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This report gives a first appraisal of a collection of animal bones that was seen from the start to be of great potential interest. Time and other commitments did not allow an immediate recording bone by bone to the usual detailed standards of the Faunal Remains Unit and for the purpose of the present report a much simplified procedure had to be adopted. The conclusions, therefore, may need to be made more precise with later working, or perhaps they may need to be revised.

METHODS OF APPRAISAL AND RECORDING

Some classes of bones were chosen for full recording, both to make valid comparisons with other sites and for the sake of the intrinsic information they could give. Of particular importance, all measureable bones were recorded in full and the measurement catalogue is therefore in every way comparable with that from other sites. Similarly, all mandibles giving ageing information from cheek tooth rows have been recorded in full detail, along with all loose lower third molars both deciduous and permanent.

Every bone of the assemblage has been examined and where possible identified. Some bones were found on examination to be of special interest, mostly for signs of pathology or for distinctive marks of butchery, and these bones have been listed separately and indexed directly to the archive.

Apart from this the main records were set out in an archive which was based not on the individual bone but on the archaeological context. The general state of the material was recorded, primarily for chewing, erosion and burning, and the presence or absence of species. An overall picture of preservation may therefore be obtained, and the varying occurrences of the species may be quantified and compared, but the usual percentage comparisons by fragment count are not available from these shortened records.

The prime archive has been drawn up box by box and bag by bag and it should be of use in suggesting suitable lines for further specialised study and in enabling instant retrieval of the material. For the present report various tables have been compiled from the prime archive and arranged for ease of comparison between assemblages from the grubenhauser, from the larger or the more productive pits, and from the other contexts. By far the most productive single feature was the hut F7339.

THE STATE OF THE MATERIAL

The general condition of the material is shown in Table 1, where the summarised percentages relate of course to the numbers of occurrences and not, as is more common, to the fragments. Preservation overall was good, and though a few individual bones showed some erosion there were no contexts where this was marked for the assemblage as a whole. Signs of chewing, however, were quite common; they occurred in half the contexts from the huts and in just over one third of the contexts from the main pits, and from their general appearance were caused probably by dogs. Burning was relatively rare, but was found more often in the huts than in the pits.

THE REPRESENTATION OF THE SPECIES

The species occurrences are shown in Table 2.

Amphibia were found in several contexts throughout the feature groups; the bones in pit F7341 were particularly large and must surely have come from toad. There was one fragment of fish, not further identified, from pit F7309. There were signs of working on antler (Riddler,) but there was no postcranial deer, and though the settlement was surely a rural one the community would have depended for meat almost entirely on its domestic supplies.

There were also several occurrences of horse, and with good distribution over the body, and some of these horse bones had been chopped, but they were found just one or two fragments at a time and even if they came from food remains - which is by no means certain - horse would have formed no more than a very small part of the diet.

For the more important food species a mere tally of occurrences means little, but a broad idea of the relative abundance of cattle, sheep and pig may be gained from the minimum numbers from their lower jaws: these gave 21 cattle, 44 sheep and only 5 pigs (30.0%, 62.9% and 7.1% respectively). This would suggest a considerable stress on sheep, a good supply of cattle (since each beast is represents both a greater effort in the rearing and a greater range of resources in return), and a marked lack of interest in pig.

Domestic fowl was moderately common in that there was a total of 43 measureable bones in 23 occurrences, with some concentration of these in the huts and in particular in the rich assemblage of F7339. Goose was more rare, with only 6 occurrences and was not found at all in the pits.

From the less common domestic animals, there were occasional occurrences of cat across the context-types, but it is notable that despite the many signs of chewing there were no remains of

dog. Goat was rare: it was not found at all in the huts, there was only one occurrence in the pits (an immature horn core in F7341), and there were two fragments of postcranial goat in minor contexts.

AGEING

In the prime archive mandibles are aged according to the toothwear scheme devised by Grant (1975), but the results in Table 3 have been simplified into six broad age groups. The present samples are not large and the data are amplified by the separate inclusion of loose third molars in addition to the mandibular rows. It is interesting that the cattle show a clear trend of either being juveniles or else being considerably old - the prime meat group is largely absent, that of the young adults where the final molar has almost erupted or is just coming into wear. Sheep have a wider spread of ages, but the jaws of young adults again are poorly represented. The youngest sheep jaws are mostly found in hut F7339.

The few pig jaws were quite young.

No horse lower jaws were found, but there were two finds of worn upper molars.

SIZES

The sizes of the main domestic animals are of particular interest (Tables 4 and 5). A total of 121 bones was measured, but these were distributed between the species and over the body and produced few samples large enough for a fair calculation even of a mean. To gain a more general picture all measurements have been individually compared with those from other Saxon sites in Wessex.

The cattle from Abbot's Worthy gave quite reasonable sizes. There were four measurements of total metapodial length from which withers heights could be estimated, and these results compared well with the good measurements given by large Middle Saxon assemblages from Hamwic (Boundillon and Coy 1980) and from Ramsbury (Coy 1980). Indeed, the figure of 1.29m from the metatarsus in F7623 is conspicuously high for the general period. Though the cattle measurements of bone width are on average somewhat below those from Hamwic and Ramsbury, there are nevertheless several fragments which are comfortably above their respective Hamwic means, and only one is below the Hamwic range (a radius with distal breadth of 59.4 mm from hut F7339).

The sheep by contrast were particularly small: there were no measurements of total lengths of longbone from which to estimate the withers heights, but it is notable that every single measurement of bone width was below the respective means for

sheep as established for Hamwic and echoed at Ramsbury. In hut F7389 and pit F7483 there were measurements which fell below the Hamwic ranges (a scapula with distal length of 24.2 mm, and a tibia with distal breadth of 21.6 mm). The same phenomenon of sheep of small stock was found at Early Saxon material from Old Down Farm near Andover (Bourdillon 1980), and there the few cattle bones had been small as well.

There were few mature pig bones but where measurements could be taken these were of good size.

The domestic fowl came well within the ranges established for Hamwic and the figures fell variously both above and below their respective Hamwic means. Few of the goose bones could be measured, but in F7623 there were several good-sized fragments and F7389 gave a whole goose humerus with an exceptional length of 174 mm.

BUTCHERY CUTS

Butchery cuts seem mostly rough and imprecise. The exigencies of time did not allow any detailed quantification during the study, but some special points of interest were noted: careful cutting was found on a cow lumbar vertebra and a sheep thoracic vertebra, both from the hut F7389, where there was also a cow cervical vertebra with a neat sagittal cut, which is rare if not unique for this period in Wessex. The various pits gave little careful cutting, save for a cranial fragment of cattle sacrum from F7541, which had two firm clean cuts which had almost certainly been sawn. The minor contexts produced one very clean cut on a rib, probably of sheep, in F7627, and from F7623 a cow metacarpus which had been cut repeatedly on the surface and then chopped through with considerable force.

SIGNS OF ANOMALIES OR OF DISEASE

A few minor cases of pathology are listed in the archive. Perhaps of greatest present interest were the instances of impaction in the cheek tooth rows of the sheep, for these were found in a variety of locations within the toothrow, between premolars, between molars, or where premolar and molar rows abut. Such variation in a single assemblage is unusual. Otherwise the sheep mouths were in general quite healthy: there was only one bad case of periodontal disease and this was seen in a very old jaw.

THE GENERAL ANIMAL ECONOMY

From the results as a whole it would seem that we are looking at something positive and good, at something that is much better established, for example, than the light animal husbandry of Early Saxon Old Down Farm. The sheep which are the most numerous of the Abbot's Worthy animals may indeed be small in stature, but many were kept to a good age and in a good state of health. Both from their sizes and from the location of impaction in their lower jaws it would seem that they represent rather different flocks from those sheep which were found by the mouth of the River Itchen at Hamwic.

The cattle were less numerous than the sheep but they were of good height and quite reasonably robust; many of them were kept to a considerable age, presumably for their many rural uses. The gap in the pattern of ageing of the cattle, with the prime meat group being almost entirely absent from the sample, suggests that part of the herd may not be represented here and if this is so then the relative strength of the cattle may have been underrated. One may speculate on whether animals were being killed for the provisioning of some other settlement and if so where this other settlement might be - there is always the hope that one may light upon the source of some of the good food supplies which reached Hamwic, but if the sheep from Abbot's Worthy seem not to be closely akin to those found at Hamwic it would surely be stretching the evidence to suggest that there were strong trading links there for the cattle.

Supplies of meat were basic and domestic, and there seems to have been little if any exploitation of wild animals for food: although antler was in quite common use for working there are no signs of post-cranial deer, and this suggests that the status of the inhabitants was not that of those in whose interests any nearby deer may have been protected.

Yet even in this first quick appraisal there have been found, along with much rough butchery, some signs of more careful cutting of the carcase, signs indeed found even in the huts. It would seem then from the bones that in the early phases and onwards this was far more than a simple rural settlement where people existed hand to mouth.

From the point of view of the animal bones this is a very interesting site. Even the limited study has added a new dimension to the awareness of animal husbandry in this period, and the recording of the bones to the usual rigorous standards would indeed be well worth while.

REFERENCES

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TABLE 1

THE STATE OF THE MATERIAL

	CONTEXTS WITH BONE	CONTEXTS WITH MUCH EROSION	CONTEXTS WITH CHEWING	CONTEXTS WITH BURNING
HUTS				
F 7334	1			
F 7339	15		8	4
F 7403	1			
F 7445	3		2	1
PITS				
F 7341	9		3	1
F 7345	6		3	
F 7404	2		1	
F 7483	5		2	1
F 7485	4			
F 7499	2			
F 7582	1		1	
F 7541	2		1	1
F 7809	2		1	
ALL HUTS	20	—	10 (50.0%)	5 (25.0%)
ALL PITS	33	—	12 (36.4%)	3 (9.1%)
OTHERS	30	—	9 (30.0%)	3 (10.0%)
TOTAL	83	—	31 (37.3%)	11 (13.3%)

TABLE 2

SPECIES OCCURRENCES

	CON-TEXTS WITH BONE	CONTEXTS WITH OCCURRENCES OF:										
		COW	SHEEP	GOAT	PIG	HORSE	CAT	FOWL	GOOSE	AMPHB.	FISH	
HUTS												
F 7334	1	1	1					1				
F 7339	15	14	13		9	5	1	8	3	1		
F 7403	1	1	1		1							
F 7445	3	3	3		1							
PITS												
F 7341	9	8	1	1	3	1	1			2		
F 7345	6	5	4		1	1				1		
F 7404	2	2	1		1	1						
F 7483	5	4	3		2	2	1	1				
F 7485	4	1	3									
F 7499	2	2	1		1							
F 7532	1	1	1				1	1				
F 7541	2	2	2		2	1		2		1		
F 7809	2	2	2		1			2			1	
ALL HUTS	20	19	18		11	5	1	9	3	1		
ALL PITS	33	27	18	1	11	6	3	6	3	4	1	
OTHERS	30	26	20	2	10	3	1	9		3		
TOTAL	83	72	56	3	32	14	5	23	6	8	1	

TABLE 3

AGEING BY TOOTHWEAR

(A) CATTLE

WEAR STAGE	JAWS + LOOSE		M.N.I
1			-
2	3		3 (14.3%)
2 or 3	3	1	4 (19.0%)
3	1		1 (4.8%)
4	2		2 (9.5%)
5	2	2	4 (19.0%)
6	4	3	7 (33.4%)
TOTAL	15	6	21

STAGE 1: M 1 not yet in wear
2: M 2 not yet in wear
3: M 3 not yet in wear
4: M 3 coming into wear
5: M 3 in full wear
6: M 3 in heavy wear

(TABLE 3)

(B) SHEEP

WEAR STAGE	JAWS + LOOSE		M.N.I.
1	3		3 (6.8%)
1 or 2	1		1 (2.3%)
2	5	1	6 (13.6%)
2 or 3		1	1 (2.3%)
3	5	4	9 (20.4%)
3 or 4	1		1 (2.3%)
4	4	3	7 (15.9%)
5	6	5	11 (25.0%)
6	5		5 (11.4%)
TOTAL	30	14	44

with stages as for cow

(/ TABLE 3)

(C) PIG

WEAR STAGE	JAWS + LOOSE	M.N.I
1 or 2	1	1 (20.0%)
2	1	1 (20.0%)
3	1	1 (20.0%)
4	2	2 (40.0%)
5		-
6		-
TOTAL	5	5

with stages as for cow

TABLE 4 - WITHERS HEIGHTS OF CATTLE
by Teckle factors

from Metacarpus Total Length:	189.6 mm	x 6.125	= 1.16 m
from Metatarsus Total Length:	208.7 mm	x 5.45	= 1.14 m
	211.4 mm	x 5.45	= 1.15 m
	236.7 mm	x 5.45	= 1.29 m

TABLE 5 - MEAN MEASUREMENTS OF WIDTH (in mm)

Cattle Astragalus, Lateral Length: $\bar{x}$ = 59.6

(range 59.2 - 64.4, n = 5)

Sheep Humerus, Distal Breadth: $\bar{x}$ = 26.2

(range = 25.2 - 29.7, n = 7)

Domestic Fowl Radius, Greatest Length: $\bar{x}$ = 57.9

(range = 54.1 - 65.5, n = 6)