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The Bowl Hole Early Medieval Cemetery at Bamburgh, Excavations 1998 to 1999

Sarah Groves, Philip Wood and Graeme Young
with contribution by Gail Hama

SUMMARY

This paper presents the results of a limited archaeological investigation of the Bowl Hole cemetery site adjacent to Bamburgh Castle, Northumberland. Although the existence of the site was known from antiquarian reports from the 19th century its exact location was uncertain prior to the present programme of research. The limited finds evidence and ^{14}C assays indicate a date range between the 6th to 8th centuries AD. Substantial variation was seen within the small sample of burials investigated and at least two phases of burial is proposed.

INTRODUCTION

This report details the rediscovery and initial investigation of an Anglo-Saxon cemetery, close to and potentially associated with Bamburgh Castle. The investigation was undertaken by the Bamburgh Research Project (BRP), during two short excavation periods in August 1998 and August 1999. The site was first discovered in the winter of 1817 and although it was subject to limited antiquarian investigation up to the 1930s few records exist and the precise location of the site was not recorded (Bateson 1894, 56–7). The present phase of research was intended to re-locate the site and undertake a limited excavation to provide information on its nature, date and current state of preservation. The investigation was funded by grants from the Society of Antiquaries of Newcastle Upon Tyne and by Northumberland County Council. Following on from this initial work a wider campaign of excavation and post-excavation analysis, conducted by the BRP in conjunction with the University of Durham and funded by the Arts and Humanities Research Council (AHRC) is currently ongoing.

LOCATION AND TOPOGRAPHY

The Bowl Hole burial ground is located near the village and castle of Bamburgh, within the general area of the coastal dunefields. The site lies some 300 m south-east of the castle on a natural plateau to the east of the base of a wooded spur of high ground that extends some 450 m to the south-east from the base of the castle rock (NGR NU 18673485). The plateau, which is 90 m north-west to south-east by 40 m south-west to north-east, is defined on its north and east sides by a low lying depression in the dunefield, called locally the Bowl Hole, to the south by an uneven area of dune through which a small stream finds its way to the sea and to the west by the aforementioned ridge of high ground. The subsoil that underlies the

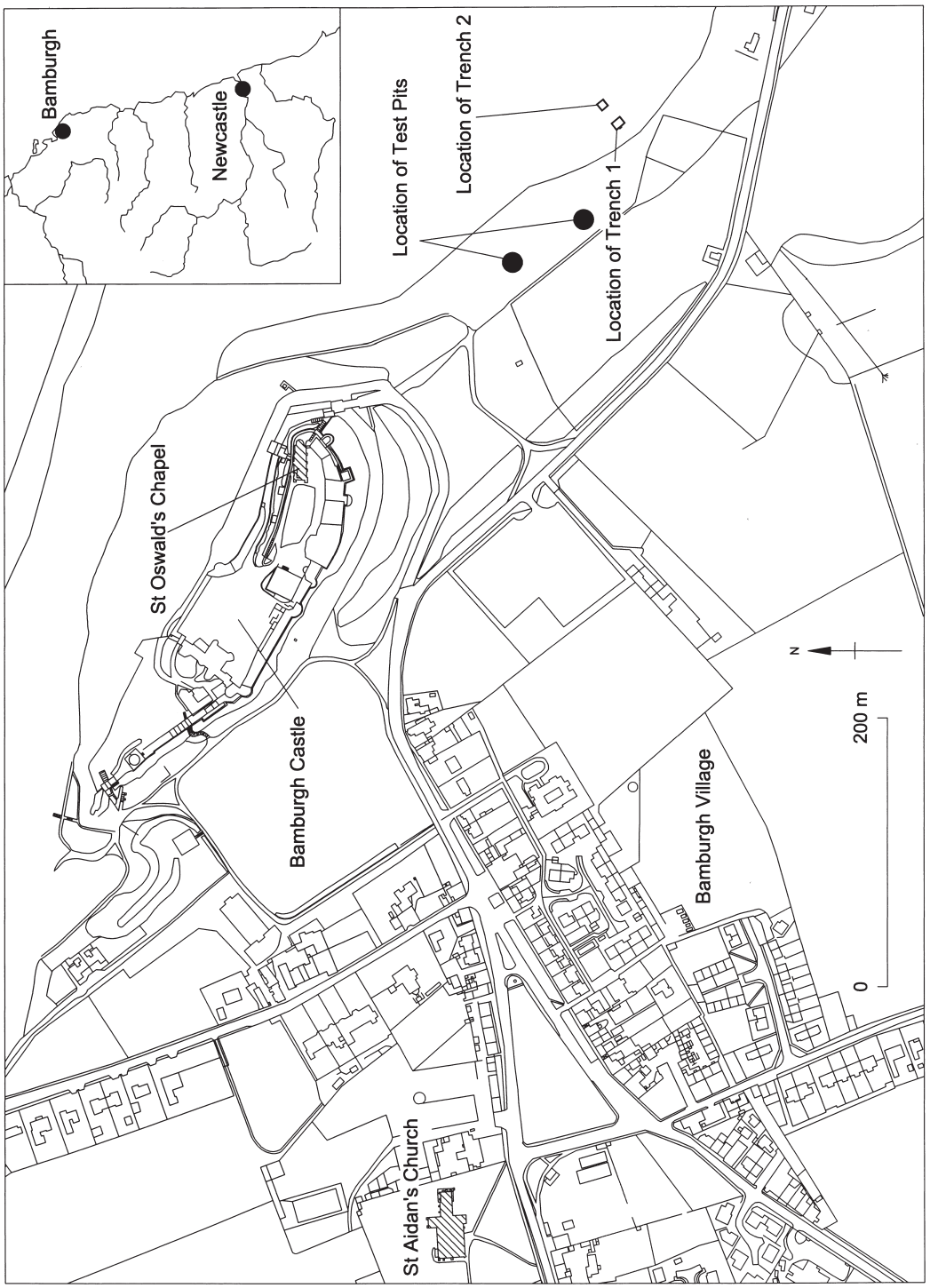

Fig. 1 Bamburgh Castle and village, showing the location of the excavation (1:5000).

site comprises a glacial boulder clay overlying sandstone. The plateau slopes very gradually downwards from south-west to north-east, from 10.65 m OD to 10.10 m OD within the site area, and lies some 15 m below the ridge and 8m above the base of the Bowl Hole depression. The cemetery lies largely under rough grass, although there is some encroachment from sycamore and other trees from the sandstone ridge. A number of small sand dunes, up to 10 m in diameter and 1 m in height, overlie the cemetery area at several points (fig. 1).

HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

Excavation within Bamburgh Castle by Dr. Brian Hope-Taylor between 1959 and 1962 and 1970 and 1974 and by the BRP since 1999, have revealed a deeply stratified, well preserved, site with evidence of occupation from the Neolithic to the modern period. Bamburgh, like Edinburgh and Dumbarton, is believed from documentary evidence, to have formed a focus to a British kingdom in the immediate post-Roman period (Morris 1980, 78). Anglo-Saxon occupation is traditionally thought to have begun at Bamburgh in the mid 6th century (Morris 1973a, 230–231) and by the beginning of the 7th century Bamburgh had become the pre-eminent centre of the Anglo-Saxon dynasty that came to dominate Northumbria (Stenton 1943, 75). Bamburgh maintained its status as a principal royal centre until the fragmentation of Northumbria during the Viking period. After which, and from at least the early 10th century, a family of hereditary 'earls' ruled what remained of Northumbria along the eastern seaboard north of the Tees until the later 11th century when they were replaced by earls of Norman origin (Simeon 1987, 142–144). Following the rebellion of earl Robert de Mowbray, in 1095, Bamburgh was taken into the direct ownership of the crown and remained a royal castle until it passed into private ownership immediately following the Union of the Crowns (Bates 1895, 48).

In his *Historia Ecclesiastica*, Bede reports that St Aidan died at a church in a royal vill (*villa regia*) near to the *urbs* of Bamburgh (Bede 1969, 262–3). Given that the church of St Aidan in the village of Bamburgh, 450 m to the west of the castle, is the only known medieval dedication to St Aidan in England it is reasonable to assume that the later medieval church preserves the focus of the Anglo-Saxon predecessor. This being the case then a royal vill or estate centre lies under the present village (Cambridge 1995, 136–8).

PREVIOUS INVESTIGATIONS AT THE BOWL HOLE

The Bowl Hole cemetery was initially discovered in 1817 following a great storm which scoured an area of the dune field away to reveal a number of burials that were described as 'formed of flagstones set on edge'. A tradition seems to have developed that the burials were those of Viking warriors as the 1st Edition Ordnance Survey map of *c.* 1860 marks an area south west of the Bowl Hole as 'Old Danish Burying Ground'. The first recorded excavation on the site appears to have taken place in 1894, after further storms, revealed 'a series of possibly medieval interments disposed at length in rough cists at a shallow depth, and two crouched burials, without grave-goods, and the remains of an infant, lying in a circle of boulders at a greater depth' (P.S.A.N. 1905, 203–4). A small quantity of human bone, together with an iron object found at the Bowl Hole, donated to the Society of Antiquaries of Newcastle in 1935 are likely to have derived from this excavation (Accession No: 1956.110. A, box 310). During his campaign of excavation at the castle in the early 1960s, Dr Hope-Taylor excavated

a number of trenches in an attempt to relocate the cemetery. He was unsuccessful, as he appears to have concentrated his efforts on the high ground above the cemetery site ignoring the cartographic evidence for the cemetery location (Hope-Taylor 1962, 5–7). The area of the burial ground appears to have been periodically susceptible to erosion, as a site inspection of the Bowl Hole depression in the late 1960s indicated that human bone had recently eroded from the surrounding ground (Northumberland Historic Environment Record 5252).

THE RE-DISCOVERY OF THE BURIAL GROUND

In the autumn of 1997 the BRP initiated a modest programme of geophysical survey and trial trenching in an endeavour to re-locate the Bowl Hole cemetery site. A small area of gradiometer survey was undertaken in the limited area of open ground between the castle car park and the wooded ridge (Barker *et al*. 1997, 96–101). The results were inconclusive with regard to the presence or absence of features of potential archaeological interest and so it was decided to excavate three trial trenches, measuring 3 m by 2 m, in an effort to provide more conclusive evidence. The first of the trial trenches was located in the area of the gradiometer survey, the second under the trees on the ridge and the third on the plateau marked on the 1st Edition Ordnance Survey as the burial ground site.

The two trial trenches on the high ground of the ridge revealed a deep accumulation of wind blown sand not bottomed at a depth of 1.2 m below ground level (fig. 1). The third trench however uncovered a grave, partly outlined with stone slabs, lying centrally within the trench and directly beneath the turf.

EXCAVATION RESULTS

The threat of erosion indicated by the 1960s inspection, and the great archaeological interest of an early burial site so close to Bamburgh Castle, made a limited archaeological evaluation of the site very desirable. The BRP undertook such an evaluation over two short excavation seasons, each of two weeks duration, during August of 1998 and 1999. During 1998 two trenches, each measuring 5 m square were excavated. Trench 1 was centred on the area of the trial trench where the grave outline had previously been identified in order to ensure that at least one burial would be present to investigate. Trench 2 was located 12 m to the north-east, extending from the break of slope towards the Bowl Hole depression, sited to investigate if erosion of the burial ground was occurring along this exposed edge (fig. 2). No burials were encountered within Trench 2 and during the 1999 excavation all effort was concentrated on Trench 1, which was expanded to measure 6 m by 8 m, in response to the complexity of the burials encountered during the previous season.

Trench 1

Turf and topsoil (100) were removed by hand and the surface cleaned back to reveal a silty sand layer (101) into which four burials, partly outlined by stone slabs, and a further seven simple graves had been cut. Six of the graves were selected for investigation as a representative sample. The spoil produced by the cleaning and that produced by all subsequent excavation was sieved to 5 mm to aid the recovery of finds and smaller bones.

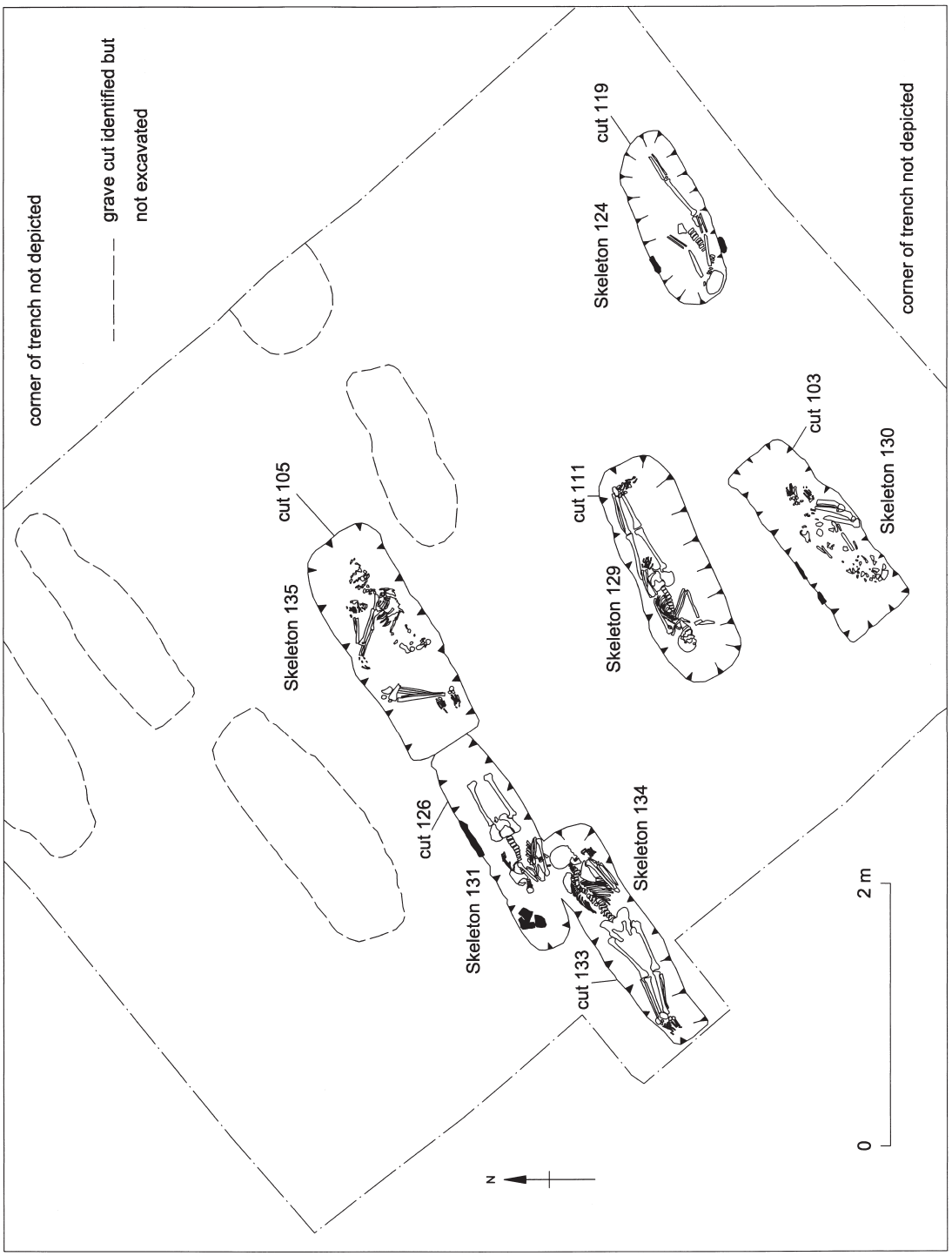

Fig. 2 Trench 1 (1:50).

Fig. 3 Graves 126 and 133, facing south-west.

Phase I

Grave 126 *(Skeleton* 99/131*)*

The grave lay immediately to the west of grave 105 and was cut by both graves 105 and 133 (fig. 3). It was aligned south-west to north-east, differing only very subtly in alignment from the later and deeper burials of Phase II in that the west end lay somewhat further to the north. It measured 1.75 m by 0.42 m and was cut 0.25 m into the subsoil. A single vertical slab of a micaceous siltstone lay along the northern edge of the grave. The fill (125) comprised a loose sand with clay lumps, from which an iron pin (SF3) was recovered. Although not closely associated with the skeleton, it may have served as a clothing or shroud pin (see below).

Skeleton 99/131 lay in a supine position, the head originally to the west, and with the right arm folded across the chest. The left arm was disturbed with the scapula and humerus inverted over the upper left chest. The lower left arm and left clavicle were not present. Grave 105 had completely removed the lower legs and feet. The tibia and fibula of both legs apparently drawn out from the grave when exposed as the overlap between the two burials did not appear to have been great. The head was not present; the reason for this is uncertain. The shallow depth of the burial and the presence of a probable pillow stone, make it plausible that the skull had at some point been revealed through erosion and could have been removed by persons unknown. However, the absence of the first cervical vertebra (the atlas), the mandible and the lack of any fragments of the skull would suggest that it is more likely that the head was removed while the skeleton was still articulated. Aside from the missing elements detailed above, the skeleton was very well preserved and represent the remains of a young probable male of between 18 and 24 years of age, whose stature has been estimated, from the complete right femur, as *c.* 159 cm.

The initial examination of this skeleton by Dr Langston identified a detached neural arch (spondylolysis) of the fourth lumbar vertebra and sacralisation of the fifth lumbar vertebra. Re-examination by Groves as part of the AHRC project identified several other conditions. Os acromiale was present in the right scapula and Schmorl's nodes were present in several vertebrae, possibly indicating that this individual had a physically active lifestyle. A well-healed rib fracture was present on the right side. Most interestingly, a series of sharp-force traumatic lesions extending down the left side of the body, from the shoulder to the knee; the left humerus, scapula, ribs, pelvis and femur were all affected. These injuries have straight edges, no evidence of crushing and very polished surfaces, suggesting that they were inflicted by a very sharp, straight-edged weapon, possibly a sword or large axe. The location of the injuries indicates that they are likely to have been caused by a right-handed attacker who was probably facing the victim. There is no evidence for healing, and together with the location of these injuries it is most likely that they were the cause of death of this individual. The discovery of these traumatic injuries supports the possibility that this individual may also have been decapitated.

Grave 111 *(Skeleton* 99/129*)*

The grave lay 1.5 m to the south of the stratified burial group (105, 126 and 133). It displayed the same alignment as grave 126 that contained skeleton 131 and measured 1.72 m by 0.60 m and was 0.42 m deep. A simple cut grave with no evidence for the use of stone slabs to demark its edges, it contained a firm silt-clay fill (106). A concentration of human bone (109) was encountered within a centrally located, sub-circular cut (107), 0.4 m across, excavated into the surface of the grave fill, indicating a deliberate act of re-deposition. The remains comprised at least one juvenile aged *c.* 7–8 years while a second juvenile aged *c.* 3–4 years was represented by material recovered from the general grave fill indicating the re-deposition of a second individual, or at least of the bones identified during excavation.

Skeleton 99/129 lay in a supine position, with the head to the south-west. A single AMS radiocarbon date from a long bone gave a calibrated date range of A.D. 640–730 at two sigma (77% certainty) (Table 1). The right arm was folded over the chest while the left lay straight. Two pieces of animal bone, part of a cow rib and a piece of the lower jaw of a sheep or goat, lay over the right shoulder of the body (SF8 and SF9). Preservation of the skeleton was

moderate with 90% of the bones surviving, with little abrasion and represented an adult male, aged approximately 30 to 40 years. Stature was estimated using the complete femorae and tibiae which gave a height between 168 and 170 cm. The skeleton showed a probable healed soft tissue injury on the upper right arm, and some slight degeneration of the joints of the hand and the left shoulder. Small areas of periosteal woven bone were present on the long bones of the upper and lower limbs, possibly due to low-level infection or systemic disease that was active at the time of death. Caries, calculus and abcesses were present in the dentition, particularly in the mandible.

Grave 119 *(Skeleton* 99/124*)*

The grave lay approximately 1 m to the east of graves 103 and 111 aligned similarly with cut 111. It measured 1.42 m by 0.50 m, was 0.31 m deep and contained a firm clay-silt (118). Two small pieces (each 0.15 m by 0.1 m) of vertically set stone slab lay on the north and south sides of the cut

The body was on its left side and lay along the south side of the cut rather than centrally within the grave. Two pieces of animal bone (a cow foot bone and part of a sheep or goat rib) were positioned in the grave to the north of the head (SF3 and SF4). The human remains were that of a child, between approximately 8.5 and 10 years of age. Approximately 70% of the skeleton was present but preservation was poor and many elements were abraded. While some deciduous teeth remained, several permanent teeth had erupted or were in the process of forming. Carious lesions were present on both the deciduous and permanent teeth.

Phase II

Grave 105 *(Skeleton* 99/135*)*

The grave, which was originally seen in the trial trench, was oriented approximately east to west, measuring 1.9 m by 0.78 m and was 0.67 m deep. Two vertical stone slabs lay at the south-west corner of the cut, while a third, disturbed slab was encountered within the fill at the south-east corner. All three fragments were composed of the dark grey micaceous siltstone seen elsewhere and were disturbed during the excavation of the grave. The fill (104) was a mix of firm clay-silt and loose sand containing fragments of both animal and human bone. In this instance, in contrast to grave 111, the human bone was distributed within the fill and therefore likely to represent disturbance rather than re-deposition of a pre-existing burial. The grave was also seen to cut grave 126 to the west.

The body lay in a crouched position, on its right side with the head to the east (fig. 4). The remains were of an adult, possibly female, although the sex remains uncertain as no diagnostic pelvic or skull fragments survived. Preservation was poor, with only 40% of the skeleton remaining, and the bones that were present were fragmentary and abraded. The individual was probably over 40 years of age, although the preservation of the skeleton prevented more precise ageing. Stature was estimated using the left tibia, which gave a height of 170.3 cm if female and 172.7 cm if male. Some of the teeth had been lost during life and calculus was present on all of the remaining teeth. There was severe degeneration of the joints, indicating advanced osteoarthritis. Eburnation was present in both knees, the right shoulder, both hands and wrists and in the articular facets of the lower thoracic and lumbar vertebrae. Periosteal bone reaction was present on the distal right femur, both tibiae and fibulae; this may have been due to inflammation caused by a long-term, low-grade infection.

Fig. 4 Grave 105, facing north-west.

Grave 133 (Skeleton 99/134)

This grave lay immediately south-west of grave cut 126, which it marginally cut into. It extended beyond the limit of excavation to the west, necessitating a small extension to the trench to allow the full burial to be exposed and excavated (fig. 3). It was oriented roughly north-east to south-west, measured 1.95 m by 0.44 m and was only 0.17 m deep and contained a loose clayish sand fill (132).

The body lay in a prone position, with the head to the north-east. A single AMS radiocarbon date from a long bone gave a calibrated date range of A.D. 650–780 at two sigma (93.8% certainty) (Table 1). The arms were folded under the chest, with both hands under the head. The remains were of a young adult male, aged between 25 and 35 years of age. The skeletal remains were in good condition, with 95% of the skeleton surviving and little abrasion to the bones. Stature was estimated using complete femorae and tibiae and gave a height range of 168 to 171 cm. As with the other individuals examined this individual suffered from dental disease, with both caries and calculus present in the dentition, although Sk 99/134 was less severely affected than the other adults. Cribra orbitalia was present which may indicate nutritional stress, particularly anaemia (Stuart-Macadam, 1991; Lewis, 2000, 39–57). Bone cysts were identified in the right calcaneus (heel) and in the left scaphoid (wrist). These lesions are usually benign and may not have caused any symptoms. The cause of these lesions is uncertain but they may be associated with trauma, rheumatoid and osteoarthritis or gout. Trauma is a common cause of cyst-like lesions in the scaphoid (Rennie and Findlay, 2003). The

Fig. 5 Grave cut 103, facing south-west.

right tibia and fibula showed evidence of trauma, which had caused a pseudarthrosis between the proximal tibia and fibula, perhaps as the result of a fall which twisted the knee. A well healed fracture to the right second rib shaft was also identified. It is possible that there were minor degenerative changes to the vertebrae; Schmorl's nodes in the mid thoracic vertebrae and osteophytes on the lumbar vertebrae.

Grave 103 *(Skeleton* 99/130*)*

The grave lay 0.5 m to the south of grave 111 and was oriented in align with grave cuts 105 and 133 (fig. 5). It measured 1.55 m by 0.62 m and was 0.5 m deep with three vertical stone slabs present, partially lining the north-west, south-east and south-west sides of the grave.

The fill (102) of the grave consisted of a firm clay-silt with some sand, and contained a quantity of disarticulated human bone, including bones from a juvenile aged between 3–4 years, which were concentrated in the south-east corner of the grave. The presence of these disarticulated bones, as with the previous examples, may indicate that the grave was originally used for the burial of the juvenile and re-used at a later date for the adult, sk 99/130[Sarah Gro1]. However the damage to the lower legs of sk 99/130 could be consistent with excavation into the grave to allow for the burial of the disarticulated remains, allowing the intriguing possibility that the remains of the juvenile were moved from elsewhere in order to accompany the adult.

The body of the adult lay in a tightly crouched position, on its left side, with the head to the south-west. A single AMS radiocarbon date from a long bone gave a calibrated date range of A.D. 560–670 at two sigma (94.5% certainty) (Table 1). The burial was accompanied by an iron buckle (SF6) and by a near complete iron knife 120 mm in length (SF5), both positioned at the waist, implying that they were being worn at the time of burial (see below). A second fragment of iron blade (SF1) was found within the fill, but not obviously associated with the skeleton. The highly contracted position of the skeleton may indicate that the body was tied or tightly shrouded for burial. The remains were that of a robust adult male over 40 years of age at death. Preservation was moderate with approximately 50% of the skeleton surviving. The dentition was poorly preserved but showed considerable dental disease; several teeth had been lost during life and caries, calculus and abscesses were all observed. Osteoarthritic changes were present throughout the skeleton. Osteophytes were present on the medial condyle of the right femur, and on the margins of both patellae, the majority of bones from the right foot and on the margins of the left acetabulum. Eburnation was present on the first metatarsal head and on the articular facets of the fifth lumbar and first sacral vertebrae. These changes, together with the robustness of the skeleton and rugged and well-defined muscle markers suggest that this individual may have led a physically active life.

Trench 2

As previously described the trench was excavated 12 m east of Trench 1, on the upper part of the slope down to the Bowl Hole depression. Removal of turf and topsoil (200) revealed a natural subsoil of a stony pink, sandy clay (201). The remains of a shallow palaeochannel (203) ran east to west through the centre of the trench (down slope), filled with a sandy material (202). Despite intensive cleaning of the exposed subsoil, no grave cuts were found.

PALAEOPATHOLOGICAL ANALYSIS

Dr Sarah Groves

The following is a summary of the full palaeopathological analysis, which is retained in the excavation archive. It is based upon analysis of the skeletal remains carried out by Dr Joy Langston in 1998 and 1999, with further reinterpretation by Dr Sarah Groves undertaken as part of a currently ongoing research project on the Bowl Hole burial ground, 'The Bamburgh Bowl Hole Anglian cemetery: a contextual study', being jointly undertaken by the BRP and the University of Durham and supported by the AHRC, which will be published in 2010.

The human skeletal assemblage from the Bowl Hole represents a valuable resource for understanding health, diet and lifestyle in early medieval Northumberland and its

association with a known early medieval historical site serves to further enhance its value. Some characteristics appear to be common across the assemblage, such as the high prevalence of dental disease among all individuals for which dentitions were present. Evidence for degenerative disease of the spine and appendicular joints was seen in several of the adult individuals, particularly the older adults, sk 99/130 and sk 99/135. While advancing age is the major factor for the development of these conditions, the presence of degenerative changes in the joints of younger individuals such as sk 99/129, and the traumatic injuries sustained by sk 99/134 and sk 99/129 suggest that life for these people was physically demanding. Of particular interest in this small skeletal assemblage are the traumatic injuries suffered by the young adult male, sk 99/131. Cases of weapon trauma are relatively rare in Early Medieval skeletal assemblages, (Härke, 1992, 149–165), so the presence of this individual in the Bowl Hole cemetery is noteworthy. The presence of os acromiale, Schmorl's nodes and a healed rib fracture suggest that this young man may have been physically active from a young age, perhaps even training to be a warrior from his early adolescence. The excellent preservation of the skeleton may permit a reconstruction of the blow or blows, which were inflicted upon this individual, and the type of weapon that caused the injuries.

In addition to the pathological skeletal changes observed, a variety of non-metric traits were identified in the skeletal material. These traits are variations upon normal skeletal anatomy and, on the whole, would not have affected the health or quality of life of the individual. Although the precise cause of these traits is uncertain, some may be inherited and hence may offer the potential to identify related individuals within a population (Molto, 2001, 81–100), although the heritability of non-metric traits is currently poorly understood (Tyrrell, 2000, 289–306).

The skeletal non-metric traits are listed below:

Sk 99/130: Left acetabular crease, left patella bipartite, right patella vastus notch. Bilateral double inferior talar articulation.

Sk 99/135: Right septal aperture of the humerus, bilateral patella vastus notch, right medial talar facet present. Bilateral double inferior talar articulation. Defects in left proximal first metatarsal.

Sk 99/129: Bilateral lambdoid bones, right pareital foramen. Bilateral patella vastus notch, left acetabular crease.

Sk99/134: Six sacral vertebrae, reduced third molars with abnormal crown formation.

Although this is only a small sample, the presence of an acetabular crease in two individuals (sk 99/130 and sk 99/129), and vastus notch of the patella in three individuals (sk 99/130, sk 99/135 and sk 99/129) suggests that these individuals may have been related to each other.

Table 1 Radiocarbon dates from skeletal long bones.

Lab. ref.	Skeleton no.	^{14}C date (BP)	2 sigma calibration
OxA-9432	99/129	1337+/-35	AD 640–730 (77.0%)
			AD 740– 780 (18.4%)
OxA-9433	99/130	1424+/-33	AD 560–670 (95.4%)
SUERC-10813	99/134	1290+/-35	AD 650–780 (93.8%)
			AD 790–810 (1.6%)

RECOVERED FINDS

Gail Hama

The following is a summary of the recovered finds report, which is retained in the excavation archive. Five iron objects were recovered from the excavation, of which two were certainly grave goods, accompanying an adult man (skeleton 130). These were an almost complete knife (BH99 RF 5) and an iron buckle (BH99 RF 6). A buckled waist-belt was common for both men and women in the 6th and 7th century, and in burial contexts they are usually associated with a knife which would either be tucked into the belt or worn suspended from it. The shape and size of the buckle suggests a 7th century date, the knife found with it supports this date. Knives are one of the most common artefact types in Anglo-Saxon graves and their length and form have frequently been used as a chronological indicator in continental graves (Böhner 1958, 215–25, *Taf*. 60). Although the transfer of this dating to England seems dubious without independent corroboration (Hirst 1985, 89) there was found to be a correspondence between some knife types and date-ranges at Buckland, Dover and the Trier region (Evison 1987, 115). The knife accompanying skeleton 130, with its curved back and straight cutting edge, is one of these types being an Evison Type 4 (Type D at Castledyke South, Barton-on-Humber, Drinkall 1998, 279–283). At Buckland and Castledyke these dated to the 7th century.

The remaining three were less closely associated with the skeletons. Part of a blade (BH99 SF1) was also found in the grave of skeleton 130, but may have incorporated into the fill from another (disturbed) grave. This is too poorly preserved to determine the form of the blade and cannot be securely dated. The pin (BH99 SF2) was recovered from the grave of skeleton 131. The body lay almost directly below the turf and the object did not lie close to the skeleton, but it might have functioned as a clothing or shroud pin. Pins are usually found in the neck or chest area with larger examples, such as this one, being used to secure cloaks. Again they are found in graves dating to between the 6th and 8th century (Ross 1998, 270). A possible fragment of an iron buckle frame came from context 114 (BH 99 RF 7). Although not from a secure burial context it could have derived from a grave.

A number of small fragments of animal bone were found in close proximity to skeletons 124 and 129. These together with the metal small finds will be fully reported on in as part of the AHRB funded project.

DISCUSSION

The initial investigation of the Bowl Hole burial ground at Bamburgh has answered several key questions concerning this important site. Firstly, and obviously, it has relocated the cemetery, confirming its position at the 'Old Danish Burying Ground' of the early maps. In addition we now have a better understanding of bone and artefact preservation as well as the stability and present condition of the site. Three radiocarbon dates and the evidence from the few artefacts gives a consistent date range to at least the immediate area of the cemetery investigated by Trench 1. Finally this limited evaluation has indicated that the cemetery site is one of great interest prompting a wider study which it is hoped will greatly advance the present state of knowledge regarding the early medieval population of Northumberland.

The investigation suggests that the erosion of the site, assumed from the presence of human bone in the Bowl Hole depression, noted in the 1960s, is no longer an active threat. Trench 2 located no eroding burials on the slope down to the Bowl Hole and the burials

encountered on the plateau in Trench 1, although shallow, were stable beneath a resilient turf layer, and in some cases buried to a substantial depth. The scope of the present evaluation was too limited to provide unambiguous information regarding the extent of the cemetery. However its location on the topographically defined plateau allows for some speculation regarding its extent. The size of the plateau would allow for a cemetery site that extends north to south for 90 m and east to west for some 40 m. If this is correct and the density of occupation were to be consistent with that revealed by Trench 1 then a cemetery of considerable size may be present at Bamburgh. One further issue regarding the scale and extent of the cemetery is its relationship with the coastline. At present, the cemetery lies 250 m from the high tide line, separated by a well-established dunefield. However, study of 19th century maps of Bamburgh, particularly the 1st and 2nd edition Ordnance Survey maps, shows that between *c*. 1860 and *c*. 1900, some 100 m of dune formation occurred between the Bowl Hole and the sea. Such evidence indicates a dynamic coastal environment and one in which erosion as well as deposition could have occurred. It would be unwise therefore to assume that the present topography of the cemetery area represents its full extent during its period of use despite its apparent stability at the present time.

Although all of the graves examined were broadly arrayed north-east to south-west, at least two subtle variations on this alignment have been identified. In addition two distinct depths of burial have been recognised within the sample group, differing in the order of 0.3 m to 0.45 m. These variations together with the stratigraphic relationship observed between graves 105, 126 and 133 have been used to propose a tentative division of the burials into two phases.

The proposed model to explain the variation of orientation and depth of burial is based on the erosion or truncation of the surface of the site during the 'lifetime' of the cemetery. That erosion had taken place is clear from skeletons 99/131 and 99/134, which lay immediately below the turf. At such a shallow depth the bodies would have been susceptible to disturbance by wild animals and therefore cannot reflect the original burial condition. More tentative is the proposal that a discrete and substantial erosion event could account for the variations used to phase the burials discussed in this report. A severe storm, similar to that which resulted in the discovery of the site in 1817, would be the most likely candidate for such a distinct event. The loss of ground markers such as the stone lintels or other perishable surface markers would then account for the slight change in orientations as a 'new' orientation would need to be laid out and also for the degree of inter-cutting of burials observed. In addition further burial at a normal depth would result in deeper burials due to the reduced ground level.

One of the principal aims of the present investigation was to begin the process of creating a dating framework for the cemetery site. The investigation now indicates that some element of phasing can be discerned, though this need not have implications regarding the general period in which the cemetery was in use, given that the model adopted to explain the variation is based on a truncation event that is likely to have been a discrete process, perhaps even a single storm on a particular day. The ^{14}C dates from three skeletons, two mid 7th to mid-late 8th century and one mid 6th to mid-late 7th century (Table 1) and the limited finds assemblage, are all consistent with a 7th to 8th century date for the lifespan of the cemetery. Use in the 6th century seems less likely given the sparse recovery of grave good, though this remains far from a certainty. It is worth noting though that the burial with the earlier ^{14}C date (Sk 130) is associated with a knife blade thought to be no earlier than the mid 7th century, a date not

inconsistent with the span of the ^{14}C assay at two standard deviations. Having been included with the Phase II burials on orientation and depth it would suggest that Phase II burials commenced in the mid to later 7th century. A mid 7th century date for the end of Phase I would not be inconstant with the ^{14}C date for Sk 129 (A.D. 640–730 at 2 sigma).

Bone preservation was generally very good, the exception being the few instances of bone being in close contact with re-deposited clay subsoil, which is likely to be relatively acidic. The excellent preservation has allowed detailed analysis of the human remains, including analysis of age, sex, stature, metric-and non-metric variations and health status. The in-situ remains of five adult individuals, four male and one possibly female, and one juvenile represent a small but significant assemblage of burials, particularly when considered as a part of the Bowl Hole cemetery as a whole. A range of pathological conditions has been identified, including a rare case of multiple injuries caused by a bladed weapon, and more common afflictions such as joint disease and dental disease.

The presence of disarticulated human skeletal material in several of the graves suggests re-use of some graves, or deliberate re-disposition of skeletal material, perhaps indicating the presence of family or kin group plots within the cemetery. This prospect is enhanced by the identification of non-metric traits in several of the skeletons which may indicate the presence of genetically related individuals. It would appear from the demography of the sample, including adults of both sexes and with ages ranging from young juveniles to older adults, that this was a cemetery that served a relatively normal population, of which this small sample represents a cross-section.

The presence of two pieces of animal bone near the heads of two individuals does not appear accidental. It is unclear whether they were placed there with flesh attached or as bones, but from the choice of a part jaw, two part ribs and a single foot bone, they do not appear to have been the remains of joints of meat. Their inclusion therefore appears symbolic, perhaps a relic from an earlier time when food was placed in the grave, or may have denoted some aspect of social, religious or familial significance to the individual or those burying them (Lucy 2000, 94).

Four of the graves were partly lined with vertical stone slabs and antiquarian reports would suggest that at least some of those originally identified were also defined in this fashion. This description of cist graves led to the belief that the graveyard was a southern outlier of the early medieval long cist cemetery tradition of eastern Scotland (Hope-Taylor 1977, 254–5). These are concentrated in Lothian and Fife and are believed to be a phase of British and Pictish burial practice dating to the 3rd to 8th centuries A.D. (Alcock 1992, 126–7). The Bowl Hole graves however differ from long cist graves, where slabs formed a complete 'box' around the body, in that only the upper edge of the grave sides were lined. This partial use of stone lining has been termed 'lintel graves' and is thought to have used a mix of slabs and wooden planks to form a box over the body (Hill 1997, 70–3). Cist burial was one of a number of burial practices used in Anglo-Saxon Bernicia in the 6th century (Lucy 1999, 22–23). The use of cist style graves at Bamburgh may simply be a local expression of the great variation seen in burial practice in Bernicia and has been suggested as an adoption from British practice by Miket (Miket 1980, 300). There was substantial variation in body position including supine, prone and flexed. The prone burial (Skeleton 134) is perhaps of particular interest as such burials have in the past generated much comment, particularly with regard to the possibility of live burial (Lucy 2000, 78–81). In this instance the burial in question would appear more reminiscent of a sleeping position and is likely to be a deliberate choice

by those placing the body within the grave. Previous attempts to link aspects of burial practice with the survival of British customs have been problematic and are likely to remain so at least until a substantial sample of unambiguously British burials have been excavated within the region (Lucy 2002, 75–6).

A number of factors may have influenced the choice for the location of the cemetery. Contemporary descriptions of Anglo-Saxon Bamburgh describe two foci, an *urbs* (the fortress site) and a *villa regia* (royal vill or estate). The *urbs* and the *villa regia* appear therefore as separate, but linked, settlements (Cambridge 1995, 136–8) and this separation may also be reflected in where the dead of each were buried. We also know that from the mid 7th century there was a church dedicated to St Peter within the *urbs*, which stood in the inner ward of the fortress (Bede 1955, 252). Had this church been the focus for funerary rites then the limited space within the fortress may have necessitated the creation of an external burial ground. The Bowl Hole cemetery, outside the fortress, in sight of it but not the village, may have been considered a suitable location. Certainly the robust nature of the present skeletal assemblage would be in no way inconsistent with a high status demographic. The possibility of a third church at Bamburgh in the early medieval period, not mentioned in any reference cannot be ruled out, but would seem unlikely.

FURTHER WORK

The well-preserved nature of both the cemetery and the burials within it, together with the scarcity of such sites in the archaeological record for Northumberland made further work on the cemetery an ideal research opportunity. In order to facilitate this Professor Charlotte Roberts of Durham University in conjunction with the Bamburgh Research Project have successfully applied to the Arts and Humanities Research Council for funding to conduct a much more extensive programme of fieldwork and analysis. This new phase of work commenced in 2006 and will continue to 2010 and will aim to better resolve the chronology of the site, establish its limits, and excavate a representative sample of those buried within it.

CONCLUSIONS

The scope of the present fieldwork was deliberately limited with the hope that it would lead to the further investigation of an important cemetery site. The successful re-location of the cemetery therefore remains the most important single result of the work. The wider interpretation presented in this report is based on a very limited data set and is likely in the face of the wider research currently ongoing to be subject to considerable revision. However even the limited sample so far discussed indicates that the cemetery belongs to the Anglo-Saxon 'Final Phase' classification, covering what is thought to be the generations around and after the introduction of Christianity (Boddington 1990, 177–199; Geake 1992, 83–94). Recognised characteristics of these cemeteries include a significant number of crouched or flexed burials, the occasional prone or east-facing individual, and the relatively sparse inclusion of grave goods, usually personal items (Lucy, 1999, 19–21). Even within the present small sample all of these characteristics have been identified. The identification of cemeteries of this date is rare and Bamburgh is the most northerly Anglo-Saxon cemetery of this date so far recognised.

The re-discovery and study of the Bowl Hole cemetery site is of great significance particularly as it can be associated with Bamburgh Castle, a site of considerable historical importance

in the region. The examination of a larger sample of burials, currently ongoing, will greatly enhance our knowledge of Northumberland at seminal time, that of St Oswald, St Cuthbert and Bede.

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