ANCIENT MONUMENTS LABORATORY

REPORT
1638

SERIES/No	ENVIRONMENTAL 8/74
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TITLE	BOXNOR Animal bone

CC/T

BOXMOOR Roman Villa — Alison Gebbels.

Animal Bone Report. — 3/4/74.

All the bones were grouped together in one occupation phase. The following species were represented:-

Horse	Cattle	Sheep	Pig	Deer?	Fish	Bird	Hare	Rodent	Frog	
2	5	4	6	3	1	3	1	3	8	(minimum numbers)

Horse.

Two individuals were recognised from the differing state of the dentitions;

Part of a maxilla was present with the worn dentition of a mature individual: 3 incisors, 2 upper molars, 1 canine (therefore a male of at least 4 years.) 1 upper molar showed excessive wear on one side, which could be the result of the tooth erupting at the wrong angle.

Two molars from the other individual showed far less wear, and are from a young adult.

The long bones present were a femur and the distal and proximal ends of a tibia. The head of a scapula may also be present, but this was very fragmentary.

No measurements were possible.

Cattle.

The minimum number was based on metatarsals, since these were the most numerous long bone.

Five proximal ends of metatarsals were represented: 3 proximal ends of metacarpals, 2 distals ends of metacarpals. These all show signs of butchery (as noted at Northchurch).

Seven radii were present, three of which showed signs of butchery.

One tibia was complete, but the proximal epiphysis was unfused, therefore the individual was under 4 years. This articulated with one astragalus. Also there were 3 distal and one proximal ends of tibiae. One very small tibia was unfused at both ends, thus the individual was under two years old and was most likely only a calf of a few months.

The two astragali both articulate with a tibia.

Two ulnae from different individuals were present, also 2 calcanea, 1 atlas, 2 axes, 1 vertebral body, 2 pairs of scapulae and 6 other parts of the blade, and three parts of the acetabulum of the pelvis.

The basal part of a skull was tentatively attributed to Bos, and many rib fragments were present.

Tibia	t.l.	p.w.	m.s.d.	d.w.	
	312	76	38	56	(prox. epiph. unfused)
	-	-	-	56	
	-	-	-	62	

Radius	t.l.	p.w.	m.s.d.	d.w.
	-	75	38	-
	-	54	-	-
	-	75	-	-
	-	75	-	-
	-	70	-	-

Metatarsal	t.l.	p.w.	m.s.d.	d.w.	
	-	46	26	50?	(approx., as broken)
	-	57	-	-	
	-	48	-	-	
	-	46	-	-	

Metacarpal	t.l.	p.w.	m.s.d.	d.w.
	-	48	-	-
	-	58	-	-
	-	65	-	-
	-	-	-	56
	-	-	-	55

Astragalus

Maximum lateral length 60mm
70mm

t.l. is the total length
m.s.d. is the mid-shaft diameter
p.w. is the proximal width
d.w. is the distal width

All measurements are taken in mm across the maximum surface. This method is one devised by R. Harcourt.

Mandibles were poorly represented. One anterior fragment with two premolars and two parts of the diastema were present. Loose teeth included seven third molars, 9 upper molars, 2 deciduous upper molars (thus the individual was under 2 years), and 2 deciduous third molars.

The hyoid bone was present which indicates a fairly mature individual (for this bone to have ossified sufficiently to be preserved) and also good preservation conditions on the site.

Sheep

The absence of most major long bones except metapodials was notable. The following bones were present from a single individual: 1 metatarsal, 2 first phalanges, 1 calcaneum, 1 navicular cuboid. These are all small and complete.

From other individuals there were one metatarsal (distal end unfused), 1 metacarpal, 1 fragment of the proximal end of a metacarpal with an unfused epiphysis, 3 split shafts of metapodials, and one scapula.

5 mandibles were present, and one part of a maxilla, indicating 1 adult of approximately 2 years, another 2 individuals of 18 months, and the mandible of a lamb about 1 month old.

Teeth included 7 lower molars, 1 third molar, 1 upper premolar and 1 deciduous third molar.

The presence of such a limited part of the skeleton may be due to the slaughter of young animals (under 2 years) and the export of their carcases after the limbs and mandibles had been removed.

Metatarsal	t.l.	p.w.	m.s.d.	d.w.	
	127	16.5	9	20	
	-	21	10	23	(distal end unfused)
	-	-	12	-	

Metacarpal	t.l.	p.w.	m.s.d.	d.w.	
	133	22.5	14	25	
	-	25	-	-	(prox. end unfused
	-	-	15	-	

1st Phalanx	t.l.	p.w.	m.s.d.	d.w.
	34	10	8	9
	34	9.4	7.5	9

Pig

Almost all long bones were missing, and so all calculations are based on mandibles and teeth.

1 maxilla had a completely deciduous dentition, representing an individual of under 1 year. Another mandible retains some deciduous dentition and was from an individual about 1 year old. Also 1 individual of 1 year and another of 2 - 2½ years are represented.

3 loose incisors were present, and 2 loose molars which had just erupted.

The 3 long bones were 1 ulna, the distal part of a tibia, and a humerus, whose shaft had been hollowed out for marrow.

As with the sheep the absence of so much of the skeleton may indicate some export of meat from the site.

Tibia	t.l.	p.w.	m.s.d.	d.w.
	-	-	-	35
	-	-	14	-

Also present was the humerus and femur of a foetal or newborn piglet.

Deer

The minimum number was based on the phalanges and the identification of the teeth was quite tentative as they could be the deciduous teeth of a cow.

Bones present include two right and one left scapulae, and one first phalanx of Red deer. Two first phalanges of Fallow deer are also present. There are two loose upper molars.

1st Phalanx	t.l.	p.w.	m.s.d.	d.w.
	58	21	17	20
	42	16	12	16
	43	13	10	12

Fish

These were represented solely by a vertebral body.
Diameter 21mm
Thickness 16mm

Bird

2 metatarsals of male domestic fowl (same side) are present. There are also the femur and humerus of domestic fowl.

A small individual (blackbird size?) was represented by metatarsus, femur and humerus.

Also present was a fragment of a femur, part of the pelvis, a tibia shaft and a small pair of radii. (Not identifiable to species level).

Hare

This was represented by 2 phalanges.

Schmidt* records that hares were sold skinned, but with the fur still on the paws, so as not to be mistaken for cat. These were then cut off before roasting and are often the most numerous bones found on a site.

Rodent

These may well all be intrusive.

2 voles were represented by 2 pairs of jaws, 1 pelvis, and about 10 long bones.

1 rat was present: skull, mandibles, 1 pair of femora, ulna, radius, scapula, and 6 vertebrae. (This is definitely intrusive)

Frog

8 individuals were represented by 4 pairs of pelves, 8 pairs of tibia/fibula, and 7 pairs of femora.

Schmidt* says that there is evidence for the eating of frogs in the Roman

* Schmidt, 1972. Atlas of Animal Bones. P36

Provinces from the site of Augusta Raurica.

General Comments

Many splinters of bone were present showing signs of butchery; most of them were of a size attributable to ox.

The absence of dog is unusual on Roman sites. Preservation is good on this site, therefore this absence cannot be explained by differential preservation.

The selection of bones present from different species is interesting, as there is a definite bias among sheep and pig while cattle are fully represented. This may represent use of cattle for home consumption, while sheep and pig were exported from the site.

The absence of horn cores from both cattle and sheep may also be an indication of their removal from the site for some use elsewhere.

BONE FREQUENCY CHART

	Ox	Horse	Deer	Sheep	Pig	Bird	Rodent	Misc.
skull	1	-	-	-	-	-	1	-
mandible	1	-	-	5	5	-	3	-
vertebrae	4	-	-	-	-	-	6	fish 1
pelvis	3	-	-	-	-	1	1	4 frog
humerus	-	2	-	-	-	2	?	-
radius	7	-	-	-	-	2	?	-
ulna	2	-	-	-	-	-	-	-
scapula	6	1?	3	1	-	-	1	-
metacarpal	6	-	-	2	-	-	-	-
carpals	-	-	-	-	-	-	-	-
femur	-	1	-	-	1	2	2	7 frog
fibula	-	-	-	-	-	-	?	8 frog
tibia	5	1	-	-	1	-	?	8 frog
patella	-	-	-	-	-	-	-	-
metatarsals	6	-	-	2	-	3	-	-
talus	-	-	-	-	-	-	-	-
calcaneum	2	-	-	1	-	-	-	-
tarsals	-	-	-	-	-	-	-	-
phalanges	5	-	3	2	-	-	-	2 hare
ribs	?	-	-	?	-	-	-	-
upper canine	-	-	-	-	-	-	-	-
premolar	-	-	-	1	-	-	-	-
molar	6	2	2?	2	-	-	-	-
incisor	-	3	-	-	-	-	-	-
lower canine	-	-	-	-	3	-	-	-
premolar	-	-	-	-	-	-	-	-
molar	7	2	-	8	2	-	-	-
incisor	-	1	-	-	3	-	-	-
metapodial	-	-	-	3	-	-	-	-
cheek teeth	-	-	-	2	-	-	-	-
astragalus	2	-	-	-	-	-	-	-
horn cores	-	-	-	-	-	-	-	-
hyoid	1	-	-	-	-	-	-	-

A Comparison Between the Animal Bones from the Roman Villas of Boxmoor and Northchurch.

The animal bones from Boxmoor can be compared to the last occupation phase at Northchurch (third and fourth centuries A.D.).

The overall species distributions seem to be very similar. However, at Boxmoor the sample seems to represent fewer parts of the body for certain species. For example, sheep are mainly represented by metacarpals. The small size of the samples makes it difficult to carry these observations any further.