Animal Bone from Mancetter

The animal bone from Mancetter was presented in two very different assemblages. One was a group of well preserved and largely unbroken bones mainly of equine origin, and the other was a collection of small groups of poorly preserved fragments from a number of context, of which a considerable proportion could not be identified. However, upon close examination the first group also bore areas of erosion. The horse group was excavated from a well, and appeared to have been secondarily deposited therein by roadmakers during the 4th century, a view which is supported by the anatomical composition of the deposit; thus these bones are not dated. It is suggested that they are survivors of a larger group, preserved by the alkaline conditions produced by the breakdown of bones on the edge of that group, and the areas of erosion on them is further supporting evidence.

Well Group

The following horse bones were identified from the well group:

Skull 3, largely intact, 2 fragmented.
Mandible 2, neither of which fitted intect skulls
Vertebrae 53, comprising 2 atlas, 10 cervical, 21 thoracic, 12 lumbar, 2 sacra and 8 caudal, all of which were mature.
Sternal, Sternal ribs 5
Thoracic ribs 46
Scapula 1
Pelvic bones 3 complete, 1 partial. All mature, 1 pair
Humerus 2 left, 3 right including 1 proximal immature
Radius/ulna, 1 left, 3 right. All mature, 1 pair
Metacarpal 2 left, 1 with fused metacarpals 2 & 4 pairs with detached side bones.
Femur 3 left, 2 right (1 pair). All mature
Patella 1
Tibia Left 2, right 3. All mature, no pairs.
Calcaneum 1 left, 2 right. All mature, no pairs.
Astragalus 1 left.
Metatarsal 3 left, 2 right. All distal epiphyses mature, all side bones (a total of 9) detached.

Phalanges 3 proximal, 2 middle and 5 distal, of which there were 2 pairs
Loose teeth 13 (5 incisors, 1 upper premolar and 7 upper incisors)

The minimum number of individuals included in the above is 6,5 mature and 1 immature which is represented by only 3 bones, a humerus and possibly 2 metpodials. The skulls all came from mature animals, and apart from one very elderly specimen (possibly in its mid-teens) all had molar teeth about 60% of the unworn length. Canine teeth were present in all jaws except for 1 and there were thus 4 male and 1 female animals; since infantile castration is not commonly practiced in this species, it cannot be stated whether the former were stallions or geldings, but the long bones were all slender, suggesting geldings.

Detailed measurements of these long bones is set out in table 1.

Besides the horse bones, other species were present in the well group. There were 16 cattle bones and 2 loose teeth, including 11 mature vertebrae (1 atlas 8 cervical and 2 thoracic) three pelvic bones of which one came from a castrate male and the other two were a pair from a very small and slight female. All 3 pelvic bones had different forms of anteromedial notch in the acetabulum; assuming that the cause for this is genetic, a population with a wide genetic base is tentatively suggested. The other cattle bones identified were a left premaxilla and a right tibia shaft. The teeth were

both upper premolars, one of which was just coming into full wear, thus originating from an animal younger than those represented by pelvis or vertebrae; a minimum of 3 individuals is thus indicated.

The well group was completed by 3 sheep bones (2 of which could have been goat) and a number of lagomorph bones. The sheep bones comprised a skull fragment, a frontoparietal junction from which a horn core had been broken off, a left juvenile and mandible and a right tibia shaft (minimum 2 individuals). The lagomorph bones comprised a femur and a pair of tibiae from a young hare and the tibia, femur and scapula of a smaller immature individual which might have been a rabbit or a hare younger than the above; other bone fragments might have come from either of these. Owing to the burrowing activities of the rabbit, these bones might have been intrusive and it seems likely that neither lagomorph or sheep bones were part of the initial deposit.

It would appear that the horse and cattle bones were originally deposited in an articulated state, but in the course of redeposition of a number of smaller bones, carpals, tarsals and sesamoids and most of the phalanges were lost. There were, however, some signs of butchery on some of the horse bones. The posterior neural spines on one of the sacra have been cut through diagonally and the left transverse processes of four of the lumbar vertebrae have also been removed. Both sets of cut marks are very smooth and are not recent breakages. Whilst it is possible that the cuts were made by roadmakers' tools it is conceivable that they were made in course of removing the substantial (and succulent) muscles of that area. Reports of collections of horse bones are rare in the British archaeological literature, but the most likely period for them to occur is the iron age. A possible example is that part of the Beckford (Worcs.) excavations reported on by Gilmore (1970). Though she found an overall total of 60% horse, she did not mention the possibility of whole limbs having been deposited. This concentration of horses was localised at Beckford; apart from a buried horse skull horse bones were neither particularly noteworthy or numerous on other parts of the site. (Noddle unpublished).

Table 1. Dimensions of Horse bones (mm)

The measurements were carried out according to the recommendations of Von den Driesch (1976).

a) Cranial Skulls:

Overall length	Maxillary width as 1st molar	Length tooth row
480	109	160
490	110	165
500	115	160
Mandibles:		
370		168
380		160

b) Post Cranial:

Bone	Length	Proximal width	Distal width	Midshaft width
Scapula				55
Humerus	280			80
	263			77
	275			82

Bone	Length	Prodimal width	Distal width	Midshaft width
Radius	30	69	64	37
	305	76	66	35
	315	73	67	35
	315	74	64	37
Metacarpal	202	46	42	29
	208	43	44	30
	215	44	42	31
Femur	310 approx	-	-	
	330	90	64	
	335	94	78	
	340	89	67	
	355	100	78	
	380	105	81	
	380	102	87	
Tibia				
	315	84	64	
	330	90	64	
	340	89	67	
Calcaneum	94			
	96			
	102			
Metatarsal	240	44	40	27
	240	47*	40	27
	250	43	41	27
	257	47	43	30
	257	46	44	30
1st phalanx	74	47	38	
	76	47	40	
	80	49	38	
	81	51	40	

* includes pathological exostosis

Withers heights were calculated from the bone lengths, using the conversion factors of Kieswalter (1888). These ranged from 116 cm to 137 cm, the lesser heights being obtained from the femur. In conventional equine terminology these dimensions range from 11 to 13 hands, that is to say medium sized ponies. Horses dating from the later Roman period are usually slightly larger than this.

Poorly preserved group

This comprises bone fragments from 60 contexts, but 32 of these contained no recognisable fragments. From the reminder, 33 fragments were identified: 25 of bovine origin, 5 sheep, 2 pigs and one rabbit. Assuming that each context contained bones from different individuals, these came from 22 cattle, 4 sheep, 2 pigs and 1 rabbit, the latter probably being intrusive. Some of these individuals could be aged; the cattle were 1 each newborn and juvenile and 2 mature, and one of the pigs was also immature. A few measurements were obtained from these bones, and are presented in the Table below.

Animal	Bone	Part measured	Measurement
Cattle	Lower 3rd molar	Ant-post length	139
	Calcaneum	Length	140
	Metatarsal	Proximal width	43
Pig	Radius	Proximal width	26

(this last one may have come from an immature animal)

No great significance should be attached to this collection; its composition is probably influenced more by differential durability than by actual input, but it does serve to emphasise the exceptional nature of the horse bones.

References:

Von den Dreisch A.,(1976). A guide to the measurement of animal bones from archaeological sites. Peabody Muesum Bull 1.

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