

JOHN HURST DISSERTATION PRIZE 2012

In 2004, the *Medieval Settlement Research Group* announced the launch of a prize, set up in honour of the late John Hurst, who did so much to promote the field of medieval archaeology and in particular the study of medieval settlement. To encourage new and young scholars in the field, an annual prize of £200 is offered to graduate students for the best Masters dissertation on any theme in the field of medieval settlement and landscape in Britain and Ireland (c. AD 400–1600). Directors of Masters courses in Archaeology, English Local History, Landscape Studies and related fields are invited to submit high-quality completed dissertations for consideration by the MSRSG Committee. For the 2012 award, we are delighted to announce that the prize winner is Anna Fotaki, whose dissertation as part of her MSc at the University of York comprised a detailed osteoarchaeological analysis of two sets of Anglo-Saxon burials in Cleveland, exploring in particular the status of non-adults. Below Anna presents an extended summary of her dissertation:

Brief Lives: the non-adults from two neighbouring Anglo-Saxon cemeteries in Norton, Cleveland

By ANNA KATERINA FOTAKI

Introduction

This study set out to compare the non-adults from two neighbouring Anglo-Saxon cemeteries in Northern England: the pagan-period burial ground of Norton East Mills and the early Christian Norton Bishopsmill School. In particular, this project aimed to highlight any noticeable differences in the number of non-adults present, in the average age at death or in prevalence of disease between the two cemeteries, and to compare the data obtained from the Norton groups to other, contemporary Anglo-Saxon cemeteries. From a broader perspective, this analysis hoped to identify cultural or mortuary biases within the assemblages and to question and expand our understanding of the ‘brief lives’ of Anglo-Saxon children within these communities.

It is generally argued that the change of religion following the re-introduction of Christianity (both from Ireland and from the Continent) from the late 6th century across Anglo-Saxon England brought about changes in social organisation and certainly in mortuary practice (Chaney 1970; Crawford 1999, xii; Daniels and Loveluck 2007, 186; Lee, 2008, 31; Lewis-Simpson 2008, 2; Morris 1989). Previous analysis of Anglo-Saxon cemeteries has noted evidence for the apparent co-existence of both religions (in the so-called ‘final phase’ cemeteries) before we register the eventual abandonment of pagan traditions in the second half of the seventh century (Blair and Keynes 2003; Blair 2005). However, emphasis has been generally placed on the adults in these burial communities and non-adults, often under-represented, are far less explored. For this reason there have been very few studies which consider how and to what extent child rearing and attitudes towards the disposal of a deceased child altered in the Conversion and Christianisation periods (Lee 2008, 36; Lucy 1994, 22).

This thesis hoped to give better ‘voice’ to this rather invisible pre-adult population through detailed analysis of the burial data from these two important burial sites at Norton. Age assessment was achieved using

known osteological parameters of epiphyseal fusion, bone length and tooth development. The remains were then analysed for evidence of disease, trauma, dental pathologies and congenital disorders, and were also given a score for preservation and completeness. Finally, the data obtained were compared to other non-adult assemblages from contemporary cemeteries in the UK.

The Norton Cemeteries

Discovered in 1982, the pagan necropolis of Norton East Mills (hereafter ‘NEM’) is considered to be a complete and well-furnished Anglo-Saxon cemetery, dated as in active use between AD 550–650 (Sherlock and Welch 1992). Analysis of the skeletal remains by the author identified 46 of the 120 exhumed individuals as non-adults (compared with the excavation record of 38 under the age of 18).

In 2003 excavations just 250 metres west of NEM brought to light the early Christian Anglo-Saxon cemetery of Norton Bishopsmill School (‘NBS’). Burial activity has been set to between AD 650 until 910, after which it is thought that the community burial ground moved to the area of the medieval church further west (Johnson 2005). The excavation record for this assemblage reported that 12 of the 100 individuals exhumed were under the age of 18, but close analysis of the skeletal remains in fact located only ten non-adults in this assemblage. It is important to record that NBS was only partially excavated, thus preventing a full understanding of the community’s profile, and also thereby impairing any comprehensive comparison.

No settlement has yet been traced and linked to either of the two cemeteries, and it is unknown whether these two cemeteries represent a single local population with a change of religious practice after the mid-7th century, or denote two separate communities – such as a local and an incoming immigrant group, or even a combination of both cases; nor can we say if the burial population derived from various scattered farms and hamlets in the

zone rather than a nucleated community. What can be stated, however, is that the territory of Norton must have felt some of the wider, political and military as well as religious upheavals that characterised Northumbria across the 6th to 9th centuries AD, with likely significant changes in demography, economy and lifestyle (Johnson 2005, 18; Welch 1992). At the same time, however, the two cemeteries here, and their likely interrelationship, might be taken as a sign of relative stability and continuity in and around Norton in Cleveland.

Analysis of the burial groups

In the earliest stages of my study of the two Norton cemeteries, it became quickly apparent that poor preservation and incompleteness was high in both assemblages, which would significantly impact observable data (see Fig. 1).

As shown by the demographic age-spread depicted in Table 1, both cemeteries evidently also had a significant underrepresentation of children under the age of five. This paucity of younger children is not specific to the Norton sites and has plagued the non-adult archaeological record across the world, with the Anglo-Saxon mortuary record being no exception (Crawford 1993, 84; Hirst 1985, 34; Sofaer-Derevenski 1994, 8; Lewis 2007, 20; Lucy 1994, 26). As NEM is fully excavated, the lower numbers of examples should signify that the younger individuals are likely to be interred outside the community cemetery; rather than assume that their remains were lost during excavation

and later curation. Interestingly, NEM juveniles (aged one to five years) were found in primarily in one area of the cemetery, in what is assumed to be a designated family plot (Stoodley 2011, 654). This could mean either that this family was inclusive of younger children or that this was in fact the allocated burial area for all non-adults of this age group. Since the early Christian NBS is only partially excavated, data are slighter, which means no significant pattern can be deduced. As it is not known whether NBS is a final phase or a purely Christian cemetery, one can only speculate as to the fate of the younger non-surviving members of the community. Potentially, if further excavations are undertaken it may be possible to revisit this question here.

Analysis also revealed that the peak of age at death in each non-adult assemblage coincides roughly with the suggested age of transition to adulthood during the Anglo-Saxon period (i.e. between 10 and 14 years of age) (Crawford 1999, 155; 2000; Stoodley 2000, 461) – see Fig. 2. This may be a sign that this time was particularly perilous with the assignment of new gender and age-related roles, as might be supported by the presence of adult grave goods. However, this peak should be viewed in the context of the ‘missing babies’ – namely in the significant absence of younger non-adults, particularly infants. Nonetheless, at least for NEM, this period of increased mortality coincides with the eruption and natural shedding of teeth, and thus at a time of increased infection risk (Lewis 2007).

From both non-adult populations at Norton, the prevalence of disease was not significantly different from

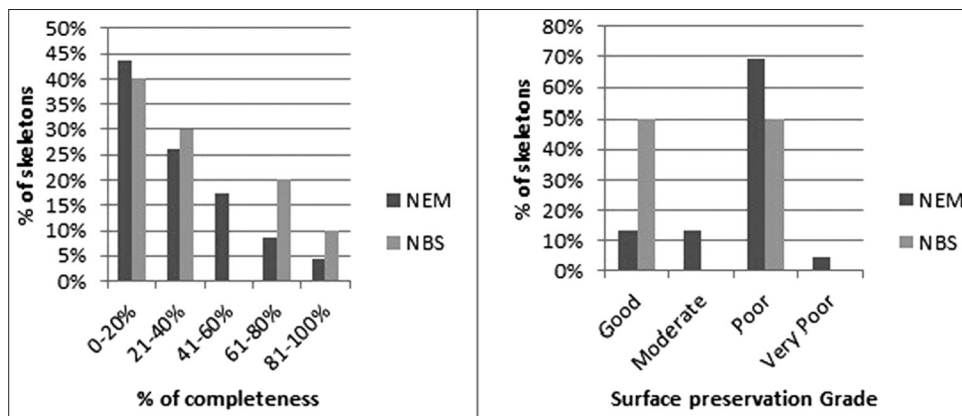


Figure 1 Completeness and surface preservation for the non-adults found in NEM and NBS.

Table 1 Number of individuals found for each age group. %N is the percentage of each age group from the total number of non-adults from each assemblage. SD is the standard deviation

Age	Norton East Mills (NEM)				Bishopsmill (NBS)			
	N	%N	Mean	SD	N	%N	Mean	SD
Neonates 0–1 month	0	0			0	0		
Infants 1 month < 12 months	1	2 %	0.7	0	0	0		
Young Juveniles 1 year < 5 years	7	15%	2	1.14	1	10%	3	0
Mid Juveniles 5 years < 12 years	23	50%	8.24	1.14	4	40%	8.25	1.89
Adolescents 12 years < 15 years	6	13%	13	0.55	2	20%	14.25	0.35
Late Adolescents 15 years < 18 years	9	19 %	16.1	1.17	3	30%	15.8	0.79
TOTAL	46		9.52		10		11.55	

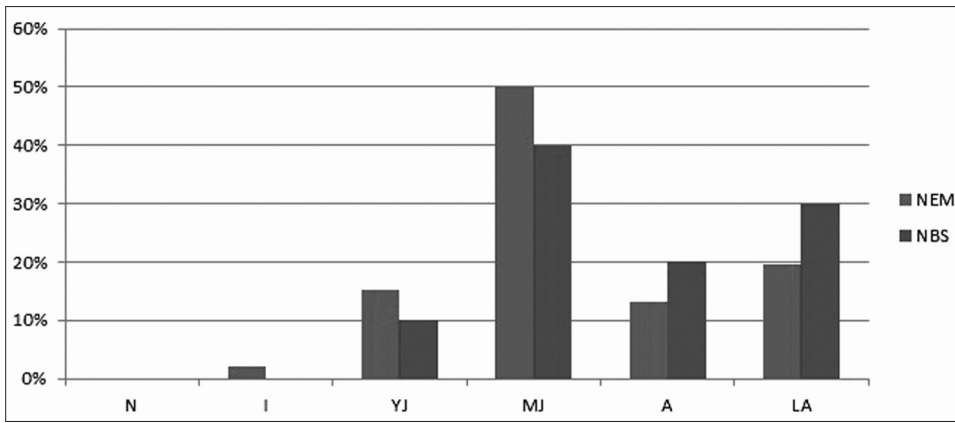


Figure 2 Frequencies of age-at-death for each age group, out of the total number of non-adults from each population.

that to be expected from a small agricultural community of the time. Evidence of trauma was low, as were the levels of infection and dental hygiene that characterise a rural diet. Metabolic imbalances in the form of *cribra orbitalia* were also noted in a few individuals from NEM collection, which imply that dietary stress, at least during breastfeeding were occurring, at levels compatible with other contemporary cemeteries. Otherwise, the growth rates of non-adults from both Norton cemeteries were very similar, suggesting that the quality of life for the non-adults was comparable. One example of the quality of life led by a non-adult as reflected in the dental record is shown in Fig. 3.

However, it was evident that a higher prevalence of the stress indicator of dental enamel hypoplasia (DEH) existed in the NBS cemetery (Fig. 4). On the one hand, this could be taken as a sign that the Christian community here was subjected to more stressful incidents compared to the earlier, pagan population group – connected more to upheavals in the Kingdom (such as economic pressures) rather than simply the act of conversion and being Christian. On the other hand, this higher prevalence could signify that the Christian population was more adept at dealing with stressful incidents, which they survived successfully, either through better care for the sick, or on account of better living conditions. Calculus levels were similar for both

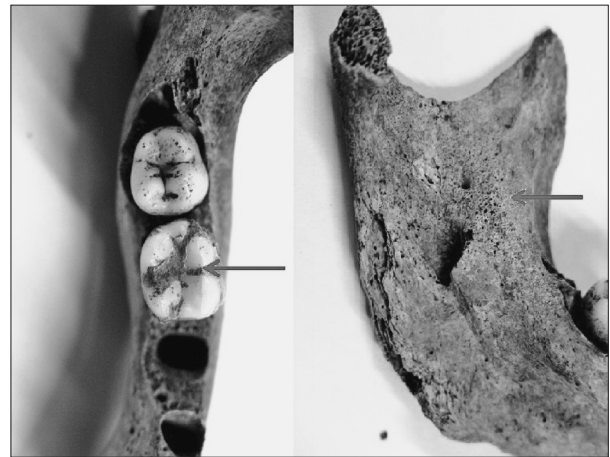


Figure 3 A non-adult from NBS with evidence of infectious pitting on the mandible and calculus deposits on the occlusal surface of the teeth from the same side. The presence of inflamed bone at death and evidence of non-mastication on the same side of the mouth are quite likely interlinked.

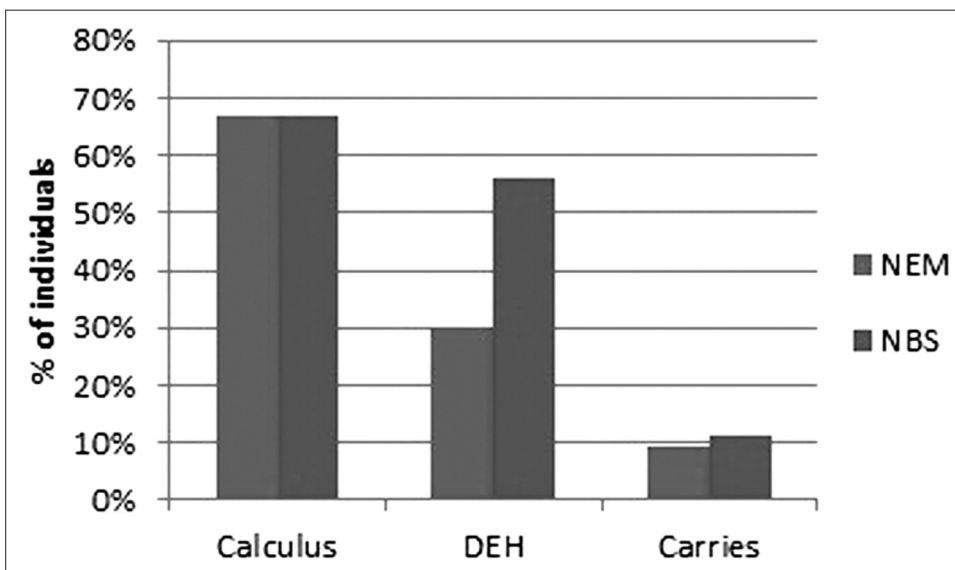


Figure 4 Percentage of individuals with observed dental pathologies.



Figure 5 Abnormal pitting indicative of an actinomycosis infection found on a non-adult from NBS.

NEM and NBS (Fig. 4), which conceivably points to a similar dietary pattern for both pre- and post-conversion cemeteries.

What we can term as ‘Care in the community’ can be discerned in the burial of a few sick non-adults in the NBS cemetery. It is presumed that Christianity was inclusive to the infirm (Crawford 2010; Lee 2008, 34) and in our sample, this could perhaps be seen with the inclusion of an evidently poorly child during the later phase of the cemetery: this non-adult (currently unsexed until genetic analysis takes place) appeared to have had severe infectious lesions along its spine and sacrum, possibly indicative of an actinomycosis infection which would have had a deteriorating effect on the child’s quality of life and would have required significant care (see Fig. 5). Since this was one of the four skeletons used for scientific dating, we know that this individual lived during the latter part of the use of the NBS cemetery, before the move to the nearby parish churchyard (radiocarbon dates between AD 710–910, AD 920–960) (Johnson 2005, 111).

Non-adults with physiological and congenital impairment were noticeably absent. As the NEM cemetery is thought to be completely excavated, this absence may be due to differential or selective treatment of those born with congenital abnormalities (cf Crawford 2010). Multiple burials were present in the NEM cemetery, most containing the remains of at least one non-adult. Interestingly, there was a multiple burial containing two non-adults each with noticeable skeletal pathologies on the spine as well as a number of double burials with two non-adults, which is a relatively rare occurrence in pre-Christian Anglo Saxon mortuary practice (Crawford 2007, 85).

Conclusions

In summary, it appears that the two non-adult populations of Saxon Norton had similar dietary patterns, witnessed

few traumatic events and those with evidence of disease were included in the community cemeteries, indicating care for infirm children. Although poor preservation and partial excavation affected the results, analyses overall revealed that in both cemeteries the age of transition to adulthood showed the highest morbidity, while children under five years were under-represented. Stress indicators were higher for the Christian cemetery, suggesting either greater risk exposure or better risk-coping.

Among the future research directions that could benefit non-adults studies, the use of DNA in particular has great potential. DNA analysis, which is becoming increasingly refined and less destructive, would allow for accurate sexing (summary in Brown and Brown 2011), which, in the case of the two Norton cemeteries, would be of high value to examine if there is a gender bias in the non-adults that were included in the community cemeteries. Family links can also be established to certain degree via genetic markers known as ‘short tandem repeats’ (STRs) as well as maternally-inherited mitochondrial DNA (Brown and Brown 2011; Rösing *et al.* 2007; Zeder *et al.* 2006). These can be used to identify whether the assumed family plots of NEM are actually related, and could also explore the possible relationship of the individuals found in double and multiple burials. Moreover, stable isotope analysis would assist in better understanding of weaning ages, child-rearing practices, and coming-of-age changes in dietary patterns, and whether these differed between pagan and early Christian communities (Richards *et al.* 2002; Mays 2010). Future analysis of adults and non-adult members of the two Norton assemblages would be beneficial, particularly with regards to stress indicators and dental health. It would also be important to seek to refine the chronology of NBS, as the current estimate covers a very wide timespan (AD c. 650–910), during which dietary and social habits, stressful incidents (famines, disease, etc.) and mortuary attitudes changed.

In conclusion, it can be stated that the data obtained from the non-adults of both assemblages do not differ dramatically from other Anglo-Saxon collections. However, both Norton cemeteries offer great future potential for analysis of the skeletal remains and a unique opportunity to study non-survivors of two communities of successive time periods in the same locale; ideally of course we should be able to investigate the homes and farms of these people, to see how their living spaces may have evolved as their society and health evolved, but unfortunately no settlement as yet has been found to link in to either cemetery. As interdisciplinary research gains momentum new insights will be gained into the past quality of life. Whether or not this did improve for the Norton non-adults during this period of religious change remains unresolved. What my study has hoped to show is that these burial groups were made up of people of all ages, and in these groups, children, irrespective of their brief lives, need to be viewed as independent agents of their communities, and as non-adult studies become routine, valuable insights can be gained into the lives of Anglo-Saxon children. Indeed, burial data are a vital window into these non-adults, since children are figures still barely perceptible in excavated settlement sites.

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