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Who Gets Buried with a Bear?

The Inclusion of Wild Animals in the Cremation Rite of Eastern England and Northern Germany (4th to 8th Centuries CE)

ABSTRACT

Cremation was the dominant funerary rite amongst Germanic groups on the European continent before the coming of Christianity (4th to 8th centuries CE). Likewise, it was also a prominent mortuary tradition in early medieval England (5th to 7th centuries CE). One of the most distinctive customs amongst cremation practicing groups was the provision of both domesticated and wild animal offerings at the funeral. Bear phalanges are found in a number of cremation burials in both regions. We have analysed the association between bear bones and the age and sex of the deceased, as well as relationships with pyre- and grave-goods on a site and inter-site level. We also examine other wild animals that have been identified from cremation burials, such as beaver and osprey, and discuss why these species were selected. Finally, we consider the origin of this burial rite, and the sources of these animals, as some species, for example the bear, were probably extinct in England at this time.

KEYWORDS

Cremation / funerary rites / identity / wild animals / bears / *Ursus arctos* / eastern England / northern Germany / early medieval Period / Migration Period

Introduction

The use of cremation as a mortuary rite has a rich history throughout much of Europe. Germanic groups on the continent followed this funerary practice up to the 8th century CE. Due to the influence and spread of Christianity, cremation fell out of favour and inhumation became the dominant mortuary tradition (Ludowici 2019; Steuer 2021, 611. 832–988). Northernmost Germany (Schleswig-Holstein) has yielded several sites with more than 1,000 cremation burials from the late pre-Roman Iron Age to the middle of the 1st millennium CE (c. 100 BCE to 500 CE). In contrast, only 56 inhumation burials (dating from c. 350 to 500 CE) are known from this area (Bemmann 1999; see also Abegg-Wigg 2014, on the outstanding finds from Neudorf-Bornstein). For the northern part of Germany, the bi-ritual cemeteries of Liebenau (Nienburg/Weser county, Lower Saxony; late 4th to mid-9th century CE) and Issendorf (Harsefeld, Stade county, Lower Saxony; late 4th century to 530/540 CE) are of particular importance. Liebenau is a notable site as there is surviving evidence to suggest that funerary pyres were constructed and lit in the cemetery. The cremated remains were left *in situ* at the pyre site and were subsequently covered with sand or earth. So far, Liebenau is the only site from northern Germany where this has been observed archaeologically (for further details on funeral customs at Liebenau and Ossendorf, see Häßler 2000; 2001). Cremation was also a majority rite in parts of early medieval England (5th to 7th centuries CE). This mortuary tradition had been followed in the earlier Roman period (Toynbee 1971; McKinley

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2000), though there were distinct differences in the rites conducted, for example the inclusion of domesticated and wild taxa in the early medieval period (Worley 2008, 416–417). This led Worley (2008, 411) to suggest that there was no direct continuation of the cremation rite between the Roman and early medieval periods in England, but rather a new practice had been adopted. Such a change may be attributable to the migration of Germanic groups to eastern and southern Britain who brought with them their own customs and mortuary practices (Hills 1988; Squires 2016; Gretzinger et al. 2022). Cremation was mainly practiced in this region from the 5th to 6th centuries, though it did continue as a less prominent rite into the 7th century CE (Squires 2024). During the same period the inhumation rite was also followed across eastern, south-eastern, and central England, and became more dominant over time (**fig. 1**). Despite being restricted to a more limited geographic area than the inhumation rite, many of the cremation-dominant cemeteries totalled several hundred deposits. This is evident from sites at Spong Hill (Norfolk), Cleatham (North Lincolnshire), Elsham (North Lincolnshire), and Sancton I (East Riding of Yorkshire), which are more reminiscent of the large urnfields seen on the continent than the inhumation-dominant cemeteries in England (Squires 2016).

Archaeologists have long recognised the similarities between material culture from contemporary cemeteries in England and on the continent (e. g. Myres/Southern 1973, 29; Hills 1998; Williams 2005a; Hills/Lucy 2013; Martin 2015). Many studies in the past have primarily focused on identifying artefact typology and chronology, with less attention paid to establishing connections between the urn's occupant and the associated material culture (Richards 1987). Squires (2016) identified similarities and differences between the cremation rite in early medieval England and contemporary sites in Germany. At the broadest level, cremated human bone was interred in pottery cinerary urns alongside pyre- (burned) and grave- (unburned) goods and cremated animal bone, though regional differences were apparent. Of particular interest is the mean number of cremation burials containing animal bone from early medieval England (29 %), as the figure is greater than that from Migration Period Germany (7 %) but lower than that from late Roman Iron Age Germany (74 %; see Squires 2016). While based on a relatively small sample of late Roman Iron Age cemeteries

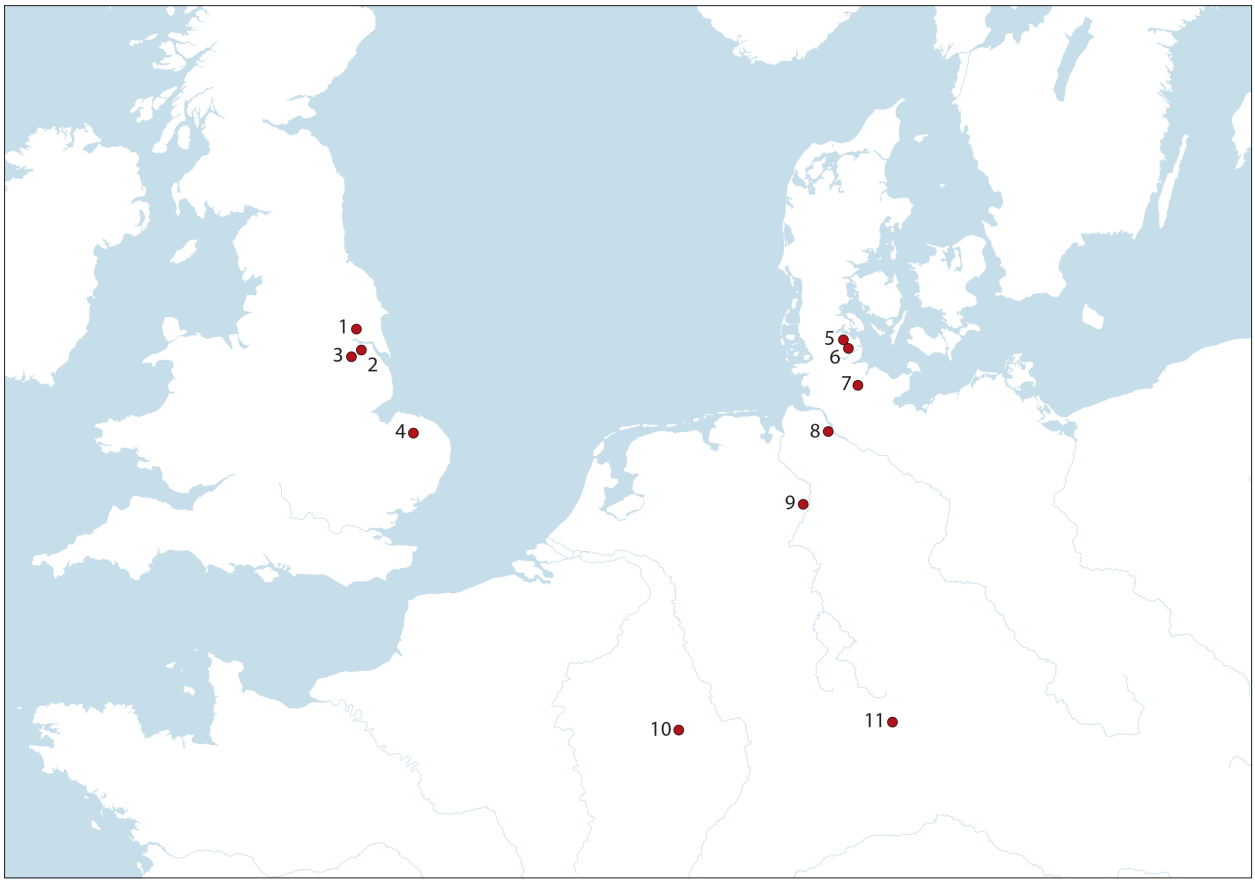

Fig. 1 Early medieval cremation-dominated cemeteries mentioned in the text. **1** Sancton. – **2** Elsham. – **3** Cleatham. – **4** Spong Hill. – **5** Süderbrarup. – **6** Sörup. – **7** Bordesholm. – **8** Issendorf. – **9** Liebenau. – **10** Schankweiler. – **11** Stettfeld. – (Map M. Bolte, LEIZA).

(n = 4), Squires' (2016) findings would suggest that the tradition of cremating and burying animal remains with humans in early medieval England originated on the continent and was introduced by migrants who continued to practice this rite. In contrast, this custom decreased in frequency in Migration Period Germany, perhaps due to changing ideological beliefs, the socio-economic implications of cremating animals, and/or shifts in the socio-political landscape (Squires 2016).

Animals domesticated for food (e. g. cattle [*Bos taurus*], sheep/goat [*Ovis/Capra*], pig [*Sus scrofa*]), companion animals (horse [*Equus caballus*], dog [*Canis familiaris*]), as well as wild animals (e. g. brown bear [*Ursus arctos*], fox [*Vulpes vulpes*], beaver [*Castor fiber*], hare [*Lepus* sp.], and birds of prey) are identified in cremated bone deposits in early medieval England (Bond 1993; 1994; 1996; Worley 2008), as well as in cremation deposits in the central northern part of Europe from the late Roman Iron Age to early medieval periods (c. 300 to 700 CE). Most examples contain only one or two cremated non-human taxa, but there is evidence to suggest that some deposits held up to four or five species (Worley 2008, 410). The quantity and provision of a range of taxa may have been related to the deceased's identity and social standing (Squires 2011). However, while the bones of animals from some sites have been studied and their inclusion in funerary customs interpreted in terms of their roles in society and cosmology (Wahl 1988a; May 1994; Schönfelder 1994; Crabtree 1995; Bond 1996; Williams 2005b; Bond/Worley 2006; Lee 2007; Pluskowski 2010; Poole 2013; 2015; Squires 2013; 2016; Beermann 2016), there is less work focussing specifically on the wild animals amongst cremation-practicing groups (exceptions include Schönfelder 1994; Bond 1996; Bond/Worley 2006; Pluskowski 2010). Of the wild fauna included in this mortuary rite, bears have received the greatest amount of attention. In England, bear remains (specifically, their phalanges) found in cremated bone deposits are always burned (**fig. 2**; see Bond/Worley 2006; O'Regan 2023), while in Germany long bone and skull fragments have also been found alongside claws, for example in grave S13/B1 from Liebenau (Häßler 1990, 38–40; May 1994, 183).

Fig. 2 Cremated bear phalanges from burial MT89BLG at Cleatham, North Lincolnshire, England. – (After Squires 2011).

In the past, explanations for the inclusion of bear remains in the cremation rite have been wide-ranging, from interpreting their presence as representing protective entities of the young in the afterlife (Meaney 1981) and other roles they held within ideological beliefs (Bond/Worley 2006), to a means of displaying mortuary identity (Pluskowski 2010) and social standing (Crabtree 1995; Pluskowski 2010). The overarching aim of this chapter is to further our understanding of the provision of wild animals, particularly bears, in early medieval cremation burials in England and northern Germany, given the similarities seen in funerary rites between the two regions. First, human demographic associations (biological age and sex) with remains of bears and other wild animals will be established to determine whether their provision was influenced by these attributes. Associations will also be drawn between the inclusion of wild animals and pyre- and grave-goods at a site and inter-site level. Secondly, we will consider why specific species were selected and included in the cremation rite. Finally, the source of these animals will be addressed to explore the reasons for their inclusion at the funeral.

The Sites

Site reports were collected for cremation and mixed-rite cemeteries of the appropriate date in England and northern Germany (**tab. 1**). The dataset for this study was then refined by determining which sites contained animal bones, and whether or not these had been analysed. If they had been analysed, the species lists were examined to establish if they contained wild taxa. After this process of elimination ten sites remained – four from eastern England and seven from northern Germany (**tab. 2**). Records of domestic dog at these sites were also collected and considered in analyses, as the dog is a companion animal, occupying a different social space to that of the wild and other domesticated animals within these assemblages (Worley 2008). Dog is included here to determine whether it yielded any patterns that were different to those of wild taxa. It must be highlighted that two German sites (Liebenau and Süderbrarup) have a broader chronological range than some of the other cemeteries examined, but

Site	Period	Animal bone present	Animal bone analysed	Wild animal bone present
Schankweiler	Roman	X	X	X
Stettfeld	Roman	X	X	
Süderbrarup	Late pre-Roman to Migration	X	X	X
Bordesholm	Migration	X		X
Gettorf	Migration	X		
Schmalstede	Migration	X		
Issendorf	Migration	X		X
Liebenau	Late Roman to early medieval	X	X	X
Soerup II	Migration	X	X	X
Quarnbek	Migration			
Sancton I	Early medieval	X	X	X
Spong Hill	Early medieval	X	X	X
Elsham	Early medieval	X		X
Cleatham	Early medieval	X		X
Mucking	Early medieval	X	X	
Newark	Early medieval	X	X	
Rayleigh	Early medieval	X	X	
Alwalton	Early medieval	X	X	
Snape	Early medieval	X	X	

Tab. 1 All cremation and mixed-rite cemeteries considered for inclusion in this study, with the presence of non-human taxa, wild or domestic, indicated where these data are available. X = present; blank cell = absent.

Site	Period	Total number of burials	Reference
Sancton I	Early medieval	90-95	Bond 1993
Elsham	Early medieval	564	Squires 2011; 2013
Cleatham	Early medieval	979	Squires 2011; 2013
Spong Hill	Early medieval	2,384	Bond 1994
Bordesholm	Migration	23	Wahl 1988a
Soerup II	Migration	33	Wahl 1988a
Schankweiler	Roman	89	Wahl 1988a; 1988b
Stettfeld*	Roman	318	Wahl/Kokabi 1988
Liebenau	Late Roman to early medieval	522	Häßler 2001
Süderbrarup	Late pre-Roman to Migration	1,234	Bantelmann 1988; Wahl 1988a
Issendorf	Migration	3,279	Caselitz 2005

Tab. 2 All 4th–7th-centuries CE cemeteries with evidence for wild animal remains and anthropological data included in this study. Note that we have used »number of burials« to indicate the size of the cemetery – this is not equivalent to the minimum number of individuals, owing to the presence of multiple burials. *Stettfeld has been included in this table due to the identification of domestic dogs. – (After Squires 2016).

the burials containing the remains of bear and other wild animals mainly belong to the period from the 4th to mid-7th century CE and are thus more or less contemporary with the finds from England (**tab. 2**). It should also be noted that the publications utilised in this research contained variable amounts of information relating to the faunal remains identified from each burial, for example at Elsham and Cleatham (Squires 2011; 2013) a comprehensive zooarchaeological assessment of the animal bone has yet to take place, whereas detailed reports have been compiled for Sancton I (Bond 1993) and Spong Hill (Bond 1994).

Where bear remains were included in multiple burials, these were excluded from statistical analysis (following Squires 2013, 161), as it is not possible to establish which human was associated with these offerings; this also applies to the examination of pyre- and grave-goods. As we were interested in general biocultural trends in connection with wild animal remains, »subadult« (0–18 years) and »adult« (19+ years) age groupings were used. The biological sex categories employed in this study (female, probable female, indeterminate, probable male, male) follow those employed by McKinley (1993; 1994) and Squires (2012). Possible sex was assigned to a number of individuals in the original publications, but these were excluded from this study; again, this was to avoid reporting inaccurate associations between sex of the deceased and animal species. Given that sex cannot be assigned to subadults using osteological methods, these individuals were excluded from any analyses that focused on the sex of the deceased and the funerary offerings they were buried with. All statistical analyses were carried out using IBM SPSS 28.

Results and Discussion

Species Selection at the Funeral

In total, 63 burials (including four multiple burials) from the cemeteries examined contained the remains of wild animals. The species observed included brown bear (n = 28; 44 %), bird (n = 21; 35 %), deer (n = 9; 14 %), fish (n = 3; 5 %), fox (n = 3; 5 %), hare (n = 3; 5 %), dog/fox/wolf (n = 2; 3 %), beaver (n = 1; 2 %), boar (n = 1; 2 %), marten (n = 1; 2 %), and oyster (n = 1; 2 %). Dog was present in 44 burials, but only co-occurred with wild taxa in three instances. Within the bird category, shelduck, osprey, unidentified raptor, and goose (which could be wild or domestic) were noted, though most birds were not recorded to taxon. **Table 3** shows a higher number of burials containing wild animal remains at sites in England than in Germany. This pattern was also observed by Squires (2016) when examining faunal remains more generally. It is interesting to note that all taxa in **table 3** were extant members of local fauna in both Germany and England, with the exception of the bear, which was extinct in England by this period (Pluskowski 2010; O'Regan 2018). In some cases, it is difficult to establish whether species were from England or overseas. For example, the marten bone mentioned in this study was recorded as *Martes* sp. Europe has more marten species than England, so it may represent an unknown taxon for England, such as the beech marten (*Martes foina*), though it could also be from the native pine marten (*Martes martes*), found in Britain from the Mesolithic onwards (Yalden 1999, 86–87). However, without further information no conclusions can be drawn about the source of these remains.

Biocultural Trends

Age Associations

The examination of these species in subadult and adult graves revealed patterns (**fig. 3**) seen elsewhere at individual cemeteries (e. g. Squires 2011). It is clear that there is a preference for the placement of bear, bird, deer, and dog in adult burials. Some species were found in low numbers and thus no clear conclusions can be drawn in such instances (e. g. beaver, boar, marten). Interestingly, Cleatham was the only site where bear remains were found with subadults (n = 3). As discussed elsewhere (e. g. Richards 1987; Squires 2011; 2014; 2016), the provision of specific faunal offerings and, indeed, pyre- and grave-goods as well as cinerary urns, may be dictated by the deceased's stage within the human lifecycle and their associated social identity and roles held within the household and wider community. In rarer cases, young individuals were buried with assemblages more akin to those of adults, including the provision of wild animals. This practice has been interpreted in different ways. Squires (2014), for instance, has suggested that social standing of individuals was influenced by their kin group. Crawford (2000), on the other hand, postulated that wealthier grave assemblages may have been the result of grieving kin

Site	No. of Burials	Bear	Beaver	Bird	Boar	Deer	Dog	Dog/Fox/ Wolf	Fish	Fox	Hare	Marten	Oyster
Cleatham	20	10	0	0	0	0	11	0	0	0	1	0	0
Elsham	11	6	0	1	0	0	4	0	0	0	0	0	0
Sancton I	5	2	0	0	0	3	3	0	0	1	0	0	0
Spong Hill	53	4	1	15	0	6	23	1	2	2	1	0	0
	England	**22**	**1**	**16**	**0**	**9**	**41**	**1**	**2**	**3**	**2**	**0**	**0**
Bordesholm	1	0	0	0	0	0	0	0	1	0	0	0	0
Issendorf	3	0	0	0	1	3	0	0	0	0	0	0	0
Liebenau	11	4	0	3	0	0	1	0	0	0	0	0	0
Stettfeld	2	0	0	0	0	0	2	0	0	0	0	0	0
Schankweiler	1	0	0	0	0	0	0	1	0	0	0	0	0
Sörup II	2	0	0	2	0	0	0	0	0	0	0	0	0
Süderbrarup	5	2	0	0	0	0	0	0	0	0	1	1	1
	Germany	**6**	**0**	**5**	**1**	**3**	**3**	**1**	**1**	**0**	**1**	**1**	**1**
	Total	**28**	**1**	**21**	**1**	**12**	**44**	**2**	**3**	**3**	**3**	**1**	**1**

Tab. 3 Number of burials from each of the sites examined in this study that contained human bone as well as remains of wild animals and domestic dog.

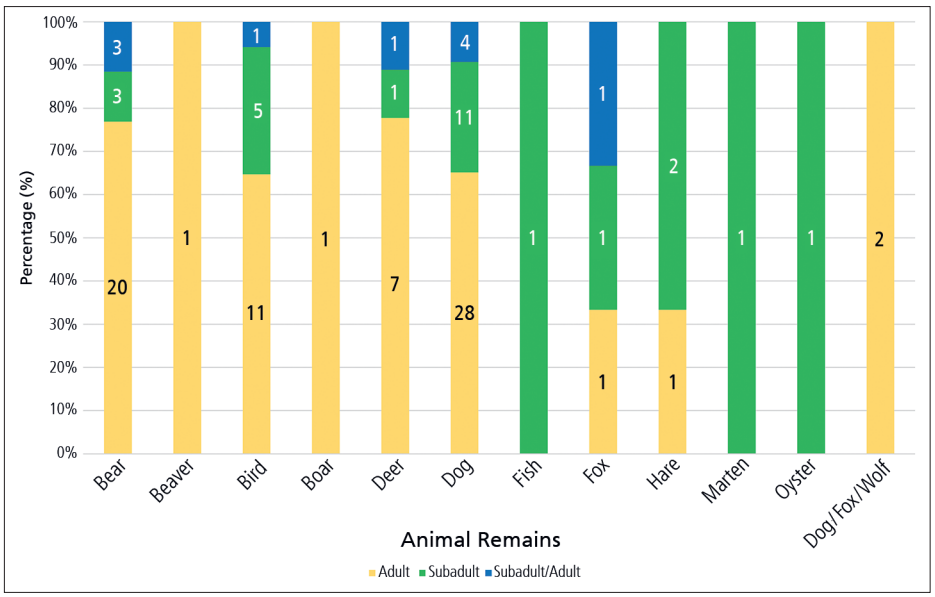

Fig. 3 Total number and percentages of wild animals and domestic dog found in the cremation burials of subadults (0–18 years), adults (19+ years), and subadults/adults (where individuals could not be assigned to a specific age category) from England and Germany. – (Graphics K. Squires).

wishing to communicate their loss, whereas Meaney (1981) has explored the amuletic meaning of the provision of certain domesticates and wild animals. In the case of Cleatham, it seems likely that these non-adults were offered bear remains at the funeral due to localised customs (see Squires 2016 for further examples and discourse around local traditions).

Sex Associations

There are several difficulties when attempting to identify sex-related trends in the cremation rite. Firstly, sexually dimorphic traits rarely survive the cremation process, so very few individuals from cremated bone deposits are assigned biological sex (this point is discussed in more depth in Squires 2012). In the present study, only a small number of individuals whose biological sex could be estimated were found with the remains of wild fauna (n = 33). Here, it must be highlighted that the total number of individuals assigned to a biological sex category excludes those from multiple burials where sex was determined, as it is not possible to ascertain which individual was associated with each funerary offering. The second difficulty is that faunal remains need to have survived and the assemblages must have been identified to species. **Figure 4** highlights the number and frequencies of wild animals and domestic dog found with humans where sex could be determined. There is a greater proportion of females than males, which is to be expected given the trend frequently observed from early medieval cremation cemeteries (see Squires 2012 for further discussion). Overall, there are no clear patterns in the data which, in

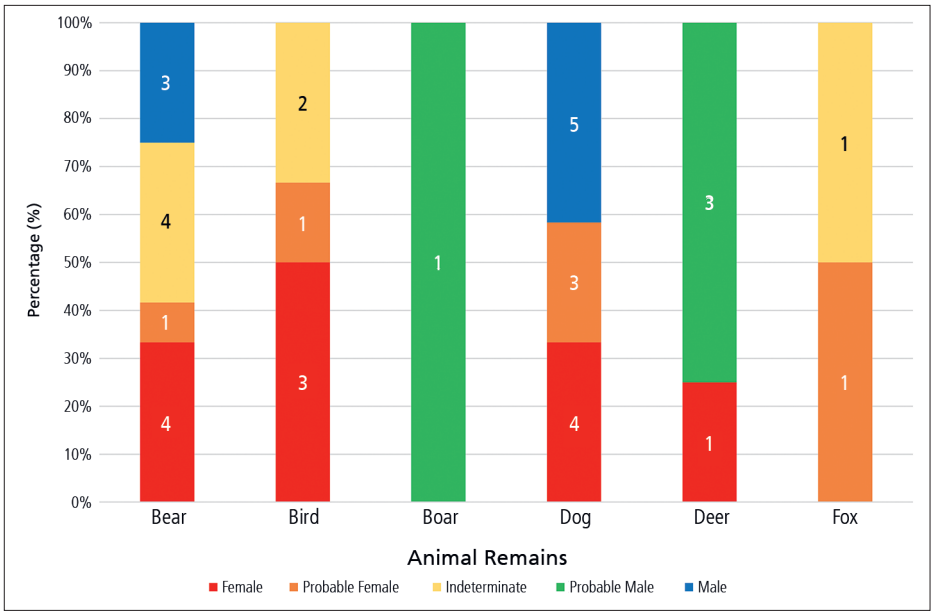

Fig. 4 Total number and percentages of wild animals and domestic dog found in the cremation burials of individuals assigned to a biological sex category. – (Graphics K. Squires).

part, may be due to the small sample sizes. Bear and bird were found in slightly higher numbers with females, whereas deer and dog were more frequently associated with males. In contrast to these results, multiple authors have stated that bears are more frequently associated with males on the continent (Holck 1986; McKinley 1994; Schönfelder 1994). On the whole, there is a relatively even proportion of wild animals in male and female burials, possibly indicating that sex was not a deciding factor when gifting fauna at the funeral. However, without increasing the sample size it is not possible to gain a true understanding of the provision of wild animals in male and female graves during this period in England and Germany.

Associations with Pyre- and Grave-goods and Domesticates

Principal Component Analysis (PCA) was carried out to establish whether there were any associations between wild animals, domesticates (e. g. horse, cattle, pig, sheep), and pyre- and grave-goods (**fig. 5**). Overall, the majority of the data cluster around the centre, though there are some outliers. Of particular interest is the relationship between deer and sheep. Deer was recorded from Spong Hill; in each case (n = 6) this taxon was found with sheep, and in four of these instances it was also associated with horse (highlighted in blue in **fig. 5**). Deer was also found with cattle and pig at the same site. McKinley (1994) noted that these combinations were not associated with biological age or sex. It thus suggests that offering multiple species may have been related to the social standing and role of an individual within a household or wider community. The provision of numerous species potentially indicates an individual of higher social standing as greater amounts of commodities were invested in the funeral.

In the past, researchers have classed bear remains as »high status« funerary offerings (Pluskowski 2010) or suggested they were possibly used for the purpose of disguise during rituals (Schönfelder 1994; Pluskowski 2010). Bear remains might thus be expected to be associated with horse and so-called high value artefacts (e. g. ivory items, brooches, bronze bowls). However, horse are only found with bear in six instances (21 %), and in the majority of cases, bear is not found with any other animal species (n = 19; 68 %). The provision of objects alongside bear is extremely variable. In some cases, the deceased are found with no pyre- or grave-goods, whilst in other instances, they are provided with combs, ivory items, glass vessels, beads, buckles, and a shield mount (artefacts most commonly associated with bear are highlighted in green in **fig. 5**). There do not appear to be any trends regarding the provision of these different artefacts and the location of the sites where they were buried. This may not only suggest local customs, but specific artefacts selected to represent the deceased's identity, social role, and position in life (Squires 2013). It is worth highlighting that associations identified through the use of PCA must be approached with caution and investigated further, e. g. fish and ivory appear together in one grave only but have formed a distinct grouping (highlighted in red in **fig. 5**).

Where Did the Animals Come from and What is Their Significance?

The sources of the animals included in the cremation rite is of clear interest. Their inclusion reveals information about trade, potential cultural origins, and the significance of the animals themselves. Taking the bear as the most prominent species, several observations can be made. Firstly, and as previously mentioned, it is highly likely that the bear was extinct in England when these cremation rites were taking place (O'Regan 2018; 2023), suggesting that bears, or their remains, must have been imported from elsewhere. The presence of bear phalanges in English cremation deposits is suggestive of skins rather than whole animals, with the implication that the skins, as opposed to whole bears, were being traded. It is worth noting that although claws could also be considered as amulets, there is no evidence in the British archaeological record of pendants made from bear remains (O'Regan 2023), and none of the documented remains are pierced for hanging. That, and the number of bones recovered from individual cremations – c. 10 in the case of MT89BLG at Cleatham (Squires 2015) and 12 from grave 402 from Süderbrarup (Wahl 1988a, 33, 118) – suggests that they originate in bear skins that formed part of the funerary assemblage. Alternatively, phalanges may have been sewn onto clothing (Mansrud 2023). The inclusion of bear phalanges on personal effects has been recorded for other cultures, for example bear claw bags were made and traded by Native Americans in the late 19th century CE (**fig. 6**). A third possibility is that the bear paw itself was important in ideological beliefs and rites. For instance, in Norway bear paws were used for healing until the early 20th century (Mansrud 2023), and there might be a line of continuity of this use at least since the Viking Age, owing to the dating of paws found beneath medieval church floors (Jahnsen 2023). It is believed that

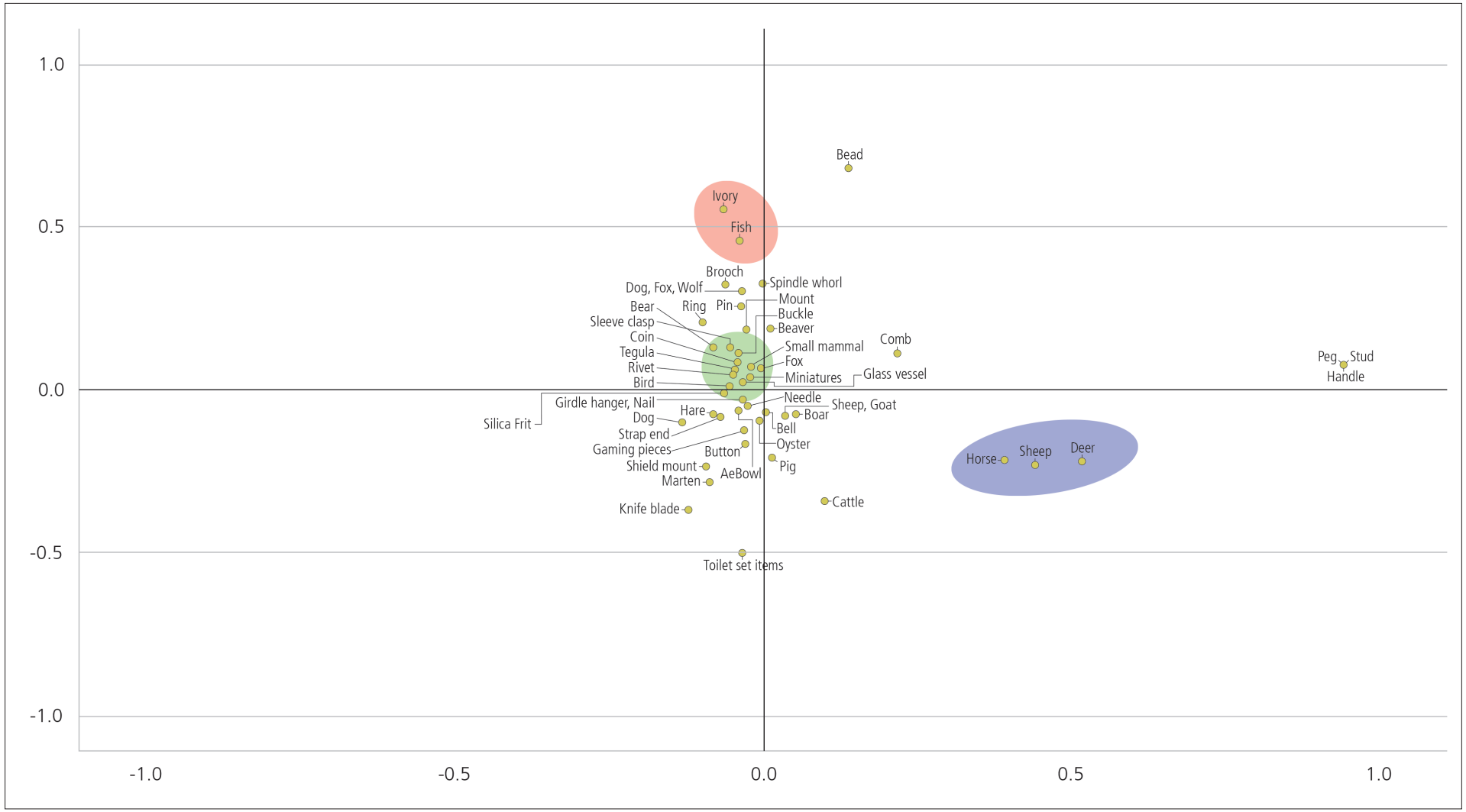

Fig. 5 Component plot of all faunal remains (wild and domesticates) and grave- and pyre-goods from burials containing wild animal remains. – (Graphics K. Squires).

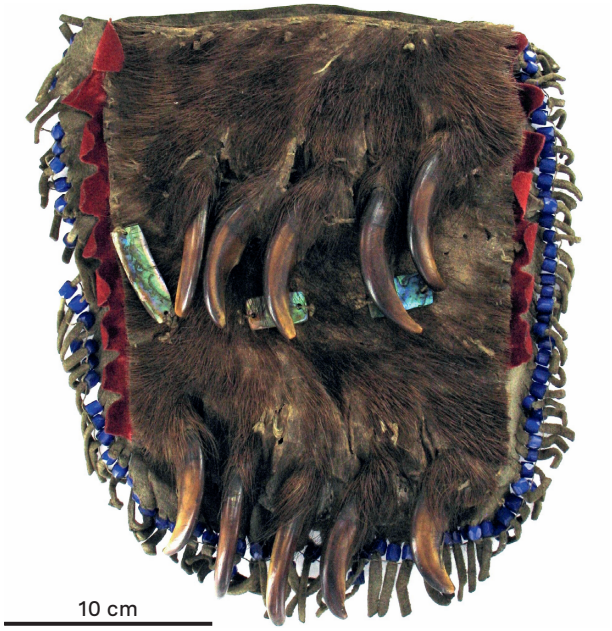

Fig. 6 A bear claw bag made and traded by Native Americans in the late 19th century CE. The leather is deer or bison, with attached bear claws. Formerly on display at Nottingham Castle Museum. – (© Nottingham City Museums & Galleries, United Kingdom).

these paws were deliberately deposited in such locations to »recharge« them for further medicinal use, but some were never recovered.

By the early medieval period, brown bears had largely been extirpated from western France (Crees et al. 2016), north-west Germany (Schmölcke 2023), and Denmark (Aaris-Sørensen 1998, cited in Price et al. 2021), but there is evidence for their presence in eastern Germany (Schmölcke 2023) and the Netherlands (Kuijper et al. 2016). The skins in German graves could have come from these latter regions, but those in England are perhaps more likely to have been traded from Scandinavia or central Europe where bear populations were larger (Albrecht et al. 2017). In Norway, 130 human cremation deposits with bear claws have been identified, dating from 1 to 575 CE (Mansrud 2023), while in Sweden, for the period 400 to 775 CE, there are 177 graves containing bear claws (largely cremation deposits, but this total also includes some inhumations; Ljungkvist/Lindholm 2023). In the Vendel period (560 to 770 CE), deposits of cremated bone contain bear and lynx claw bones, and for those sites that could be tightly dated to Vendel periods 1–3 (560 to 710 CE), 15 out of 61 (24.6 %) graves with bear remains also contained lynx remains (Ljungkvist/Lindholm 2023). Lindholm/Ljungkvist (2016, 12) suggest that owing to the paucity of brown bears in the local landscape their skins are likely to have been imported from northern Sweden, Norway, or from further east around the Baltic. To date, no lynx claws have been found in English cremation deposits, and indeed the lynx is likely to have been at very low numbers or even extinct in England by this period (Hetherington et al. 2016). There were also no lynx found in northern German deposits, thus their presence marks a clear difference between the Scandinavian deposits and those from England and northern Germany.

Dobney/Jaques (2002) surveyed the birds present at 26 early medieval sites in England, including rural, urban, and ecclesiastical locations. Neither of the two bird taxa that have been identified to species from the cremated bone deposits in the present study – osprey (*Pandion haliaetus*) and shelduck (*Tadorna tadorna*) – were identified at any of the non-burial locations examined by them (Dobney/Jacques 2002). The partially preserved osprey talon and shelduck distal radius were found in the same cremation (EL75OK) at Elsham (Squires 2015). This deposit contained the skeletal remains of an unsexed adolescent alongside a number of other items, including glass beads and ivory fragments (Squires 2015). While the role of hunting with raptors in early medieval society has been widely discussed (e. g. Dobney/Jaques 2002; Pluskowski 2010; see also numerous contributions in Gersmann/Grimm 2018 and Grimm 2020), osprey was not, and is not, used in falconry because they feed on fish and thus did not attract the attention of falconers who wanted to witness the raptor's flight and catch. The identified species are all are related to water, and both the osprey and shelduck are migratory in England. In the present day, shelduck directly link northern Germany and England, as the British shelduck population migrates to the Wadden Sea to moult in late summer prior to returning to Britain in the autumn (Cramp 1977, 458). Unidentified raptor claws have also been identified in cremations, for example at Spong Hill, where two deposits contained single phalanges that have been pierced for suspension, possibly as amulets or pendants (McKinley 1994).

Animal bone and deer antler combs are known from cremation burials in England, northern Germany, and Jutland (Williams 2003; Ashby et al. 2015). While combs are often associated with personal care, it is also thought that they served as a form of remembrance of the dead (Williams 2003). Alongside worked deer antler, unworked antler fragments of red and roe deer (*Cervus elephus* and *Capreolus capreolus*) have also been found in cremated bone deposits from England; however, their significance remains unclear (Bond/Worley 2006; Worley 2008). The antler remains from the cemetery in Issendorf are yet to be analysed (Weber 2000, 82). Given the number of combs that were made from bone or antler in this

period (e. g. West 1985; Ashby 2014; Williams 2016), it appears that deer were present in more cremations in the form of completed »products« than they were as raw materials (Poole 2013). This suggestion is supported by the only identified non-antler roe deer artefact – an inscribed astragalus interpreted as a gaming piece – from a deposit of burned bone from the cremation-dominant cemetery of Caistor-by-Norwich in Norfolk (Worley 2008, 389). It is perhaps unlikely that unworked antler had the same significance as the combs, but this is an area that could prove interesting for further research.

The distribution of beaver remains is also noteworthy, as so far they have only been identified in cremated bone deposits from England, despite the animal also being present on the continent. Crees et al. (2016) identified beaver remains at archaeological sites throughout northern Germany, indicating that beaver might be expected to be available for those providing funerary offerings, but on the basis of the current evidence this animal does not appear to have been used in mortuary rites. However, Coles (2006) makes the important point that beaver products such as castoreum or skins do not contain bones, so unless their limbs were dried for meat their presence is likely to be invisible on many archaeological sites. The same author notes the presence of a beaver skin bag at Sutton Hoo (Suffolk) as an example of what may have been present elsewhere at the time of burial (Coles 2006, 133–134). In England, the majority of early medieval beaver finds are incisors from inhumation burials of children and younger women (where sex could be identified; see Coles 2006, 132). It has been suggested that the teeth may have been used as talismans or simply pendants and that they could relate to teething, pregnancy, or fertility (Meaney 1981; Coles 2006, 133). As yet, no beaver incisors have been found in deposits of cremated bones. A distal humerus belonging to a beaver was recovered from Spong Hill (Bond 1996), which is perhaps more likely to have been a food offering than having a deeper significance (Coles 2006). As beavers were present in England at the time, and are particularly likely to have been present in the fenlands south of Spong Hill, this humerus probably represents a local animal rather than an import.

Other wild taxa that are documented but rarely found include fox, hare, fish, marten, and oyster. The presence of foxes and dogs in the cremation rite has been discussed by Bond/Worley (2006), who suggested there may be some (unknown) significance in the finding of both fox and bear remains in cremation MS202 at Sancton I, and in cremation 2890 at Spong Hill. Fish are found in two deposits from Spong Hill and in one burial at Bordesholm. The remains from Spong Hill were single vertebrae from unknown species (Bond 1994), making further interpretation difficult. A single marten metatarsal of unknown species (*Martes* sp.) was found at Süderbrarup (Wahl 1988a, 117–118), and is perhaps most likely to represent a skin or perhaps an item of clothing that was incorporated into the cremation rite. Hare bones have been found at Spong Hill, Cleatham, and Süderbrarup. The single hare tibia found at Süderbrarup had been worked, possibly to form a bead (Wahl 1988a, 118), while the bone from Spong Hill was a humerus fragment with no sign of butchering (Worley 2008), and the remains from Cleatham were only identified as »?hare«; interestingly, all were from a single child's burial (MT85GR; Squires 2015). Hare remains could be indicative of hunting, such as with dogs or birds of prey (Dobney/Jaques 2002), and/or they may indicate a food offering (Worley 2008), but with only three examples to consider there may not be a unifying reason for inclusion across the sites. A single find of an oyster shell at Süderbrarup is also difficult to interpret (Wahl 1988a, 118), as it may represent food remains or could even be residual within the soil.

Based on the analyses presented in this chapter, bears, birds, deer, fish, and hare have all been found in cremated bone deposits in both England and northern Germany. As mentioned above, we can say very little about the fish or hare, and the category of birds includes different species, from domesticated goose to wild osprey, that may have had very different cultural meanings. Therefore, given the more frequent inclusion of unworked deer antler and bear remains at the funeral, it would appear that these species held particular importance to cremation-practicing groups. A key question is which parts of deer are present at Issendorf, to determine if the pattern of unworked deer antler is the same as that seen in England. However, analysis of the finds from Issendorf has yet to be carried out (Weber 2000, 82). The distribution of bear remains at most sites in England and Germany supports the idea that bears demonstrate a cultural link between the two regions. Given that bear remains appear in cremated bone deposits regardless of the provision of pyre- and grave-goods, it would not appear that social standing alone is the reason for their inclusion. A similar conclusion was also reached by Mansrud (2023) and Strehlau (2023) with regards to the incorporation of bear remains in cremation deposits in Norway and Uppland in Sweden – some graves with bear remains had almost no other grave goods while others appeared to have high status furnishings. Strehlau (2023) suggests that the inclusion of bear remains may mark a social grouping, as males, females, and children all received them.

Concluding Remarks and Recommendations for Further Work

While the inclusion of wild animals in deposits of cremated bone dating to the 4th to 7th centuries CE is a rarity, these remains are important as they can provide a wealth of information about grave provision type (e. g. unprocessed [deer antler] versus processed [bear skins, antler combs]) materials and their sources, as well as the identity of the deceased human they were gifted to.

It is clear that more zooarchaeological work is needed from both England and Germany, a call that was made over 25 years ago by Hills (1998) but has still not been heeded. Such analyses will offer a more comprehensive understanding of faunal offerings in the cremation rite and human-animal interactions, through increasing sample sizes, and further elucidating similarities and differences between the two populations. Zooarchaeological analysis has yet to be conducted for 18 cremated bone deposits from Issendorf; these were excavated in 1967–1979 but, at present, the only published details of the faunal remains mention the inclusion of charred horse teeth in one burial and unspecified antler remains from three interments (Weber 2000, 82). There is also the potential for comparing the deposits discussed here with those from Scandinavia; however, these deposits also need full osteological analysis as most are still sexed by grave goods (Strehlau 2023; Ljungkvist/Lindholm 2023). The development of osteological methods over the past twenty years now allows bioarchaeologists to untap previously unknown information about individuals offered the cremation rite. It is hoped that recent advances within the discipline of burned bone studies will attract more zooarchaeologists to analyse and interpret cremated faunal offerings from northern Europe.

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