

THE OSTEOLOGICAL EVIDENCE FOR EXECUTION IN ANGLO-SAXON ENGLAND

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By the eleventh century, burial in Anglo-Saxon England occurred in consecrated ground, adjacent to a church (Gittos 2002; Blair 2005, 228-45). However, there were exceptions. Later Anglo-Saxon law codes stipulated that criminals and sinners might be excluded from burial in consecrated ground, and the cemeteries in which such individuals were apparently buried have been identified archaeologically (Reynolds 2009). These cemeteries have become known as 'execution' cemeteries, albeit that it is clear from the law codes that not everyone excluded from burial in consecrated ground would have been executed. Such cemeteries have been identified through evidence for careless and disorderly burial, the interment of multiple individuals in a single grave, prone burial, diverse burial alignments, bound limbs, and osteological evidence indicative of execution, most obviously decapitation (e.g. Reynolds 1997; 2009; Hayman and Reynolds 2005; Buckberry and Hadley 2007; Cessford 2007; Mattison 2017). This paper reviews the osteological evidence for execution, which, in the cases of modern analysis, can reveal considerable detail about the methods of decapitation, in particular, and it also provides a critical appraisal of the considerably less reliable antiquarian reports. Interpretations of execution practices and the processes of judicial punishment rest to a large degree on the evidence for decapitation, although it has typically not been subject to detailed scrutiny, beyond individual case studies (e.g. Hayman and Reynolds 2005, 232-4; Buckberry and Hadley 2007; Cessford 2007, 203-15; Buckberry 2008), and there is a tendency to aggregate together archaeological evidence for execution that is of varying types and quality. The paper suggests that secure evidence for execution, principally decapitation, can be identified through modern osteological analysis but it is limited, and it also argues that assertions made in antiquarian excavation reports about apparent examples of execution need to be treated with caution.

Consecrated ground and the exclusion of sinners

Numerous Christian cemeteries have been excavated in England, dating from at least the seventh century, in which the grave was usually orientated consistently on a west-east alignment, the body was positioned supine with the arms and legs extended along the body, grave goods were generally absent, and there was a diverse array of grave furniture, in the form of coffins and grave linings (e.g. Hadley and Buckberry 2005). Yet, while most people would have been interred in this manner by the later Anglo-

Saxon period, criminals and sinners might be excluded from burial in consecrated ground, and from the rites and grave provision that were characteristic of churchyard burial. The first written reference to consecrated burial in England, and the basis for exclusion from it, comes from the early tenth-century laws of Æthelstan (II Æthelstan 26), where it is stated that:

And if anyone swears a false oath and it becomes manifest he has done so, he shall never again have the right to swear an oath; and he shall not be buried in any consecrated burial ground when he dies, unless he has the testimony of the bishop, in whose diocese he is, that he has made such amends as his confessor has prescribed to him (Attenborough 1922, 140-3).

The concept of consecrated ground had, however, emerged earlier than this, as references to soul-scot, a burial tax paid at the graveside to the Church, occur in charters from the 870s, which suggests institutional control over burial practices (Gittos 2002, 201-2). Moreover, the excavation of burials adjacent to major churches reveals that this was afforded some people as far back as the seventh century, although this may not have been extended to anyone other than monastic communities and their patrons, and churchyard burial may not have been the norm until the tenth century (Blair 2005, 58-73, 228-45).

As burial in consecrated ground became increasingly common, legislation emerged to codify the circumstances under which such burial was prohibited. Clauses in law codes state that exclusion from burial in consecrated ground might befall clerics who had failed to remain celibate (I Edmund 1), adulterers (I Edmund 4), individuals who had intercourse with nuns (I Edmund 4), those who had committed assaults (IV Æthelred 4), violent burglary (I Æthelred 4.1) or homicide (I Edmund 4), perjurers (II Æthelstan 26) and those refusing to learn the Pater Noster (I Cnut 22) (Robertson 1925, 6-7, 170-71), although none of these crimes are said to have merited capital punishment. The crimes that would have resulted in capital punishment were: theft (Wihtred 26-7; Ine 12; II Æthelstan 1, 1.2, 20.3, 20.6; IV Æthelstan 6-6.7; VI Æthelstan 1.1-1.4, 12.2; III Edmund 4; III Edgar 7.3; IV Edgar 11; II Cnut 26-26.1); violation of the king's peace (Ine 12; II Edmund 6); attacks on a man's house (II Edmund 6); plotting against one's lord or the king (Alfred 4-4.2; II Æthelstan 4; III Edgar 7.3; V Æthelred 30; VI Æthelred 37; II Cnut 26, 57); drawing weapons in the king's hall (Ine 6; Alfred 7; II Cnut 59);

failing a second trial by ordeal (I Æthelred 1.6, 2.1; II Cnut 32.1); breach of the peace inside the town (II Æthelred 6); deserting the army under control of the king (V Æthelred 28); striking false coins (III Æthelred 8); committing an act of capital violence while serving in the army (II Cnut 61); absconding from penal slavery (Ine 24); deserting one's lord or comrades on expedition (II Cnut 77); harbouring outlaws, fugitives, criminals, or excommunicated persons (Alfred 4; IV Æthelstan 6.3; V Æthelstan 0.3; VI Æthelstan 1.2; III Æthelred 13.1; VIII Æthelred 42; II Cnut 66); standing by, avenging a thief, or aiding the escape of a thief (II Æthelstan 6.2; IV Æthelstan 6.3; VI Æthelstan 1.3, 1.4, 1.5, 8.3; Cnut's Proclamation of 1020 no. 12); having no surety upon accusation, and interposing the behalf of such a person (I Æthelred 4, 4.2; II Cnut 33.1, 33.1a); returning to his native district by an outlaw (IV Æthelstan 3; V Æthelstan 0.2); arson (II Æthelstan 6.2); murder through witchcraft, sorcery or deadly spell (II Æthelstan 6); an excommunicated man or homicide remaining near the king before making amends towards the Church and state (V Æthelred 29; II Cnut 77) (Attenborough 1922, 28-31, 38-41, 64-9, 126-7, 130-1, 136-9, 146-53, 156-9, 162-5, 168-9; Robertson 1925, 10-11, 14-15, 26-7, 36-7, 52-5, 58-9, 68-9, 86-7, 102-3, 128-9, 142-3, 188-9, 192-3, 204-7, 214-15).

Only occasionally is it made explicit that execution would prohibit burial in consecrated ground. In Æthelred's first law code, for example, it is stated that if a person has no legal surety, 'he shall be slain and buried in unconsecrated ground' (I Æthelred 4.1), as also will anyone who assists such a person (I Æthelred 4.2); these clauses are repeated in Cnut's second code (II Cnut 33.1, 33.1a). That such legal prescriptions linking execution with a specific form of burial provision were actually enacted is confirmed by a charter from 962, concerning land at Sunbury (Middlesex), which describes the demise of one Ecgferth who lost his life as a result of an unspecified crime and was consequently prohibited from burial in consecrated ground (Reynolds 2009, 214). A charter from 995 refers to two brothers who had been killed while assisting a thief and had been illegally given burial in consecrated ground, confirming that their behaviour was expected to have prohibited them from receiving churchyard burial (Reynolds 2009, 214).

Archaeological interest in execution practices in Anglo-Saxon England has gathered pace over the last twenty-five years. In a 1992 study of burials dating to the period of conversion to Christianity, c.600-800, Helen Geake (1992, 87) discussed a category of what she called 'deviant' burials, among which were instances of decapitation, broken necks, bound limbs, and bodily positions suggesting mutilation around the time of death, noting that some of these had previously been labelled as 'execution cemeteries'. However, the classification of such burials as indicative of execution cemeteries has principally occurred in the work of Andrew Reynolds (1997; 2009), who has identified some 27 cemeteries of this type, with the

majority located to the south of the Humber: Dunstable Five Knolls and Galley Hill (Bedfordshire); Abingdon and Castle Hill (Berkshire); Bran Ditch, Chesterton Lane and Wandlebury (Cambridgeshire); Wor Barrow (Dorset); Meon Hill, Old Dairy Cottage and Stockbridge Down (Hampshire); Staines (Middlesex); South Acre (Norfolk); Crosshill (Nottinghamshire); Wallingford/Crowmarsh (Oxfordshire); Sutton Hoo (Suffolk); Ashtead, Eashing, Gally Hills, Guildown, and Hog's Back (Surrey); Burpham and Malling Hill (Sussex); Bokerley Dyke, Old Sarum and Roche Court Down (Wiltshire); and Walkington Wold (Yorkshire), the one example to the north of the Humber. Their identification as execution cemeteries rests on evidence for decapitation, bound limbs, carelessly arranged bodies, prone burial, shallow graves and the presence of multiple bodies in a single grave. While several of these characteristics can be found in churchyards (especially prone burial and multiple interments; Hadley 2010, 107-8, 110), it is the concentration of these characteristics in the cemeteries discussed by Reynolds that reveals their distinctive nature, although there are variations in practice between the different cemeteries, and the dating evidence is not equally robust for each of them (discussed in Mattison 2017).

With the well-documented prisons of the period proving archaeologically elusive, and artefactual evidence for restraint limited to a handful of discoveries of iron shackles from Winchester (Hampshire) (Goodall 1990, 1011-14), two individuals tied together at the ankles with iron fetters in a cemetery there (Russel 2016), and a pair of wooden stocks from a well at Barking Abbey (Essex) (Reynolds 2009, 13, 15-17), execution cemeteries are now regarded as providing the most compelling archaeological evidence for Anglo-Saxon practices of judicial punishment (Reynolds 2009, 33). Dating of these cemeteries relies on recovery of artefacts from graves and on radiocarbon dating of skeletal remains, which suggest that they mainly date to between the seventh and eleventh centuries (Reynolds 2009, 153-5). Reynolds (2009, 235-47) has argued that the development of execution cemeteries corresponded with the growth of central government and the need for increased judicial punishment. The execution cemeteries present important evidence for our understanding of the development of the Anglo-Saxon state, legal practice and the relationships between the state and the Church, and much rests on the quality of the evidence from these cemeteries, many of which were excavated long ago. The remainder of this paper focusses on one aspect of these cemeteries, as it evaluates the osteological evidence frequently adduced as indicative of execution. Yet despite the significance placed on this evidence, many of the cemeteries have, in fact, either had no osteological analysis undertaken or were analysed in only a cursory manner, using unstated methods or by individuals without osteological training. However, others have either been excavated more recently or have seen modern (re-) analysis of the human remains and provide the most authoritative information.

Identifying the victims of execution

Before commencing an assessment of the osteological evidence, we need to consider what forms of execution may have been employed in the Anglo-Saxon period. Among methods of capital punishment, the law codes mention hanging (Ine 24; VI Æthelstan 6.3, 12.1-2; III Edmund 4), drowning (IV Æthelstan 6.4), stoning (IV Æthelstan 6.5), burning (IV Æthelstan 6.7), throwing individuals from a cliff (IV Æthelstan 6.4), losing one's head (which may refer to decapitation) (IV Edgar 11; I Æthelred 1.6, 2.1; II Cnut 32.1), and generally being slain, while other written sources, including charters, list hanging, decapitation, slaying and drowning as methods of execution that were used to punish criminals (Attenborough 1922, 44-5, 148-51, 160-1, 168-9; Robertson 1925, 14-15, 36-7, 52-5, 192-3). Some of these methods of execution will not, or only rarely, be identifiable using osteological methods (reviewed in Buckberry 2014), and so circumstantial evidence has frequently been adduced. For example, at Five Knolls, Dunstable thirty individuals had been buried with arms crossed at the wrists, mainly behind the back, and, thus, were thought probably to have been bound, perhaps prior to hanging (Dunning and Wheeler 1931). Yet this is not conclusive evidence given lack of preservation of what, if anything, may have bound the wrists, and lack of osteological analysis of the skeletal remains. However, osteological proof of hanging will be rare anyway since hanging would have been performed at this time by the short-drop or running noose methods, to judge from illustrations in contemporary manuscripts (Gatrell 1994, 46; Poulton 1989, 81), and in either case the victim would usually die from strangulation rather than a broken neck; hence, there would be limited likelihood of any osteological evidence of cervical fracture or dislocation (James and Nasmyth-Jones 1992, 82-9; Ubelaker 1992). Similarly, drowning is caused by asphyxiation as the victim is simultaneously swallowing and trying to regurgitate water, so leaves no evidence on the skeleton (Szpilman *et al.* 2010, 2102-3).

Stoning would have caused severe internal and external bleeding, which would have been the primary cause of death, however it is possible that heavy stones with a great deal of force behind them may have left blunt force fractures on the skeleton (Boylston 2000, 364). Being thrown from a cliff should present compression fractures and other blunt force fractures caused by the impact (Boylston 2000, 361; Novak 2000, 93), while burning to death should be visible in charring on the bones, identified by colour change and shrinkage of the bone from the heat (Schmidt and Symes 2015). Any other trauma that involved significant stabbing or the breaking of bones should also be apparent, provided the skeletal preservation is fair (Buckberry 2008; Boylston 2000, 361; Cessford 2007; Correia 2006, 276-7; Novak 2000, 93; Pollard *et al.* 2012). However, while some of these documented methods of execution may have left traces on the skeleton,

osteological analyses of execution cemeteries do not report any instances of pathologies consistent with these practices (Mattison 2017). Either such practices were not common, or the victims of these forms of capital punishment are to be found elsewhere. It may also be the case that while it is theoretically possible that certain execution practices will have left osteological traces, this did not, in fact, occur in practice.

In contrast to the forms of capital punishment discussed thus far, decapitation is much more capable of being identified osteologically (Buckberry 2014). Even so, numbers of decapitation victims among the execution cemeteries are often inflated by the inclusion of burials of individuals who are missing their heads but display no cervical trauma, or for which osteological analysis was not undertaken. Certainly, there are a few examples of headless burials which appear to present more convincing, if circumstantial, evidence for decapitation despite a lack of osteological evidence: for example, headless individuals interred with the neck of the corpse butting up against the edge of the grave suggest the grave had been cut for a headless body (e.g. skeleton 13 from Bran Ditch (Lethbridge and Palmer 1929) and burials 21 and 35 from Sutton Hoo (Carver 2005)). At Five Knolls, Dunstable excavation revealed one individual with his head placed between his knees (Dunning and Wheeler 1931), while at Wor Barrow there were two individuals buried with their heads placed by their hands (Pitt Rivers 1898). Yet, there are many ways, other than decapitation, in which the head may have been unintentionally, or even purposefully, removed from its correct anatomical position after burial. Aside from later erosion, wildlife activity and disturbance by, for example, recent agricultural or road-building activity, many of these sites have a long history of use, and disturbance may have arisen due to the intercutting of graves for later burials.

Osteological evidence provides the securest form of evidence for decapitation, which should be fairly evident providing the skeleton is well-preserved (discussed in Buckberry 2014). The neck would usually be severed using a heavy bladed weapon, such as an axe or a sword. Injury caused by such a bladed weapon is known as sharp-force trauma, and can be identified in bone by the linearity of the lesion, the presence of a smooth, often polished surface on the acute side, and a defined, clean edge to the injury. Decapitation will usually be caused by chopping trauma (where a blade is swung towards the victim, resulting in a cleft in the bone). However, care must be taken to differentiate this from incised trauma (created by running a blade along a body part or bone), which may be present if bodies were dismembered, for example to facilitate the display of heads following a different mode of execution, such as hanging (Symes *et al.* 2012). Use of microscopy and a Scanning Electron Microscope (SEM) enables identification of striations in the surface of sharp-force trauma in bone, which can be used to infer direction of force; irregularities in the edge of the blade will leave striations running parallel to the direction of the blow

(Boylston 2000; Symes *et al.* 2012). Occasionally these striations are visible with the naked eye or with the use of a magnifying glass, but they are much more difficult to identify and interpret in the trabecular (spongy) bone that forms vertebral bodies (among other areas) than in the dense cortical bone found on the shafts of long bones, the neural arches of vertebrae, the mandible, and the outer and inner tables of the cranium. This approach is rarely employed, but could be used to better interpret evidence of Anglo-Saxon execution. Where a significant force is applied, the trauma can result in additional fractures that radiate away from the point of impact, caused by failure of the bone. These blunt-force fractures continue beyond the point where the blade itself comes to a stop and therefore do not have the characteristic smooth, polished acute surface. This type of trauma has been described as sharp-blunt trauma, reflecting the two different mechanisms of injury, and was seen in mandibles at Walkington Wold (Figure 1).

Injuries that result in decapitation largely seem to have been delivered from behind, and mainly affect the cervical (neck) vertebrae. However, the cranial base may also reveal traces of the decapitation process if a blow is angled upwards or delivered high up on the neck, especially the occipital bone at the back of the cranium and the mastoid processes of the temporal bone, which project inferiorly just behind the ear (Figure 2). Injuries may also be evident on the mandible ranging from small v-shaped nicks to the ascending ramus, to more substantial sharp-blunt trauma affecting the inferior portion of the mandibular body. If decapitation occurs at a lower level it can result in trauma to the clavicles and/or upper thoracic (chest) vertebrae (Buckberry 2014). Decapitation sometimes occurs, in contrast, from the front, and sharp-force trauma has occasionally been observed on vertebral bodies, which are on the front of the spine (Buckberry and Hadley 2007). However, it should be noted that while chopping trauma to the anterior vertebral body would be expected in cases of decapitation from the front, incision wounds may also be observed on the anterior of vertebrae belonging to individuals who have been dismembered or possibly those who had their throats cut. As noted above, it is possible to distinguish between an incision and chopping trauma if there is well-preserved cortical bone at the point of impact, via the observation of striations in the surface of the bone (Buckberry 2014, 236). Unfortunately, these striations are difficult to see in the trabecular bone of vertebral bodies and impossible to view if the cut was incomplete, meaning the cut surface is not directly visible (Figure 3).

At sites with poor levels of bone preservation, it is possible that sharp-force trauma may be obscured either by degradation of the bone surface, or by complete loss of the affected elements. However, if the head was displaced, but buried before decomposition occurred, it may be possible to infer decapitation from other osteological evidence. The soft tissues of the neck will hold in place the mandible, hyoid, and any vertebrae above the level of decapitation, and so if the articulated bones of a skull or skull and cervical vertebrae are excavated away from the remainder of the body it can be assumed that they were deposited while sufficient soft tissue remained to hold the additional bones in articulation (Buckberry 2014). However, care must be taken not to mistake a case of decapitation for a largely disturbed burial where only the cranium has remained in a grave, a phenomenon which is often seen in crowded cemeteries with lots of inter-cutting of graves (Cherryson 2007).

The skeletal evidence for later Anglo-Saxon execution

Only ten of the sites proposed by Reynolds as execution cemeteries contain individuals who display skeletal trauma for execution which has undergone osteological examination, although some of these analyses were undertaken in the early part of the twentieth century: Walkington Wold, Old Dairy Cottage, South Acre, Staines, Chesterton Lane, Meon Hill, Stockbridge Down, Guildown, Bran Ditch and Roche Court Down. The nature and findings from the osteological analyses of skeletal remains from each of these cemeteries are discussed in the remainder of this paper. Some modern osteological analyses of well-preserved skeletal remains have revealed considerable detail about the methods of execution, but analyses presented in reports from older excavations are far less reliable. In the discussion that follows, skeletons and skeletal remains are referred to according to the conventions used in the respective published reports unless otherwise stated.

1. Walkington Wold

Excavations at Walkington Wold in 1967 and 1969 revealed twelve burials, ten of which were missing their crania, and eleven disarticulated crania some distance away (Bartlett and Mackey 1972). The burials were positioned around a Bronze Age barrow, on diverse alignments, and they included a triple burial; most of the isolated crania were found close to the barrow. At the time of publication there was little awareness of the phenomenon of execution cemeteries, and the excavators suggested that the burials probably dated to the fifth century AD (Bartlett and Mackey 1973, 10, 21, 26). However, more recent radiocarbon dating of three skeletons acquired by Jo Buckberry and Dawn Hadley (dated to AD640-775, 775-980, and 900-1030 all at the 95% confidence level) confirmed it to date to between the seventh and eleventh centuries (Buckberry and Hadley 2007, 312). Osteological analysis was initially undertaken by Jean Dawes who

suggested that one of the individuals was a female, but the collection was reanalysed in 2001 by Jo Buckberry using current methodologies, who revealed that the individuals buried there, for whom age and sex could be assigned, were all male, or probable male, in young to middle adulthood (18 to 45 years) (Buckberry and Hadley 2007, 315-16; Buckberry 2008). While it may seem logical to deduce that the presence of ten burials missing their crania and eleven disarticulated crania reveals at least eleven examples of decapitation, without osteological analysis this should not be assumed. Indeed, only two of the post-cranial skeletons (7 and 11) and four crania (skulls 2, 5 and 8, and the skull found in the grave of skeleton 1, but not derived from it) displayed clear evidence for decapitation, meaning that there was a minimum of four decapitated individuals and a maximum of six, since it is not possible to be certain whether any of the disarticulated crania were from the two *in situ* skeletons displaying evidence of decapitation (Buckberry and Hadley 2007, 316-22; Buckberry 2008). At Walkington Wold, the evidence can be interpreted as revealing only that between 30.8 (4/13) and 84.6 (11/13) per cent of burials had been decapitated, which is a wide estimation, but even detailed modern osteological analysis was unable to narrow this down (Buckberry and Hadley 2007, 324). Consequently, we should be wary of the figures for the numbers and percentages of decapitations that are often presented in studies of execution cemeteries, as they may be more precise than the evidence really allows on strict osteological grounds.

The manner of decapitation identified from osteological analysis varied. Two individuals had been decapitated from behind, with a sword or axe cutting through part of the mandible. Sharp force trauma was evident on the base of the mandibular body from the skull from the grave of skeleton 1 (adult aged 26 to 35 years), with radiating fractures extending towards the chin, but the cervical vertebrae were too poorly preserved to reveal any possible traces of injury (Buckberry 2008). A peri-mortem fracture was present on the base of the mandibular body of skeleton 11 (male aged 25 to 35 years), but the posterior portion of the mandible was not present. The similarity of the fracture to that seen on the skull associated with skeleton 1 suggests that it is likely that the fractures were radiating from areas of sharp force trauma to the (absent) inferior portion of the ascending ramus. The dens of the second cervical vertebra also appears to have been removed by the blow from behind that resulted in decapitation, but it was not possible to be confident of this, given the presence of consolidant and soil adhering to this area (Buckberry 2008). In two other cases (skulls 2 and 5) there was evidence for an attempt to carry out a decapitation from behind, but the back of the cranium had been hit. In one of these cases (skull 5, male, aged 20 to 35 years), a blow had penetrated the right occipital and a second had clipped the base of the cranium and probably succeeded in decapitating the individual (Buckberry 2008). Another cranium (skull 2, adult, aged 18 to 25 years) had evidence for three blows to the back of the head: a glancing blow which had exposed an area of diploic bone on the right parietal and occipital,

crossing the lambdoid suture; a shallow blow, which had just cut into the occipital to the right of the midline; and a deep blow, which had exposed diploic bone and was associated with two radiating fractures in the centre of the occipital. The blows had all been delivered in an upwards direction, indicating that the victim was probably bent over with their chin resting on their chest. None of these had resulted in decapitation, although they are consistent with attempts at decapitation, which presumably must have been achieved by a further blow (or blows) (Buckberry 2008).

In contrast, in the other two cases, decapitation appears to have occurred from the front, using a thin blade, such as a knife, dagger or fine sword. Skeleton 7 (male, aged 20 to 35 years), displayed two parallel cut marks to the anterior of the first thoracic vertebra, and are consistent with blood-letting or throat slitting as well as decapitation from the front. That there were no traces of the cranium within the grave may suggest that decapitation had occurred (Buckberry 2008). Skull 8 (male, aged 18 to 25 years) had suffered sharp force trauma to the front of the fourth and fifth cervical vertebrae (Buckberry 2008).

There is some further osteological evidence for decapitation, although this is less secure than the evidence for cut marks. The position in the grave of a partial burial (skeleton 13, adult) indicates that it may also have been beheaded prior to burial, although it did not display osteological evidence of decapitation. This skeleton had been badly disturbed by three later burials (skeletons 8, 11 and 12), and the cranium was missing, but the cervical vertebrae remained undisturbed and articulated, and it is probable that the head was removed prior to burial (Buckberry and Hadley 2007, 314). Most of the eleven disarticulated crania from the site lack any pathologies consistent with decapitation, even though this seems a plausible explanation for their location on and around the Bronze Age barrow. Many were notably missing their mandibles, and this has been interpreted as evidence that they may have been displayed prior to burial until a certain state of disarticulation had been reached. As there is no osteological evidence that the skulls were stuck on stakes, it is possible they were displayed on a gibbet, which may be evidenced by the presence of a large posthole on the top of the barrow (Buckberry and Hadley 2007, 314).

2. *Old Dairy Cottage*

During excavation at Old Dairy Cottage by the Winchester Museums Service in 1990, sixteen inhumations were discovered, including three examples of prone burial, while three individuals had their hands crossed as if bound. Radiocarbon dating of four individuals ranged from the eighth to eleventh centuries (AD770-970, 775-965, 890-1020, and 780-990 at the 95% confidence level). Annia Cherryson and Jo Buckberry (2011) performed the osteological analysis and found evidence for decapitation on seven individuals as well as on some of the disarticulated material (all osteological analysis reviewed

here is based on Cherryson and Buckberry 2011). With one exception (skeleton 580) all of the decapitations were found with their heads. The individuals were all adults, except for one child aged around 10 years.

Skeleton 525 (probable male, aged 26-45 years) was buried with the skull placed by the right knee, and the base of the third cervical vertebra exhibited sharp force trauma indicative of decapitation. Skeleton 531 (male, aged 18-25 years) was found with the skull by the left knee. There was evidence suggesting at least two separate blows were required to sever the head, leaving cuts on the second and third cervical vertebrae, as well as cuts on the mandible causing radiating fractures. It was thought that at least one of the blows was directed from the left and angled upwards. The head of skeleton 560 (probable male, aged 18-25 years) was probably severed in a single blow which left sharp force trauma on the neural arch of the fifth cervical vertebra. The severed head was interred by the individual's right leg. A blow, probably from behind and to the right of skeleton 562 (male, aged 26-35 years), sliced through the right side of the body and neural arch of the fourth cervical vertebra, severing the head. The skull was found below the individual's left knee. Sharp force trauma on the vertebrae of skeleton 565 (male, aged 18-25 years) suggested that it may have taken three blows to decapitate the individual. One blow had completely cut through the sixth cervical vertebra, one had sliced off the superior surface of the seventh cervical vertebra and one had further sliced off another piece of the body of the seventh cervical vertebra on the anterior side. The skull of this individual was placed above the shoulders but 'inverted'. The decapitation of skeleton 575 (male, aged 36-45 years) also seems to have taken multiple attempts. A single blow had severed the base of the fourth cervical vertebra's spinous process, while slicing through the neural arch and body of the fifth cervical vertebra below. The severed head was placed by the knees. However, there was also evidence of cuts to the left clavicle which possibly resulted from a previous missed attempt at decapitation (Figure 4). The headless skeleton 580 (of indeterminate sex, aged 18-25 years), displayed evidence of a blow which affected most of the superior surface of the sixth cervical vertebra. Evidence of sharp-force trauma indicative of decapitation was also found on disarticulated material from grave 128, that of skeleton 575. A third or fourth cervical vertebra had clearly been cut through. While this vertebra may have belonged to skeleton 575, it was found with other disarticulated material adding up to a minimum number of four individuals.

A further probable decapitation (skeleton 528, male, aged 18-25 years) was identified through placement of the skull by the right arm in the grave. Unfortunately, no cervical vertebrae were present to provide osteological confirmation of decapitation. The skeleton had also lost its mandible, leaving only the cranium to rest by the arm. No evidence was noted by the excavators to suggest that the grave had been disturbed in any way, and while it might be

suggested that the vertebrae had simply not survived, the bone preservation was overall very good and the absence of the mandible is curious. There is a possibility that the head may have been displayed after it was severed until the point at which it had decomposed enough for the vertebrae and mandible to fall off before being added to the grave with the body. Three sets of charter boundary clauses for estates that meet at Old Dairy Cottage – Headbourne Worthy, Chilcomb and Easton – mention the phrase *heafod stocc* or 'head stake' (Reynolds 2009, 119). The association of Old Dairy Cottage with head-stakes, the missing vertebrae and mandible of skeleton 528, and the fact that the numbers of crania and post-cranial skeletons do not match (skeleton 580 was missing its skull, while two additional skulls were discovered in grave 128 alongside that of skeleton 528) suggest the possibility that the severed heads of some of these decapitated individuals may have been displayed. Osteological evidence that severed heads were impaled on stakes is extremely limited in Anglo-Saxon England, although the cranial elements which would have exhibited a large hole through the bottom of the skull may not have always survived. The frontal, parietals, occipital, and left temporal of skeleton 528 were present; none of these are noted as showing damage consistent with impalement, but there is the possibility that the missing right temporal might have shown such evidence. *Heafod stoccan* display a large enough presence in historical sources, such as the three aforementioned charters, to suggest that it was a familiar concept; the historical sources do not describe *heafod stoccan* so it is possible that the notion of the severed head being driven onto a stake is too restrictive as an interpretation. A *stocc* is a post or pole, so perhaps on a *heafod stocc* the head was actually affixed by other means than impalement, or the stake was wide with a head placed on top.

3. South Acre

The South Acre ring ditch was one of five ring ditches discovered in 1933 by O.G.S Crawford, and was excavated between 1987 and 1988 by the Norfolk Archaeological Unit (Wymer 1996). One hundred and twenty-six burials were discovered within the boundaries of the ring ditch and on the peripheral land, with the greatest concentrations located on the eastern side of the ring ditch, most notably in the north-east corner and adjacent areas. They were characterised by shallow graves, varying burial orientations, prone burial, evidence of decapitation, indications that the arms and legs of eight individuals had been tethered, four double burials and one triple burial (Wymer 1996, 88-9). Two radiocarbon dates indicated that the site was active between the first and eleventh centuries (AD80-550, AD950-1020, both at the 95% confidence level), but on the basis of the positions of the graves within the ditch, an earlier, possibly Bronze Age, date, was proposed by Wymer (1996, 67-9) for one burial (S111). However, this burial has recently been radiocarbon dated to the seventh to eighth century (AD690-779, at the 95% confidence level) (Williams-Ward 2017), which reveals

that the sequence of grave construction was different from that suggested by Wymer (1996, 88). Two further radiocarbon dates (AD772-973, 950-1020, at the 95% confidence level) were recently obtained from graves in the overspill area to the north east of the ring ditch (S17 and S33), confirming that these were also of Anglo-Saxon date (Williams-Ward 2017).

The original osteological assessment was conducted by Jacqueline McKinley. Sex assessment indicated that 52% of sexed individuals were female and 48% were male, although sex could only be assigned to 58.6% of all individuals due to poor skeletal preservation (McKinley 1996, 82). The high proportion of females at South Acre distinguishes the site from other execution cemeteries, which typically contain only, or mainly, males (Williams-Ward and Buckberry forthcoming). The skeletal material was reanalysed by Michelle Williams-Ward in 2015, and this indicated that the proportion of males was higher than was suggested in the initial assessment (68.8%), but the 31.2% of females was still considerably higher than is typical of execution cemeteries (degradation of the skeletal material meant fewer individuals could be confidently assessed for sex in the reanalysis). All individuals were aged over 8 years, but 17.5% of the population could be considered skeletally immature (less than *c.*25 years of age) (Williams-Ward 2017). This is consistent with the earliest age that individuals may be executed (from 10 years of age; Ine 7.2, 12), typically as an accessory to theft (Attenborough 1922, 39-41).

Evidence of decapitation at the site was limited, but eight probable decapitations were identified. Three individuals (S5, S30 and S96) had peri-mortem trauma consistent with decapitation (McKinley 1996, 86). S30 was a middle adult with transection of the left side of one cervical vertebra (probably the fifth, sixth or seventh), probably from a blow from the left, but lower in the neck than is often noted. S96 was an adolescent (12-17 years) with transection of the axis vertebra and complete removal of the odontoid process. S5 was an older child (8-10 years) with sharp force trauma to the right mastoid process and adjacent bone and to the right gonial angle of the mandible, probably indicating a blow from the back (McKinley 1996, 86; Williams-Ward 2017). Five individuals were recorded with the heads out of normal articulation: between the legs, or next to the upper or lower body (S45, S82, S89, S94/95 and S98) and sections of the atlas, axis and other cervical vertebrae were observed with four of these (S82, S89, S94/95, S98), suggesting that the head was removed at the neck, then placed in the grave, although no evidence of cut marks was recorded for these individuals. Re-assessment of the South Acre skeletal material, although somewhat hampered by deterioration to the bone, revealed that the trauma identified to two of these individuals was no longer visible due to missing elements, or fragmentation, but peri-mortem sharp force trauma to the cranium and/or cervical vertebrae was observed on two further individuals during reanalysis: S89, an adult of indeterminate sex and S45, a young adult male, both of whom had the heads out of

normal articulation. Thus, combining the data from the two analyses reveals that five individuals had trauma consistent with decapitation and a further three decapitations can be inferred due to the deliberate placement of heads, out of normal articulation, in the grave. It is possible that further individuals were decapitated, but skeletal evidence has not survived.

4. *Staines*

Excavation in advance of development at Staines in 1999 uncovered a cemetery radiocarbon dated to the eighth to twelfth centuries (AD684-893, 999-1186 and 1024-1222 all at the 95% confidence level; Hayman and Reynolds 2005, 252). Seven individuals appeared to have been buried with their arms crossed at the wrists, four individuals were interred prone, there were several multiple burials, many graves appeared to have been cut through by later graves, suggesting that the graves were not marked or particularly organised, and there was evidence for decapitation. The lack of cemetery organisation and concentration of unusual funerary practice led Hayman and Reynolds (2005) to interpret this as an Anglo-Saxon execution cemetery. Out of the thirty-five skeletons uncovered, eight could not be sexed because they were too fragmentary, and seven were juveniles and so not possible to assign a sex; of the remainder, thirteen were male or probable male, six were indeterminate, and only one was a female. Of the twenty-one skeletons that could be aged, one was aged around 10 years, six were aged 14 to 20 years, three were aged 20 to 30 years, three were aged 30 to 50 years and three were aged over 50 years (Hayman and Reynolds 2005, 232-3). Fiona Coward and John Robb performed the osteological analysis and identified two victims of decapitation (S277 and S454), who had both been buried prone, through evidence of sharp force trauma to the cervical vertebrae. S277 (male, aged 20 to 30 years) revealed two slicing cuts to the bottom angle of the mandible, and a large, angled chop mark to the left side of the second cervical vertebra, while skeleton S454 displayed a possible cutmark to the posterior of the fifth cervical vertebra (Hayman and Reynolds 2005, 234).

Coward and Robb addressed whether some of the individuals excavated may have been hanged, and considered the possibility that this might be evident on the skeletal remains, but noted that the absence of any hyoid bones and of some of the cervical vertebrae, and the poor preservation of others, meant that it was not possible to identify any peri-mortem fractures that may have resulted from hanging (Coward and Robb in Hayman and Reynolds 2005, 234). However, short drop hanging is less likely to cause fractures than long drop hanging, so evidence of 'hangman's fractures' are uncommon for the Anglo-Saxon period (Buckberry 2014).

Two individuals buried in the same grave (S451 and S452) were also considered decapitations by the excavators, although they exhibited no osteological trauma. The head of S451 (adult, aged 18 to 30 years) was placed into the

grave prior to the interment of the body, as the ribs overlaid the skull; thus, even though there was no evidence of cutmarks, this must represent evidence of decapitation. S452 (adult, aged 17-25 years) was placed on the left side and the skull was turned to the right as to be facing backwards. The axis and atlas were articulated to the skull, but all other cervical vertebrae were missing (Coward and Robb in Hayman and Reynolds 2005, 229).

5. *Chesterton Lane*

Chesterton Lane Corner was excavated in 2000, yielding finds dating from the Roman to post-medieval periods, among which were eight graves, and some disarticulated remains, interpreted as deriving from an execution cemetery (Cessford 2007). Radiocarbon dates were derived from nine skeletons (one of which was sampled three times), and three groups of disarticulated remains (AD690-900, 710-960, 680-940, 680-890, 650-780, 660-960, 680-890, 680-890, 720-960, 680-980, 770-980, 720-960 and 250-430 at the 95% confidence level). Based on these dates, it was suggested that the cemetery was mainly in use during the eighth century, but may have started in the seventh and continued into the ninth; one of the burials was identified as Roman but it was not possible, given the limited scale of excavations, to decide whether the site had seen continuous use or had been reused after a break in activity (Cessford 2007, 212-14). Only two of the graves were fully excavated, but enough of the other six was uncovered for osteological analysis to be possible. All individuals for whom it was possible to assign sex were male, many of them adults aged between 19 and 44 years of age.

Five individuals (inhumations 1, 4, 5, 8 and group of disarticulated material 13) display traumatic evidence of decapitation, or attempted decapitation. Cut marks were visible on the fifth and sixth vertebrae of inhumation 1 (male, aged 19 to 25 years), suggesting a blow from behind. Given 'the roughened, slightly raised area of bone on the anterior of the cut' on the sixth vertebra, it was deduced that the blow had not succeeded in decapitating this individual (Cessford 2007, 206). There were cut marks on the fourth and fifth cervical vertebrae and on the inferior part of the mandible of inhumation 4 (male, aged 26 to 44 years), suggesting one or two blows, again from behind. Further possible cut marks were identified on the seventh cervical vertebra and third thoracic vertebra, but these were less obviously peri-mortem. Six articulating cervical vertebrae were found in the grave fill of this inhumation, with cut marks evident on cervical vertebrae two, three and four, suggestive of a single blow, also delivered from behind (Cessford 2007, 208). Cut marks were present on the first, second and third cervical vertebrae, mandible and cranium of inhumation 5 (possible male, aged 13 to 18 years), suggesting a minimum of three blows from behind, possibly from the right (Cessford 2007, 209). Cut marks were present on the third, fourth (but not the fifth), sixth and seventh cervical vertebrae of inhumation 8 (adult, aged

26-44 years), suggesting five blows to the neck, all from behind. It was not clear whether the head would have been removed, despite the number of blows; there was a cut right through cervical vertebra 6, yet the head was still in anatomically correct position in the grave. A radiating fracture on the mandible has ragged, not smooth, edges and may be a peri-mortem fracture that occurred at the same time as the cut marks to the vertebrae, but equally could have been from a post-mortem break that occurred shortly after deposition (Cessford 2007, 210). Among a group of disarticulated material (group 13) recovered from the grave in which skeleton 4 was interred, were six articulating vertebrae, with cut marks on the second, third and fourth vertebrae, suggesting a blow from behind (Cessford 2007, 208). One further individual (inhumation 6; older juvenile around 12 years) appears to have both been bound at the wrists and buried prone, with the legs bent back on themselves, and so was also interpreted as a victim of execution, although there was no osteological evidence to confirm this.

6. *Meon Hill*

The ring-fort of Meon Hill was first discovered in 1924, although excavation that confirmed its Iron Age date did not begin until the autumn of 1932. Ten inhumations interred in the ditch of the ring-fort displayed evidence of decapitation, wrists crossed and presumably bound, while two (skeletons 4 and 7) were interred prone. They were dated to the tenth or eleventh century, but partly on dubious grounds. When examining the skeletons, Miriam Tildesley of the Royal College of Surgeons took 'a considerable number of measurements' on the skulls and using comparative samples deduced that they were Anglo-Saxon rather than Romano-British (Liddell 1933, 139). The unsuitability of craniometrics for such specific dating has been extensively proven (Relethford 1994), but the few grave goods that were found amongst the skeletons did, however, corroborate a late Anglo-Saxon date. An iron buckle was found at the edge of the grave of skeleton 8, while a small bronze earring and bronze wrist fastener were associated with skeleton 4. Another bronze earring was found near the ear of skeleton 9, and an iron buckle and a bronze chape or strap-end were found in the location where a belt would have been worn on skeleton 5, and by the right hand there was a coin dating to the latter part of the reign of Edward the Confessor (1045-1066) (Liddell 1933, 135-6, 152-5). The individuals buried in the ditch were all thought to have been adult males, except skeleton 8 who was identified as female. The bodies were laid out extended with their feet to the north, however some individuals were placed on top of others and some of the skeletons (particularly skeleton 10) were disturbed by the burial of other individuals (Liddell 1933), suggesting that the corpses were not all buried at the same time.

Analysis was undertaken in 1932/3 by Miriam Tildesley and reported by Liddell (1993). Skeleton 1 (male, aged 40-45 years) appears to have been decapitated in two blows to

the left side of the neck. A sharp force wound was evident on the right transverse process of the fifth cervical vertebra from a blow which had not fully severed the head. A second blow had removed an inferior piece of the left transverse process of the fifth cervical vertebra as well as having sliced through the superior parts of the body and right transverse process of the sixth cervical vertebra. All the cervical vertebrae were present and the cranium remained above the neck and turned to the right; the mandible was at some point displaced and was found 2 inches (5.08 cm) above the body (Liddell 1933, 133, 138). The neck of skeleton 5 (male, aged 20-23 years) had evidently been severed between the fourth and fifth cervical vertebrae, although the precise osteological indicators observed on the vertebrae were not detailed in the published report. The skull was placed face down between the knees (Liddell 1933, 135, 138). Skeleton 6 (male, aged over 50 years) was killed in exactly the same fashion. A single 'clean' blow severed the head between the fourth and fifth cervical vertebrae and 'took a little off of each'. All of the cervical vertebrae were preserved and the skull remained on the neck, positioned slightly forward and to the left with the mandible jutting forward (Liddell 1933, 135, 138).

Skeleton 7 (male, aged around 45 years) presented a third cervical vertebra with a portion of the inferior surface removed. It is highly probable that this blow would have also left its mark on the fourth cervical vertebra, but the fourth to sixth cervical vertebrae were not present to confirm either this or the possibility of further blows affecting the lower neck. Two cutmarks were present on the right clavicle: one had removed the medial end and the other had hit the bone at a more lateral angle. The skull was found between the femora of skeleton 7 (Liddell 1933, 135, 138). The cervical vertebrae of skeleton 9 (male, aged around 20 years) had all survived and presented evidence of having been cut through between the fifth and sixth cervical vertebrae. The skull was placed between the legs on its left side (Liddell 1933, 136, 139). Skeleton 10 (male, age 35 years or over) was greatly disturbed by the later burials of skeletons 7 and 9, and so most of the right side of the skeleton was missing and the skull was fragmentary. Nonetheless, the second to sixth cervical vertebrae were present and it was possible to see that the atlas (second) was severed through the body, indicating the site of decapitation (Liddell 1933, 139).

7. Stockbridge Down

Excavations began in 1935 on Stockbridge Down, a prominent hill along the River Test, prompted by the discovery of human bones when some of the residents dug into the ground to make a bonfire. Forty-one inhumations were discovered in narrow, shallow, and often short graves along with some disarticulated material; the burials were on diverse orientations. As well as evidence for decapitation, there were various other irregular characteristics. Sixteen skeletons were buried with wrists crossed, possibly tied, nine individuals were buried prone,

and two others were buried in positions unusual for Christian burial: skeleton 4 was buried on the right side with the legs slightly flexed; and skeleton 35 was laid supine but with the legs bent underneath so that the feet were underneath the pelvis. Two 'almost identical' postholes, roughly two feet wide and three feet deep (0.61m x 0.91m) with steep sides, were found about eight feet (2.44m) apart amidst the burials at Stockbridge Down, and interpreted as evidence for a gibbet, although there is discrepancy in the report about where exactly they were located (Hill 1937, 252, plates V and III). Taking the diversity of funerary practice and potential gibbet into account, Hill's (1937, 248) interpretation was that these were execution victims who were 'carelessly' buried.

The burials were evidently not contemporary, and intercutting produced many disarticulated bones and displaced articulated skeletal elements, which were packed around the complete skeletons (Hill 1937, 247-8). The burials were dated to the late Anglo-Saxon or early Norman period on the basis of associated grave goods, including two bronze buckles, a bronze wrist fastener, three iron buckles, three iron rings probably for a belt, and bronze pins which also may have been for a belt. Pottery of the same date was found at the site, although not in direct association with any of the skeletons. However, the most secure dating evidence came from six coins, wrapped in a piece of linen, found in the armpit of decapitated skeleton 19. The coins belong to the last two or three years of the reign of Edward the Confessor (Hill 1937, 249-57). This indicates that at least this skeleton was buried in or later than the mid-eleventh century, although it is possible that the interments began earlier than this and continued later.

A complete osteological examination had not been performed at the time the excavation report was published, and no further report seems to have been published since. It is not stated who performed the initial rudimentary osteological analysis, but the report provides a general overview of the demography and palaeopathology of the skeletons, and specific information for select individuals. All individuals were thought to have been male and mostly all in adulthood. Very little disease or injury was noted, and it was remarked that as a group they were 'small but generally healthy' (Hill 1937, 248-9). Limited detail was provided about the osteological trauma associated with the decapitations. It was thought that the head of skeleton 17 (male, aged 18-25 years) had been severed between the second and third cervical vertebrae, but whether this was on account of the presence of sharp force trauma or whether it was merely because the first two cervical vertebrae remained articulated to the cranium is not made clear. It is noted that a piece of the left side of the mandible had been removed by a blade and that further sharp force trauma was present on the mandibular angle. The head was placed between the legs, presumably at the time of burial because there is no mention of later disturbance to the grave (Hill 1937, 254). The second cervical vertebra of skeleton 19 (an adult male) was cut through, indicating that the head was fully severed. The head had been placed

between the legs. This individual was also buried with a decapitated dog, whose head had not been buried in the grave (Hill 1937, 254).

Another individual, skeleton 41 (age and sex not noted in the excavation report), may also have been decapitated. The skeleton was missing the cranium and first four cervical vertebrae, and the grave seems to have been cut to fit the headless skeleton exactly, although no examples of trauma were recorded (Hill 1937, 256). While it is not impossible that the blade cut through the neck at the level of one of the first four missing cervical vertebrae, it is wise to be cautious in unreservedly considering skeletons with missing heads as decapitations, even with supporting funerary evidence such as an unusually short grave. On the other hand, the report on skeletons 17 and 19 demonstrated that even a rudimentary investigation of skeletal trauma can reveal more certain evidence of decapitation than body position alone.

8. Guildown

The cemetery at Guildown was discovered in 1929 by a gardener, and excavated by the Surrey Archaeological Society. The site is located on the summit of Hog Back ridge, overlooking the town of Guilford. Two-hundred and twenty-two burials were discovered, which seem to date to at least two different periods: thirty-six graves were assigned to the sixth century on the basis of grave goods, and the remainder were dated to the later Anglo-Saxon period. Intercutting revealed that the latter were not all contemporary. Some of them date to at least the 1040s, given the presence of a silver halfpenny of Edward the Confessor, dating to 1043, in a multiple grave of three skeletons (173, 174 and 175). This grave had disturbed an earlier triple burial which had, in turn, disturbed one of the sixth-century burials (Lowther 1931, 1-3). The later Anglo-Saxon skeletons displayed evidence of decapitation, binding and mutilation, and there were also instances of other markers of execution cemeteries, including prone and multiple burial. Lowther suggested that many of these individuals were victims of the Guildown Massacre in 1036, when Earl Godwin supposedly captured and executed Prince Alfred and his party. The slender shape of many of the heads was used to support an argument that there were Normans among the dead, which, as noted above, is an unreliable means of dating skeletal remains or assigning ethnic origins (Relethford 1994). However, Lowther did not believe that they had all died in 1036, so he proposed that some of these later burials represented the graves of 'malefactors and prisoners put to death for their crimes and not considered worthy of a churchyard burial' (Lowther 1931, 30-2). These included the triple burial which contained the coin of Edward the Confessor, which must date to later than the Guildown massacre.

Although modern osteological re-analysis could not be undertaken, much can be gleaned from the publications and archive notes. Two individuals were identified by Lowther

(1931) as having been decapitated. Skeleton 106 (sex and age not recorded) displayed a 'clean cut' through one of the vertebrae, although which one is unspecified in the report. The placement of the head in the grave was not described very clearly in Lowther's report, but it seems as if it was found between the legs of this individual. The head of skeleton 68 had similarly been placed between the legs, but we should be cautious of accepting this as evidence of decapitation as no supporting osteological evidence was cited. Sir Arthur Keith, of the Royal College of Surgeons, is said to have performed the osteological analysis, but any ensuing report was never published. Recent consultation of Keith's notes, archived by the Royal College of Surgeons (Mattison 2017, 527-41), suggests that he was only given a limited sample of the skeletons to examine, and did not examine either of the apparently decapitated skeletons (68 and 106). However, he did examine skeleton 207 (male, aged 30-40 years), and while this was not mentioned as a decapitation in Lowther's (1931) publication, Keith determined that the individual had been decapitated from an incised wound to the posterior left of the atlas. Since the skull had been replaced in the grave in its correct anatomical position, the injury would not, perhaps, have been immediately obvious. In establishing the context of these burials, and evaluating the suggestion that some of the burials derive from the Guildown Massacre, it has to be concluded that there is insufficient osteological evidence provided in the published report, or the notes by Keith, to enable any distinction between victims of execution and battle dead to be drawn.

It was suggested in the report that gallows may have at some point 'stood at or near Guildown' (Lowther 1931, 46); however, the source of this information, whether it was discovered during excavation or was merely local knowledge, was not provided. Keith supported the suggestion that there were gallows there by stating that 'one skull (that of a man) shows rupture of its base – a lesion which is found in death by hanging – with a long drop' (Lowther 1931, 46), but neither the published report nor his notes provide a full description or an image of the lesion, or even reveal on which individual it was found. While it is possible that this lesion at the base of the skull was, indeed, created by the individual being hanged, long drop hanging would not have been used at such an early date and the occurrence of such lesions even in long drop hanging is rare (James and Nasmyth-Jones 1992, 82-9, n. 5).

9. Bran Ditch

The cemetery at Bran Ditch is the earliest purported execution cemetery discussed in this paper. A military earthwork of apparent Anglo-Saxon construction was first excavated in 1923 (Fox and Palmer 1926). In a subsequent excavation in 1927 shallow graves estimated to contain around 50 individuals were uncovered in the chalk rock layer of the ditch on one side of the earthwork. Many of the skulls and limbs were displaced within the graves, and it

was argued by Lethbridge and Palmer (1929, 87) that the bodies were either ignored for a period after death or displayed which resulted in advanced decay prior to burial, leading to the disarticulated state of the bodies. The site was dated to the Anglo-Saxon period, on the basis of the grave goods found with skeleton 7, including a small iron clip under the left femur, near the pelvis, and an iron knife, of Anglo-Saxon style, at the right hip; these indicated that skeleton 7 was wearing a belt at the time of burial. What were claimed to be 'fragments of Anglo-Saxon pottery' were also found in the fill of the graves (Lethbridge and Palmer 1929, 82). Lethbridge and Palmer (1929) suggested that Bran Ditch may have been the site of a massacre. They noted border dykes in the Bran Ditch area between Mercia and East Anglia are mentioned in an *Anglo-Saxon Chronicle* entry for the year 905, and argue that the massacre could date anywhere between the settling of Anglo-Saxons in Britain and 905, with the most likely date occurring somewhere in the seventh century when tensions were high between Mercia and East Anglia (Lethbridge and Palmer 1929, 92). David Hill (1976, 126-8) later commented that the degree of intercutting and displacement of skeletons by later burials suggests continued and regular use for individual burial rather than the simultaneous group burials that might be expected of a battle cemetery.

The skeletons were supposedly analysed by Dr W.L.H. Duckworth, but the full analysis was never published and only limited notes survive in the University of Cambridge Leverhulme Centre archive. The excavation report provided initial observations based on his examination of fifteen of the skeletons. This includes basic demographic information for the sample and a discussion of the shape of the crania. The published report stated that most of the skeletons were thought to have been male, although two probable and two possible females were identified by Duckworth in his initial investigation. A range of ages were identified, from elderly to as young as 12 years. A foetus or very young infant was uncovered at the edge of the group, although it was suggested that this individual may not be associated with the rest of the burials because of its liminal position and its proximity to a post-hole probably related to the construction of the earthwork (Lethbridge and Palmer 1929, 87, 94-6).

Lethbridge and Palmer (1929) do not specify how many decapitations they uncovered, stating merely that 'many were wanting their heads' and that, in their opinion, there was 'unmistakable evidence that many of the bodies had been decapitated'. Some of the individuals are noted as having visible evidence of trauma on the cervical vertebrae or cranium, however the descriptions of the trauma are neither very detailed nor always clear, and it is likely that they were the observations of the excavators rather than Duckworth. Lethbridge and Palmer may have inflated the extent of decapitation, as they seem to consider all headless bodies and disarticulated crania as evidence of decapitation, without osteological evidence to confirm the injury. This is particularly worrisome since there were

many disarticulated limbs spread amongst the graves, and the excavators suggested that the bodies might have significantly decomposed prior to burial, providing an explanation other than decapitation for some of the missing and disarticulated skulls.

Recent re-analysis of the Bran Ditch skeletons was undertaken by Rachel Holgate (2013), although attempts to verify the published report were confounded by the fact that the original skeleton numbers used by Lethbridge and Palmer were not identified on the boxes of skeletal material housed in the Duckworth Collection. The results of the re-analysis presented here use the Duckworth Collection archive numbers, with the skeleton number, where known, provided in parentheses (Holgate 2013, 39-42; see also Mattison 2017, 517-25 for an account of the collection in the archive). In some cases, it is possible that elements from one skeleton are distributed between two Duckworth Collection archive numbers, making it difficult to ascertain how many individuals had osteological analysis of decapitation (Holgate 2013, 39-42).

Between eight and eleven individuals displayed clear evidence of decapitation. Skeleton Eu1.2.159 (skeleton 6), a young adult (c.18-29 years, probable female), had one cut mark to the fourth cervical vertebra and two to the posterior of the right clavicle; all three blows were delivered from behind. Skeleton 14 was found without a head in anatomical position, but with two disarticulated crania (skeletons 15 and 16) placed within the grave (Lethbridge and Palmer 1929, 84); it is not clear which, if either, of these belonged to skeleton 14. Reanalysis of Eu1.2.161 (either skeleton 14 or 16, possibly both as a cranium and postcranial bones were present), a young (c.18-29 years) probable female, revealed a cut mark to the second and third cervical vertebrae, and a second cut to the fifth cervical vertebra, both delivered from behind. The sixth cervical vertebra had five possible peri-mortem incisive cuts on the right side. Eu1.2.162 (Skeleton 15) consisted of a cranium and some vertebrae. A cut mark was present on the fourth cervical vertebra; this blow was delivered from behind.

Lethbridge and Palmer (1929, 84) reported that the cranium and first four cervical vertebrae were missing from skeleton 19. However, next to the tibia of skeleton 19 was skull 21, articulated with three cervical vertebrae, the bottom of which displayed a cut mark, as did the associated mandible. Additional crania were also found in this grave, but Lethbridge and Palmer noted that these did not have articulating mandibles or vertebrae and surmised that these were buried without flesh. It is unclear if skeleton 20 was associated with this grave, but the remains from three individuals in the Duckworth Collection are attributed to skeletons 19 and 20: Eu1.2.164 (19 or 20), Eu1.2.164A (19) and Eu1.2.165 (20). Each of them displayed evidence of peri-mortem trauma. Eu1.2.164 had sustained sharp force trauma to the right ascending ramus of the mandible; the blow was delivered from behind. This is presumably the mandibular injury described by Lethbridge and Palmer

(1929, 84). Eu1.2.164A had a cut mark to the third cervical vertebra, but the orientation of the blow could not be established from the remaining bone. Eu1.2.165 consisted of a cranium and mandible. Sharp force trauma was present on the inferior aspect of the mandibular body on the left side; this injury was delivered from behind.

The head of skeleton 36 was placed in anatomical position in the grave, but a cut on the fourth cervical vertebra was noticed by the excavators (Lethbridge and Palmer 1929, 84). Two individuals are attributed to skeleton 36 in the Duckworth Collection: Eu1.2.173 and Eu1.2.173A. Eu1.2.173, a young adult probable female, consisted of both cranial and post-cranial material. A cut mark was present on the inferior of the axis, but the orientation of the blow could not be established. Eu1.2.173 also contained additional skeletal material with evidence of trauma. An atlas associated with Eu1.2.3.173 had a cut mark to the inferior, removing the bottom of both apophyseal facets. This blow was delivered from behind. A further atlas associated with Eu1.2.173 displays a cut mark to the left inferior apophyseal facet. Individual Eu1.2.173A (also attributed to skeleton 36), an unsexed young adult, consists of both cranial and postcranial elements. There were two cut marks to the superior of the fourth cervical vertebra. Both blows were delivered from behind. This final traumatic lesion (to Eu1.2.173A) is consistent with a cut on the fourth cervical vertebra of skeleton 36 described by Lethbridge and Palmer (1929, 84).

Eu1.2.175 is attributed to the loose skull 39 and the loose mandible described by the excavators (Lethbridge and Palmer 1929, 87). Reanalysis confirmed the presence of sharp force trauma on the posterior of the left ascending ramus. The individual was a young adult male. During excavation, the projection of the axis of skeleton 45 was observed to have been cut off, although Lethbridge and Palmer (1929, 87) argue that it is uncertain if this would have fully severed the head. Reanalysis of Eu1.2.179 (skeleton 45), a young adult male, confirmed the presence of a cut mark to the odontoid process of the axis. A further cut mark was identified to the right superior apophyseal facet of the fifth cervical vertebra. Both injuries were sustained from behind.

Two further skeletons with trauma were identified in the skeletal collection, but neither can be attributed to the numbering system employed by Lethbridge and Palmer. Eu1.2.205 consists of a single mandible. A small cut mark was present on the inferior-posterior surface of the left gonial angle. This was directed from inferior-posterior to superior-anterior. Material ascribed to Eu1.2.203 included a rib with a cut mark to the inferior edge. The cut was located approximately a third of the way along the rib from the vertebral end. It was larger on the visceral surface than on the lateral surface, and was probably delivered from the front. It is not certain if this rib belonged to the individual, or was a disarticulated bone. This is the only example of

peri-mortem trauma that is not consistent with decapitation (or attempted decapitation).

Skeleton 4 (sex not identifiable, probably aged around 14-15 years) was buried with the head bent backwards and to the left. It was suggested that this individual had had their throat slit, based on the position of the neck (Lethbridge and Palmer 1929, 84). However, no cut marks were identified on the vertebrae for Eu1.2.157 (skeleton 4) during reanalysis by either Mattison or Holgate.

10. Roche Court Down

Excavations at Roche Court Down began in 1930 when a rabbit-trapper accidentally uncovered human bones in the intersection of two prehistoric ditches. One of three barrows nearby contained a sixth-century primary interment, and seventeen burials, dating to the sixth or seventh century, was found to the north of the barrows. When the area of ditch presenting human bone was extended, sixteen to eighteen further burials were uncovered, among which evidence for decapitation, bound limbs and prone placement were recorded (Stone 1932, 568-76). This is the least securely dated cemetery discussion in this paper. No material evidence was directly associated with any of the burials, and so dating was assigned, dubiously, on the basis of craniometrics, which, in comparison with British Iron Age and Anglo-Saxon collections, using the 'Coefficient of Racial Likeness', led to the conclusion that the Roche Court burials were of Anglo-Saxon type. This date was supported by Stone (1932, 575-6) who assigned a date to the burials on the basis of the amount of soil deposited per year, estimated to be half-an-inch per century, and by measuring the depth of soil between the burials and deposits of seventeenth-century gunflints. Using this unreliable method, Stone (1932, 568) suggested that these were the burials of Saxons or Jutes who were slaughtered by raiding Romano-Britons. However, Andrew Reynolds (2009, 148-49) suggested that these were the burials of later Anglo-Saxon judicial offenders; there is no independent dating evidence, but the similarities with other securely dated execution cemeteries supports the interpretation of Reynolds.

The osteological examination was performed by M.L. Tildesley in the 1930s, although not all of the bones were able to be exhumed from the earth to be sent for examination, presumably due to their state of preservation, which limited what could be learned from the skeletal remains (Stone 1932, 569, 587). The osteological analysis at this site is very good for its time, and it is made clear which skeletal elements are missing from those individuals who showed no trauma but where the head was not in anatomical position in the grave. Eleven possible decapitations were identified on the basis of the placement of the skull within the grave, but only five of these (skeletons 8, 14, 15, 17 and 18) could be confirmed through osteological analysis. Skeleton 8 (male, aged around 23 years) was buried prone with the limbs flexed in slightly

unusual positions, and the skull was found lying on its left side a short distance from the postcranial skeleton. A cut which almost removed the left mandibular ramus and a cut into the right gonial angle suggested that a blow from the right probably severed the head. A fracture along the mandible from the cut on the left side probably occurred the executioner removing the blade from the neck with some force (Stone 1932, 573, 588). Skeleton 14 (male, aged 25-30 years) had been badly disturbed by the burial of skeleton 15, although the left carpals, metacarpals and phalanges survived to suggest that the hands were crossed behind the back. One blow, probably that which severed the head, removed both mandibular angles, and another blow left a deep sharp force wound on the left ramus (Stone 1932, 574, 588). The skull of skeleton 15 (male, aged 35-40 years) had been placed at the left elbow, near the skull of skeleton 14, and the post-cranial skeleton was laid supine with the wrists crossed in front of the pelvis. Osteological examination suggested at least five attempts at decapitation were undertaken. Both transverse spinous processes had been removed from the third cervical vertebra, which remained articulated to the end of the spinal column. A blow, probably from the right, skimmed both transverse processes of the second cervical vertebra. It also seems that three separate blows, possibly from the left, impacted the right mandibular angle, removed the right mastoid, styloid process and mandibular condyle, and again struck the right mandibular angle from a slightly different orientation (Stone 1932, 574, 588-9). Although the executioner seems to have been unskilled, there is little doubt that the head was fully severed from the body.

Skeleton 17 (male aged 30-35 years) was positioned with the legs bent under so the feet were beneath the pelvis. The skull was placed on the upper right arm with three vertebrae still articulated. A fragment of the right transverse process has been sliced off the third cervical vertebra. This blow does not seem to have severed the head, but a second, more successful, blow fractured the axis and removed a fragment of the left mandibular angle (Stone 1932, 574, 589). The skull of skeleton 18 (of indeterminate sex, aged 40-45 years) was placed under the right knee. The axis and one other, unspecified, cervical vertebra were found on the pelvis. It was suggested this was the result of animal disturbance. It probably took two blows to fully sever the head of this individual. A fatal blow removed the spinous process of the atlas and the posterior arch of the axis, but would not have decapitated the individual as the blade seems to have become fixed in the base of the skull. Further blows removed a fragment from the inferior right edge of the mandible and impacted the right ramus, breaking off the condyle in the process. The hands were crossed at the wrists behind the back (Stone 1932, 574, 589).

There were apparently other examples of decapitation, but the vertebrae of these were not able to be excavated due to poor preservation. Skeleton 2 (male, aged around 26 years) was disturbed by the burial of skeleton 1, with the entire left side removed in the process. The head of skeleton 2

was separate from the body and found on the other side of skeleton 1, and the vertebral column ended in the fifth or sixth cervical vertebra. The cervical vertebrae were not able to be examined, so it was unclear whether the cranium had been separated by peri-mortem decapitation or by the burial of skeleton 1 (Stone 1932, 572, 587). The head of skeleton 4 (male, aged around 20 years) had been placed on top of the chest. The vertebrae were not able to be examined, so the decapitation could not be confirmed osteologically. A cut was present on the left side of the face ending between the eyes, which indicates some sort of violence around the time of death. This individual was also buried with the wrists crossed behind the back (Stone 1932, 572-3, 587). Skeleton 5 (male, aged 23 years or less) lay next to skeleton 4, also with the wrists crossed behind the back. Only the upper half of the cranium survived, placed just below the shoulders and facing the feet, but there was no osteological evidence for decapitation. Stone (1932, 573), argued that, since the cranium was surrounded by large flints it could not have been disturbed into that position but must have been deliberately placed there. However, the cranium seems to have been destroyed to a level beyond the consequence of decapitation, which seems to indicate later disturbance and re-burial. The cranium of skeleton 6 (male, aged 35-40 years) had been placed face down between the femora during burial (Stone 1932, 573). There was no evidence for decapitation on the cranium or two articulated vertebrae but Tildesley states that 'some would presumably have been found on the remaining cervical vertebrae', which implied that the vertebrae could not be exhumed for examination (Stone 1932, 588).

Skeleton 7 (male, aged 40-45 years) lay supine with the arms crossed in front at the wrists, and the cranium was found underneath the lower right leg. There was no evidence of decapitation, but only the first four vertebrae were sent for examination, so Tildesley presumed that it must have been severed lower down (Stone 1939, 573, 588). Skeleton 10 (male adult) was interred on his back, with the arms crossed at the wrists and the knees bent. The body had been covered with flint block and the head, severed at the second or third cervical vertebra, had been placed on top of the flints; however, neither the cranium nor the vertebrae were able to be examined osteologically.

Conclusions

This paper has provided a review of the evidence for execution in later Anglo-Saxon England, revealing that of the many prescribed methods of judicial punishment it is principally decapitation that can be identified osteologically. Decapitation is commonly inferred when the head is displaced within the grave or absent, but there is frequently evidence for disturbance of burials such that this is an insecure deduction. Osteological analysis is required, and evidence for cut marks needs to be identified, usually on the mandible or cervical vertebrae. Microscopy may help to refine whether decapitation was the manner of death as opposed to the head being removed after death –

for example, to display it – but such analysis is rarely undertaken. While the form of some burials (e.g. graves that are only long enough for a headless body; skulls placed out of anatomical alignment, or missing, when there is no indication of disturbance to the grave) appears to be quite convincing evidence that decapitation had taken place, it is not conclusive. Caution needs to be exercised when relying on older osteological reports, especially concerning their assertions about examples of decapitation that derive from the form of the grave. As we have seen, antiquarian reports do not always specify the details of the osteological analysis undertaken – or, indeed, if any expert analysis was undertaken – and subsequent examination of surviving archival reports has revealed that the published reports did not always accurately recount the specialist findings. Osteological methods have, moreover, changed extensively over the course of the last century and re-analysis of skeletal remains can be extremely informative. In some cases, however, such re-analysis reveals that fragile bone can become damaged while being curated, eroding away important osteological evidence for decapitation.

The recent discovery of an execution cemetery at Weyhill Road, Andover (Hampshire) supports our conclusions (Walker *et al.* 2020). The site was excavated by Cotswold Archaeology, and it was characterised by multiple burials, prone burial and indications of bound limbs. Osteological examination was performed on all 124 articulated skeletons discovered, but of these, only 9 had evidence for blunt-sharp trauma consistent with execution. Identification of a fractured cervical vertebra is highlighted as a rare example of evidence for hanging.

The paper has suggested that decapitation was infrequently used as a means of capital punishment. It has also revealed that decapitation was not undertaken in a uniform manner, as the resultant skeletal trauma is diverse. Moreover, in some cases, there were evidently multiple attempts made to achieve decapitation and the work of an unskilled executioner may be inferred. Together, this may suggest that decapitation was a deterrent to wrong-doing, used occasionally, with heads sometimes displayed as a visible manifestation of the fate that might befall others if they transgress.

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Figure 1: Sharp trauma to mandible (grey arrow), with blunt force radiating fractures continuing through the mandibular body (white arrow). Walkington Wold Skull associated with Skeleton 1. (Photograph © Jo Buckberry)

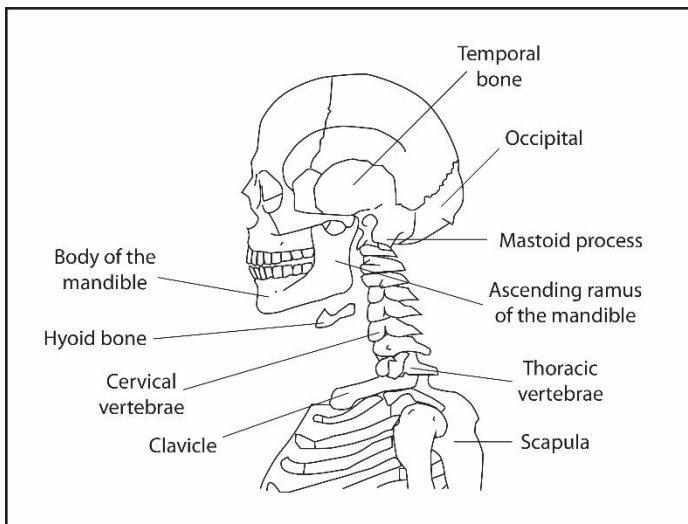


Figure 2: Bones and anatomical locations of the upper skeleton discussed in this paper (drawn by Dan Bashford)



Figure 3: Two sets of sharp force trauma to the first thoracic vertebra of Walkington Wold 7. It can be difficult to identify striations on the areas of cut trabecular bone (Photograph © Jo Buckberry)



Figure 4: Sharp force trauma to the clavicle of Old Dairy Cottage 575 (Photograph © Jo Buckberry).