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Summary

Ten boxes of animal bones were examined from a site in or around the former bed of the River Test. The pottery suggests a date in the Early Iron Age or perhaps in the Late Bronze Age; of the two, a date from the Early Iron Age would seem better suited to the bones.

There had been some exploitation of wild species - red deer, roe deer and wild pig. Of the domestic species, fragments of cattle dominated the assemblage, and horse was well represented. There was relatively less sheep/goat than has been found on many Iron Age sites from Wessex, and rather more pig; this may reflect the valley environment in contrast to the upland chalk which has more often been studied. Many bones were whole or near-whole but the pattern of butchery and the mixed nature of the bone assemblages suggested domestic food waste: the horse bones in particular showed many light cuts, as from the removal of meat. The only articulated material consisted of one front leg of cattle, parts of two or three dogs, and much of the skeleton of a cormorant.

The material was very well preserved and a good corpus of measurements could be taken.

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THE ANIMAL BONES FROM LA SAGESSE (THE PRESBYTERY) 1988, an Early Iron Age or Late Bronze Age site at Romsey, Hampshire

The La Sagesse site in Romsey (which is also known as the Presbytery) was excavated by the Test Valley Archaeological Trust in 1988. It gave 10 large boxes of bones from a few contexts from a prehistoric stream channel of the River Test, which was filled in with a series of calcareous tufa deposits. It is thought that the deposits may represent a midden, but the range of material is limited to ceramics and animal bone, plus a very small amount of human bone. Nearly all the animal bone is well preserved.

Two large contexts (cc.8 and 19) were very well sealed, as were two rather smaller ones (c.6 in the centre of the stream-bed and c.7 directly below it); the evidence of the pot places the upper contexts in the Early Iron Age, and the other two from that time or perhaps from a little earlier. Below them a small amount of animal bone was found from separate small contexts (mainly c.20 and c.32, taken together as BTM in the present tables), and some of this was accompanied by Bronze Age flints. Sealing the main group, an upper layer (c.5) was considered by the excavator to show some minimal disturbance but to be generally sound; its animal bone was well preserved, and this assemblage has been examined and compared with the sure prehistoric material below it.

In Wessex, the known Late Bronze Age material has come almost entirely from the chalk - though Done (1980) has published good Late Bronze Age material from Runnymede Bridge on the Thames. Jennie Coy (n.d.) reported on a small amount of Bronze Age material from the Bell Street site in Romsey, but this was too fragmentary to give much useful information; other material from the Bell Street site has added little to the picture (Bourdillon in prep.). For the Early Iron Age there is much more material: there was a large assemblage from the hill-fort at Danebury in the upper Test Valley, and from Winnall Down (in the upper Itchen valley some 17km east of Romsey) there was a good assemblage from pit, ditch and quarry contexts from the period (Maltby 1985a). But this too was from chalkland. The present assemblage gives a chance for prehistoric valley material from this area to be studied and compared.

The La Sagesse site also gave a few later contexts, some from the Romano-British period and others from the 18th century. The animal bone from these contexts has all been examined but much of it appears to have been disturbed. The material from the less disturbed contexts was recorded in the archive and has been listed separately in the first of the present tables; but there was little of note and it is not discussed thereafter.

The site was excavated by normal hand recovery. In addition, a few soil samples were disaggregated and floated for fine sieving.

The material was studied at the Faunal Remains Unit by the Unit's normal methods. The prime data file (SAGESSE.TSY) is held there on a Comart CP520 computer and coded by the AML system (Jones et al. 1981). The archive of computer print-outs is held both at the Faunal Remains Unit and at the Test Valley Archaeological Trust and it comprises:

(a) a table of identified fragments by context
(b) the mandible archive
(c) the measurement archive
(d) a descriptive list of specimens with signs of pathology or other anomalies
(e) a descriptive list of specimens showing cutmarks.

The material will be stored with the Hampshire County Museums service.

THE RESULTS

The list of recovered fragments is given in Table 1. It is of note that cattle and horse are both well represented in comparison with many other prehistoric sites and there may have been a bias towards the larger and heavier bones; but the range of species is of interest. There are a few fragments from wild species -two or perhaps three fragments of wild pig (Sus scrofa), whose attribution is discussed below, and thirteen fragments of deer, of which five were of red deer antler. The bird bones in c.8 were from a single skeleton; but even if these are scaled down in calculation, fragments from wild species formed some 2% of the fully identified material, which is quite a high figure for the period (e.g. Grant 1981,205).

Of the domestic species, cattle were predominant in the material and sheep/goat fragments were quite plentiful. Horse and dog are represented in the table almost as highly as pig. The bones of horse were scattered and varied and seem likely to have come from many individuals; those of dog were more often found in groups. There were no domestic birds, nor any small mammals, amphibians, or fish.

Of the nineteen samples of soil taken for fine sieving, only six gave animal bones, and this material came only from the major mammals. Two samples from c.30 gave a cervical vertebra of cattle, a rib of sheep/goat and three unidentified fragments from the larger ungulates. Context 5 gave only a fragment of cattle skull; c.20 gave three ribs of sheep/goat and an incisor of pig; and c.8 and a small lens (c.35) gave five unidentified fragments, three of them probably from the larger ungulates and two from the smaller ones. One may therefore have confidence in the results from trench recovery. Indeed, the same excavation team has recovered a good amount of small material from difficult Romsey sites (from a sticky matrix on the Midland Bank site A 1988.9, for example): on the present site the matrix was gritty and the bones could easily be seen.

The pattern of distribution over the body is given in Table

2. Loose teeth are quite common for horse, dog and pig though no more than moderate for cattle and sheep/goat. There are many fragments from the head, probably as a result of the easier dis-integration of such light material - this is certainly so for many of the cattle skull fragments in c.8, where the material seems to have come in the main from just two skulls. There was only one loose horn core of cattle; some skull fragments of cattle were found with the horn cores still in place, and no polled material was seen.

Bones of the head are common too from the other domestic species, though they are less so for horse where the pattern of distribution differs from that of cattle and where relatively there were far more bones of the feet, though any horse foot has but few. Pig footbones were minimal. It is interesting that in contrast to pig the fragments of dog included several small foot bones. The dogs may have come into the river as individuals, and perhaps their foot bones stood a better chance of preservation if they entered the water still with skin and flesh.

THE CONDITION OF THE MATERIAL

The good condition of the material was shown in several ways (Tables 3 and 4). Most bones were well preserved and there was a low rate of unidentified fragments - those classified simply as from large or from small ungulates. Many such fragments were little more than bone crumbs, too small either to show chewing and erosion or to give sure negative evidence of their absence; they have therefore been omitted from Table 4, and also from the later tables.

An overall rate of less than 10% for loose teeth is low, and may be a further sign of good preservation. The sample of loose teeth for sheep/goat is small, and there must be an element of disquiet in case such small material was lost to the river; but these data are given separately because there are good comparisons. The present rates compare with about 10% for the loose teeth found by Maltby at Winnall Down in the large sample of sheep/goat material from Early Iron Age pits, which he takes as very well-preserved. Even the rate of nearly 15% in c.5, the context held on archaeological grounds to have been perhaps a little disturbed, is well below the other Winnall Down com-parisons which top 30% in the Early Iron Age ditches and 60% in the quarries from the same period (Maltby 1985b, 42).

Some bones had been chewed, apparently by dogs, but most marks of chewing were quite light. Signs of heavy chewing were rare, and this suggests that discarded bones were not left lying around the place for any length of time. Save for the small assemblage from c.7, general erosion was low and heavy erosion was minimal; this again may suggest quick deposition.

The fragments classed as 'concreted' were those with white powder either adhering hard to the surface or incorporated into the network of the bone. In fact a great many bones showed a minor dusting of such powder, presumably from the calcareous nature of the deposit: the fragments listed in Table 4 are those where it was more marked, and these were concentrated in the lowest of the main contests, c.19. Contexts 6 and 7 in the main bed of the stream showed no fragments with heavy concretion.

With good general preservation, it is useful to look for any differences between the contexts: indeed there were variations, but no context was consistently poor. Context 19, for example, gave the highest rate of unidentified material; but only one fragment was heavily eroded. The heavy rate of erosion in c.7 was perhaps the single parameter to stand out from the rest, yet the rate of loose teeth there was low and nearly all its small assemblage could be identified. The rate of chewing was low in all layers. It may be said that most of the bones had been dumped directly and once-for-all.

BUTCHERY

The incidence of fragments with cutmarks was not high (2.6% overall - Table 5) but it was convincing as evidence of butchery. Maltby (1985c, 22 and 31) has demonstrated that the survival of such marks varies in inverse proportion to the incidence of chewing and erosion, and it is with the better-preserved material from Early Iron Age Winnall Down that the present material should be compared (cutmarks found there on over 10% of the chewed or eroded cattle bones, and on over 30% of the others).

There are contrasts by context and by species. The six cuts found from c.7 made a high tally for a small assemblage; yet there was a virtual absence of cutmarks in the far larger assemblage from c.8. Fragments of horse were generally the most likely to show cutmarks. Cattle bones gave occasional cutmarks, as did those of sheep/goat.

Nearly all the marks were small sharp cuts on the surface of the bone, often closely repeated, and would have been made at disarticulation or in removing the meat. The exceptions were were a deep cut on a cattle first phalanx from c.7 and a hard untidy one on the only cut fragment from c.8 (a cattle ilium, cut laterally on the shaft). Only one fragment was cut right through the bone - a lumbar vertebra of cattle from c.7, trimmed both in the sagittal and in the horizontal plane.

Bones with cutmarks were found from all over the body - three ulnae (two of horse, plus cattle), three vertebrae (two of cattle, plus sheep/goat), three astragali (two of horse, plus goat), three ribs (two of sheep/goat, plus cattle). Two cattle humeri showed cutmarks on the shaft. Other bones of the body, if cut at all, were found cut only once.

On the other hand a great many fragments were whole or near-whole (Tables 6 and 7): the archive permits a coding of bones with roughly three-quarters remaining, and of those which are whole; fragments between these two groups are graded as `near-whole' and are those where some 80% or more of the bone is taken as still present in a quick assessment by eye. Most of the longbones of horse were whole, or nearly so, and so too were many metapodial fragments of horse, of cattle and of sheep/goat. If the smaller fragments had been washed more easily downstream there would of course be some bias to the larger fragments in what was left, but it would seem that large fragments of material were quite regularly discarded. One whole right fused radius-and-ulna of cattle in c.6 was found in articulation with a near-whole humerus, and a right metacarpal quite similar in texture was nearby, which suggests that this front leg had been deposited more on less intact, but in most contexts the whole or near-whole bones clearly came from several individuals. From this, as from the cutmarks, it seems likely that the material was generally from food waste but that the bones were often discarded without being opened for their marrow. In this the present material fits with the pattern found by Maltby (1985a, 101) from Early Iron Age Winnall Down.

Even the bones without cutmarks could well have been wastage from food. The bones of dog were found in groups which may represent a few individuals, and for them the absence of cutmarks leaves open the question of whether or not the dogs had been eaten and the same must be said for the skeleton of cormorant; but though none of the pig bones showed any marks, the pigs were surely eaten, for why else are pigs kept but for their food? None of the postcranial deer bones showed cutmarks, nor did the wild pig humeri; but these too were likely food waste.

THE RELATIVE REPRESENTATION OF THE DOMESTIC SPECIES (Table 8)

If deposition in the river may have given a bias towards the heavier fragments, those less likely to have been washed away, it seems safest to make comparisons mainly of like with like and of size with size: cattle and horse should be considered together, and the smaller species taken on their own.

Bones of horse tend to be quite rare in the Bronze Age: at Runnymede Bridge, for example, Done (1980) found 54 fragments of horse and 1584 of cattle, a ratio of 1:29. Maltby (1985d) found 112 fragments of horse, including many loose teeth, as against 3825 fragments of cattle at four Late Bronze Age sites on the Marlborough Downs (1:34); he stresses the poor state of pre-servation and does not press any conclusions, but horses were clearly not greatly exploited there. Horses are generally more common from the Iron Age, though there may be wide variations by context and also over time. In the large assemblages from Danebury the low ratio for the Early Iron Age (1:24) rose sharply to 1:4 for the middle and later Iron Age layers there (Grant 1984,117). There was an overall ratio of 1:4 for the Early Iron Age deposits at Winnall Down, but Maltby (1985,99) found great variation there between the various context-types. In the present assemblage the ratio varies between the layers and is highest in the uppermost context (c.5), but horse fragments were found throughout the assemblage and the overall figure of 1:6.4 would seem to fit better with a Iron Age date than with a date from the Bronze Age.

Sixteen fragments came certainly from sheep, against five sure fragments of goat. Maltby (1981, 154), however, has listed many Iron Age sites where bones that were certainly from goat were either negligible or were non-existent. In the present assemblage four of the five goat bones were post-cranial.

What perhaps is of greatest important is the ratio of sheep/goat to pig. In many prehistoric sites sheep are the most abundant of the domestic species on the fragment count, and pig are well behind: Grigson's (1982) high rates of pig for the later Neolithic in Wessex come mainly from ritual sites. Coy (1981) has warned against facile comparisons for a changing abundance of pigs, but it may be said that in general they give low values on many Wessex Iron Age sites - though not at Groundswell Farm in Wiltshire or at Ower in Dorset, as Coy herself has shown (Coy ibid, 61). For the present material the pig: sheep/goat ratio is 1:2.1 by fragment count. Figures for Iron Age Danebury are consistently higher for sheep - 1:3.6 for the Early Iron Age, 1:3.2 for the Middle and 1:4.2 for the Late (Grant 1984,117), and from Early Iron Age layers from Winnall Down the figure for sheep was higher still - 1:4.8 (Maltby 1985a,99). Danebury and Winnall Down are both on chalk, however, and it may be that what counted for most in the exploitation round Romsey was its situation in the valley rather than up on the chalk: one may make the exact comparison with Late Bronze Age Runnymede Bridge on the Thames, where Done (1980) found 388 fragments of pig against 752 of sheep/goat (1:2.1).

AGEING

Ageing was assessed first from the mandibles (Table 9). Cattle and pig each gave one very young mandible (with the first molar not yet in wear). Sheep/goat showed several young individuals from the next stage, with the first molar in wear but not the second. These animals would still have been quite small and they might have been casualties from sickness, or else they were slaughtered in a dairying economy or culled at the onset of the winter; they are unlikely to have been killed directly for their meat. Otherwise there are the prime meat age-groups represented, especially with the four cattle mandibles from stage 3 where the third molar is not yet in wear - this may not be the most economic meat yield, but the animal is then of good size yet still young enough to be tender. There were several adults, some with all their molars in full wear, both for cattle and for sheep/goat. There were also three fully adult jaws of pig from a total of six, a higher rate than is often found for a species reared only for food.

Ageing may also be assessed on the incidence of small porous bones (Table 10). It was only cattle which gave material so small and porous that it must have come from neonatal or even from foetal individuals; but the main species all gave material from the quite young stock, from animals perhaps a few weeks old. These again are likely to represent young casualties. Material from these age-groups shows the presence of breeding stock nearby.

PATHOLOGY AND ANOMALIES

There were contrasts between the species in the patterns of pathology (Table 11). Five of the sheep/goat mandibles (from a total of 20) showed a serious degree of impaction in the teeth, either between the first and second molars or between the fourth premolar and the first molar; three were from c.19, where one jaw was also swollen with periodontal disease. The cattle mandibles showed several genetic anomalies, all from c.19 - one absent second premolar (n=12), and three third molars each with their final column lacking (n=9). There were, however, no problems of impaction or disease. A cattle acetabulum from c.5 had a small slit in the surface of the joint (n=8).

The troubles for dog were more serious. A mandible from c.5 had lost the first and second molars ante-mortem; and a large fragment of skull from c.8 showed damage as from a heavy blow above the right eye. The crest was crushed out of line and the bone had regrown with rough lumps, but the dog had recovered well enough to have lived for some long time thereafter - eating quite gingerly, with an uneven and one-sided bite which gave the upper cheek toothrows, left and right, a pattern of differential wear.

Neither pig nor horse showed any problems or anomalies.

THE SPECIES

CATTLE

Cattle were well represented.

Maltby (1981,185) takes the Greatest Length of the astragalus as a measurement sufficiently common on most sites to be used to plot changes in the sizes of cattle over time. On the present site, however, only one cattle astragalus could be measured: its Greatest Length (54.9 mm) came low in Maltby's range. Seven withers heights could be calculated and these gave a mean of 103.3 cms and a range from 98.3 to 108.1. The calculations from the metacarpals were made by Fock's (1966) factors and produced the greatest heights; as often happens, Matolcsi's factors on the longbones gave lower results (e.g. Bourdillon and Coy 1980, 105). The sample is small; yet with a standard deviation of 3.5 and a coefficient of variation of 3.4% the seven results do give a certain consistency.

It seems, then, that in the patterns of decline of cattle size from large individuals in the neolithic period to very small ones in the later Iron Age, the material from La Sagesse was well advanced; but there was evidence still of individuals of a reasonable size. A fragment of skull in c.8, which provided several measurements, came from an individual with quite a large head. And some measurements of bone breadths showed variation in size, from quite large individuals as well as small ones - seven measurements for the proximal articular breadth of the radius ranged from 54.6 to 69.7 mm, and six measurements of acetabular length from 45.5 to 58.3 mm. Individual measurements are given in the catalogue in Table 12.

The measured skull fragment had both horn cores still in place. These were quite small ones, oval in cross-section and curving deeply downwards - an earlier rather than a later trait - and the profile of the forehead was double-arched.

OVICAPRID

Five fragments could definitely be identified to goat - one fragment of core from c.19, a radius, and three ankle bones. Sixteen bones could be identified as from sheep - these were nearly all leg bones, front and back, and also two fragments of skull. In most of the present tables these sure identifications have been taken with the rest of the ovicaprid material, that recorded in the archive as "sheep/goat". Only two withers heights could be calculated: both were from sheep metacarpals, and both were reasonable prehistoric sizes (58.1 and 60.3 cms). Of the two tibiae which gave measurements of distal breadth, one was very small (22.1 mm) but the other was of a fair size (25.2mm).

PIG

Most of the pig bones were small, save for two fragments of distal humerus which were large and substantial, and for one quite large proximal radius. The humerus is not a bone which Payne and Bull (in press) prefer for the separation of wild from domestic pig in archaeological material, since its considerable sexual dimorphism may be confusing; but in his major study of the pig remains from Klagenfurt in Roman Carinthia, Luhmann (1965, 28) gives measurements of humerus distal breadth ranging from 32-43 mm for the domestic animals and from 48.7-60 mm for those from the wild species (Sus scrofa), and measurements of 48.6 and 52.1 mm make it very likely that the two humerus fragments from La Sagesse were of wild pig. The proximal radius from c.20, with a breadth of 32.7 mm, was notably large in comparison with two other radius fragments in the present assemblage; but Luhmann's ranges for this measurement are 22-32 mm and 36.5-41.5 mm for domestic and wild material respectively, and these figures suggest - though not conclusively - that the fragment is more likely to have come from domestic stock.

HORSE

The horse fragments were found scattered and they came from various individuals - in c.5 there was a minimum number of three on the femur. All teeth were from adults and no sure young material was seen, which would fit with Harcourt's (1979,158) interpretation of prehistoric horse exploitation as the rounding up of semi-wild animals when they reached maturity and were old enough to train. It should be said, however, that a chewed humerus shaft from c.6 felt quite porous and may have come from an animal that was immature.

It was seen in Table 5 above that it was bones of horse which were the most commonly cut. Most notably, a skull fragment from c.6 had many small sharp cuts on both condyles, and a radius from c.5 had repeated oblique cuts on the shaft.

Five withers heights could be calculated for horse from Kiesewalter's factors from measurements of lateral length. They ranged from 117.5 cms (very small) to 135.0 cms, that of a medium-sized pony. A left mandible from c.5 was much slighter than that of a modern New Forest mare in the FRU's collection, but its cheek-tooth row was almost identical in length (167 mm). No larger horses were found.

DOG

The measurements of dog mandibles in Table 12 come from three individuals, but all were closely comparable in size. The pair, left and right, from c.8 came from the individual with the damaged skull described above; this skull fragment, though damaged, was the only one complete enough to be measured.

From the estimations of shoulder heights, however, it would seem that two animals of somewhat different sizes were represented. From the front leg, the radius in c.8 gives calculated shoulder heights of 43 or 44 cms, whilst a femur in c.5 gives figures of 53 or 54 cms. For each bone Harcourt's factors give slightly higher results that do those of Koudelka, but the difference between the two methods is far smaller than is the difference between the two individuals. Both heights are within the ranges given by Harcourt for the Iron Age (29 - 58 cms) in his survey of the dog in prehistoric and early historic Britain, but the smaller of the two individuals comes only narrowly within his figures for the Bronze Age (43 - 62cms - Harcourt 1974, 159 and 163).

DEER

Of the 10 fragments of red deer, five were of antler. Three of these had been worked and the other two had been rubbed at the tip, perhaps from use as tools.

One antler fragment was the shed burr of a large individual (61.9 x 54.6 mm for the breadth and depth of the coronet). This had been cut laterally below the first tine, quite deeply but not through, and there were several lighter cutmarks on the shaft; there was also a patina on the tip of the tine. A tine fragment

Large back fragment of CATTLE SKULL from c.8:	
greatest diameter of horn core base	47.5
least diameter of horn core base	32.0
length of outer curvature of horn core	176.0
length of molar row	75.4
greatest breadth occipital condyles	101.8
greatest breadth foramen magnum	40.0
height of foramen magnum	41.8
least breadth between bases of horn cores	173.0
greatest breadth across orbits	280.0

CATTLE MANDIBLE

context	TOOTH ROWS premolars	molars	cheek-teeth	GL,M3
5				33.3
5	52.8	85.9	136.7	36.3
8				38.7
8			129.8	
9	45.2	83.6	129.7	34.6
19	47.0	84.6	128.6	36.2

CATTLE SCAPULA

context	SLC	GLP	BG	LG
5	51.7	60.0	43.2	51.1
19	41.7	57.1	37.9	46.1

CATTLE HUMERUS

context	SD	Bd	BT
5	28.5	61.5	56.1
6	30.4	71.3	59.0
7		68.5	60.2
8	25.4	73.3	66.8
8	29.0	68.2	65.2

CATTLE RADIUS

context	GL	Bp	BFp	SD	Bd	WRH (cms)
5		76.0	69.7	38.4		
6	235.0	70.3	63.0		62.9	101.1
6		66.4	61.1			
8		67.1	63.0			
8		56.4				
8		69.5	65.6			
8		69.8	63.6			
19			54.6			

CATTLE METACARPAL

context	GL	Bp	SD	Bd	WRH(cms)
6	170.0	53.5	33.6	59.1	104.1
6	175.5	50.3	27.9	49.8	107.2
6	176.5	51.2	27.6	50.0	108.1

CATTLE OS COXAE

context	AL
5	45.5
6	56.8
6	54.1
19	56.8
19	54.9
19	58.3

CATTLE FEMUR

context	GLC	DC	Bd	WRH(cms)
6		37.1		
7	293.0		77.8	101.7
8		38.7		

CATTLE TIBIA

context	GL	Bp	SD	Bd	WRH(cms)
5		85.4			
5			33.8	54.4	
5	285.0		29.4	51.1	98.3
6				52.8	
8	297.0		32.1	53.0	102.5

CATTLE ASTRAGALUS

context	GL1	GLm	Bp	Bd
6	54.9	49.9	34.7	33.2

CATTLE METATARSAL

context	Bp
8	41.4

SHEEP/GOAT MANDIBLE

context	TOOTH ROWS		
	premolars	molars	cheek-teeth
5	20.6		
8	20.8		
8	23.2	44.6	68.2
8	22.0	44.8	65.1
19	21.7	45.7	67.7

SHEEP SCAPULA

context	SLC	GLP	BG	LG
8	17.0		18.5	22.3

SHEEP HUMERUS

context	SD	Bd	BT
5		25.9	23.9
5		26.0	23.4
8	11.5	26.7	24.4

SHEEP RADIUS

context	Bp
20	24.7

SHEEP METACARPAL

context	GL	Bp	SD	Bd	WRH(cms)
8	118.8	18.8	11.6	22.3	58.1
19	123.4	20.0	11.8	21.8	60.3

SHEEP/GOAT OS COXAE

context	AL
5	23.2

SHEEP/GOAT TIBIA

context	GL	Bp	SD	Bd
6			12.2	22.1
19				25.2

PIG MANDIBLE

context	M ROW	CHEEK ROW	M1	M2 breadth	M3	M3 GL
8		88.4				30.3
8	60.6					29.7
9			11.1	13.0	13.8	27.2
19	65.8					

PIG SCAPULA

context	SLC	GLP	BG	LG
6	20.8	31.1	22.9	26.5
8	19.8	27.9	19.2	26.9
8	20.8	32.5	23.2	29.3

PIG HUMERUS

context	SD	Bd	BT
8	15.1	37.6	30.6
20		37.1	29.3

WILD PIG HUMERUS (Sus scrofa)

context	SD	Bd	BT
8	21.2	48.6	36.9
19	20.7	52.1	37.6

PIG RADIUS

context	Bp
8	25.8
19	24.9
20	32.7

HORSE SCAPULA

context	SLC	GLP	BG	LG
8	52.2	72.6	36.3	46.1

HORSE HUMERUS

context	SD	Bd	BT
8	33.0	80.2	69.7

HORSE RADIUS

context	GL	Bp	BFp	SD	Bd	GL1	WRH(cms)
5		73.6	65.6	32.0			
8	323.0	76.9	68.6	35.3	68.6	311.0	135.0

HORSE METACARPAL

context	GL	Bp	SD	Bd	GL1	WRH(cms)
5	209.0	45.7	30.9	44.1	200.5	128.5
8	216.0	47.5	30.7	44.1	207.0	132.7
19	203.0	44.0	29.9	42.5	195.0	125.0

HORSE FIRST PHALANX

context	GL	Bp	BFp	SD	Bd	BFd
6	69.7	45.8	42.8	31.2		
8	80.3	52.0	46.2	32.9	45.3	41.7

HORSE SECOND PHALANX

context	GL	Bp	BFp	SD	Bd	BFd
8	46.3	49.6	43.3	44.3	48.9	47.9

HORSE OS COXAE

context	SB	LA	LAR
8	23.8	62.0	57.4

HORSE METATARSAL

context	GL	Bp	SD	Bd	GL1	WRH(cms)
5	224.5	40.5	26.9	39.7	220.5	117.5

DOG SKULL from c.8

length of molar row	34.0
greatest mastoid breadth	59.8
greatest breadth occipital condyles	32.0
greatest palatal breadth	59.7
skull height	56.8
length carnassial P4	16.9
breadth carnassial P4	7.6

DOG MANDIBLES	c.5	c.8 left+right		c.8 right
middle height of vertical ramus		28.1	31.1	
oral height of vertical ramus		48.5	48.3	
gonion caudale - infradentale			128.4	
length of premolar row		36.6	37.7	37.6
length of molar row	35.2	35.1	34.6	36.2
length of cheek-tooth row	73.0	73.4	71.2	74.8
height of mandible in front of M1		20.0	21.5	

DOG RADIUS

context	GL	Bp	Bd	WRH (cms) Harcourt	WRH (cms) Koudelka
8			22.6		
8	133.4	15.3	20.5	44.4	43.0
19		17.1			

DOG FEMUR

context	GLC	Bp	DC	SD	Bd	WRH(cms) Harcourt	WRH(cms) Koudelka
5	179.0	38.4	19.5	14.1	33.5	54.0	53.0

RED DEER METACARPAL

context	Bd
8	44.5

RED DEER TIBIA

context	Bd
5	45.1
8	46.7

from this context showed marks suggesting rubbing, and a fragment of antler shaft from c.7 was either rubbed or worn. It was two fragments from c.5, however, that had most clearly been worked: a small fragment of shaft had been neatly cut and scooped, and a larger fragment had been carefully sawn in three planes.

Four of the postcranial fragments of red deer came from c.8 (a left distal metacarpus, the shaft of a right radius, a left ulna, and a right distal tibia). A left distal tibia came from c.5. No cutmarks were seen on any of these fragments, but there was considerable evidence of chewing.

For roe deer there was a left shaft fragment of metatarsus in c.19, and two fragments in c.5 - a fused right distal humerus and a fused left distal radius. These bones showed no cutmarks, nor had they been chewed.

CORMORANT

There were 26 fragments of cormorant (Phalacrocorax carbo) in c.8. All the longbones were present, paired, and also a whole mandible, both coracoids, both carpometacarpi, a single wing phalanx, one vertebra and several fragments of rib. No cut marks were seen. The bones were in good condition and were a close match for the larger of two skeletons of cormorant in the FRU's modern collection.

Romsey is some 10 km inland from the mouth of the River Test and the bird could have travelled there easily; but its presence seems a sign of good fish in the river.

SUMMARY AND CONCLUSIONS

This represents a good assemblage of well-preserved animal bones deposited in and around the former bed of the River Test. Some of the smaller bones may have been lost; but the good preservation seems to rule out any final dumping from a midden and perhaps the smaller, lighter bones were more easily washed downstream. There were no marked differences between the various layers and the material may be taken as a whole.

Many of the bones were whole or near-whole, but the pattern of butchery and the mixed nature of the bone assemblages suggests domestic food waste: the horse bones in particular showed many light cuts, as from the removal of meat. The only articulated material was a whole front leg of cattle, parts of two or three dogs, and much of the skeleton of a cormorant.

There was evidence of some exploitation of wild species. Of the domestic species, fragments of cattle dominated the assemblage. Horse fragments were present in numbers which were high for the Iron Age, but which have been still higher for the Bronze Age. There was relatively less sheep and sheep/goat than has been found on many Iron Age sites from Wessex, and rather more pig, but this may reflect the valley environment in contrast to the upland chalk.

With such well-preserved material a good corpus of measurements could be taken. The horses were either small or very small. The cattle were low in stature, and mostly they were also slight in build, but a few bones came from more sturdy individuals. The sheep bones too, though sometimes tiny, included some more robust material that might have been out of place later in the Iron Age. The Early Iron Age, therefore, is an acceptable date for this material, with the proviso that the assemblage may have sprung from its valley setting at least as much as from its time and that a sequence of valley assemblages is called for to make their likely dating any more than an educated guess.

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ROMSEY LA SAGESSE

ROMSEY LA SAGESSE

TABLE 1 - IDENTIFIED FRAGMENTS

	C	S	O	G	P	H	D	R	RO	WP	BD	LAR	SAR	TOTAL
BOTTOM	20	1	7		6	1	1					4		40
19	73	1	35	2	17	6	2		1	1		21	45	204
8	154	4	50		36	16	33	6		1	26	54	16	386
7	46		8		1	1		1				3	6	66
6	77		11		1	8	1					1	26	125
5	74	10	21	3	10	37	30	3	2			11	57	258
TOTAL	444	16	132	5	71	69	67	10	3	2	26	94	150	1079
ALSO														
R-British	11		4			1						2	2	20
18th cent.	22		7						FAL			1		31

KEY: MAIN DOMESTIC MAMMALS
- Cow
- Sheep
- Ovicaprid
- Goat
- Pig
- Horse
- Dog

WILD MAMMALS
- Red deer
- ROe deer
- Wild Pig
- FALlow deer

BirD

also: LAR-large ungulates, not further identifiable to species
SAR-small ungulates, similarly

TABLE 2 - DISTRIBUTION OVER THE BODY

	COW	SHE	S+G	GOA	PIG	HOR	DOG	RED	ROE
antler/core	1			1				5	
skull fragt	115	2	5		4	11	14		
maxilla	1		5		8	1	1		
mandible	39		25		14	1	6		
loose l.tooth	17		7		6	5	6		
loose u.tooth	20		3		5	5	3		
atlas/axis	7						4		
other cerv. vert	5		1						
thoracic vert	16		3		1	4			
lumbar vert	5		2			2			
sacral vert	10								
vert. fragt	3								
rib	72		54		14	8	1		
scapula	8		2		3	1			
humerus	14	3	2		2	3	1		1
radius	13	1	5	1	6	3	3	1	1
ulna	4				1	4	3	1	
carpal	4					2			
metacarpal	12	4				6	3	1	
os coxae	23		2		1	1			
femur	12		2		1	4	1		
tibia	19		10		2	1	1	2	
fibula					1		2		
astragalus	3		1	1		2	1		
calcaneum	2			1					
other tarsal							2		
metatarsal	13	6	1	1		2	6		1
metapodial					2		3		
phalanx 1	2		2			2	3		
phalanx 2	2					1	2		
phalanx 3	2						1		
TOTAL	444	16	132	5	71	69	67	10	3

summarised %

	COW	S/G	PIG	HOR	DOG
horn cores	0.2	0.7			
loose teeth	8.3	6.5	15.5	14.5	13.4
other head	34.9	24.2	36.6	18.9	31.3
feet/ankles	9.0	11.1	2.8	21.7	24.0
other bones	47.6	57.5	45.1	44.9	31.3

TABLE 3 - THE INCIDENCE OF UNIDENTIFIED FRAGMENTS

CONTEXT	BTM	19	8	7	6	5	TOTAL
unidentified	4	66	70	9	27	68	244
und.% of all frags	10.0	32.4	18.1	13.6	21.6	26.4	22.6

TABLE 4 - THE INCIDENCE OF LOOSE TEETH AND OF CHEWED, ERODED AND CONCRETED FRAGMENTS

CONTEXT	BTM	19	8	7	6	5	TOTAL
all loose teeth	3	8	31	2	2	28	74
sheep/goat l.teeth		1	3	1		5	10
all fragts chewed	3	5	28	3	6	16	61
heavily chewed	1	3	16	2	4	10	35
all fragts eroded	3	7	12	14	6	9	51
heavily eroded		1	2	3	1	1	8
fragments concreted	1	10	10			3	24
total id.fragments	36	138	316	57	98	190	835
%s							
all loose teeth	8.3	5.8	9.8	3.5	2.0	14.7	8.9
s/g l.teeth (species %)		2.6	5.6	12.5		14.7	6.7
chewed	8.3	3.6	8.9	5.3	6.1	8.4	7.3
heavily chewed	2.8	2.2	5.1	3.5	4.1	5.3	4.2
eroded	8.3	5.1	3.8	24.6	6.1	4.7	6.1
heavily eroded		0.7	0.6	7.0	1.0	0.5	1.0
concreted	2.8	7.2	3.2			1.6	2.9

TABLE 5 - THE INCIDENCE OF CUTMARKS

CONTEXT	BTM	19	8	7	6	5	TOTAL	%
cattle		2	1	4		2	9	2.0
sheep/goat				2		3	5	3.3
pig							-	-
horse		1			2	5	8	11.6
dog							-	-
wild species							-	-
total	-	3	1	6	2	10	22	2.6
%	-	2.2	0.3	10.5	2.0	5.3	2.6	
total id.fragments	36	138	316	57	98	190	835	

TABLE 6 - THE INCIDENCE OF WHOLE OR NEAR-WHOLE LONGBONES

	COW	S/G	PIG	HOR	DOG
humerus	4	1	2	2	1
radius	10	2	3	3	2
femur	1			4	
tibia	6	2	1		
TOTAL	21	5	6	9	3
ALL LONGBONE FRAGS	58	24	11	11	6

TABLE 7 - THE INCIDENCE OF WHOLE OR NEAR-WHOLE METAPODIAL BONES

	COW	S/G	HOR
whole/near-whole	12	7	4
ALL M/P FRAGMENTS	25	12	8

TABLE 8 - RELATIVE REPRESENTATION OF THE DOMESTIC SPECIES
(a) cattle, sheep/goat, pig, horse and dog

CONTEXT	BTM	19	8	7	6	5	TOTAL
cattle	55.5	53.7	52.5	82.1	78.6	40.0	55.2
sheep/goat	22.2	27.9	18.4	14.3	11.2	18.4	19.1
pig	16.7	12.5	12.3	1.8	1.0	5.4	8.8
horse	2.8	4.4	5.5	1.8	8.2	20.0	8.6
dog	2.8	1.5	11.3	-	1.0	16.2	8.3
n	36	136	293	56	98	185	804

(b) cattle, sheep/goat and pig

CONTEXT	BTM	19	8	7	6	5	TOTAL
cattle	58.8	57.1	63.1	83.6	86.6	62.7	66.4
sheep/goat	23.5	29.6	22.1	14.6	12.3	28.8	23.0
pig	17.7	13.3	14.8	1.8	1.1	8.5	10.6
n	34	126	244	55	94	115	732

TABLE 9 - AGEING BY MANDIBLES

(a) cattle, sheep/goat and pig compared

	CATTLE	S/G	PIG
STAGE 1	1		1
STAGE 1 or 2		1	
STAGE 2		3	2
STAGE 3	4	2	
STAGE 4	1	7	
STAGE 4 or 5		1	
STAGE 5	5	6	3

STAGE 1 M1 not yet in wear
STAGE 2 M2 not yet in wear
STAGE 3 M3 not yet in wear
STAGE 4 M3 coming into wear
STAGE 5 M3 all cusps in wear

(b) cattle mandibles by context

CONTEXT	BTM	19	8	7	6	5	TOTAL
STAGE 1	1						1
STAGE 2							-
STAGE 3		2	1	1			4
STAGE 4			1				1
STAGE 5	2		1			2	5

(c) sheep/goat mandibles by context

CONTEXT	BTM	19	8	7	6	5	TOTAL
STAGE 1 or 2		1					1
STAGE 2		2				1	3
STAGE 3			2				2
STAGE 4		1	4	1	1		7
STAGE 4 or 5		1					1
STAGE 5		3	1	1		1	6

(d) pig mandibles by context

CONTEXT	BTM	19	8	7	6	5	TOTAL
STAGE 1			1				1
STAGE 2		1	1				2
STAGE 3							-
STAGE 4							-
STAGE 5	1		2				3

TABLE 10 - THE INCIDENCE OF VERY YOUNG MATERIAL

(a) in cattle, sheep/goat, and pig

	CATTLE	SHEEP/GOAT	PIG
v.porous, v.small	10 (2.3%)	-	-
porous, small	12 (2.7%)	6 (3.9%)	3 (4.2%)
n	444	153	71

(b) in cattle

CONTEXT	BTM	19	8	7	6	5	TOTAL
v.porous, v.small	1	2	3	1		3	10
porous, small		4	3	4	1		12
all cattle fragments	20	73	154	46	77	74	444

(c) in sheep/goat

CONTEXT	BTM	19	8	7	6	5	TOTAL
v.porous, v.small							-
porous, small	1		1			4	6
all sheep/goat fragments	8	38	54	8	11	34	153

(d) in pig

CONTEXT	BTM	19	8	7	6	5	TOTAL
v.porous, v.small							-
porous, small		2	1				3
all pig fragments	6	17	36	1	1	10	71

TABLE 11 - EVIDENCE OF PATHOLOGICAL AND ANOMALOUS CONDITIONS

	COW	S/G	PIG	HOR	DOG
dental crowding		5			
dental/oral disease		1			1
infection/injury					1
exostosis					
dental anomalies	4				
other anomalies	1				

TABLE 12 - THE MEASUREMENT ARCHIVE

KEY:

AL	Length of acetabulum
Bd	Distal breadth
BFd	Distal articular breadth
BG	Breadth of the glenoid cavity
Bp	Proximal breadth
BFp	Proximal articular breadth
BT	Breadth of the trochlea
DC	Diameter of the caput
GL	Greatest length
GLC	Greatest length from caput
GLl	Greatest lateral length
GLm	Greatest medial length
GLP	Greatest length of the articular process
LG	Length of the glenoid
SD	Diameter of the shaft
SLC	Smallest length of collum scapulae

WRH - withers height, calculated by factors
of Fock (1966) for cattle metapodials,
of Matolcsi (1970) for other cattle bones,
of Teichert (1975) for prehistoric/protohistoric sheep,
of Kiesewalter for horses and Koudelka for dogs (both from von den Driesch and Boessneck 1974);
also of Harcourt (1974) for dogs.

Measurements were taken correct to 0.1 mm and as recommended by von den Driesch (1976).