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Early Anglo-Saxon dress accessories from Saltwood Tunnel, Kent

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1 INTRODUCTION

The dress accessories from the three early Anglo-Saxon cemeteries include 868 beads of glass, faience, amber, copper alloy and silver, as well as 15 brooches, one copper alloy bracelet, three finger rings, two sets of wire necklace rings, nine pins, at least eight pendants and two intaglios. In addition, 46 copper alloy and iron buckles are also described here.

Brooches, pins and decorative accessories other than beads were recovered from some twenty of the Saltwood graves. Although the skeletal remains could not be confirmed as biologically female, it is obvious from cemeteries with better bone preservation that items such as these generally signal the burial of a woman or girl (Stoodley 1999, 24-52, 105-118; Walton Rogers in press). They begin with two heirloom brooches, a button brooch and an early radiate-headed brooch, and then move through representatives of the 6th-century Merovingian four-brooch costume, and on into 7th-century pendant necklaces and a prestigious plated disc brooch. The owners of these accessories probably represent the more affluent members of society, but there are also some less ostentatious articles, such as pins, finger-rings, a bracelet and a lightweight annular brooch. Beads are discussed below by Sue Hirst and buckles by Sonja Marzinzik, while the role of the accessories within the changing dress styles of the period has been reviewed alongside the fabrics of the clothing (Walton Rogers 2006).

2 BROOCHES

by Penelope Walton Rogers

2.1 Button brooch

The earliest brooch from the cemetery is a very worn gilded copper-alloy button brooch, *ON 2167* (Fig. 107 and pl. 3a), which was found with a late Kentish square-headed brooch, *ON 2133*, in a short grave, Western C4643, possibly that of a child. Button brooches are identified by their cast saucer shape and the representation of a man's face, which, in the Saltwood brooch, has plump cheeks, round eyes, wide nose and notches on the moustache and brow; the man wears a pointed helmet and there are punched triangles around the rim. These features place the brooch in Avent and Evison Class Aii (Avent and Evison 1982). It is 20.5 mm diameter and the iron pin is horizontal to the brooch face, as is often the case in these small Kentish examples.

Button brooches are found all over south-east England, and also in northern France at cemeteries with obvious Anglo-Saxon connections. Class A brooches are distinguished by the high quality of their workmanship, although Class Aii has more formalised features than Ai. Apart from a single brooch from Frénouville, all eight of the English examples of Class Aii have been found in Kent, where they were almost certainly made (Avent and Evison 1982, 80; Brugmann forthcoming) and there is a brooch from Stowting G9 which is a close match for the Saltwood example, even in the punched triangles around the rim.

Class A button brooches were originally dated to the second half of the 5th century and the early 6th (Avent and Evison 1982, 99) and many of the graves from which they come prove to be dated to Kentish Phase I (Brugmann forthcoming). The Stowting brooch, however, was in association with square-headed brooches which are more usually attributed to Kentish Phase II (i.e. after AD 500). The Saltwood example was also found with a square-headed brooch, so that these two probably represent the tail-end of Class Aii button brooches. Most of the gilding of the Saltwood brooch has worn away from long-term use and deposition some way into the early 6th century is therefore likely.

2.2 Radiate-headed brooch

A worn and damaged radiate-headed Continental bow brooch was recovered from the well-furnished grave of a young adult, Western cemetery C3762, *ON 2007* (Fig. 83 and pl. 3b). The brooch originally had five garnet-set knobs around the head, and the foot is parallel-sided with an animal head terminal. The ornament includes cast scrollwork on the head and in the borders of the bow and foot; a raised band with punched ring-and-dot running down the centre of the bow and foot; and blue glass eyes set into the animal head. The brooch has been cast in base silver (50%) and was once gilded, although it is now so worn that the gold is only detectable by analysis (Gilmour 2006). One of the knobs was already missing when it was placed in the grave and only three of the original five garnets are present, while the crown of the bow has obvious signs of heavy wear.

Radiate-headed brooches first appeared on the Continent in the 5th century, but their main period of production was the early and mid 6th century. The Saltwood brooch bears all the hallmarks of one of the mainstream Continental products, although it is difficult to categorise it precisely. Within Alexander Koch's system, it should be placed in Class I.3.1, which has five knobs on the head, a straight-sided foot and an animal-head terminal, while the scrollwork on the head and foot-plate indicates sub-category 5, the Schwarzrheindorf/Maastricht/Müngersdorf type-group (I.3.1.5) (Koch 1998, I 47-9, II find list 3, Map 3, plate 3.7). This is an early group, dated

to *c*.475-520, with a distribution tightly focused on the Middle Rhineland. They lack the garnet settings, however, and the Saltwood brooch might also be categorised as a plain variant of type I.3.1.4, represented by two less securely dated brooches from France with garnet-set knobs (Koch ibid., II plate 3.5-6). The example from Coizard-Joches, Dép.Marne, in particular has all the elements of the Saltwood brooch, with the addition of niello on the headplate. The design of the Saltwood headplate and knobs also re-appears in straight-foot brooches of Type I.3.3.1, which continue up to *c*. 540/50, although scrollwork on the foot occurs less frequently in these (ibid., I 52-7, II find lists 4-6, Maps 4-6, plates 5-7). The Saltwood brooch therefore fits most naturally in the earlier part of the radiate-headed sequence.

Some five-knob, straight-foot brooches with scroll-work on the headplate have already been recorded in Kent, as pairs at Finglesham D3 (Chadwick 1958, 14-16, 40-1) and Bifrons grave 29 (Chadwick Hawkes 2000, 22, 26), and singly at Howletts (Smith 1918, 108 and plate 2; Koch 1998, find list 5, type I.3.3.1.3 var. B). The Howletts brooch also has an animal head on the foot (though without eye-settings) and scrolls on the foot stem. Like the Finglesham pair, it has lantern-shaped knobs without garnets, and several of the lantern-knob series on the Continent have scrollwork down the foot, while others have settings for animal eyes (Kühn 1965, 140-151, Type 11, plates 76-8, plate 77.32-33). Thus, although the Saltwood brooch cannot be classified exactly, it has points of relationship with other radiate-headed brooches entering Kent from the Continent (see also Åberg 1926, 90-3). The Howletts brooch is not securely dated, but the Finglesham pair has parallels in South German Phase 4 (AD 510-530) and the Bifrons brooches have been dated to the second quarter of the 6th century (Brugmann 1999, 41-2).

Radiate-headed brooches are mostly found in pairs, but the Saltwood worn and damaged example was on its own with a keystone disc brooch of Avent's Type 2.2, dated to the mid to late 6th century (see below). This confirms that it was already old when placed in the grave, although the textile pierced by the pin shows that, despite its battered state, it was still a functioning brooch.

2.3 Square-headed brooches

A pair of square-headed brooches was found in each of three graves, Western cemetery grave C3747, Eastern cemetery graves W1453 and W1762, and there was a single brooch from Western cemetery grave C4643. Two of the three pairs are typical of Kentish-made, continental-influenced square-headed brooches, and the singleton from grave C4643 is a late derivative from the same group. The pair from grave W1453, on the other hand, belong to the *Jutlandisch* design group, although where they were made is open to question. There is no standard classification system for

Kentish square-headed brooches, even though Leigh has described them and their interrelationships (Leigh 1980), but Åberg has illustrated representative examples (Åberg 1926, 74-86, figs 119-146) and his figure numbers are now used as Type numbers (Brugmann 1997, 35-9).

Matched pair from Grave C3747

The brooches from grave C3747, *ON 1977* and *ON 1978*, have the standard elements of the square-headed brooch, namely the rectangular head, lozenge-shaped foot and animal ornament at the junction of the bow and foot, to which has been added flat-cut garnets at the corners of the headplate, the centre of the foot and the footplate terminal (Fig. 79 and pl. 4). Although the two are identical in design, the metal is relatively pure silver in *ON 1977* and base silver in *ON 1978* (Gilmour 2006). Brian Gilmour is of the opinion that the black surface of the ridges of *ON 1978* represents a deliberate patination, and since both brooches are gilded in the channels of the design, *ON 1978* will have been visually black on gold, and *ON 1977* silver on gold.

The footplate terminal of the pure silver brooch *ON 1977* has been broken and lost in antiquity, but any notion that *ON 1978* is a base-metal replacement of another broken or lost brooch is contradicted by the impressed gold foils behind the garnets. Each of these foils, used to give added glitter to the garnets, has been stamped with a large ring inside a box. A smaller variant of this pattern has been recorded on a Class 3.1 keystone disc brooch from Dover Buckland G35, which has parallels at Lyminge and Abingdon, Oxfordshire (Avent and Leigh 1977, 26, 28-9), but otherwise ring foils are rare (Arrhenius 1985, 41). The unusual nature of the foils suggests that the two brooches were made in the same workshop at the same time and that the difference in the metals was intentional.

Garnet-set silver square-headed brooches are found throughout the East Kent cemeteries, with outliers in France, and single brooches almost identical with the Saltwood pair have been found at Dover Buckland G417 (Parfitt and Brugmann forthcoming) and Herpes, France (Leigh 1980, catalogue entry for 'Herpes 1'), while there is a similar pair with extra garnets on the side lobes at Finglesham E2 (Chadwick 1958, 19-20). These brooches are all the same size, 73-79 mm long, with essentially the same Style I ornament. The headplate motif is derived from the 'beast-men' or *Tiermenschen* of Germanic art, which can be traced back to earlier versions in Nydam Style (Haseloff 1981, 111-131) and which recurs in a highly simplified form in the motifs of keystone brooches such as *ON 2053* (pl. 4f). The ornament at the bow-foot junction is another crouching animal, a common motif in related brooches (pl. 4g) (Åberg 1926, Types 125 and 129-131).

The six brooches of this group differ only in minor details: the gold foils of the Dover Buckland G417 brooch have a grid pattern where the Saltwood brooches have ring foils (the other foils have not been individually recorded) and the maker of the Saltwood brooches has replaced the scalloped edge of the Dover Buckland headplate with cast semi-circles within the headplate frame. Both Dover Buckland G417 and Finglesham G E2 have been ascribed to Brugmann's Phase III (530/540-560/570) (Brugmann 1999, 55; Brugmann forthcoming), and the Class 1.1 keystone disc brooch in the Saltwood grave draws comparison with another from the Finglesham grave.

Matching pair from Grave W1762

The pair of small brooches, *ON 296* and *ON 302* from grave W1762, are examples of Åberg Type 132, which has vertical bars within the headplate panel, animals in the upper border of the footplate, and a lozenge foot with semicircles on the side lobes and two scrolls on the terminal lobe (Fig. 61 and pl. 5). The motif in the footplate border of the Saltwood brooches is a long-necked bird, although it is likely that this is a re-interpretation of the dislocated Style I animal which usually appears here (pl. 4j). The brooches are 54-55 mm long and the metal is debased silver, gilded in select areas of the design. There is a double row of niello around the edge of the outer panel of the headplate and a single row on the framework of the foot.

Brooches of Type 132 have been found singly at Howletts GA and Mill Hill G105C (where it was paired with another square-headed brooch) and as a pair at Chatham Lines G18 (Åberg 1926, 80, 200; Brugmann 1997, 38-9, 192; 1999, 56, 58). Examples from outside Kent include single brooches from Herpes in Charente, France, and Barrington, Cambs, and a pair of a related variant from Brighthampton, Oxfordshire (Åberg 1926, 80). Brugmann (1999, 50) puts the Kent examples of Åberg Type 132 in the earlier part of her Phase III, AD 530/40- 560/70, and the silver disc brooch ON 301 in Saltwood grave 1762 indicates a corresponding date (see below).

Square-headed brooch from Grave C4643

The silver brooch from grave C4643, *ON 2133*, with gilding in the recessed areas and niello on the head, bow and the dividing rib of the foot, represents Åberg Type 133 (Fig. 107 and pl. 6a). These small brooches, mostly in the region of 50 mm long, have a shallow profile with a short bow. The footplate has the silhouette of a classic square-headed brooch, but the original reasons for the outline shape – the cross or lozenge foot and the animals springing from the bow-foot junction – have disappeared and in their place is a raised band dividing the foot into two panels of dislocated and segmented Style I ornament (pl. 6c). The process that led to this emphasis on the silhouette and revision of the ornament is already in progress in Åberg Type 131, which has

the same outline shape and a version of the crouching animal motif at the bow-foot junction, although it has geometric ornament in the headplate. In the headplate of Type 133 the motif is a variant of the Style I beast-man already seen in the brooches from grave 3747 (Pl. 6b, *cf* pl. 4). As David Leigh has shown, there is no simple linear sequence in the designs of these brooches, but a constant cross-pollination of ideas (Leigh 1980).

The Saltwood brooch appears to be a late development in design and motif and the divided foot is also regarded as a late feature (Leigh 1980, 316). It has been argued that all the Kentish square-headed brooches must have been made in the same workshop, since they share so many motifs and technical features, and because there is no regional grouping in the different types (Leigh 1980, 108-120). Type 133, however, shows a westerly distribution, in a pair from Chatham Lines G6, two pairs and two singletons from Chessell Down (G40, G55 and unprovenanced), Isle of Wight, and a single brooch from Droxford, Hants, to which may be added two from Herpes, France (Aberg 1926, 200; Aldsworth 1979, 143; Arnold 1982). Several of theses sites have also yielded Type 131 brooches (ibid.). Whether this indicates manufacture in an offshoot workshop, or that the original workshop was making a late series of brooches for an external market, is impossible to say. There are few dateable grave goods associated with Type 133, although Chessell Down G40 had broadly 6th-century artefacts including a 'duck' brooch and a crystal ball in a silver sling (Arnold 1982, 25-6, 56). Stylistically, however, it seems likely that Type 133 falls towards the end of the square-headed brooch date range, in the latter half of Kentish Phase III.

Jutlandisch square-headed brooches from grave W1453

The pair of square-headed brooches from Eastern cemetery grave W1453, *ON 78* and *ON 43*, illustrate the Germanic love of *trompe l'œil*. (Fig. 52 and pls. 7 and 8b-c). Originally gilded, they have been cast in high relief with images that change as the brooch is turned. The small human face on the headplate disappears between a pair of glaring eyes when upside-down, and the face looking out from behind the terminal roundel can be viewed from either direction. Other motifs include a bearded face at the junction of the foot with the bow, two more in profile on the arches springing from the bow-foot junction, and parts of animals in Salin's Style I in the lower borders. The framework of the headplate and foot is plain, as are the roundels on the lobes and the central ridge of the bow. The headplate has borders of cut-down circles and the bow displays a variation on bead-and-reel and S-scrolls. Differences between the two brooches are few, although the face by the terminal roundel has a single pair of pellets for the eyes on *ON 43*, where *ON 78* has two pairs of pellets to represent eyes and cheeks.

Both brooches are relatively small, 74-75 mm long, and they have been made from silver alloy, although the contrasting levels of silver and lead in the two suggest they are not cast from the same charge (Gilmour 2006). On the back of both brooches the pin support and the pin clasp have been riveted to cast ribs (Fig. 52 and pl. 7), which might indicate a repair, although separately made pin fittings are not unusual in this particular metalwork group (Haseloff 1981, I, 144, 154, 158; Evison 1987, 37). The brooches show a significant degree of wear and a stub of metal on the crown of both bows marks the point where an ornamental disc will once have been attached.

These two brooches are members of Haseloff's *Jutlandisch* Group C, of which the distinguishing features are a disc or medallion on the bow, roundels on the footplate lobes and cast ornament in the form of face masks and animals in Style I (Haseloff 1981, I 21-3)(Pl. 8b-e). The heads in profile on the side arches and the full-face masks on the foot and headplate are particularly diagnostic of Group C. *Jutlandisch* brooches and their Jutish-style derivatives have been found in Norway, Denmark, Germany, Belgium and France, and in Britain in at least ten cemeteries in Kent, with an outlier in Sussex (Haseloff 1981, I 18-51; Leigh 1980; Chadwick 1958; Evison 1987, 35-8; Down and Welch 1984; 1990, 95-6; Brugmann 1997, 35- 7). Some were made in South Scandinavia and others are almost certainly the work of a Jutish or Jutish-trained master working in East Kent (Leigh 1980, 120; Down and Welch ibid.).

The Saltwood pair share individual features with the Kentish variants, especially an example from Cop Street, Goldstone, Ash (formerly ascribed to Richborough) (Pl. 8d), but their closest correspondence is with a brooch from Tranum Klit, Jutland (Pl. 8e). This is also relatively short, 71 mm, and the design includes faces in similar positions to those on the Saltwood brooches, although the Jutland brooch incorporates S-scrolls in the headplate frame, bow and inner panel of the footplate, while two bosses on the headplate stand in the place of the glaring eyes on the Saltwood example (Haseloff 1981, I Fig.29, III Plate 14.2). A larger and more elaborate brooch, 139 mm long, from Donzdorf G78, Kreis Göppingen, Germany, has variants of the same motifs, and both the Donzdorf and Tranum Klit bows have the prominent vertical and crossways ridge seen on the bows of the Saltwood brooches (Haseloff 1981, I Fig.24, III Plate 15). It is obvious from this and other members of Group C that the image in the headplate of the Saltwood brooches represents a development out of the well-known 'mask between two beasts' motif.

The proportions of the Saltwood brooches are subtly different from those of most other *Jutlandisch* brooches. They have a small head, wide bow and a foot that is essentially oval in outline, which takes the over-all design closer to Continental oval-footed bow brooches (Pl. 8a)

(Kühn 1965, plates 100-101; Koch 1998, plates 40-44). To achieve the smoother oval profile, the side roundels and the animals in the lower borders have been pared back and the arches at the bow-foot junction have been shortened by re-modelling. It has already been recognised that the transfer of Style I motifs into the oval-footed series shows an interaction between these two major brooch types (Haseloff 1981, II 540-644) and the modification of the essential *Jutlandisch* shape seen here argues for some reciprocal influence.

It is obvious from the quality of the high-relief casting, the deep hollow bow and the freshness and vigour of the motifs that the Saltwood brooches represent Scandinavian metalworking skills, and yet their shape, size and pairing suggest that they were made with a client from the Merovingian sphere in mind. This poses the question, where exactly were they manufactured? They were worn with a pair of continental quatrefoil brooches and a necklace that incorporates continental beads, as part of the Merovingian four-brooch costume, Dress Style IV (Walton Rogers 2006). While none of these features individually is unusual for Kent, in combination with the outline shape of the brooches, they raise the suspicion, might there not have been a Jutish-trained equivalent of the Kentish master at work on the continent? The similarity in motifs between a *Jutlandisch* Group B brooch from Engers, Kreis Neuwied, Rheinland-Pfalz, Germany, and another from Finglesham D3, at one stage led E. T. Leeds to suggest that both brooches had been made in the Rhineland, although this theory was refuted by several authorities, who argued that the motifs were clearly not part of mainstream Frankish work, and, since their designs and motifs had an influence on later Kentish products, their manufacture in Kent was a preferable solution (Chadwick 1958, 45-57). As Down and Welch (1990, 95) have pointed out, however, no workshop sites have been found or excavated, and now that it is known that some smiths were itinerant (Hinton 2000, 111-5; Hines 1995, 77; 1997, 22) such questions may be unanswerable. Nevertheless, the appearance of a new pair of *Jutlandisch* brooches will undoubtedly re-open the scholastic debate.

Haseloff places the manufacture of Group C brooches in the period AD 500-520, based on the dating of two graves with large brooches, Donzdorf G78 to the second quarter of the 6th century and Bifrons G41 to the mid 6th (Haseloff 1981, 173). Brugmann allocates the Kent series to her Kentish Phases II and III, but she suggests that the smaller variants worn in pairs are likely to be a late development, and places the Jutish-style pairs from Bifrons G64 and Finglesham G203 in Phase III, 530/40-560/70 (Brugmann 1997, 35; 1999, 55-6). Many of the continental oval-footed bow brooches of comparable outline shape also belong to this phase (Koch 1998, Typentafel 3), and the quatrefoil brooches from the Saltwood grave are unlikely to be earlier than AD *c* 530 (Koch 2001, 219). The wear on the Saltwood square-headed brooches is no more than

is to be expected if the woman had worn them throughout her adult life, and the quatrefoil brooches have seen an equivalent degree of use. All of this suggests that the Saltwood burial belongs to Brugmann's Kentish Phase III (Saltwood Phase 2) and that the brooches were probably made towards the end of the *Jutlandisch* Group C period of production.

2.4 Bird brooch

The small silver-alloy bird brooch from Eastern cemetery grave W1762, *ON 327*, has a slender shape and a short hooked beak, with Style I ornament on the body; the eye and tail are set with garnets and there is a row of niello around the edge (Fig. 61 and pl. 9a). Small bird brooches of this general type were widespread within the Merovingian world, but the sleak lines of this particular example identify it as a Kentish product. There is a similar brooch from Buckland (1994 excavation) G419, sf 1000, which is silver-gilt (Brugmann forthcoming) (Pl. 9b), although the Buckland bird faces left and the Saltwood bird right. Right-facing is usually regarded as a Continental fashion and left-facing Kentish, but Brugmann refers to a set of unpublished Kentish bird brooches from grave 30 at Bekesbourne which are identical in design to the Buckland brooch and which also face right (Brugmann ibid.).

Kentish bird brooches have been dated on stylistic grounds to Kentish Phases II-III, c.500-560/70 (ibid.; Brugmann 1999, 45, 102). They were mostly used as one of the upper two brooches of the 'four-brooch costume', which was probably also the function of the Saltwood example.

2.5 Silver disc brooch

The small silver disc brooch from Eastern cemetery grave W1762 (*ON 301*), has a central garnet surrounded by a field of cast ornament made up of four trapeziums, each incorporating three triangles, and it is finished with rows of punched triangles (Fig. 61 and pl. 9c). A brooch of similar size and design, but with gilding and raised chip-carved triangles where the Saltwood brooch has sunken ones, was recorded at Buckland (1994 excavation) G419 sf 1001 (Pl. 9d). Brugmann relates the Buckland brooch to a small group of Continental disc brooches with a central setting and a radiating geometric design framed by a flat rim, which are dated by Koch to South German Phases 4-5, AD 510-550 (Brugmann forthcoming; Koch 2001, 74-7, 234). In both Saltwood grave W1762 and Buckland G419 the brooch was worn centre chest in combination with a Kentish bird brooch and the women in the two graves may be regarded as wearing related costume styles (see Walton Rogers 2006).

2.6 Quatrefoil brooches

A matching pair of small, four-lobed or quatrefoil brooches (*ONs 105 and 119*) was recovered from Eastern cemetery grave W1453 (Fig 52 and pl. 9e-f). The brooches are cast in the form of an equal-armed cross with roundels between the arms and they are set with five circular garnets, without foil backing, one at the centre of the cross and one at the end of each arm. The alloy from which they have been made includes silver, although copper predominates, and some worn gilding is present in places (Gilmour 2006). There is an almost identical brooch from Howletts, also set with garnets (Smith 1918, 107-8, plate 2), although whether there were any associated grave goods is not clear from the publication. This is a common brooch type of the Merovingian Continent, where they are found in silver and copper alloy, with and without garnets (Koch 2001, 219-220, 557-8). The Howletts brooch seems to have been a singleton and the Continental examples occur both singly and in pairs, as part of the 'four-brooch costume' (Martin 1991, 636). Ursula Koch places them in South German Phase 5, AD 530-555 (Koch ibid. and 75-7).

2.7 Keystone garnet disc brooches

There are two keystone garnet disc brooches, one (*ON 1987*) a standard type from Western cemetery grave C3747, and the other (*ON 2053*) an unusual variety from Western cemetery grave C3762. Brooch *ON 1987* is a well-made example of Avent's Class 1.1 (Avent 1975), cast in silver with well defined panels of gilt animal ornament separating three keystone garnets, each on the same grid-pattern foil as the central circular garnet; and there is a double opposing row of niello around the rim (Fig. 47 and pl. 9g). Brooch *ON 2053* is cast from a silver alloy with a high copper content, which gives it its present green appearance, in contrast with the more pure silver of other examples of keystone brooch (Fig. 83). It is now heavily corroded, but it has a ring of gold inlay around the central garnet setting, which is in turn surrounded by a flat circle of green stone, possibly malachite (Gilmour 2006), inside the main ring, which incorporates three keystone garnets separated by animal ornament. The gilded panels of cast ornament are of Avent's Type 6.2 and this, and the wide rim with beading, place the brooch in Avent's Class 2.2. Several brooches of Class 2 have white material in the central setting, but the green stone seems to be unique.

Class 1 and 2 keystone brooches came to the fore as the 'four-brooch costume' disappeared in the second half of the 6th century. At Mill Hill they were both introduced in Kentish Phase III (530/40-560/570) but they were primarily in use in Phase IV (560/70-580/90) (Brugmann 1997 and forthcoming). It is probable that Class 1 comes to an end before Class 2, since both Class 1 and Class 2 brooches were associated with Bead Group A2 (AD 480-580) and

A2b (AD 530-580) in Brugmann's recent survey, but only Class 2 brooches were found with Bead Group B (AD 550-650) (Brugmann 2004, 58). Their function within Kentish costume Style V is uncertain, although they may have been the fastener on a chemise. The gilding on *ON 2053* shows signs of wear on one quadrant more than the other, perhaps from contact with beads.

2.8 Annular brooch

The copper-alloy annular brooch (*ON 833*) from Central cemetery grave C1521 has a thin hoop of circular section, poorly cast continuous ribbing and the fragmentary remains of a copper-alloy pin with a distinctive bean-shaped section at the hinge (Fig. 182). Annular brooches of this type, with thin hoops and copper-alloy pins, mainly belong to the late 6th and 7th centuries (Drinkall and Foreman 1998, 255; Geake 1997, 52-4). They form a part of Leeds type F, a group which also includes D-section brooches (Leeds 1945, 48), of which there is a thin-hoop example from Bifrons (Conyngham Collection No.94: Chadwick Hawkes 2000, 77). Such brooches are rare, however, in Kent, the majority being found in the Humberside-Lincolnshire region, with smaller numbers in Yorkshire, East Anglia and the West Midlands (Leeds ibid.; Hirst 1985, ibid.). Contacts between Kent and the Humber basin during the late 6th and early 7th century have already been suggested from other evidence (Hirst 1985, 56) and the Saltwood example is likely to have derived from this interchange.

The lightweight annular brooches of the late 6th and 7th centuries were usually worn as a singleton on the upper chest, in contrast with the earlier annular brooches which were worn in pairs on the shoulders. This particular brooch came from a small grave, probably that of a child, where it was in the region of the waist.

2.9 Plated disc brooch

The disc brooch (*ON 2413*) from Central cemetery grave C6421, with its rings of cloisonné and gold filigree, belongs to the general category, 'plated disc brooches', although it has a corrugated collar of a type more usually seen in composite disc brooches (Fig. 192 and pl. 10a). It is 47 mm in diameter and has been constructed from a gold front plate, to which the cloisonné cells and gold-wire filigree have been attached; a silver backing plate; a gold rim-collar that holds the two plates together; a separately made raised boss which is set into the front plate; and a ring of off-white material (Gilmour 2006) around the boss. The gold boss has a central square garnet surrounded by four cells, of which two still hold garnets. Outside the ring of white material is a ring of cloisonné incorporating blue glass, garnets, and void cells which may have been intentionally empty. Outside the cloisonné ring lies a double ring of filigree, into which have been

set eight individual cloisonné settings of garnets, made up of alternating shapes, essentially squares and triangles with their sides squeezed in. All garnets are set on a grid-pattern gold foil. The two rings of filigree are separated by a beaded wire and the filigree is made up of double coils, mostly facing clockwise, sometimes counter-clockwise. Where the front plate meets the rim, a thick beaded wire covers the join, and the gold collar around the rim has three ribs. On the back, the pin holder and pin hinge have been cast with the silver back plate, but the pin itself is iron. There are patches of wear on the sides at two places opposite each other, their position being at right angles to the line of the pin.

Plated disc brooches developed out of the later forms of keystone garnet disc brooch. Their elaborate cloisonné and filigree work represented a new departure, but most of the plated brooches still had the distinctive beaded and nielloed rim of the keystone brooch. The Saltwood brooch has the corrugated or 'reeded' collar of the larger and heavier composite brooch. Composite brooches have a layered construction similar to plated brooches, but are distinguished by a second ring of cloisonné work and often extra bosses (Avent 1975; Pinder 1995; Coatsworth and Pinder 2002). Plated and composite brooches were both comparatively rare – Avent listed 24 plated and 16 composite, as against 144 keystone brooches in his 1975 survey – and each was unique. The Saltwood brooch has most features in common with Avent's Class 1 and its design is closest to that of a Class 1 brooch from Faversham (Avent No. 147, Plate 50), which has a very similar boss, heart-shaped filigree, and triangles and tri-lobed shapes in the outer cloisonné ring. The diameter is similar, 43 mm, and the cloisonné work is also red and blue. Two further Class 1 brooches from Faversham (Avent No. 145 and 146) are clearly related types.

Plated disc brooches overlap chronologically with the end of the keystone series (Avent 1975, 4), which lies in the late 6th and early 7th century (Brugmann 1997, 39-41; Geake 1997, 33). The Saltwood brooch was accompanied by a garnet and gold pendant necklace, as are the plated disc brooches from Teynham and Chartham Down, and may be ascribed to the 7th century (Geake 1997, 40). At least five plated brooches, including Class 1 examples from Sibertswold-Barfreston and Upchurch-Otterham Creek, were found with amethysts, which suggests that some brooches were still in use after AD 650 (Brugmann 2004, 58, 70-1). This would mean they were contemporary with composite disc brooches, which would explain the corrugated collar around the rim of the Saltwood brooch.

This is clearly a prestige brooch and comes from the best equipped woman's grave in the cemetery. It may have fastened a lightweight linen mantle (see Walton Rogers 2006).

3 BRACELET

by Penelope Walton Rogers

A bracelet (*ON 1194*) was found in the region of the waist in Central cemetery grave C1210 (Fig. 161). It is made from sturdy copper-alloy (leaded gunmetal) wire, 2 mm in diameter, and it is the expandable type, where the coiled ends of the wire slide along the shank of the bangle. As recovered, it has a small diameter, approximately 45 mm, and the poorly preserved skeletal remains indicate a child aged 8 to 18.

Bracelets were not especially popular among the Anglo-Saxons, but the simple sliding-wire bangle is the most common type and current from the 5th to the 7th centuries. In the Thames Valley in the 5th and early 6th centuries, bracelets were found almost exclusively with children, and elsewhere they occur more often with children than with adults – although this pattern is less in evidence in the later 6th and 7th centuries (Dickinson 1976, 200; Geake 1997, 55-6; Evison 1987, 85-6).

4 FINGER RINGS

by Penelope Walton Rogers

Fragmentary remains of finger rings were recovered from three children's graves. One is from the same burial as the bracelet (grave C1210), where it lay in the region of the pelvis (*ON 1195*); and a second (*ON 2248*) was found towards one end of the grave (C4726) of a 7-to-10-year-old from the Western cemetery (Figs. 161 and 122). A third ring (*ON 1240*), formed of a copper-alloy band with fluted decoration, came from Central cemetery grave C1387 (Fig. 177)[1]. The hand bones were not preserved in any of the graves, but the rings could be identified as finger rings from their spiral construction. The first ring (*ON 1195*) is a simple spiral coil of oval-section copper-alloy wire, 16 mm diameter, and the second (*ON 2248*), a plain flat strip of silver with tapering ends, curled into a spiral of about 20 mm diameter. The third ring (*ON 1240*) is a broad band with fluted decoration.

Spiral rings in silver and copper alloy occur throughout Anglo-Saxon England, mostly in 6th-century graves, and they seem to be solely an insular production (Down and Welch 1990, 100; Boyle *et al* 1995, 87; Timby 1996, 59; Brugmann 1997, 66; Malim and Hines 1998, 217; Drinkall and Foreman 1998, 273-4). A single example from grave 134 at Castledyke, North

[1] This ring was not seen by Penelope Walton Rogers and is described here by Ian Riddler.

Lincolnshire, was originally thought to belong to the early 7th century (Geake 1997, 56), but has since been re-dated to the 6th century (Drinkall and Foreman 1998, 272). Rings of this nature were usually worn by adult women on the left hand. On children they are rare, which suggests that the large, adult-size ring from grave C4726 was placed in the grave as a memento or keepsake.

5 WIRE NECKLACE RINGS

by Penelope Walton Rogers

Fragments of silver wire, 1.0-1.5 mm diameter, were found in association with beads in two graves from the Central cemetery, grave W1279 (*ONs 14, 19, 22 and 26*) and grave W3080 (*ONs 351-354*)(Figs. 218 and 224). Some of the fragments from grave W3080 have finer wire coiled around the shank, a feature typical of 7th century necklace rings, such as those from Harford Farm, Caistor St Edmund, Norfolk, where the thin tapered end of the wire has been worked into ornamental coils (Penn 2000, 50, Plate XVI). Grave W3080 was probably a double burial, and the position of the rings in relation to other artefacts suggests that they were originally at the neck of one of the bodies. The more extensive remains of wire from grave W1279, representing over 110 mm in length (and there are obviously some pieces missing), were from the region of the upper chest. In this group of fragments there are three tapered ends, but in the absence of any coiling, it seems likely that the wire comes from simpler forms of necklace ring.

Wire rings of different sorts had been used throughout the 6th century, but necklaces incorporating silver rings are mostly dated to the 7th century (Geake 1997, 48; Hawkes 1990). The whole necklace could be made up of rings, or they might be elements within a more elaborate string of beads and pendants (ibid.; Hyslop 1963, 173-5, 179-182, 185-6, 198-9; Penn 2000, 51). The Harford Farm type with extra decorative coils may have its origin in earlier finger rings, but incorporated into necklaces it has been recorded in grave 11 at Shudy Camps, Cambs (Lethbridge 1936, 4), grave 39 at Chamberlain's Barn II, Leighton Buzzard, Bedfordshire (Hyslop ibid., 182), and most notably in five burials at Finglesham graves 7, 62B, 138, 182, 203 (Chadwick Hawkes and Grainger 2006, 235, 254, 279, 294).

Sliding-knot wire rings in copper-alloy had an earlier and more general use, as suspension loops for a variety of objects. A copper-alloy wire ring from a male burial C6643 in the Central cemetery (*ON 2499*) (position not recorded), and another from below the necklace in grave W3080 (*ON 355*), probably belong in this broader category (Figs. 205 and 224).

6 PINS

by Penelope Walton Rogers and Ian Riddler

Pins were recovered from nine burials, six in the Central cemetery (C1138, C1261, C2401, C6423, C6516 and W1279), two in the Western cemetery (C4597 and C4684) and one in the Eastern cemetery (W1490)(Figs. 56, 110, 116, 149, 170, 183, 195, 197 and 218). Some of the burials in the Central cemetery were mostly identified as female from the other accessories (graves C1138, C1261, W1279, C2401), but graves C6423 and C6516, alongside graves C4597 and C4684 from the Western cemetery and grave W1490 from the Eastern cemetery, had no gender-specific grave goods. The iron pins from graves C1261 (*ON 1167*), C2401 (*ON 1479*) and C6516 (*ON 2506*) and the copper-alloy pin from grave W1279 (*ON 27*)[2] are short, under 80 mm long, and this, together with their simple globular and disc heads suggests a late 6th- or 7th-century date (Walton Rogers in press). This would accord with the phases ascribed to the graves, which are phases 3b-4 for C1261, 4b-6 for C2401 and C6516, and 5-6 for W1279. A fragment of a copper-alloy pin with a flat, perforated oval head (*ON 2428*) from Central cemetery grave C6423 (Phase 5-6), a fragment of thin copper-alloy shank with two zones of encircling grooves (ON 1115) from Central cemetery grave C1138 (Phase 4-5) and fragments of a thin iron shank (ON 2135/2139) from Western cemetery grave C4597 (Phase 4) probably belong in the same category. Only two iron pins with a loop or crook head (*ON 2163* from Western cemetery grave C4684 (Phase 2-3) and *ON 270* from Eastern cemetery grave 1490 (Phase 2-3)) are over 80 mm long and of the longer Migration Period type.

7 PENDANTS AND PENDANT NECKLACES

by Penelope Walton Rogers

Necklaces incorporating glass and gemstone pendants are a feature of high-status women's graves of the 7th century. There are two examples from Saltwood, one from Western cemetery grave C4699 which includes a large intaglio carved with Christian symbols, and the other from Central cemetery grave C6421. In addition, a child's grave, Central cemetery grave C6416, has yielded a small blue glass intaglio mounted as a single pendant and suspended from a leather thong.

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[2] These pins were not seen by Penelope Walton Rogers

7.1 The pendant necklaces from Graves C4699 and C6421

Remains of three pendants were found in the region of the upper chest of the body in grave C4699, along with four beads, two of amethyst and three of glass (described below). The arrangement of these items in a closed circle implies that the necklace had been placed on the woman's chest, rather than hung around the neck. The pendants consist of a circular cabochon garnet with a domed profile set in a silver frame with a notched inner edge (*ON 2177*); remains of a cabochon garnet, probably originally pear-shaped, with a gold foil backing and a chamfered silver frame (*ON 2173*); and a large yellowish brown glass intaglio with remains of a silver backing, (*ON 2174*), discussed further below (Fig. 119 and pl. 11).

The necklace in grave C6421 lay in a crossways band immediately below the plated disc brooch, in what was probably the region of the upper chest (Fig. 192). The pendants are set with flat-cut stones and include a drop-shaped garnet with a gold foil backing, in a gold mount (*ON 2411*); a pear-shaped garnet in a silver setting (*ON 2430.1*); fragments of garnet and glass and pieces of silver frame (*ONs 2430.2* and *2430.4*), representing further pendants; an amethyst bead (*ON 2430.3*); and a gold coin pendant discussed separately below (*ON 2412*).

Glass and garnet pendants in a variety of simple shapes, mounted in gold, silver and copper-alloy, are found throughout the area of Anglo-Saxon occupation in graves dated to the 7th century (Geake 1997, 39-40, 211). They are arranged in neatly organised symmetrical necklaces in the larger barrow burials at Desborough, Northants, and Galley Low (Brassington Moor), Derbyshire (Baldwin Brown 1915, IV, Plate 102), and the necklace from the barrow at Roundway Down, Wilts, probably belongs in the same category (Baldwin Brown 1915, III, Plate 81). In cemetery burials, however, they are more likely to appear as oddments strung together in the manner of a charm bracelet. Garnet pendants resembling those from Saltwood, with and without gold-foil backings, have been found at several other sites in Kent, in five graves at Dover Buckland (Evison 1987, 56-7), four at Barfriston, one at Sibertswold and one at Kingston (Faussett 1856, Plate IV). The most dazzling necklace comes from Sibertswold G172 where there are eight pendants of different types, and there is another from Barfriston G48 which has five pendants. These two last include a pair of amethysts, which are a common feature of pendant necklaces. The small mounds raised over both Sibertswold G172 and Barfriston G48 emphasise the status of the women buried there (Faussett ibid, 131, 143).

7.2 The glass intaglio from Grave C4699

The large yellowish brown intaglio (*ON 2174*) from grave C4699 (Fig. 119 and pl. 11a) has been engraved with the image of a woman with arms raised in prayer, *orans*, flanked by a pair of

Greek crosses. Remains of a thin silver plate adhering to the back of the gemstone indicate that the intaglio was originally in a silver setting comparable with that of the other pendants from this grave. The figure has been identified as a woman from her costume, which is made up of a full-length gown with a high, wide belt; a pallium sketched in diagonally across the skirt; a veil which covers the back half of the head; and a garment draped across the upper chest with loose ends hanging at the back, which may be a mantle, stole or the lower part of the veil. While venerable men, such as St Procopios in a late 5th-century intaglio (website of the Beazley Archive, Oxford) are on rare occasions represented in long robes with a diagonal pallium, the head-veil is only seen on women.

The figure is almost certainly the Virgin Mary, who appears in wall paintings, icons, mosaics, metalwork and textiles of the Early Medieval Mediterranean world, often in the orant posture, as here (Vassilaki 2000). Mary had been venerated since the earliest years of Christianity, but her cult became more firmly established in the latter half of the 5th century, when Greek temples were re-dedicated in her name and shrines were set up in Constantinople (Mango 2000). In most images, Mary has a nimbus (halo), which the Saltwood figure lacks, but there are two 6th-century ivories of Mary with Jesus which demonstrate that the nimbus was not always present (Vassilaki 2000, 26, 29, 266-7).

This belongs to a group of large glass intaglios which can be confidently dated to the late 5th or early 6th century (Spier in press, 93). They have a distinctive shape, being oval with thick convex sides and a flat top, and they are usually yellow or brown and over 20 mm long (the Saltwood example is 26.5 mm). They derive from smaller garnet intaglios of the same shape, which were made towards the end of the 5th century in Constantinople, and which in turn were influenced by Sasanian prototypes (ibid., 85-91). Christian images, including the Virgin Mary *orans* with a cross or crosses, are well represented in the garnet group. A similar image of a woman with arms raised, flanked by Greek crosses, appears in a smaller gemstone intaglio in a German private collection (Stupperich 1986, 241, Plate 41/5 and 41/6, catalogue no.25), although in this instance the woman wears the Byzantine pallium across the shoulders and long sash, as illustrated in the mosaics at San Vitale, Ravenna.

The glass examples come mainly from sources in the Syria-Palestine region, but others have been found in Asia Minor and six have been set in buckles and belt-sets of a type worn in both Gothic and Byzantine milieux (Spier ibid., 93). Jeffrey Spier (pers.comm.) places their manufacture and that of the Saltwood example in Constantinople itself. On the other hand, some of the more crudely cut garnet variants are considered Visigothic copies (Spier ibid., 91) and the heavy brow bone and the headband on the woman in the Saltwood intaglio suggest a Germanic

influence: these features re-appear in western work such as the Susanna Crystal, produced in Lorraine in the 9th century (Kornbluth 1995, 31-48, Figs.1-4, 1-26).

The intaglio is likely to have been re-mounted as a pendant in the 7th century. There are some individual finds of intaglios in 6th-century settings, such as the Germanic finger-ring at Snape, Suffolk (Filmer-Sankey and Pestell 2001, 7-8, 195-8), a square-headed brooch from Alveston, Warwickshire (Henig 1974, I, 196-7), a probable buckle-plate from Lyminge (ibid.) and a silver sling from Buckland II (Adams forthcoming), but by the 7th century whole gemstones and their glass imitations, whether intaglio, cameo or plain, were more commonly mounted in pendant settings. Roman intaglios in pendants have been recorded at Harford Farm G33, Norfolk (Penn 2000, 49-51), and St Martin's Canterbury (Webster and Backhouse 1991, 23-4), and there is a Byzantine example from Sibertswold G172, Kent (Henig 1974, ii 85, no.634). There is also a Byzantine or Sasanian intaglio in a finger-ring from a 7th-century grave at Alfriston G28, Sussex (ibid. ii, 36, no.231), and a garnet cameo in a pendant setting from Epsom, variously identified as Byzantine (Henig 1974 I, 197, ii, 96, no.734), Sasanian (Arrhenius 1985, 37), or Roman or Byzantine (Webster in Webster and Backhouse 1991, 54).

Pendant necklaces are a late Roman and Byzantine fashion that appeared in Lombard Italy in the second half of the 6th century and spread to Anglo-Saxon England via Francia or Frisia (Care Evans in Webster and Backhouse 1991, 29). The presence of long, pale amethyst beads probably places the necklace from grave C4699 in the third quarter or final half of the 7th century (Brugmann 2004, 40, 63). At this time there was a change in the nature of Byzantine goods reaching north-west Europe, which may mark increased East-West diplomatic activity – activity in which the Church played a vital role (Harris 2003, 71-2, 92-3, 104). There was a boom in monastic foundations, beginning in AD 670 (Blair 2005, 79-100), and in this period Hild was Abbess at Whitby (d.680) and Ethelburga at Barking. Since the 4th century, Mary, because of her virginity, had been a model for cloistered women, and early medieval *Lives* of female saints regularly draw on her story (Tsironis 2000, 27, 35). The intaglio bearing her image therefore carries many layers of reference, both to women in the early Church and to the diplomatic connections of 7th-century Kent.

7.3 The coin pendant from Grave C6421

The coin pendant from grave C6421 (*ON 2412*)(Fig. 192 and pl. 10d), is a gold solidus minted at Marseilles in the name of the emperor Maurice (AD 582-602) (Richard Abdy, The British Museum, pers.comm.), mounted with a ribbed gold suspension loop. Pierced Roman coins appear in necklaces of the 5th and 6th centuries, but post-Roman coins with ribbed or corrugated

suspension loops belong to the later 6th and 7th centuries (Evison 1987, 49-51). Unfortunately, due to pressure of time, it was not possible to analyse the purity of the gold in the loop, which can help date the mounting of the coin (Mortimer and Anheuser 1998, 248-250). The Saltwood solidus has a cross on one face, as do many mounted coins of this period, and it is possible that, like the Virgin Mary intaglio, it was worn as an intentional reference to the Christian faith (Evans 1991, 22-6).

7.4 The blue glass intaglio from Grave C6416

A blue intaglio set in a silver-alloy mount, 17 mm long (*ON 2518*), was found by the teeth of a juvenile aged 10-12 years in Central cemetery grave C6416, phase 5-6 (Fig. 191 and pl. 11b). It depicts a figure who stands with his left hand pointing down while his right clasps a short staff. The intaglio has been mounted upside down in relation to the suspension tag, which consists of two metal plates sandwiching a narrow leather strap. The form of suspension and the absence of any associated beads or necklace fittings differentiates this child's pendant from those found in adult women's graves. The intaglio has been examined by Martin Henig who provides the following report:

The intaglio is of soda lime glass, opaque, with a blue upper layer (copper having been analysed as the colorant) on a dark ground, imitating 'nicolo', an onyx with the same contrasting colours. Nicolo glass intaglios are often found on British sites but most are moulded. This is cut with a very simple standing figure. This and the uneven layering bring to mind the Alsen gems which are found in Northern Europe and normally dated to the 9th century, though as noted by Henig and MacGregor (1996, 89, pl.x) these were derived from earlier Byzantine prototypes. Although generally not quite as crude as the Saltwood intaglio, the alternatives seem to be to regard this as providing a much earlier beginning for the Alsen gem tradition or to see it as a sub-Byzantine piece, possibly made in Gaul.

8 LACE TAGS

by Ian Riddler

A pair of copper alloy lace tags lay at the feet of the skeleton in Central cemetery grave C6101 (Fig. 187). The complete tag (*ON 2392*) has a band of transverse lines at its upper end and a lateral perforation; the second tag (*ON 2393*) is fragmentary. Both tags belong to the rolled cone type, as defined by Geake (1997, 64-5). They are concentrated in graves dating to c. 650 or later, and particularly those in Kent cemeteries, including Canterbury (St. Lawrence Forstal), Cuxton,

Dover Buckland, Finglesham, Kingston and Polhill (Blackmore 2004; Hawkes 1973, 194-5). They may have been used for a variety of purposes but the set from this grave was clearly associated with the feet of the deceased and would have been used with shoes.

9 BEADS

by Sue Hirst

9.1 Introduction

A total of 868 beads of all kinds were recovered during the excavations. Of this total, only 10 beads were surface, ditch or unstratified finds, the remaining 858 beads being recovered from 36 grave contexts over the three cemetery areas (Table 1). The total number of beads includes not only those extracted by excavation staff on site, but also a number recovered during post-excavation sieving of grave fills.

Table 1: Incidence of different types of beads by cemetery

Cemetery / other	*Total no. graves*	*No. graves with beads*	*Incidence of graves with beads*	*Amethyst*	*Rock crystal*	*Amber*	*Faience*	*Mono-chrome glass*	*Poly-chrome glass*	*Copper alloy*	*Silver*	*Total no. of beads*
Central	140	15	11%	5		12	1	345	16	3	1	**383**
% total				1%		3%	0%	90%	4%	1%	0%	
Eastern	8	5	63%		1	189		51	2			**243**
% total					0%	78%		21%	1%			
Western	59	16	27%	2		103		120	6	1		**232**
% total				1%		44%		52%	3%	0%		
Central U/S									1			**1**
Settlement features						5		4				**9**
Total	**207**	**36**	**17%**	**7**	**1**	**309**	**1**	**520**	**25**	**4**	**1**	**868**
% total				1%	0%	36%	0%	60%	3%	0%	0%	

Table 1 shows that the predominant bead type for the Central cemetery is monochrome glass beads (90%), amber beads predominate in the Eastern cemetery (78%), while in the Western cemetery the numbers of amber and glass beads are fairly even. These basic differences will be shown to reflect the different date ranges of the cemeteries.

Beads were found mainly in female gender graves although several came from graves of male gender. The poor survival of human bone meant that just twelve graves with beads could be

attributed to sex, and only two of those with any certainty at all. Both of those turned out to be male graves (graves C3713 and C3885 in the Western cemetery). In the case of grave C3885, it has been argued above that this was possibly a stacked grave, with a male and female both present (Riddler and Trevarthen 2006). Grave C3713 provided only a small, fragmentary amber bead. Ten graves were sexed as possible males, all of these with grave goods of female gender; only two were identified as possible females.

There was more success in determining the age categories of burials with beads and the sample provides one infant (alongside an adult in the double grave W1810), one infant or juvenile (Central cemetery grave C1122), four juveniles (Central cemetery graves C2401 and W3083, Western cemetery grave C4726 and Eastern cemetery grave W1462), one subadult (Western cemetery grave C3755) and several graves of juveniles to subadults or adults (Central cemetery graves C1210 and C1521), or subadults to adults (Central cemetery grave C3080, Western cemetery grave C3741). Thirteen graves were those of adults, one of which (Western cemetery C3713) was a senior adult.

Strings of over 40 beads were entirely confined to the graves of adults and with just two exceptions the graves of infants, juveniles or sub-adults contained a maximum of 11 beads. 20 beads came from the juvenile to subadult grave C1210 and 26 from the juvenile to adult grave C1521.

9.2 Methodology

The beads were initially catalogued by Lorraine Mepham and Adrian Murphy, relying on the procedures and typology established for the Mucking cemeteries (Hirst 2000; Hirst and Clark in prep) and typologies published by Evison for Dover Buckland (1987, 57–82). Identifications were checked by Sue Hirst and final site type series and catalogue entries produced.

A representative bead of each type from each grave was drawn, wherever possible. Measurements for individual beads are not given in the catalogues (it is assumed that the drawing will be enough), while bead descriptions of size follow the conventions below.

Diameter:

small, ie diameter of 5mm or less;

medium, ie diameter of 6–11mm

large, ie diameter of 11mm or more

very large, ie diameter of 25mm or more

Length:

standard length, where no comment is made (ie the length is more or less the same as the diameter (probably within the range of more than 9/10ths and less than 11/10ths of the diameter);
short, where the length is distinctly less than the diameter (probably less than 9/10ths of it);
long, where the length is distinctly more than the diameter (probably more than 11/10ths of the diameter).

NB: Disc and annular forms both refer to very short beads where the length is half the diameter or less.

Final assessment of the beads included consideration of their relation to the groups of Anglo-Saxon beads recently dated by Brugmann using correspondence analysis on a sample of over 32,000 Anglo-Saxon beads (Brugmann 2004).

Glass beads

Monochrome glass beads comprise 60% of the total bead sample, but polychrome glass beads are rare (only 3%) (Table 1).

Colour

Colour descriptions are based on visual examination in artificial light and using the colour type series worked out for the Mucking beads (Hirst 2000; Hirst and Clark in prep). They are cited in colour wheel order and comprise opaque red (2.1) (about 5% of the opaque red beads were more of a reddish brown colour recorded as 2.2 on EXCEL database), opaque orange (3.1), translucent brown (4.1); opaque yellow (5.1), translucent yellow (5.2); green: opaque green (6.1); translucent pale green (6.2); blue green (pale, 6.5, blue green 6.6 and semi-translucent blue green, 6.7), blue: semi-opaque green blue (7.2); semi-translucent green blue (7.3); transparent pale blue (7.5); opaque pale blue (7.6); blue (7.7); dark blue (7.8); opaque white (8.1) or opaque blue white (8.2); colourless (as in gold-in-glass type beads (9.1).

9.3 Monochrome beads

Colour

The range of colours found in the monochrome glass beads is shown in Table 2 with yellow and green beads predominating in the Central and Western cemeteries and colourless gold-in-glass type beads, followed by dark blue in the Eastern cemetery. These predominant colours are all found in small (and hence often more numerous) bead types.

Form

The range of forms found in the monochrome glass beads is based on the type series worked out for Mucking (above) and is shown in Figure 235. The predominant bead forms for the Central and Western cemeteries are small globular beads and small drawn and crimped beads (Fig. 235, types B1 and M1–M2; Table 5). In the smaller sample of beads from the Eastern cemetery gold-in-glass type drawn and crimped beads predominate (Fig 235, N1–N5), followed by annular and cylinder, and other small drawn beads.

Brugmann noted that Kent seems to be the only Anglo-Saxon region in which drawn beads were reintroduced in the 7th century on a large scale (Brugmann 2004, 75) and the small drawn and crimped beads in pale green or pale yellow glass (Fig 235, type M1) are examples of these (see also for example Brugmann 2004, fig 86; Brugmann forthcoming).

Dating

Datable monochrome glass beads found at Saltwood include a small number of earlier types of the later 5th and 6th centuries and a slightly larger group of late 6th- to 7th-century types. Other monochrome bead types cannot be closely dated.

Gold-in-glass type beads

Amongst the early types are the gold-in-glass type beads (Fig. 235, type N1–N5). True gold-in-glass type beads are drawn and crimped segmented globular beads, distinguished from other drawn globular beads (eg Fig 235, type M1–M3) in having a second layer of colourless glass applied over the basic blown and drawn tube, with evidence of gold or silver metal foil enclosed between the layers of glass. The earliest gold examples are Ptolemaic, while silver ones appear in the Roman period (Boon 1966; 1977). Brugmann's analysis of Anglo-Saxon beads suggests that they mainly occur in Anglo-Saxon graves of the late 5th and 6th century but there are a few earlier examples in late Roman/early Anglo-Saxon contexts (type ConSeg in Brugmann 2004, 30, 75). The occurrence of imitation gold-in-glass type beads in Anglo-Saxon graves complicates their identification. Two types of imitation beads, where no metal is enclosed, occurred at Mucking: one where bubbles give a metal-like appearance and another, where the outer layer of glass is yellow-tinged to give a gold-like appearance (Bayley in Hirst and Clark in prep). XRF analysis can be used to confirm the presence of gold or silver in these beads.

Visual examination alone suggests that there were 25 probably true gold-in-glass type beads from Saltwood, occurring in three graves in the Eastern cemetery (W1453 with 18 beads, W1462 and W1762) and one (C3762) in the Central cemetery (Figs 52-3, 54, 61 and 83).

Drawn and crimped cylinders

Drawn and crimped cylinders in blue glass (Fig. 235, type L2) are mainly found on the Continent but also occur in Anglo-Saxon graves in small numbers and were dated by Brugmann to the late 5th–late 6th century (Brugmann's type ConCyl, 2004, 37, 75). Five of the six examples from Saltwood are found in Eastern cemetery grave W1453, along with the majority of the gold-in-glass bead types, and one from Western cemetery grave C4643 (Figs. 52-3 and 107).

Blue annular beads

Very few of the blue annular beads (Fig. 235, A2) so characteristic of later 5th- and earlier 6th-century Anglo-Saxon bead strings outside Kent were found at Saltwood (Brugmann 2004, type Blue, 74). Only ten examples were found: three from the Central cemetery (graves C1110 and C1210) and seven from the Eastern (grave W1453 with six examples, and W1762). The examples from the Central cemetery were found with much later bead types (Figs 52-3, 61, 146 and 161).

Blue melon beads

Probably 6th-century imports are the blue melon beads (Fig. 235, type F1) (Brugmann type Melon Bl, 2004, 37, 76). The two examples from Saltwood were from Central cemetery grave W1122 and one from ditch 1024 (Fig. 216).

Round and pentagonal section cylinder beads

These cylinder beads, defined by the marked angle between the flat marvered body and their flat perforated ends, occur in opaque white, yellow, red and blue glass, and date to the second half of the 6th and the first half of the 7th century (Brugmann types CylRound and CylPen, 2004, 39, 75). At Saltwood there are four examples of the pentagonal form (Fig. 235, type K2) from the Central cemetery: two in blue-green (a colour not recorded by Brugmann) from grave C1110, and one opaque white and one opaque yellow from grave C1210, in both cases found with other late 6th- to 7th-century beads (Figs. 146 and 161). The circular section cylinders (Fig. 235, G1) must be distinguished from the later spirally wound, unmarvered irregular beads (type E1, below); they also occur in segmented form (Fig. 235, G2). Twenty four such beads were found (including eight type G2) in opaque red, yellow and white; most came from the Central cemetery (graves C1110,

C1138, C1210, C1216, C6524, W3083) and one grave (C4692) from the Western cemetery (Figs. 118, 146, 149, 161, 163, 199 and 225).

Small yellow globular beads

Although only one segmented example was found in grave C3885 in the Western cemetery (Figs.93 and 235, B2), the 128 single small opaque yellow globular beads (Fig. 235, B1 small) probably also belong to Brugman's SegGlob type, dated to the late 6th to first half of the 7th century and with their main distribution on the Continent (Brugmann 2004, 75). They formed a major component of the bead strings in Central cemetery graves C1138, C1216, C1521 and Western cemetery C4659 (Figs. 112, 149, 163 and 182).

Late types of drawn globular beads

Brugmann notes a distinct type of drawn globular bead, similar to gold-in-glass type beads (her ConSeg) but in pale green and without metal inclusions, which are found mostly in Kent in the late 6th and 7th centuries (Brugmann, 2004 #1666, 75; she did not distinguish this type in her study). At Saltwood there were 41 of these beads from Central cemetery graves C1138, C1216, C1521, C6524, Western cemetery graves C3885, C4659 and C4692, and Eastern cemetery grave W1634 (Figs. 59, 93, 112, 118, 149, 163, 182 and 199). Two pale yellow examples of this type, found with these beads in Western cemetery graves C3885 and C4659, cannot be distinguished from earlier possible imitation gold-in-glass type beads (above).

Another possibly late type of drawn bead is represented by the 125 blue green small drawn segmented beads (Fig. 235, M1b, M2b, M3b) mostly found associated with the opaque yellow globular beads (above), which are dated to the late 6th to first half of the 7th century.

Opaque orange beads

Beads in this colour have a curious matt texture and are usually biconical or, as in this case, barrel-shaped (Fig. 235, D1). They are more common in Kent than elsewhere in England and most common on the Continent. Brugmann, like others, dates them to the 7th century (Brugmann 2004, 75). Three such beads were found in Central cemetery graves C1110 and C2401 (Figs. 146 and 183).

Unmarvered spirally wound beads

Beads of this type may be roughly cylindrical, barrel-shaped, or biconical but all are somewhat irregular and with the spiral winding visible at the ends or sometimes on the sides, ie they are not

carefully marvered (Fig. 235, E1). Brugmann's type WoundSp, medium-sized beads occur in opaque green, red, white, yellow or green blue and are dated to the period after *c* AD 650 (Brugmann 2004, 76). At Saltwood 27 such beads occur in opaque red, green, blue green, green blue and white, and come from Central cemetery graves C1210, C2401, C6524, W1279, W3080 and W3083, and Western cemetery grave C4699 (Figs. 119, 161, 183, 199, 218, 224 and 225).

Table 2: Incidence of colours in monochrome glass beads by cemetery

Cemetery	*Op red*	*Op orange*	*Brown*	*Op yellow*	*Yellow*	*Greens*						*Blues*						*Op white*		*Colour-less*	
	2.1	**3.1**	**4.1**	**5.1**	**5.2**	**6.1**	**6.2**	**6.5**	**6.6**	**6.7**	**6.8**	**7.2**	**7.3**	**7.5**	**7.6**	**7.7**	**7.8**	**8.1**	**8.2**	**9.1**	**Total**
Central	25	3		124		9	28	93		28		3	4				9	13	6		345
	7%	1%	0%	36%	0%	3%	8%	27%	0%	8%	0%	1%	1%	0%	0%	0%	3%	4%	2%	0%	
Eastern	1		1	1		1	5										19			23	51
	2%	0%	2%	2%	0%	2%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	37%	0%	0%	45%	
Western	13			24	2	3	8		1	32	1	8		1	1	7	6	1	10	2	120
	11%	0%	0%	20%	2%	3%	7%	0%	1%	27%	1%	7%	0%	1%	1%	6%	5%	1%	8%	2%	
Non-grave	1			2													1				4
Total	**40**	**3**	**1**	**151**	**2**	**13**	**41**	**93**	**1**	**60**	**1**	**11**	**4**	**1**	**1**	**7**	**35**	**14**	**16**	**25**	**520**
%	8%	1%	0%	29%	0%	3%	8%	18%	0%	12%	0%	2%	1%	0%	0%	1%	7%	3%	3%	5%	

Table 3: Incidence of monochrome glass bead forms by cemetery

	A1	**A2**	**B1**	**B2**	**C1**	**D1**	**E2**	**F1**	**G1**	**G2**	**H1**	**H2**	**K1**	**K2**	**L1**	**L2**	**M1**	**M1b**	**M2a**	**M2b**	**M3b**	**N1**	**N2**	**N3**	**N4**	**N5**	**?**	**Total**
Central		11	120			9	24	1	17	7	1		1	4	1		75	54	5	12	1						1	344
Eastern	2	9				2						1			4	5	5					14	5	2	1	1		51
Western		5	55	3	2	2	2		1						2	1	9	31	2	4				2				121
Settlement			1	1		1		1																				4
Total	2	25	176	4	2	14	26	2	18	7	1	1	1	4	7	6	89	85	7	16	1	14	5	4	1	1	1	520
	0%	5%	34%	1%	0%	3%	5%	0%	3%	1%	0%	0%	0%	1%	1%	1%	17%	16%	1%	3%	0%	3%	1%	1%	0%	0%	0%	

9.4 Polychrome beads

The range of polychrome beads types represented by the 25 polychrome beads found is shown in Fig 236, arranged from simple to complex decorative types. The low proportion of polychrome beads overall (3%) is reflected in the narrow range of types present.

Table 4: Polychrome bead types by cemetery

Cemetery	**P04**	**P07**	**P08**	**P03**	**P06**	**P01**	**P02**	**P05**	**Total**
Central	7	4	2		1	1	1		16
Eastern	2								2
Western	2		1	2				1	6
Central unstrat					1				1
Total	**11**	**4**	**3**	**2**	**2**	**1**	**1**	**1**	**25**

Type P01 – spiral decorated cylinder

The single example, from Central cemetery grave C1210 (Fig. 161), is in opaque red with an opaque white spiral. This bead is the equivalent of a Koch42 bead (Koch 1977, Farbtaf 4) and type D05 from Dover Buckland (Evison 1987, col pl III), which was found in graves 59 and 42, dated to the late 6th–early 7th and the second quarter of the 7th century respectively. Brugmann suggests such beads may be related to the Koch20 White wave and spot beads (see P07 below for yellow examples), imported into England in the second half of the 6th century (Brugmann 2004, 91) with which they are found at Dover (Brugmann 2004, fig 159) and so may similarly be imported in the later 6th century.

Type P02 – short spiral decorated bead

A single short biconical bead in blue green glass with an opaque white spiral was found in Central cemetery grave C2401 (Fig. 183). A very close parallel comes from Faversham in Kent (Brugmann 2004, fig 153). Both are examples of Brugmann's type WhSpiral, dated to the late 6th to 7th century (ibid, 80).

Type P03 – cylinder with irregular trails

Two opaque yellow cylinder beads with irregular opaque red trails were found in Western cemetery grave C3762 (Fig. 86). These are apparently examples of Brugmann's Norfolk

YellowRed (NoYR) type, which in her sample were found exclusively in Norfolk and dated to *c* AD 480–580 (Brugmann 2004, 79–80, fig 56).

Type P04 – beads with double crossing wave trails

Beads of type P04a (opaque red with narrow-crossing opaque white waves) and b (opaque white with narrow-crossing blue green or blue waves) (Fig. 236) are examples of the very common Brugmann type Koch34Wh and Koch34Bl beads, imported in large numbers to Anglo-Saxon England in the late 6th and first half of the 7th century (Brugmann 2004, 81). Nine examples were found in Central cemetery graves C1210, C1110, C1138, Eastern cemetery grave W1634 and Western cemetery grave C4692 (Figs. 59, 118, 146, 149 and 163).

The single example of a larger, shorter bead in opaque white with irregular blue wide-crossing waves may be an earlier example of this type of bead (Fig. 236, P04c). Another unusual (and therefore undated) variation on this type is the smaller bead in opaque green with opaque red narrow-crossing waves (Fig. 236, P04d).

Type P05 – bead with monochrome spots

The large pale yellow annular glass bead with three elongated white spots on the upper surface (Figs. 104 and 236, P05; Western cemetery grave C4584) is an unusual bead, possibly related to Brugmann's early Candy beads in pale coloured glass with opaque white or red decoration ((Brugmann 2004, 76), but not typical of the decoration found on these.

Type P06 – beads with bichrome spots

Two very different beads of this type were found, both quite unusual types. Bead P06a (Figs. 217 and 236; Central cemetery grave W1124) is a very large globular dark blue glass bead, with bichrome stratified spots in opaque white with smaller pale green spots in the centre. This is similar to Koch groups 5–8 (Koch 1977, farbtaf 1; Koch 1997, pl 5–6), but the combination of blue with white and green appears to be unusual (Koch type 8.5 has the same colour combination but is a much smaller bead with more spots). Koch suggests a late 6th- to early 7th-century date for these bead types (Koch 1977).

The second, unstratified bead from the Central cemetery area (P06b, Fig 236), is a medium barrel bead in colourless/milky semi-opaque glass with irregular opaque white circumferential trail overlaid with polychrome slightly protruding stratified spots in translucent dark blue, inside opaque white, inside translucent brown glass. This may be an example of a

Koch group 15.9 bead (Koch 1997, pl 6). Group 15 beads are also dated to the late 6th to early 7th century by Koch (1977).

Type P07 – beads with double crossing wave trails and spots

The three beads of type P07a, with waves and spots in the same colour, are all in opaque red with opaque yellow trails and all come from Central cemetery grave C1210 (Fig. 163). They are examples of Brugmann's Koch20Ye type, imported into England in the second half of the 6th century but with their main distribution on the Continent (Brugmann 2004, 91).

The single example P07b, an opaque white barrel bead with dark green double crossing wave trails and opaque red spots, comes from the same grave as the P07a beads and is probably of similar date. It is an example of Koch group 21.2 (1977, Farbtaf 2); the Schretzheim examples of this type came from late 6th- to early 7th-century graves (ibid).

Type P08 – millefiori mosaic beads

Three millefiori mosaic beads were found. Mosaic beads in England were dated by Brugmann to *c* AD 530–580 and are found most frequently in Kent, though their main distribution is on the Continent (Brugmann 2004, 79, fig 55). Type P08a (Figs. 114 and 236; Western cemetery grave C4677) is a large biconical dark blue bead with millefiori decoration of opaque white eyes with opaque red centres interspersed with yellow and green 'flowers', an example of Koch type M14 (Koch 1977, Farbtaf 6).

Type P08b (Figs. 214 and 236; Central cemetery grave W1112) is a large globular bead with colourless glass base overlaid with blue millefiori decorated glass round circumference with large opaque white spots with opaque red eyes and small opaque white spots surrounding, and an opaque red band top and bottom. It is an example of Koch type M20 (Koch 1977, Farbtaf 6). The fragmentary P08c (not illustrated; from the same grave as P08b) is a medium-sized barrel form bead in translucent green with opaque yellow 'flowers' and an opaque red band top and bottom; an example of Koch type M23 (ibid).

9.5 Non-glass beads

Faience

One faience melon bead was found in Central cemetery grave 3080 (Figs. 224 and 237, Q). It is usually assumed that the examples found in small numbers in Migration period cemeteries on the Continent and in England are Roman beads (produced in large numbers from the 1st century AD onwards) (Born 1975).

Amber

A total of 309 amber beads, the majority from the Eastern and Western Cemeteries, were found (Table 1) comprising 36% of the total bead sample. In the Eastern cemetery 78% of the beads were amber, while they comprised 44% of the beads from the Western cemetery and only 3% of the beads from the Central cemetery (Table 1), reflecting the different date ranges of these cemeteries. Six of the beads were irregular disc beads Fig. 237, R1a, one a fairly regular annular bead, Fig. 237, R1b, and the rest all irregular globular or barrel-shaped beads, ranging in size from small (5mm diameter or less) to large (11mm diameter or more) (Fig. 237, R3), with the majority medium sized. These beads (sometimes called 'irregular faceted' use the natural shape of the amber with minimal flattening of the perforated ends. There were none of the 5th-century 'spindle-shaped' beads found in some Anglo-Saxon graves and matched by examples from the earliest bead combination group for South Germany (Brugmann 2004, 30) but the disc beads and especially the carefully-shaped annular bead are also potentially earlier types (ibid).

Amber is generally assumed to have been imported from Baltic areas in increasing quantities from the late 5th to later 6th century, although a small amount could have come from deposits of similar Baltic amber on the east coast of Britain (Huggett 1988, 64; Hines 1994, 15–16).

9.6 Quartz beads

Rock crystal

Only one rock crystal bead was found in the Eastern cemetery, an irregular bun-shaped bead (Grave W1453) (Figs. 52-3 and 237, T1). The associated glass beads were of 6th-century types. In general rock crystal beads are most common in the first half of the 6th century (Dickinson 1976, 206–7).

Amethyst

A total of seven amethyst beads were found, two from the Western Cemetery and five from the Central. Koch distinguished between small almond-shaped beads, mostly of strongly purple coloured amethyst, which were imported into Alamannic and Frankish regions from the last third of the 6th century, and longer paler coloured beads imported in the mid 7th century (Koch 1987, 346; Brugmann 2004, 40). Brugmann suggests that the smaller earlier beads are rarely found in Anglo-Saxon England (ibid, 63). Two of the seven beads found might be of the earlier type (grave C1110, ON 850, 856/3); both are 15mm long (Fig 237, U1). The other beads of the later

type (Fig 237, U2), range from 17–25mm long, and were found as two further pairs of beads (graves C1138 and C4699) and a singleton (grave C6524) (Figs. 119, 149 and 199).

9.7 Metal beads and fittings

One silver bead was found in Central cemetery grave C6524: a silver disc bead; one end flat, the other with a raised narrower rim. There were also four possible examples of copper-alloy beads: Central cemetery graves W3080 (fragments only, *ON 355*), C1110 (a small cylinder of copper alloy sheet, in three pieces, *ON 835*), and C1210 (a short rolled copper-alloy cylinder bead, *ON 1193*); and Western cemetery grave C4726 (a small copper-alloy sheet metal tube, *ON 2249*) (Figs. 122, 161 and 224). In two of these graves fragments of probable silver necklace rings were also found: Central cemetery grave W3080 and Western cemetery grave C4726; the latter also had other metal fittings (below). Wire slip knot rings were most popular in the 7th and early 8th century but do occur earlier (Hyslop 1963, 191, fig 8, 9; Owen-Crocker 1986, 94–5; Geake 1997, 12, 48, table 6.1).

The three pendants in copper-alloy settings found in Western cemetery grave C4699 are discussed in the section on costume accessories above, as well as the contribution on costume (Walton Rogers 2006).

Possible triangular copper-alloy decorative triangles with rows of punched dots (*Klapperschuck*) were found in grave C6202 (*ON 2397*). A possible bead string fitting was also found in Western cemetery C4726. An iron lozenge of trapezoidal shape with rounded apices and a central, circular perforation was set between a copper-alloy ring and a larger, fragmentary iron ring (*ON 2255*) (Fig. 122).

9.8 The bead strings and their probable dating

Examination of the proportion of different bead types and their dating suggests some broad groupings of bead strings: predominantly amber bead strings, mostly probably 6th-century in date (Saltwood phases 2–3), small numbers of 6th-century glass beads, and then three distinct types of late 6th- to 7th-century bead strings (Saltwood phases 3b–7) (Table 5, bead strings groups 1–5). The Eastern cemetery contains mainly 6th-century bead strings with only one example of a late 6th- to first half of the 7th-century bead string, while the bead strings from the Western cemetery comprise both 6th-century and 7th-century types. Those from the Central cemetery, however, are mainly late 6th and 7th-century types.

Table 5: Bead strings by cemetery and predominant and dated bead types

Grave	*Amethyst*	*Rock crystal*	*Amber*	*Faience*	*Monochrome glass*	*Poychrome glass*	*Silver bead*	*?CA bead*	*Total*	*Silver necklace rings*	*Other fitting*	*Pendant*	*Bead string group*	*Predominant/datable bead types*	*Brugmann 2004 date*	*Equivalent Saltwood phase*	*Assigned Saltwood phase*
Central cemetery																	
C1261			9						9				1	amber med barrels	A2	2-3	3b - 4
W1112						2			2				2	millefiori mosaic	A2b	2-3a	4 - 6
W1122					2				2				2	MelonBl & op yellow glob	A2b	2-3a	4 - 6
W1124						1			1					Koch8.5 general type late 6/early 7	?B1-B2	3-4	3b - 4
C1138	2		2		124	3			131				3	predom sm yellow & green; also amethyst & Koch34	?B2	3b-4	4 - 5
C1216					133				133				3	pred sm yellow (?SegGlob) & green; also CylRound	?B2	3b-4	3b - 4
C1387					1				1				3	green blue bd as Gr 1216/38	(?B2)	3b-4	3b - 4
C1521					26				26				3	pred sm yellow (?SegGlob) & green	?B2	3b-4	3b - 4
C1110	2				11	1		1	14				4	predom red mixed monochrome include Orange & CylPen; also sm amethyst & Koch34Wh	B2/C	3b-4	4 - 5
C1210			1		10	8		1	19				4	mixed late polychromes Koch24, Koch34 & monochromes incl CylRound & CylPen (red, yellow, white)	B2	3b-4	3b
C6524	1				12		1		14				4	pred late monochrome CylRound white & red; also amethyst	B2/C	5-7	5 - 6

Grave	*Amethyst*	*Rock crystal*	*Amber*	*Faience*	*Monochrome glass*	*Poychrome glass*	*Silver bead*	*?CA bead*	*Total*	*Silver necklace rings*	*Other fitting*	*Pendant*	*Bead string group*	*Predominant/datable bead types*	*Brugmann 2004 date*	*Equivalent Saltwood phase*	*Assigned Saltwood phase*
C2401					8	1			9				5	pred late monochrome red & green Woundsp; also Orange & WhSpiral	C	5-7	4b - 6
W1279					13				13	frags			5	red & grn Woundsp	C	5-7	5 - 6
W3080				1	1			1	3	1			5	faience melon& turq WoundSp	C	5-7	5 - 6
W3083					4				4				5	WoundSp opaque red & white	C	5-7	5 - 6
Total	**5**	**0**	**3**	**1**	**343**	**13**	**1**	**3**	**369**								
U/S						1			1					Koch15	?B1-B2	3-4	
Eastern cemetery																	
W1453		1	161		38	1			201				1	predom amber w rock crystal, ConSeg & Blue annular	A2	2-3	2
W1462			1		1				2				1	amber & ConSeg	A2	2-3	2 - 3
W1762			25		6				31				1	predom amber w ConSeg & Blue annular	A2	2-3	2
W1810			2						2				1	2 amber	A2	2-3	2 - 3
W1634					6	1			7				3	predom pal grn drawn glob w Koch34	B2	3b-4	3b
Total		**1**	**189**		**45**	**1**			**236**								
Western cemetery																	
C3713			1						1				1	amber	A2	2-3	3 - 4
C3741			1						1				1	amber	A2	2-3	3
C3747			61						61				1	amber barrels	A2	2-3	3
C3755			2						2				1	amber	A2	2-3	2 - 3
C3762			26		11	3			40				1	amber, blue cylinders, ConSeg & NoYr	A2	2-3	3
C4643					1				1				1	ConCyl	A2	2-3	2

Grave	*Amethyst*	*Rock crystal*	*Amber*	*Faience*	*Monochrome glass*	*Poychrome glass*	*Silver bead*	*?CA bead*	*Total*	*Silver necklace rings*	*Other fitting*	*Pendant*	*Bead string group*	*Predominant/datable bead types*	*Brugmann 2004 date*	*Equivalent Saltwood phase*	*Assigned Saltwood phase*
C4726			11					1	12	1	1		1	amber & metal	A2	2-3	2
C4584						1			1					unusual light yellow/white polychrome	?A2	?1-3	5-6
C6202					1				1					pale blue translucent annular	?A2	?1-3	4-5
C4677						1			1				2	millefiori Mosaic	A2b	2-3a	3b
C3885			1		6				7				3	pale grn drawn glob, small bl grn & yellow	?B2	3b-4	3b-4a
C4659					85				85				3	pale grn drawn glob, small bl grn & yellow: also some red white & blue	?B2	3b-4	3b - 4
C4692					10	1			11				3	pale grn drawn glob, small blue, Koch34 & Woundsp	C	5-7	1b-2
C4502					3				3				5	op white & yellow med WoundSp	C	5-7	5 - 6
C4699	2				3				5			3	5	amethyst, garnet pendant, WoundSp	C	5-7	5 - 6
Total	**2**	**0**	**103**		**120**	**6**	**0**	**1**	**232**								
SFB99																	
U/S			2						2								
ditch 1566			1						1								
ditch 1023			1		3				4								
feature 922					1				1								
Total			**4**		**4**				**8**								

Predominantly amber bead strings (group 1)

There is only one string of nine amber beads in the Central cemetery (grave C1261)(Fig. 170). In the Eastern cemetery the two substantial bead strings are both predominantly amber: grave W1453 with 201 predominantly amber beads including a rock crystal bead, gold-in-glass type beads and blue glass annulars; and grave W1762 with 31 predominantly amber beads also with gold-in-glass type beads and blue annulars (Figs. 52-3 and 61). Two other graves had one amber and one gold-in-glass type bead (W1462) and two amber beads (W1810), respectively (Figs. 54 and 63).

In the Western cemetery there were three substantial predominantly amber bead strings: grave C3747 with a string of 61 amber barrel beads; grave C3762 with 40 predominantly amber beads including blue cylinders, gold-in-glass type beads and two 6th-century insular Norfolk YellowRed beads (above type P03); and grave C4726 with 10 amber beads and 1 silver bead (Figs. 79, 86 and 122). Four other graves had one or two amber beads only (Table 5).

6th-century glass beads (group 2)

Two graves from the Central cemetery (W1112 and W1122) contained just two glass beads of 6th-century types, including a blue melon bead and millefiori mosaic beads (Table 5 and Figs. 214 and 216). Both are graves assigned to phase 4 – 6, situated on the eastern side of the cemetery.

In the Western cemetery grave C4677 also had one 6th-century millefiori mosaic bead, while the single beads from graves C4584 and C6202 may also be 6th-century types (Table 5).

Predominantly small green and yellow glass bead strings (group 3)

Four substantial bead strings comprised predominantly small blue green drawn segmented beads and small yellow globular beads: Central cemetery graves C1138, C1216, C1521 and Western cemetery grave C4659. The same bead types were also found in the smaller Western cemetery string in grave C3885 and a single blue green bead in Central cemetery grave C1387. While the opaque yellow beads are probably single examples of Brugmann's SegGlob (above, Small yellow globular beads), rather than earlier types of yellow globular beads, this dating is reinforced by the presence of amethyst and Koch 34 beads in the C11138 string, suggesting a late 6th- to 7th-century date for these bead strings. A similar bead string from Buckland Dover grave 46 (colour photo in Brugmann 2004, fig 86) has similar pale green, blue green and opaque yellow beads but also contained gold-in-glass type beads (above). The string is used by Brugmann as an example of her segmented globular beads (late 6th- to early 7th-century) and presumably endorses a late

date for this bead string contra Evison, who dated this grave to her phase 1 (AD 475–525) on the basis of horizontal stratigraphy, a date in keeping with the gold-in-glass beads but not the other bead types in this string (Evison 1987, 137 and 175).

All these Saltwood bead strings also contained the small drawn globular pale green translucent beads commonly found in Kent in the late 6th and early 7th century (above, Late types of drawn globular beads). These beads were also found in two other strings: Eastern cemetery grave W1634 and Western cemetery grave C4692, both with Koch34 (type P04 above) beads and C4692 with a WoundSp (above, Unmarvered spirally wound beads), suggesting these pale green beads may have been current from the late 6th throughout the 7th century.

Predominantly red glass bead strings of late 6th- to 7th-century bead types (group 4)

Three bead strings from the Central cemetery contained monochrome beads of predominantly red mainly late 6th- to first half of the 7th-century types (round and pentagonal section cylinder beads), with Orange (above), amethyst and polychrome P04a (Koch34) beads in grave C1110, polychrome P07 and P04a (Koch20 and Koch34) in grave C1210 (25) and amethyst in grave C6524 but no exclusively late 7th-century types. These strings comprised moderate numbers of mostly medium sized beads (14, 19 and 14 beads respectively).

Bead strings with later 7th-century bead types (group 5)

Six graves contained relatively small numbers of beads (3–13) of specifically later 7th-century types – principally unmarvered spirally wound monochrome beads in opaque red, green and white glass (Fig 1, E1 and above). In Central cemetery grave C2401 these beads were accompanied by an orange bead (above) and a type P02 polychrome bead (both current throughout the 7th century). Grave W1279 contained 13 WoundSp beads in red and green and smaller numbers were found in graves W3080 and W3083. In the Western cemetery two graves also contained WoundSp beads: C4502 in opaque white and shiny yellow, and green and blue in grave C4699 along with amethyst beads and later 7th-century pendants (see costume accessories section above).

10 BUCKLES AND BELT EQUIPMENT

by Sonja Marzinzik

Buckles and belt fittings occurred within all three cemeteries. In total, there were 21 buckles with plate and 23 without. In addition, two graves contained belt studs and there were numerous fittings and fragments that may represent a buckle, buckle plate or belt fitting. The finds span the sixth to seventh centuries, possibly extending back to the late fifth century and up into the eighth. Buckles were made from both copper-alloy and iron and there were instances of gilding, probable wire-inlay and one definitive and several potential cases of garnets set on gold foil.

The spectrum of buckles encompasses types which are well-known from other Kentish cemeteries such as Dover Buckland (Evison 1987), Mill Hill Deal (Parfitt and Brugmann 1997) and Polhill (Philp 1973), to name only three sites. In addition, there are some buckle types which are rare finds for Anglo-Saxon England. The assemblage is a mix of probably locally produced buckle types and pieces which were either brought over from the Continent, mainly Francia, or which were at least produced by craftsmen who were intimately familiar with the fashions there. Plainer buckles made from iron or copper-alloy and found on most sites of Anglo-Saxon England are also present.

The Eastern cemetery produced among others two buckles with club-shaped tongue (*ONs 44* and *303*) from graves W1453 and W1762, and a buckle with rectangular tongue-shield that was associated with two belt studs (*ON 304*) in grave W1767 (Figs. 52, 61 and 62). The two former buckles are typical of the earlier sixth century and may even stretch back into the late fifth, while the latter find may date to the first half or middle of the sixth century, judging by its size and the presence of the drop shaped belt studs (Marzinzik 2003, 21f and 62f). The late buckle forms present in the other two Saltwood cemeteries do not appear here.

The Central cemetery appears to have started later, at least judging by the buckles alone. Apart from the ubiquitous iron and copper-alloy buckles, which cannot be dated closely within the early Anglo-Saxon period, there are no finds that need to have been deposited before the sixth century. On the contrary, a high proportion of the buckles are of a type characteristic of the late sixth to seventh centuries. It is likely that they extended into the eighth century, as finds from York-Fishergate, Dover Buckland graves 145 and 146 and Continental parallels suggest (Rogers 1993, 1346f; Evison 1987; Stein 1967, 7). These buckles with a high-rectangular plate with three usually knob-headed rivets arranged along the rear edge can be seen as type fossils for the 'Conversion period' (Marzinzik 2003, 51). The x-rays of three buckles of this type look particularly promising, as they show rivets with a ring-collar. A typical feature of the seventh

century, these may indicate rare, garnet set rivets, such as those on the buckle from Ford, Laverstock in Wiltshire (Musty 1969) or Harford Farm, Norfolk (Penn 2000, Fig. 86.2).

Another exciting find is *ON 1165* from grave C1261 in the Central cemetery (Fig. 170). Interpretation has to remain tentative, as the object is completely covered in textile, various accretions and corrosion products. The x-ray, however, clearly shows a buckle with plate. The loop form is, to my knowledge, only paralleled by one find from Anglo-Saxon England, a buckle from Wasperton grave 55. This buckle has been identified as a Mediterranean type with close comparative pieces from the Longobardo-Byzantine sphere (Marzinzik 2003, 47 and 85). A possibly Mediterranean provenance of the Saltwood buckle may be corroborated by the decoration in the form of an equal-armed cross on the plate.

Even more difficult to substantiate, but equally as important due to its rarity (cf. Hawkes 1981) is the possible occurrence of inlaid silver wire or silver sheets on some of the iron buckles. The x-ray of an iron buckle (*ON 900*) from grave 1132, for instance, shows some sort of cross hatching on the plate (Fig. 147). This, as well as several wire fragments visible on the x-ray suggests that this plate was wire-inlaid. Further evidence comes from the broken-off edge of the smaller plate fragment, where two gold or brass-coloured specs, possibly traces of inlaid wires, are visible. The tongue base is enlarged, probably in mushroom shape. Therefore, this buckle may be similar to the sumptuous, mainly Kentish, triangular late sixth to seventh-century buckles, which Evison interpreted as badges of authority (Evison 1988, 18ff and 50f; Marzinzik 2003, 50). Should this buckle be decorated with polychrome wire inlay, this would not only be a sensational find for Anglo-Saxon England, but also yet another link with the Frankish kingdom.

It is also worth mentioning the small iron buckle with a double tongue from grave W1101 (Fig. 213) within the Central cemetery (east of trackway 226) as a relatively late type within the seventh to eighth century (Geake 1994; 1997, 77-8).

The buckle with garnet-inset tongue base from grave 3826 (*ON 2002-2003)* is perhaps the oldest closely datable find from the Western cemetery (Fig. 91). It belongs to Wieczoreck's Code A5b, most likely to date between ca. A.D. 500 and ca. 525/35 or possibly up to 560/70 (Wieczoreck 1987, 423f). The ?silver sheet that covers the loop can be paralleled by a Swiss find with a *t.p.q.* of A.D. 536. A similar, but not as sumptuous buckle – the Saltwood buckle and its tongue still carry traces of gilding – comes from Westgarth Gardens grave 30A and is likely to have been old when it was buried (West 1988; Marzinzik 2003, 22). The Western cemetery produced a number of other 6th century pieces, for instance the shield-tongue buckles from graves C3741 and C3762 (Figs. 78 and 83). The fact that there are only two of these buckles

between the three sites is surprising, compared to their popularity at other Kentish sites. As at the Central cemetery, there were also late buckles with rivets along the rear edge of the plate.

As for the position of the buckles, it is difficult to ascertain how exactly they were worn due to the poor bone preservation on the site. It seems that in male as well as female graves they were mostly positioned at waist or hip height. In a number of graves, the buckle seems to have been associated with the sword, probably indicating a belt deposited with the scabbard (see Ager *et al* 2006). In Western cemetery grave C3944 an iron fragment (*ON 2083*), probably a buckle loop, was found at the foot end of the grave. It is, however, unlikely that the fragment represents a shoe fitting, as at 34 mm it is too large for shoe buckles or garter fittings.

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