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Summary

A small collection of animal bones was recovered from features associated with the anglo-Saxon monastery, previously examined at Church Close. This collection is very similar to that from Church Close with sheep/goat fragments being most common. Most parts of the carcase are represented but bones from the head and feet are scarce. This could indicate either that primary butchery took place elsewhere on the site or that only dressed carcases were procured. The latter option seems more probable for the cattle remains. Bones from very young, probably perinatal, lambs are present. These may represent natural infant mortalities suggesting that the breeding flock was maintained in the vicinity of the site. Alternatively baby lamb may have been a delicacy. Cattle, pig and horse remains are present but infrequent. Geese and domestic fowl are the most frequent bird bones with duck and pigeon also represented.

Author's address :-

Louisa J Gidney

Biological Laboratory
University of Durham
Woodside Building
Science Laboratories
South Road

The Animal Bones from the Excavations in 1987 of the Saxon contexts at Morison Hall, Hartlepool, Cleveland.

By L. J. Gidney

Introduction

The animal bones considered in this report were recovered by hand excavation from four contexts associated with the Anglo-Saxon monastic occupation previously examined at Church Close (Daniels, 1988). The contexts examined are 289 and 290, ditch and fill, also 408 and 409.

The sample comprises a mere 791 fragments of mammal bone and 33 fragments of bird bone compared to 4182 and 789 fragments respectively from the comparable phases at Church Close. Fragments were identified to species as far as possible using the reference collection of the Biological Laboratory, Department of Archaeology, University of Durham. The term sheep/goat is used in this report as bones of the two species are superficially similar. It is possible to separate the two species on many elements of the skeleton (Boessneck 1969, Payne 1985, Prummel & Frisch 1986). Moreover in archaeological material goat bones are often noticeable as being more robust than the sheep material (O'Connor 1988, 71). However with such a small and poorly preserved collection it was not considered cost-effective to try to check every sheep/goat bone fragment for species-specific characteristics. Only skull fragments were routinely catalogued to species. Other elements, particularly metapodials, were examined for the characters of sheep

and goat. All appeared to be sheep but were catalogued as sheep/goat. Two skull fragments were definitely from sheep. No bones from this site exhibited the characters of goat. The fragments recorded as sheep/goat are therefore thought to derive predominantly from sheep.

Only 25% of this collection could be identified to species compared to 54% of the Church Close assemblage. Fragments recognisable to element were assigned to the size categories large ungulate, small ungulate and more amorphous pieces as large mammal. The ribs and vertebrae classed as large or small ungulate will be considered with the cattle and sheep/goat respectively for the representation of carcase portions on the site as deer are absent while horse and pig are infrequent in this assemblage.

The bones will be stored in the Gray Museum and Art Gallery, Hartlepool.

Preservation and Fragmentation

The majority of the fragments from context 209, which produced the greater part of this collection, had degradation of the surfaces partly caused by rootlet action. The bones from 408 and 409 were in better condition. Despite the post-depositional deterioration of much of this collection some fragments from very young sheep/goat were retrieved in reasonable condition. This suggests some variation in the burial environment, which was more clearly demonstrated at Church Close (Rackham, 1988). There are very few loose teeth which may in part suggest that post depositional decay has not been so

severe that many jaws have totally decayed leaving only the teeth.

While it has not been tabulated, it was noted during cataloguing that the distal ends of sheep/goat humeri and tibiae were more common than the proximal ends, as was seen at Church Close. Assuming that standards of excavation and recovery are similar for the Church Close and Morison Hall sites, fragmentation may be slightly more severe on this site as the number of zones per fragment is 1.4 for both cattle and sheep/goat compared to a lowest count of 1.7 at Church Close.

All the animal bones from this site appear to be detritus from food though the degradation of surfaces has obscured butchery marks.

Species

The species present are listed in Table 1. All the mammal bones found are from domestic animals and, with the exception of the six fragments of horse, are from the food producing species sheep/goat, cattle and pig.

Remains of sheep/goat are by far the most numerous contributing 73% of the bone fragments from the three major species. Fragments of cattle bone are far less common providing only 18% while pig remains are very scarce forming only 8% of these three species. When it is considered that many small elements of sheep/goat will have totally decayed or been missed during excavation the predominance of bones from this species suggests that sheep/goat meat was regularly consumed. Pig bones may also be under represented for the same factors affecting

the sheep/goat bones. Pig meat may have been a more important part of the diet than the proportion of bones suggests. Ham, bacon and sausages for example are largely boneless. Beef may have provided larger joints of meat but may have been consumed less frequently than mutton.

While this is a much smaller group of bones than that recovered from Church Close the preponderance of sheep/goat remains is more striking with concomitantly fewer cattle and pig remains.

No dog bones were found but four cattle bones and six sheep/goat bones showed the characteristic marks of gnawing by dogs. Dog bones were recovered from Church Close.

The collection of bird bones is small and of these goose bones provide over half the identifiable fragments. Domestic fowl bones are the next commonest with duck and pigeon also represented. The duck bone is comparable with mallard. Goose and fowl were also the predominant species found at Church Close (Allison, 1988).

Carcase Distribution

The skeletal elements present for sheep/goat and cattle are listed in Table 2. All parts of the sheep/goat carcase appear to be represented, apart from the smaller elements which may be missed during excavation. Metapodials and skull fragments are infrequent. This may suggest that the extremities were not valued for food, indicating that this collection is primarily domestic refuse. The majority of primary butchery refuse may have been dumped elsewhere. The femur is under-represented

compared to the tibia, possibly because the femur splinters into undiagnostic slivers and the epiphyses fuse late.

The small number of cattle bones would seem to derive from the dressed carcase. There are no skull fragments or loose teeth and no metapodials though the smaller and more numerous phalanges are represented.

Age structure of the domestic animals

The ages of epiphysial fusion used in Table 3 are taken from Silver (1969). The numbers of fragments with epiphysial ends are small but a few trends can be seen from Table 3. For the sheep/goat there would seem to be two peak culls, one of lambs less than a year old and one of animals five years and older. Amongst the lambs some very juvenile sheep/goat are present. Besides the seven unfused epiphyses in the 0-1 yr group one other epiphysis and a further eighteen fragments without epiphysial ends were also from very young animals, in the first few weeks of life. This, taken with the presence of all parts of the carcase on site, could suggest that the sheep were reared and slaughtered in the close vicinity. Sheep less than one year old were also found at Church Close. Many animals obviously reached full skeletal maturity, at least five years old, but a smaller proportion had been culled between a year old and five years old.

There are fewer cattle epiphyses and only one unfused epiphysis from an animal less than two years old. Given the presence of lamb bones, the absence of calf bones cannot be caused by differential preservation and may

suggest that breeding cows were not kept in the vicinity unlike the breeding ewes. The cattle would seem, on such very limited evidence, to have largely attained skeletal maturity, at least five years old, prior to slaughter. This may indicate that the primary use of cattle on this site may have been for traction.

The small number of pig epiphyses all seem to derive from immature animals. Only two epiphyses just fusing seem to indicate animals surviving to about three years old.

There are no jaws with teeth or loose teeth of cattle or pig to compare tooth eruption and wear with the epiphyses for ageing. For the sheep/goat there is a mandible and a maxilla with only deciduous dentition, molar 1 not yet erupted, and one maxilla with three permanent teeth in wear. Of the seven loose teeth two are deciduous, one is unerupted and four have little wear. The teeth thus seem to derive largely from the younger animals killed.

Measurements

Where possible, bones were measured but because of the surface deterioration of much of the bone few could be measured and even these are likely to be inaccurate. For this reason, the metrical data obtained are not presented in this report. Two complete sheep/goat radii give withers heights of circa 55cm and 59cm when applying Teichert's multiplication factors (von den Driesch & Boessneck 1974).

Conclusion

This small group of animal bones forms an adjunct to the bones already studied by Rackham from Church Close. Most of the trends noted there are apparent here. Remains of sheep/goat are by far the most frequent, some whole carcases would appear to have been dismembered on site but this may not have been a standard practice. The presence of very young animals suggests that the sheep were kept nearby. Cattle, pig and horse remains are much rarer and no wild mammals seem to have been exploited. Geese and fowl were kept with duck and pigeon also present.

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Table 1. Fragment Counts for the Species Present

Cattle	36	Goose	15
Sheep	2	Fowl	9
Sheep/goat	144	Duck	1
Pig	16	Pigeon	2
Horse	6	Indet	6
S. Ungulate	180		
L. Ungulate	85	Total	33
L. Mammal	21		
Indet.	301		
Total	791		

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Table 2
Skeletal elements present

	Sheep/goat & S. Ung.	Cattle & L. Ung.
Skull	18	
Jaw	8	
Scapula	25	3
Humerus	14	3
Rad. & Uln.	27	2
Cervical Vt.	9	8
Thoracic Vt.	10	14
Lumbar Vt.	17	8
Rib	78	66
Pelvis & Sacrum	14	6
Femur	1	4
Tibia	26	4
Carpals	1	3
Tarsals	7	
Metacarpal	1	
Metatarsal	3	
Phalanges	1	6

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Table 3
Summary of Epiphysial Fusion Data
F = Fused J = Just Fused U = Unfused

Sheep/goat	F	J	U
0-1yr	19		7
1-2 yr	8	1	3
2.5-3.5 yr	8		6
5yr	15		14
Cattle			
0-2 yr	6	1	1
2-3 yr			
3-4 yr	10		
5yr	8	2	9
Pig			
0-1yr	2	1	2
2-3 yr		1	2
3-4 yr		1	3
5 yr			