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SHADWELL

THE ANIMAL BONES

A total of 943 animal bones was recovered from Roman deposits during the 1974 excavations at Shadwell, London Docks by A Johnson.

The following species were identified; ox (Bos sp.) 69.7%, horse (Equus sp.) 3.1% sheep (Ovis sp.) 5.5%, pig (Sus sp.) 4.8%, dog (Canis sp.) 0.3%, domestic fowl (Gallus sp.) 1.5%, goose (Anser sp.) 0.1% and unidentifiable fragments 14.0%.

Bones were measured whenever possible using measurements devised by R T Jones of the Ancient Monuments Laboratory (Jones 1978), these measurements are available on request from the author. Few withers or shoulder heights could be calculated as most bones were incomplete.

Table 1 indicates the different species and anatomise present in each phase some phases cover a limited occupation time while other divisions such as S S represent the bone recovered from the walls of the signal station which overlaps a number of phases and may contain some intrusive material, this is all explained in the key.

The quantity of bone is small and in every phase cattle are dominant both numerically and in terms of meat weight. As well as suggesting a preference for beef in the diet the dominance of cattle may in part be a result of difficulties during a rescue excavation as well as the fact that no sieving was carried out, which must bias recovery in favour of the larger and more robust bones. Most of the bone came from the later phases, especially from features associated with the water tanks in phase 4, which reflects much the same relative proportions of species as other sparser phases.

's difficult to make any interpretations from such a small group of bones, r excavations in an adjacent area by the Inner London Archaeological Group produced groups of bone ye to be examined which may yield a more

statistically viable sample.

However from the bone recovered in 1974 a few observations can be made. With regard to butchery this was frequently observed on cattle, long bones were often chopped axially down part of the shaft as well as chops about the proximal and distal ends of long bones. Knifecuts were observed around the proximal area of a metatarsal and the midshaft of a humerus which was also chopped. Most long bones were fragmented in some way although metapodials less so than other long bones, phalanges and other extremities also tended to be complete which is usual as these bones bear little meat.

Sheep and pig bones were also chopped (no definate goat bones were identified), and a few knifecuts were present on domestic fowl bones but these species were too few for comment on any butchery techniques.

Most cattle bones were fully fused, and mandibles had achieved full dentition, a few sheep, pig and domestic fowl bones showed signs of immaturity, all the horse bones were fully fused.

Four pathological specimens were present; a mid rib fragment from an ox (F 255) had a healed fracture, the first phalanx of an ox (F 268) showed slight signs of osteoarthritis on the proximal medial surface. A complete left ox metacarpal (F 199) exhibited on the anterior surface of the midshaft a raised area, rough and pitted in appearance with a probable infective sinus placed centrally (see Plate 1). Radiography showed erosion of the original surface of the periostium and some deposition on the anterior wall of the medullary cavity, two small detached bone fragments were seen within the abcess cavity. In appearance this specimen is similar to the description of osteomyelitis in Baker and Brothwell (1980) and the condition may have been caused by a severe blow injuring the surface of the bone but did not cause a complete fracture. The fourth specimen was a domestic fowl humerus (F 4b)

which exhibited gross thickening of the shaft.

If the dominance of cattle , is real this agrees with evidence from 33 Roman military sites from Britain and the Continent whose bone evidence was reviewed by Davies (1971). Davies was examining aspects of the Roman military diet and he maintains that the army in the Empire ate meat at all times, the sites he reviewed suggested 'the largest percentage of the bones of any one animal is that of the domesticated ox; sheep - and to a lesser extent goats - were also eaten in large quantities while pork was popular'. Davies also includes hunting as an important food source as well as the consumption of fish and shellfish. There is no evidence of hunting at Shadwell, lack of fish remains may be because no sieving was carried out, and oysters were recovered from the 1977 excavations. Both domestic fowl and goose were found at Shadwell and along with duck were present from many of the other military sites.

A further 308 bones were recovered from Post Medieval deposits, again ox is the most numerous species, sheep, pig, horse, rabbit and duck were present as well as most of the skeleton of a male dog aged about 1½ years (this skeleton was also included in the count).

As previously mentioned because the quantity of bone from these excavations was so small any interpretation can only be tentative, and this report should really be regarded as interim awaiting the ex amination of the bones from the 1977 excavations.

I should like to thank Mr R T Jones for many helpful remarks, especially regarding the pathology.

REFERENCES

J Baker and D Brothwell. Animal Diseases In Archaeology. Academic Press 1980. p. 64

R W Davies. The Roman Military Diet. Britannia. Vol 2. 1971. pp122-142.

R T Jones. Computer Based Osteometric Archaeology. Ancient Monuments Report No 2333. 1978.

KEY FOR TABLE 1

E R P = Early Roman Period, (Features 17c 17b 267) Late C1st/Early C2nd.

P 1 = Period 1 (Feature 286) A D 260's

S S = Signal Station (Features F1 F2 F3) Robbed walls that appear in Period 1,2,3,4 and the rubble level.

P 2 = Period 2 (Features F266 18 19) A D 270's - 280's.

P 3 = Period 3 (Features 285 193 231 239) A D 280's - 300.

P 3 and 4 = Features that appear in both periods 3 and 4 (4a 4b 4c 232).

P 4 = Period 4. Associated with the water tanks, up to A D 370 (Features 285 255 199 195 197 201 233 233b 256).

L R = Late Roman features, probably fit with period 4 (Features 300 283 268 222 275 296 251).

R L = Rubble level (Features 4 114a 235) C4th onwards.

TABLE 1

SHADWELL

	ERP			P1	SS				P2					P3				P3 and 4					P 4						LR					RL		
	OX	HORSE	DOM FOWL	SHEEP	OX	SHEEP	HORSE	PIG	OX	SHEEP	PIG	DOG	BIRD	OX	SHEEP	PIG	BIRD	OX	SHEEP	PIG	HORSE	DOM. FOWL	OX	SHEEP	PIG	HORSE	GOOSE	DOM. FOWL	OX	SHEEP	PIG	HORSE	BIRD	OX	SHEEP	HORSE
JAW	-	-	-	-	-	-	-	2	2	-	1	-	-	4	3	-	-	2	-	1	-	-	10	5	3	-	-	-	1	-	1	-	-	-	-	-
SCAPULA	-	-	-	-	-	-	-	1	1	-	-	-	-	5	-	-	-	6	1	2	-	-	8	-	5	-	-	-	2	-	-	-	-	5	-	-
HUMERUS	-	-	-	-	1	-	-	-	2	-	-	-	-	2	1	-	-	1	-	1	-	-	3	2	2	1	1	-	3	1	1	-	1	1	-	-
RADIUS	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	1	-	-	9	-	-	-	-	-	-	1	-	-	-	1	-	-
ULNA	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	1	-	-	-	-	-	-	-	-
METACARPAL	-	-	-	-	-	1	-	-	1	-	-	-	-	2	-	-	-	2	-	-	-	-	21	-	-	2	-	-	1	-	-	-	-	1	1
1ST PHALANX	-	-	-	-	1	-	-	-	3	-	-	-	-	4	1	-	1	1	-	-	-	-	11	1	-	-	-	-	3	-	-	-	3	-	-
2ND PHALANX	-	-	-	-	-	-	-	-	2	-	-	-	-	2	-	-	-	2	-	-	-	-	4	-	-	-	-	-	1	-	-	-	1	-	-
3RD PHALANX	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
OS COXAE	-	-	-	-	-	-	-	-	1	-	-	1	-	3	-	-	-	7	-	-	-	-	6	-	-	1	-	-	2	-	-	-	-	-	-
ILIUM	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	-
ACETABULUM	-	-	-	-	1	-	-	-	1	-	-	1	-	1	-	-	-	2	-	-	-	-	4	-	1	-	-	-	1	-	-	-	-	-	-
FEMUR	-	-	-	-	3	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	2	1	1	-	-	1	1	-	-	-	-	-	-
TIBIA	-	-	-	-	-	2	-	-	2	-	1	-	-	1	-	-	-	1	1	1	-	2	2	1	-	-	-	-	1	-	-	-	-	-	-
CALCANEUM	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	-	-	-
TALUS	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASTRAGALUS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
METAPODIAL	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	1	1	-	-	-	-
METATARSAL	-	-	-	-	-	1	-	-	1	1	-	-	-	3	-	-	-	3	1	-	-	1	16	1	-	-	-	-	1	1	-	-	4	-	-
MAXILLA	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	7	2	1	-	-	-	1	-	-	-	-	-	-
PALATINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HORN CORE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
RIB	-	-	-	-	4	9	-	-	3	-	-	-	-	13	-	-	-	5	-	-	-	-	73	-	-	-	-	-	3	-	-	-	-	-	1	-
CERVICAL VERT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	4	-	-	-	-	-	-	-	-	-	1	-	-
THORACIC VERT	1	-	-	-	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
LUMBER VERT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
VERTEBRAE	2	-	-	-	-	-	-	-	3	-	-	-	-	3	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	1	-	-	-
FRAGMENT	-	-	-	-	-	-	-	-	21	-	-	-	1	35	-	-	-	6	-	-	-	-	89	-	-	-	-	-	1	-	-	-	-	-	-	-
LONG BONE FRAG	-	-	1	1	7	-	-	-	-	-	-	-	-	3	2	-	-	18	-	-	-	2	32	2	-	-	-	-	9	-	-	-	1	12	-	-
SKULL FRAG	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	6	1	-	-	-	17	-	-	-	-	-	2	-	1	-	-	-	-	-
UPPER TOOTH	-	19	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	4	-	-	2	-	-	2	-	-	-	-	1	-	-
LOWER TOOTH	-	-	-	-	2	-	-	-	-	-	2	-	-	2	-	-	-	-	2	-	1	-	10	-	2	1	-	-	2	-	2	-	-	1	2	-
FIBULA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
TOTAL	3	19	1	1	22	14	1	4	48	2	8	3	1	87	7	1	1	62	6	9	1	7	365	15	17	7	1	2	40	3	6	1	2	31	4	1
UNIDENTIFIABLE	11			-	12				14					-				15					37						39					11		
TOTAL	34			1	53				76					96				100					444						1 burnt 92					42		