Little Somborne
Animal Bone Report

The amount of animal bone recovered from the Iron Age site of Little Somborne totalled 1666 fragments. The following species were represented;

Cattle (Bos sp.) 268 fragments.

Cattle sized fragments 171.

Sheep (Ovis sp.) 256 fragments.

Sheep sized fragments 161.

Horse (Equus sp.) 47 fragments.

Pig (Sus sp.) 45 fragments.

Dog (Canis sp.) 120 fragments.

Red deer (Cervus elephus.) 2 fragments.

Unidentifiable fragments 596.

These were recovered from three main feature types; ditches, pits and palisade trenches, however most of the bone came from the pits.

A chart has been made showing the relative frequency of each species from the different types of feature. For simplicity, as the features are contemporary the discussion of age, butchery etc treats the bones as a single group.

Methods

Records were made directly onto computer punchtape (at the Ancient Monuments Laboratory). The bones were examined context number by context number. Measurements were made whenever possible (Jones 1974)

Two computer catalogues were produced; the first tabulates all the basic measurement data by species, anatomy and context number, together with the total number of measured and non measured bone. The catalogues also show the maximum, minimum, mean, standard deviation and standard error for each type of measurement.

The Ditches

	Cattle	Sheep	Pig	Horse	Dog
skull	3	-	1	1	-
horncore	1	-	-	-	-
mandible	3	6	1	4	1
vertibrae	2	1	-	-	-
os coxae	-	-	-	-	-
humerus	1	2	-	-	-
radius	-	1	1	-	-
ulna	-	-	-	-	-
scapula	1	-	-	-	-
metacarpal	-	-	-	-	-
femur	-	-	-	1	-
fibula	-	-	-	-	-
tibia	1	4	-	-	2
metatarsal	-	1	-	1	-
calcaneum	-	-	-	-	-
1st phalanx	-	-	-	-	-
2nd phalanx	-	-	-	-	-
3rd phalanx	-	-	-	-	-
astragalus	-	-	-	-	-
rib	2	-	-	-	-
total	23	15	3	7	3

Cattle sized fragments 9

Unidentifiable fragments 28

Total 88

The predominance of cattle is not significant as the total number of bones from the ditches is so small. Mandibles appear to be the most frequently occurring bone, this may just be a factor of preservation.

The Pits

	Cattle	Sheep	Pig	Horse	Red deer	Dog
skull	48	28	10	4	1	-
horncore	7	4	-	-	-	-
mandible	24	34	10	18	-	4
vertebrae	41	22	-	-	-	35
os coxae	17	6	-	-	1	5
humerus	14	21	5	-	-	2
radius	4	26	-	5	-	3
ulna	6	2	2	1	-	2
scapula	20	4	4	1	-	5
metacarpal	2	6	1	-	-	-
femur	15	5	-	2	-	3
fibula	-	-	-	-	-	2
tibia	18	17	2	4	-	6
metatarsal	6	21	-	-	-	12
calcaneum	3	2	-	-	-	4
1st phalanx	3	5	3	2	-	2
2nd phalanx	1	2	4	-	-	1
3rd phalanx	-	-	-	1	-	1
astragalus	6	4	-	2	-	4
rib	6	21	-	-	-	26
total	241	240	41	40	2	117

Cattle sized fragments 159

Sheep sized fragments 161

Unidentifiable fragments 554

Total 1556

Cattle and sheep appear to be of equal importance, however dog is over represented by the presence of two partial skeletons.

Cattle. Apart from mandibles (24) the most frequently represented parts of the skeleton are; scapulae (20), tibiae (18), femora (15) and humeri (14).

Sheep. Again mandibles are the most important (34), also tibiae (27), radii (26), humeri (21) and metatarsals (21).

Pig. Only certain parts of the skeleton are present; mainly mandibles (10).

Horse. Mandibles (18), radii (5) and tibiae (4) appear most frequently.

Deer. Red deer is represented by two bones.

Dog. The major proportion of two skeletons are present from two contexts (323 and 513). Both are adult specimens, the pathology observed on the dog from 323 is discussed later. A few bones from other adult specimens were also present.

Palisade Trench.

	Cattle	Sheep	Pig
skull	-	1	-
horncore	-	-	-
mandible	-	-	1
vertebrae	-	-	-
os coxae	-	-	-
humerus	1	-	-
radius	1	-	-
ulna	1	-	-
scapula	-	-	-
metacarpal	-	-	-
femur	-	-	-
fibula	-	-	-
tibia	1	-	-
metatarsal	-	-	-
calcaneum	-	-	-
1st phalanx	-	-	-
2nd phalanx	-	-	-
3rd phalanx	-	-	-
astragalus	-	-	-
rib	-	-	-
total	4	1	1

Cattle sized fragments 3

unidentifiable fragments 14

Total 23.

The very small amount of animal bone indicated by the above chart does not contribute anything to the interpretation of the site.

Ageing

Owing to the small quantity of material it was not possible to show any age groupings as were calculated for Gussage (Harcourt 1974 .)

However the mandibles of cattle, sheep and pig do suggest a predominance of individuals with full dentition in wear, with smaller quantities of mandibles at varying stages of deciduous dentition. These immature mandibles showed no signs of butchery and could reflect the proportion of natural deaths as opposed to those killed for food.

As many long bones were only represented by their mid shafts, the proximal and distal ends being broken off, it was difficult to assess how many were fully fused. From the proximal and distal ends present the greater proportion were fully fused, there were no cases of numbers of a particular bone being unfused.

The exception to this was horse, all examples of horse indicates full epiphyseal fusion, and full permanent dentition. This may be open to the same interpretation that Harcourt puts forward for Gussage, ie that horses were not bred, but periodically rounded up for selection for work. But the small size of the sample makes this rather tentative.

All the examples of dog indicated mature individuals.

Size

The fragmentary nature of many of the bones meant that very few measurements could be taken and therefore few estimations of withers heights.

However from the measurements that were taken comparison has been made below

between the range of certain measurements from Little Somborne, Gussage (Harcourt 1974) and Winklebury (Jones 1976)

	Little Somborne	Gussage	Winklebury
Cattle	Tibia (total length) 281.0-293.0 mm. (2 specimens)	278.0-310.0mm. (3 spec.)	304.0-322.0mm. (2 spec.)
	Astragalus (total length) 55.4-59.1mm. (4 spec.)	54.0-62.0mm. (54 spec.)	55.7-7-69.7mm. (4 spec.)
	Radius (proximal width) 72.5-76.9mm. (3 spec.)	54.0-74.0mm. (77 spec.)	70.6-74.4mm. (3 spec.)
	Humerus (distal width) 62.7-74.0mm. (3 spec.)	57.0-72.0mm. (61 spec.)	63.6-75.0mm. (5 spec.)
	1st Phalanx (proximal width) 27.5-29.0mm. (3 spec.)	20.0-29.0mm. (83 spec.)	23.0-27.3mm. (6 spec.)
Sheep	Metacarpal (total length 124.0mm. (shoulder ht 60.0cm.) (1 spec.)	104.0-122.0mm. (shoulder ht 53.0cm.-59.0) (33 spec.)	61.0-115.0mm. (9 spec.)
	Humerus (distal width) 24.8-26.8mm. (4 spec.)	21.0-29.0mm. (78 spec.)	18.6-26.6mm. (20 spec.)
Pig	Humerus (distal width) 37.6mm. (1 spec.)	25.0-40.0mm. (18 spec.)	15.6-35.0mm. (3 spec.)
Horse	Metacarpal (total length) 184.0mm. (1 spec.) (shoulder ht 98.1 cm.)	183.0-223.0mm. (18 spec.) (shoulder ht 117.0-143.0cm.)	186.0-203.0mm. (4 spec.)
	Tibia (total length) 309.0 mm (1 spec.)	236.0-296.0mm. (12 spec.)	300.0-325.0mm. (2 spec.)
	1st Phalanx (total length) 76.4mm (1 spec.)	63.0-86.0mm. (23 spec.)	65.6-77.1mm. (3 spec.)
Dog	Humerus (total length) 146.0mm. (1 spec.)	120.0-176.6mm. (39 spec.)	165.0-167.0mm. (2 spec.)
	Radius (total length) 142.0-164.0mm. (2 spec.)	116.0-176.0mm. (37 spec.)	147.0-160.0mm. (3 spec.)

Ulna (total length)		
170.0mm. (1 spec.)	152.0-201.0mm. (8 spec.)	180.0-188.0mm. (2 spec.)
Femur (total length)		
190.0-mm (1 spec.)	120.0-190.0mm. (32 spec.)	179.0-182.0mm. (2 spec.)
Tibia (total length)		
164.0-189.0mm. (4 spec.)	130.0-194.0mm. (37 spec.)	180.0-181.0mm. (2 spec.)

Although the number of complete measureable bones from Little Somborne was too few to indicate whether the same population of each species was present they do suggest a similar size range to Gussage and Winklebury.

The dog measurements also fall well within the size range of other dogs known from the Iron Age (Harcourt J.A.S. 1974)

The sheep horncores varied in size and shape perhaps indicating the presence of both rams and ewes. In contrast the cattle horncores were all of the short horn variety and very similar in appearance. However the small numbers of these made it impossible to separate these into sexes.

Butchery

The butchery practised on this site seems to fall into two main categories; chopping and knife cuts. Cattle horncores frequently showed repeated knife cuts around the area adjoining the skull and horncore, this may have been to facilitate the removal of the horn.

Other forms of butchery observed on cattle are chop marks especially on the shaft area of long bones at varying angles, eg out of 16 humeri 6 showed chop marks.

In contrast sheep showed mainly knife cuts noted on some long bones, os coxae and vertebrae.

No butchery was observed on pig, but this may be due to the small representation of this species rather than a lack of butchery. Similarly no butchery was present on horse, Red deer, and dog.

Canid gnawing was present on some bones often accompanied by butchery.

Burning was apparent mainly on heavily fragmented bone, eg on 22 of the 595 unidentifiable fragments, and was also seen on a few long bones of cattle and sheep.

Pathology

A few examples of limb pathology were present, but no dental abnormalities were observed.

The most interesting limb pathology was associated with the dog skeleton from pit 323. This affected four bones. A fracture towards the distal end of a humerus shaft had a false joint which had formed between the un-united fractured bone ends, this may possibly be the result of inadequate immobilisation. Associated with this was an ulna, in which the olecranon had formed a false joint which articulated both laterally and medially with the proximal end of the ulna. The fracture may possibly have occurred at the same time as that of the humerus. The other ulna had a fissure running along the proximal end of the olecranon in a dorsal/palmar direction. A rib fragment also from the same individual showed a healed fracture. (See photographs 1, 2, 3, 4.)

Pathology on other species was very limited; resorbtion and pitting was present on the os coxae of a cow, exostosis appeared on the radius of a sheep and also on the distal end of the femur of a cow.

Bird

The only bird identified from this site was the partial skeleton of a rook (Corvus frugilegus) from the context 164. There is no indication that this was used for food.

General conclusions

The small amount of bone precludes any valid economic interpretation of the site, but it does suggest that cattle and sheep are of approximately equal in importance in numbers if not in meat weight.

The rare occurrences of wild fauna which might supplement the diet are in contrast to Gussage and Winklebury, and perhaps suggest a reliance on domestic animals for food.

References

1. The Animal Bones from Gussage All Saints, Dorset. R.A. Harcourt. 1974 A.M.L. Report number 1804.

2. Winklebury; Animal Bone. R.T. Jones 1976 A.M.L. Report number 2173.

3. The Dog in Early and Historic Britain. R.A. Harcourt. J.A.S. Vol. 1 No 2. June 1974. Page 151.

4. Osteometric Methodology. R.T. Jones 1974 A.M.L. Report number 2333.

Photograph 1.
The humerus of a dog showing a false joint which has formed between the ununited fractured bone ends.

Photograph 2.

The proximal end of an ulna in which the olecranon has formed a false joint articulating laterally and medially with the proximal end of the ulna.

Photograph 3.

The proximal end of an ulna showing a fissure which runs in a dorsal/palmar direction.

Photograph 4.
A rib fragment showing a healed fracture.