

A Late Saxon Hoard of Iron and Copper-alloy Artefacts from Nazeing, Essex

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A HOARD of fifteen iron and two copper-alloy artefacts was discovered near Nazeing in Essex in 1972. The nature and condition of the artefacts suggest that the hoard, consisting mainly of scrap metal, was that of a metalworker. A date of deposition in the 11th century is probable.

In 1980, a group of seventeen metal artefacts (Pl. iv) was brought to my attention by Mrs R. Huggins of Waltham Abbey. They had been found together by Mr W. Dorset of Broxbourne in 1972 and have remained in his possession since that time. On examination, there proved to be fifteen objects of iron and two of copper alloy; the latter appeared to be in a stable condition, but the iron ones, although in a good state of preservation, were corroding and in need of conservation. Mr Dorset has now lent the hoard to the Epping Forest Museum, Waltham Abbey, where it will remain on a twelve-year loan. The present paper aims, firstly, to present the discovery of the hoard and its context; secondly, to describe each artefact in detail; thirdly, to try to ascertain the nature of the find and suggest a date for its deposition; and finally, to assess its importance, comparing and contrasting it with other metalwork hoards of similar date.

Mr Dorset discovered the hoard in the alluvial gravels on the E. side of the R. Lea in Nazeing parish, Essex. The findspot was in the area known as Nazeing Marsh (TL 374052) to the SW. of Lower Nazeing village (Fig. 1). He could not say whether the objects had been contained in a receptacle, as no traces of one had survived, but the objects were very close together. Since the degree of corrosion on all the objects is very similar, there is no reason to suppose that they were not all deposited at the same time. At present, there is no information available about whether the hoard was found on an archaeological site, or was unassociated. Indeed, since there has been commercial extraction of alluvial gravel from the area round Nazeing, it is even possible that any traces of a site have been destroyed since 1972.

The seventeen objects of the Nazeing hoard consist of: four axes; four spear-heads; an unsocketed gouge; a chisel; a small hammer; a ploughshare; two knives; a three-pronged fish spear; a copper-alloy ring; and a copper-alloy cup. No metallographic analyses have been carried out on these artefacts, but, since they are well-preserved, detailed physical examination has allowed much to be determined about

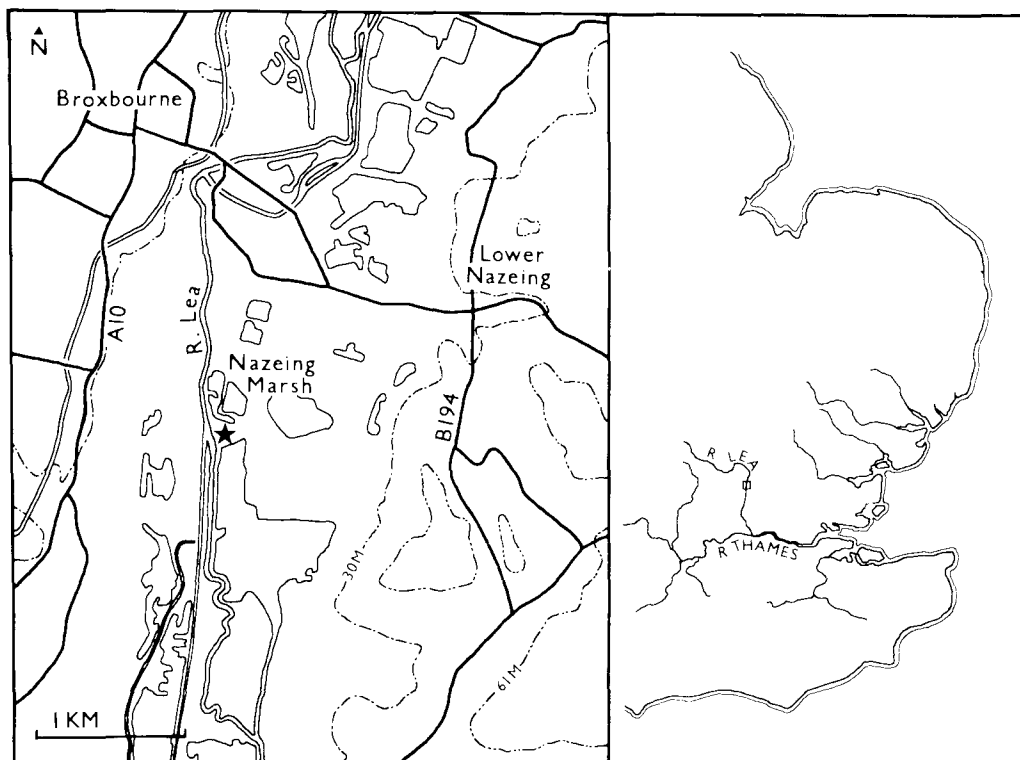


FIG. 1

Location of Nazeing and Nazeing Marsh, showing where the hoard was found in 1972

their form, the methods used in their manufacture and the patterns of wear and breakages caused by use. These observations, together with the measurable dimensions, are included below. Apart from some very small wood fragments preserved by the metallic salts of some of the objects, no organic artefacts such as wood, leather, bone or textile have survived, although the hoard could originally have included artefacts of these perishable materials.

CATALOGUE (Pl. IV)

(L. = maximum length; W. = maximum width; D. = diameter; Th. = thickness)

1. Axe with hammer-like square butt (Fig. 2, a); probably originally rounded rectangular sockethole 36×17 mm, but now crushed and distorted with a fragment of the socket missing; short, narrow neck. The thick blade, whose lower edge curves downwards, has a piece separately welded on to one side, which is differently corroded from the rest of the axe; a similar piece was probably originally welded on to the other side, but now only a depression remains; no traces of sharpening of the blade edge survive. The socket was formed by the symmetrical wrap-around technique.¹

L. 145 mm; W. (blade) 56 mm; (butt) 21×25 mm.

This axe is most similar to small Roman carpenter's axes. It is almost identical to one in Reading Museum, probably from Silchester.² Other parallels include an axe from

Gloucestershire³ and another from Silchester,⁴ among many similar examples from Roman Britain. Axe 1 may therefore be Romano-British in origin.

2. *Axe* with rounded butt (Fig. 2, b); heavy, long, thick blade whose lower edge curves down slightly; narrow neck; probably originally oval sockethole, now crushed from both sides and distorted; butt split longitudinally; blade edge has a separately welded-on piece at one side only;⁵ traces of sharpening on both sides of the blade. The socket was formed by a wrap-around technique similar to that used for axe 1, but one side of the original billet of iron was made shorter than the other, and the weld seam can be seen just beyond the socket.

L. 189 mm; W. (blade) 51 mm; Th. 19 mm.

This axe fits Wheeler's description of his Type I axe: 'Small woodsman's axe of a type which altered little from pre-Roman times onwards. It illustrates the conservatism of the civilian craftsman, who evolves an adequate tool and retains it with little alteration through long periods of time.'⁶ One of its closest parallels is from the Old London Bridge group, illustrated by Wheeler,⁷ and dated by him to the 11th century. Another from the Thames at Putney is dated by Wheeler to the 8th–11th centuries.⁸ There are several other similar axes of this general type, but none is accurately dated or has been excavated from an archaeological context. Since it is sharpened on both sides of the cutting edge, axe 2 could easily have been used for felling, cutting or general shaping; its weight suggests this also.

3. Large *axe* with flaring symmetrical blade (Fig. 2, c); slight wings above and below sockethole which was originally an elongated oval in shape (52 mm long), but is now crushed in from one side and distorted; socket sides split in many places. The rounded butt shows signs of burring where it has been either hammered or used as a hammer; clear traces of sharpening on one side of the blade's cutting edge only.

L. 170 mm; W. (blade) 110 mm; (butt) 43 × 20 mm.

This axe belongs to Wheeler's Type IV.⁹ Axes of this type are more or less symmetrical with spur-like projections (i.e. wings) above and below the socket; they are believed to have increased in popularity at the end of the 9th century, becoming the characteristic form of the 10th.¹⁰ Wheeler attributes to this type an axe from Viborg in Jutland which has an elaborately inlaid pattern in the Jellinge style. The probable dating of this style has recently been given by Wilson as from c. 875 to the second half of the 10th century,¹¹ which thus goes some way to reinforcing Wheeler's dating of the type. English parallels for the Nazeing axe are found in the Hurbuck hoard dated to the late 9th/early 10th centuries (see below), and axes from Thames Street and Aldersgate Street in London.¹² The latter two examples are very similar to the Nazeing axe and are dated by Wheeler to the 10th century. The most important characteristic of the Nazeing axe is the sharpening of the cutting edge on one side only. In craftsman's terms, this makes it a side axe (i.e. one which could be used, perhaps with only one hand, for shaving planks) and identifies it as a woodworking tool rather than a fighting axe.

4. Small *axe* with a wide neck but very thin blade (Fig. 2, d); blade slightly asymmetrical, but flaring, and has a step or shoulder which rises upwards from the top of the sockethole; the latter was recognized as being the top because the sockethole was shorter there than lower down. The socket was formed by the symmetrical wrap-around technique, but is now crushed in from both sides and distorted; blade edge sharpened on both sides.

L. 117 mm; W. (blade) 73 mm; L. (butt) 35 mm

This very small, lightweight axe has no direct parallels in Britain. It is a good example, however, of the sort of small shaping axe which might have been used in delicate woodworking.

5. Socketed *spear-head* (Fig. 2, e); finely made; elongated lozenge-shaped blade with lozenge-shaped cross-section; socket broken on one side. The decoration between blade and socket consists of a barrel-shaped collar with two ribs above and below it; these had been forged by cutting into the spear when hot during manufacture; pattern-welded blade;¹³ traces of wood in the corrosion inside the socket; external surface of the socket very highly polished.

L. 246 mm; W. (blade) 35 mm; Th. (blade) 6 mm; D. (socket) 18 mm.

This spear-head is of Petersen's Type M, dated by him to the 11th century.¹⁴ Spears of Type M are closely related to Petersen's Type K (cf. a spear-head of this K/M Type from Finland, decorated with Ringerike-style ornament on the socket).¹⁵ A group of 24 such ornamented spear-heads of types K, K/M, and M has been discussed by Fuglesang.¹⁶ The decoration allows the spears to be dated to the late Viking period, that is the second half of the 10th to the beginning of the 12th century. The Nazeing spear-head may therefore be dated as late as the 11th century. It has four striking parallels in England; a spear-head from the R. Cherwell, Kidlington, now in the Ashmolean Museum, Oxford,¹⁷ one, unpublished, found by a diver in a river during the widening of a bridge in 1973 at Lugg Mills, Herefordshire, and now in the Hereford Museum, and two found in London.¹⁸ The Kidlington spear has forged ornament on the socket which is very similar to that of the Nazeing spear, including two collars, each consisting of three ribs. The Lugg Mills spear has no forged ornament, but was decorated with gilding, traces of which still survive with pieces of shaft binding. The London spears have barrel-shaped collars as has the Nazeing spear. These spears, besides being similar in shape, all have highly decorated tubular sockets, a fashion which only seems to have occurred on a large scale at the end of the first millennium.

6. Socketed *spear-head*, badly corroded (Fig. 2, f); pair of rivetholes c. 6 mm above the bottom of the socket for a single rivet, fragments of which still survive; flanged socket with a long slit between the two edges of iron; leaf-shaped blade with curved sides and a Z-shaped cross-section; the blade is 'corrugated' with hollows cut out on each surface to the left of the central axis during forging; fragments of unidentified wood remain in the socket.

L. 160 mm; W. (blade) 26 mm; Th. 8 mm; D. (socket) 21 mm.

This spear has no parallels in the late Saxon period, but is probably one of Swanton's Type I2, consisting of leaf-shaped, socketed spears with 'a narrow fuller displaced to the left hand side of the centre line'.¹⁹ The length of Swanton's Type I2 spear-heads varies from 250 to 350 mm; in this respect, the Nazeing spear is small. It is, however, the only spear-head in the hoard to have a rivet in the socket, with which the wooden spear-shaft would have been secured, and it is interesting that at least two of Swanton's Type I2 spears have similar rivets, including ones from Battersea (Museum of London: A8840) and Kempston, Bedfordshire (British Museum: 91,6-24,86).²⁰ The distribution of Swanton's Type I2 spears is concentrated on the middle and upper Thames, with scattered single examples through the Midlands as far as Lincolnshire.²¹ He dates this type to a relatively early stage of the Anglo-Saxon settlement, from the 5th to early 6th centuries. We cannot be certain that the Nazeing spear does date from this period, but all its characteristics except its size correspond to those of Swanton's Type I2.

7. Socketed *spear-head* (Fig. 2, g); well-preserved blade, but very corroded and broken socket; long, narrow leaf-shaped blade with curved sides and lozenge-shaped cross-section.

L. 249 mm; W. (blade) 21 mm; Th. (blade) 7 mm.

This spear-head is of Petersen's Type E, dated by him to the 8th and 9th centuries.²² The examples illustrated by him are very similar to the Nazeing spear, from Koll, Vardal, Krist. and Holvik, Gloppen, N.B. in Norway.

8. Socketed *spear-head* (Fig. 2, h); small leaf-shaped blade with curved sides and lozenge-shaped cross-section; socket originally flanged with slit, but now distorted; possible small rivethole near bottom edge of socket.

L. 136 mm; W. (blade) 20 mm; Th. (blade) 7 mm; D. (socket) 14 mm.

This spear-head has no diagnostic features to enable its date or parallels to be closely established. It resembles Swanton's Type C1, which has many parallels,²³ but 'leaf-shaped blades . . . formed a basic component of all spear series throughout Europe, in Celtic as well as Germanic contexts'.²⁴ We should not be surprised, therefore, that the Nazeing spear also fits into Petersen's Viking-age Type A, for it is very similar to the example from Kvarberg, Vaage, Krist., Norway.²⁵ No certain date can be suggested for this spear, except that it could possibly be as early as spear-head 6 (Fig. 2, f).

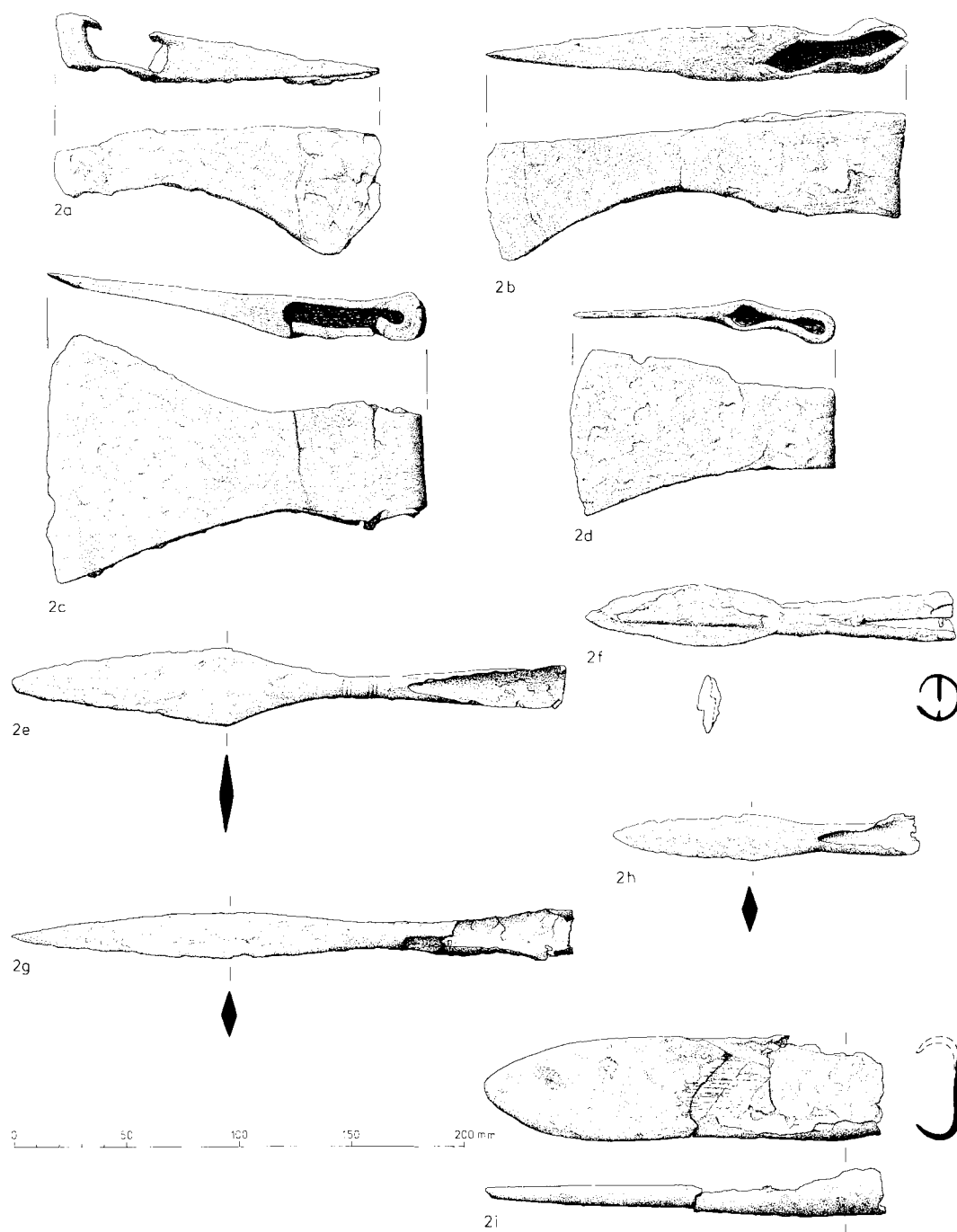


FIG. 2

Objects from the Nazeing hoard: a-d, axes; e-h, spear-heads; i, ploughshare. Scale 1:3

9. *Ploughshare* (Fig. 2, i). Heavy, thick blade with rounded point, sharpened on the underside round the blade, with a very pronounced sharpening bevel. The blade tapers in thickness towards the cutting edge which is worn down asymmetrically in profile. The flanged socket was open towards one, probably the upper side; traces of wood preserved by metallic salts show that the part of the share in the socket was made of *Quercus sp.* (Oak); lateral split in the metal at the junction of the socket and blade.

L. 176 mm; W. (blade) 45 mm; Th. (blade) 10 mm; estimated W. (socket) 48 mm.

The closest parallels for this implement are found in Russia. There are similar ones from 9th-/10th-century Staraya Ladoga, 9th-century Pskov, 11th-/13th-century and 16th-century Novgorod, and 12th-century Brembola.²⁶ These were used as the iron points of scratch ploughs which were hauled by an animal. The object from Nazcing must be from a similar implement, although it may not have been hafted in the manner illustrated by Thompson as a reconstruction of the medieval scratch plough of Novgorod. There are no parallels for this object from Britain. Apart from Russian examples, perhaps the closest parallels are from Dorestad.²⁷ No date is suggested for these, but they probably fall within the general dating of the site to the late 7th to 9th centuries. Although the Dorestad objects are similar in nature to the Nazcing plough point, the actual shapes are different.

10. *Knife/dagger* (Fig. 3, a); single-edged blade with triangular cross-section; wide, flat back; very well preserved; in profile, the blade is symmetrical about the longitudinal axis with the back edge straight and the cutting edge curving slightly towards the point; sharpened on both faces with an incipient S-shaped profile that is usually caused by sharpening; small, separate rectangular hilt with rounded corners; the tang was fixed through a rectangular hole in the hilt, but only a fragment now remains; two parallel grooves on each long side of the hilt were made with a chisel or punch during forging; ends of the hilt curve towards the blade; pronounced filing marks on the back of the hilt.

Total L. 229 mm; L. (blade) 214 mm; W. (blade) 22 mm; Th. (blade) 7 mm; L. (hilt) 38 mm; W. (hilt) 15 mm; Th. (hilt) 7 mm.

There are no parallels for this knife in pre-Conquest Britain. The type of narrow stiletto-like blade is not usually found until the knife-daggers of the medieval period, well represented by examples in the Museum of London.²⁸ These are usually dated to the 14th and 15th centuries. The small rectangular hilt, curving towards the blade and decorated with parallel grooves, is also a feature which cannot be immediately paralleled by knives of the Saxon period, although they are found in many shapes and sizes on swords. We can only surmise that this implement is a small and unusual form of single-edged sword. These weapons are common in the Merovingian period, but go out of fashion at the beginning of the Viking age in Scandinavia. Petersen illustrates such a sword from Saude, Lyster, Norway, which also has a rectangular hilt with rounded corners.²⁹ Another single-edged sword, from Grinningsdalskampen, Jotunheimen, Norway, is illustrated by Martsrander and Sjøvold, from a grave dated to the 8th-/9th century.³⁰ This grave also contained, among other artefacts, a small hammer similar to that from Nazcing (see below). This comparison of the Nazcing knife with single-edged swords is very tenuous, but it is the only viable line of enquiry given the lack of similar knives.

11. *Knife* with straight back (Fig. 3, b); cutting edge curves upwards to meet the back at the point; blade wider towards point than near tang; latter complete, thicker than blade, and bent over at end; linear forging marks along blade; the cutting edge shows markedly less corrosion than the rest of the blade and it is possible that a separate piece was welded on to the cutting edge; sharpened on both sides; two parallel lines cut into metal near back 45 mm from tang.

Total L. 226 mm; L. (blade) 169 mm; W. (blade) 27 mm; Th. (blade) 4 mm.

This is a type of knife which is rare in Britain but which is referred to by Wheeler as a Norwegian type, dating to the 7th and 8th centuries.³¹ It has two very close parallels in a knife from Dorestad, presumably dating from sometime within the site's date of late 7th to

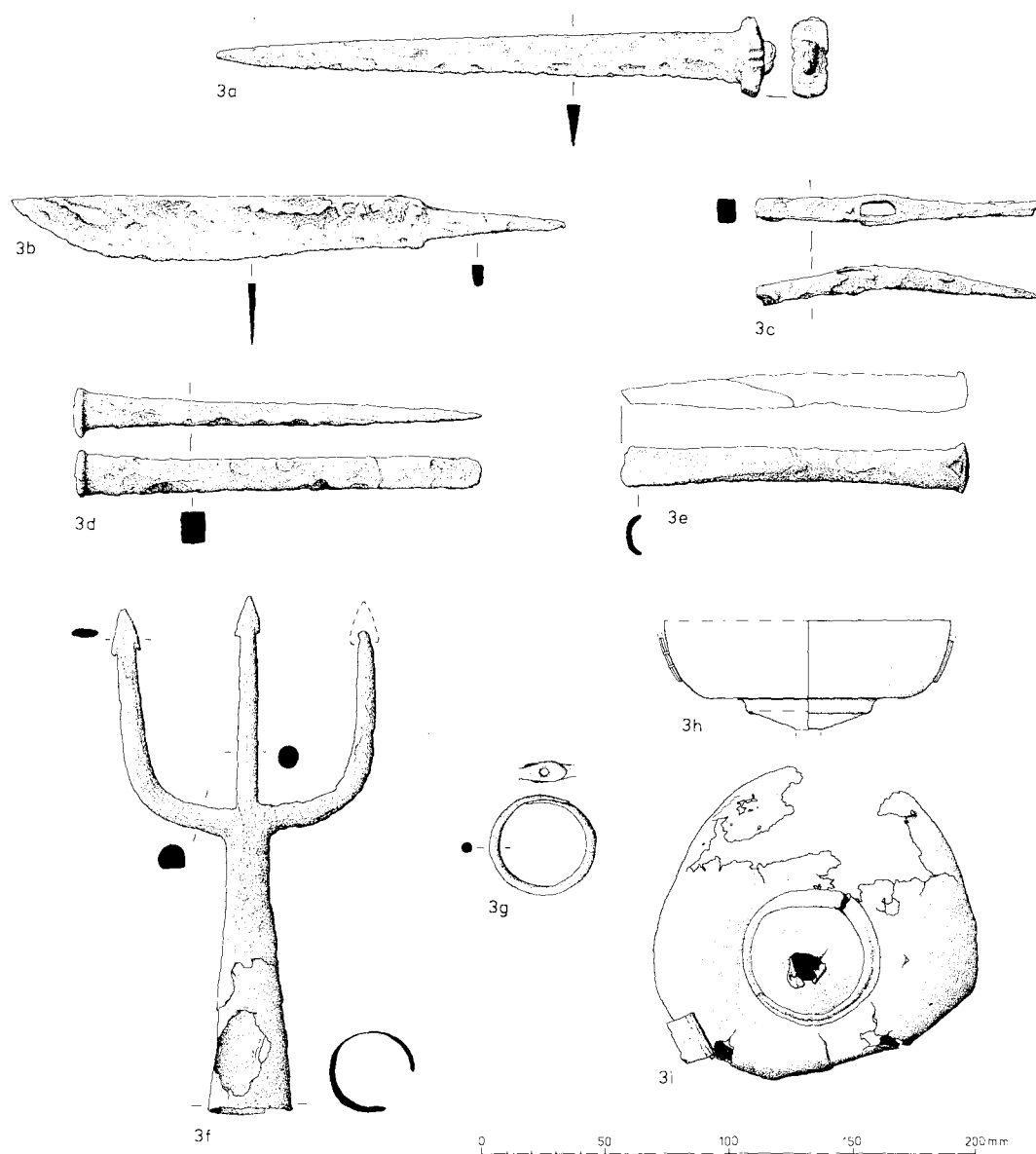


FIG. 3

Objects from the Nazeing hoard: a, knife/dagger; b, knife; c, hammer; d, chisel; e, gouge; f, fish-spear; g, ring; h, reconstruction of cup; i, cup. Scale 1 : 3

9th centuries,³² and one from Hungate, York.³³ The York knife dates from Richardson's 'Anglo-Danish' phase of the Hungate site of the 9th to 11th centuries.

12. Small *hammer* (Fig. 3, c); possibly a metal-worker's hammer; rounded rectangular socket-hole, 14 × 5 mm, punched through during forging; both head and tail ends curve downwards from the socket-hole; rectangular head which now has a step in it, although it is unclear whether this is original or caused by corrosion; long, narrow chisel-like tail.

L. 115 mm; Th. 13 mm; W. (head) 8 mm; W. (tail) 6 mm.

This hammer is far too small and fine to be a general woodworking tool. It is more likely to have been used for fine metalworking, perhaps of non-ferrous metals. The hammer is much smaller than, for example, the metalworker's hammers in the Mästermyr tool chest, the smallest of which was 210 mm long.³⁴ The Mästermyr find has been dated to c. 1000. It was of a similar size, however, to the iron double-ended hammer found in the 'Black Earth' at Birka in Sweden, and interpreted as a fine metalworking hammer.³⁵ This hammer was only 109 mm long.

13. *Chisel* (Fig. 3, d); more or less parallel sides; rectangular in cross-section; head square and burred over; the pattern of corrosion shows how percussion damage has weakened the metal; the cutting edge is now corroded and has rounded edges, and all evidence of sharpening has disappeared; there is some evidence that a separate piece of metal was welded on at the cutting end.

L. 168 mm; W. (head) 20 mm; L. (head) 19 mm.

Woodworking chisels normally have sockets into which a wooden handle can be fixed, unlike the Nazeing chisel's butt, and almost invariably have a bevelled cutting edge, sharpened on one side only. The cutting edge of the Nazeing chisel has not survived, so its use for woodworking cannot be precluded, but it could have been a cold chisel for metalworking since the cutting edge is very robust, and probably had a superior edge welded on. In any case, the chisel has sustained much direct percussion on its head which has caused burring over. The closest parallels from Britain are the chisel and chisel-blanks from the Crayke hoard (see below), although the Crayke tools are unfinished and/or unused, whereas the Nazeing tool has been heavily used. They have been dated to the Viking period, possibly the 9th century.

14. *Gouge* with a parallel-sided shaft (Fig. 3, e); circular in cross-section; head originally circular, but now burred over, and the pattern of wear and corrosion shows how the metal has been weakened by percussion damage; the side of the head has split away and is missing; a clear weld seam shows that the cutting edge is a separately welded-on piece, and the corrosion of the latter is much less than the head end; gouge-end is U-shaped in cross-section, but is now broken, and no traces of sharpening survive.

L. 140 mm; W. (gouge) 17 mm; D. (head) 21 mm.

The gouge is almost certainly a woodworking tool, although woodworker's gouges, as with chisels, are almost always socketed tools with wooden handles which can be hit by mallets. Its head, however, has sustained much direct percussion which has caused burring. The closest parallel known from Saxon England is the gouge in the Crayke hoard, but this tool has a socket.

15. *Fish-spear* in the form of a socketed trident (Fig. 3, f); socket corroded and broken at lower end where it is widest; the functional end has forging lines in the metal which show that it was an elaborately manufactured implement; the forging lines follow the curves of the two side tines showing that the iron was divided into three pieces by two cuts in the metal, and the three tines hammered out separately; the tines are circular in cross-section and terminate in slightly barbed triangular points; one point is broken and missing.

Total L. 211 mm; L. (tines) 87 mm; D. (socket) 32 mm.

There are no objects comparable to this trident from Saxon and medieval Britain, and few from North Europe at this period. I have been able to find similar artefacts, however, in the folk collections of Ireland of more recent times. In 1952 Went published an article on Irish

fishing spears,³⁶ most of which are in the collections of the National Museum of Ireland, Dublin. The many spears which he illustrates include multi-tined and barbed eel-spears with their tines close together, but the spears which are most similar to the Nazeing implement are the salmon-spears; their tines are widely spaced, and terminate in a single barb or triangular piece. Most of the salmon-spears have three, four or five tines, but there are six- and eight-tined examples. Some of the spears are socketed, others are tanged. They are so similar to the Nazeing spear that the function of the latter must have been for fishing for large freshwater fish such as salmon, probably in the nearby R. Lea. It is unlikely to have been an eel-spear as the tines are too widely spaced. The socketed seven-barbed spear from Rise, Oppdal, Sør-Trøndelag, Norway,³⁷ was interpreted as a fish-spear by Nordgaard,³⁸ but it is not very similar to the Nazeing spear, except perhaps in function. It was manufactured in a very different way to the Nazeing spear, and forms only a general parallel. The two three-tined fish-spears illustrated by Norlund,³⁹ were found in the 10th-/11th-century Viking fortress at Trelleborg, and are the closest parallels (of similar date) to the Nazeing spear.

16. Copper-alloy *ring* (Fig. 3, g); manufactured from rod of circular cross-section, bent round to form an oval; ends hammered out into ovals, and a circular hole 3 mm diameter punched through both at the same time; ends not welded together; small hole is unworn. D. 43 × 40 mm; Th. 4 mm.

Probably a swivel ring, but it has been used very little, if at all, since there is no wear on the hole; if it was a swivel ring, it would have had a separate loop which fitted through the hole and to a strap at one side; similar ones of iron continued in use throughout the medieval period, for example an iron swivel from the Customs House site, London dated to the late 13th or the 14th century,⁴⁰ and a swivel loop from St Peter's Street, Northampton, dated to the late 15th century.⁴¹

17. Copper-alloy *cup* (Fig. 3, h and 3, i); probably manufactured from a separate bowl, stem and foot, but only fragments of the bowl and the stem remain; the bowl is beaten (not spun) copper-alloy sheet 0.04 in. thick (measured with a micrometer in inches and approximately 1 mm); undecorated; plain rim. Although fragments of the bowl are missing, and the shape is now distorted, it seems that the total circumference has survived, and the diameter can therefore be reconstructed; the reconstruction of the profile of the bowl, however, is tentative, and is shown in Fig. 3, h; it is possible that the sides were more rounded and less flattened at the base, and the bowl could therefore have been deeper than shown. The internal base was almost certainly flat. The stem is made from two separate components, one a piece of beaten copper-alloy forming a 'cone'; there is no sign of a radial join, but there is clear evidence of tear damage at the apex of the cone, and the cone is likely to have continued as a narrow stem; it is attached to the bowl by the second component, a copper-alloy collar formed of a band of metal of S-shaped cross-section bent round and joined by an overlap. Roughly opposite the overlap, the collar has split; it is fixed to the bowl by brazing. The bowl has remains of a handle or escutcheon consisting of a parallel-sided copper-alloy strip, folded double; the folded end is now broken and missing, and there are indications that it was torn across. Two parallel decorative lines across lower edge; fixed to bowl by two copper-alloy rivets in a vertical line; the upper rivet has torn through because the escutcheon has pulled away from the bowl; approximately opposite, but not exactly, there is a hole in the side of the bowl and an associated outward bulge indicating that a rivet has also been torn outwards from the bowl here; there is no second rivet at this side since the bowl is broken. The reconstruction shows two handles, but this interpretation is by no means certain.

D. (reconstruction) 114 mm; D. (collar) 56 × 54 mm.

This vessel is referred to as a cup, because there is no evidence, either from the object itself, or the association with other objects in the hoard, or the findspot, that it is an ecclesiastical vessel. However, this possibility should not be ruled out entirely. The only clear parallels for the Nazeing vessel are the Trewhiddle and Hexham chalices, although Wilson mentions a third possible Anglo-Saxon chalice from Hazleton, Gloucestershire which is unpublished, but was exhibited at the Society of Antiquaries in 1942.⁴² The vessels from Hexham⁴³ and

Hazleton were funerary, ecclesiastical chalices, but the Trewiddle chalice was found with a hoard of other metal objects in Cornwall in 1774; its deposition is dated *c.* 872–75 by associated coins.⁴⁴ The Nazeing cup and the Trewiddle chalice have a few characteristics in common. They were both probably tripartite with a bowl, stem and base. Although there were not enough pieces surviving of the lower part of the Trewiddle vessel to suggest how its stem was attached to the bowl, the stem was probably attached to the base by a tripartite mechanism. The reconstruction published by Wilson⁴⁵ shows three holes in the base, and a circular plate with three holes positioned below the conical lower part of the stem; two rivets join the stem through the plate to the base. The Nazeing bowl is also joined to the stem by a tripartite mechanism, but the elements are different. Here the flat bottom of the bowl and the conical stem are joined by a soldered-on S-sectioned circular collar. The stems of both vessels have conical parts just below the bowl which lead into a narrower part of the stem. There are differences between them; the Trewiddle chalice is made of parcel-gilt silver, the Nazeing cup of copper-alloy; the Trewiddle chalice has a T-shaped rim with an additional decorative band riveted on below the rim, the Nazeing cup has a plain rim and no decoration; the Nazeing cup has one, possibly two handles, the Trewiddle chalice has none.

Having discussed the finding of the hoard and described each artefact in detail, it is necessary to establish the nature of the hoard. At first sight, the range of its artefacts does not seem to correlate with a single field of human activity, as would, for example, an assemblage of weapons or of woodworking tools. One distinctive feature displayed by most of the objects in the hoard is *breakage*. Axe 1 is likely to be a Roman axe, but the welded-on pieces of iron strongly suggest substantial repair at a later date. Axes 2, 3 and 4 show deliberate crushing of the socket, as almost certainly does axe 1. Such crushing is not likely to have been produced after deposition. Spear-head 8 and especially spear-head 7 show signs that they were forcibly torn from their shafts. The ploughshare is broken across the blade and so could not have been used in that state. The tang of the knife-dagger is broken off and missing; it is unlikely to have corroded away in the soil in view of the object's good general condition. The fish-spear has a broken tine. Finally, the copper-alloy cup has been torn apart. The value of these objects at the time of their deposition would have lain, not in their utility, but in their scrap value as raw material. The ring, while not actually broken, has no associated parts and was probably never used. The rôle of the chisel, hammer and gouge in the hoard is uncertain since it cannot be assumed that they were totally useless at the time of deposition. If the bulk of the hoard is scrap metal, and of use to a metalworker, then the chisel and hammer, at least, would have their place here as tools of his trade. In conclusion, therefore, the contents and condition of the hoard are best explained by the fact of it having belonged to a metalworker.

If the hoard is considered to be a scrap-metal hoard containing objects gathered together by a metalworker, the wide range of dates suggested above for the objects is not incongruous. It is quite possible that the broken and repaired Roman axe 1 and the early Saxon spear-head 6, which is heavily corroded, were simply objects gathered for scrap, and so their dates need not be representative of the group as a whole. The dates of the other objects which have clear parallels suggest that most of them were made in the mid or late Saxon period, that is the 7th/8th to 11th centuries. The presence of the Petersen Type M spear-head (spear-head 5), in a good state of preservation, suggests that the deposition date of the hoard was no earlier than the

11th century, but probably not much later than that. Few finds of this date have been made in this area of Essex, but in 1975 and 1976, 186 burials and two timber buildings were excavated at Nazeingbury.⁴⁶ These were interpreted as the cemetery and churches of an ecclesiastical community, dating from the 7th to 9th centuries.

The Nazeing hoard is only the fourth such hoard of non-precious metals to be found in England, and dating to the late Saxon period. The other three hoards with which it is to be compared are the Hurbuck, Co. Durham, hoard dated to the late 9th/early 10th century,⁴⁷ the Crayke, East Yorkshire, hoard dated to the Viking period, perhaps the 9th century,⁴⁸ and the Westley Waterless, Cambridgeshire, hoard dated to *c.* 1000.⁴⁹

The Hurbuck hoard, now in the British Museum, contains two swords, four scythes, two rings (possibly buckles), a spoonbit, an iron bar which is pointed at one end and blunt at the other, two adzes, six axes (three T-shaped axes and three others), a ferrule and a pick. This appears to be a hoard of tools and weapons which were still functional when deposited, and may only be compared with the Nazeing hoard insofar as they both contained axes.

The Crayke hoard, now in the Kingston upon Hull Museum, contains two swords, one of which was broken, two figure-of-eight horse-bit links and ring, a fragment of a (?) horse-bit, two more rings, a broken T-shaped axe, a hook or fastener, a socketed gouge, nine chisel blanks, a chisel, a fragment of another sword, four (?) knives, a wall hook, parts of iron hoops, six bars, a horseshoe fragment and three fragments of indefinite shape. This hoard appears to consist of broken objects, scrap metal, blanks, and perhaps a finished object or two. As with the Nazeing hoard, this hoard appears to have belonged to a metalworker.

The Westley Waterless hoard, now in the Cambridge Museum of Archaeology and Ethnology, was found in a field during drainage digging. It was contained in a circular lead vessel said to have been 17½ in. in diameter and 11 in. high, decorated on the outside with pendant triangular panels terminating in circles and ornamented with interlace designs. The hoard itself consists of a bill, two spear-heads, a steelyard weight, holdfasts, a spoonbit, a coulter, staples, hasps and other fragments including parts of a possible drawknife. Hughes thought that the hoard was the stock-in-trade of a worker in iron who made use of an old discarded water container as a receptacle.⁵⁰ No comprehensive report on the finds has yet been published.

Such hoards as those discussed here are rare, and, as only the fourth of its kind to be found in England, the Nazeing hoard makes an important addition to our knowledge of artefacts of the early medieval period. Firstly, it contains a number of objects which are as yet unparalleled in England at this period. These are the ploughshare, the knife-dagger and the fish-spear; also, the copper-alloy cup is unique as a secular vessel. Secondly, the hoard's well-preserved condition allows information to be gleaned about the processes of manufacture of such iron and copper-alloy artefacts, and of their repair and reuse. Finally, it gives insight into the ways in which metalworkers of the period obtained some of the raw materials for their craft, *i.e.* by recycling scrap metal, some perhaps of considerable antiquity.

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NOTES

- ¹ This method of manufacture is shown diagrammatically in a paper by B. G. Scott, 'Metallographic study of some early iron tools and weapons from Ireland', *Proc. Royal Irish Academy*, 77C12 (1977), fig. 5.
- ² W. L. Goodman, *The History of Woodworking Tools* (London, 1964), fig. 12.
- ³ J. W. Brailsford, *British Museum Guide to the Antiquities of Roman Britain* (London, 3rd edition, 1964), fig. 24, 5.
- ⁴ G. C. Boon, *Silchester: the Roman Town of Calleva* (Newton Abbot, 2nd edition, 1974), fig. 41, 14.
- ⁵ Scott, op. cit. in note 1, fig. 4.
- ⁶ R. E. M. Wheeler, *London and the Vikings* (London Museum Catalogues no. 1, 1927), 23 and fig. 6, 1.
- ⁷ *Ibid.*, 23, fig. 1, 8. Museum of London acc. no. A23344.
- ⁸ *Ibid.*, 25, fig. 8, 1. Museum of London acc. no. A25844.
- ⁹ *Ibid.*, 25.
- ¹⁰ *Ibid.*, 25.
- ¹¹ D. M. Wilson, 'The Dating of Viking Art in England', 135-44 in J. Lang (ed.), *Anglo-Saxon and Viking Age Sculpture and its Context* (Oxford, Brit. Archaeol. Repts. Brit. Ser. 49, 1978), 139.
- ¹² Wheeler, op. cit. in note 6, 26, fig. 10, 1 and 2. Museum of London acc. nos. 27.53 and A21969.
- ¹³ A method of manufacturing a pattern-welded spear-head is shown in Scott, op. cit. in note 1, 309, fig. 3.
- ¹⁴ J. Petersen, *De Norske Vikingesverd; en Typologisk-kronologisk Studie over Vikingetidens Vaaben* (Christiania, 1919), 35, fig. 25.
- ¹⁵ J. Graham-Campbell, *Viking Artefacts; a select Catalogue* (London, 1980), 73, pl. 261.
- ¹⁶ S. H. Fuglesang, *Some Aspects of the Ringerike Style* (Odense, Mediaeval Scandinavia Supplements Vol. 1, 1980), 29-42.
- ¹⁷ Ashmolean Museum acc. no. 1949/928: *Oxoniensia*, xiv (1949), 76 and pl. xii, A.
- ¹⁸ R. E. M. Wheeler, *London and the Saxons* (London Museum Catalogue no. 6, 1935), pl. 11, 4 and 5. One is from Thames Street, the other unprovenanced, but found in London.
- ¹⁹ M. J. Swanton, *The Spear-heads of the Anglo-Saxon Settlement* (Royal Archaeol. Inst., 1973), 125.
- ²⁰ *Ibid.*, fig. 47, c and e.
- ²¹ *Ibid.*, fig. 46.
- ²² Petersen, op. cit. in note 14, 26-28, figs. 12 and 13.
- ²³ Swanton, op. cit., in note 19, 49-51 and fig. 9.
- ²⁴ *Ibid.*, 46.
- ²⁵ Petersen, op. cit. in note 14, fig. 7.
- ²⁶ M. W. Thompson, *Novgorod the Great* (London, 1967), fig. 88, 4, 5, 6, 8, 9, 10 and 7.
- ²⁷ W. A. Van Es and W. J. H. Verwers, *Excavations at Dorrestad 1. The Harbour: Hoogstraat I* (Nederlandse Oudheden 9, 1980), fig. 131, 1 and 2.
- ²⁸ For example, J. B. Ward Perkins, *London Museum Medieval Catalogue* (London, 1940), pl. xii, 2, 3 and 4.
- ²⁹ Petersen, op. cit. in note 14, fig. 70a.
- ³⁰ S. Marstrander and T. Sjøvold, *Fortiden Forteller. Universitetets Oldsaksamling 1829-1979* (Oslo, 1979). The grave group has acc. no. C20188.
- ³¹ Wheeler, op. cit. in note 18, figs. 177-79.
- ³² Van Es and Verwers, op. cit. in note 27, fig. 137, 4.
- ³³ K. M. Richardson, 'Excavations in Hungate, York', *Archaeol. J.*, cxvi (1959), fig. 18, 5.
- ³⁴ H. Arbman, *The Vikings* (London, 1961), pls. 3 and 5.
- ³⁵ A. Oldeberg, *Metallteknik under Vikingatid och Medeltid* (Stockholm, 1966), 119, fig. 330.
- ³⁶ A. E. J. Went, 'Irish Fishing Spears', *J. Royal Soc. Antiq. Ireland*, LXXXII (1952), 109-34.
- ³⁷ Graham-Campbell, op. cit. in note 15, 13, pl. 23.
- ³⁸ O. Nordgaard, *Traek av Fiskeriets Utvikling i Norge* (Trondheim, 1908), 49.
- ³⁹ P. Norlund, *Trelleborg* (Nordiske Fortidsminder IV band I, 1948), pl. XLIV, 2 and 3.
- ⁴⁰ M. Henig, 'The small finds' in T. Tatton-Brown, 'Excavations at the Customs House Site, City of London, 1973', *Trans. London Middx. Archaeol. Soc.*, xxv (1974), fig. 38, 65.
- ⁴¹ I. H. Goodall, B. Ellis and G. E. Oakley, 'The Iron Objects', in J. H. Williams, *St Peter's Street, Northampton. Excavations 1973-1976* (Northampton, 1979), fig. 119, 77.
- ⁴² D. M. Wilson and C. E. Blunt, 'The Trewhiddle Hoard', *Archaeologia*, xcvi (1961), 90.
- ⁴³ *Ibid.*, 90-91 and pl. XXVIIIa.
- ⁴⁴ *Ibid.*, 75-122.
- ⁴⁵ *Ibid.*, fig. 3c.
- ⁴⁶ P. J. Huggins, 'Excavations of a Belgic and Romano-British Farm with Middle Saxon Cemetery and Churches at Nazeingbury, Essex 1975-76', *Essex Archaeol. Hist.*, x (1978), 29-117.

⁴⁷ Victoria County History, *Durham*, I (1905), 213–15.

⁴⁸ T. Sheppard, 'Viking and other Relics at Crayke, Yorkshire', *Yorks. Archaeol.*, xxxiv (1939), 273–81.

⁴⁹ Professor Hughes, 'Report presented to the Cambridge Antiquarian Society at the AGM, May 26th, 1879', *Proc. Cambs. Antiq. Soc.*, iv (1876–80), xiv–xvi.

⁵⁰ *Ibid.*, xvi.

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