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Bird Bones from West Stow, Suffolk

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Extracts from this report will be used by Mrs P.J. Crabtree in the bone report for West Stow (Crabtree n.d.). Full details of all the West Stow bird bones have been recorded using the Ancient Monuments Laboratory's Computer Based Osteometric System (Jones <u>et al</u>. n.d.). The details below mostly refer to those bird bones belonging to

the Anglo-Saxon phases although Table 1 includes results for the whole site.

The bird bones were mostly of domestic fowl and a large domestic type of goose comparable in size with the greylag goose, <u>Anser anser</u>. The few fragments of wild birds were mostly from edible species of water birds and waders. Results for the whole site are shown in Table 1.

The relative roles of domestic birds and mammals were not the same for the Saxon phases of West Stow as they were for Melbourne Street, Southampton (Bourdillon and Coy 1980), birds played a lesser role at West Stow.

The relative roles of fowl and goose (with an approximate fowl bone: goose bone ratio of 2:1) were however almost exactly paralleled at Melbourne Street and North Elmham (Noddle 1980).

A more detailed breakdown of these results into Anglo-Saxon phases will be possible at a later stage in the West Stow analysis and may be worthwhile as, for example, differences emerge from the different 'Hamwic' sites (Chapel Road, Southampton has a 1.3 : 1 ratio).

Domestic Fowl

In a comparison of bone measurements Melbourne Street means are generally slightly below those for West Stow, Table 2. In some cases this must be due at least in part to the presence of a number of smaller individuals at Melbourne Street. This small 'tail' to the distribution at Melbourne Street (not so for Chapel Road, Southampton) represents small bantams which may have been selectively bred at Melbourne Street.

Even without these the West Stow birds are often small and comparable in size with some modern bantam breeds. The range of fowl size at West Stow is very large with birds ranging from bantam size, through game fowl size, to occasional larger specimens which compare with some modern breedx at least as far as total lengths are concerned. The general build of the fowl is lighter than that of modern specimens however. Castrated birds, capons, were kept, judging from the evidence of tarso-metatarsi with rudimentary spurs and long bones of large size with immature joints (Bourdillon & Coy 1980).

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TABLE 2	Measu	rements of	Fowl Bones			
CORACOID	VdD	<u>n</u>	range	x	s	<u>cv</u>
Total length	\mathtt{GL}	18	46.8-58.7	53 •7	4.3	7•9
Medial length	Lm	18	45.2-56	50.7	4.0	7.8
Basal breadth	Bb	17	12.3-19.5	14.7	2.0	13.6
Facet breadth	BF	19	9•5-14•0	11.7	1.4	11.8
SCAPULA	VdD	n	range	X	s	<u>cv</u>
Total length	GL	.4	63 - 69.7	67.0	-	-
Distal breadth	DiC	14	10.7 - 13.6	12.0	1.3	10.8
HUMERUS	VdD	<u>n</u>	range	X	5	CV
Total length	GL	16	63.7 - 84.5	71.6	5.5	7•7
Proximal breadth	Вр	25	16.4 - 25.2	20.0	2.6	13.5
Distal breadth	Bd	20	13.0 - 21.0	16.1	2.1	12.9
Minimum breadth	SC	23	5.8 - 10.0	7.6	1.3	17.2
RADIUS	VdD	<u>n</u>	range	x	<u>s</u>	CV
Total length	GL	14	54.2 - 69.1	61.8	4.6	7.4
Distal breadth	Bd	22	5.1 - 9.1	6.9	0.9	13.2
Minimum breadth	SC	22	2.4 - 5.5	3.4	0.7	21.4
	114D			₹	c	. CV
ULNA		<u>n</u>		<u>A</u>	<u>6</u> # 0	
Total length	ЧIJ	20	60•1 - 72•7	0/•0	4.0	(•6
CARPOMETACARPUS	VdD	<u>n</u>	range	X	<u>s</u>	CV
Total length	GL	8	31.6 - 40.4	36.2	3.6	9.9
Proximal breadth	Bp	10	10.1 - 13.2	11.2	0.9	7.7
Distal breadth	Did	9	6.2 - 9.0	7.5	1.1	14.1
Both shafts br. (Erbersdobler)	BS	8	8.4 - 10.6	9.2	0.8	8.9

TABLE 2 continued

FEMUR	VdD	<u>n</u>		range	X	<u>s</u>	<u>cv</u>
Greatest length	GL	25		67.3 - 86.4	77.5	5.9	7.6
Proximal breadth	Bp	30		13.5 - 20.3	16.5	1.9	11.8
Distal breadth	Bd	24		12.8 - 17.4	15.2	1.4	9.0
Smallest breadth	SC	32		5.4 - 10.1	7.3	1.5	15.7
Medial length	Lm	22		62.8 - 82.1	73.8	5.8	7.8
Proximal depth	Dp	26		8.4 - 14.8	11.2	1.9	16.8
Distal Depth	Dd	22		11.3 - 16.8	13.3	1.7	12.5
TIBIOTARSUS	v	dD	<u>n</u>	range	X	<u>s</u>	<u>cv</u>
Greatest len	igth	GL	21	92.2 -119	106.8	9.3	8.7
Proximal dia	gonal	Dip	28	16.7 - 23.9	20.0	2.0	10.0
Distal bread	th	Bd	32	9.1 - 16.1	11.7	1.3	11.3
Smallest bre	adth	SC	40	5.0 - 8.8	6.3	0.8	13.0
Axial length		La	20	90.4 -114.6	102.9	8.5	8.3
Distal depth		Dd	33	10.9 - 16.2	11.9	1.4	12.1
Proximal wid (Bacher)	th	Вр	27	11.1 - 15.5	12,9	1.3	10.2
TARSOMETATAR	SUS	VdD	<u>n</u>	range	<u>x</u>	S	CV
Greatest le	ngth	GL	20	61.3 - 89.4	72.0	9.4	.13 . 0
Proximal br	eadth	Вр	25	10.7 - 16.8	12.7	1.5	12.1
Distal bread	th	Bd	20	10.7 - 16.0	12.5	1.4	11.3
Length of sp	ur		2	19.0, 21.1			
Minimum brea	dth	SC	24	4.6-9.0	5.9	1.8	30.3

Notes All measurements in millimetres and according to the methods of Von den Driesch (1976) except where another author quoted.

n = number of readings

 $\overline{\mathbf{X}}$ = mean

s = standard deviation

CV = coefficient of variation

This wide size range makes <u>means</u> a poor statistic for comparison. <u>Modal group</u> is more clear in this case and comparison of modal groups at West Stow and Melbourne Street shows that distributions are roughly comparable and usually bimodal. The bimodality is probably due to sexual dimorphism and may represent hens and capons. Bones of the latter would probably show delayed maturation and reach a greater length before maturation at the joints. Only mature bones were measured and discussion of the rôle of very young birds must be left for the moment.

In humerus and radius bones of the wing there is an indication that the modal groups for total lengths are higher at West Stow than at Melbourne Street.

TABLE 3	Modal Groups (in millimetres)	of Wing	Bone Lengths
	Melbourne Street	,	West Stow
humerus	60–65		65-70
radius	55-60		65-70

This might suggest that the West Stow birds were stronger in the wing than Mid-Saxon birds from Melbourne Street but further study is needed.

Domestic Goose

Most goose bones were from a large species of goose which compared closely in all its measurements and anatomical characters with Mid-Saxon geese from Melbourne Street (Table 4). No goose skulls were preserved at Melbourne Street but one was found at West Stow in Layer 133 and another in Layer 624 showing a distinctive slight inflation of the cranial area adjoining the upper beak. This feature may be a result of domestication.

Two sterna found in Phase 1 (Layer 815, and Hut 27) show considerable depth of keel on the breast compared with wild greylags, greylags in captivity, and later medieval material from Wessex, although available samples were small. This would suggest some selection for meat production as might be expected.

There were occasional fragments from smaller geese, presumably from a smaller wild species, perhaps a migrant e.g. <u>Anser brachy-</u><u>rhynchos</u>, the pink-footed goose, or <u>Anser albifrons</u>, the whitefront. As the measurement ranges of wild and domestic geese overlap it would be unwise at this stage to attempt a metrical comparison of West Stow geese and those from other Saxon settlements. TABLE 4 Measurements of Goose Bones

CORACOID Vd	D	<u>n</u>	range	$\overline{\underline{x}}$	s	<u>cv</u>
Total length G	L	2	65.8, 69.9			
Medial length L	m	4	60.4 - 70.9	65.9		
Basal breadth B	Ъ	1	32.9		·	
Facet breadth B	F	2	32.2,33.3			
SCAPULA Vd	D	<u>n</u>	range	<u>x</u>	S	CV
Total length G	L	2	100.0,106.6			
Distal breadth D	iC ´	12	18.2 - 21.2	20.1	1.0	5.1
HUMERUS	VdD	<u>n</u>	range	x	<u>s</u>	CV
Total length	GL	1	162			
Proximal breadth	Bp	4	32.8 - 36.1	34.8		
Distal breadth	Bd	7	21.6 - 24.1	23.1	0.9	4.1
Minimum breadth.	SC	9	8.8 - 13.9	11.4	1.7	14.9
RADIUS	<u>VdD</u>	<u>n</u>	range	x	s	CV
Total length	GL	5	136.3 - 159.4	146.3	9	6.2
Distal breadth	Bd 1	18	9.2 -12.4	10.9	1.1	10.2
Minimum breadth	sc 1	18	4.2 - 6.9	5.5	0.7	13.6
CARPOMETACARPUS	VdD	n	range	X	<u>s</u>	CV
Total length	\mathtt{GL}	5	87.3 - 101.9	94.4	5•3	5.7
Proximal breadth	Вр	7	21.0 - 27.3	23.6	1.9	8.0
Distal diagonal	Did	5	11.8 - 13.6	12.4	0.7	5.5
Breadth both sha:	fts BS	(Er	bersdobler) 9.6,10.4,1	11.1		
OS COXA	<u>VdD</u>	n	range	X	<u>s</u>	CV
Acetabulum	DiA	3	8.7, 9.3, 10.	5		

TABLE 4 continued

FEMUR	<u>Vd D</u>	n	range	ž	<u>s</u>	CV
Total length	GL	4	78.1 - 85.0	80.5		
Proximal breadth	Bp	6	20.0 - 27.1	22.2	2.5	11.4
Distal breadth	Bd	6	20.7 - 27.8	22.6	2.6	11.5
Minimum breadth	SC	7	9.0 - 12.0	10.3	1.0	9.6
Caput length	Im	3	74.5, 75.4, 80.1			
Proximal depth	Dp	6	13.7 - 17.4	15.1	1.4	9.4
Distal depth	Dd	4	15.7 - 21.7	18.1		
TIBIOTARSUS	VdD	<u>n</u>	range	<u>x</u>	s	<u>cv</u>
Total length	GL	1	134.4			
Proximal diagonal	Dip	2	24.3, 25.2			
Distal breadth	Bd	8	. 14.7 - 18.8	17.6	1.2	7.1
Minimum breadth	SC	10	6.9 - 10.1	8.7	1.1	12.2
Proximal width	Bp	2	16.8, 17.9			
Distal Depth	Dd	5	14.0 - 18.5	16.9	1.8	10.7
TARSOMETATARSUS	VdD	n	range	<u>x</u>	S	CV
Total length	GL	2	85.2, 85.9			
Proximal breadth	Bp	2	19.6, 21.7		,	
Distal breadth	Bd	6	17.9 -22.8	20.0	1.7	8.4
Minimum breadth	SC	6	7.0 -10.2	8.5	1.1	12.9

For references and abbreviations see Table 2 notes.

DUCKS

It is not possible to say whether the larger duck bones were from wild mallard, <u>Anas platyrhynchos</u>, tamed mallard, or true domesticated ducks not interbreeding with their wild counterpart. Anatomically there is no indication that they were domestic. The smaller duck bones were of wild species, a medium-sized species comparable with the wigeon, <u>Anas penelope</u>, and the small teal, <u>Anas crecca</u>.

WILD SPECIES

The presence or absence of the different wild species in the various Anglo-Saxon phases is indicated in Table 5. Apart from the crane all these birds are breeding or migrant species for East Anglia today. A species of crane bred in East Anglia until c. 1600 (British Ornithologists Union 1971). Details of the butchery observed on this species and the other birds will be included in a later report together with an account of the pathologically altered bones.

TABLE 5 Species Distribution i	n Saxon Pl	nases		
	<u>Phase 1</u>	<u>Phase 2</u>	Phase 3	<u>Layer 2</u>
DOMESTIC FOWL	\checkmark	1	\checkmark	V
DOMESTIC GOOSE	\checkmark	\checkmark	\checkmark	\checkmark
domestic duck or mallard, Anas platyrhynchos	\checkmark	\checkmark	\checkmark	1
heron, <u>Ardea cinerea</u>			\checkmark	
swan, <u>Cygnus</u> sp		\checkmark		
wild goose, <u>Anser</u> sp		\checkmark		
wild duck (wigeon-size) <u>Anas</u> sp	\checkmark	\checkmark		
teal, <u>Anas crecca</u>		V		
goshawk, <u>Accipiter</u> gentilis *		<i>,</i>		
hen harrier, <u>Circus cyaneus</u>				
crane, <u>Grus</u> sp	/	\checkmark	V	\checkmark
moorhen, <u>Gallinula</u> <u>chloropus</u> *				
lapwing, <u>Vanellus</u> <u>vanellus</u>		~		
golden plover, <u>Pluvialis</u> apricar	ia	\checkmark		
greenshank, <u>Tringa</u> <u>nebularia</u>		\checkmark		
woodcock, <u>Scolopax</u> rusticola		\checkmark		
snipe, <u>Gallinago</u> gallinago	\checkmark			
common gull, <u>Larus canus</u>		\checkmark	-	
herring/lesser black-backed gull, <u>Larus fuscus/argentatus</u>		\checkmark		t .
thrushes, <u>Turdus</u> sp	\checkmark	\checkmark	V	
starling, <u>Sturnus</u> vulgaris *				

* Anglo-Saxon but not phased.

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