

MAMMAL AND BIRD BONE, ST JOHN'S COLLEGE, OXFORD (OXJL16)

by Lee G Broderick

Excavations at St John's College recovered a small assemblage of animal bone, mostly dating from the Medieval and Early Modern periods. These two components differed both in their makeup and in the approach taken to studying them. The earlier phases, although a smaller assemblage, were considered of greater importance for understanding the wider archaeology of the site and are contextualised by other recent studies in the area. The later phases presented a medium sized assemblage which could offer an unusual look into the supply of meat to Oxford Colleges and into caprines around the city in the Early Modern period.

The Medieval Period

The best dated of these were those from the 12th and 13th centuries AD (phases 2 & 3) which were recorded and analysed in full, using Oxford Archaeology's reference collection as well as standard identification guides and a diagnostic zone system¹. In all, this was 651 specimens, of which 638 (98%) were recovered by hand and 13 were from environmental samples. Given the small size of this assemblage, NISP figures will be used throughout this paper as providing the best indication of importance on the site.

The Medieval zooarchaeology of Oxford is relatively well studied² in comparison with other British cities, with the most recent investigation in the immediate area taking place at Elizabeth House in 2007. That study recovered material dating from the 11th to 19th centuries AD, with the greatest part coming from the 13th century³. As such, that study provides a useful point of departure for this one. Situated to the north-west of the site investigated here, it featured a series of pits, which contained all of the animal bone recovered, and was interpreted as being characteristic of horn-working or of primary butchery waste. The latter is consistent with spatial distribution patterns for animal bone disposal partly modelled on the archaeology of Oxford⁴, suggesting a site slightly outside the boundaries of the occupied city. Being nearer the city walls, but still outside them and near tenements, this site thus provides an opportunity to further investigate this patterning.

As already mentioned, the assemblage recovered from phases 2 & 3 was relatively small, coming principally from two ditches. The most notable feature of these was at least one dog (*Canis familiaris*) ABG (Associated Bone Group). Context (601) contained 63 dog specimens, including cranial, forelimb and hindlimb elements of both sides from at least three individuals (based on the left humerus). One of these ABGs was considerably more complete than the other, with duplicate elements limited to the left mandible, axis, atlas,

¹ Dale Serjeantson, "Animal Bone," in *Runnymede Bridge Research Excavations, Volume 2: Refuse and Disposal at Area 16 East, Runnymede*, eds. Stuart Needham and Tony Spence (London: British Museum Press, 1996), 194–223.

² e.g. Bob Wilson, "Mortality Patterns, Animal Husbandry and Marketing in and Around Medieval and Post-Medieval Oxford," in *Urban-Rural Connexions: Perspectives from Environmental Archaeology*, eds. Allan R. Hall and Harry K. Kenward (Oxford: Oxbow Books Ltd, 1994), 103–116.

³ Matilda A. Holmes, "The Animal Bones," in *The Oxford Henge and Late Saxon Massacre; with Medieval and Later Occupation at St John's College, Oxford (TVAS Monograph 17)*, ed. Sean Wallis (Reading: Thames Valley Archaeological Services Ltd., 2014), 222–226.

⁴ Bob Wilson, *Spatial Patterning Among Animal Bones in Settlement Archaeology: An English Regional Exploration (BAR British Series 251)* (Oxford: Archaeopress, 1996).

right scapula, left humerus, left 2nd metacarpal, a 4th metacarpal and the left tibia. This animal, as well as one of the other two dogs in the ditch, was around 55cm tall at the shoulder, representing a medium sized dog, with the least represented individual being around 15cm taller (Figure 1). A baculum (suggesting that the ABG was of a male dog) was also recovered from the ditch, along with six cervical vertebrae, ten thoracic vertebrae, three lumbar vertebrae and ten caudal vertebrae as well as 124 rib fragments of medium mammal, probably mostly from the same individual.

Leaving aside the dog specimens, the most commonly represented species in each phase were domestic cattle (*Bos taurus taurus*) and caprines (sheep [*Ovis aries*] and/or goats [*Capra hircus*]) distantly followed by pig (*Sus scrofa domesticus*), a pattern which was in keeping with the larger assemblage recovered from Elizabeth House⁵. Also similar to that assemblage was a relatively large number of cranial elements of domestic cattle recovered from the 13th century (9 out of 18), including three horncores. Of the remaining specimens from this phase, five elements were foot elements (phalanges and metapodials) as were five of the six domestic cattle specimens from the 11th century. These figures are in contrast to those for caprines – just five of the thirteen eleventh century caprine specimens and six of the 21 thirteenth century caprine specimens were head or foot elements. At least three individual caprines were represented in the assemblage in each phase and at least two domestic cattle in the thirteenth century component.

The pattern then, does fit with the spatial pattern theory laid out by Wilson but we can also use this dataset, small as it is, to tentatively suggest some supporting evidence for the nearby Elizabeth House site. The lack of any biasing towards head or foot elements for caprines argues against this site being one of primary butchery waste, with fourteen specimens (64%) of meat-yielding limb elements (humerus, radius, femur and tibia) instead suggesting that the assemblage results primarily from domestic (kitchen) waste.

Butchery evidence was, in fact, sparse – a caprine femur from phase 3 was chopped through mid-shaft and a caprine humerus from phase 2 had an oblique cutmark on the cranial side near the distal end. Both are, likely, primary butchery marks – the latter from breaking the carcass down by following the anatomy of the animal and the former from breaking one of the resultant pieces into a smaller one. By contrast, butchery marks were slightly more common on domestic cattle specimens and large mammal ribs (a cut and a chop) and vertebrae (a chop). A domestic cattle metatarsal from phase 2 had superficial chopmarks on the lateral side and a 1st phalanx from the same phase had oblique cutmarks around the cranial and caudal surfaces. These marks would be consistent with some processing for skins taking place near the site at this time whilst cutmarks on the caudal side of a horncore base would seem to support the idea that a horner may have been practicing his craft in the vicinity in the thirteenth century.

Six specimens from the thirteenth century phase had been gnawed by canids, a much lower proportion than was reported at Elizabeth House but which paint a picture of disposed refuse in pits and ditches being left open and exposed for some time to scavengers – a chicken bone from this period, gnawed by a rodent, adds to this impression. Unusually, a dog ulna had also been gnawed by canids. This particular specimen was from the same group – 675 – as the ABG(s) discussed above but dated to phase 2. It is perhaps through the

⁵ Matilda A. Holmes, "The Animal Bones," in *The Oxford Henge and Late Saxon Massacre; with Medieval and Later Occupation at St John's College, Oxford (TVAS Monograph 17)*, ed. Sean Wallis (Reading: Thames Valley Archaeological Services Ltd., 2014), 222–226.

prism of this scavenger's paradise that the two cat bones (one recovered from each phase) might be best interpreted.

The Early Modern Assemblage

Due to time and budgetary constraints, the larger assemblage from the Early Modern period was studied in less detail, instead being assessed in line with current guidelines⁶. The most striking feature of the assemblage from these phases is the large proportion of caprine specimens. This is above 50% in phases 4, 5 and 6, reaching a peak of 59.5% in phase 6. Almost as dramatic, especially when compared with the Medieval phases on the site, is the proportion of bird remains on the site – particularly domestic fowl (*Gallus gallus*). Domestic fowl are the third most common taxon by NISP in phases 4 and 5 and the second most common in phase 6. This is in stark contrast to the diverse Civil War assemblage recently excavated from nearby Love Lane⁷ and to the Early Modern assemblage recovered from Elizabeth House, at both of which caprines and domestic cattle are present in similarly large proportions and domestic fowl are a minor component or else absent.

Unusually, sixty-six of the caprine specimens were pelvises, which would provide an opportunity for sex profiling the assemblage (Table 3). Combined with the large number of caprine specimens with potential for ageing data (372) and the proportion of contexts containing butchered material (Table 2) this medium-sized assemblage could provide an unusual opportunity for studying caprines in Early Modern Oxford.

St John's College was founded in 1554 and so provides a convenient lens through which to interpret these remains. The continued presence of dog and cat specimens in the assemblage, albeit in small quantities, as well as those of crow (*Corvus corone*) or rook (*Corvus frugilegus*) suggest that disposed rubbish continued to be left exposed, at least at times. The large proportions of caprine and domestic fowl might be supposed to represent a more consistent diet of the college staff and students, compared to the more catholic diet of those disposing their refuse on the nearby sites⁸, perhaps with their own supply agreements.

Conclusions

The assemblage recovered from the St John's College excavations divided neatly into two different types. The first of these was a small medieval assemblage which was securely dated and of greatest important to understanding the rest of the archaeology of the site. Dominated by dog bones, including at least one ABG, the assemblage is best understood with recourse to the recent excavations at the nearby Elizabeth House site. This suggests a city-edge refuse disposal site frequented by scavengers, possibly including the dogs in this assemblage. At this time the site appears to be used for disposal of kitchen waste from the

⁶ Polydora Baker and Fay L. Worley, *Animal Bones and Archaeology: Guidelines for Best Practice* (Swindon: English Heritage, 2014).

⁷ Lee G. Broderick, "Animal Bones," in *Love Lane Building, Mansfield College, Oxford, Oxoniensia*, eds. Andrew Simmonds and Toby Martin.

⁸ *Ibid.*; Matilda A. Holmes, "The Animal Bones," in *The Oxford Henge and Late Saxon Massacre; with Medieval and Later Occupation at St John's College, Oxford (TVAS Monograph 17)*, ed. Sean Wallis (Reading: Thames Valley Archaeological Services Ltd., 2014), 222–226.

nearby tenements as well as from a possible horner working nearer the Elizabeth House Site.

The second part of the assemblage is much larger and consists of unusually high proportions of well-preserved caprine and domestic fowl bones. It was not possible to study these in as much detail as the Medieval component but the assemblage is suggestive of a different diet, particular to the college, compared to surrounding sites. This unusual pattern may reflect a secured separate supply network and the assemblage has potential for a detailed study of caprines in Oxford in the Early Modern period.

Table 1: NISP (Number of Identified SPecimens) and NSP (Number of SPecimens) figures for each phase of occupation on the site, note that the material from phases 4-7 was recorded differently to the rest of the assemblage (see text). Samples from phases 2 & 3 are also included in their own columns, separate from the hand-collected data.

	2	3		4	5	6	7		Samples 2	Samples 3
domestic cattle	6	18		4	76	68	7		2	1
domestic cattle?		1								
caprine	13	22		14	221	357	14			
caprine?		1								
caprine/roe deer									2	1
pig	1	4		1	13	12	7			
horse	1	2			4	1				
dog	6	68		2	12	2				
dog?										1
domestic cat		1			1	1				
domestic cat?	1									
rabbit				2	9	17	2			
small mammal	29	4								
medium mammal	6	349							1	
large mammal	13	52								
Total Mammal	76	522		23	336	458	30		5	3
amphibian							7			
frog/toad										1
Total Amphibian	0	0		0	0	0	7		0	1
bird					4	29	3			
swan					1					
swan?						1				
greylag/domestic goose		1			5	3	1			
domestic fowl		2		3	60	108	1			
domestic fowl?		1								
crow/rook					2	1				
Total Bird	0	4		3	72	142	5		0	0
Total NISP	76	526		26	408	600	42		5	4
Total NSP	106	532		88	2048	3121	258		5	8

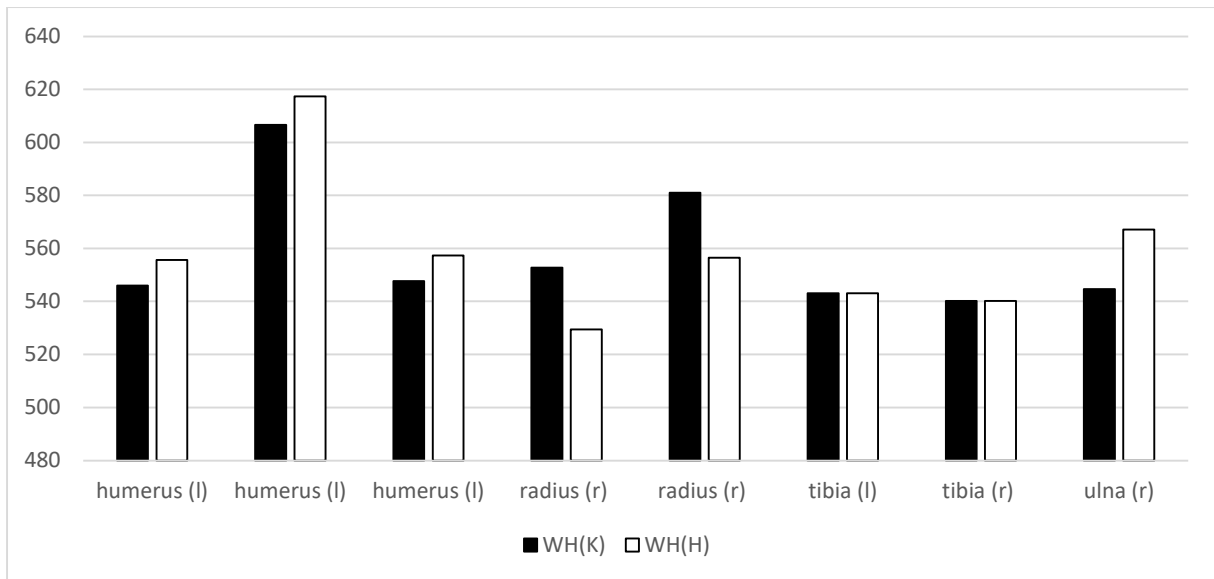


Figure 1: Withers Height estimates for dog specimens from phase 3 ditch group 675, using factors devised by Koudelka⁹ (K) and by Harcourt¹⁰ (H).

Table 2: Contexts with burned bones or bones exhibiting butchery marks, pathologies, expressed as a percentage of the total number of contexts per phase.

	Butchery marks	Pathologies	Burned	No. of contexts
Phase 4	25.00	0.00	0.00	12
Phase 5	47.22	2.78	4.63	108
Phase 6	77.55	6.12	8.16	49
Phase 7	33.33	22.22	11.11	9

Table 3: Number of specimens from phases 4-7 with potential for ageing, sexing or biometric data.

	Ageing data	Biometric data	Sex
domestic cattle	86	10	
caprine	372	177	66
pig	24	1	
horse	1		
dog		3	
Total	483	191	67

⁹ F. Koudelka (1885), cited by Rudolf Müller, "Die Tierknochenfunde aus den spätrömischen Siedlungsschichten von Lauriacum: Wild-und Haustierknochen ohne die Rinder" (Universität München, 1967).

¹⁰ Ralph A. Harcourt, "The Dog in Prehistoric and Early Historic Britain," *Journal of Archaeological Science* (June 1974), 1: 2, 151–175.