A High-Status Seventh-century Female Burial from West Hanney, Oxfordshire.

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Abstract: In 2009, a metal-detector find of a rare garnet-inlaid composite disc brooch at West Hanney, Oxfordshire, led to the excavation of an apparently isolated female burial sited in a prominent position overlooking the Ock valley. The burial dates to the middle decades of the seventh century, a period of rapid socio-political development in the region, which formed the early heartland of the Anglo-Saxon kingdom of Wessex. The deluxe brooch links the wearer to two other burials furnished with very similar brooches at Milton, some 10 km to the east and only c 1 km from the Anglo-Saxon great hall complex at Sutton Courtenay/Drayton, just south of Abingdon. All three women must have been members of the region's politically dominant group, known as the Gewisse. *The burial's grave goods and setting add a new dimension to our understanding of the richly furnished female burials that are such a prominent feature of the funerary record of seventh-century England.*

DISCOVERY AND EXCAVATION

On 20 September 2009, an Anglo-Saxon garnet-inlaid composite disc brooch was discovered during a metal detecting rally in a ploughed field on Kimmeridge Clay in West Hanney, Oxfordshire, approximately 5 km north of Wantage (FIG 1. NGR SU 39042 92510).[1] The finder also observed what he believed to be human bone and notified the relevant authorities. Over the following week, a team of local archaeologists excavated a shallow, heavily truncated grave, in some places only c. 0.10 m deep, containing the relatively complete inhumation of a woman estimated to be in her mid twenties (see Appendix). An area of c. 3 m square was excavated around the grave but no other features were visible within this area. The body lay in an extended supine position, lying approximately South- North, with the head to the South [FIG 2]. The skeleton had suffered some plough-damage to the left side of the upper body and skull. The damage had also affected the brooch, which had been resting and presumably worn on the left shoulder. A number of other grave goods were also recovered and are discussed below. The grave fill was dark brownish-grey silty-clay with frequent angular and sub-angular flint and stones and was similar in appearance and texture to the ploughsoil.

THE BURIAL ASSEMBLAGE [FIGS 3-6]

The garnet-inlaid cloisonné composite disc brooch is an exceptional find and forms the most recent and most westerly addition to the small corpus of this opulent and distinctive type of female dress ornament.[2] Composite discs were an elaboration of the simpler jeweled disc brooches worn relatively widely in Kent, in emulation of Frankish fashion. Only nineteen other complete or largely complete examples of composite disc brooches are known, thirteen of which were found in Kent [FIG 3].[3] Of the remainder, one was found in London, one in Bedfordshire, and two in East Anglia. The remaining two were uncovered in the 1830s from two graves in a poorly recorded cemetery at Milton, North Field, (Oxfordshire, formerly Berkshire), just south of Abingdon.[4] These provide by far the closest parallels for the Hanney brooch; the date and stylistic relationship of all three brooches are discussed in detail below.

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[1] Byard 2011. The finds, skeletal material and archive from West Hanney have been deposited with the Oxfordshire Museums Service, Reference number OXCMS: 2011.150

[2] Owen-Crocker 2004, 138--9; Avent 1975.

[3] Scull 2009, 89.

[4] Hawkes 1986, 89 and pl. 8a.; Meaney 1964, 49.

The rest of the grave assemblage from West Hanney fits within a relatively well-attested tradition of seventh-century female furnished burials as discussed by Geake, Stoodley and others.[5] The finds, though few in number, are for the most part characteristic of such burials. Two fragments of glass, apparently from the same vessel, were found close together between the knees and may have been carried in a leather or cloth bag, although no organic remains were discernible. Meaney has suggested that pieces of vessel glass were often collected because of their attractive appearance, or for use in healing rituals.[6] Williams has argued more recently that such fragmentary objects, and indeed bag collections generally (which are mostly found with women and often in burials of seventh-century date), should be seen as having served a mnemonic or commemorative function, their importance deriving from their association with a particular individual or ancestor[7]; the two interpretations are of course not mutually exclusive. It is sometimes assumed that such glass fragments are Roman, although a number of burials have been shown to contain fragments of Anglo-Saxon glass. At the cemetery at Street House, Loftus (North East Yorkshire), for example, three graves contained fragments of vessel glass dating to the period 550-700.[8] LA-ICPMS analysis of the fragments from the Hanney burial has demonstrated that these are natron glasses characteristic of Freestone *et al*'s Period II, i.e. 550-700 AD.[9] Although the fragments are too small to allow the form of the vessel to be identified with any certainty, the date, convex shape and trail suggest that they derive from a globular bowl of a kind mostly found, and probably made, in Kent (Evison 2008, 7 and fig. 25). The only other globular bowls with trail decoration known from the Upper Thames Valley were found in the nineteenth century at Cuddesdon, to the east of Oxford, where two dark blue examples were recovered.[10]

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[5] Geake 1997, Stoodley, 1999, Williams, 2010, Bayliss *et al* 2013.
[6] Meaney 1981, 228.
[7] Williams 2010. See also the discussion of bag collections from the cemetery at Butler's Field, Lechlade, Gloucestershire (Boyle *et al* 2011, pp. 73-4).
[8] These came from Graves, 7, 9 and 18 (Sherlock 2013, p. 68). The graves are unsexed, although associated finds are suggestive of female burials. The glass fragments from Streethouse, which were deposited either near the head or on the chest, are described in the report as 'amuletic', though no reason is given for this.
[9] Freestone *et al* 2008. The analysis was undertaken by Dr. Andrew Shortland of Cranfield University. I am grateful to him for his observations on the Hanney glass.
[10] These, however are of a different and rare sub-type; Dickinson 1974.

A chalk spindlewhorl was also found between the knees and may therefore also have been part of the putative bag collection. Spindlewhorls, which are fairly common finds in settlements, were also occasionally deposited in graves: in Geake's corpus of Conversion-period burials, 43 contained spindlewhorls.[11] Of these, chalk was the most commonly used material and nearly half were, like the Hanney example, plano-convex, a form that became 'firmly established' in the seventh century.[12] Whorls are, furthermore, strongly gendered grave goods, overwhelmingly associated with females, whose association with textile production is given particular emphasis in Old English texts.[13]

Iron knives are the single most common find in both male and female burials of this period. The knife from the Hanney burial appears to conform most closely to Evison's Type 3, i.e. knives with an angled back and curved cutting edge.[14] At the Dover Buckland cemetery, most Type 3 knives derived from burials dating to Phases 4-6, that is, from between c. 625 – 700.[15] The West Hanney knife, which was found next to the lower right leg, lay beneath a spatulate tool of similar size, a pairing paralleled in a number of other seventh-century burials. Geake includes 48 spatulate tools in her study, only one of which appears likely to pre-date the seventh century.[16] Their function is unclear, although they are sometimes described as 'steels'.[17] There is evidence from several burials to suggest that they were occasionally carried together with a knife in a bag or pouch.

The two small, near-identical, ceramic vessels also found next to the lower right leg (one of which was originally placed partly on top of the knife and spatulate tool) are perhaps best described as cups. While pottery was a fairly common grave good, to find two vessels in a grave of this period is extremely unusual; only three examples appear in Geake's corpus.[18] Her distribution map of hand-made pottery in Conversion-period graves shows a concentration in East Kent, possibly lending weight to the impression of a link between burial practices in the Upper Thames

[11] Geake 1997, 58--60.
[12] Walton Rogers 2007, 24; the Hanney spindlewhorl also appears to belong to Harrington's Type 9. Harrington 2008, fig. 16.
[13] Fell 1984, 27 39--41.
[14] Evison 1981, 113, Table XVII.
[15] Ibid Table XVII.
[16] Geake 1997, 92.
[17] As at Coddenham, Suffolk, Graves 5 and 8. Penn 2011.
[18] Geake 1997, 89.

Valley and Kent.[19] Of the more than 74 pots from burials recorded by her, most were, like the Hanney vessels, small and undecorated. By the seventh century, furthermore, the majority of pottery fabrics in the Upper Thames Valley were also chaff-tempered; by the end of that century, the region appears to have been virtually aceramic.[20] The Hanney cups thus make a valuable addition to the tiny corpus of complete pottery vessels from the Upper Thames Valley known to date to the seventh century. The soil from inside the vessels was dry-sieved, but no trace of the original contents was recovered. In this respect too, they mirrored the pots in Geake's corpus, none of which produced evidence of its contents.[21]

THE DATE OF THE BROOCH AND OF THE BURIAL

The brooch is the only object from the grave that can be closely dated. The most comprehensive study of composite disc brooches remains that published by Avent, who dated their manufacture to between c 610-650, based largely on associated grave goods, coin dating, and typology.[22] As first recognized by him and later confirmed by Pinder, composite disc brooches which, like the Hanney and Milton brooches, have cloisons made of copper alloy rather than gold, were made late in the series.[23] Both Avent and Hawkes dated the Milton brooches to around the middle of the seventh century.[24] The use of copper alloy cloisons in the Hanney brooch and its close stylistic similarities to the Milton brooches, discussed in detail below, point to a comparable date of manufacture.

It is notable that several of the later forms of composite disc brooches display evidence of wear and repair, and thus appear to have been in circulation for some years prior to burial. The most striking example of this is the brooch from Harford Farm, Norfolk, which displays two large repairs and a runic inscription that reads: 'Luda repaired [this] brooch'.[25] The brooch from the Boss Hall cemetery near Ipswich had also been repaired, and must have been around fifty years old when

[19] Geake 1997 Map 50; Hawkes 1986.
[20] Hamerow, Holloevoet and Vince 1994, 14.
[21] 1997, 90. A small, pointed iron object was identified during conservation, but it is unclear whether this was found inside one of the pots, or in grave fill surrounding it.
[22] Avent 1975.
[23] Pinder 1995.
[24] Hawkes 1975, 252; Avent 1975, 61--3. For a more recent discussion, see Scull 2009, 88-91.
[25] Penn 2000.

buried.[26] Both thus appear to have been buried towards the end of the seventh century. The question of whether the Hanney brooch was old when buried is difficult to answer from its appearance alone because of its damaged state, although one of its largest slab-cut garnets appears to have cracked in antiquity. Furthermore, the filigree work on two of the surviving gold panels is beaded, whereas that on the other two is plain, much less carefully executed and non-matching, suggesting that the 'plain' mounts may represent repairs or replacements. XRF analysis has indeed demonstrated that the gold composition of the two beaded-wire mounts is identical, whereas that of the plain-wire panels is different both from the beaded panels and from each other, and has a higher silver content. This strongly suggests that the brooch saw at least one, and perhaps two, episodes of repair.

For these reasons, and because the Hanney burial is the first containing a composite disc brooch and excavated under modern conditions to have produced extensively preserved skeletal material, the possibility of undertaking radiocarbon dating was investigated. It was recognized that this would not enable the date of the brooch's manufacture to be more precisely calculated than the broad mid seventh-century date already derived from numismatic and typological evidence (see above).[27] Nevertheless, it was decided that the possibility that the brooch was old when buried – as was the case with the Harford Farm and Boss Hall brooches -- should be investigated. For this reason, three samples for AMS radiocarbon dating were taken from a third molar, rib and femur to achieve maximum precision. The combined date at 95.5% probability is between 622-665 cal AD; and at 68.2% probability, between 644-659 cal AD (OxA-30141, OxA-30142, OxA-30143), indicating that the brooch is unlikely to have been more than a decade or two old when buried.

THE HANNEY BROOCH: EVIDENCE OF AN UPPER THAMES WORKSHOP?

The Hanney composite brooch belongs to Avent's Class 4, a group that also includes the two brooches from Milton, North Field (which Avent recognized as being particularly closely linked), and one from Faversham, sometimes referred to as the 'Kennard' brooch. The group is characterized by the use of simple garnet cloisonné, with two interlocking rows of 'honey-comb' pentagonal garnets forming the outer

[26] Scull 2009, 88--91.

[27] I am grateful to the Radiocarbon Accelerator Unit of the Research Laboratory for Archaeology and History of Art, Oxford for providing the AMS dates.

border.[28] The overall layout of the Hanney brooch is very closely linked to that of the Milton brooches, particularly Avent's corpus no. 182. The rings of sub-rectangular garnets around the subsidiary bosses that interrupt the cloisonné border around the rim of the brooch is, however, a feature shared by most of the copper alloy composite brooches. That said, one of the Milton brooches (Avent's corpus no. 183) does not possess such rings.

The proportions of the cloisonné designs and overall dimensions of all three brooches are closely similar. There are of course also certain differences in design. Perhaps the most striking of these is the slightly raised central 'tier' found on the Hanney brooch [FIG 5]. Although the Hanney brooch shares the same symmetrical, cruciform layout as the Milton brooches, instead of four rectangular cloisonné arms projecting from the central circular field, four small triangular cloisonné fields originally separated the gold filigree panels.[29] The simple scrolled wire decoration on the gold panels of the Hanney brooch is crude in comparison to the elegant Style II filigree serpents seen on the Milton brooches. Instead of 'honey-comb' garnets around the central setting as on the Milton brooches, the Hanney brooch makes use of rectangular garnets, including several large slab-cut pieces. It should be recognized, however, that even the two Milton brooches, despite their obvious connection, differ from one another in a number of ways, as Avent recognized.[30]

Although Avent argued for a Kentish origin for the Milton brooches, based on their similarity to the Faversham brooch,[31] Hawkes took the view that the Milton brooches could equally have been made in the Upper Thames region and that the evidence 'strongly suggests that the manufacture of these later bronze composite brooches was not confined to Kentish workshops'.[32] The discovery of a third closely similar brooch within 10 kilometers of Milton significantly increases, prima facie, the case for a local manufacture for all three brooches.

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[28] Avent 1975, 54--5, Corpus nos 181, 182, 183.

[29] In this respect it resembles the Boss Hall, Ipswich brooch. In the Boss Hall brooch, however, the triangular fields are formed by gold plaques separated by cloisonné fields, the opposite of the Hanney brooch.

[30] Avent 1975, 55; Hawkes 1975, 252--3.

[31] Avent 1975, p. 65 and no. 181. Meaney and Hawkes also originally suggested that the Milton and Kennard brooches could have been made in the same workshop (Meaney and Hawkes 1970, 70).

[32] Hawkes 1975, 254--5; More recently, Scull has also suggested that 'some of the brooches found outside Kent were also made outside Kent' (2009, 90).

In order to shed further light on the question of the relationship of the three brooches and the likelihood of local production, technological and compositional analysis of the Hanney and one of the Milton brooches was undertaken at the Cranfield Forensic Institute. This took the form of microscopy and CT scans to reveal the construction of the brooches and XRF and XRD analysis of the materials used in their manufacture.[33] The results will be published in full elsewhere but it is already clear that the Hanney brooch and that found at Milton, North Field in 1832, now in the Ashmolean Museum (Avent's corpus no. 182), differ in a number of ways. The rivets securing the five circular bosses on the Hanney brooch were, for example, made of copper alloy tubes, while those on Milton were of iron; a crimped strip that formed part of the outer row of cell-work on the Hanney brooch appears to be, very unusually, of pure copper whereas on the Milton brooch, all are copper alloy. There are of course also important similarities: e.g. the general techniques for working the metals involved seem very similar, the bottom plates of both brooches were of copper alloy covered on the back with silver sheet, and the white paste filler used is common to both. Perhaps most strikingly, the CT scan revealed that the proportions of the copper alloy plates used to form the middle layer of the Hanney brooch and the top layer of Avent's corpus no. 182 are effectively identical, suggesting that the same template was used for both. It is too soon to evaluate the significance of these similarities and differences, but it is clear that there was more than one way to make a composite disc brooch, and even two visually similar brooches could contain subtle constructional differences. How such differences should be interpreted will be the subject of a separate study, but they do not make a local manufacture for the three brooches inherently less likely.

THE HANNEY BURIAL IN CONTEXT

The burial occupied an extremely prominent position on one of the highest points in the parish of West Hanney, with the ancient routeway known as the Ridgeway clearly visible to the south and with commanding views over the Ock valley to the north (FIG. 7). The burial lay approximately 2.5 km west of the road from Wantage to Marcham, stretches of which are still visible as a low linear earthwork, running

[33] The analyses were undertaken by Dr Andrew Shortland and Dr Sophie Beckett of Cranfield University.

parallel to and just west of the A338.[34] Less than 100m to the west of the burial runs the Childrey Brook, which formed part of the northern limits of an estate at East Hanney granted in 956 by King Eadwig to his *adoptivus parens* [FIG. 8]; it also forms part of the parish boundary of West Hanney.[35] It is perhaps not too far-fetched to suggest that it already formed a significant boundary in the seventh century. No early Anglo-Saxon cemetery has been identified within a 5km radius, with the nearest known cemetery lying at West Hendred.[36]

The location of the burial therefore raises the question of whether it was originally a visible landmark. A geophysical survey, 60m x 60m and centred on the burial, was carried out to establish whether any evidence of a ploughed-out barrow and/or of further burials could be identified. No trace of either a ring ditch or further grave cuts was found, however, although linear ditches, possibly field boundaries, were identified. The lack of evidence for a barrow is not conclusive, however; the grave cut was severely truncated and a shallow ditched feature would have been ploughed away completely. A controlled metal detector survey revealed a small number of both ferrous and non-ferrous signals that were not investigated further. Given the intensity of metal-detecting in the field in question, however, and the good working relations between local metal detecting groups and the local Portable Antiquities Scheme Finds Liaison Officer, finds of this period are likely to have been reported had the burial lain within a larger cemetery containing furnished burials.[37] The balance of probability, therefore, is that this find does represent an isolated burial.

Recent refinements in the dating of Anglo-Saxon burials have demonstrated that, after a sharp and widespread decline in the furnished burial rite after the 570s

[34] This road is likely to be the '*bradan* herpaÞe' or 'broad highway', referred to in tenth-century charter bounds (see n. 35).

[35] Kelly 2001, 229--37, Charter **55**. No charter survives for West Hanney, which lies in Wantage Hundred. The name (OE *hanena īeg*) refers to the 'island of the wild birds'. According to Gelling, the 'island' in question was probably 'the strip of land between Letcombe and Childrey Brooks' (Gelling 1973--76, 477).

[36] Hamerow 1993.

[37] Extensive metal-detecting did not, furthermore, reveal evidence of significant Romano-British activity in the immediate vicinity of the burial (Byard 2013). A range of mid to late Saxon metalwork, mostly ninth- and tenth-century in date and including over a dozen strap ends and a hooked tag, are, however, recorded on the PAS website (www.finds.org.uk) as coming from the Hanneys. Mid Saxon finds include two sceattas and one copper alloy pin. These appear to indicate dispersed activity, especially between Childrey and Letcombe Brooks. There may be something of a concentration of early medieval finds immediately to the east of Letcombe Brook (Byard 2013).

(excepting, of course, the handful of lavish male princely burials of the early seventh century), there was a 'surge' in well furnished female burials accompanied by a range of new artefact types which made use of precious and exotic materials beginning in the second quarter of the seventh century, while the number of male weapon burials remained small.[38] Females tended to dominate the burial record until the demise of the furnished burial rite sometime towards the end of the seventh century.

The West Hanney burial thus belongs to a well-attested tradition of well furnished seventh-century female inhumations, a few of which, such as those found at the Eton Rowing Course (Bucks) and in the reused Bronze Age barrow on Swallowcliffe Down (Wilts), were isolated.[39] Female burials like the one at West Hanney, which overlooked long-distance routeways, lay close to a territorial boundary, contained an opulent brooch and probably also a bag collection, is perhaps best understood within the context of a newly prominent hereditary aristocracy establishing its position within recently formed and rapidly expanding kingdoms. [40] For such a group, the furnished burial of women still offered the possibility of competitive display, notwithstanding the concealment of elements of the grave assemblage in containers. That said, these burials appear to have been less obviously concerned with the 'conspicuous consumption of wealth' than the male princely burials that preceded them in the early seventh century, such as those from Sutton Hoo, Suffolk.[41]

This marked phenomenon may, as has recently been argued, be related to increasing constraints on the circulation of weaponry leading to the decline of weapon burials, a possibility suggested by certain clauses in seventh-century law codes and maybe even the Staffordshire Hoard.[42] John Hines has suggested, furthermore, that the identity of the women accorded furnished burial in the seventh century may not have been 'subject to the same direct public and political interests'

[38] Bayliss and Hines 2013.

[39] Boyle et al. 2002; Speake 1989. The Hanney burial was relatively poorly furnished compared to some burials with composite disc brooches, such as Grave 11 from Harford Farm, which contained a festoon of beads, a toilet set, knife, shears, and comb, and Grave 93 from Boss Hall, with its coins, silver cosmetic implements, and necklace(s) (Penn 2000; Scull 2009). Other composite brooches, however, also appear to have been accompanied only by an iron implement or two and perhaps a few beads (For example Avent 's Corpus nos. 174 and 175; Avent 1975, 46).

[40] Hines 2013, 543.

[41] Crawford 2004, 95.

[42] As suggested by Hines in Bayliss and Hines 2013, 542.

as that of the males previously buried with weapons: 'Put in positive terms, we can postulate that the female identity in question—relative wealth and eminence in the community, and a special domestic role –- was both assigned and valued on a more local basis, rooted in the household and the family.'[43]

Yet furnished female burials like the one at West Hanney – regardless of whether they included objects with overtly Christian symbolism (and it is a moot point whether the brooch, with its cruciform motif, was intended to be understood as a Christian object, although it seems likely) -- can be understood within the context of another remarkable phenomenon: the marked prominence of women in the Church from the middle decades of the seventh century onwards.[44] This same period saw the accumulation of considerable landed wealth in the hands of women.[45] Indeed, it appears increasingly likely that the 'abbess generation' of the 660s onwards (of which St. Hilda was the most prominent member) emerged out of an earlier, widespread and undocumented change in the role of women evidenced in this 'surge' of well furnished female burials that began in the 630s. This corresponds broadly to the period when the daughters of Anglo-Saxon noble families began to be sent to Frankish double monasteries, which were headed by abbesses and have been described by Le Jan as 'major players in the complex mechanisms by which land-ownership circulated'.[46] Some died there; a few famously rose to become heads of these establishments themselves. Still others returned to England, no doubt bringing with them new ideas about women as the managers of landed estates.

That women were now, in at least some cases, critical in assuring the continuity and securing the property of high-ranking Anglo-Saxon families may have contributed to their new prominence, along with their 'tendency to outlive men', another means by which they could acquire land.[47] Female members of land-owning

[43] Hines 2013, 542--3.
[44] The distinction between the burials of aristocratic females who were members of religious houses and those who were not is unlikely to have been clear-cut in the seventh century. Indeed, there is no reason why Hild could not have been buried with a spindlewhorl.
[45] Blair 2005, 230; Wormald 2006. For example, as John Blair has noted, the foundation legend of Minster in Thanet appears to show the example of a Kentish princess, 'Domne Eafe', using her wits to secure a hefty eighty-hide endowment from her cousin, the murderous King Ecgberht (Blair 2005, 144).
[46] 'They also sent their daughters to be taught in [Frankish monasteries] and to be wedded to the heavenly bridegroom.' Bede, *HE* III.8; Le Jan 2001, 244.
[47] Wormald 2006, 272.

families might thus not merely represent a valuable form of symbolic capital,[48] but also the family's interest in newly gained estates. The burial of a female family member near a major boundary, accompanied by a range of richly symbolic 'material metaphors', would surely have had a significance that went well beyond the purely local and domestic.[49]

The obvious similarity of the Hanney brooch to those from Milton, for example, appears deliberately to emphasize links with a leading family in the Abingdon area, a region that was able from an early period to procure precious metals, luxury imports and coinage, and that displayed high-status occupation over several centuries.[50] It is furthermore possible that the inclusion of the glass vessel fragments, with their associations with feasting and drinking, was intended to underscore this link, given the proximity of the Milton burials to the great hall complex at Sutton Courtenay/Drayton, which is likely to represent an Anglo-Saxon 'royal vill'.[51] The occasion when these objects were deposited with the woman at West Hanney may also have evoked important communal memories regarding their production and giving as gifts.[52] Indeed, the site at Sutton Courtenay/Drayton yielded, in addition to high status seventh-century metalwork, extremely rare (though undated) evidence of goldworking in the form of droplets of gold solder and fragments of cut gold sheet.[53] While this must inevitably remain pure conjecture, the site at Sutton Courtenay/Drayton is as good a candidate as any for the location of an Upper Thames valley workshop capable of producing deluxe items such as the Milton and Hanney composite brooches.

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[48] Cf Nelson and Rio 2013.

[49] It is worth considering who decided where and how such women were to be buried, although here one must enter the realm of speculation. Circumstantial evidence suggests that a 'class of female ritual specialists, responsible for the control and maintenance of burial tradition' existed throughout the early Anglo-Saxon period and beyond (Geake 2003, 265), while it appears that the nuns and abbess of Barking Abbey were able, at least *in extremis*, to decide for themselves (Bede, *HE* IV.4).

[50] Hamerow, Ferguson and Naylor 2013.

[51] Hamerow, Hayden and Hey 2008. It is intriguing to speculate about what happened to the rest of the vessel. One possibility is that the fragments were distributed amongst the mourners, as has been suggested to explain the relatively common occurrence of fragments of combs, usually made of antler, in early Anglo-Saxon cremation urns (Williams 2003).

[52] Williams 2010, 35.

[53] Hamerow, Hayden and Hey 2008.

While there can indeed be no single answer to the question, who were the women to whom a richly furnished burial rite was accorded in the seventh century[54], the West Hanney burial and others like it seem to express a complex interplay between the new political importance of land and inheritance on the one hand, and the prominent role of women in the initial stages of the Conversion, as set out so clearly by Bede, on the other. The extensive corpus of seventh-century female furnished burials -- whose chronological development has now been defined in greater detail than ever before – thus retains considerable potential to enhance our understanding of gender and power in Conversion-period England.

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APPENDIX A. CATALOGUE OF GRAVE GOODS

Esther Cameron

1. **Composite disc brooch [FIGS 4, 5]**.[55] The brooch's circular outline is slightly damaged as if by a blow to the edge and a circumferential metal collar, most probably

[54] Hines 2013, p. 538.

of copper alloy, gilt, is missing. There is further damage to the front: three of the four outer segments of the design, and its entire border, comprising copper-alloy cells, garnets and gold, had been dislodged. On the back, silver sheet and a pin had become detached. Some of these elements were recovered from the soil.

The brooch has a layered structure: there is a lower plate of copper alloy, the outside coated with silver sheet; a middle plate with a large central hole, on which the majority of the cloisonné is set, and a small upper plate supporting the central tier. The spaces between the plates are filled with a white paste composed of calcium carbonate. Five rivets connect the upper and lower parts of the brooch, each headed with a boss of white aragonite, a mineral consisting of calcium carbonate (occurring, for example, in shell but also as a deposit in hot springs). The cell or cloison structure is formed from circular strips of copper alloy soldered to the supporting plates, and radial sub-divisions set into paste. The cells are filled with white paste topped with gold foil and garnets. The patterns on the foils are of two types: the majority is 'standard' grid with a line count of 4 lines/mm, a type which is uncommon among composite brooches but occurs frequently in the Sutton Hoo jewellery; a few, mainly those beneath the largest garnets, are 'boxed' grids with a line count of 3.2 lines/mm, a type occurring regularly in Anglo-Saxon garnet jewellery but not among composite brooches or the Sutton Hoo assemblage (Avent and Leigh 1977, 2, table 1; East 1985, 137). The garnets surmounting these cells, although well-polished and flat, have irregular 'nibbled' edges, suggesting they were shaped in a workshop without specialist gem-cutting equipment or skills (Bimson 1985, 127-8).

The front is divided into three concentric circles: the first, innermost, has a central white boss (see below) encircled by two rings of trapeze-shaped garnets and gold foil in copper-alloy cloisons. These slab-cut garnets are of two sizes, the larger ones being 2.5 times the width of the smaller ones, including one that appears to have an old break. In the second concentric circle there are four gold mounts, originally eight in total, wire-bordered and decorated with S-scroll motifs; two of the mounts have 13-14 motifs each in beaded wire, while the other two have 8-10 each in plain, slightly coarser wire, and the scroll-work appears less accomplished; it is possible

[55] The Oxfordshire County Museum Service's purchase of the brooch and its associated finds in 2011 was made possible by the V&A Purchase Grant Fund, the Headley Trust and the Friends of the Oxfordshire Museum. The brooch is currently displayed at The Oxfordshire Museum, Woodstock.

that these represent replacements. In its complete state, the mounts would have depicted the four arms of a Maltese cross; the triangular spaces between the arms in-filled with garnets; the centre of each arm punctuated with a white boss encircled by trapeze-shaped garnets. The third, outermost circle is a double border of small pentagonal garnets separated by a crimped strip of, unusually, pure copper.

The central boss consists of filigree gold collars at the base and crown, presumably surmounted by a smaller boss with a single cabochon garnet and filigree collar (missing); two gold strips or 'crown arches' descend from the crown to the base; a third arch and possibly fourth arch are presumed to be missing. Four outer bosses: probably identical to each other, comprising filigree gold collars at base and crown with a single cabochon garnet set in the top; the stone and setting is missing from one of the bosses.

On the back of the brooch, five small holes in the lower plate mark the exits of tubular rivets, the ends burred over. A small U-shaped loop, ends fixed to the inner face of the lower plate, is a 'safety loop' for attaching a chain (Avent 1975, 21). Fragments of silver sheet, some detached from the back of the brooch, are engraved with a simple interlace design against a partial background of cross-hatched lines, of similar design to that on the front of a seventh-century buckle from Eccles, Kent (Speake 1980, 58-9, pl.9e). The layout suggests an interlace border, with further decoration around the base of the pin head and possibly the catch-plate. The back of the 'Kennard' brooch from King's Field, Faversham is engraved with cross-hatched triangles (Avent 1975, 21, Plate 72) and there are similar motifs on the back of the Monkton brooch (Hawkes 1975, fig.2). Pin fragments, including a drum-shaped pin head and a U-shaped deposit, possibly of solder, on the silver backing sheet, suggest the fastening of the Hanney brooch was of Avent's type 5 (Avent 1975, fig.27). Diameter 70mm

2. & 3 [FIG 6a]. Two fragments of blue-green **glass** from the rim and body of a vessel: the rim, a simple upright edge; the convex body sherd with a trail across it. Rim Th 5.5mm; body Th 3mm; trail Th 4mm

4 [FIG 6a]. **Spindle whorl** of chalk and clay, plano-convex: surface rough and eroded, of an ochreous grey colour. Diam 34mm, H 18mm, Diam of hole 10mm

5 [FIG 6a]. **Spatulate tool**, fe, parallel-sided with a blunt, rounded end; straight tang possibly with a twist, no evidence of an organic handle. On the underside, a trace of mineralised skin or leather: probably from a sheath for the knife that was found beneath. L 111mm, W 13mm

6 [FIG 6a]. Knife, fe, with trace of a horn handle: widest at the shoulder; back slopes gently towards an angled tip; cutting-edge straight with a slight upward curve at the tip. On the underside, a trace of mineralised textile: Z-spun yarn, 0.3mm in diameter, the weave unclear. L 113mm, W 14mm

7 & 8 [FIG 6b]. Two near-identical ceramic **cups**: globular body with base slightly flattened, neck tall and flared, rim a simple convex edge. Fabric mottled black and orange/brown with carbonised organic temper. Surface roughened inside and out, with voids where the temper has been burnt away, and lumps of adhering soil and laboratory consolidant. H 92mm, Diam 106mm.

9. Not illustrated. **Awl or point**: fe, part of a tapered rod, circular in cross-section, with associated fe fragments which, were they to join, would suggest a total length of approximately 50mm. Found during conservation of the cups, although the exact relationship of the ironwork and the pottery was not recorded. Extant L 23mm, W 5mm

APPENDIX B. ANALYSIS OF THE HUMAN REMAINS

Andreas Düring, Nicholas Marquez-Grant and Paula Levick

Introduction

The following skeletal report comprises the initial study by Paula Levick and a more in-depth analysis conducted in 2014 at Cranfield University including CT scans. The study seeks in particular to establish the biological profile (sex, age-at-death) of the individual and to shed light on the lifestyle or living conditions as evidenced by the pathological conditions in the skeleton. We would like to thank Dr Sophie Beckett and Jessica Bolton for the CT-scanning of the skeletal remains at Cranfield

University. Sincere thanks go to Almudena García-Rubio, Kayleigh Cooper and Oznur Gulhan of Cranfield University as well as Janamarie Truesdell, Michael Gantley of the University of Oxford for their help and comments during the recording of the skeletal remains. An article on the osteological analysis discussing the CT-scans in detail and including more comparative research is in preparation.

Methods

The osteological analysis was conducted according to the standards published by Brickley and McKinley (Brickley and McKinley 2004) and Mays (Mays et al. 2002; Roberts and Council for British Archaeology 2009). Morphological observations were made to estimate sex and age-at-death as described in Brickley and Mckinley (2004). The metric analysis is based on Buikstra and Ubelaker (1994) as well as on Brothwell, Bass and Martin (Brothwell 1981; Bass 1995; Martin 1914). Stature was estimated based on the formulas developed by Trotter, Gleser and Bach (Bach 1965; Trotter 1970; Trotter and Gleser 1952).

To assess the social status of one isolated individual based on a skeletal analysis is impossible. Palaeopathological methods and the newly developed methods on activity-related osseous changes require larger skeletal populations (Perreard Lopreno et al. 2013; Roberts and Council for British Archaeology 2009; Roberts and Cox 2003; Roberts and Manchester 2005). This report will, however, try to link its results with the archaeological context by addressing the individual's living conditions. This is only possible because of an interesting offset between the results of some of the age estimation methods we applied. In this report we lay a different stress on some of the methods in light of the archaeological context and draw comparisons with general frequencies of pathological conditions in the early medieval period as well as with a site of the same period that is known to have experienced challenging living conditions – the cemetery of Bärenthal in southwest Germany.

Preservation

Although most of the bones were fragmented and some of the bone surfaces eroded, especially the long bone diaphyses, the skeleton was relatively well preserved (skeletal completeness over 75%, bone condition good but with high fragmentation). Only the facial skeleton and the anterior (ventral) aspect of the pelvic bone were

missing almost entirely. The missing pubic symphyses complicate the age estimation. All the skeletal elements probably belong to one single individual and there were no repeated bone counts. Eleven animal bones, belonging to various species, were mixed with the human remains. The 1 tooth and 1 cranial and 9 long bone fragments were found in different areas within the burial and this, combined with their fragmentary state and their size indicate that they do not represent deliberate deposits.

The location of the brooch in the grave can be established on the basis of the green staining of the upper left thoracic area of the skeleton. The left part of the mandible, the left scapula, the left clavicle and six upper left ribs have been stained dark grey to green.

Sex

The sex of the individual could be estimated on the basis of standard morphological observations and metric data. The majority of the morphognostic sex markers were graded as feminine, especially the pelvis with its wide Greater sciatic notch and the extremely gracile mandible (Mental eminence, minimal Gonion flaring). Of all the observable cranial features, only the strongly pronounced Posterior zygomatic arch resemble male standards. The individual's long bones are gracile and short, with lengths that fall on the female peak in comparison with other early medieval populations: e.g. maximum length of the left femur (Fe 1): 419 mm, early medieval population of Bärenthal, Germany: Ø males: 467.7 mm (s=18.8 mm), Ø females: 424.6 mm (s=28.9 mm) / maximum length of the right fibula (Fi 1): 331 mm, Bärenthal: Ø males: 377.3 mm (s=29.4 mm), Ø females: 332.5 mm (s=17.5 mm) / maximum length of the right radius (Ra 1): 221 mm, Bärenthal: Ø males: 256.3 mm (s=11.3 mm), Ø females: 230.8 mm (s=11.8 mm) (Düring 2011; Düring 2014).measurements of the epicondylar breadth of the both humeri, the vertical head diameter (43 mm) and bicondylar width of the right femur (69.8 mm) and the height of both glenoid cavities (33.0 left and 34.5 right) help clarify the sex determination further as they score low indeterminate and female values according to the standards (Bass 1995).

Age

The age-at-death of the individual was much harder to estimate as the pubic symphyses and the sternal rib ends were not recovered and, furthermore, the skull of

the individual was very fragmented. Some of the methods also yielded different estimates. The age estimate therefore depends on how the methods should be weighed against each other and on contextual information.

The first age estimate is based on the postcranium. Because all the epiphyses (with the exception of the sternal ends of the clavicles, see below, are fully fused and the auricular surface does not retain any youthful signs and shows an overall coarse and granular surface with some striations and a beginning breakdown of the rims, an absolute age of 25 to 35 years seems realistic (Lovejoy et al. 1985).

The second of the contradictory age estimates is based on observations of the individual's dentition. The teeth of the individual are not abraded to any great extent (polished occlusal surfaces of the molars with tiny dentine spots on the tip of the mesiobuccal cusps of the first left lower molar and two dentine spots at the first upper right molar) which hints towards an absolute age of less than 25 years (Brothwell 1981) or under 12-20 years of age (Miles 1962) depending on the grading system applied (Hillson 1996). As both grading systems are based on Anglo-Saxon populations, tooth abrasion should reflect the relationship of the individual buried at West Hanney to the population standard of that time quite well.

The epiphyseal fusion of the sternal ends of the clavicles are generally seen as a good age marker above the age of 18 as they do not represent a degenerative factor (Schulz et al. 2008). A thorough review of the existing literature has, however, revealed that there is a wide range of possible ages for partly fused sternal ends of clavicles. According to Bass, the fusion should mostly have stopped before the age of 25 (Bass 1995). The general literature, however, states that fusion progresses between 23 and 30 years of age (McKern and Stewart 1957; White and Folkens 2005). A recent paper examined fusion stages of the sternal ends of clavicles and reviewed earlier research. The preserved sternal ends of the clavicles sore stage 3 (active fusion) in the 5-phase system and stages 2-3 in the 3-phase system which corresponds to a minimum age of 19 and a maximum age of 30 years with an average in the mid to late twenties (Langley-Shirley and Jantz 2010). An age estimate of less than 25 years is therefore unsupported.

Cranial suture closure (only included because of the contradictory age estimates) yields a rough range of 20-40 in this case aas the S1 part of the sagittal suture ahd already started to fuse before death (Vallois 1937; Rösing 1977).

The buried individual did not show degenerative joint disease in the spine and extremities (with the exception of two small-scale osteophytic reactions at the medial aspect of the femoral heads). Together with the minimal abrasion of the teeth, this points towards an individual with a higher chronological age who had fewer abrasive elements in the diet than the average and was exposed to low levels of physical stress to the spine and the extremities. The evidence taken together therefore points to an age of 25-30 as a narrow estimate and 20-35 as a wider estimate. This female therefore died a few years before, or in accordance with, the onset of the general mortality peak of early medieval populations at ages 30 to 40 (Chamberlain 2006; Düring 2014; Kokkotidis 1999).

Stature

Different methods can be applied to estimate the stature of an individual. Siegmund presents an overview of the most common methods (Siegmund 2010). Trotter's estimation formulas yielded good results in comparison with other archaeological data (Trotter 1970; Trotter and Gleser 1952). According to Trotter's formula for white females and the length of the femur the stature of the individual was 157.6 ± 3.72 cm. Bach's chart for female femora lengths suggests a stature of around 1.61 to 1.62 m (Bach 1965).

Pathological conditions

Dental health

The dental health of the individual was relatively good and no enamel defects could be observed. Even those teeth scanned with CT displayed no irregularities on the outer surface of the enamel. 18.8 % (640 of 3,407, crude prevalence rate) of Anglo-Saxons were diagnosed with enamel hypoplasia in an overview study of health and disease in Britain. Overall, 384 of 5167 (7.4 %) of teeth were affected. But some Anglo-Saxon sites yielded prevalence rates of over 60 %. (Roberts and Cox 2003). In the early medieval low status site of Bärenthal, Germany, 88.9 % of all adult females were diagnosed with enamel hypoplasia (Düring 2014).

Dental abrasion has already been discussed and corresponds with the lowest stages (6-12), suggesting an age of less than 20-25 (Brothwell 1981; Miles 1962). This means that the cusps of the teeth showed polish but only the first and second molars had developed little dots of dentine on the larger cusps. It is likely that the

individual consumed food containing fewer abrasive elements than the average Anglo-Saxon. A caries lesion on the occlusal surface of the left upper first molar was identified by Paula Levick in the intial study and could not be verified as it had been destroyed during the radiocarbon sampling. The other teeth showed no signs of caries and ante mortem tooth loss could not be diagnosed. No signs of apical activities or active or healed periodontitis could be observed in the mandible and the still present parts of the maxilla, although the alveolar rims of the 25, 26 and 27 show some slight pitting. Almost all teeth had light to medium calculus formation (tartar) on the lingual and labial surfaces (Brothwell 1981; Hillson 1996). According to Roberts and Cox, 4.2 % of 38,911 Anglo-Saxon teeth showed signs of caries, dental calculus was observed in 39.2 % of 3,567 teeth and 27.0 % of individuals suffered from periodontal disease (Roberts and Cox 2003). At Bärenthal, 37.8% of all teeth were affected with caries or lost ante mortem, every young adult female suffered from periodontal disease. 85.7 % of young adult females had developed at least one caries lesion and six out of seven had lost at least one tooth ante mortem. Young adult females had also built up dental calculus of the medium and strong stages (Düring 2014).

Pathological conditions of the postcranium

The individual did not show any signs of trauma or Cribra orbitalia. In the postcranial skeleton, Schmorl's Nodes, i.e. herniations of the intervertebral discs into the upper and lower surfaces of vertebral bodies, could be identified in the lumbar vertebra 2, 3 and 4 and the thoracic vertebra 8 and 10. These probably activity-related lesions are common in young adults and produce no symptoms (Aufderheide and Rodríguez-Martin 1998; Roberts and Manchester 2005; Waldron 2009). Of all the observable articular surfaces only the rib heads of both 12th ribs had slightly pitted surfaces and the lower medial aspect of the rims of the femoral heads showed slight osteophytic reactions. According to Waldron these lesions can be diagnosed as a mild form of Osteoarthritis (Waldron 2009).

Only very few pathological changes could be observed and the individual showed very few minor degenerative changes. Many more pathological lesions due to physical stress or a high daily workload would not be uncommon for this age group in the Anglo-Saxon period. Joint disease is observed in 8.8 % of the overall population (628 of 7,122, crude prevalence rate) and usually more males than females

are affected (Roberts and Cox 2003). 10.18 % of the individuals aged 20-29 studied at the Alamannic cemetery of Munzingen showed degenerative changes (Burger-Heinrich in Groove 2001). In other early medieval populations much higher prevalence rates have been observed in the age category of 20 to 40. 68.4 % of the adult individuals at Bärenthal, Germany, had developed spondylarthropathies and 73.7 % of the adult population showed osteoarthritic reactions of the extremities. The female part of the population had much higher prevalence rates than the males with 87.5 % of cases of joint disease in the adult age group (Duering 2011; Düring 2014). More positively diagnosed females than males alongside a high rate of cases of individuals aged lower than 30 could also be observed in the early medieval village of Berslingen (Kaufmann 2000). Arguments based on the absence of evidence are always problematic. The analysis, however, suggests that the individual's living conditions were slightly better than for the average woman.

The only other pathological change is a 1.5x2 cm large spot of grey woven-bone formation on the anterior surface of the diaphysis of the left femur. Periostitis symptoms can have a wide range of different causes, e.g. stress, infections and metabolic/systemic disorders. Because a similar lesion on the right side could not be observed, the causes might be more localised and less systemic (Aufderheide and Rodríguez-Martin 1998; Roberts and Manchester 2005; Waldron 2009).

The absence of pathological lesions in the skeleton is not a guarantee that the individual did not suffer from diseases that do not affect the bones (Wood et al. 1992).

Activity related osseous changes

Activity related osseous changes are difficult to study without a large reference population and the following observations must therefore be treated with care (Perreard Lopreno et al. 2013). The muscle attachments of the upper extremities were excluded from the study as the surface of the radii and ulnae was eroded. The diaphyses of the humeri show little relief but are not completely smooth. They can be graded maximally to stage 1 of expression based on the 'Coimbra Method' (Henderson et al. 2013). The femora and tibiae belong to expression stage 1 in both zones. The Linea aspera is very smooth and 'gracile'. The muscles of the lower extremities of this individual were probably not continuously stressed more than the

average. The two mild changes in the hip joint mentioned above should not, however, be forgotten.

Growth disruptions

The proximal epiphyses, metaphyses and proximal parts of the shafts of both tibiae and the distal epiphysis, metaphysis and shaft of the right tibia were scanned at Cranfield University. The proximal tibiae showed no Harris Line formations (Roberts and Manchester 2005); the right distal tibia, however, had a minimum of three slight Harris lines which do not intersect the complete spongy material but become oblique towards the anterior aspect of the shaft. Two more probable Harris lines can be seen but they are only present as very slightly transverse oriented spongy bone. The growth arrests might have been caused by multiple periods of (minor) physical stress of infections during the individual's childhood and adolescence. The Harris lines might, however, already have been partly remodeled due to the individual's age.

Summary

Sex: female, Age: (20-) 25-30 (-35), Stature: 157.6 ± 3.72 cm, Pathological conditions: dental caries, dental calculus, Schmorl's nodes in the lower thoracic and the lumbar vertebra, very early stage Osteoarthritis (12^{th} ribs, femoral heads), active Periostits on the anterior surface of the diaphysis of the left femur, three to five slight or partly remodeled Harris lines in the right distal tibia.

The individual displays fewer degenerative pathologies, relatively gracile muscle attachments and below average dental abrasion for a young adult female in the early medieval period. The age of the individual was difficult to estimate because of a small offset between the observable age markers, i.e. between the auricular surface method and tooth abrasion stages. The resuls are generally consistent with the archaeological context indicating a high status individual. Skeletal data on individuals of low status tend to show more nutritional and stress related osseous changes and pathologies (e.g. JRoberts and Cox 2003; Robserts and Manchester 2005). The osteoarchaeological analysis can, however, only identify a general trend and does not resolve the question of this one individual's living conditions. The Harris lines in the lower tibia together with the absence of enamel defects suggest that even individuals

of apparently high status could not escape mild physical stresses such as infectious diseases or nutritional deficiencies.

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Figure Captions

Fig 1 Site location. Crown copyright/ database right 2014. An Ordnance Survey/Edina supplied service.

Fig 2 Grave plan

Fig. 3 Distribution map of composite disc brooches

Fig 4 Composite disc brooch from West Hanney: a) front b) back c) fragments of engraved silver backing sheet. Photographs: I. Cartwright, Institute of Archaeology, University of Oxford

Fig. 5 Composite disc brooch with diagram showing internal construction based on x-ray computed tomography: 1 circular strips of copper alloy soldered to the middle and upper plates; 2 cabochon garnet; 3 slab-cut garnets; 4 upper plate; 5 middle plate; 6 lower plate; 7 white paste; 8 silver sheet; 9 rivet; 10 crown arch; 11 filigree gold collars; 12 gold mount; 13 triangular field of garnets; 14 crimped copper strip. Illustration by M. Wachnik, reproduced with kind permission of Oxfordshire Museums Service

Fig 6a Grave goods. Illustrations by M. Wachnik, reproduced with kind permission of Oxfordshire Museums Service

Fig 6b Grave goods (continued)

Fig 7 Looking South from site towards the Ridgeway. Photograph: J. Brasnett, reproduced with kind permission of Oxfordshire Museums Service

Fig 8 Looking West from site towards the Childrey Brook (marked by the line of trees) and beyond towards the Vale of the White Horse. Photograph: J. Brasnett, reproduced with kind permission of Oxfordshire Museums Service