects, which illustrate the Late Bronze Age industry of Britain during a stage when derivative types of Hallstatt swords had been added to the equipment of the earlier phases which had seen the introduction of the leaf-shaped sword, the socketed leaf-shaped spearhead, and the socketed axe.

2. The cup, which need not be necessarily as late as any of the earthenware examples either in Britain or on the Continent, but may well represent the cultural background of the ceramic types. The carinated pottery vessels with haematite coating found at All Cannings Cross, and other British sites, belong to a peripheral culture of Late Hallstatt inspiration best exemplified at Les Jogasses in the Department of the Marne.<sup>13</sup> The cups from Les Jogasses are akin to vessels from Hallstatt II sites in south Germany and Switzerland, but the form is also represented from early graves in the urnfields of Catalonia.<sup>14</sup> The migration of the Urnfield peoples from the Rhenish-West Alpine area to Spain began about the mid-eighth century B.C., and in the homeland region their cultural setting is that of the transition from Period E to Period F.<sup>15</sup> In view of the range of time in which the carinated pottery vessel with horizontal ribbing on the neck was in vogue in one or other part of Western Europe, the chronological position of this isolated metal example on its own evidence is hard to determine. The other evidence in the Welby hoard indicates that it arrived in Britain in advance of the Iron Age 'A' potters whose ware was found at All Cannings Cross.

3. The Central European elements, namely, the cruciform handle-attachments and the slided discs.

The cruciform handle-attachments provide valuable dating evidence for the hoard. They occur in Hallstatt I and II contexts at Hallstatt itself, and throughout the Upper Danubian region. In Bavaria, the Hallstatt I hoard from Unter-Glauheim brings a hemispherical cauldron, with the sub-type of handle-attachment to which the Welby ones belong, into association with a handled bucket with sun and bird's-head decoration.<sup>16</sup> These buckets belong to the Villanovan fine 'boss-style' work which owed something to Etruscan craftsmanship, and the period of their export to Central and Northern Europe falls within the seventh century B.C.

It would be improper to develop here the subject of the cauldron's typology and associations northward throughout Europe, but it is relevant to consider their distribution as objects of trade in so far as an occasional specimen may have arrived in Britain. The cauldron is essentially a utensil of the Eurasiatic plains, and it was developed in Siberia and China no less than in the West. It is known, too,

<sup>13</sup> *Prehistoire*, 1936, 24 ff.

<sup>14</sup> *Ampurias*, vii-viii (Barcelona, 1946), pl. 1, 2. A small scale photograph of the same vessel was published by P. Bosch-Gimpera, *Two Celtic Waves in Spain*, Proc. Brit. Acad., xxvi (1940), pl. 1, e; text, 12-13.

<sup>15</sup> Hawkes, *Proc. Prehist. Soc.*, 1948, 216 and 218.

<sup>16</sup> Consult Sprockhoff, *op. cit.*, for a full treatment of cauldrons.

that in religion and social observance it played an important part in the life of the Celtic peoples. If the cauldron originated, so far as most of Europe is concerned, in Hungary, the Villanovan metal industry on the other hand seems to have played a large part in supplying the demand north of the Alps, and perhaps gave birth to the specialized biconical type. Apart from the Hungarian group centred on the Tisza valley, the main distribution northwards of the cauldrons with cruciform handle-attachments is through Carniola, Styria, Upper Austria, and Bohemia to the Elbe system, and thence to Scandinavia. To the west the finds are rarer, but examples come from Bavaria, Switzerland, and a very few from the Upper and Middle Rhine. Dr. Savory informs me that in France a few of these handle-attachments have been found in the Departments of Oise, Aube, and Yonne, and this suggests a distribution along the Jurassic zone which gave communication westwards to the sea routes from the Loire and Brittany. One has also to remember the possible routes taken by the displaced Jogassians on their way to Britain, and, as Wheeler has suggested, these may have led them through Normandy, perhaps along the Lower Seine.<sup>17</sup> It is interesting to note that no cruciform handle-attachments have been recorded in the Lower Rhine area, nor eastwards until the valley of the Elbe is reached.

The cruciform handle-attachments provide an opportunity to see what correspondence may exist between recognized stages of culture in Britain and Scandinavia. The handle-attachments have been found in five places in the Danish islands, and at one in Sweden. On the evidence of hoards containing southern imports, such as that from Lavindsgaard,<sup>18</sup> the latter half of Period IV (Montelius) of the Northern Bronze Age can be correlated with the opening of Period F in Middle Europe. Period V in the North is contemporary with the greater part of Period F and with much of Hallstatt I, and it is in Period V that biconical cauldrons with cruciform handle-attachments first appear, as at Voldtofte and Birkengaard.<sup>19</sup> Towards the end of Period V, and in Period VI, the hemispherical cauldrons came into use (e.g. Vester Skjeringe, Hveldholm, and Svensmark) so that the Welby handle-attachments indicate a phase in Britain contemporary with Period VI in Scandinavia.

The ornamental discs with circular slides for straps are of even more exotic and peculiar interest than are the cruciform handle-attachments. As has been said, they are of a distinctive and rare type. Their cultural associations are also specialized, and the opportunity is taken to summarize the available information.

In Hungary, the five discs from the Dinnyés hoard, which are so like the Welby examples, were found in association with a horse-bit and cheek-pieces of Type II as defined by Gallus.<sup>20</sup> Discs or buttons of the same kind, but without decoration on the face, have been found with bits (it is the cheek-pieces that are really subject to typology) of Type I at Füzesabony (Grave 3),<sup>21</sup> and with cheek-pieces of Type II at Kiskoszeg.<sup>22</sup> The pottery from Grave 3 at Füzesabony, and from such other graves, as at Maroscsapo, where bits and pottery occur, is not of the indigenous

<sup>17</sup> Wheeler, *Maiden Castle* (Soc. Antiq. London), 190.

<sup>18</sup> Brøndsted, *Danmarks Oldtid*, II (1939), 170 f., fig. 156.

<sup>19</sup> Broholm, *Aarbøger*, 1933, 233 n.; Brøndsted, op. cit. 226, fig. 215.

<sup>20</sup> Gallus and Horvath, op. cit., *passim*.

<sup>21</sup> *Ibid.*, pl. II.

<sup>22</sup> *Ibid.*, pl. LIV.

Late Bronze Age ware, but a few imports of south German Period F types, such as socketed axes, have been found with bits and cheek-pieces of Types I and II, as at Zabori (grave), and Szanda and Ugra (hoards).<sup>23</sup> On the other hand Gallus notes one of his Type I bits in the transitional Period F—Hallstatt I hoard from Stillfried in Austria, and in Hungary, bits of Type II have been found with iron spearheads proper to Hallstatt I contexts. Bits of Type III are on associational evidence certainly no earlier than Hallstatt I.

It is unfortunate that all the Hungarian finds are ill-documented and none of them were scientifically excavated. It is clear, as Childe has pointed out,<sup>24</sup> that no great reliance can be placed on the chronological value of the three types of bits and cheek-pieces, and furthermore there is nothing in the available evidence to show that Period F objects in Hungary may not be contemporary with Hallstatt I further west.

In Bohemia, some small ornamental buttons with slided discs were found in two of the cart-graves (XXIV and XLVI) at the carefully excavated cemetery at Hradenin.<sup>25</sup> These graves contained rich assemblages of Hallstatt I objects including iron swords. The horse bits and cheek-pieces have clear affinities to the Hungarian ones of Types II and III, but they appear to be more finished pieces of craftsmanship. The cheek-pieces from Hradenin are typical of the type found in other graves within the Hallstatt province, and of the stray examples further north as at Court St. Étienne, Belgium,<sup>26</sup> Bertoft, Schleswig-Holstein,<sup>27</sup> and Eskelhem, Gotland.<sup>28</sup> The detail of the cheek-pieces from Hradenin (Grave XXIV)<sup>29</sup> Wiesenacker (Graves 4 and 6), Bavaria,<sup>30</sup> and Eskelhem, are strikingly close.

One interpretation of the horse-gear, and therefore of the slided discs, under consideration in Hungary and Central Europe is that it represents an intrusion of warrior horsemen from the steppes, who, being highly mobile, could have covered great distances with comparative ease. The apparent absence of comparable horse-gear from the area between Hungary and the Caucasus is a well-known difficulty, but if this was indeed the direction whence the horsemen came, it is understandable how the bits would be found in Period F associations absolutely older than Hallstatt I objects anywhere in Central Europe. The intruders would have had to depend largely on local crafts during the early stages of their settlement, before they prospered sufficiently to build up the richer material culture we know as Hallstatt.

Quite apart from the question of the origin of the horsemen, and of the burial poms of their richer chieftains, it is clearly to a point in time within Period F that the introduction of the metal bits and cheek-pieces must be sought. Hawkes has shown that Period F in Middle Europe lasted throughout the latter half of the eighth, and greater part of the seventh centuries B.C. The horse-gear is not likely to have been introduced earlier than the beginning of the seventh century B.C., that is, towards the end of the Period. In that case the possible influence of

<sup>23</sup> Gallus and Horvath, *op. cit.*, 50 f.

<sup>24</sup> *Antiquity*, 1947, 217 ff. A valuable summary of all the issues.

<sup>25</sup> Dvofák, *op. cit.*, *passim*.

<sup>26</sup> Baron de Loe, *La Belgique Ancienne*, II, 163-7.

<sup>27</sup> Schwantes, *Vorgeschichte Schleswig-Holsteins* (1939), 404.

<sup>28</sup> Åberg, *Chronologie*, II, figs. 133-4; Sprockhoff, *op. cit.*, 87; Hansson, *Gollands Bronsalder* (1927), pl. 53. This is a Period VI hoard.

<sup>29</sup> Dvofák, *op. cit.*, fig. 30.

<sup>30</sup> Åberg, *op. cit.*, II, figs. 83-7 and 89-91.

Etruscan horsemanship on native chieftains cannot be ruled out, for it has been already noted that the trade in metal vessels from Italy had reached Middle Europe and Scandinavia well within the seventh century B.C. Gallus noted that a similarity existed between the Hungarian bits and early Etruscan types, although he believed the latter to be of no greater antiquity than the former.<sup>31</sup> If this line of enquiry should bear deeper investigation it must be remembered that Etruscan horsemanship itself had an Anatolian background, and can, therefore, claim some relationship to the Caucasian-Iranian region.

In Northern Iran, in Cemetery B at Tépé Sialk, were found graves of an intrusive people who possessed horse-gear of the same general type as that under discussion, and included in one of the richest graves (Tomb 15) were examples of plain slided discs or buttons. This grave also produced three pairs of bronze cheek-pieces and their bits, and a cylinder seal depicting men on horseback.<sup>32</sup> Various opinions exist as to the date of Sialk B; the excavator, R. Ghirshman, proposed the dates 1000-800 B.C.; but Schaeffer, mainly on the typology of cylinder seals and scarabs, adduces the dates 1250-1100 B.C.<sup>33</sup> Horvath, when discussing the Hungarian material, concluded that the horsemen's graves at Sialk B belonged to the first half of the seventh century B.C.,<sup>34</sup> and this date, with perhaps a slightly earlier margin, recommends itself on general grounds no less than as being more reconcilable with the European evidence.

The importance of the slided discs in the Welby and Parc y Meirch hoards is that they represent a direct Central European element not easily interpreted as being due to trade, as may a commodity such as the cauldrons with cruciform handle-attachments. The diffusion of martial equipment and horse-gear north and west from the original Hallstatt province moved, like the trade in metal vessels, ahead of the iron-working economy which was the special contribution of Hallstatt to European civilization. It would appear that, apart from the trade, there was an actual infiltration of fighting men, immediately anterior to the true Iron Age cultures and migrations, in France and the Rhineland, and some of these warriors crossed the English channel, probably carrying with them some subservient communities or womenfolk. The ceramic group known as Flat-Rimmed Pottery,<sup>35</sup> identified in Scotland by Childe and in England first by Hawkes, and described by Hencken, would appear to be explained by such a movement; and this pottery, as well as the Hallstatt metal objects, and their derivatives, which appear in otherwise normal insular Late Bronze Age contexts, give substance to this important phase, which has lately been propounded by Hawkes as Period III of the British Late Bronze Age.<sup>36</sup>

On the present evidence for the chronological position of the Hallstatt culture in Central Europe and of Period VI in Scandinavia, we need place this Late Bronze

<sup>31</sup> Gallus and Horvath, *op. cit.*, 52. In conversation, Mr. R. W. Hutchinson has drawn my attention to a possible material link between Iranian and Etruscan horsemanship. The large forks found in graves at Vetulonia may be akin to the less elegant ones from Sialk and a few other Iranian sites. Some of these would appear to have been weapons for attack against the enemies' horses rather than having been used as *stimuli* or for some other purpose.

<sup>32</sup> Ghirshman, *Fouilles de Sialk*, II, pl. LIII-LVII.

<sup>33</sup> Schaeffer, *Stratigraphie Comparée et Chronologie de l'Asie Occidentale* (Oxford, 1948), 470 ff.

<sup>34</sup> Gallus and Horvath, *op. cit.*, *passim*.

<sup>35</sup> Hawkes, *op. cit.*, 218, and refs. therein.

<sup>36</sup> Hawkes, in *Survey and Policy of Field Research in the Archaeology of Great Britain*, I (Council for British Archaeology, 1947), 37.

Age III Period in Britain, and within it the Welby hoard and such others containing Hallstatt objects, no earlier than the latter half of the sixth century B.C.

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#### NOTE ADDED IN THE PRESS

Thanks to the indefatigable enquiries of Mr. John Daniell of the Leicester Museum, who has very recently succeeded in contacting Mrs. Hocart in Western Australia, some further information has come to light on the finding of the hoard. Mrs. Hocart has written that the surviving objects, together with many more, were discovered by a farmer when digging "a trench" in a field in the parish of Welby. The farmer brought the finds to a small foundry in Melton Mowbray where they were in process of being melted down when seen by Mr. W. S. Barnes, Mrs. Hocart's father. He purchased the surviving objects which eventually came to the Leicester Museum.