

Table 1. Taxa representation including fragments belonging to articulations and partial skeletons (NISP)

a) hand collected material

	Phase						Total	
	1		2		3			
	n	%	n	%	n	%	n	%
Horse	1	<1	6	1	8	2	15	1
Cattle	153	28	288	36	142	29	583	32
Sheep	9	2	6	1	58	12	73	4
Goat			1	<1			1	<1
Sheep/goat	136	25	204	25	118	24	458	25
Pig	158	29	208	26	119	24	485	26
Dog	4	1	27	3	18	4	49	3
<i>Capreolus capreolus</i>	9	2	15	2	3	1	27	1
<i>Cervus elaphus</i>	1	<1					1	<1
<i>Lepus europaeus</i>	6	1	10	1	1	<1	17	1
<i>Anas platyrhynchos</i>	4	1	1	<1			5	<1
<i>Anas/Aythya spp.</i>	1	<1	4	<1	1	<1	6	<1
Galliformes	23	4	14	2	8	2	45	2
<i>Scolopax rusticola</i>	1	<1	3	<1	3	1	7	<1
<i>Columba spp.</i>		<1	1	<1			1	<1
<i>Corvus corax</i>		<1	3	<1			3	<1
<i>Corvidae spp.</i>	1	<1					1	<1
<i>Turdidae spp.</i>	4	1					4	<1
Bird	32	6	15	2	14	3	61	3
Fish	1	<1					1	<1
Amphibian	1	<1					1	<1
? <i>Lepus europaeus</i>					1		1	
? <i>Anas platyrhynchos</i>			1				1	
?Galliformes	8		5		5		18	
?Charadriidae	1						1	
Lg mammal	334		596		432		1362	
Med mammal	206		227		138		571	
Sm. Mammal	9		1		3		13	
Unidentifiable	1293		1713		914		3920	
Total	2396		3349		1985		7730	
Total identifiable	545		806		493		1844	
% identifiable	23		24		25		24	

Table 1. Taxa representation including fragments belonging to articulations and partial skeletons (NISP)

b) sieved samples

	Phase			Total
	1	2	3	
Cattle		2	1	3
Sheep	1			1
Sheep/goat	43	4		47
Pig	1		5	6
Lepus europaeus			1	1
Corvidae spp.	1			1
Bird	4			4
Rodent		1	2	3
?Galliform		1		1
Lg mammal		2		2
Med mammal	40	5	5	50
Sm. Mammal			1	1
Unidentifiable	1097	248	228	1573
Total	1187	263	243	1693
Total identifiable	50	7	9	66
% identifiable	4	3	4	4

c) Number of fragments belonging to partial skeletons and/or articulated remains

	Phase 1		Phase 2		Phase 3	
	n	MNI	n	MNI	n	MNI
Cattle					9	2
Sheep/goat	56	3			53	1
Dog			7	1	8	1
Roe deer	6	1				
Turdidae	4	1				
Total	66	5	7	1	70	4

\* includes fragments probably belonging to partial skeletons as listed in Table 1c

Table 2. Minimum number of individuals: a) cattle, b) sheep/goat, c) pig

a) cattle

	Left	Right	Total
<i>Phase 1</i>			
Mandible	2	2	4
Scapula	4	2	6
Humerus		2	2
Radius	1	1	2
Ulna	2	1	3
Pelvis	1	1	2
Femur	1		1
Tibia	3	2	5
Astragalus	4		4
Calcaneum	1	4	5
Metacarpal	3	5	8
Metatarsal	2	1	3
MNI	5		

	Left	Right	Total
<i>Phase 2</i>			
Mandible	3	2	5
Scapula	1	3	4
Humerus	3	4	7
Radius	4	5	9
Ulna	5		5
Pelvis	3	4	7
Femur	1	1	2
Tibia	2		2
Astragalus	2	6	8
Calcaneum	4	8	12
Metacarpal	4	4	8
Metatarsal	2	6	8
MNI	8		

	Left	Right	Total
<i>Phase 3</i>			
Mandible	2	2	4
Scapula	3	2	5
Humerus	2	2	4
Radius		4	4
Ulna		1	1
Pelvis	2	2	4
Femur			
Tibia	2	3	5
Astragalus	1	1	2
Calcaneum	3	2	5
Metacarpal	1	1	2
Metatarsal	4	3	7
MNI	4		

b) sheep/goat

	Left	Right	Total
<i>Phase 1</i>			
Mandible	5	3	8
Scapula	2	1	3
Humerus	2	5	7
Radius	1	7	8
Ulna	1	3	4
Pelvis	1	2	3
Femur	4	2	6
Tibia	2	6	8
Astragalus		1	1
Calcaneum		3	3
Metacarpal	2	1	3
Metatarsal	1	2	3
MNI	7		

	Left	Right	Total
<i>Phase 2</i>			
Mandible	3	5	8
Scapula	2	2	4
Humerus	2	4	6
Radius	6	2	8
Ulna			
Pelvis	5	2	7
Femur		2	2
Tibia	3	5	8
Astragalus	1	1	2
Calcaneum	1	1	2
Metacarpal	3	3	6
Metatarsal	5	2	7
MNI	6		

	Left	Right	Total
<i>Phase 3</i>			
Mandible	2	4	6
Scapula	1	1	2
Humerus	1	3	4
Radius	7	3	10
Ulna	1	1	2
Pelvis	2	3	5
Femur		2	2
Tibia	1	5	6
Astragalus		1	1
Calcaneum	1	3	4
Metacarpal	4	4	8
Metatarsal	2	1	3
MNI	7		

c) pig

	Left	Right	Total
<i>Phase 1</i>			
Mandible	2	1	3
Scapula	2	2	4
Humerus	3	2	5
Radius	4	4	8
Ulna	2	1	3
Pelvis		5	5
Femur	1	1	2
Tibia	2	2	4
Astragalus	1	2	3
Calcaneum	4	4	8
Metapodial		19	19
MNI	5		

	Left	Right	Total
<i>Phase 2</i>			
Mandible	3	3	6
Scapula	3	2	5
Humerus	3	4	7
Radius	2	5	7
Ulna	6	8	14
Pelvis	3	3	6
Femur	3	3	6
Tibia	3	7	10
Astragalus		1	1
Calcaneum	1	7	8
Metapodial		18	18
MNI	8		

	Left	Right	Total
<i>Phase 2</i>			
Mandible	2	5	7
Scapula	2	2	4
Humerus	4	1	5
Radius	1	1	2
Ulna	2		2
Pelvis	2	5	7
Femur		1	1
Tibia	3	2	5
Astragalus	1	1	2
Calcaneum	4		4
Metapodial		7	7
MNI	5		

a) Early Roman period (Phase 1)

	Horse	Cattle	Sheep/goat	Pig	Dog	Capreolus	Cervus	Lepus	Lg mammal	Med mammal
Horn core			2							
Premaxilla		1								
Zygomatic			2							
Occipital condyle			2	2						
Teeth		19	27	33						
Maxilla		2	4	4						
Mandible	1	7	9	5		2			1	
Scapula		6	4	5				1	3	
Humerus		4	13	6		1		1	11	2
Radius		3	16	9	1			1	5	
Ulna		3	6	7	1				1	
Pelvis		4	5	7					2	
Femur		3	14	5				1		6
Tibia		7	14	6					3	2
Carpal		1	2	1						
Astragalus		4	1	3						
Calcaneus		6	4	9						
Navicular cuboid		1								
Metacarpal		11	10			1				
Metatarsal		8	9				1			
Metapodial		4	3	25	2			2		
Lateral metapodial				12						
1st phalanx		9	10	9		2				
2nd phalanx		7	1	3		2				
3rd phalanx		3	4			1				
Rib									11	19
Cervical vertebra										3
Thoracic vertebra									1	1
Lumbar vertebra									1	1
Caudal vertebra										1
Skull frag				2						14
Tooth frag.		40	27	6					1	
Limb bone frag.									48	86
Rib frag.									96	89
Vertebra frag.									29	22
Total	1	153	189	159	4	9	1	6	334	246

Table 3 cont.

## b) Early Roman period (Phase 2)

	Horse	Cattle	Sheep/goat	Pig	Dog	Capreolus	Lepus	Lg mammal	Med mammal
Horn core		4	1						
Antler						2			
Premaxilla			1						
Occipital condyle				2					
Tooth	1	43	64	32					
Maxilla				8					
Mandible		18	16	17	7	2	2	3	
Atlas		2							
Axis								2	
Scapula	1	7	7	6		2		10	3
Humerus	1	12	9	11	3	1	2	9	7
Radius	1	18	18	13	8		2	1	
Ulna		6		14	6			1	
Pelvis		12	13	10				3	
Femur		3	5	9			1	1	3
Patella		1							
Tibia		7	20	17	3		3	9	8
Fibula				1					
Carpal		5						3	
Astragalus		9	2	1					
Calcaneus	1	19	2	10					1
Navicular cuboid		2							
Metacarpal		20	12			3			
Metatarsal		17	8			3		1	
Metapodial		4	3	25				4	
Lateral metapodial				9					
1st phalanx		34	8	11		1			
2nd phalanx		13	2	1					1
3rd phalanx		10		1					
Rib								16	6
Cervical vertebra								1	3
Thoracic vertebra									1
Lumbar vertebra								1	1
Sacrum			1						
Caudal vertebra								1	
Skull frag				5		1		3	3
Tooth frag.	1	24	22	5					
Limb bone frag.								54	96
Rib frag.								117	74
Vertebra frag.								31	20
Total	6	290	215	208	27	15	10	598	232

Table 3 cont.

## c) Mid-Roman period

	Horse	Cattle	Sheep/goat	Pig	Dog	Capreolus	Lepus	Lg mammal	Med mammal
Horn core		3							
Occipital condyle									1
Incisor		1		5					
Canine				8					
Upper premolar	1	1	2						
Upper molar	1	8	10	5					
Lower premolar		3	3	1					
Lower molar		7	16	4					
Maxilla			1	4					
Mandible		8	9	15	1	1		6	1
Atlas			1	1					
Axis								1	
Scapula		7	4	6				5	4
Humerus		7	6	8	4			13	
Radius	2	5	11	2	2			1	
Ulna		2	2	2					
Pelvis		9	7	10	1			2	
Femur		1	5	4				2	5
Patella		1							
Tibia	1	9	10	8	4			5	4
Fibula				1					
Carpal	1	1							
Astragalus		3	1	2					
Calcaneus		5	4	4			1		
Navicular cuboid		1							
Sesamoid								1	
Metacarpal		3	13						
Metatarsal		16	5			2			
Metapodial		4	1	7	5			1	
Lateral metapodial				10					
1st phalanx	1	12	8	2					
2nd phalanx		5	4	6					
3rd phalanx		3	2	1					
Rib			3					5	17
Cervical vertebra.								1	
Thoracic vertebra			1					1	6
Lumbar vertebra			5						4
Sacrum					1				
Skull frag				2				1	2
Tooth frag.	1	18	29	6					
Limb bone frag.								30	45
Rib frag.			5					67	46
Vertebra frag.			8					28	8
Total	8	143	176	124	18	3	1	432	143

Table 4. Anatomical representation of birds (NISP)

a) Early Roman period (Phase 1)

	Galliform	Scolopax rusticola	Anas/Aythya spp.	Anas platyrhynchos	Turdidae spp.	Corvidae spp.	Total
Furcula	2						2
Sternum	2						2
Coracoid	4						4
Scapula	3						3
Humerus	2		1	1	1		5
Radius				1			1
Ulna	2			1		1	4
Femur	2						2
Carpometacarpus	2			1			3
Tarsometatarsus	2	1			1	1	5
Tibiotarsus	2				2		4
Total	23	1	1	4	4	2	35

b) Early Roman period (Phase 2)

	Galliform	Scolopax rusticola	Anas/Aythya spp.	Anas platyrhynchos	Corvus corax	Columba spp.
Sternum			1			
Coracoid		1				
Scapula			1			
Humerus	2					
Ulna	4	1	1			1
Pelvis			1			
Femur	4				2	
Carpometacarpus	2					
Tibiotarsus	1	1		1		
Tarsometatarsus	1				1	
Total	14	3	4	1	3	1

c) Mid-Roman period

	Galliform	Scolopax rusticola	Anas/Aythya spp.
Sternum	1		
Coracoid	1		
Scapula	1		
Humerus	2		1
Carpometacarpus		1	
Tarsometatarsus	3	2	
Total	8	3	1

Table 5. Estimated age according to tooth eruption and wear (after Levine, 1982; Legge, 1991; Payne, 1973, O' Connor 1988)

a) Phase 1

	P4	M1	M2	M3	Estimated age
Cattle	(j)				6-26 months
Cattle				?f	26-36 months
Sheep	(b)				2 - 6 months
Sheep	(j)	f	d		12 - 24 months
Sheep/goat		f	d		12 - 24 months
Sheep/goat				c	2 - 3 years
Sheep/goat	g	g	f	e	3 - 4 years
Sheep/goat	h	g	f	e	3 - 4 years
Sheep/goat			m	j	over 8 years
Sheep/goat		l			over 8 years
Pig				V	Immature
Pig	(d)				Immature
Pig				a	Adult
Pig	d	g	e		Adult
Pig		k	f	d	Adult

b) Phase 2

	P3	P4	M1	M2	M3	Estimated age
Horse			10.4mm			over 18 years
Cattle		(k)	g	f		15-26 months
Cattle					a	15-36 months
Cattle					b	26-36 months
Cattle					g	over 26 months
Cattle					k	6 - 8 years
Cattle		h	>p	n	m	over 8 years
Sheep		(d)				2 - 6 months
Sheep		(g)	d			6 - 12 months
Sheep		(h)				6 - 12 months
Sheep/goat					a	2 - 3 years
Sheep/goat					a	2 - 3 years
Sheep/goat					b	2 - 3 years
Sheep/goat					c	2 - 3 years
Sheep/goat					c	2 - 3 years
Sheep/goat					c	2 - 3 years
Sheep/goat					e	3 - 4 years
Sheep/goat					e	3 - 4 years
Sheep/goat				f	e	3 - 4 years
Sheep/goat				f	f	3 - 4 years
Sheep/goat		f	g			4 - 6 years
Sheep/goat					g	4 - 8 years
Sheep/goat		g	g	j		over 6 years
Pig			a	E		Immature
Pig					a	Subadult
Pig			g	d		Adult
Pig				b		Adult
Pig				e	c	Adult
Pig					c	Adult
Pig				g	c	Adult

c) Phase 3

	P3	P4	M1	M2	M3	Estimated age
Horse		60.5mm				6-7.75 years
Cattle					a	15 - 36 months
Cattle					e	26 - 36 months
Cattle			l	k	g	3 - 6 years
Cattle					k	6 - 8 years
Cattle					k	6 - 8 years
Cattle				l	k	6 - 8 years
Sheep		(g)	d			12 - 24 months
Sheep		(l)				12 - 24 months
Sheep/goat					e	3 - 4 years
Sheep/goat					e	3 - 4 years
Sheep/goat		f	g	f	e	3 - 4 years
Sheep/goat			g	f		2 - 4 years
Sheep/goat		f	g	g	g	4 - 6 years
Sheep/goat					g	4 - 6 years
Sheep/goat					g	4 - 6 years
Sheep/goat		j	m	l	l	over 10 years
Pig				e	b	Adult
Pig				e		Adult
Pig					c	Adult
Pig				j	d	Adult



Table 6. Epiphyseal fusion data: Phase 1

a) Cattle

		Fused	Unfused	% unfused
7-10 months	Scapula	3		
	Pelvis			
<b>Subtotal&lt;1yr</b>		<b>3</b>		<b>0</b>
12-15 months	Radius,p	2		
15-18 months	Phalanx II	7		
15-20 months	Humerus,d	1		
20-24 months	Phalanx I	5	2	
<b>Subtotal&lt;2yrs</b>		<b>15</b>	<b>2</b>	<b>12</b>
24-30 months	Tibia,d	3	1	
	Metacarpal	3		
	Metatarsal	1		
<b>Subtotal&lt;3yrs</b>		<b>7</b>	<b>1</b>	<b>13</b>
36 months	Calcaneus			
36-42 months	Femur,p	1	2	
42-48 months	Humerus,p			
	Radius,d	1		
	Ulna,p			
	Femur,d			
	Tibia,p			
<b>Subtotal&lt;4yrs</b>		<b>2</b>	<b>2</b>	<b>50</b>

b) Sheep/goat

		Fused	Unfused	% unfused
3-4 months	Humerus,d	5	3	
	Radius,p	5	1	
5 months	Scapula	1	1	
	Pelvis		1	
5-7 months	Phalanx II	1		
7-10 months	Phalanx I	6	2	
<b>Subtotal&lt;1yr</b>		<b>18</b>	<b>8</b>	<b>31</b>
15-20 months	Tibia,d	5		
20-24 months	Metacarpal	2	1	
	Metatarsal	1	1	
<b>Subtotal&lt;2yrs</b>		<b>8</b>	<b>2</b>	<b>20</b>
36 months	Calcaneus	2	2	
<b>Subtotal&lt;3yrs</b>		<b>2</b>	<b>2</b>	<b>50</b>
36-42 months	Femur,p	2	4	
42 months	Humerus,p	1		
	Radius,d	2	3	
	Ulna,p			
	Femur,d	3	5	
	Tibia,p			
<b>Subtotal&lt;3.5yrs</b>		<b>8</b>	<b>12</b>	<b>60</b>

c) Pig

		Fused	Unfused	% unfused
12 months	Scapula	4		
	Humerus,d	1		
	Radius,p	7	1	
	Pelvis	1		
	Phalanx II	3		
<b>Subtotal&lt;1yr</b>		<b>16</b>	<b>1</b>	<b>6</b>
24 months	Tibia,d		2	
	Metapodial		13	
	Phalanx I	3	6	
<b>Subtotal&lt;2yrs</b>		<b>3</b>	<b>21</b>	<b>88</b>
24-30 months	Calcaneus		3	
<b>Subtotal&lt;3yrs</b>			<b>3</b>	<b>100</b>
36-42 months	Ulna,p		1	
	Femur,p		2	
42 months	Humerus,p			
	Radius,d			
	Femur,d			
	Tibia,p		1	
<b>Subtotal&lt;3.5yrs</b>			<b>4</b>	<b>100</b>

Table 7. Epiphyseal fusion data: Phase 2

a) Cattle

		Fused	Unfused	% unfused
7-10 months	Scapula	3		
	Pelvis	1		
<b>Subtotal&lt;1yr</b>		<b>4</b>		<b>0</b>
12-15 months	Radius,p	11		
15-18 months	Phalanx II	11		
15-20 months	Humerus,d	7		
20-24 months	Phalanx I	23	1	
<b>Subtotal&lt;2yrs</b>		<b>52</b>	<b>1</b>	<b>2</b>
24-30 months	Tibia,d	3		
	Metacarpal	5	1	
	Metatarsal	4	2	
<b>Subtotal&lt;3yrs</b>		<b>12</b>	<b>3</b>	<b>20</b>
36 months	Calcaneus	7		
36-42 months	Femur,p		1	
42-48 months	Humerus,p			
	Radius,d	4		
	Ulna,p	2		
	Femur,d			
	Tibia,p	2		
<b>Subtotal&lt;4yrs</b>		<b>15</b>	<b>1</b>	<b>6</b>

b) Sheep/goat

		Fused	Unfused	% unfused
3-4 months	Humerus,d	1	2	
	Radius,p	4		
5 months	Scapula			
	Pelvis	5		
5-7 months	Phalanx II	2		
7-10 months	Phalanx I	5	1	
<b>Subtotal&lt;1yr</b>		<b>17</b>	<b>3</b>	<b>15</b>
15-20 months	Tibia,d	4	2	
20-24 months	Metacarpal		1	
	Metatarsal			
<b>Subtotal&lt;2yrs</b>		<b>4</b>	<b>3</b>	<b>43</b>
36 months	Calcaneus		1	
<b>Subtotal&lt;3yrs</b>			<b>1</b>	<b>100</b>
36-42 months	Femur,p			
42 months	Humerus,p		1	
	Radius,d	1		
	Ulna,p			
	Femur,d		2	
	Tibia,p	1	1	
<b>Subtotal&lt;3.5yrs</b>		<b>2</b>	<b>4</b>	<b>67</b>

c) Pig

		Fused	Unfused	% unfused
12 months	Scapula	2	1	
	Humerus,d	2	1	
	Radius,p	6		
	Pelvis	3		
	Phalanx II	1		
<b>Subtotal&lt;1yr</b>		<b>14</b>	<b>2</b>	<b>13</b>
24 months	Tibia,d		7	
	Metapodial	2	12	
	Phalanx I	2	8	
<b>Subtotal&lt;2yrs</b>		<b>4</b>	<b>27</b>	<b>87</b>
24-30 months	Calcaneus		5	
<b>Subtotal&lt;3yrs</b>		<b>0</b>	<b>5</b>	<b>100</b>
36-42 months	Ulna,p		2	
	Femur,p			
42 months	Humerus,p		3	
	Radius,d			
	Femur,d		2	
	Tibia,p		1	
<b>Subtotal&lt;3.5yrs</b>			<b>8</b>	<b>100</b>

Table 86. Epiphyseal fusion data: Phase 3

a) Cattle

		Fused	Unfused	% unfused
7-10 months	Scapula	3		
	Pelvis	1		
<b>Subtotal&lt;1yr</b>		<b>4</b>		<b>0</b>
12-15 months	Radius,p	4		
15-18 months	Phalanx II	4		
15-20 months	Humerus,d	3		
20-24 months	Phalanx I	10		
<b>Subtotal&lt;2yrs</b>		<b>21</b>		<b>0</b>
24-30 months	Tibia,d	7		
	Metacarpal	1		
	Metatarsal	6	2	
<b>Subtotal&lt;3yrs</b>		<b>14</b>	<b>2</b>	<b>13</b>
36 months	Calcaneus	1		
36-42 months	Femur,p			
42-48 months	Humerus,p			
	Radius,d			
	Ulna,p			
	Femur,d			
	Tibia,p			
<b>Subtotal&lt;4yrs</b>		<b>1</b>		<b>0</b>

b) sheep/goat

		Fused	Unfused	% unfused
3-4 months	Humerus,d	1		
	Radius,p	3		
5 months	Scapula			
	Pelvis	1	1	
5-7 months	Phalanx II	1	3	
7-10 months	Phalanx I	1	6	
<b>Subtotal&lt;1yr</b>		<b>7</b>	<b>10</b>	<b>59</b>
15-20 months	Tibia,d	1	1	
20-24 months	Metacarpal	1	3	
	Metatarsal		2	
<b>Subtotal&lt;2yrs</b>		<b>2</b>	<b>6</b>	<b>75</b>
36 months	Calcaneus	2	2	
<b>Subtotal&lt;3yrs</b>		<b>2</b>	<b>2</b>	<b>50</b>
36-42 months	Femur,p			
42 months	Humerus,p			
	Radius,d	1	3	
	Ulna,p		1	
	Femur,d		1	
	Tibia,p		2	
<b>Subtotal&lt;3.5yrs</b>		<b>1</b>	<b>7</b>	<b>88</b>

c) Pig

		Fused	Unfused	% unfused
12 months	Scapula			
	Humerus,d	1		
	Radius,p	1		
	Pelvis	4	1	
	Phalanx II	2	1	
<b>Subtotal&lt;1yr</b>		<b>8</b>	<b>2</b>	<b>20</b>
24 months	Tibia,d		2	
	Metapodial		2	
	Phalanx I	1	1	
<b>Subtotal&lt;2yrs</b>		<b>1</b>	<b>5</b>	<b>83</b>
24-30 months	Calcaneus		3	
<b>Subtotal&lt;3yrs</b>			<b>3</b>	<b>100</b>
36-42 months	Ulna,p			
	Femur,p			
42 months	Humerus,p			
	Radius,d		1	
	Femur,d			
	Tibia,p			
<b>Subtotal&lt;3.5yrs</b>			<b>1</b>	<b>100</b>

Table 9. Incidence of gnawing, butchery and burning (NISP & %)

a) gnawing

	Phase 1		Phase 2		Phase 3	
	n	%	n	%	n	%
Cattle	5	3	8	3	6	4
Sheep/goat	1	1	2	1	3	3
Pig			8	4	3	2
Lg mammal	1	<1	2	<1	4	1
Med mammal			1	<1		
Total	7	<1	21	1	16	1

b) butchery

	Phase 1				Phase 2					Phase 3			
	Chop	Cut	Total		Chop	Chop/cut	Cut	Total		Chop	Cut	Total	
	n	n	n	%	n	n	n	n	%	n	n	n	%
Cattle	2		2	1	8	1	8	17	6	1	3	4	3
Sheep/goat		2	2	1			3	3	1	1	1	2	2
Pig	3		3	2	1	1	3	5	2	2	1	3	2
Capreolus capreolus				<1			1	1	7				
Cervus elaphus		1	1	100									
Lg mammal	1	10	11	3	4		12	16	3	1	5	6	1
Med mammal		5	5	2	2		3	5	2		1	1	1
Total	6	18	26	1	15	2	30	47	1	5	11	16	1

c) burning

	Phase 1						Phase 2				Phase 3			
	Calcined	Charred	Charred	Part	Total		Calcined	Charred	Total		Calcined	Charred	Total	
	n	n	n	n	n	%	n	n	n	%	n	n	n	%
Sheep/goat	25	7		1	33	18								
Lg mammal	3				3	1								
Med mammal	45	4			49	20	2		2	1	1	4	5	3
Sm. Mammal											1		1	25
Total	73	11		1	85	7	2		2	<1	2	4	6	<1

Table 10a. Provenance of all animal bone according to feature type (NISP)

	Phase			Total
	1	2	3	
Pit	1095	5	125	1225
Post hole	35	31	162	228
Well			1	1
Occupation layer/deposit	337	344	110	791
Floor	249	697	19	965
Hearth	10	107		117
Beam slot	220			220
Gully			12	12
Misc. layers/spreads/deposit	1533	2110	1136	4779
Other	104	319	663	1086
Total	3583	3613	2228	9424

Table 10b. Provenance of major domesticates(%)

i) Phase 1

	Cattle	Sheep/goat	Pig	Total
Pit	1	32	3	30
Post hole	1		2	<1
Occupation layer/deposit	12	10	8	10
Floor	12	5	8	<1
Layer/spread/misc deposit	55	46	65	60
Beam slot	11	5	11	<1
Other	7	2	3	<1
Uncertain	1	1	1	<1
Total	100	100	100	100

ii) Phase 2

	Cattle	Sheep/goat	Pig	Total
Pit	1			<1
Post hole	1	<1	1	1
Occupation layer/deposit	12	13	13	13
Floor	27	29	30	28
Hearth	1	<1	3	1
Layer/spread/misc deposit	50	48	46	48
Other	8	8	8	8
Uncertain	1			<1
Total	100	100	100	100

iii) Phase 3

	Cattle	Sheep/goat	Pig	Total
Pit	1	33		14
Post hole	3		4	2
Well	1			<1
Occupation layer/deposit	10	1		4
Floor	1	1	1	1
Layer/spread/misc deposit	62	39	73	56
Robber trench	6	5	2	5
Other	13	19	17	17
Uncertain	3	2	3	3
Total	100	100	100	100

Table 11. Representation of major domesticates according to Object Group (%)

a) Phase 1

	Object						Total
	50010	50017	50030	50033	50034	50043	
	n=73	n=166	n=74	n=7	n=30	n=151	
Cattle	19	42	20	57	27	28	31
Sheep/goat	60	32	27		40	40	38
Pig	21	26	53	43	33	32	32

b) Phase 2

	Object			Total
	50018	50019	50037	
	n=184	n=88	n=441	
Cattle	39	50	39	41
Sheep/goat	30	27	31	30
Pig	30	23	30	29

Table 12. Relative representation of minor taxa according to Object (NISP)

a) Phase 1

	Object				Total
	50010	50017	50030	50043	
Horse	1				1
Dog			4		4
<i>Capreolus capreolus</i>	1	7	1		9
<i>Cervus elaphus</i>		1			1
<i>Lepus europaeus</i>		1	2	3	6
<i>Anas platyrhynchos</i>			4		4
<i>Anas/Aythya spp.</i>				1	1
Galliform		14	7	2	23
<i>Scolopax rusticola</i>		1			1
Corvidae spp.		1	1		2
Turdidae spp.		4			4
Fish			1		1
Total	2	29	20	6	57
%	4	51	35	11	100

b) Phase 2

	Object			Total
	50018	50019	50037	
Horse	2	2	2	6
Dog	3		24	27
<i>Capreolus capreolus</i>	4	3	8	15
<i>Lepus europaeus</i>	1		9	10
<i>Anas platyrhynchos</i>	1			1
<i>Anas/Aythya spp.</i>			4	4
Galliform	1	5	8	14
<i>Scolopax rusticola</i>	2	1		3
<i>Columba spp.</i>			1	1
<i>Corvus corax</i>			2	2
Total	14	11	58	83
%	17	13	70	100

Figure 1. Phase 1: p

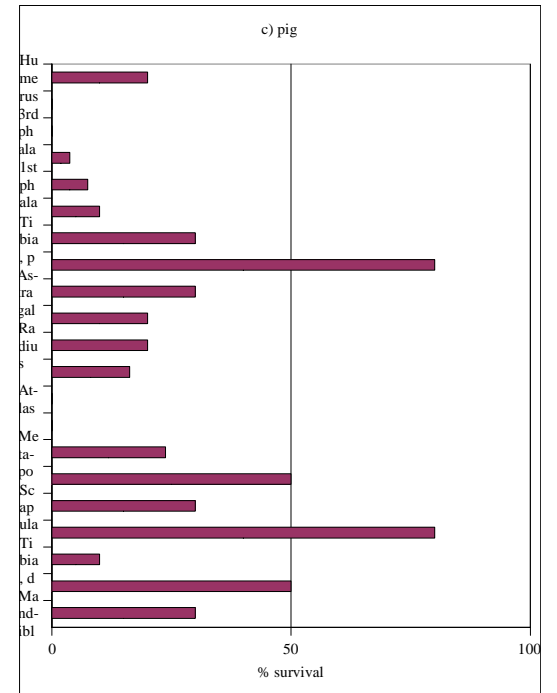
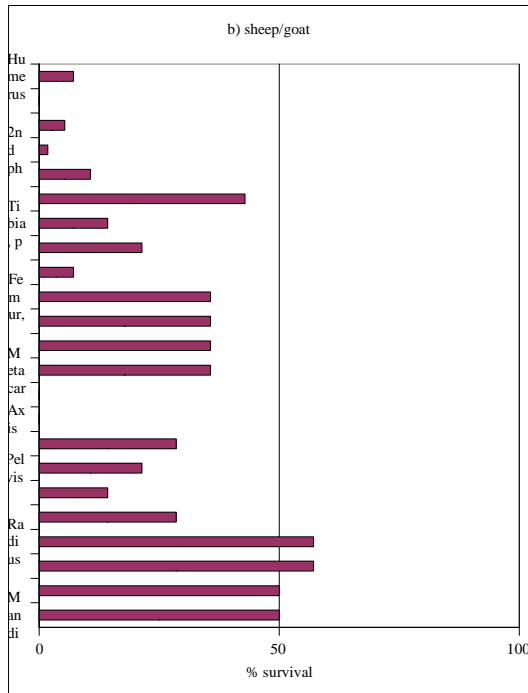
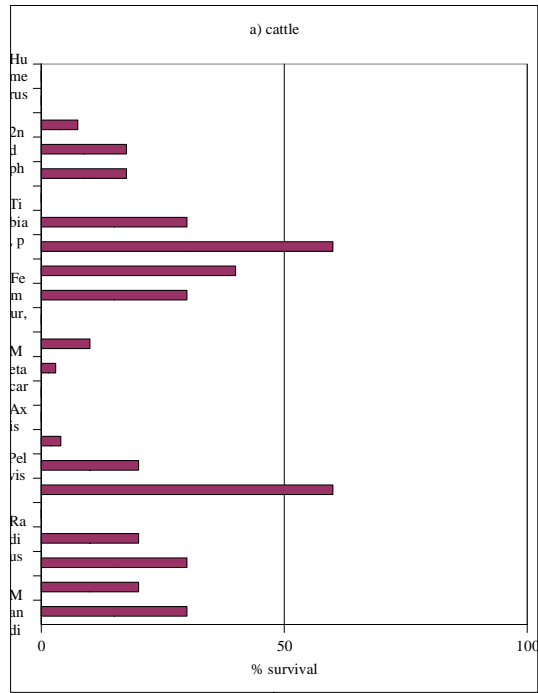
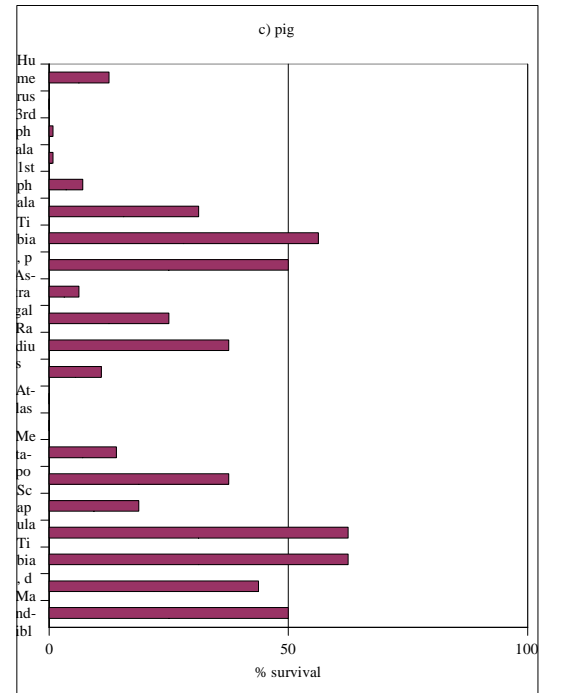
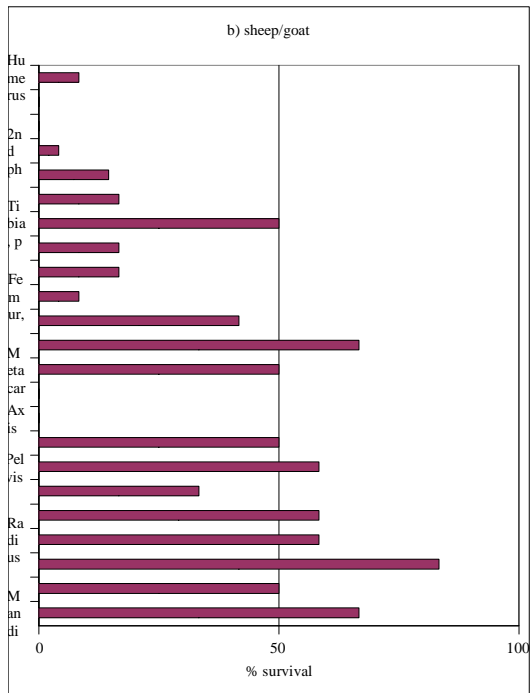
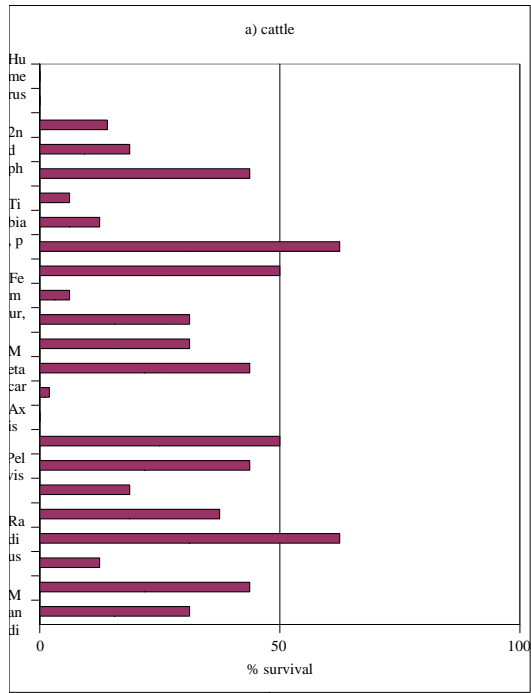
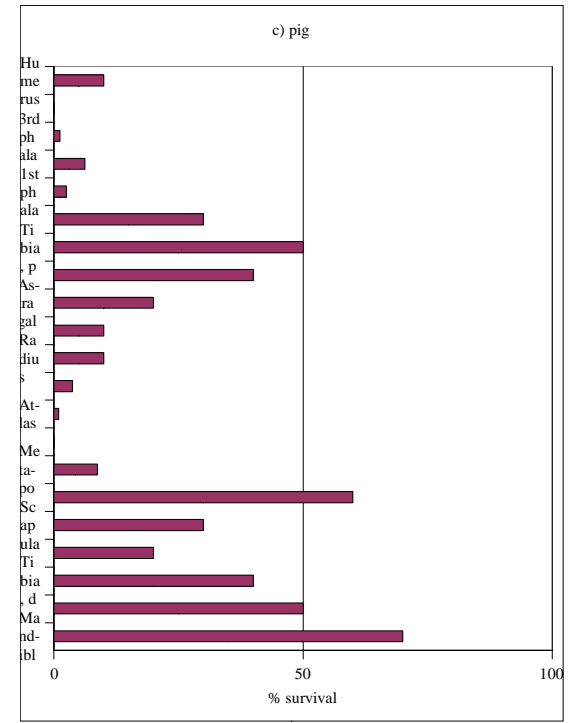
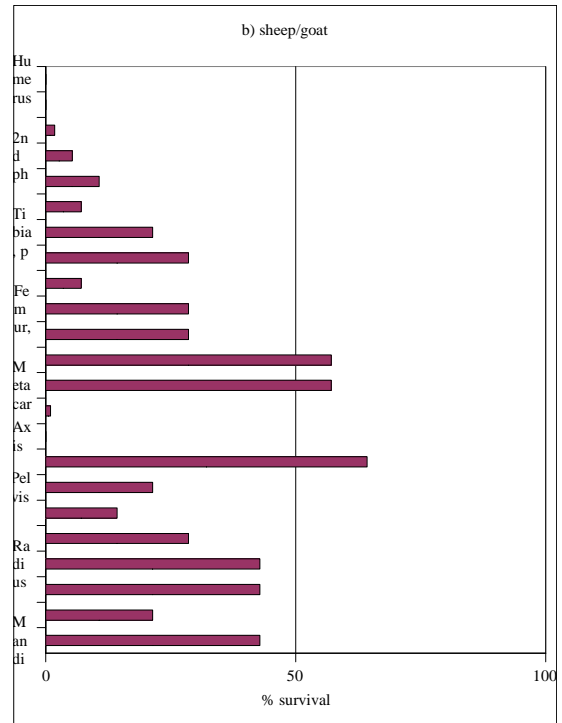
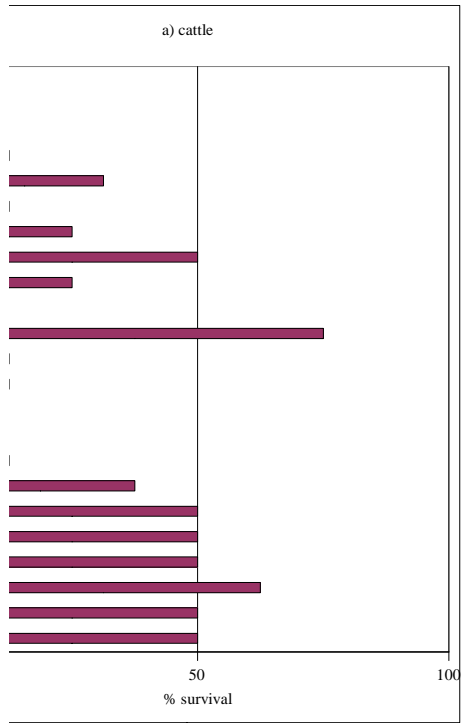




Figure 2. Phase 2: percentage survival (elements arranged according to Brain, 1969)



hase 3: percentage survival (elements arranged according to Brain, 1969)



Appendix 1a. Metrical data for mammals

Phase	Taxa	Element	Measurement type						
			<i>GL</i>	<i>Max</i>	<i>Min</i>				
3	Cattle	Horn core							
3	Cattle	Horn core	123	50.5	34.3				
				40.7	28				
			<i>GL</i>						
3	Pig	Lower M3	31.2						
3	Pig	Upper M3	29.5						
			<i>GLP</i>	<i>BG</i>	<i>LG</i>	<i>SLC</i>			
1	Cattle	Scapula			41.7	43.5			
1	Cattle	Scapula				46.6			
1	Cattle	Scapula	64.1	43.4	53.3	46.9			
2	Cattle	Scapula	72.2	52	62.8	55.5			
1	Pig	Scapula	35.5		33				
1	Pig	Scapula	34.6		32.9	21.6			
1	Pig	Scapula				25.6			
2	Pig	Scapula	35.6						
3	Pig	Scapula				24.5			
2	Capreolus capreolus	Scapula	25.4	19.4	21	16.7			
2	Capreolus capreolus	Scapula	29	20.5	22.5				
			<i>Bd</i>	<i>BT</i>	<i>HT</i>	<i>Htc</i>			
2	Horse	Humerus	92	82.4	47.5	37.9			
1	Sheep/goat	Humerus	24.2		14.8	11			
1	Sheep/goat	Humerus	28.3	26.3		12.5			
3	Pig	Humerus	38.8		30.4	23			
3	Dog	Humerus	20.5	14.6	9.9	8.3			
3	Dog	Humerus		13.1					
3	Dog	Humerus			14	9.7			
3	Dog	Humerus	17.4	13.8	10	16.6			
2	Capreolus capreolus	Humerus	26.1		18.7	13.5			
			<i>Bp</i>	<i>Bfp</i>	<i>SD</i>	<i>Bd</i>	<i>Bfd</i>		
2	Horse	Radius				65.5	49.8		
2	Cattle	Radius	e82.8	77.8	43.9				
2	Cattle	Radius	e68.2	63.6					
2	Cattle	Radius					48.8		
2	Cattle	Radius				70.5	49.2		
2	Sheep/goat	Radius	30.9	27.9					
2	Sheep/goat	Radius				28.6	24.5		
3	Sheep	Radius	28.6	26.3					
3	Sheep/goat	Radius				26.3	22		
3	Sheep/goat	Radius			13				
1	Pig	Radius	28.7						
1	Pig	Radius	26.4						
1	Pig	Radius	34						
1	Pig	Radius	30.5						
1	Pig	Radius	25.7						
1	Pig	Radius			14.8				
2	Pig	Radius	28.8						
2	Pig	Radius	29.3						
1	Dog	Radius	13.5						
1	Lepus europaeus	Radius				9.9			
2	Lepus europaeus	Radius	8.5						
			<i>LA</i>						
2	Cattle	Pelvis	58.3						
2	Sheep/goat	Pelvis	22.6						
2	Sheep/goat	Pelvis	24.5						
2	Pig	Pelvis	33.5						
3	Pig	Pelvis	39.6						
3	Pig	Pelvis	34.6						
			<i>SD</i>						
1	Sheep/goat	Femur	12.9						
			<i>SD</i>	<i>Bd</i>	<i>Dd</i>				
3	Horse	Tibia		60.4	35.8				
1	Cattle	Tibia		64.1	47.8				
1	Cattle	Tibia		52.6					
3	Cattle	Tibia		49.7					
1	Sheep	Tibia		26.4	20.3				
1	Sheep	Tibia	13	24	19.6				

1	Sheep	Tibia		21.8	16.8					
3	Sheep	Tibia		23.2						
2	Sheep/goat	Tibia		23.2	18					
2	Dog	Tibia		12.6	11.1					
3	Dog	Tibia	9.4							
3	Dog	Tibia	8.6							
3	Dog	Tibia	8.3							
			<i>GI</i>	<i>GLM</i>						
1	Cattle	Astragalus	57.4	53.9						
1	Cattle	Astragalus		69.3						
1	Cattle	Astragalus		54						
2	Cattle	Astragalus	65.2							
2	Cattle	Astragalus	68.8	62.1e						
2	Cattle	Astragalus		59.6						
2	Cattle	Astragalus		57.5						
2	Cattle	Astragalus	e70							
1	Sheep/goat	Astragalus	24.9	24.4						
2	Sheep	Astragalus	24.7	23.8						
3	Sheep	Astragalus	25	24.1						
1	Pig	Astragalus	40.4	38						
1	Pig	Astragalus	37							
3	Pig	Astragalus		38.3						
3	Pig	Astragalus		36.9						
			<i>GL</i>							
1	Sheep	Calcaneus	48							
1	Pig	Calcaneus	39.2							
3	Lepus europaeus	Calcaneus	31.9							
			<i>GL</i>	<i>Bp</i>	<i>Dp</i>	<i>SD</i>	<i>Bd</i>	<i>B@f</i>	<i>b</i>	<i>a</i>
1	Cattle	Metacarpal		46.9	29.2					
1	Cattle	Metacarpal		48	30					
1	Cattle	Metacarpal		64.9	39.7					
1	Cattle	Metacarpal		e55.6	31.3					
1	Cattle	Metacarpal		50.2	31.1					
1	Cattle	Metacarpal					56.9	54.3		
2	Cattle	Metacarpal					59.2	52		
2	Cattle	Metacarpal					43.6	42		
2	Cattle	Metacarpal					56.9	51.7		
2	Cattle	Metacarpal		50.9	32.3					
2	Cattle	Metacarpal		49.9	29.6					
2	Cattle	Metacarpal		54.8	32.9					
2	Cattle	Metacarpal					51	48.4		
2	Cattle	Metacarpal					59.7	e54		
3	Cattle	Metacarpal					55	50.3		
3	Cattle	Metacarpal		51.7	32.8					
1	Sheep	Metacarpal	123.2	20	14.5	11.3	21.5	20.7	13.6	9.2
2	Sheep/goat	Metacarpal		17.2	13.1					
2	Sheep/goat	Metacarpal		18.8	13.3					
2	Sheep/goat	Metacarpal		22	15.9					
2	Sheep/goat	Metacarpal		25.4	17.7					
3	Sheep/goat	Metacarpal				14.7				
3	Sheep/goat	Metacarpal					22.6	22.5		
3	Sheep/goat	Metacarpal				12.4				
3	Sheep/goat	Metacarpal		19.6	14.7					
1	Capreolus capreolus	Metacarpal				12.2	21.1	19.4		
1	Cattle	Metatarsal					44.1	39.8		
1	Cattle	Metatarsal		45.7	46.5					
1	Cattle	Metatarsal		42.6	41.7					
2	Cattle	Metatarsal		38.5e	37.2e					
2	Cattle	Metatarsal					e56.5	51.5		
2	Cattle	Metatarsal					52.5	50		
3	Cattle	Metatarsal					60.2	54.4		
3	Cattle	Metatarsal					59.5	54.2		
3	Cattle	Metatarsal					57.3	51		
1	Sheep	Metatarsal	130.8	18	18	9.5	20.4	19.5	13.6	8.7
2	Sheep/goat	Metatarsal				11				
2	Sheep/goat	Metatarsal				11.4				
2	Sheep/goat	Metatarsal				11.2				
2	Sheep/goat	Metatarsal		18.9	19.2					
3	Sheep/goat	Metatarsal				10.1				
1	Cervus elaphus	Metatarsal				23.3				

Appendix 1b. Metrical data for galliformes

Phase	Taxa	Element	Measurement type				
			<i>GL</i>	<i>Dic</i>			
			<i>GL</i>	<i>Dic</i>			
3	Galliform	Scapula	66.4	11.7			
			<i>GL</i>	<i>Bp</i>	<i>SC</i>	<i>Bd</i>	
2	Galliform	Humerus	72	19.9	7		
			<i>GL</i>	<i>Bp</i>	<i>Dip</i>	<i>SC</i>	<i>Did</i>
1	Galliform	Ulna	56.4	8.1	11.1	3.7	7.4
1	Galliform	Ulna					8.8
2	Galliform	Ulna		10.1			
			<i>GL</i>	<i>L</i>	<i>Bp</i>	<i>Did</i>	
1	Galliform	Carpometacarpus	33.2	30.6	10.8	6.4	
1	Galliform	Carpometacarpus	37.4				
2	Galliform	Carpometacarpus			7.9		
2	Galliform	Carpometacarpus				6.9	
			<i>Bp</i>	<i>Dp</i>	<i>SC</i>	<i>Bd</i>	<i>Dd</i>
1	Galliform	Femur	13.2	8.3			
1	Galliform	Femur				14.3	14.1
2	Galliform	Femur	13.6	10			
2	Galliform	Femur				13.6	11.8
2	Galliform	Femur			5.6		
2	Galliform	Femur	14.1	10.4			
			<i>SC</i>	<i>Dd</i>			
1	Galliform	Tibiotarsus		10.5			
1	Galliform	Tibiotarsus		9.6			
2	Galliform	Tibiotarsus	5.2				
			<i>GL</i>	<i>Bp</i>	<i>SC</i>	<i>Bd</i>	<i>Spur</i>
1	Galliform	Tarsometatarsus		11			
2	Galliform	Tarsometatarsus			5.5	10.5	
3	Galliform	Tarsometatarsus				11.6	
3	Galliform	Tarsometatarsus		11.5	6.2		16.4
3	Galliform	Tarsometatarsus	69.9	12.3	6.1	11.8	