The role of birds as grave gifts in richly furnished Roman Iron Age inhumation graves *c.* 1-375 AD, eastern Denmark

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Gotfredsen A. B. 2013. — The role of birds as grave gifts in richly furnished Roman Iron Age inhumation graves c. 1-375 AD, eastern Denmark. *Anthropozoologica* 48 (2): 355-370. http://dx.doi.org/10.5252/az2013n2a12

ABSTRACT
In this paper, zooarchaeological evidence from Roman Iron Age (*c.* 1-375 AD) inhumation graves with focus on the avian remains is presented. The material comprises both old and recently excavated material mainly from wealthy burial sites in eastern Denmark. Birds occur rarely as grave gifts in Danish inhumation graves. In total six graves provided bird remains with three holding parts of or entire goose (*Anser anser*) skeletons and three yielding domestic chicken (*Gallus gallus domesticus*). Both bird species were offered as food for the deceased as evidenced by cut marks and by the arrangements of the birds in pottery vessels or their location associated with other food offers like meaty portions of pig (*Sus scrofa domesticus*) and sheep (*Ovis aries*). Morphometric and contextual analyses indicated that the geese were domesticated geese. All graves with goose were princely graves, containing Roman imports and other animals offered, such as entire, but butchered lambs or pigs but also dogs (*Canis familiaris*). In two cases, the deceased were soldiers of a relatively high military rank within the cavalry. The geese therefore are considered to have had a dual function and were offered both for culinary and symbolic reasons as guards for the deceased. The domestic chicken occurred in a woman's grave and in men's graves and was considered, like the domestic goose, to have been relatively rare during the Danish Roman Iron Age.s

KEY WORDS
Goose,
domestic chicken,
wealthy inhumations,
grave gifts,
Roman Iron Age,
eastern Denmark.

RÉSUMÉ

Le rôle des offrandes d'oiseaux dans les inhumations à riche mobilier funéraire de l'Age du Fer romain (1-375 ap. J.-C.) du Danemark oriental.

Cette contribution est consacrée à la présentation des données archéozoologiques de sépultures à inhumation de l'Age du Fer romain (env. 1-375 ap. J.-C.) et plus particulièrement des attestations de restes osseux d'oiseaux. Les mobiliers présents proviennent à la fois de fouilles anciennes et récentes de nécropoles, le plus souvent riches, situées dans la partie orientale du Danemark. Dans cette région, les oiseaux sont rarement associés au mobilier des sépultures à inhumation. Au total six sépultures ont livré des vestiges aviaires attestant la présence de l'oie (*Anser anser*) sous forme de squelettes complets ou de parties de squelettes dans trois contextes et du coq domestique (*Gallus gallus domesticus*) dans trois autres cas. Les deux espèces ont fait l'objet de dépôts d'offrandes pour les défunts comme l'atteste la présence de traces de découpe et la disposition des oiseaux dans des récipients de céramique ou leur association avec des dépôts d'autres portions d'animaux riches en viande provenant de porc (*Sus scrofa domesticus*) et de mouton (*Ovis aries*). Les analyses morphométriques des restes d'oie et les données relatives aux contextes de découvertes indiquent qu'il s'agit d'animaux domestiques. Les sépultures contenant des restes d'oie correspondent toutes à des sépultures princières et ont livré des mobiliers d'importation d'origine romaine et des restes d'autres animaux de consommation comme des agneaux ou des porcs complets mais préparés comme des pièces de boucherie et enterrés avec des chiens (*Canis familiaris*). Deux de ces sépultures correspondaient à celles de soldats de cavalerie de rang élevé. Une signification à la fois culinaire et symbolique, comme gardienne du défunt, semble pouvoir être conférée à l'oie. Les squelettes de coq domestique sont associés à une sépulture féminine et à plusieurs sépultures masculines et peuvent être considérées, ainsi que les oies, comme relativement rares pour la période de l'Age du Fer romain au Danemark.

MOTS CLÉS
Oie,
coq domestique,
inhumations princières,
offrandes funéraires,
Age du Fer romain,
Danemark oriental.

INTRODUCTION

The reasons for placing animal bones in human graves may be manifold and therefore the animal remnants may represent a variety of different objects such as tools, ornaments, amulets and wraps. Un-worked animal bones in human burials have primarily been interpreted to have had three main functions. First, the animal bones may represent meals intended as provisions for the deceased person in the afterworld (e.g., Grant 2002; Lauwerier 2002: 65). Second, they may be remnants of ritual meals at the funerary feast held at the burial place (Philpott 1991: 205; Parker Pearson 1999: 10; Serjeantson 2009: 243). The challenge is of course to separate the genuine or true food offerings from the funerary meal leftovers. Third, animal bones in human graves may represent offerings to the gods to ensure a safe arrival in the afterlife (Philpott 1991: 206; Lauwerier 2002). Both in Celtic and Roman religious beliefs, animals were seen as attributes to gods, and thus animal sacrifices formed part of the cult rituals at Celtic and Roman temples and shrines (Philpott 1991: 206). In the present paper, the term 'grave gift' is used both for animals given to the deceased as a food offering and for sacrificial animals placed in graves, e.g., a dog killed or sacrificed in order to accompany its master in the afterlife.

Very little has been published on animal bones from Roman Iron Age inhumation graves in present-day Denmark. In some cases, the archaeologists included a brief comment on the animal bones of the grave in question in their publications.

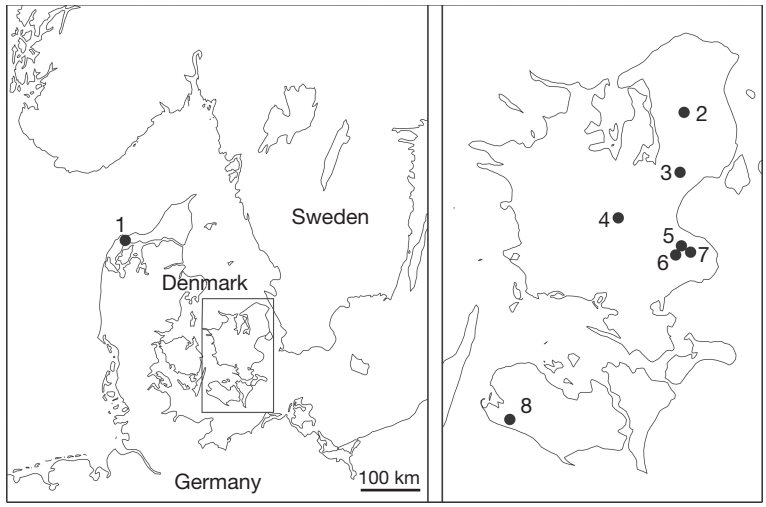

Fig. 1. — Map of the surveyed area and the position of important locations mentioned in the text: **1**, Smedegård; **2**, Kirkebakkegård; **3**, Ellekilde; **4**, Kærup Nord; **5**, Himlingøje; **6**, Vråby; **7**, Varpelev Vest; **8**, Munkehøjgård. Drawing: Knud Rosenlund.

Furthermore, animal bone analyses presented as short chapters in combination with wider studies, such as the Himlingøje burial site at Stevns (Hatting 1978; Lund Hansen *et al.* 1995) and the Skovgårde burial site at southern Zealand (Hatting 2000; Ethelberg *et al.* 2000) provided relevant information on animal bones. The vast majority of the excavated bones, however, have only been reported in site reports or as unpublished species lists on file at the Natural History Museum of Denmark, Zoological Museum, University of Copenhagen (ZMUC). During the last decades a wealth of rich graves yielding human skeletons and well-preserved animal bones, dated to the Late Roman Iron Age (*c*. 150-375 AD), has been excavated on Zealand, eastern Denmark (Ethelberg *et al.* 2000; Boye & Lund Hansen 2009; Christensen 2011; Iversen 2011). Interdisciplinary studies of the human skeletons, grave inventory, and animal remnants provided entirely new insights into funerary practices and the deposition of animals during the Roman Iron Age. Domesticates like sheep, pigs and cattle dominated the grave gifts. However, the burials also yielded non-food species like horse and dog, both with a special symbolic role, and in rare instances, goose and domestic chicken (Gotfredsen forthcoming). This paper presents new and old finds of avian remains from inhumation graves from eastern Denmark, in order to review and discuss the role of birds as grave gifts symbolising food, status and identity during the Roman Iron Age.

MATERIAL AND METHODS

The faunal material derives from Roman Iron Age inhumation graves which were usually established at the highest point of gravel ridges. A large number of the graves were discovered during gravel digging in the late 19th and early 20th century. Some of the grave contents, including animal bones, were uncovered by laymen before the arrival of an archaeologist and consequently the excavations were not carried out by modern standards.

The animal bones were identified by using the comparative collection at ZMUC. Bone surface alterations and pathology were registered and all relevant measurements on intact bone elements were taken with a digital caliber with a precision of 0.1 mm. Definitions follow von den Driesch (1976). In order to record and identify modifications or alterations of the bone surface the bones were carefully checked by the naked eye and cut

TABLE 1. — Census of the Roman Iron Age inhumation graves of the surveyed area holding birds as grave gifts. The sites are archaeologically dated and arranged chronologically. Abreviations: **ERIA**, Early Roman Iron Age; **LRIA**, Late Roman Iron Age. The chronology followed Lund Hansen (1987).

Site No.	Burial Site, Grave	Cat. No. Zmuc	Period	Absolute Date Ad	Species		Reference
					Aves	Mammalia	
6	Vråby, Grave 1	Z.M.K. 46/1979	ERIA	70-200 AD?	*Gallus gallus domesticus*	*Lepus europaeus, Sus scrofa domesticus, Ovis aries*	Liversage 1980
8	Munkehøjgård, Grave 4	Z.M.K. 13/1916	ERIA, B2	150-200 AD	*Gallus gallus domesticus*	*Ovis aries*	Blinkenberg 1815 H. Winge det.
7	Varpelev Vest	Z.M.K. 53/0000	LRIA, C1b	200-250 AD	*Anser* sp.	*Sus scrofa domesticus*	Herbst 1861 Lund Hansen 1987
2	Kirkebakkegård, Grave 1	Z.M.K. 131/1966	LRIA, C1b	200-250 AD	*Anser* sp.	*Sus scrofa domesticus, Bos taurus, Ovis aries*	Thrane 1967 U. Møhl det.
3	Ellekilde, Grave 34	Z.M.K. 18/2008	LRIA, C1b/C2	c. 250 AD	*Anser* sp.	*Canis familiaris, Sus scrofa domesticus, Bos taurus, Ovis aries*	Iversen 2011
4	Kærup Nord, Grave A3663	Z.M.K. 7/2007	LRIA, C1b/C2	c. 250 AD	*Gallus gallus domesticus*	*Ovis aries*	Christensen 2011

marks subsequently checked using a stereo Wild Microscope. Most actualistic studies, concerning the micro morphology of cut marks, were made on marks inflicted by stone implements and documented by SEM microscopy to have a V-shaped to U-shaped cross section (Shipman 1981, Behrensmeyer *et al.* 1986). Binford (1981: 105), however, stated that marks made by metal tools were hairline in size and that "*They often appear to have been cut into the bone from the side, or obliquely, leaving an overlapping small shelf of bone that remains in place*." Most of the recorded cut marks in the present study conform to that description. For the present study, the definition of cut mark types inflicted during the skinning process, i.e. removal of the hide, dismemberment marks inflicted during disarticulation, followed Binford (1981: 106ff, table 4.04). Cut marks resulting from the filleting process, i.e., removal of meaty parts from the bones, followed definitions given by Noe-Nygaard (1995) and Binford (1981: 126ff, table 4.04). For the avian material, definitions and interpretations presented by Serjeantson (2009: 131ff) were applied.

The key questions when studying animals in graves are: i) which species were present in the graves, i.e., essentially a species list, and ii), how well represented were the skeletons of the species in question, meaning were animals offered as partial or entire carcasses? Therefore in order to show the representation of the individual animals the MNE (Minimum Number of Elements) was applied, which signifies the minimum number of a particular skeletal element or portion of a taxon (Lyman 1994: 102). This measure is less affected by fracturing having occurred prior to deposition, being caused by post depositional events or the ontogenetic age of the animal. However, the MNE is to some extent still sensitive to variations in excavation techniques. In the following section, a short description of the inhumation graves with avian remains and find circumstances is given. Fig. 1 shows the positions of the localities and Tables 1 and 2 provide information on dating and species counts and quantification.

TABLE 2. — Census of the animals found in the examined graves as quantified by MNE (Minimum Number of Elements) and MNI (Minimum Number of Individuals) shown in brackets.

Burial Site, Grave	*Anser* sp.	*Gallus gallus domesticus*	*Lepus europaeus*	*Canis familiaris*	*Sus scrofa domesticus*	*Bos taurus*	*Ovis aries*
Vråby, Grave 1		9 (1)	2 (1)		3 (1)		8 (1)
Munkehøjgård, Grave 4		45 (1)					13 (1)
Varpelev Vest	6 (1)				2 (1)		
Kirkebakkegård, Grave 1	48 (1)				5 (1)		
Ellekilde, Grave 34	58 (1)			8 (1)	15 (1)	5 (1)	108 (2)
Kærup Nord, Grave A3663		40 (1)			1 (1)		45 (1)

RESULTS

VRÅBY

The Early Roman Iron Age burial site of Vråby comprised two inhumation graves and was discovered during gravel extraction. The site was located east of the highest elevation of a relatively low gravel bank and excavated by C. Neergaard, The National Museum in 1930 (Liversage 1980, Sellevold *et al.* 1984: 139). Both graves contained human skeletons, whereas animal bones were only retrieved from Grave 1. An incomplete skeleton of an adult man, aged at least 20 years, was present in the grave, which besides the animal bones contained only a pottery vessel (Liversage 1980, Sellevold *et al.* 1984). The grave yielded remains (n=9) of an adult domestic hen comprising part of the right wing (ulna and radius), the pectoral girdle (right coracoid, right scapula and the cranial part of sternum), the majority of the left leg (femur, tarsometarsus and part of the pelvis) and a right tibiotarsus. The bird was an egg-laying hen at the time of deposition, as the femur contained medullary bone, a calcium reserve which female birds build up during the egg-laying period (Rick 1975; Driver 1982). Although, there were no cut marks visible on the bones the bird presumably represents a food offering. The animal bones were found 1 m below the surface, which corresponds to the depth of the grave; however the exact position was not registered. In addition, the grave was furnished with a calvarium, including the maxillary bones with *in situ* teeth and one left astragalus of an adult hare (*Lepus europaeus*). A left proximal unfused ulna and a left maxillary bone with two unworn deciduous premolars (dp^3 & dp^4) derived from a few-week-old pig. And finally, bones representing a few-week-old lamb comprising a skull fragment, the right humerus and parts of the left lower leg (tibia, metatarsal, calcaneus, phalanx 1 and 2) and an unfused metapodium (Gotfredsen forthcoming).

MUNKEHØJGÅRD

This small Early Roman Iron Age burial site comprised three inhumation graves. It was situated in a gravel bank and discovered during gravel digging in 1915. Two of the relatively richly furnished graves contained human skeletons and animal bones (Blinkenberg 1915: Sellevold *et al.* 1984). Grave 1 contained a man aged 35-50 years (Sellevold *et al.* 1984: 89) and most of the bones of fore- and hind legs (n=16), except for the extremities, of a 6-12-month-old ram, which was deposited as a food offering (Gotfredsen forthcoming). Grave 4 held a poorly-preserved human skeleton of a person *c.* 20-30 years old and of indeterminate sex (Sellevold *et al.* 1984: 89), however, as judged from the grave inventory, presumably a man. The grave produced a well-preserved nearly complete skeleton of a domestic chicken (N=45). The bird, an adult cock, was located at the left hand of the deceased. The only missing parts were the cranium (including the atlas), the left metatarsal, and most of the phalanges. The recovery of small bones, such

Fig. 2. — Calvarium, trunk and wing elements of a robust goose from a princely grave at Varpelev Vest. Photograph: Marcus Krag. Scale bar: 50 mm.

Fig 3. — Goose remains exhibiting butchery traces at Kirkebakkegård, Grave 1: **A**, Right coracoid; **B**, Furcula; **C**, Left humerus. Photograph: Marcus Krag. Scale bars : A, B, 20 mm; C, 30 mm.

as a single phalanx, a few ribs, and most of the vertebrae, however, implies meticulous excavation of the bones. In this context, the robust right metatarsal was hardly overlooked during excavation. It is therefore likely that the lacking parts may have been cut off and thus not deposited in the grave together with the rest of the cock skeleton. No cut marks, however, were documented on the bones. Additionally, a food offering consisting of a forepart of a 6-12 month-old female sheep represented by the skull, some ribs, and a section of the neck (n=13), was present in the grave (Gotfredsen forthcoming).

Varpelev Vest

This burial site comprised one richly furnished inhumation grave dating to the Late Roman Iron Age. It was found during gravel extraction and its south part was uncovered unprofessionally, whilst the northern part was examined by A. Strunk, The National Museum in 1861 (Herbst 1861; Sellevold *et al.* 1984). The deceased was a man aged 35-55 years with *osteoarthritis* and a healed lesion at the left clavicle (Sellevold *et al.* 1984: 137). The grave provided a total of six goose bones, i.e., the brain case, a right carpometacarpus, the left proximal part of a radius and proximal humerus and both coracoids of an adult goose. Thus both the meaty parts of the pectoral girdle and the less meaty parts, i.e. the skull were present (Fig. 2). No cut marks were documented on the bones. The humerus and radius breakages are difficult to evaluate; they may have been inflicted prior to deposition, but also during retrieval. The south part of the grave was uncovered by laymen and the bones may therefore have been damaged and some even lost. It is thus impossible to ascertain how complete the bird was at the time of deposition. The carpometacarpus exhibited *osteophytes* at the rim of the *trochlea carpalis* on the ventral face, which may indicate that the bird was an old individual. The dimensions of the goose bones were within the variation of extant graylag geese, but in the upper end. The coracoids were particularly robust and with large muscular attachments and the calvarium was very large and robust. The robustness and morphological traits of the bones indicate a domestic goose, probably a male. Two pig bones, a distal part of a tibia and part of a distal right femur deriving from a pig of at least 2 years both exhibited dismembering and chop marks (Gotfredsen forthcoming).

Kirkebakkegård

This Late Roman Iron Age burial site yielded one richly equipped inhumation grave with a 50-60 year-old man with severe signs of arthritis in the back bone and healed lesions of a finger and the left tibia (see Thrane 1967: 71). Some of the personal equipment, i.e., bronze spurs and gilded bandolier mounting with a face mask from a sword belt, in combination with the healed lesions of the deceased, strongly indicate a connection to the military and cavalry implying a relatively high military rank (see Iversen 2011).

The main part of an adult goose (n=48) was situated south of the man's head inside the coffin. The head of the bird (except for the upper beak), the majority of the wing and leg bones, a large part of the sternum, and some ribs and vertebrae were recovered. Most of the pectoral girdle was present, i.e., the furcula and both scapulae; one right coracoid was present, whereas the left one was absent. Moreover, the feet (phalanges) and most of the left wing (carpometacarpus, ulna and radius) were missing. The feet may have been cut off, although no cut marks were observed on the distal metatarsals. Conversely, dismemberment and filleting marks were documented on wing bones and the pectoral girdle (Fig. 3A-C). The right coracoid had two mid-shaft and distal clusters of parallel transversal 2-10 mm marks on the cranial face inflicted during filleting (Fig. 4A). The furcula exhibited cut marks on the peripheral (left) side, resulting from the filleting process (not shown) and proximally ventral to the pneumatic foramina inflicted during dismemberment (Fig. 4B). Finally, a number of short and long parallel cut marks were observed on the medial face of the proximal humerus at the head and the capital groove resulting from dismemberment (Fig. 4C). These types of cut marks clearly indicate that the goose was butchered and the breast meat was cut off. Taphonomic and recovery biases and/or the fact that the goose was butchered and thus was not placed in the grave as a whole bird may explain

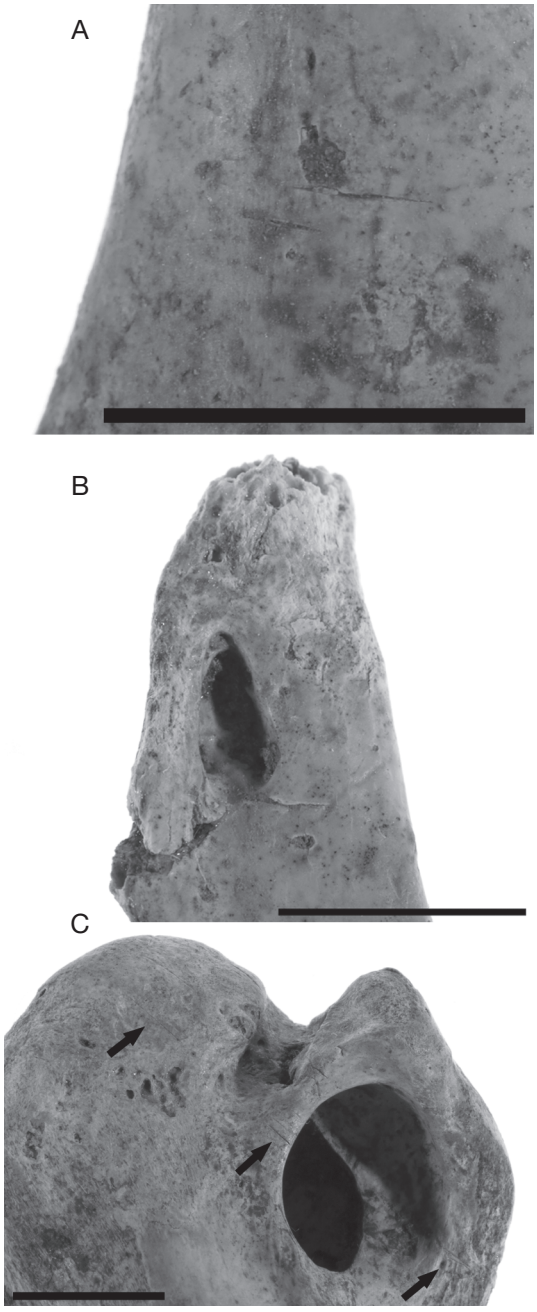

Fig. 4. — **A**, Coracoid with cut marks cranially mid-shaft; **B**, Furcula with cut marks peripherally below pneumatic foramina; **C**, Humerus with numerous faint long cut marks proximally, indicated by arrows. Photograph: Marcus Krag. Scale bars: 10 mm.

the incomplete nature of the goose skeleton. The leg bones were robust and the goose was most likely a domestic form (Fig. 5). Pig bones of a subadult pig were recovered from the same area as the goose bones. The bones, although highly fragmented, could be reassembled to a proximal part of a femur, distal part of tibia, patella, and proximal part of an astragalus from the left leg. In addition, a right lower pig rib from the mid-section of the trunk was found.

Ellekilde

The Late Roman Iron Age burial site of Ellekilde was excavated during the autumn of 2007 by the Kroppedal Museum. At the time of occupation the site was located at a prominent elevation in the landscape at the border of the Lille Vejleå River valley. The cemetery yielded a total of 23 human skeletons, whilst only five graves provided animal remains (Iversen 2011). The largest burial, Grave 34, with specific Roman imports was in the centre, with the remaining 29 graves forming a semicircle from the northeast towards the south. It contained an adult man aged 35-40 years, exhibiting signs of four unhealed lesions (Bennike 2011).

The grave provided a fairly complete goose skeleton (n=58) located beside the deceased's left shoulder. All parts of the goose skeleton were present, although a few phalanges, ribs, the main part of the sternum and part of the pelvis were missing. No cut marks were documented. The dimensions of the goose bones fall within the variation of bones from extant graylag geese (*Anser anser*) (Table 3). The relatively low values for wing bone circumference and large leg bone circumference values, however, indicate that the goose bones derived from domestic goose (*Anser domesticus*). Other animal grave gifts placed in the same position as the goose bones included parts of a ca. 3-6 month old pig, thoracic vertebrae, ribs and small fragments of femur, parts of 3-4 ribs and a left proximal femur with clear dismembering marks of a subadult sheep. Beneath a Hemmorer bucket, dog bones from an adult individual, comprising vertebrae (one cervical vertebra and four thoracic vertebrae), quite a

TABLE 3. — Selected measurements of goose wing bones. The measurements are of extant graylag geese and the Haithabu geese are from Reichstein & Pieper (1986). Definitions follows von den Driesch 1976. Measurements in mm.

Coracoid	**n**	**min Lm**	**max Lm**	**mean Lm**	**Lm**
A. anser	32	61.5	78.1	65.6	
Haithabu	22	61.6	71.4	66.8	
Varpelev Vest	1				68.3
Ellekilde	1				64.6
Coracoid	**n**	**min BF**	**max BF**	**mean BF**	**BF**
A. anser	32	26.9	36.2	29.8	
Haithabu	8	28.0	30.4	29.6	
Varpelev Vest	1				32.9
Ellekilde	1				27.8
Humerus	**n**	**min GL**	**max GL**	**mean GL**	**GL**
A. anser	33	151.0	189.0	166.4	
Haithabu	10	161.0	180.0	171.3	
Kirkebakkegård	1				176.4
Ellekilde	1				168.0
Humerus	**n**	**min Bd**	**max Bd**	**mean Bd**	**Bd**
A. anser	33	22.7	27.8	25.0	
Haithabu	50	21.6	26.2	23.7	
Kirkebakkegård					24.8
Ellekilde					23.1

number of fragmented ribs, a single right metacarpal I, and the upper part of a left humerus were recovered (Gotfredsen 2011). At the feet, to the left of the deceased, the main part of an entire 6-12 month-old male lamb (n=94) was placed in close proximity to a large pottery vessel. Three bone elements exhibited dismembering marks (Gotfredsen 2011), resulting from the primary butchery process *sensu* Binford (1981), which serves to coarse butcher the slaughtered animal. Finally, in a higher position than the remaining animal bones (pers. comm. R. Iversen 2008), a cattle hind foot (a metatarsal, two proximal phalanges, one medial, and one distal phalanx) was retrieved.

Kærup Nord

The Late Roman Iron Age burial site of Kærup Nord was excavated in 2006 by Sydvestsjællands Museum (SVM) (Christensen 2011). The site comprised 11 inhumation graves (with at least one double grave), all of them oriented in a north-south direction and containing a total of 13 human skeletons, mostly women (n=6) and children (n=4). Only two graves provided animal bones. Grave A3618 held the remains of at least two people: a young man of 18-20 years and an adult ca. 30 years old of indeterminate sex (Christensen 2011). An incomplete skeleton of a 2-6 month old ram (n=33) exhibiting cut marks on nine bones (Gotfredsen forthcoming), was offered as a food gift. Grave A3663 contained a woman, aged 30-40 years (Christensen 2011). The grave was richly equipped as indicated by necklaces, a prestigious fibula and other personal belongings, placing grave A3663 in the rich end of the spectrum in the Kærup Nord burial site (Christensen 2011: 31). The grave yielded an almost complete skeleton of an adult cock (Fig. 6), located in a pottery vessel which was placed at the feet of the deceased woman. The diameter of the opening of the pottery vessel was 15 cm and it might thus be suspected that some of the damage to the bones may have occurred during deposition. An additional food offering comprised a large part (front and hind legs) of a 1-2 year-old sheep, with three bones exhibiting dismemberment marks, was placed beside the pottery vessels (Gotfredsen forthcoming). Finally, a caudal part of a subadult pig's right pelvis (*os ischium*) was retrieved from a pottery vessel.

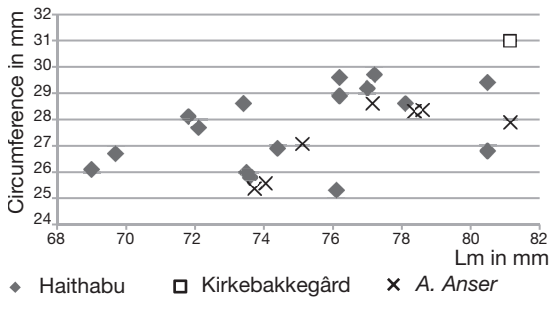

Fig. 5. – Femoral circumference plotted against the medial length (Lm) of the Kirkebakkegård goose compared with measurement of the Haithabu geese and extant graylag geese (*Anser anser*). Measurements of Haithabu geese and graylags from Reichstein & Pieper (1986). Measurements are according to von den Driesch (1976).

Fig. 6. – The entire cock skeleton of Kærup Nord, Grave A3663 a richly furnished woman's grave. The cock was retrieved from a pottery vessel at the foot end of the grave. A fragmented furculum, sternum and a total of 11 phalanges are not shown. Scale bar 10 cm. Photograph: Geert Brovad.

DISCUSSION

Domestic chicken, eggs and sometimes other bird species are known to have been deposited in human burials and cremations within the Roman Empire and its periphery (Parker 1988; Lauwerier 1993; Benecke 1994; Gál 2005). Roman funerary rites also included other bird species than domestic chicken, such as geese (*Anser* sp.), eider (*Somateria* sp.), ducks (Anatinae), quails (*Coturnix* sp.) and woodcocks (*Scolopax rusticola*) (see e.g., Lauwerier 1983; Parker 1988; Gál 2005). During the Roman period, the domestic chicken was the most frequently observed avian species in human graves both in Britain and on the Continent (Lauwerier 1983; 1988; Philpott 1991). For the Gallo-Roman area of the continent, pig was the most frequently occurring species in graves during the late La Tène period through the 1st to 2nd centuries AD, shifting to a preponderance of chicken for the 4th and 5th centuries AD (Lepetz & Van Andringa 2004: 165). However, during the subsequent periods, goose remains have been found in graves in increasing numbers following the expansion of goose husbandry during the Anglo-Saxon period in Britain (see Albarella 2005: 251; Serjeantson 2009: 344).

The number of inhumation graves within the Danish study area contaning bird remains is relatively scarce. Out of 105 studied burials yielding animal bones, only seven contained avian remains (Gotfredsen forthcoming). Goose bones from the wealthy grave of an adult man aged 20-35 years old, at the huge Himlingøje burial site have previously been published (Hatting 1978; Lund Hansen 1978; 1995; Sellevold 1995: 255). Hatting (1978: 69) stated: "*In addition, first one poorly-preserved upper end of a bird femur that with some uncertainty could be identified as domestic goose, second three phalanges of a smaller bird*" (author's translation). However, a closer examination revealed that several splintered goose and mammal bones, some of which exhibit digestion traces, comprised the stomach contents of a sacrificed dog placed at the ledge of the grave and not grave gifts (Gotfredsen forthcoming). Thus three inhumation graves produced goose and three produced domestic chicken remains representing true grave gifts (Tables 1 & 2). This scarcity could

to some extent be due to taphonomic reasons. The avian remains were from relatively rich graves, except perhaps for the Vråby grave, and thus in all cases derived from deep graves ranging between 0.8 and 2.6 meters in depth, when measured from the topsoil surface. Moreover, those rich burials were often covered by large stones to protect the graves from being robbed (Ethelberg *et al.* 2000; Iversen 2011). Consequently, bird remains have only been retrieved from graves with the most favorable preservation conditions.

WILD OR DOMESTIC GOOSE?

It is notoriously difficult to separate early forms of domesticated geese from their wild progenitors solely on the basis of skeletal morphological characteristics. The detection of the presence of the domestic form in archaeological assemblages is indicated either by the context and/or high relative frequencies of goose bones and therefore the earliest occurrence of domestic geese is difficult to date. It is, however, assumed that they arrived around the time of Christ's birth together with the first domestic chickens. Domestic geese occurred in low numbers during the Celtic Iron Age but increased during the Roman period in the British Isles (Serjeantson 2009; Yalden & Albarella 2009: 103). The same trend can presumably be seen outside the Roman Empire in present-day Denmark. During the Viking Age and Early Medieval site of Haithabu, the presence of domestic geese was documented by statistical means (Reichstein & Pieper 1986: 99ff.): the wing bones of domestic geese proved to be relatively slighter (smaller circumference) than present day graylag wing bones, whereas the leg bones, on the contrary, tended to be relatively more robust (larger circumference), than the comparable skeletal elements of their wild progenitors.

The dimensions of the goose bones of the Zealand burial sites in the aforementioned three inhumation graves are within the variation of graylag geese (Table 3; Fig.5). However, both the wing and the leg bone measurements lie within the variation of the Haithabu geese and a few measurements are outside the 95% confidence interval for extant graylags. The geese that were sacrificed as food offerings were thus considered to be domestic geese, which were probably still unusual or relatively rare birds during the Roman Iron Age.

Most authors agree that the progenitor of the domesticated goose is the graylag goose (*Anser anser*) and that the first steps of domestication took place in ancient Egypt where depictions of penned geese in cages, and in a variety of colours, indicate domestication as early as the eighteenth Dynasty, 1450-1341 BC (see Albarella 2005: 252). From Egypt, domesticated geese, or the idea of domesticating graylags, passed via ancient Greece to the Roman Empire and with the Romans up through Europe (Toynbee 1973; Serjeantson 2009; Yalden & Albarella 2009: 102). The Romans considered goose to be both food and sacred birds for the goddess Juno (Yalden & Albarella 2009: 103), for example it is described how the geese in Juno's temple on the Capitol in Rome cackled, when the dogs failed to bark, and thus warned the Romans against an attack by the Gauls in 390 BC. Perhaps due to this event, geese symbolizing the alertness of the soldier became associated with the war god Mars north of the Alps (Zeuner 1963). A relief depicting the warrior god Mars Thincsus, with a goose at his feet is visible on an arch from a Roman Fort at Hadrian's Wall (Albarella 2005: fig. 4). According to Apicius' book of recipes, goose meat was not commonly eaten (see Albarella 2005: 253), whereas other products were highly praised, such as eggs (Zeuner 1963). Pliny the Elder, who lived in the 1st century AD, knew of the concept of fattening geese for the pate de foie gras and described how the Romans valued the white (and thus domesticated) geese both for food and for down production (see Yalden & Albarella 2009: 103).

GOOSE MEANT FOR FOOD?

Were the geese offered as grave gifts meant for food? Although Caesar stated that the native population of Britain regarded it unlawful to eat geese and chickens, this should not be taken too literally since domestic chicken in Britain from Cesar's time bear cut marks (Albarella 2005: 253). A large

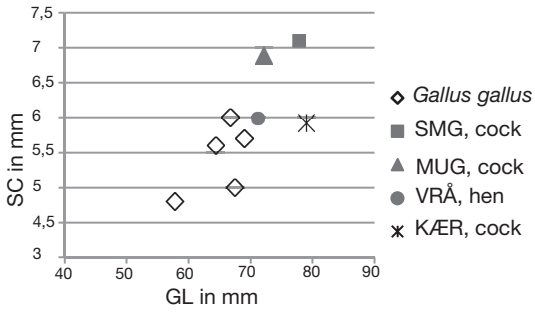

FIG. 7. — Tarsometatarsal SC plotted against GL of domestic chicken of Danish Roman Age finds compared with measurements of red jungle fowl (Gallus gallus). Measurements of the Smedegård specimen and red jungle fowl from Raahauge (2002). SMG: Smedegård; MUG; Munkehøjgård; VRÅ: Vråby; KÆR: Kærup Nord. Measurements are according to von den Driesch (1976).

proportion of the sacrificed domestic chickens in Roman graves have had the meatless parts, i.e., feet or head, cut off, as is often evidenced by cut marks (Keller 1971; 1979; Lauwerier 1988; Wahl & Kokabi 1988). The practice of removing the head and feet can be seen on a depiction dating from the 2nd or 3rd century AD on a bronze lid from Mundelsheim (Paret 1938). Further evidence that the animal was intended for food emerges from the way the corpse was placed, for example in a ceramic vessel or on a plate (Lauwerier 1993: 77; Serjeantson 2009: fig. 14.4). Parts of animals or entire animals of small size could be arranged on a dish. At a fourth century AD Roman cemetery at Nijmegen, a chicken was placed on a Coarse Ware dish together with the head of a suckling pig. Judging from the articulated state of the chicken bones, the carcass was presumed to have been placed in the dish while still intact (see Serjeantson 2009: fig. 14.4). Other arrangements of chicken skeletons have also been observed. They were either placed between the legs of the deceased, as in three burials at Winchester at a Roman cemetery, or with the head of the chicken resting on a pot (Serjeantson 2009, 342; Maltby 2010). A domestic chicken, together with parts of a pig, was placed beside the left leg of a Roman soldier (Gál 2005), a position that was often used for placing medium-sized animals such as pig or sheep.

The Varpelev Vest grave comprised parts of a goose. If the grave was indeed carefully excavated, it is likely that in this case only the front part of the bird was placed in the grave. At the Kirkebakkegård grave, an almost whole goose placed at the head end of the deceased, combined with dismemberment traces on the humerus and furcula and filleting marks on the coracoid and furcula, documented this bird as a food offering. The Ellekilde specimen also comprised an entire bird. No cut marks were documented. The skeleton may originally have been disarticulated; however solifluction and compaction of the sediments have moved and crushed a number of bones and thus blurred thisinformation. The bird was most likely intended as a food offering since it was arranged together with meaty parts of pig and sheep beside the left shoulder of the deceased, presumably on a wooden table (see Iversen 2011).

Despite the very small sample size, the three graves with goose remains exhibit some similarities. The goose remains were confined to particularly richly equipped men's graves containing Roman imports, two of which (Ellekilde & Varpelev Vest) comprised the extremely rare circus cups (see Lund Hansen *et al.* 1995: 182,189; Iversen 2011; Table 4). The graves are categorized as so-called princely graves, due to a combination of several factors; e.g., the orientation (head towards south) and the position (supine position) of the deceased men in their graves, the location within the cemetery either as single graves (Kirkebakkegård & Varpelev Vest) or centrally placed graves covered by a mound (Ellekilde), as well as the very rich grave inventory. Princely graves were found on the European continent from the La Tène period to the Roman Iron Age (Ethelberg *et al.* 2000; Iversen 2011: 118). The deceased were soldiers. The Ellekilde man probably died at the battle field and the men at Kirkebakkegård and Varpelev Vest had healed lesions. Moreover, the Ellekilde and the Kirkebakkegård graves held the remains of a soldier, who presumably had a relatively high rank within the organization of the mounted army, as symbolized by the bugle, and the bandolier mounting, respectively (see Iversen 2011). The Ellekilde princely grave contained an entire butchered lamb and parts of a dog, presumably a

TABLE 4. — Census of the portions of avian and mammalian skeletons, Roman imports and signatures of cavalry found in the graves. [1] The sex could not be ascertained anthropologically but was indicated on the basis of the grave inventory. Sources of information on sex and age of the decease see text.

Burial site, grave	Depth of the grave below soil surface	Portion of bird	Portion of mammal	Roman imports	Cavalry signatures	The deceased	
						Sex	Age in years
Vråby, Grave 1	0.8-0.9 m	Part of hen	Part of hare, part of pig, parts of sheep	None		Male	> 20
Munkehøjgård, Grave 4	Not stated	Entire cock	Fore part of sheep	Drinking horns, bronze ladle and strainer		Male[1]	20-35
Varpelev Vest	2.6 m	Part of goose	Part of pig	3 circus cups bronze bucket, bronze ladle and strainer, glass		Male	35-55
Kirke-bakkegård, Grave 1	1 m	Entire goose	Part of pig	Drinking glasses	bronze spurs, gilded bando-lier mounting	Male	50-60
Ellekilde, Grave 34	c. 2 m	Entire goose	Part of dog, entire sheep, part of sheep, part of pig	Hemmorer bucket, ladle and strainer, 2 circus cups	Bronze mountings & silver rivets for a bugle	Male	35-40
Kærup Nord, Grave A3663	1 m	Entire cock	Parts of sheep Part of pig	None		Female	30-40

reburied individual (Gotfredsen forthcoming). The inclusion of entire animals in graves is seen as a sign of high status (Ethelberg *et al.* 2000, Gotfredsen forthcoming). Bearing in mind that geese served as guards, were even considered more alert than dogs, and were associated with Mars, the war god, it cannot be regarded as a mere coincidence that geese were given to soldiers. Since domestic geese were probably uncommon during the Roman Iron Age, it may also have added status to include a rare white bird to the grave gifts. It is noteworthy that the richly furnished graves with goose remains have a very limited time horizon i.e., they all date to the C1b or C1b/C2 sub-period (c. 200-250 AD).

DOMESTIC CHICKEN IN GRAVES

The whole cock carcass in the relatively rich man's grave at Munkehøjgård was probably intended as a food offering. It was placed at the left hand of the deceased who was lying in a supine position. The bird lacked its head and one metatarsal; although no cut marks were observed. Only the Vråby grave was probably not a very wealthy grave since the only grave goods consisted of a pottery vessel. The find circumstances are not well documented; however the avian remains may have been associated with the clay pot. The woman in the rich Kærup Nord A3663 grave was offered a whole cock in a clay pot, which was placed at her feet in close proximity to other food gifts in the grave. Although no butchery marks were documented, the way of placing the bird clearly indicates that it was meant as a food offering. According to Lauwerier (1993: 79ff) there seems to be no correlation between the sex of the deceased and the sex of the offered domestic chicken. The few finds in the present study are in keeping with this observation. Besides being of culinary value, there are numerous examples of the use of domestic chicken as sacrificial birds in rituals (Philpott 1991: 206; Serjeantson 2009: 349f). In Roman times, chickens were sacrificed in temples dedicated to Mercury, but also Mithras

and Isis, which spread within the Roman Empire in the first three centuries AD (Serjeantson 2009: 351). In Mithraism, cocks were central to the rites because their crowing welcomed the rising sun.

Contemporary reliably-dated Danish Roman Iron Age finds of domestic chicken are virtually non-existent. The earliest dated find is from the northern part of Denmark dated to the transition from late pre-Roman Iron Age to Early Roman Iron Age. The Iron Age farm Smedegård located in Thy, northern Jutland, yielded an entire cock which was radiocarbon dated to 6-12 AD (AAR-3784) (Raahauge 2002: 95). The cock, representing the only domestic chicken bones at the Smedegård site, was found as a whole carcass and the deposition was thought to be of ritual character (Ibid.). The few measurements obtained from early domestic chicken are of comparable size (Fig. 7). The GL of the metatarsals (n=4) ranged from 71.3 to 79.1 mm, which are within the variation given by Gál (2005: 316) of 59.0-74.9 mm (females) and 76.7-85.3 mm (males) for domestic chicken of the Roman period of Pannonia, Dacia and Moesia. The domestic chicken seemed to be of a rather uniform size and robustness during Roman times.

Two of the eastern Danish domestic chicken finds were from the Early Roman Iron Age whilst only one dates to the Late Roman Iron Age. Chickens were definitely not an everyday commodity for Roman Iron Age people in Southern Scandinavia and the inclusion of an entire cock or hen in a grave probably further added luxury and/or prestige to the offering. Although, the main purpose of placing animal parts in Roman Iron Age inhumations graves was in fact to provide the deceased with provisions, additional symbolic or status-related connotations should not be overlooked. The inclusion of animal bones in burials should rather be seen as: "*…complex symbols which express the various values, aims and attitudes of the mourners in the face of death.*" (Parker Pearson 1999: 10).

CONCLUSIONS

The evidence discussed in the present paper, albeit based on a small sample size, leads to the following conclusions regarding the role of birds as grave gifts in Roman Iron Age inhumation graves, in eastern Denmark:

– Few graves contained birds, either goose or domestic chicken, whilst the majority of animals offered were domestic mammals, primarily sheep and pig.

– Goose and domestic chicken were, as a rule, found in wealthy graves and offered as entire birds arranged as a food offering as evidenced by i) bones bearing butchery marks ii) placement in pottery vessels, and/or iii) association with meaty parts of other food animals.

– Domestic chicken occurred in women's as well as men's graves from the Early and Late Roman Iron Age.

– Geese did not occur until the Late Roman Iron Age and only in princely or high status men's graves, i.e., richly furnished graves with high prestige Roman imports, and in some cases associated with food offerings of entire animals or non-food animals such as dogs.

– Geese were found in soldiers' graves of high military rank within the mounted army. This connection between geese and soldiers was ascribed to this species' documented association with the Roman war god Mars. Thus in addition to being a high status food offering, the geese may also have served as a guard for the deceased soldier.

– Morphometric and contextual studies strongly indicate that the geese of the Late Roman Iron Age inhumation graves were domestic birds.

Acknowledgements

The present paper was originally prepared as a conference paper for the 2010 ICAZ session "Animals in funerary space" in Paris arranged by Rosemarie Arbogast and Sébastien Lepetz, who are thanked for organizing such an interesting and stimulating session. The animal bones study was made possible by a grant from The "Heritage Agency of Denmark" and was carried out at the Natural History Museum of Denmark, University of Copenhagen (SNM). Marcus Krag (Fig. 2, 3A-C and 4A-C) and Geert Brovad (Fig. 6) took the photographs and Knud Rosenlund prepared the map, all from SNM.

Carl Chr. Kinze read earlier versions of the draft. Finally, the two reviewers gave valuable comments to improve the manuscript. To these persons and institutions I am truly grateful.

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Submitted the 13 September 2011;
accepted the 2nd May 2012