

Section 5.1.15 Trench 11 animal bone

By Priscilla Lange

	C3		Late C3-4		?Roman	?Early Medieval	Total	
Taxon	NISP	%	NISP	%	NISP	NISP	NISP	%
Cattle	9	19	19	29	2		30	20
Sheep/Goat	20	43	23	35	14	5	62	42
Sheep	[5]		[3]			[1]	[9]	
Pig	10	21	13	19	8	1	32	22
Horse	5	11	6	9		2	13	9
Hare			2	3			2	1
Chicken	2	4	1	1.5			3	2
Bird	1	2	1	1.5			2	1
Rodent			1	1.5	1		2	1
Rabbit					1		1	<1
Total identifiable	47		66		26	8	147	
% identifiable		52		44				48.5
Large Mammal	17		41		10		68	
Medium Mammal	27		40		13	6	86	
Small Mammal			2				2	
Total unidentifiable	44		83		23	6	156	
% unidentifiable		48		56				51.5
Grand Total	91		149		49	14	303	

Table 5.188 Trench 11 totals.

Third century AD

	Floor			
	11028 = 11029			
Taxon	NISP	NISP	Total	%
Cattle	3	5	8	23.5
Sheep/Goat	1	10	11	32
Sheep		[1]	[1]	
Pig	1	8	9	26.5
Horse	1	2	3	9
Chicken		2	2	6
Bird		1	1	3
Total identifiable	6	28	34	
% identifiable				62
Large Mammal	4	6	10	
Medium Mammal	2	9	11	
Total unidentifiable	6	15	21	
% unidentifiable				38
Grand Total	12	43	55	

Table 5.189 Species representation according to NISP and percentage for floors (11028 = 11029).

These two layers will be considered together as they are the same layers on the mortar floor. The evidence for this is that there is one horse femur which was found in both layers.

As can be seen in Table 5.189, there is a high percentage of identifiable bone. The reason for this is that 33% (18 specimens) are in excellent condition and none are poorly preserved. This supports rapid burial and very little exposure to the open air for these bones. Other attritional processes are low: gnawing 11% and only one burnt bone (Large Mammal unidentified bone). Complete or almost complete bones and teeth make up 36% of the sample which is a very high percentage as completeness aids identification. Only 5 bones have butchery marks representing 9% which is a low percentage at Alfred's Castle. As only 55 bones were recorded they will be considered together.

Foetal remains were found for sheep/goat (an unfused half of a metapodial and a distal radius) but not for any other animals. Newborn remains were recorded for sheep/goat (a pelvis and a radius), for cattle (tibia and a pelvis) and for pig (pelvis). Therefore, rearing of these animals was conducted close to this floor.

Only three mandibles or loose teeth were available for ageing: a pig right mandible was aged to 14-21 months, a right sheep mandible was aged to 3-4 years and a left cattle loose lower premolar 4 to an adult. Interdental attrition was found on the sheep mandible, between the posterior cusp of premolar 3 and the anterior cusp of premolar 4, and the posterior cusp of premolar 4 and the anterior cusp of molar 1 (see Fig. 5.32). An unshed upper deciduous premolar had plaque deposits buccally.



Fig. 5.32 Interdenal attrition on sheep mandible. Photo by P. Lange.

Butchery marks are not very frequent. A complete horse femur in order to separate it from the pelvis. A sheep/goat lumbar vertebra had been chopped through the middle in order to partition the carcass in two. A Large Mammal mandible fragment had a cut buccally for the filleting of the cheek meat.

Further animals raised for their meat are two chicken bones, a tarsometatarsus and an ulna. A very young bird humerus which could also be from a chicken although it appears larger. But as it is unfused proximally and distally it is not possible to identify further.

It is unusual that the relative abundance of the three main domestic animals is very similar but the small sample size must be taken into consideration. Although sheep/goat remain more common, pigs are second and cattle third. Horse continue to be rare although the complete femur may point to a consumption episode. Chicken bones are not very common and are unusual for this time period at Alfred's Castle.

Late Third-Fourth centuries AD

The best preserved and less fragmented elements in these layers are isolated teeth. But complete bones (other than teeth) are found in small quantities for cattle, pig and chicken so at least some of the bones might be in primary deposition. The only excellently preserved elements are complete teeth. There is only one poorly preserved bone so most are actually good to fairly well preserved. Nevertheless, there is a larger percentage of unidentifiable bone (56%) than identifiable ones (44%) (see Table 5.190). Gnawing marks are low for these layers at 9% which includes one bone which was digested and one which has rodent gnaw marks. Only one bone is burnt and only a small amount is butchered (5%).

Only isolated teeth of sheep and sheep/goat and a pig mandible were available for ageing and all were found in layer (11004). An isolated lower deciduous premolar 4 was estimated as belonging to a 0-2 month old. A pig mandible was aged to 14-21 months. Finally a sheep/goat isolated lower molar 3 was aged to 4-6 years which is an unusual old age for the Iron Age but not for the Roman period.

Further to these teeth and mandible, a foetal sheep/goat metapodial and a newborn calcaneum were found in layer (11004). A complete cattle metacarpal but younger than 2-2.5 year, as it is unfused distally, also comes from this layer. But other young cattle deciduous premolars come from layer (11001). A young pig metatarsal 2, also distally unfused and aged as younger than 2 years was also found in layer (11001).

	Destruction layers						
	11001	11002	11004	11007	11027		
Taxon	NISP	NISP	NISP	NISP	NISP	Total	%
Cattle	9		9		2	20	32
Sheep/Goat	12		8			20	32
Sheep	[1]		[2]			[3]	
Pig	7		4			11	17.5
Horse	2		4			6	9.5
Chicken			1			1	1.5
Hare			1	1		2	3
Rabbit		1				1	1.5
Rodent			1			1	1.5
Bird		1				1	1.5
Total identifiable	30	2	28	1	2	63	
% identifiable							44
Large Mammal	14	3	24		1	42	
Medium Mammal	20		17		1	38	
Small Mammal			1			1	
Total unidentifiable	34	3	42	0	2	81	
% unidentifiable							56
Grand total	64	5	70	1	4	144	

Table 5.190 Species representation according to NISP and percentage for destruction.

Pathological changes are also only found in these two layers. The cattle distal metacarpal discussed above also had splayed condyles from pulling a plough or general traction. A fragment of a cattle distal first phalanx from layer (11001) also had remodelling of the bone associated with ploughing and traction. The complete metacarpal from layer (11004) also have remodelling of the bone on its proximal posterior shaft; it must be remembered that this is a young individual which was put to the plough or was pulling heavy loads at a young age. A cattle scapula from this same layer had extra lipping around the articular surface suggesting that this articulation with the humerus (not present) was subjected to a heavy work load due to pulling. It is very likely that some of the bones showing evidence for ploughing could belong to one individual represented by the distally fused metacarpal, the scapula and the distal first phalanx. The complete metacarpal must belong to another individual as it is distally unfused. Therefore we have at least two cattle individuals which pathological changes to the bones associated with ploughing and pulling of heavy loads which is not surprising in the rural environment which Alfred's Castle sits.

All butchered bones also come from these two layers. A mandible fragment from layer (11004) has chop marks to detach it from the cranium and sheep astragalus from the same layer has skinning marks. A cattle distal metacarpal from layer (11001) has dismembering marks and had been open up for marrow. A Large Mammal rib also from this layer has

filleting marks. And finally lateral horse metapodial has saw marks on its shaft, perhaps for bone working.

As is evident in Table 5.191, unidentifiable Large Mammal and Medium Mammal bones dominate these destruction layers with ribs and long bone fragments being the most numerous. It is unusual for cattle and sheep/goat to have the same amount of bone, as the latter are usually more common, even in Roman layers. Vertebrae are rare, and non-existent for sheep/goat which otherwise have almost all parts of the carcass represented, if only by one bone. The most common elements are isolated teeth and cranial elements.

Possibly Roman

This sarsen spread is typical of other features or layers at Alfred's Castle in which sheep/goat dominates the sample (Table 5.192). But with only 46 bones, and half of them unidentifiable, it will be difficult to reach many too conclusions. Preservation is mostly good with only two bones in poor condition. Carnivore gnawing is found in a low percentage (9%) for this site. Burning is totally absent as are butchery marks.

Some of the individuals inferred from these few bones are from young animals although the majority of the bones could not be aged with any precision. A fragment of a cattle lower deciduous lower premolar 4 was unworn but could not be aged further, although it still represents a newborn individual. Other bones representing young individuals belonged to sheep/goat, a proximally unfused first phalanx and distally unfused metacarpal. The only ageable mandible was that of a pig 14-21 months old. The most common elements for all domestic species are loose teeth and cranial elements, 100% for cattle, 87.5% for pigs and 50% for sheep/goat.

Finally, the rabbit element is a femur which is a cylinder due to carnivore gnawing. Unfortunately, as this spread cannot be reliably dated except to possibly in the Roman period, this rabbit might or might not be intrusive. It has been reliably established that rabbits were introduced to Britain by the Romans (see O'Connor and Sykes (2010) and discussion in Trench 3). However due to its uncertain date, this rabbit will not be able to further our understanding on this matter.

Burial cut [11021], skeleton 13

A loose mandibular row consisting of an unshed lower deciduous premolar 2 (complete) and a lower deciduous premolar 3 (broken so unable to tell if sheep or goat) were found in association with skeleton 13. A further lower deciduous incisor was also found and very likely all belong to a young individual, and may represent an original mandible which decayed with time. A rodent incisor was also found but it is considered intrusive.

Possibly Early Medieval

Destruction layer (11017)

The two horse bones are lateral metapodials. One of them had been chopped towards its distal end for either dismembering it from the metacarpal or metatarsal or for bone working. All sheep/goat elements are isolated teeth. All other bones are Medium Mammal long bone fragments (Table 5.193).

	Cattle	Sheep/goat	Pig	Large Mammal	Medium Mammal
Element	NISP	NISP	NISP	NISP	NISP
Horn core	1				
Cranium	1			2	
Maxilla					
Loose maxillary teeth only		2			
Mandible	5	2	3		
Loose mandibular teeth only	4	4	5		
Hyoid					
Atlas	1				
Axis					
Cervical					
Thoracic				1	
Lumbar					
Sacrum					
Caudal					
Vertebra Fragments				1	1
Rib				16	5
Ossified cartilage					
Scapula	2	1	1	1	
Humerus		2		2	
Ulna					
Radius	1	1			2
Carpal					
Metacarpal	2				
Pelvis		1			
Femur					
Patella					
Tibia		4			
Fibula					
Astragalus		1			
Calcaneum		1			
Tarsal					
Metatarsal			1		
Phalanx 1	3				
Phalanx 2			1		
Phalanx 3					
Metapodial		1			
Long bone				15	28
Unidentified				4	2
Total	20	20	11	42	38

Table 5.191 Species and body part representation according to NISP (all Late 3rd-4th destruction layers).

	Sarsen spread 11012	
Taxon	NISP	%
Cattle	2	39
Sheep/Goat	12	52
Pig	8	5
Rabbit	1	4
Total identifiable	23	
% identifiable		50
Large Mammal	10	
Medium Mammal	13	
Total unidentifiable	23	
% unidentifiable		50
Grand Total	46	

Table 5.192 Species representation according to NISP and percentage for sarsen and tile spread [11012].

	Layer 11017
Taxon	NISP
Sheep/Goat	3
Sheep	[1]
Pig	
Horse	2
Total identifiable	5
Medium Mammal	2
Total unidentifiable	2
Grand total	7

Table 5.193 Species representation according to NISP and percentage for layer (11017).

Robber trench [11015], Fill (11016)

The youngest individual is represented by sheep/goat metacarpal cylinder in which the fusion line is still visible between the two halves, so about a few months old. Another young individual a pig unshed upper deciduous incisor. A sheep/goat upper molar was from an adult. All other bones (four) are Medium Mammal long bone fragments.

Not discussed by Gosden and Lock (2013)

	C3	L3-4	L3-4		
	Layer 11020	Layer 11018	Layer 11019		
Taxon	NISP	NISP	NISP	Total	%
Cattle		1		1	6
Sheep/Goat	9	3		12	70
Sheep	[4]			[4]	
Pig	1	2		3	18
Horse	1			1	6
Total identifiable	11	6	0	17	
% identifiable					41
Large Mammal	6			6	
Medium Mammal	15	1	2	18	
Total unidentifiable	21	1	2	24	
% unidentifiable					59
Grand total	32	7	2	41	

Table 5.194 Species representation according to NISP and percentage for destruction layers (11018), (11019) AND (11020).

Layer (11020), Third century AD

It is very unusual that no cattle bones were identified in this layer, although some are likely to be in the Large Mammal category (a cranium and a thoracic vertebra, both fragments) (Table 5.194). But both could also be horse as it is represented by a further cranium fragment. A sheep loose lower molar 3 was the only element which could be aged at 2-3 years. None of the bones are butchered or have pathological problems. Four bones or 12.5% are gnawed and this might explain the poor quality of the sample.

Layer (11018), Late 3^d-4th centuries AD

All sheep/goat and pig remains are loose teeth (Table 5.194). The only ones which can be aged are a pig lower deciduous premolar 4 and lower molar 1 which may be from the same mandible and may belong to a 0-2 months piglet. Two of the sheep/goat teeth are from upper deciduous molars (unshed) which may also belong to newborns. The only cattle bone is a fragment of a pelvis which cannot be sexed.

Layer (11019), Late 3^d-4th centuries AD

Only two Medium Mammal long bone fragments were recorded for this layer (Table 5.194).