

LOCAL BRONZE IMPLEMENTS IN KINGSTON-UPON-THAMES MUSEUM

BY

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KINGSTON-UPON-THAMES Museum contains an interesting collection of bronze tools which has not hitherto been described in detail, although some items have been mentioned in earlier publications. The entire collection is illustrated here except an axe of Breton type from Brittany.

HOARDS

(a) Nos. 506-520. *Fifteen Pieces of Copper Cake* (Plate I, lower).

Probably local; part of the late Ald. F. Gould's collection, donated 28 September 1904. These are shown to be copper by their reddish colour; Bronze Age metal cakes are usually 99% pure copper (Smith & Blin-Stoyle, 1959). The two largest, No. 506 (3 lbs.) and No. 507 (1 lb. 15 oz.), come from a bun-shaped cake of diameter about 20 cm. (8 ins.) which would have weighed about 12 lbs. It is not certain, however, that they, or any of the others, are from the same cake. Total weight 7 lbs. 15 oz. This is small as hoards of copper cake go; Fox mentions two of over $\frac{1}{2}$ cwt. (Fox, 1923, 49).

(b) Nos. 1092-1094. (Plate I, upper).

Discovery

'... found and collected by Mr. C. H. Clutton in 1869 and 1870, and presented by him to H.R.H. the late Duke of Cambridge, who presented them to the Museum of Christ's Hospital School, Horsham...; lately extra class room accommodation was required at the school, and the Kingston specimens among others passed into the hands of a local builder who wished to dispose of them. By good fortune Dr. W. E. St. L. Finny heard of them and went at once to Horsham, secured them, and brought them back to Kingston... a mass of bronze from the bronze smith's melting pot, from which implements were made, a bronze awl, a bronze socketed celt, a fragment of bronze sword and a tubular implement of bronze; and several other bronze objects which have now disappeared...' (Offprint from newspaper, source unknown, in the Museum).

This is the hoard listed by J. Evans (Evans J., 1881, 423 and 467). The find spot was George Lane Gravel Pits, now a golf course. From examination of maps of the area, Mr. J. Hampton of the Ordnance Survey has been able to work out the area of the gravel pit dug at that time so that it is possible to give an almost exact grid reference for this hoard, viz., TQ(51)201703-5.

Contents. When part of the Duke of Cambridge's George Lane Gravel Pits collection was exhibited to the Royal Archaeological Institute on 2 April 1869, by Walter H. Tregellas, the following metal objects were shown: 'Portions of a bronze sword, and of a bronze javelin or blade, also part of a bronze socketed celt, and another object of the same description that has a fragment of cake-copper forced into the cavity of the socket . . .' (*Arch.J.*, XXVI (1869), 288). According to the *Victoria History of the County of Surrey*, Vol. I, 241, the hoard included 'two socketed celts, one sword, one spearhead and one piece of copper-cake.'

The objects now in the Museum are:—

No. 1092. Circular copper-cake weighing 2 lbs. 2 oz.

No. 1093A. Small bronze awl, probably part of the smith's equipment rather than scrap (Fig. 2).

No. 1093B. Socket from a large riveted spearhead.

No. 1093C. Small fragment of a leaf-shaped sword, badly flawed in casting.

No. 1094. Socketed axe; piece missing out of side.

It cannot be absolutely certain that all the objects were in direct association when found, but they are all probably part of a founder's hoard, in spite of Whimster's view to the contrary (Whimster, 1931, 80).

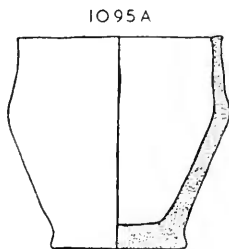


FIG. 1.—IRON AGE POT FROM GEORGE LANE GRAVEL PITS. (4)

Date. All the above objects belong to the Late Bronze Age, while the axe is a late type within it. However, 'Neolithic' pottery was found at the same time; this 'Neolithic' pottery is actually of Iron A type (Fig. 1). It is possible that this hoard should be dated to the beginning of that period.

CASUAL FINDS

Acquisition

With the exception of spearhead No. 1063 which was donated by Ald. Dr. W. E. St.L. Finny, J.P., on 20 October 1929, these all come from two collections of miscellaneous material.

- (i) Nos. 1–33: part of the late Ald. F. Gould's collection donated on 28 September 1904.
- (ii) Nos. 716–754: formerly the property of Mr. W. H. Roots, F.R.S.E. and purchased by the Museum on 30 April 1907.

Provenance

No details are known of the exact provenance of any of the finds nor whether any were together when found. With the exception of the unlooped palstave No. 737 (and perhaps also No. 749) they were all found in the Thames. Probably all (except No. 737) were found at Kingston, although this is not certain in every case.

SWORDS (Plate II and Fig. 2).

No. 25. *Rapier of Group I* (Trump, 1962). With two rivet holes and two notches. Estimated original length 30 cm. (1 foot).

Date: c. 14–13 Cent. B.C. From Thames, Kingston.

No. 751. *Rapier of Group II, Wandsworth Class* (Trump, 1962). (The Wandsworth Class was a local product of the London area.)

Two rivets 20 by 9 mm.

Date: c. 12 Cent. B.C. From Thames, Kingston.

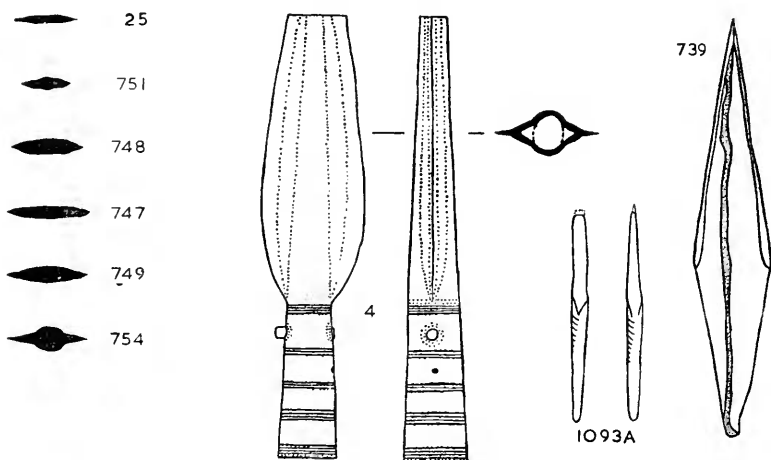


FIG. 2.—MID-SECTIONS OF SWORDS. DECORATED SPEARHEAD. BRONZE CHISEL. CASTING SEAM. [Reading from left to right.] ($\frac{1}{2}$)

No. 748. *Rixheim/Lambeth Sword*

As pointed out by Wheeler (Wheeler, 1927) this is almost identical with one from the Thames at Lambeth, now in the London Museum (No. A19785). This latter is also illustrated by Brewis (Brewis, 1923, Fig. 15) and figured by Miss Trump (Trump, 1962, Fig. 17). Miss Trump classifies it as a Ballintober sword, but it does not bear much resemblance to her other Ballintober swords (nor is it like the Ballintober sword of Hodges) (Hodges, 1956, 37, and 1957, 64); it is clearly a type of rapier whereas the Ballintober sword is a type of leaf-shaped sword, even if a crude variety. It comes much closer to the Rixheim swords, one of which was found at Eriswell, Suffolk, with Group III Lisburn Class rapiers (Briscoe and Furness, 1955, 218).

Mr. C. B. Burgess has told me in correspondence that he classifies this kind of rapier as the Lambeth sword. He considers it to be a development from the Rixheim sword and related to the Rosnoën Group sword. One of the swords from the Pennavern, Rosnoën, hoard figured by Giot has a tang with four rivet-holes like the Lambeth sword (Giot, 1960, Fig. 46).
Date: 1100–950 B.C. From Thames, Kingston.

No. 747. *Ballintober/Chelsea Sword*

The butt end of the tang has been broken short; one can be reasonably certain that there never was a pommel, since swords which have no rivet-holes through the flanges (Evans, J., 1881, Figs. 346 and 357; Grimes, 1951, Fig. 71) lack pommels.

As pointed out by Wheeler (Wheeler, 1927) this also is very close to a sword in the London Museum, to wit No. A6366 from Thames, Chelsea; this latter is also figured by Miss Trump (Trump, 1962, Fig. 19). It is also very close to another found in the Thames, Kingston, and figured by Biden (Biden, 1852).

It should be noted that this sword has a flattish section, not the flat lozenge section of the true Ballintober sword. Mr. Burgess classifies this type as the Chelsea sword. He regards both the Chelsea and the Ballintober swords as developments of the Lambeth sword under the influence of the leaf-shaped sword.

Date: c. 1050–950 B.C. From Thames, Kingston.

No. 749. *Type 'G'/Hallstatt 'A' Sword* (Peake, 1922; Cowen, 1951).

Compare with the one in the Meldreth hoard (*Inventaria Archaeologica*, G.B. 13, No. 3), the ones from Minden and Gentbrugge (considered to be of British make) (Cowen, 1952) and the one from the Tyne figured in the *Later Prehistoric Antiquities* (British Museum, 1953) and by Peake (Peake, 1922).

The tip (about 1.5 cm.) is missing and the edges have about forty nicks hacked into them; this damage must be intentional and not the result of use.

Date: c. 650–450 B.C. Probably from Thames, Kingston.

No. 754. *Carp's-Tongue/Beachy Head Sword*

It was at one time thought that carp's-tongue swords were of Alpine origin (Evans, E. E., 1930); however they were almost certainly a North Spanish/West French derivation from the leaf-shaped sword (Savory, 1948). It was formerly considered that they were imported into this country as scrap metal (Brewis, 1923). Their high lead content, however, would make it appear more likely that they were made here (Smith and Blin-Stoyle, 1959).

The tip had already been snapped when discovered, but nevertheless this is one of the best preserved specimens recorded in Britain.

Date: c. 750–450 B.C. From Thames, Kingston.

SPEARHEADS (Plate III, upper).

No. 752. *Spearhead Class IIIA* (Greenwell and Brewis, 1909), i.e. with ribbed wings and loops at the base of the blade, cf. their fig. 22 from Thames, Teddington.

E. E. Evans Type (1), i.e. with loops attached to the ribs (Evans, E. E., 1933), for which he quotes J. Evans, from Isleham Fen (Evans, J., 1881, Fig. 406).

The butt end of the socket is missing, also the connection between the blade and the socket, so that its original length is uncertain. The top end of the shaft was found inside the spearhead. It is in the shape of a rod whittled almost to a point but leaving a flat tip of diameter 3 mm., which would reach to within 9 cm. of the tip of the spearhead (assuming that the unstained part of the shaft was inside the spearhead and the stained part at the fracture). Its diameter at the maximum is 13.5 mm., so that it must have shrunk about 1 mm. but otherwise it is almost as good as new.

Date: c. 1300–1100 B.C. From Thames, Kingston.

No. 1063. *Spearhead of Class IIIA* (Greenwell and Brewis, 1909) *Type* (1) (Evans, E. E., 1933).

'In July, 1929, a Bronze Age spearhead was recovered from the Thames at Kingston. It has a leaf-shaped [sic] blade, a strong central tubular rib with grooves either side of the rib, and it is 13 inches long and 2 inches across the widest part. Some of the wood of the original shaft was adhering to the spearhead when found but unfortunately it was removed and lost.' (*Sy.A.C.*, XXXVIII (1930), 227.)

It is in two fragments, clearly broken up as scrap. Its original length would have been about 50 cm. (20 ins.).

Date: c. 1300–1100 B.C. From Thames, Kingston.

No. 753. *Spearhead of Class V* (Greenwell and Brewis, 1909), i.e. leaf-shaped and riveted, cf. one from Thames, Isleworth (Greenwell and Brewis, 1909, Fig. 31).

The junction between the blade and the socket is missing so that its original length is uncertain; it is possible that there were once loops but it is most unlikely. There are traces of wood on the inside of the socket.

Date: c. 1000–700 B.C. From Thames, Kingston.

No. 16. *Spearhead of Class V* (Greenwell and Brewis, 1909).

Tip ripped off, originally about 22 cm. (9 ins.) long. Note the dents just below break.

The top of the shaft has been preserved in good condition, although not as well as No. 752 since its diameter has shrunk from 18 to 11 mm. It was whittled to a point. Although the socket has a rivet hole, it was clearly not used, as there is no mark on the shaft.

Date: c. 800–500 B.C. From Thames, Kingston.

No. 4. *Spearhead Class VB* (Greenwell and Brewis, 1909), i.e. hollow leaf-shaped (Fig. 2).

Tip ripped off, originally about 22 cm. (9 ins.) long. Note the nicks cut out of the edges.

The walls are much thicker and stronger than is normally the case with a hollow spearhead. The surface is stepped.

The shaft, of which a warped fragment about 6 cm. long was found in the blade, was held to the head by a bronze rivet 4.5 mm. wide, protruding on one side 4 mm. (Bronze rivets, especially protruding ones, are usually confined to Class VI, barbed, spearheads; normally a wooden or bone peg would have been used). On the other side there is an extra rivet hole (empty), 2 mm. across.

Decoration

This spearhead is exceptionally finely decorated; unfortunately due to corrosion the decoration can only be seen with difficulty, and hardly at all on the photograph. Nevertheless the following patterns can be discerned:—

- (i) A line of dots at the step between the midrib and the blade surface, on each side and face, making four in all.
- (ii) A line of dots at the step between the blade surface and the edge, on each side and face, making four in all.
- (iii) A double band of dots around the socket at the base of the blade, below which are:—
- (iv) Five bands round the socket consisting respectively of 4, 3, 3, 4 and 4 grooves picked out with dots inside.
- (v) A single band of dots round the base of the socket.
- (vi) A double circle of dots round each end of the rivet—but not round the empty rivet hole.

Date: c. 800–500 B.C. From Thames, probably Kingston.

PALSTAVES (Plate IV).

No. 737. *Unlooped Palstave*. Splayed edge and ridges down the faces.

Date: c. 1200–1000 B.C. From Wimbledon.

No. 739. *Looped Palstave of Intermediate Type* (Smith, 1959). Vertical ridge on lower half.

This palstave must have been cast at an angle of 45° relative to the plane of the mould. This can be seen from the fact that whereas the casting seam runs down the centre of the inner (looped) face, it is well over to one side of the outer face (Fig. 2.)

Date: c. 1000–800 B.C. From Thames, Kingston.

The remaining palstaves all approximate to Smith's *Late Type* (Smith, 1959). Late palstaves are distinguished by their narrow blades and precise modelling (Grimes, 1951, 67). *Date:* c. 900–600 B.C.

No. 9. From Thames, probably Kingston.

Decoration of Clark's *Class I*—i.e. with ribs on the lower half only, the commonest type of ribbed palstave. This decoration is probably copied from that of the socketed axe (Grimes, 1951, 67).

No. 738. From Thames, Kingston.

Lower half plain.

No. 6. From Thames, probably Kingston. Short vertical ridge down lower half.

No. 736. From Thames, Kingston. Vertical ridge down lower half.

No. 740. From Thames, Kingston. Short vertical ridge down lower half.

SOCKETED AXES (Plate IV.)

No. 10. *Socketed Axe (Plain)*. Recalls a palstave in outline. Socket almost square, completely filled with the original wooden haft, which now holds it together, as it is split across within the loop.

Date: c. 1000–450 B.C. From Thames, Kingston.

No. 743. *Socketed Axe decorated with Three Knobs on each Face*. Socket almost square, contains part of haft—very warped.

Date: c. 1000–450 B.C. From Thames, Kingston.

No. 742. *Socketed, Imitating Winged, Axe*. Imitation wings upper end only. Socket almost square, large piece ripped out of front.

Date: c. 700–450 B.C. From Thames, Kingston.

No. 744. *Socketed, Imitating Winged, Axe*. Socket round, contained small fragments of wood.

Date: c. 700–450 B.C. From Thames, Kingston.

No. 3. *Socketed Axe*

In 'mint' condition—probably never used.

Date: c. 700–450 B.C. From Thames, probably Kingston.

MISCELLANEOUS (Plate II.)

No. 24. *Knife (or Razor?)*. Cf. Heathery Burn (British Museum, 1953, Plate IV, No. 23).

From Thames, Kingston.

No. 745. *Chape* (Plate III, lower). Scabbard-shaped—for use with the leaf-shaped sword. See Evans, J., 1881, Fig. 364, from Isleworth.

Note that there is a rivet hole (the rivet has dropped out but has been preserved) 13 cm. from the mouth. The sword could not have reached beyond that. There are remains of a wooden scabbard inside.

Date: c. 1000–600 B.C. From Thames, Kingston.

No. 746. *Chape* (Plate III, lower). Similar to last.

Rivet in position 14.5 cm. from mouth. The end of the wooden scabbard was found inside, shrivelled but preserving its rhomboid outline.

Date: c. 1000–600 B.C. From Thames, Kingston.

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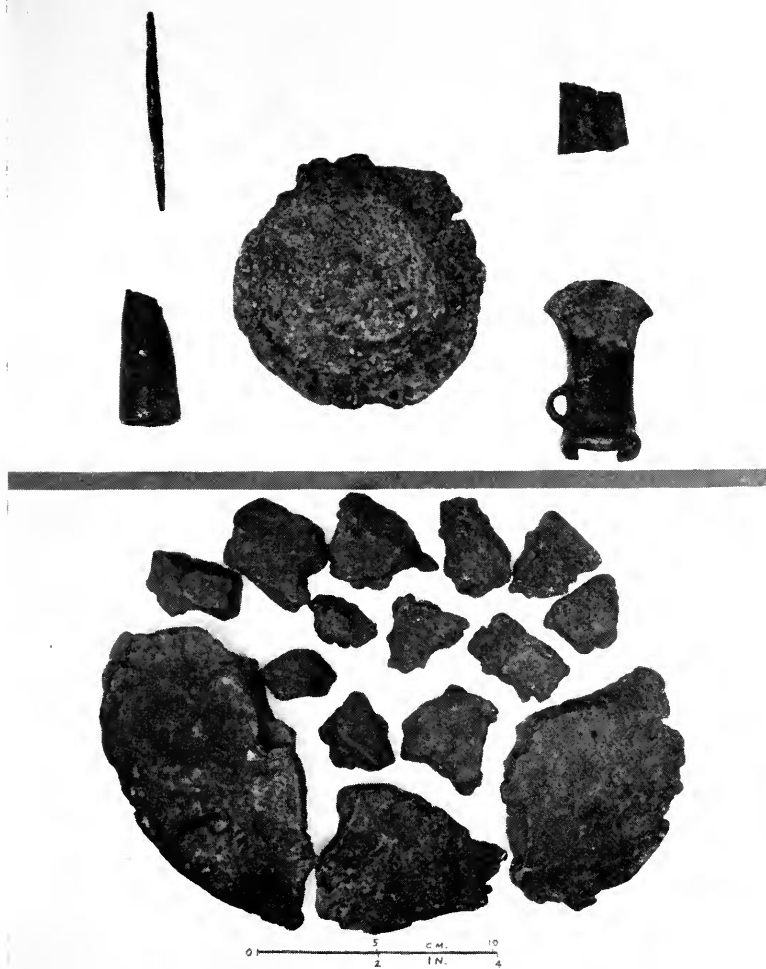
APPENDIX

REPORT ON WOOD SAMPLES

By Dr. C. R. METCALFE, *Royal Botanic Gardens, Kew.*

Small portions of wood attached to some of the implements described above were identified as follows:

- No. 4. Extreme tip of spearhead. Ash, *Fraxinus excelsior*.
- No. 10. Knee-haft, still in socketed axe. Not identified because sections could not be obtained.
- No. 16. Head of spearshaft. Ash, *Fraxinus excelsior*.
- No. 743. Part of axe knee-haft. Oak of *Quercus robur* type.
- No. 744. Crumbs of axe knee-haft. Probably oak of *Quercus robur* type, but no broad rays seen, probably because the material was from a young shoot.
- No. 745. Crumbs of scabbard wood. Probably alder, *Alnus glutinosa*.
- No. 746. Wood of scabbard. Probably alder, *Alnus glutinosa*.
- No. 752. Head of spearshaft. *Pyrus* sp. probably pear (*P. communis*). The structure agrees with pear rather than apple.
- .



(Scale: about $\frac{1}{4}$)

[Photos: Miss O. B. Halstead

Upper:—HOARD FROM GEORGE LANE GRAVEL PITS (Nos. 1092-4). (p. 1).

Top left: chisel. Centre: copper cake. Top right: sword fragment.

Bottom left: spear fragment. Bottom right: axe.

Lower:—HOARD FROM KINGSTON (?). (p. 1).

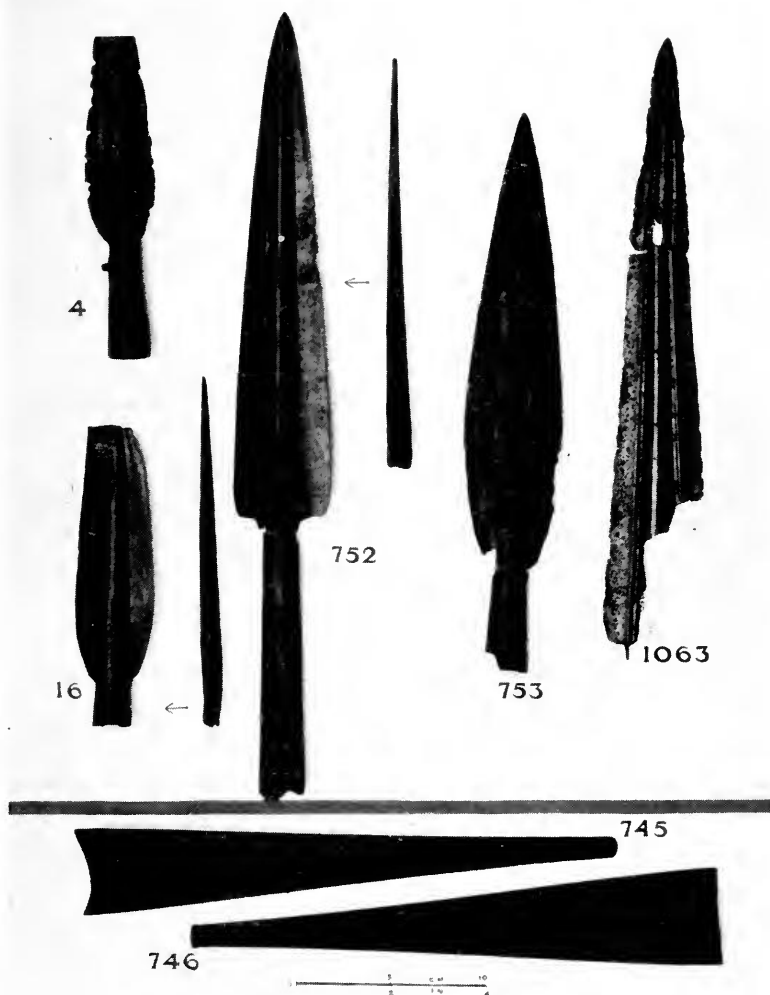
Fifteen pieces of copper cake (Nos. 506-20).



(Scale: $\frac{1}{4}$)

[Photo: Miss O. B. Halstead]

SWORDS AND KNIFE, PROBABLY ALL FROM THAMES, KINGSTON.
(pp. 3-4, 7).



(Scale: $\frac{1}{4}$)

[Photos: Miss O. B. Halstead

Upper :—SPEARHEADS AND SHAFTS, PROBABLY ALL FROM THAMES, KINGSTON.
(pp. 5-6).

Lower :—TWO CHAPES FROM THAMES, KINGSTON. (pp. 7-8).



(Scale: 1)

[Photo: Miss O. B. Halstead

UNLOOPED PALSTAVE FROM WIMBLEDON (No. 737).

LOOPED PALSTAVES AND SOCKETED AXES, PROBABLY ALL FROM THAMES, KINGSTON. (pp. 6-7).