BONES: Section 3.2, by Mark Maltby

Table 1 Contexts

Group	Contexts
Structure S59	285 304
Structure S60	61 118 125 127-8 144 165 185-6 191 202 212 214 223 227 236 245 252
Structure S97	129 198 216
Structure S200	138 189 192 199 205 238 254-5
Structure S299	50 130 140 149 275 279 310
Ditch F22	23-4 78 203 215
Other Linear	115 187 204 222 224
Grave fills	231 234-5 249-50 288 315
	15 18-9 33 36 39 120 123 170-2
Walls	179
Rubble layer 121	121 121a 121b 121c 121b/c 121e
Other rubble layers	25 41 53 56 64 163 177 188 190 209 242 251 291 298
Soil layers 12, 100-110	12 100-2 109 109a-c 109g 109w 110 110a-e 110w
Other soil layers	16 51 57 63 65-6 82 116 143 157 161-2 164 246 262 269 271 293
Other contexts	21 62 106 132 137 142 145 302

Table 2: Animal bones recorded by group

Group	Mammal	Bird	Fish	Amphibian	Total
Structure S59	98	3	30		131
Structure S60	2067	49	106		2222
Structure S97	1520	15	132	1	1668
Structure S200	1398	29	157	1	1585
Structure S299	228	6	4		238
Ditch F22	241	8	12		261
Other Linear	86		2		88
Grave fills	354	1	1		356
Walls	275	9	10		294
Rubble layer 121	1633	8	38		1679
Other rubble layers	938	20	129		1087
Soil layers 12, 100-110	1561	20	43	4	1628
Other soil layers	2139	20	92	1	2252
Other contexts	149	4	7		160
Total	12687	192	763	7	13649

Counts are of number of individual specimens (NISP) and include unidentified fragments

Table 3: Preservation indicators

Group	Gnawed NISP (I)	%	Eroded NISP (I)	%	Burnt NISP	%	Ivoried NISP (I)	%	Modern breaks NISP (I)	%	Uni NISP	%
Structure S59	1	2	1	2	6	5	0	0	0	0	75	57
Structure S60	71	7	68	7	24	1	2	0.2	41	4	1273	57
Structure S97	75	8	20	2	15	0.9	3	0.3	47	5	759	46
Structure S200	63	7	19	2	41	3	4	0.5	39	5	721	45
Structure S299	15	12	1	0.8	2	0.8	15	12	7	6	111	47
Ditch F22	13	12	2	2	3	1	0	0	4	4	148	57
Other Linear	8	17	0	0	0	0	0	0	3	6	40	45
Grave fills	7	6	8	7	1	0.3	0	0	13	11	234	66
Walls	10	7	14	9	23	8	0	0	16	11	145	49
Rubble layer 121	73	10	47	6	18	1	6	0.8	26	3	912	54
Other rubble layers	41	8	12	2	23	2	3	0.6	20	4	555	51
Soil layers 12, 100-110	41	5	85	10	2	0.1	1	0.1	86	10	776	48
Other soil layers	96	8	22	2	25	1	2	0.2	64	6	1109	49
Other contexts	14	14	7	7	1	0.6	0	0	6	6	61	38
Total	528	8	306	5	184	1	36	0.5	372	6	6919	51

NISP = number of individual specimens; NISP (I) = number of specimens of identified species

Table 4: Mammal bones recorded by group

Species	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	Total	% Dom	% Id Mamm
Cattle	5	145	110	153	23	18	22	20	25	108	88	93	128	22	960	16	16
Sheep/Goat	39	618	605	491	49	64	19	80	92	527	294	590	859	57	4384	71	71
Pig	4	96	85	96	6	17	6	17	13	88	61	95	81	11	676	11	11
Horse		4	9			1		4	2	8	3	2	3	1	37	0.6	0.6
Dog		10	22	8	44	2			2	3		7	4		102	2	2
Cat				2						2		13		1	18	0.3	0.3
Red Deer			1							1	1				3		0.05
Roe Deer											1				1		0.02
Hare				1								1	1		3		0.05
Cetacean											1				1		0.02
Field Vole											1				1		0.02
Rat													1		1		0.02
Total Identified	*48*	*873*	*832*	*751*	*122*	*102*	*47*	*121*	*134*	*737*	*450*	*801*	*1077*	*92*	*6187*		
Large Mammal	3	193	177	200	38	37	19	37	50	201	142	132	218	33	1480		
Medium Mammal	40	909	491	413	67	93	15	188	86	504	315	561	816	21	4519		
Small Mammal		4		1							1	4			10		
Unid Mammal	7	88	20	33	1	9	5	8	5	191	30	63	28	3	491		
Total Undentified	*50*	*1194*	*688*	*647*	*106*	*139*	*39*	*233*	*141*	*896*	*488*	*760*	*1062*	*57*	*6500*		
Total	*98*	*2067*	*1520*	*1398*	*228*	*241*	*86*	*354*	*275*	*1633*	*938*	*1561*	*2139*	*149*	*12687*		

Counts are of number of individual specimens (NISP)

Table 5: Totals and percentages of major domestic mammals by group

Species	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	Total
Cattle	5	145	110	153	23	18	22	20	25	108	88	93	128	22	960
Sheep/Goat	39	618	605	491	49	64	19	80	92	527	294	590	859	57	4384
Pig	4	96	85	96	6	17	6	17	13	88	61	95	81	11	676
Total	*48*	*859*	*800*	*740*	*78*	*99*	*47*	*117*	*130*	*723*	*443*	*778*	*1068*	*90*	*6020*
Large Mammal	3	193	177	200	38	37	19	37	50	201	142	132	218	33	1480
Medium Mammal	40	909	491	413	67	93	15	188	86	504	315	561	816	21	4519
Total	*43*	*1102*	*668*	*613*	*105*	*130*	*34*	*225*	*136*	*705*	*457*	*693*	*1034*	*54*	*5999*
Cattle	10%	17%	14%	21%	29%	18%	47%	17%	19%	15%	20%	12%	12%	24%	16%
Sheep/Goat	81%	72%	76%	66%	63%	65%	40%	68%	71%	73%	66%	76%	80%	63%	73%
Pig	8%	11%	11%	13%	8%	17%	13%	15%	10%	12%	14%	12%	8%	12%	11%
Large Mammal	7%	18%	26%	33%	36%	28%	56%	16%	37%	29%	31%	19%	21%	61%	25%
Medium Mammal	93%	82%	74%	67%	64%	72%	44%	84%	63%	71%	69%	81%	79%	39%	75%

Counts are of number of individual specimens
(NISP)

Table 6: Percentages of Cattle, Sheep/Goat and Pig from Romano-British sites in Dorset and neighbouring counties.
Data adapted from King 1984: 1999; 2005; Hambleton 1999;
Maltby 2002; in press

County	Location	Site	Type	NISP	Cattle	Sheep/G	Pig	S/G:P
Dorset	Portland	Weston Road		6020	16	73	11	87
Dorset	Dorchester	Charles St/WC II	Large Town	3281	32	49	19	72
Dorset	Dorchester	Colliton Park	Large Town	1431	35	58	7	89
Dorset	Dorchester	Greyhound Yard	Large Town	17485	38	37	25	60
Devon	Exeter	various	Military	1161	43	33	24	58
Devon	Exeter	Goldsmith St	Large Town	2978	46	31	22	58
Devon	Exeter	Rack St	Large Town	1242	74	19	7	73
Devon	Exeter	St Mary Major	Large Town	1563	37	31	32	50
Devon	Exeter	Trickhay St	Large Town	1278	60	19	21	48
Hampshire	Silchester	Basilica	Large Town	6842	36	38	26	60
Hampshire	Silchester	Manor Farm	Large Town	213	51	31	18	63
Hampshire	Silchester	South Gate	Large Town	1104	58	25	17	59
Hampshire	Winchester	Crowder Terrace	Large Town	416	69	29	3	89
Hampshire	Winchester	Defences	Large Town	1362	46	38	17	69
Hampshire	Winchester	Hyde Abbey	Large Town	1662	36	47	17	73
Hampshire	Winchester	Oram's Arbour	Large Town	423	37	46	17	72
Hampshire	Winchester	Staple Gardens	Large Town	1354	45	34	21	62
Hampshire	Winchester	Victoria Rd G2-4	Large Town	2069	63	24	13	66

Hampshire	Winchester	Victoria Rd IV-VI	Large Town	2142	41	40	19	68
Hampshire	Winchester	Victoria Rd X-XVI	Large Town	9384	54	34	12	74
Somerset	Ilchester		Large Town	1229	66	30	5	87
Dorset	Dorchester	Alington Avenue	Rural	857	53	42	6	88
Dorset	Ower	(4th C)	Rural	435	42	40	18	69
Dorset	Rope Lake Hole		Rural	1408	23	71	6	92
Dorset	Whitcombe		Villa	338	38	56	6	91
Dorset	Hod Hill		Military	494	14	74	12	87
Hampshire	Winnall Down		Rural	1791	46	46	7	50
Hampshire	Micheldever Wood	(LIA-ERB)	Rural	830	39	43	19	70
Hampshire	Little Somborne		Rural	592	44	50	6	89
Hampshire	Neatham		Small Town	1383	67	26	8	78
Hampshire	Abbotstone Down	(LIA-ERB)	Rural	647	50	40	10	80
Hampshire	Brighton Hill South	(LIA-ERB)	Rural	1803	53	40	7	84
Hampshire	Hayling Island		Temple	4939	1	55	44	56
Hampshire	Porchester Castle		Military	16504	65	19	16	55

%S/G:P = percentage sheep/goat of total sheep/goat and pig

Table 7: Sheep/Goat element counts

Element	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	NISP Total	% NISP	% Man	MNE	% MNE	WBE
Horn Core		2	4	3	1	1					2		6		19	0.4	5.2	10	6.8	
Maxilla		6	16	8		2	1	2	2	1	3	2	6		49	1.1	13.4	22	15.1	
Skull frag	1	24	33	37	4	6		4		21	14	24	49	6	223	5.1	61.1	39	26.7	
Mandible	2	40	88	50	7	6	2	11	10	26	20	52	46	5	365	8.3	100.0	89	61.0	54.45
Hyoid				1		1			1				1		4	0.1	1.1			
Loose Teeth	6	183	147	141	7	20	2	17	24	188	65	164	189	10	1163	26.5				
Scapula	1	22	19	15	2	3			3	9	9	6	26	1	116	2.6	31.8	49	33.6	23.20
Humerus		26	16	18	2	3	2	3	7	30	15	29	33	2	186	4.2	51.0	112	76.7	43.55
Radius	3	26	27	23	4	1		7	9	29	21	35	65	4	254	5.8	69.6	97	66.4	70.05
Ulna	1	13	15	8	2			4	1	7	5	16	19	3	94	2.1	25.8	57	39.0	
Pelvis	2	26	35	26	5	2	1	2		25	15	16	47	1	203	4.6	55.6	104	71.2	27.45
Femur	2	35	17	19	3	1	1	1	6	20	10	28	40	7	190	4.3	52.1	69	47.3	39.20
Patella		3	2	1						2		3	4		15	0.3	4.1			
Tibia	2	47	37	26	3	3	3	6	3	27	29	39	72	2	299	6.8	81.9	146	100.0	82.35
Carpals		2	4	4						5		2	6		23	0.5	6.3			
Astragalus	2	12	8	9			2		1	11	1	12	26	2	86	2.0	23.6	81	55.5	
Calcaneus		14	5	7			2		2	7	4	10	18		69	1.6	18.9	67	45.9	
Centroquartal	1	4	7	1				1		6	3	3	11		37	0.8	10.1	37	25.3	
Other Tarsals								2							2	0.0	0.5			
Metacarpal	2	15	24	15		3		1	4	22	15	30	26	8	165	3.8	45.2	64	43.8	51.15
Metatarsal	2	30	31	26	2	3	1	1	7	21	24	35	46	3	232	5.3	63.6	70	47.9	71.10
Metapodial	1	2	4	1				1	1	4	1	6	5		26	0.6	7.1			
Phalanx 1	4	14	18	14	2	5		4	3	23	8	28	30	2	155	3.5	42.5	35	24.0	
Phalanx 2	1	7	2	2	1	1		2	1	5	5	7	12		46	1.0	12.6	11.5	7.9	
Phalanx 3		6	3	2					1	6	2	5	5		30	0.7	8.2	7.5	5.1	
Atlas (VC1)		5	4	4		1		2		4	2	5	6		33	0.8	9.0	58	39.7	
Axis (VC2)		3	2	1			1	1		1	4	4	2		19	0.4	5.2	34	23.3	
Cervical V		8	4	6				2	2	5	1	9	18		55	1.3	15.1			
Thoracic V	2	13	6	5		1		3	1	11	5	7	12		66	1.5	18.1			
Lumbar V	2	12	12	6	1			3	1	2	6	6	4	1	56	1.3	15.3			
Sacral V		1	2	4		1						1	1		10	0.2	2.7	14	9.6	
Caudal V		1		1									1		3	0.1	0.8			
Ribs	2	15	13	7	3		1		2	7	5	6	25		86	2.0	23.6			

Sternebrae		1								2			2		5	0.1
Total	39	618	605	491	49	64	19	80	92	527	294	590	859	57	4384	

NISP = number of individual specimens; WBE = whole bone quivalents

MNE = minimum number of elements represented; counts of phalanges divided by 4; counts of VC1,VC2 and VS multiplied by 2

Table 8: Sheep/goat body areas represented

Area	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	NISP Total
Cranial	3	72	141	99	12	16	3	17	13	48	39	78	108	11	660
Upper forelimb	5	87	77	64	10	7	2	14	20	75	50	86	143	10	650
Upper hindlimb	6	111	91	72	11	6	5	9	9	74	54	86	163	10	707
Foot	13	106	106	81	5	12	5	12	20	110	63	138	185	15	871
Trunk	6	59	43	34	4	3	2	11	6	32	23	38	71	1	333
Total	33	435	458	350	42	44	17	63	68	339	229	426	670	47	3221

Percentage	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	Total
Cranial	9	**17**	**31**	**28**	29	36	18	27	19	**14**	**17**	**18**	**16**	23	**20**
Upper forelimb	15	**20**	**17**	**18**	24	16	12	22	29	**22**	**22**	**20**	**21**	21	**20**
Upper hindlimb	18	**26**	**20**	**21**	26	14	29	14	13	**22**	**24**	**20**	**24**	21	**22**
Foot	39	**24**	**23**	**23**	12	27	29	19	29	**32**	**28**	**32**	**28**	32	**27**
Trunk	18	**14**	**9**	**10**	10	7	12	17	9	**9**	**10**	**9**	**11**	2	**10**

Cranial = mandible, maxilla, hyoid, horn core, skull fragments but excludes loose teeth
Upper forelimb = scapula, humerus, radius, ulna
Upper hindlimb = pelvis, femur, patella, tibia
Foot = carpals, tarsals, metapodials, phalanges
Trunk = ribs, sternebrae and vertebrae

Table 9: Elements displaying cut, chop and saw marks

Element	Cow	S/G	Pig	Cat	Med. Duck	Great Auk	Gannet	Scad
Horn Core	2	1						
Maxilla		1	6					
Skull frag	3	3						
Mandible	3	3	1					
Hyoid		1						
Furcula					1			
Scapula		9	2					
Humerus		4	2			1	1	
Radius	1	2						
Ulna	1	1						
Pelvis	3	11	2					
Femur	4	3	1					
Tibia	1	4	6	1				
Astragalus	4	12	2					
Calcaneus		5						
Centroquartal	1	5	1					
Metatarsal		1						
Phalanx 1	7	2						
Atlas (VC1)	1	8	3					
Axis (VC2)	1	2	1					
Cervical V	1	5	1					
Thoracic V	2	7	1					
Lumbar V	1	8	2					
Sacral V	1							
Caudal V								1
Ribs		6	1					
Sternebrae								
Total	37	104	32	1	1	1	1	1

Table 10: Cattle, sheep/goat and pig mandibular tooth ageing data

		Mandibles		
Cattle	**No.**	**%**	**Cum %**	**MWS scores**
Stage 1	1	25	25	2e
Stage 2	0	0	25	
Stage 3	0	0	25	
Stage 4	1	25	50	28
Stage 5	0	0	50	
Stage 6	1	25	75	43e
Stage 7	1	25	100	47-49
Total	4			

Sheep/		**Mandibles**		
Goat	**No.**	**%**	**Cum %**	**MWS scores**
Stage 1	5	9	9	**1e** *1e 2 2 2e*
Stage 2	1	2	11	**3**
Stage 3	15	28	40	**8e 9-10 10 11 11e 11e** 11-14 **12e 12e** *13* **13** 13 **15 15 15e**
Stage 4	10	19	58	19-20 **20e 20e 21-25 21-25 21-25** 21-25 **22e 23** 23-25
Stage 5	8	15	74	28-30 30-31 31 33-36 34 34e 35 35e
Stage 6	13	25	98	37 37 37-41 37-41 37-41 37-41 38e 38e 39 40 41 41 41-43
Stage 7	1	2	100	48
Total	53			**Sheep** *Goat* S/G

		Mandibles	
Pig	**No.**	**%**	**Cum %**
Stage 1	0	0	0
Stage 2	0	0	0
Stage 3	8	40	40
Stage 4	3	15	55
Stage 5	6	30	85
Stage 6	1	5	90
Stage 7	2	10	100
Total	20		

Stage 1 = 4th deciduous premolars (dp4) not in wear
Stage 2 = dp4 in wear; 1st molar (M1) not in wear
Stage 3 = M1 in wear; 2nd molar (M2) not in wear
Stage 4 = M2 in wear; 3rd molar (M3) and permanent premolars not in wear
Stage 5 = M3 in wear; 4th permanent premolar (P4) not in wear (Cattle)
Stage 5 = M3 in wear; M1 at Grant (1982) wear stage g (S/G)
Stage 5 = P4 in wear; M3 not in wear (Pig)
Stage 6 = P4 in wear; M3 < Grant wear stage k (Cattle)
Stage 6 = M1 at Grant wear stages h-m; M2 at Grant wear stage g (S/G)
Stage 6 = M3 at Grant wear stages a-b (Pig)
Stage 7 = M3 at Grant wear stages k-m (Cattle)
Stage 7 = M1 and M2 at Grant wear stages h-m (S/G)
Stage 7 = M3 at Grant wear stages c-g (Pig)

MWS = mandible wear stage (Grant 1982); e = estimated MWS

Table 11: Epiphyseal fusion data

Cattle				
Early Fusing	**Unfused**	**Fused**	**Total**	**% Fused**
Radius P	2	10	12	83
Scapula D		5	5	
Acetabulum	2	5	7	
Humerus D		8	8	
1st Phalanx P	8	27	35	77
2nd Phalanx P	5	26	31	84
Total	17	81	98	83
Later Fusing				
Tibia D	5	1	6	
Metacarpal D	4	5	9	
Metatarsal D	3	1	4	
Metapodial D	6	1	7	
Total	18	8	26	31
Latest Fusing				
Ulna P	3		3	
Femur D	8		8	
Radius D	7	1	8	
Humerus P	4	2	6	
Femur P	11	1	12	8
Calcaneus P	6	3	9	
Tibia P	8	4	12	33
Total	47	11	58	19

Sheep/Goat				
Early Fusing	**Unfused**	**Fused**	**Total**	

Pig				
Early Fusing	**Unfused**	**Fused**	**Total**	**% Fused**
Scapula D		4	4	
Acetabulum	3	4	7	
Radius P	2	6	8	
Humerus D	6	6	12	50
Total	11	20	31	65
Later Fusing				
1st Phalanx P	9	1	10	10
2nd Phalanx P	5	5	10	50
Tibia D	12	1	13	8
Metapodial D	11	3	14	21
Lateral Mp D	5	2	7	
Total	42	12	54	22
Latest Fusing				
Ulna P	5		5	
Radius D	4		4	
Femur D	13		13	0
Humerus P	1		1	
Calcaneus P	8	1	9	
Femur P	4		4	
Tibia P	3		3	
Total	38	1	39	3

Horse				
Early Fusing	**Unfused**	**Fused**	**Total**	**% Fused**
Scapula D			0	

Acetabulum	17	52	69	75
Radius P	10	56	66	85
Scapula D	4	36	40	90
Humerus D	9	73	82	89
Total	40	217	257	84
Later Fusing				
1st Phalanx P	43	81	124	65
2nd Phalanx P	2	44	46	96
Tibia D	56	36	92	39
Metacarpal D	20	16	36	44
Metatarsal D	28	20	48	42
Metapodial D	15	5	20	25
Total	164	202	346	58
Latest Fusing				
Calcaneus P	29	24	53	45
Ulna P	13	8	21	38
Humerus P	24	5	29	17
Femur P	37	26	63	41
Femur D	33	13	46	28
Tibia P	28	9	37	24
Radius D	28	21	49	43
Total	192	106	298	36

Radius P	1		1
Acetabulum		1	1
1st Phalanx P	2		2
2nd Phalanx P			0
Total	3	1	4
Later Fusing			
Tibia D			0
Metacarpal D		1	1
Metatarsal D	1		1
Metapodial D		1	1
Total	1	2	3
Late Fusing			
Humerus P	1		1
Femur D			0
Radius D		1	1
Total	1	1	2

D = Distal; P = Proximal

Table 12: Common measurements of sheep and goat from Weston Road and Dorchester (Maltby 1993)

	Weston Road						Greyhound Yard, Dorchester					
	N	**Min**	**Max**	**Mean**	**s.d**	**c.v**	**N**	**Min**	**Max**	**Mean**	**s.d**	**c.v**
Astragalus GLl	61	22.2	28.8	25.5	1.4	5.3						
Astragalus GLm	57	21.5	30.1	24.5	1.6	6.5						
Astragalus Bd	54	14.1	19.6	16.3	1.1	6.7						
Calcaneus GL	13	45.8	53.5	48.0	2.5	5.1						
Humerus BT	31	23.3	27.9	25.3	1.2	4.9	103	22.3	30.4	26.6	1.6	
Humerus HT	32	14.9	19.9	16.6	1.0	6.1						
Metacarpal Bp	28	18.0	23.0	20.3	1.3	6.6	102	18.0	23.6	20.6		
Metacarpal Dp	23	12.9	16.1	14.6	0.9	5.9						
Metacarpal Bd	13	20.4	24.5	22.3	1.3	5.9						
Metatarsal Bp	28	15.3	20.0	17.9	1.1	6.0	81	15.6	22.2	18.5	1.3	7.0
Metatarsal Bd	12	19.8	24.4	21.9	1.5	6.9						
Radius Bp	26	24.8	32.5	26.8	1.7	6.5						
Radius Dp	22	12.6	15.2	13.9	0.7	5.3						
Radius BFp	26	22.5	30.2	24.9	1.8	7.2	66	21.4	29.8	25.7	1.6	6.2
Scapula GLP	20	25.9	32.5	28.6	1.9	6.8	70	25.6	34.2	29.1	2.0	
Scapula BG	19	14.9	20.2	17.7	1.3	7.1						
Tibia Bd	33	20.9	28.2	23.6	1.8	7.6	166	20.0	27.8	23.8	1.3	5.5
Tibia Dd	26	15.3	22.1	17.9	1.6	9.2						
Withers Ht (cm)	13	51.1	62.1	56.3	3.1	5.5	61	50.0	67.4	58.1	4.0	6.9

GLl = greatest lateral length; GLm = greatest medial length; GL = greatest length;
Bp = proximal breadth; Bd = distal breadth; BT = breadth trochlea; Height trochlea;
BFp = proximal articular breadth; GLP greatest glenoid length; BG = glenoid breadth
Withers height estimated from length measurements of complete limb bones

Table 13: Cattle element counts

Element	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	NISP Total	MNE	WBE
Horn Core		4	2	5						7	1	3	8		30	11	
Maxilla		1	3	3			1			1		3	1	1	14	5	
Skull frag		8	4	12	1	3		4	1	3	4	4	5	2	51	10	
Mandible	1	13	9	23	1	1	4		2	8	8	3	6		79	15	10.05
Hyoid											1				1		
Loose Teeth	1	57	32	32	2	1	2	6	4	32	20	29	29	2	249		
Scapula		2	2	4	2	1	2	1		3	2	1	3		23	7	3.00
Humerus		4	3	8	2	1		1	2	4	2	4	6	1	38	15	5.60
Radius	1	3	3	6	1	1			4		3	4	5	1	32	10	5.90
Ulna	1	2	4	4			1			2	1	2	3	1	21	10	
Pelvis		2		5	2		1	1	1	1	6	1	3		23	9	2.30
Femur		1	6	8		1				4	2	4	5	2	33	8	4.95
Patella						1								1	2		
Tibia		5	9	2			1	1	1	1	3	2	7	1	33	8	5.65
Carpals		3	2	3	2		1		1	5	3	3	7		30		
Astragalus		3	1	1		1					1	1	2		10	8	
Calcaneus		3	1		1		1			2		3	2	1	14	12	
Centroquartal		2	2	1			1				2				8	7	
Other Tarsals		1									1		1		3		
Metacarpal		4	4	3	2		2	2	1	4	7	1	3		33	15	9.05
Metatarsal		2	4	2	1	1			2	4	4		7	1	28	8	6.80
Metapodial			1	1					1	4		1	1		9		
Phalanx 1	1	7	6	6		2	2	1	3	4	3	7	3	3	48	9.25	
Phalanx 2		5	3	7			1	1		3	3	5	3	1	32	7.75	
Phalanx 3			2	4		1	1	1		1	2	2	5		19	4.75	
Sesamoids		3		1						2		2	3		11		
Atlas (VC1)										1	1			1	3	6	
Axis (VC2)		1					1					2			4	8	
Cervical V		1	1	4	1					1	1		2		11		
Thoracic V		4	4	3				1		4	2	2	2	1	23		

Lumbar V		1			2	2				4		2	1		12	
Sacral V		1		2	1					1	2		1	1	9	4
Caudal V			2	2								1	1		6	
Ribs		2		1	2	1			2	2	3	1	2	1	17	
Sternebrae													1		1	
Total	5	145	110	153	23	18	22	20	25	108	88	93	128	22	960	

NISP = number of individual specimens; WBE = whole bone equivalents
MNE = minimum number of elements represented; counts of phalanges divided by 4; counts of VC1,VC2 and VS multiplied by 2

Table 14: Pig element counts

Element	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	NISP Total	MNE	WBE
Maxilla		5	8	5	1		1		1	3	3	1	3		31	21	
Skull frag	1	9	10	13		2		2		8	4	9	23	1	82	21	
Mandible		12	4	13		1		1		6	6	12	4		59	21	8.95
Loose Teeth	2	24	20	15	1	3		6	3	22	14	26	10	2	148		
Scapula		3		1						5		3	5		17	7	3.00
Humerus		3	6	2			1	2		6	2	2	7	1	32	16	6.35
Radius		3	2	1		1		2		1		3	2		15	7	4.35
Ulna		5	1	3	1	1				1		4	3		19	8	4.10
Pelvis		5	1	2		1				2	2	2	1	1	17	8	2.15
Femur		4	5	6	1	2		1	2	4		1	1	2	29	10	5.05
Patella						1							1		2		
Tibia		3	4	8			1			6	1	3	4		30	11	5.70
Fibula		4		4						2		1			11		
Carpals				1					1				1		3		
Astragalus		1	1	1					1	2		1	1		8	8	
Calcaneus		1	3	1				1	1	3		1	1	1	13	11	
Centroquartal				1						1	1	1			4	2	
Other Tarsals													1		1		
Metacarpal 3			1	1							3	2			7	7	3.45
Metacarpal 4				1		1				2		1			5	5	2.85
Metacarpal												1			1		
Metatarsal 3										2	1	1			4	3	2.25
Metatarsal 4				1						1		1			3	3	1.25
Metatarsal				1											1		
Metapodial		1										3		1	5		
Peripheral Mp	1	3	4	1			1		1		2			1	14		
Phalanx 1		1		2		1				1	3	2			10	2.5	
Phalanx 2		2	2	1							3	1	1		10	2.5	

Phalanx 3				1					1		2	1	1		6	1.5
Peripheral P1		2	1	1						3	2	1		1	11	2.75
Peripheral P3										1					1	0.25
Atlas (VC1)		1	1	3	1	2					2	1	1		12	22
Axis (VC2)												1	1		2	4
Cervical V		1									1	1	1		4	
Thoracic V			6			1	2		1		2	4	3		19	
Lumbar V		2		2				1		3	6	1	1		16	
Sacral V										1					1	2
Ribs		1	5	4	1			1	1	2	1	3	4		23	
Total	4	96	85	96	6	17	6	17	13	88	61	95	81	11	676	

NISP = number of individual specimens; MNE = minimum number of elements represented; counts of phalanges divided by 4; counts of VC1,VC2 and VS multiplied by 2
WBE = whole bone
equivalents

Table 15: Element counts of other mammals

Element	Horse	Dog	Cat	Red Deer	Roe Deer	Hare	Cetacean	F. Vole	Rat
Antler				1					
Maxilla		1						1	
Skull frag	1	2							
Mandible	2	4							
Hyoid									
Loose Teeth	13	9							
Scapula	1	3				1			
Humerus	1	3			1	1			
Radius	2	2							
Ulna		2	1						
Pelvis	1	3							
Femur		5	1						
Patella	1								
Tibia		5	1	1		1			1
Fibula		1	1						
Carpals	4								
Astragalus			1						
Calcaneus			1	1					
Centroquartal									
Other Tarsals	2								
Metacarpal	1	8	1						
Metatarsal	1	8	5						
Metapodial	1	3							
Phalanx 1	2	4	4						
Phalanx 2			1						
Phalanx 3	1								
Sesamoids	1								
Atlas (VC1)		1					1		
Axis (VC2)		1							
Cervical V		1							
Thoracic V	1	10							
Lumbar V		8							
Sacral V		2							

Caudal V		1							
Ribs	1	14	1						
Sternebrae		1							
Total	37	102	18	3	1	3	1	1	1

NISP = number of individual specimens

Table 16: Bird bones recorded by group

Species	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	Total	%
Domestic Fowl		26	5	3		2		1	3	2	8	4	7	1	62	46
Duck		6		1						2			1		10	6
Goose			1		1	2			1				1	1	7	5
Great Auk				11											11	8
Razorbill	1	2		1	1							1			6	4
Auk family												1			1	0.7
Gannet													1		1	0.7
Great B-B Gull		2								1	1	3			7	5
Gull (cf Herring/LBB)				4									2		6	4
Fulmar				1											1	0.7
Great N. Diver				2					1			3			6	4
Woodcock					1										1	0.7
Pigeon family		1				1				1	1	1	2		7	5
Raven			2												2	1
Other Corvid			1	1								2		1	5	4
Thrush family			1									2			3	2
Total Identified	*1*	*37*	*10*	*24*	*3*	*5*	*0*	*1*	*5*	*6*	*10*	*17*	*14*	*3*	*136*	
Unidentified	*2*	*12*	*5*	*5*	*3*	*3*			*4*	*2*	*10*	*3*	*6*	*1*	*56*	
Total	*3*	*49*	*15*	*29*	*6*	*8*	*0*	*1*	*9*	*8*	*20*	*20*	*20*	*4*	*192*	

Counts are of number of individual specimens (NISP)

Table 17: Bird element counts

Element	Fowl	Duck	Goose	Great Auk	Razor-bill	G B-B Gull	H/L B-B Gull	Great N.Diver	Pigeon family	Other Corvid
Mandible			1	1		2	1			1
Sternum	2		2	1			1		1	
Furcula	2	1		1					1	
Coracoid	8			2						
Scapula				2	1					
Humerus	6	1		2	1		2	1		
Radius	4	2	1		1		1			
Ulna	5	2				3	1	3		1
Carpals	1					1				
Carpometacarpus	5	4			1			2	2	
Wing Phalanx	3					1				
Pelvis	1									
Synsacrum	3									
Femur	1		1	1	1					2
Tibiotarsus	8								2	
Tarsometatarsus	7		2		1				1	1
Foot Phalanx										
Vertebra	6			1						
Total	62	10	7	11	6	7	6	6	7	5

Other identifications:

Auk family	humerus
Gannet	humerus
Fulmar	humerus
Woodcock	ulna
Raven	carpometacarpus; tarsometatarsus
Thrush family	humerus; ulna; femur

Table 18: Fish bones recorded by group

Species	S59	S60	S97	S200	S299	D22	Other Linear	Grave	Walls	(121)	Other Rubb	100-10	Other Soil	Other	Total	%
Shark family													1		1	0.3
Common Eel											1				1	0.3
Conger Eel		1	2	2					2		4	3	1	1	16	4
Cod		14	10	11					2	5	2	5	17	1	67	17
Haddock													1		1	0.3
Pollack			9	4						1	3				17	4
Saithe					1										1	0.3
Ling										1					1	0.3
Hake			1												1	0.3
Gadid	1	7	13	12						4	12	7	10		66	17
John Dory		2													2	0.5
Bass		1	6							5	2		1		15	4
Scad	3	3	3	21		4			1	4	24	4	9		76	19
Black Sea Bream				1											1	0.3
Red Sea Bream	2			2							4				8	2
Gilthead									2				1		3	0.8
Couch's Sea Bream			1	6							1				8	2
Sea Bream sp.		8	19	28	1	1	1		2	2	10	7	7	1	87	22
Mullet		1										1			2	0.5
Ballan Wrasse	1		1	1		1			1	1	5	2	2	1	16	4
Wrasses		1	1							1	4	1	1		9	2
Flatfish		1													1	0.3
Total Identified	*3*	*11*	*22*	*38*	*1*	*2*	*1*	*0*	*5*	*4*	*24*	*11*	*11*	*2*	*135*	
Unidentified	*23*	*67*	*66*	*69*	*2*	*6*	*1*	*1*		*14*	*57*	*13*	*41*	*3*	*363*	
Total	*26*	*78*	*88*	*107*	*3*	*8*	*2*	*1*	*5*	*18*	*81*	*24*	*52*	*5*	*498*	

Counts are of number of individual specimens (NISP)

Table 19: Fish element counts

	Couch's	Red Sea	Sea	Ballan					Conger	
Element	**Bream**	**Bream**	**Bream**	**Wrasse**	**Bass**	**Cod**	**Pollack**	**Gadoid**	**Eel**	**Scad**
Premaxilla	4	3	3	3	1	6	3		1	
Maxilla			3			2	2	2		
Dentary	3	1	2	3	1	2	4	3	4	
Vomer						1	1			
Parasphenoid		3				3	2	1		
Articular	1	1	4			4	1			1
Superior pharyngeal				1						
Inferior pharyngeal				9						
Quadrate			2		1	1		1		
Hyomandibular			2			1		1		
Face bone			3					1	2	
Frontal						1				
Basioccipital						2		2		
Opercular			1		1			1		
Subopercular			1							
Ceretohyal						1				
Cleithrum									1	
Supracleithrum						3	1	1		
Post-temporal						5		1		
Precaudal vertebra			34		4	29	3	36	4	20
Caudal vertebra			32		5	6		11	4	54
Unid. Vertebra								5		
Scales					2					1
Total	8	8	87	16	15	67	17	66	16	76

Other identifications:

Black Sea Bream	parasphenoid
Gilthead	maxilla (2); premaxilla
Wrasse	precaudal vertebra (4); caudal vertebra (5)
Saithe	vomer

Haddock	caudal vertebra
Hake	articular
Ling	post-temporal
Flatfish	anal pterygrophore
Common Eel	precaudal vertebra
John Dory	dentary; caudal vertebra
Mullet	opercular (2)
Shark family	vertebra