AHK Rpt 4500 SITE 1627

Level III report on the animal bones from Rollright, Warwickshire.

by Bob Wilson

Some 800 bones and fragments were examined; a quarter of them were recently fragmented pieces from two horse skulls. Most of this material was in a good state of preservation. Some was more extensively leached - especially two large bones from Area I. Results of identification are given in Tables 1 and 2. The record of red deer bones in Area I is of passing note.

Bones from the Iron Age pits make up the largest feature type group. Typically with such material the remains of large mammals are relatively less common while those of the medium-sized are abundant and accompanied by burnt debris. (1) In the Rollright group pig is scarcely present (2%) but this is compensated by a great abundance of sheep (74%). Bones from both the Iron Age and Romano British ditch and deposits have the largest species best represented and few of them were burnt.

These differences between species results from different types of feature appear primarily related to the size of bones and fragments that enter deposits and this, with the incidence of burnt debris, is brought about by a complex of factors related to human and other activity. (2) The 'size of bones' rationale is supported here by elements and fragments measuring more than 10cm which amount to 2.5% of the number of bones in the pits and 22% of those in the Iron Age ditch deposits or 4.2% of all ditch deposits. The lower latter figure is biased by and should exclude the presence of much newly broken cranial debris of horse in F3. Differences in the size of bones in deposits is also indicated by the higher percentages of small unidentifiable fragments although other factors such as an improved recovery of small bones would give similar results.

The distribution of the skeletal elements of sheep in Table 2 does not appear unusual. Recovery of the smallest elements of the carpal and hock joints appears normal. A crude index of bone degradation, calculated from the relative abundance of mandible, tibia, radius and loose teeth (3) is 57%. This

confirms that the bones are neither heavily degraded nor especially well preserved. For the latter conclusion, however, a distinction should be made between the effects of leaching, which are largely absent from the bones here, and other causes of degradation, and bone dispersal, chiefly the various effects of butchery, rubbish clearance, and scavenging.

The typicality of the pit debris indicates the closeness of these deposits to domestic activity around hearths and houses nearby. Pit F5 is of further interest in containing an attractively worked piece of antler (page), the cranium of a horse, and part of a dog skeleton including fragments of both maxillae, and three neck vertebrae.

The horse cranium was largely complete except for the anterior area, and lacked the mandibles. All the maxillae teeth were erupted and with wear which suggests the horse died as a mature individual between 5 and 10 years of age. (4) Wear on the anterior half of the second premolar is noticeably smoother than on the crowns of the teeth behind. The rounding, and probable lowering, of the tooth is suggestive of wear from a bit piece between the reins.

Cut marks across the cranium in front of and between the orbits indicates that the skin was removed from the carcass up to this point. The cranium was severed from the top of the spine by chopping through the occipital condyles and the atlas vertebrae from the ventral side.

Further horse debris but of the Roman period was prominent in the ditch F3 where mandible remains were associated with articulating elements of a metatarsal, L 3/6, and part of the hock joint L 3/7; and an articulating humerus and ulna, L 3/7. Some pathology of the hock joint was evident in bone outgrowth to 6mm from the lateral proximal metatarsal and signs of element fusion between the surfaces of the 3rd tarsal and the absent 4th. Similar pathology was evident on the central tarsal.

Further incremental growth of very porous bone extended over the medial and posterior shaft of the humerus to 9mm in depth. The interior shaft appears unaffected and the outgrowth may be described as periosteitic. (5)

These pathological bones could be from the same animal. Wear on the associated mandible teeth indicates a relatively premature death around 5 years of age. (6) An age estimate from the metatarsal indicates an individual standing around 1.33m in shoulder height. (7)

While it appears that the bone pathology may have contributed to the early deaths of animals it did not prevent the butchery of the carcasses. Cut marks show the removal of meat from the ventral medial side of the posterior mandible and from the lateral and posterior parts of the distal shaft of the humerus.

Slaughtering ages of sheep, cattle and pigs. Of 9 variously represented Iron Age mandibles of sheep, 4 loose p4 are at Tooth Wear Stage f (Mandible Wear Stages 4-12), one at f or g, and one at j (M.W.S. 11-22); another incomplete mandible has P4 half erupted (M.W.S. 24-32); a loose M3 is at T.W.S. e or f (M.W.S. 34-38); and a relatively complete mandible is at M.W.S. 40. One p3 of cattle is at T.W.S. j (M.W.S. 14-29) and a mandible of pig is at M.W.S. 6 (8).

These data indicate a predominance of juvenile or immature animals were slaughtered at the site. This slaughtering pattern is particularly characteristic of regional Iron Age site debris. Indeed the data of sheep is sufficient to indicate that there were few differences with the typical slaughtering pattern of Iron Age sheep in the Thames Valley, at Danebury and other sites further south on the chalk, and at Guiting Power, elsewhere on the Cotswolds.(9)

Minimum number of individuals. These estimates were calculated from the Mandible Wear Stage data above. At least 7 sheep and one each of cattle, pig and horse are represented in the bone debris.

Pathology. Apart from the pathology of the apparently articulated horse bones already described, one of the sheep mandibles (M.W.S. 40) showed signs of periosteosis and thickening of the mandible beside P4 and M1. M1 and M2 of this jaw also show abnormal fluted and attenuated root growth; the

fluting effect being found more commonly in mandibles of older sheep.

Discussion. Besides the similarities of the species percentages in different types of feature to those elsewhere, the slaughtering pattern is sufficient to show the general comparability of the animal husbandry and economy around Rollright Stones to that at other small Iron Age settlements along the Cotswolds and in the Thames Valley. Some woodland cover is indicated by the red deer bones but the low representation of pig and the greater abundance of sheep indicate a predominately open landscape.

Footnotes to Rollright report.

1. R. Wilson, in M. Parrington, Excavs. at the Ashville Trading Estate, Abingdon Oxon (C.B.A. Research report 28, 1978), and for G. Lambrick on Mount Farm, Berinsfield, Oxon (unpublished), c/o Oxford Archaeological Unit, 46 Hythe Bridge Street, Oxford.

2. R. Wilson, 'Degraded bones, feature type, and spatial patterning on an Iron Age occupation site in Oxfordshire, England.' in Paleobiological investigations, ed. N.R.J. Fieller, D.D. Gilbertson and N.G.A. Ralph (B.A.R. 1985); and in T. Allen, Excavations at Mingies' Ditch, Hardwick with Yelford, Oxon, in prep.

3. R. Wilson, in Paleobiological investigations, op.cit.

4. M.A. Levine, 'The use of crown height measurements and eruption-wear sequences to age horse teeth.' in Ageing and sexing animal bones from archaeological sites ed. R. Wilson, C. Grigson and S. Payne (B.A.R. British ser. 109, 1982), 223-250.

5. J. Baker and D. Brothwell, Animal diseases in archaeology (1980), 63-70.

6. M.A. Levine, in Ageing and sexing bones, op.cit. 223-250.

7. L. Kiesewalter, cited by J. Boessneck and A. von den Driesch, 'Kritische Anmerkungen zur Widerristhohenberechnung aus Langenmassen vor- und fruhgeschlichtlicher Tierknochen' Saugetiekunde Mitteilungen, xxii 4 (1974), Table 3.

8. A. Grant, 'The use of tooth wear as a guide to the age of domestic ungulates' in Ageing and sexing bones, op.cit., footnote 4.

9. R. Wilson, op.cit., footnotes 1 & 2; A. Grant in B. Cunliffe, Danebury, an Iron Age hillfort in Hamsphire, (C.B.A. Res. Report, lii, pt. 2, 1984); M. Maltby, 'Iron Age, Romano-British and Anglo-Saxon animal husbandry' in The Environment of Man (B.A.R., British ser. 87, 1981) 155-203; & R. Wilson, in A. Saville, Excavs. at Guiting Power Iron Age site, Glos. 1974. (Occ. Papers C.R.A.A.G.S. 1979), 141-44.

Table 1. Frequencies and percentages of Iron Age and Romano-British bones at Rollright.

Area	I	IX					
Feature	Ditch	Pits		Ditch 3			
	F1&F3	n=10		3/5-8	3/1-4	Total	
Period	IA	IA		IA	R-B	IA	
	f	f	%	f	f	f	%
Cattle	-	23	14.1	-	6	23	13.5
Sheep/goat	-	121	73.6	3	7	124	72.5
Pig	-	3	1.8	-	2	3	1.8
Horse	-	8	4.9	2	13	10	5.8
Dog	-	8	4.9	1	-	9	5.3
Red deer	2	-	1.2	-	-	2	1.2
Sub-total(n1)	2	163	100.5	6	28	171	100.1
Unidentified	-	326		10	72	336	
Total (n2)	2	489		16	100	507	
			% of n2		%		%
Burnt bones	-	64	13.1	1	6.3 -	65	12.8
Frog	-	-		3	-	3	

Table 2. Frequencies and percentages of skeletal elements of sheep in the pit deposits.

No. of sheep bones	121
	%
Head	49
Feet	13
Body	38
Percentage of n	
Mandible	9
Loose teeth	31
Vertebrae	6
Small bones (carpal, hock & phalanges)	5
Degradation index (% of ma,to,ra & ti)	57