ANCIENT MONUMENTS LABORATORY

REPORT
1878

SERIES/No	ENVIRONMENTAL 5/75 77
AUTHOR	R T Jones
TITLE	DENNY ABBEY, Cambs ANIMAL BONE

DENNEY ABBEY ANIMAL BONE REPORT 1975

The bone material from this site is very fragmentary, few bones being well enough preserved for measurement. Where measurement was possible they have been taken and are tabulated.

I have recognised five period groups:- post-dissolution II, post-dissolution I, Late Monastic, Early Monastic and Roman. None of these groups contain sufficient material for the formulation of any concrete ideas about these animals role in their past environment.

Post-dissolution II

The species present were as follows Cattle (Bos sp 5 individuals), Sheep/Goat (Ovis/Capra sp 16 individuals), Pig (Sus sp 5 individuals) and Horse (Equus) Rabbit (Oryctolagus), Fallow deer (Dama), Red Deer (Cervus) and Dog (Canis); all one individual.

Cattle

This species provided 16.2% of the individuals of all species present at this period. Of the five animals present, recorded by their 5 left humeri, 2 were something less than 1½ years old at the time of death. The remainder were above this age (age judged from epiphyseal fusion). The dressed fat free carcass weight of these latter three animals would be approximately 90Kg, 162Kg and 164Kg respectively (as judged from modern material).

Sheep/Goat

No differentation has been made here between sheep and goat due in the main to a lack of reference material. The 16 individuals here provided 51.2% of the individuals present in this period. It is however important that no emphasis is placed on this seemingly high proportion of Sheep/Goat. A great many differential factors of preservation; for instance butchery, strength and size of bine, will have acted upon them both before and after interment. Looking further at these 16 individuals, their age determined (using the mandibular tooth row) at time of death showed that 6 (66.6%) were approximately 2 years of age, 2 (23.8%) were 1 year of age and 1 (9.6%) was more than 3 years old. Epiphyseal fusion was complete in all but two limb bones. These, two metatarsals represented 2 foetal individuals (not included in the % of individuals present).

Pig

This species comprised 16.2% of all the individuals present at this period. They were represented by 5 left tibiae and 5 palatal fragments. The age groups recognised were as follows:- 1 year (20%), 2 years (60%) and over 3 years (20%).

Horse

One individual (measurements tabulated).

Other species present were, Rabbit (3.2%), Fallow deer (3.2%), Red deer (3.2%) and Dog (3.2%).

Post-dissolution I

The species comprising this group were as follows:-

Cattle 3 (27.2%) Sheep 3 (27.2%) Pig 2 (18.3%), Fallow deer 1 (9.1%), Rabbit 1 (9.1%) and Dog 1 (9.1%). Horse and Red deer were not present in this sample.

Cattle

The 3 individuals present here were represented proximaly by 3 right tibia. A definite male and female was indentified from 2 os coxae. Whilst a third pelvic fragment was from a juvenile animal.

Sheep/Goat

The 3 individuals of this species present were represented by 3 right radii. Ageing of this species using the mandibular tooth row produced ages of 1 individual at approximately 2 years and the remainder at about 3 years.

Pig

The pigs were represented by a single foetal tibia and (not included in the overall %) and two palatal fragments neither of which was determinable as to age.

Fallow deer

A single butchered femur was present. The line of butchery cut the posterior face of the distal condyle at right angles to the shafts axis.

Late monastic

In this period the distribution of species present is as follows:-
Cattle 7 (17.9%), Sheep 15 (38.5%) Pig 4 (10.45%), Rat 2 (5.1%) Rabbit 4 (10.45%) Horse 1 (2.5%) Dog 1 (2.5%), Hare 2 (5.1%), Fallow deer 1 (2.5%), Red deer 1 (2.5%) and Cat 1 (2.5%).

Cattle

Seven animals were present here represented by their mandibles. At least 5 of these were from adult, (more than 3 years old) animals. The remaining animals being one at two years old and one at one year old. In addition to this total number there was also present the metatarsal of one foetal individual.

Sheep/Goat

The 15 individuals present were distributed at the following ages:-
Less than 1 year old (7.2%), 1 year old 3 (21.4%), 2 years old 5 (35.6%), 3 years old 1 (7.2%) and more than 3 years old 4 (28.6%).

One left tibia exhibited Vitamin D deficiency as did one left Radius. Evidence of arthritis was present on the proximal end of a second left radius.

Pig

The 4 animals present are represented by a complete skeleton (Bag No 658) of an animal aged approximately 1 year old. The remainder of the individuals were represented by their mandibles one at each of the following ages, 1 year, 2 years and 3 years.

Horse

One individual present (measurements tabulated).

Other Species

Rat, (Rattus sp) if this is R.norvegicus it is probably intrusive, it is however not possible to identify definitely, from the tibia, down to the species level. (2 individuals present).

Rabbit Of the four individuals present 3 were juvenile and probably died before weaning and probably intrusive.

Dog One individual of small proportions, but evidence very fragmentary.

Cat (Felis silvestris) one individual.

Red deer one individual.

Fallow deer one individual.

Hare (Lepus capensis might be L timidus but very unlikely) one sub adult and one adult. Almost certainly contemporary with the rest of the animal material but showed no signs of burning, boiling or butchery.

Early Monastic

The species present comprised:- Cattle 2 (16.7%), Sheep/Goat 5 (41.8%), Pig 1 (8.3%) Red deer 1 (8.3%), Dog 1 (8.3%), Cat 1 (8.3%) and Hare 1 (8.3%).

Cattle

The two individuals present were 1 animal 1 year old and 1 animal which was more than 3 years old. Most of the remains of this species at this period were ribs fragments.

Sheep/Goat

The five animals present fell into the age groups 2 years (1 individual) and more than 3 years (4 individuals). Here the four "adult" tibiae with associated tarsal bones were broken at 90 mm distance from the distal articulation of the tibia. This practice would remove the portion of the leg least endowed with edible flesh prior to cooking, or this part of the leg could be removed when skinning out, since it is difficult to skin this part of the limb in Ungulates. Again the main find of material is rib fragments.

Pig

The remains of at least one male animal, probably a sub adult.

Other species

Red deer, Dog, Cat and Hare all represented by fragments (one individual per species).

Roman

Cattle

The only species present and only represented by one rib fragment, either a very spartan period! or intrusive from another period. The latter is more likely.

Sieved Samples (5mm mesh)

No date as to period or area was received for these samples therefore I can only report on species present. Species removed were:- Frog (Rana sp), Microtus agrestis, Black bird (Turdus merula), Water vole (Arvicola terrestris), Water shrew (Neomys fodiens), Common shrew (Sorex araneus), Hare (Lepus capensis) and Wood mouse (Apodemus sylvaticus).

Sheep Butchery (Axial)

Butchery seemed to be similar throughout the periods but due to the limited sample size it would be unwise to place any emphasis on this "apparent" similarity.

Butchery was limited, Sheep skulls were cleaved medialy along their long axes possibly for removal of the brain. Horn cores also seem to have been "removed". The vertebrae in many cases have been cleaved along their long axis, often medialy, and at right angles to this axis. Such butchery could be indicative of both nerve chord removal and of the production of a joint of meat akin to our present day "cutlet".

Sheep butchery (Appendicular)

The fore limb

There are no entire humeri, only distal ends being present. From these two distinct types of butchery can be seen.

a. In only one case (post-dissolution II) was there only one record of the humero-radio/ulna joint being cleared, this was done at right angles to its long axis, anteria to posterior.

b. In the remainder of the finds of this joint, through out all periods the humerus was broken rather than cleaved distaly and the radius was broken, not cleaved proximaly.

Both of these practices would serve to remove the lower less meaty part of the limb from the general carcass mass. However I cannot suggest why the radius should be broken or cleaved, perhaps the extreme lower limb was of some use?

The Hind limb

Similar techniques of butchery can be seen at the hind limb; distal ends of tibia and proximal ends of metatarsals are found. Both bones were severed from the rest of the carcass by breakage and not cleavage. The find in three

separate instances of the tibia, calcanium and astragalus all articulated, further confirms this practice. This lower part of the limb is again the least muscular and therefore least nutritious and could well be removed before cooking.

No other cases of butchery were recorded, though they might well have existing unseen but the material was very fragmentary. Butchery was not recorded from cattle or pig, though it most probably did exist, but again the material was fragmentary.

R. Jones B.Sc.

APPENDIX 2

Measurements

Cattle

The Humerus

Period	L	PB	DB
PDII	-	-	79.3
	-	-	68.6
	-	-	82.2
PDI	-	-	-
LM	-	-	-
EM	-	-	-
Ro	-	-	-

The Metatarsal

Period	L	PB	DB
PDII	-	45.9	-
	-	-	57.9
	-	43.0	-
	-	-	61.3
	217	43.0	49.0
	-	-	43.8
	-	-	44.6
	-	-	55.6
	-	45.1	-
	-	51.7	-
PDI	211	47.5	40.7
	-	-	44.3
LM	-	-	58.0
	-	-	57.5
	-	47.3	-
	-	-	58.5
	-	49.0	-
	-	-	60.3
	-	-	54.0
	-	49.3	-

	Period	L	PB	DB
	LM cont'd	-	47.4	-
		-	-	50.7
		204	42.8	-
		-	38.9	-
	EM	-	-	-
	Ro	-	-	-
The Radius	PDII	-	66.7	-
		-	-	72.0
	PDI	-	-	69.0 En.
	LM	-	79.2	-
		-	66.5	-
		-	73.6	-
	EM	-	-	-
	Ro	-	-	-
The 1st. Phalanx	PDII	55.7	27.4	29.9
		70.0	33.8	34.0
		57.1	26.9	30.1
		57.2	24.9	26.4
		57.1	27.4	30.0
		60.6	27.4	29.3
		66.0	32.0	31.0
		68.5	28.7	32.8
		57.8	31.9	32.4
		61.9	33.6	34.8
		58.6	29.8	30.6
	PDI	64.9	31.3	30.2
		41.0	33.1	-
		59.9	-	30.2
	LM	66.7	31.9	31.9
		56.6	25.3	27.5

	Period	L	PB	DB
	LM cont'd	57.5	-	-
		68.5	34.8	36.0
		58.0	24.5	22.9
		65.0	30.0	-
		61.1	25.2	25.4
		52.1	24.7	25.8
		62.4	27.8	30.0
		54.7	24.8	27.0
		63.2	28.5	26.4
		61.4	34.3	32.3
		57.3	29.4	31.3
		56.4	26.3	26.7
		69.7	30.3	28.0
		62.8	30.5	29.2
		63.1	31.4	31.6
		63.6	27.6	30.6
	EM	-	-	-
	Ro	-	-	-
The 2nd. Phalanx				
	PDII	46.2	31.7	26.1
		38.0	25.7	21.0
		43.5	23.4	28.0
	PDI	57.0	-	29.2
		60.5	30.2	28.2
		36.2	29.7	-
		42.1	27.5	-
	LM	-	-	-
	EM	-	-	-
	Ro	-	-	-

The Metacarpal	Period	L	PB	DB
	PDII	180	52.8	53.6
		-	-	49.3
		-	-	62.9 En.
		-	53.0	-
		210	59.9	71.5 Draught
		-	-	54.5
		-	-	60.9
		197	55.8	57.7
		-	-	65.2
		-	-	61.7
	PDI	-	-	54.8 En.
	LM	-	-	54.3 En.
		-	54.4	-
		-	56.3	-
		-	64.1	-
		-	71.2	-
		-	59.7	-
		-	61.9	-
	EM	-	-	-
	Ro	-	-	-

Sheep

The Metacarpal	Period	L	PB	DB
	PDII	-	-	-
	PDI	-	-	-
	LM	-	23.9	-
		-	-	24.4
		-	21.0	-
		-	22.6	-
	EM	-	22.7	-
	Ro	-	-	-
The Metatarsal				
	PDII	-	-	-
	PDI	-	-	-
	LM	-	17.8	-
	EM	-	-	-
	Ro	-	-	-
The Humerus				
	PDII	-	-	28.9
		-	-	33.4
		-	-	29.6
		-	-	28.0
		-	-	27.2
		-	-	31.1
		-	-	23.4
		-	-	23.0
	PDI	-	-	-
	LM	-	-	30.6
		-	-	31.0
		-	-	29.8
		-	-	28.0

APPENDIX 1

Species Present as a Percentage of all the Individuals Present at Each Period (Domestic)

Period	Ox		Sheep		Pig		Horse		TOTAL No
	No	%	No	%	No	%	No	%	
PDII	5	18.5	16	59.4	5	18.5	1	3.6	27
PDI	3	38.0	3	38.0	2	25.0	0	0	8
LM	7	25.9	15	55.5	4	14.8	1	3.8	27
EM	0	0	0	0	0	0	0	0	0
Ro	0	0	0	0	0	0	0	0	0

Species Present as a Percentage of all the Individuals Present at Each Period (All)

Species	PDII	PDI	LM	EM	Ro	
OX	16.2%	27.2%	17.9%	16.7%	0	
Sheep	51.2%	27.2%	38.5%	41.8%	0	
Pig	16.2%	18.3%	10.45%	8.3%	0	
Horse	3.2%	0	2.5%	0	0	
Fallow deer	3.2%	9.1%	2.5%	0	0	
Red deer	3.2%	0	2.5%	8.3%	0	
Dog	3.2%	9.1%	2.5%	8.3%	0	
Cat	0	0	2.5%	8.3%	0	
Rabbit	3.2%	9.1%	10.45%	0	0	
Rat	0	0	5.1%	0	0	
Hare	0	0	5.1%	8.3%	0	
11	100	100	100	100	0	Totals

	Period	L	PB	DB
	LM cont'd	-	-	28.2
		-	-	28.2
		-	-	28.2
		-	-	31.4
		-	-	37.4
		-	-	26.7
		-	-	30.0
		-	-	33.6
		-	-	28.1
		-	-	28.0
		-	-	29.6
		-	-	28.9
	EM	-	-	-
	Ro	-	-	-
The Tibia	PDII	-	-	26.4
		190	-	25.0
		-	-	24.5
		-	-	24.9
		-	-	25.9
		-	31.1	-
		-	37.0	-
		-	-	28.4
		-	39.2	-
		-	-	27.0
		-	31.8	-
		-	-	24.6
		-	-	22.9
		-	-	26.0
		-	-	26.6
		-	-	36.8

	Period	L	PB	DB
	PDI	-	-	-
	LM	-	-	24.3
		-	-	25.6
		-	-	26.6
		-	-	24.6
		-	-	22.0
		-	-	26.4
		-	-	23.2
		-	-	25.6
		-	-	26.5
		-	-	24.2
		-	-	22.8
		-	-	24.2
		-	-	25.9
	EM	SEE LATER		
	Ro	-	-	-
The Radius				
	PDII	146.5	-	29.2
		-	29.6	-
		-	-	26.4
		-	-	33.8
		169	34.0	23.7
		-	31.8	-
		155	-	-
	PDI	155	30.8	28.7
		-	31.5	-
		-	-	27.8
	LM	127	28.5	26.0
		160	34.0	24.8
		-	30.1	-

Period	L	PB	DB
LM cont'd	159	30.6	29.0
	-	-	26.2
	144	25.8	32.3
	-	-	26.0
EM	-	-	-
Ro	-	-	-

The Scapula

Period	G B
PDII	27.0
	33.7
	31.7
	23.5
	34.4
	26.8
PDI	-
LM	-
EM	-
Ro	-

Sheep Tibia and tarsus (associated) from EM

1) Right	Tibia	DB	22.9,	Calcanium	L	50.9	Astragalus	L	25.0	B 19.0
2) "	"	"	25.0,	"	"	49.9	"	"	26.6	" 20.3
3) "	"	"	25.1,	"	"	51.1	"	"	25.4	" 17.8
4) Left	"	"	25.6,	"	"	50.2	"	"	26.7	" 18.2

Pig

The Humerus	Period	DB
	PDII	40.7
	PDI	27.6
	LM	-
	EM	-
	Ro	-
The Tibia	PDII	33.7
		33.2
	PDI	-
	LM	-
	EM	-
	Ro	-

Horse

The 1st. Phalanx

	Period	L	PB	DB
	PDII	80.0	52.0	41.0
	PDI	-	-	-
	LM	79.5	48.8	43.8 left fore
	EM	-	-	-
	Ro	-	-	-
The Radius	PDII	-	-	79.7
	PDI	-	-	-
	LM	270	78.0	64.0
	EM	-	-	-
	Ro	-	-	-
The Metatarsal	PDII	265	-	-
	PDI	-	-	-
	LM	-	-	-

Period	L	PB	DB
LM cont'd	159	30.6	29.0
	-	-	26.2
	144	25.8	32.3
	-	-	26.0
EM	-	-	-
Ro	-	-	-

The Scapula

Period	G B
PDII	27.0
	33.7
	31.7
	23.5
	34.4
	26.8
PDI	-
LM	-
EM	-
Ro	-

Sheep Tibia and tarsus (associated) from EM

1) Right Tibia DB 22.9, Calcanium L 50.9 Astragalus L 25.0 B 19.0

2) " " " 25.0, " " 49.9 " " 26.6 " 20.3

3) " " " 25.1, " " 51.1 " " 25.4 " 17.8

4) Left " " 25.6, " " 50.2 " " 26.7 " 18.2

	Period	L	PB	DB
	EM	-	-	-
	Ro	-	-	-
The Metacarpal	PDII	-	-	-
	PDI	-	-	-
	LM	227	49.7	51.3
	EM	-	-	-
	Ro	-	-	-
The 2nd. Phalanx	PDII	-	-	-
	PDI	-	-	-
	LM	44.6	48.2	45.5 left fore
	EM	-	-	-
	Ro	-	-	-

The 3rd. Phalanx	Period	Maximum width
	PDII	-
	PDI	-
	LM	48.4
	EM	-
	Ro	-

All measurements are in mm.

L = maximum length

PB= " proximal breadth

DB= " distal "

Ep. = Epiphysis

PDII = Post dissolution II

PDI = " " I

LM = Late monastic

EM = Early "

Ro = Roman

- = measurements not possible