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Animal Remains from Temples in Roman Britain

By ANTHONY KING

Until the 1980s, scientific study of animal remains from Roman temples in Britain was rare, mainly because the majority had been excavated in the nineteenth and early twentieth centuries, before the importance of ritual zoological material had been recognised. In recent years, however, several temple excavations have yielded significant assemblages of bones, which have been the subject of detailed analysis (FIG. 1; Table 1). These are the focus of this paper, which aims to pick out the major characteristics of the assemblages and to draw some general conclusions about the nature of the ritual activity that led to their deposition. All except four groups of bones come from Romano-Celtic temples in southern Britain. The exceptions are from the two mithraea at Carrawburgh and London and possible shrines for eastern cults at Verulamium and Rocester, which have markedly different characteristics from the Romano-Celtic temples and are considered separately below.

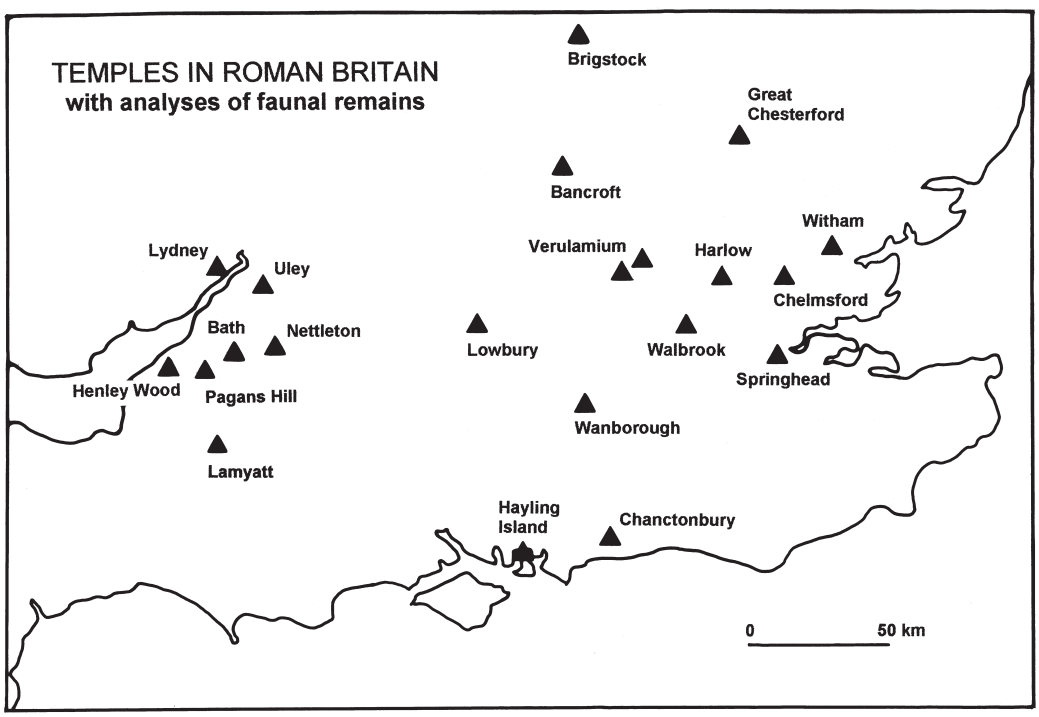

FIG. 1. Map showing temple sites in southern Britain with animal bone assemblages.

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TABLE 1. TEMPLE BONE ASSEMBLAGES:
PERCENTAGES OF MAIN MAMMAL SPECIES AND DOMESTIC FOWL

(B = Bos (domestic ox), O/C = Ovis/Capra (sheep/goat), S = Sus (pig), E = Equus (horse), Can = Canis (dog), G = Gallus (chicken))

Site	Phase/Area	Date (cent.)	Number (B+O/C+S)	B%	O/C %	S%	E/n %	Can/n %	G/n %
Bancroft	mausoleum & shrine	m-l 2, m-l 4	61	37.7	52.5	9.8	8.2	4.9	n/a
Bath	5, courtyard area	4-6	4028	51.9	29.1	19.0	0.4	1.5	n/a
Brigstock		l 3-4	136	33.8	58.1	8.1	0.0	0.0	10.3
Carrawburgh	mithraeum	3-4	52	5.8	32.7	61.5	0.0	0.0	n/a
Chanctonbury	temple 2	m 2-3	4925	0.3	0.7	99.0	0.02	0.0	n/a
	ditch	m 2-3	515	59.2	39.0	1.8	0.0	0.0	0.0
Chelmsford	6	2	730	17.3	69.6	13.2	0.0	1.1	0.0
	7, R-C temple	l 3-4	201	61.2	28.4	10.5	3.0	2.5	0.0
Folly Lane	2, mausoleum	LIA	66	30.3	51.5	18.2	0.0	1.5	19.7
	5-6, R-C temple	l 2-3	241	42.3	39.0	18.7	9.5	5.0	2.9
	encl.	m 1-3	141	48.9	44.7	6.4	34.0	7.8	4.3
	pit AET	l 2-3	2369	97.4	1.8	0.8	0.4	3.2	0.0
	shafts	l 1-3	192	43.8	40.6	15.6	51.0	7.3	7.3
Gt Chesterford	pit in enclosure	l 1-4	2944	0.03	99.8	0.2	0.0	0.0	0.2
Harlow	1, LIA	m 1 B.C.-m 1	1987	2.8	89.4	7.8	0.2	0.7	n/a
	2, R-C temple ph. 1	l 1-2	668	3.6	84.3	12.1	0.5	1.2	n/a
	3, R-C temple ph. 2	3-m 4	206	3.4	83.0	13.6	0.5	0.5	n/a
Hayling Island	2, LIA temple	1 B.C.-m 1	2444	2.0	57.6	40.4	1.9	0.04	n/a
	4, R-C temple	l 1-2	4939	1.1	55.0	43.9	0.2	0.0	n/a
Henley Wood		3-4	208	14.4	66.4	19.2	1.0	0.5	1.4
Lowbury		2-4	567	21.9	59.6	18.5	1.1	0.5	1.1
Nettleton		3-4	470	38.3	56.0	5.7	1.7	0.0	n/a
Rocester		l 1-e 2	202	63.9	22.3	13.9	0.5	1.0	1.5
Uley	1	2-1 B.C.	785	27.6	70.6	1.8	1.5	1.4	1.0
	2	e 1	3070	24.3	73.7	2.1	1.5	0.6	0.3
	3	l 1	3628	15.6	81.3	3.1	0.2	1.7	1.1
	4, R-C temple	2-3	7762	10.0	87.6	2.5	0.1	0.6	7.8
	5, R-C temple	e-m 4	28423	4.1	94.3	1.6	0.02	0.8	3.1
Wanborough	2, pre-temple	m 2	112	17.0	54.5	28.6	0.0	0.9	0.0
Walbrook	all areas	3-4	184	53.3	15.2	31.5	0.0	0.0	104.3
	mithraeum	3	21	19.0	28.6	52.4	0.0	0.0	542.9
	mithraeum?	4	32	31.3	15.6	53.1	0.0	0.0	115.6
Witham	2	LIA	246	68.3	12.2	19.5	4.5	0.4	0.0
	2.3	m-l 1	1275	57.3	34.3	8.4	7.0	0.1	0.3
	3	2-m 3	1102	88.5	9.1	2.5	4.6	0.9	0.1
	4, R-C temple?	l 3	50	48.0	40.0	12.0	2.0	0.0	0.0
	5	e 4	286	86.4	8.4	5.2	10.5	0.0	1.0
	6, Christian?	m 4	1107	77.4	15.3	7.3	11.2	0.0	0.5
	7	l 4-e 5	2326	79.4	11.3	9.4	17.1	0.9	0.7
	4-7 total	m 3-5	11552	78.5	14.0	7.5	14.1	1.6	0.3

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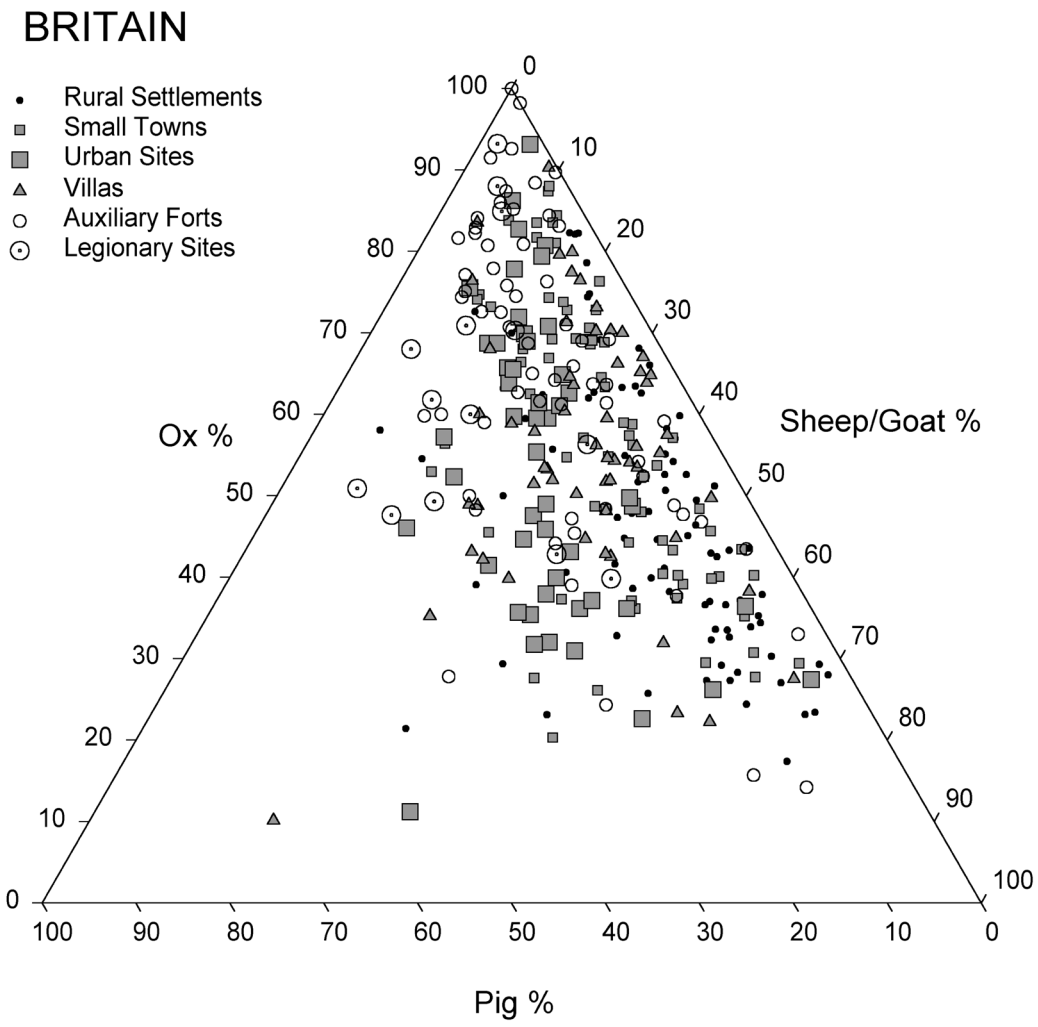

FIG. 2. Tripole graph showing percentages of domestic ox, sheep/goat, and pig for all sites (data from King 1999, table 3).

Before proceeding to examine the individual sites, it is necessary to give the general background for other types of site in Roman Britain (FIG. 2). The indigenous dietary pattern in the Late Iron Age is largely one of high sheep percentages, particularly in southern Britain.[1] After the Roman Conquest, the relative percentage of cattle and pigs increases, correlating with the apparent 'Romanised' nature of the sites. There is a gradient towards higher representation of cattle and pigs in the following sequence: rural settlements, villas, secondary urban centres,

[1] Hambleton 1998.

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urban sites, military sites, and legionary sites.[2] This appears to show that the urban, military, and legionary sites had a distinct dietary pattern, probably derived from Gaul and Germany, which was emulated by social groups seeking to become more Roman. Dietary change resulted by the late Roman period, since the high cattle/high pig pattern eventually dominates all site types.[3] However, there was always a residual dietary pattern that was reflected in the pre-Roman sheep-dominated assemblages. Many rural settlements (i.e. non-villas) retained this pattern to some degree, and it is interesting to note that in the post-Roman period there was, ultimately (but not immediately), a more general reversion to high sheep/goat percentages in bone assemblages.[4] In this respect, 'Romanisation' (or 'Gallicisation') of the diet was not complete, and, as in other provinces, regional patterns persisted.

Comparison of the background data in FIG. 2 with the temple assemblages in FIG. 3 shows that most of the temple assemblages conform in general terms with the expected patterns for other sites in Roman Britain, but there is also a significant minority that is very different. This group falls into the bottom right apex of the graph, i.e. high sheep/goat numbers, with few cattle and/or pig bones. Clearly, there has been deliberate selection of species at some of the temple sites, the exact nature of which will be explored below.

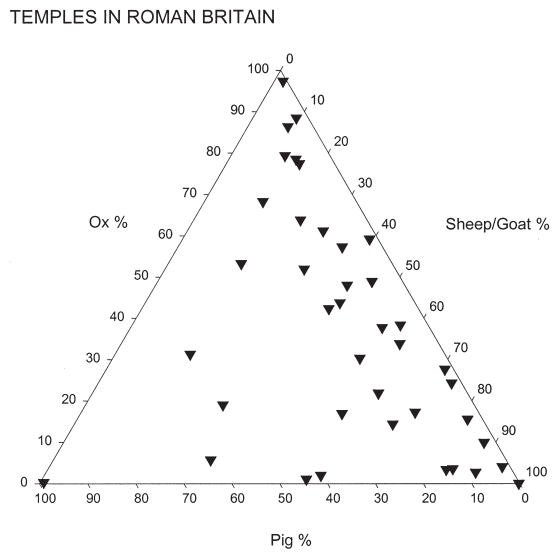

FIG. 3. Tripole graph showing percentages of domestic ox, sheep/goat, and pig for Roman temple sites (data from Table 1).

ROMANO-CELTIC TEMPLES

The order in which the individual sites are considered is a rough reflection of the significance and interest of their animal bone assemblages. It is not in any geographical order.

ULEY, GLOUCESTERSHIRE

This is a rural shrine in a high position on the Cotswolds, close to the Iron Age hillfort of Uley

2 King 1999, table 3; 1984, 189–90.
3 King 1984, 193–4.
4 King 1978, 226.

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Bury, which appears to have continued in occupation into the Roman period.[5] The temple has a Late Iron Age and early Roman phase characterised by ditches and votive deposits. Later, in the early second century A.D., in Phase 4, a Romano-Celtic temple was constructed in a loosely defined courtyard, enclosed by other buildings that were perhaps linked with pilgrimage to the site. The deity worshipped, according to the finds, was a Romano-Celtic equivalent of Mercury. By the late fourth century A.D., Phase 5d–e, the site was fully developed, but some of the ancilliary buildings had been abandoned; they were used as dumping areas for bones, and most of the deposition took place in this phase.[6] After a period of modification and abandonment in the late fourth to early fifth century, a putative Christian phase followed in the fifth to seventh centuries.[7]

The very large assemblage of *c*. 230,000 bones is increasingly dominated by sheep and goat through time (Table 2; FIG. 4), to the extent that some of the deposits have over 90 per cent of

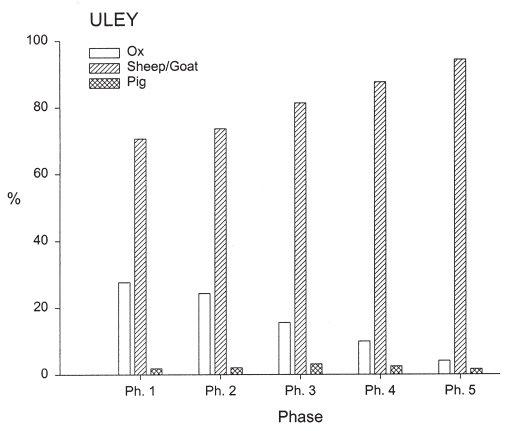

FIG. 4. Uley: bar graph of species representation by phase (data from Table 2).

TABLE 2. ULEY
(data from Levitan 1993, 260)

Phase	Ox	Sheep/ Goat	Pig	Horse	Dog	Other large mammal	Chicken	Other birds
1, 2nd-1st c. B.C.	217	554	14	12	11	4	7	1
2, e 1st c.	746	2261	63	47	19	6	8	4
3, l 1st c.	564	2951	113	6	62	29	40	3
4, R-C temple, 2nd-3rd c.	772	6798	192	5	47	23	604	15
5, R-C temple, e-m 4th c.	1158	26806	459	7	216	79	877	36
6, abandonment, l 4th c.	615	10432	224	2	35	68	477	22
7, Christian?, 5th-7th c.	1405	9409	349	57	38	59	398	12

5 Woodward and Leach 1993, 1–5.
6 Woodward and Leach 1993, 10–11, 32–62, fig. 9.
7 Woodward and Leach 1993, 63–79.

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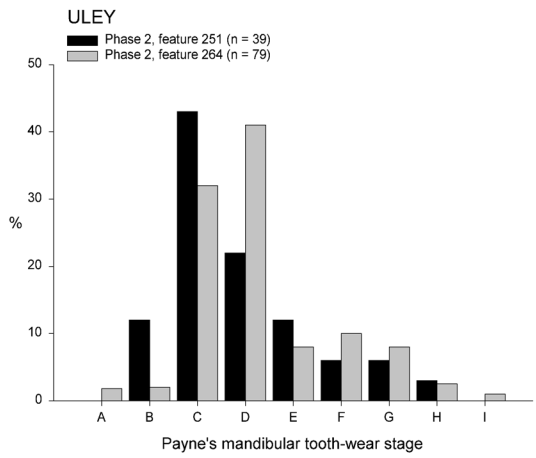

FIG. 5. Uley: bar graph of tooth wear stages in sheep/goat using Payne's method, for Phase 2, Features 251 and 264 (data from Levitan 1993, fig. 190). Key to sheep/goat stages: A, 0–2 months; B, 2–6 months; C, 6–12 months; D, 1–2 years; E, 2–3 years; F, 3–4 years; G, 4–6 years; H, 6–8 years; I, 8–10 years.

these species by the mid-fourth century A.D.[8] As a corollary to this, ox decreases over time, which contradicts the trend generally observable for Roman Britain. A majority of the sheep/goat bones are in fact goat, at the ratio of four goats to one sheep, which is also very unusual for Roman Britain.[9] It is possible that this could represent animals specifically raised for offering at the temple. Analysis of the age-at-death of sheep/goat indicates a peak at Payne's Stage C or D (FIG. 5), i.e. 6/12 or 12/24 months.[10] These are young but well-developed animals, almost certainly selected deliberately. It is suggested by Levitan that slaughter/sacrifice was seasonal, in the autumn/winter following spring births or a year later. He also calculated that, on average, *c*. 150 goats per year were killed in order to form the assemblage, of which 80 per cent could have been killed in the autumn.[11] Another element to the sheep/goat assemblage is the high proportion of males, and the removal of horns as a specific butchery pattern. Amongst the environmental samples of plant remains from the site, hay was a significant element, together with mineralised remains of coprolites, some of which may have been of caprine origin. As a result, the interpretation has been put forward that goats were kept on site (either temporarily or permanently) and provided with fodder.[12]

Also significant at Uley is the high percentage of chicken, of which a high proportion is male,[13] since it is one of only three temples with a good representation of this species, the others being Brigstock and Folly Lane (FIG. 6). The excavators interpret this as reflecting one of the attributes of the deity worshipped at the temple, since, amongst other evidence for Mercury from the site, parts of a statue, copper-alloy figurines, and an altar to this god were found, depicted with his attributes — a ram and a cockerel.[14] One of the figurines was horned, which alludes to the ovicaprid attribute.

8 Levitan 1993, 257–60.
9 Levitan 1993, 300. King 1978 discusses the usual ratios of Roman Britain: sheep being strongly dominant.
10 For the ageing method, see Payne 1973; Grant 1982, 105.
11 Levitan 1993, 300.
12 Levitan 1993, 279, 300; Girling and Straker 1993, 251–2. An interesting adjunct to this is the suggestion from dental microwear analysis that sheep and goats on a Greek Neolithic site were fed differently when destined for feasting (ritual) events than when used for ordinary domestic food supply (Mainland and Halstead 2004).
13 Levitan 1993, 260, 300.
14 Henig 1993, 88–95; Woodward 1992, 79.

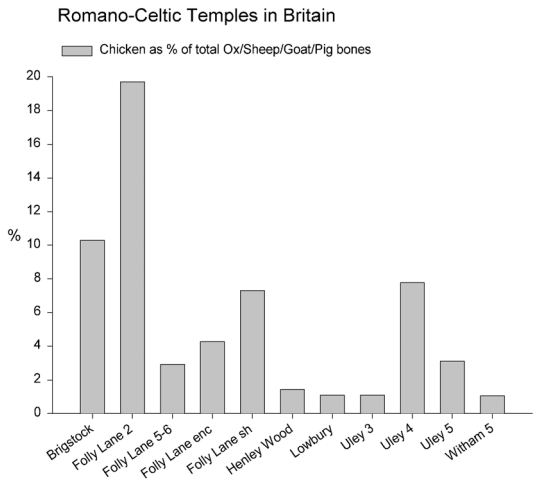

FIG. 6. Representation of domestic fowl on temple sites.

HARLOW, ESSEX

This site is a formally laid out Romano-Celtic temple on a small hill, that appears to have been an 'island' in a marshy area, linked by a causeway to firmer ground to the south. A small town stood nearby, which may have had a religious function linked to the temple.[15] A Late Iron Age shrine of uncertain appearance was succeeded in the late first century A.D. by the first temple and a wooden enclosure, with strong elements of axiality in its planning.[16] In a later phase, *c*. A.D. 200, the enclosure was rebuilt in stone with a large eastern courtyard containing an external altar. The site came to an end by the late fourth century.

Most of the *c.* 3,600 bones came from the courtyard area, the majority being of Late Iron Age date (Table 3; FIG. 7).[17] Like Uley, the assemblage is dominated by sheep/goat, but in this case almost exclusively sheep, with very little evidence for goat. The peak in the age-at-death graph is even more marked than Uley, being strongly in Payne's Stage C (FIG. 8). This is interpreted as autumn sacrifice by Legge,[18] who also gives data for a similar pattern for the temple at Great Chesterford. All parts of the sheep carcass were found on the site, but there was a predominance

TABLE 3. HARLOW
(data from Legge and Dorrington 1985)

Phase	Ox	Sheep/ Goat	Pig	Horse	Dog	Red deer	Roe deer	Hare	Other
LIA, m 1st c. B.C.-m 1st c.	55	1777	155	4	14	-	1	1	15
Temple ph. 1, l 1st-2nd c.	24	563	81	3	8	1	-	-	5
Temple ph. 2, 3rd-m 4th c.	7	171	28	1	1	-	-	-	3
Destruction, late 4th c. +	7	192	25	2	2	-	-	-	8
Disturbed	52	312	72	12	7	2	-	1	14

15 France and Gobel 1985, 13, 135.
16 France and Gobel 1985, 21–48; Bartlett 1987.
17 Legge and Dorrington 1985.
18 Legge and Williams 2000; see note 10 above.

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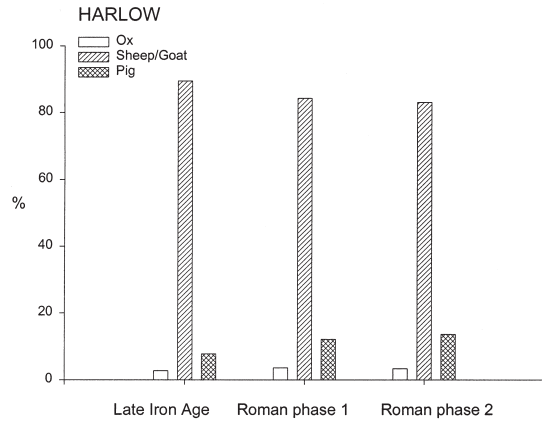

FIG. 7. Harlow: bar graph of species representation by phase (data from Table 3).

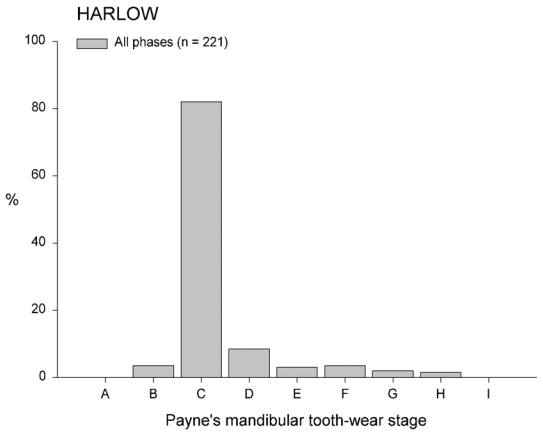

FIG. 8. Harlow: bar graph of tooth wear stages for sheep/goat using Payne's method (data from Legge and Dorrington 1985, fig. 65). For key to stages, see FIG. 5.

of mandibles and a relative lack of metapodials, the latter being interpreted as possible evidence for skinning.[19]

GREAT CHESTERFORD, ESSEX

A semi-rural Romano-Celtic temple was situated a short distance from the Roman small town of Great Chesterford, dating to the late first to fourth centuries A.D. It has yielded a large quantity of animal bones, mainly from nine pits or *favissae* in the periphery of the temple enclosure. As yet, the site is unpublished and quantified details on the bones are unavailable, but an interim paper has commented on the sheep assemblage.[20]

A sample of 2,949 bones from one pit consisted of over 99 per cent sheep, no goat, five bones

[19] Legge and Dorrington 1985, 124–7, figs 63–4.
[20] Legge and Williams 2000, 153–7.

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of young pig, five chicken and one bovine bone. The faunal remains had been dumped in a fresh state into the pit, and there was no evidence of surface exposure or canid gnawing. Two periods of slaughter were observed, at birth or shortly after and at 6–8 months, with no evidence for slaughter at any other age. Legge and Williams argue for autumn sacrifice for the 6–8 month group, and either spring sacrifice for the new-born lambs or later births killed with the 6–8 month group in the autumn. The age-at-death analysis was based on a sample of 1,011 mandibles, and it is clear that the deposit was dominated by mandibles and also lower limb bones.[21] The upper limb was very poorly represented, and was probably removed from the temple for disposal (and consumption) elsewhere. Legge and Williams make the observation that the right upper limb was better represented than the left side, possibly due to ritual selection in which the right shoulder was given to the priests, and was therefore retained on site.[22] In addition, extremities were rare, and it is possible that the lambs were skinned, and the phalanges removed with the hides. It is clear that Great Chesterford has a high degree of selectivity in sacrificial practices, if the results from the sample prove to be typical of the temple as a whole.

HAYLING ISLAND, HAMPSHIRE

Hayling Island has good evidence for a Late Iron Age temple of two phases.[23] In the Roman period, it was rebuilt in stone shortly after the Conquest and continued in use until the third century A.D. In plan it closely resembles some of the circular temples of south-west Gaul, such as La Rigale or Périgueux. The temple was situated on a possible 'sacred' island that has little evidence for other Roman occupation, and may be linked with the client kingdom of the Regni, with its capital at Chichester (14 km to the east), and the 'palace' at Fishbourne, which has similar construction techniques to those used at the temple. It has been suggested that the temple commemorated the royal house, as well as being dedicated to a Mars-type god analogous to Mars Mullo.[24]

Nearly all the *c*. 7,250 animal bones from the occupation phases of the temple were scattered in the courtyard, and spatial analysis showed that there was a concentration in the south-east sector. This was also the case with other artefacts, such as the iron, bronze and coins, and was probably a significant ritual practice, reflected elsewhere in roundhouses in the southern British Iron Age.[25] In composition the bone assemblage was almost exclusively sheep and pig (Table 4; FIG. 9); there were very few cattle bones, and the great majority of the sheep/goat bones were

TABLE 4. HAYLING ISLAND
(data from King and Reilly forthcoming)

Phase	Ox	Sheep/ Goat	Pig	Horse	Dog	Red deer	Hare
2, LIA, 1st c. b.c.-m 1st c.	49	1407	988	46	1	4	7
4, R-C temple, l 1st-3rd c.	54	2717	2168	8	-	2	-

21 Legge and Williams 2000, 155.
22 Legge and Williams 2000, 156, citing Leviticus VII.32 and Exodus XXIX.22 in support of this.
23 King and Soffe 1994; 2001; forthcoming.
24 King and Soffe 2001, 120–2. The temple to Mars Mullo at Allonnes (Sarthe) in fact presents several different characteristics from Hayling, including in the bone assemblage (see Brouquier-Reddé *et al.* 2002), so it seems unlikely that the cult at Hayling was actually Mullo, but rather a similar Mars-type deity. For La Rigale and Périgueux, see Horne and King 1980, 446, 490–1 (s.v. Villetoureix).
25 King and Soffe 2001, figs 7.3–7.6, 117–18; Fitzpatrick 1994.

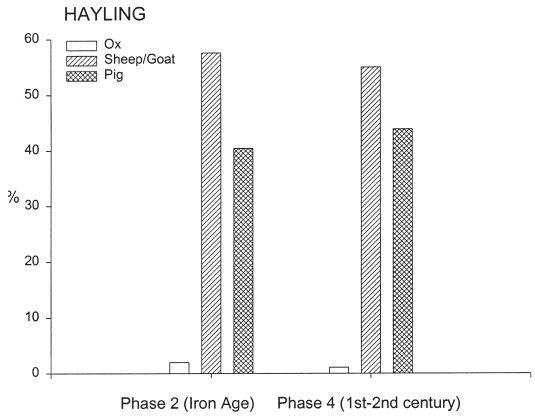

FIG. 9. Hayling: bar graph of species representation by phase (data from Table 4).

sheep.[26] It is possible that sheep and pig were the animal attributes of the deity worshipped at the temple, on the analogy of the Uley evidence.

The age-at-death pattern is also similar to Uley, in some respects (FIG. 10). For sheep in Phases 2 and 4, the peaks at Payne's Stage D are less marked, but nevertheless point to selection at the animals' full development, *c*. 12–24 months. The same applies to the data for pig, where peaks at Stages C/D (7–14 and 14–21 months, using Halstead and Hambleton's stages) are clearly discerned.[27] However, the strong peak for sheep in Phase 4 at Stage F, representing fully adult animals of 3–4 years, is very different from Uley, Harlow, or Great Chesterford, and

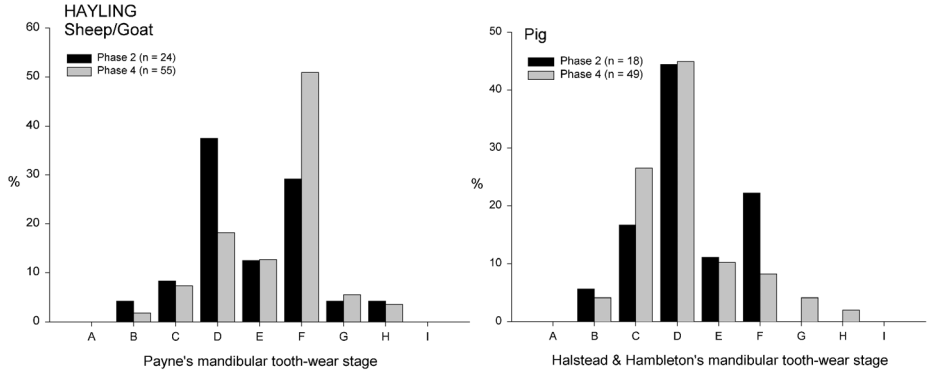

FIG. 10. Hayling: bar graph of tooth wear stages in sheep/goat using Payne's method, and pig using Halstead and Hambleton's method (data from King and Reilly forthcoming). For key to sheep/goat stages, see FIG. 5. Key to pig stages: A, 0–2 months; B, 2–7 months; C, 7–14 months; D, 14–21 months; E, 21–27 months; F, 27–36 months; G, adult; H, old adult, I, senile.

26 King and Reilly forthcoming.
27 See Hambleton 1998 for an outline of the stages and methodology. For Payne's method for sheep, see note 10.

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TABLE 5. HAYLING ISLAND: PARTS OF THE CARCASS REPRESENTED
(data from King and Reilly forthcoming)

Species & Phase	A, upper limb		B, lower limb		C, cranial		D, extremities	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Sh/Gt, ph. 2	315	35.5	365	41.1	80	9.0	128	14.4
Sh/Gt, ph. 4	523	33.4	612	39.1	207	13.2	224	14.3
Pig, ph. 2	127	28.7	107	24.2	154	34.8	55	12.4
Pig, ph. 4	198	22.1	194	21.7	377	42.1	127	14.2

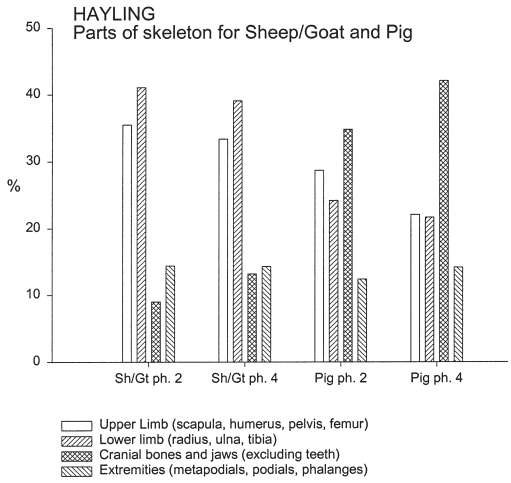

FIG. 11. Hayling: representation of parts of the carcass for sheep/goat and pig (data from Table 5).

demonstrates that adult or even relatively elderly animals were the usual votive offering at the temple in the early Roman period.

There was good evidence of selectivity of parts of the carcass for deposition (Table 5; FIG. 11). For sheep, meat bones predominate (FIG. 11, Groups A and B), but for pig there were high numbers of cranial bones, including specific deposits of mandibles (FIG. 11, Group C; FIG. 12). For both species there was a lack of extremities, despite sieving of many of the contexts, suggesting either joints of meat being brought to the site as offerings or ritual meals, or on-site sacrifices with careful spatial differentiation of deposition. If the latter took place, the extremities and, for sheep, cranial elements, must have been deposited outside the main temple area.

The site had a small number of horse bones, mainly of cranial elements (FIG. 13). It is possible that they can be associated with the 30–40 human bones, plus parts of chariots, horse furniture, etc. A possible interpretation is that there was a scattered vehicle burial of Iron Age date that underlay the temple and was perhaps the reason for its foundation.[28] A final feature to note concerning the animal bone assemblage is the almost complete lack of dog bones (FIG. 14). The temple was enclosed in a clearly defined courtyard, and it was almost certainly the case that dogs could not gain access. This may be because the offerings in the courtyard were not to be disturbed once deposited, or that dogs were regarded as unclean at this particular cult site.

[28] King and Soffe 2001, 116.

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FIG. 12. Hayling: deposit of pig and sheep mandibles in the courtyard of the temple, Phase 4, first/second century A.D. (*Photo R. Downey*)

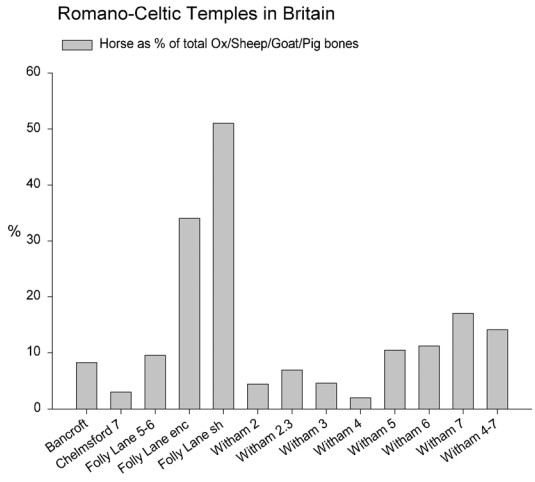

FIG. 13. Representation of horse on temple sites.

The Gallic architectural associations of the Hayling temple may also be reflected in the animal bone assemblage. The high percentage of sheep and pig is not seen at any other British temple except Wanborough (see below), and even there the relative proportion of cattle bones is higher. However, at Bennecourt (Yvelines), the Iron Age and Roman levels at the temple yielded an assemblage with similarly low proportions of ox but high pig and sheep/goat numbers, in this

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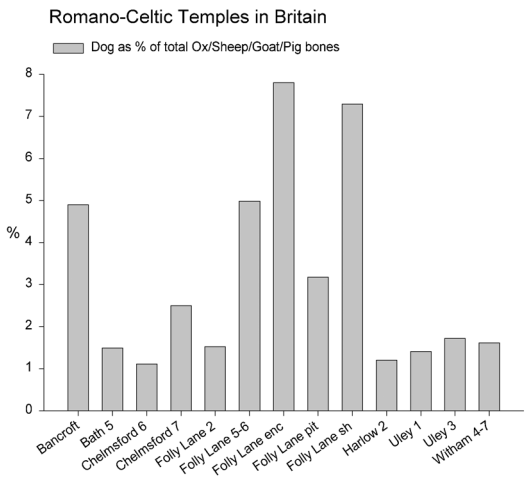

FIG. 14. Representation of dog on temple sites.

case with pig predominating.[29] A number of other Gallic temples also have an abundance of pig; there may therefore be a cultural link to Gaul in the Hayling bone assemblage.[30] However, the factor of selection for religious reasons alone may have been equally, if not more, important (see Discussion, below).

WANBOROUGH, SURREY

Following looting of this temple site in the 1980s, excavations uncovered a square Romano-Celtic temple with a circular shrine adjacent to it.[31] It has definite Iron Age evidence, chiefly in the form of very large coin deposits, which have been variously interpreted as votive offerings or a hoard. The first structure was a circular shrine of the first century A.D., for which evidence is very slight, followed by a stone circular shrine of mid- to late second-century date. This was structurally unsound and collapsed a few decades after construction. The sequence continued with a conventional Romano-Celtic temple sited just to the south, of late second-century construction, continuing until demolition in the late fourth century A.D.[32] The temple appears to be an isolated site, in a relatively low-lying position on a minor ridge under the main east–west ridge of the Hogs Back.[33]

The excavation of the Romano-Celtic temple at Wanborough yielded 880 animal bones in total, mainly from Phase 2, interpreted as a foundation deposit under the temple structure.[34] This was dominated by sheep/goat and pig, but with a reasonable number of cattle bones (Table 6;

[29] Méniel and Desse-Berset 1999, especially fig. 128. See also Dalheim, Lux. (Schulze-Rehm 2000) for an assemblage with similar proportions of species to Bennecourt. Tintignac, Corrèze, has a predominance of ovicaprids, pig bones in lesser quantities, and very few ox bones (Maniquet 2004, 102).

[30] See Lepetz 1996, 27–8, for discussion of temples in northern Gaul; and more recently, Bontron *et al.* 2002 (for Châteaubleau), Brouquier-Reddé *et al.* 2002 (for Allonnes), Fercoq du Leslay and Lepetz 2002 (for Ribemont-sur-Ancre), Magnan and Lepetz 2002 (for Meaux).

[31] O'Connell 1984; O'Connell and Bird 1994, 13–31; O'Connell 2000; Williams 2000; pers. comm.

[32] Williams, pers. comm.

[33] O'Connell and Bird 1994, 9–10.

[34] O'Connell and Bird 1994, 19.

TABLE 6. WANBOROUGH ROMANO-CELTIC TEMPLE
(data from Nicolaysen 1994)

Phase	Ox	Sheep/ Goat	Pig	Dog	Red deer	Hare
2, pre-temple, mid 2nd c.	19	61	32	1	-	-
3, construction, mid/late 2nd c.	1	5	5	-	-	-
4, construction, mid/late 2nd c.	1	1	1	-	-	-
5, occupation, late 2nd-late 4th c.	-	1	4	-	-	-
6, demolition, late 4th c. +	1	3	1	-	1	10

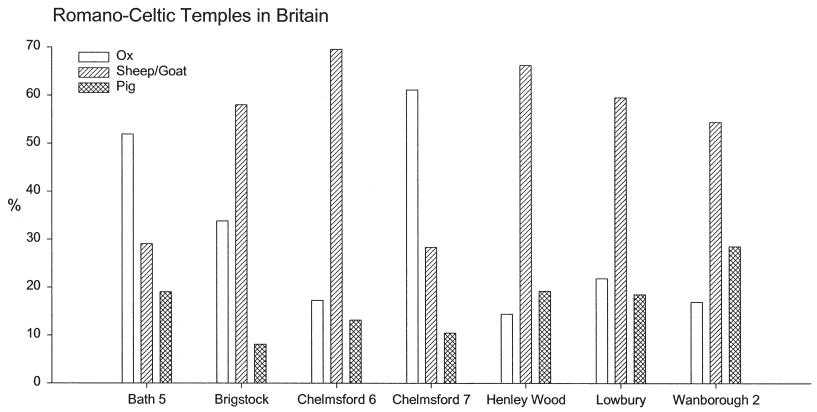

FIG. 15. Bar graph of species representation for sites not illustrated in separate graphs.

FIG. 15).[35] Body parts of the sheep/goat remains are mainly jaws, feet, and lower limbs, and there is also significant evidence for canid gnawing. This suggests that the bones were left as surface deposits before being buried, and that dogs could enter the apparently unenclosed temple area. Age at death for sheep/goat from the Romano-Celtic temple indicates a range of 18 months to 2.5 years, older than Harlow or Great Chesterford, but it should be noted that late first-century A.D. deposits from the earlier circular shrine include burials of lambs (and a chicken).[36] Chop marks were found on bones of all the main species, indicating that the animals were butchered, probably for consumption after any sacrificial rituals.[37] Calcined bones formed a significant minority of the assemblage, possibly indicating burnt offerings.[38]

CHANCTONBURY RING, WEST SUSSEX

This site has been the object of two recent excavations, that have provided interesting evidence

35 Nicolaysen 1994.
36 Williams, pers. comm.
37 Nicolaysen 1994, 162.
38 Done 1984; Nicolaysen 1994, 162; Williams, pers. comm.

of structured deposition.[39] The site is within a small Iron Age hillfort, in an elevated position commanding distant views. In the Roman period the hillfort appears to have been converted into a temenos by the construction of a chalk wall along the rampart, and the fort ditch became a deposition zone for animal bones. Two temple structures were built in the mid-second century A.D., one a standard Romano-Celtic temple on the highest point in the fort, the other an irregular polygon with a large eastern vestibule, situated just to the south of the main temple. Both buildings lasted till the end of the third century A.D. or slightly later.[40] The excavators link the site to a possible boar or pig cult in the Sussex (Atrebatic) area, evidenced by the large number of pig bones from the temple and the finding of boar figurines from several other sites in the region.[41]

From an osteological point of view, the polygonal building is of greatest interest, as it contained 4,874 fragments of pig bones, almost exclusively cranial bones, jaws, and teeth (Table 7; FIG. 16).[42] These represented a minimum number of 62 animals, and it is clear that the building was a repository for pig skulls, probably after the sacrifice of the animals on or near the temple site. The other parts of the carcass were minimally represented, and were probably consumed away from the temple.

Elsewhere, pig bones were virtually absent, and there appears to be distinct zonation in the deposition of the faunal material. From the temenos (i.e. hillfort) ditch, a large number of ox and sheep/goat cranial elements were recovered, but few other parts of the body, and very few

TABLE 7. CHANCTONBURY RING
(data from Bedwin 1980, 219 (temenos ditch), Sibun 2001, 108–9 (Temple 2 and other areas))

	Ox	Sheep/ Goat	Pig	Horse	Red deer
Temple 2	15	36	4874	1	-
Temenos ditch	305	201	9	-	-
Other areas	12	11	-	-	11

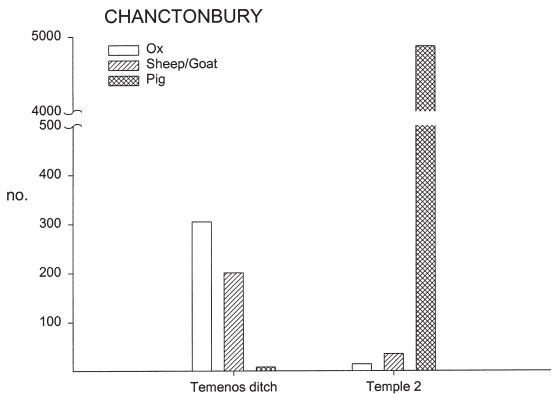

FIG. 16. Chanctonbury: species representation in different zones (data from Table 7).

39 Bedwin 1980; Rudling 2001.
40 Rudling 2001, 77–8, 118; Bedwin 1980.
41 Rudling 2001, 115–18. One of the boar figurines comes from a shrine at Muntham Court; Green 1976, 220.
42 Sibun 2001.

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pig bones (Table 7).[43] Inside the precinct, just to the west of the main temple, a large deposit of oyster shells was excavated,[44] whilst other areas appear to have relatively few bones, and a noteworthy lack of pig.

Chanctonbury has the best evidence from Britain for zonation of bone deposition.[45] Skulls were preferentially preserved at the temple; the other parts of the animals being consumed or disposed of elsewhere. Distinct zones within the site were used for different species — the temenos ditch for ox and sheep/goat, the polygonal building for pig, the area to the west of the main temple for oyster. In view of this, it seems that the polygonal building was some sort of sacred repository, and not necessarily a fully-functioning temple building in the sense that is usually ascribed to Romano-Celtic temples.

LOWBURY HILL, OXFORDSHIRE

The site of this probable temple is in an elevated position with extensive views over the Berkshire Downs. It is unclear whether a Romano-Celtic temple in fact formed the focus of the sacred area, since excavations have not revealed a structure, only building debris. An artificial sacred grove has also been suggested by the excavators as a possibility. The main surviving evidence consists of a rectangular enclosure of at least two phases, and a large quantity of artefacts, principally coins. Analysis of the latter indicates similarities with other temples, and a date range of late first/early second to late fourth century A.D. is suggested.[46]

The animal bones also have characteristics unlike contemporary settlement sites.[47] The low percentage of ox and high percentage of sheep/goat (Table 8; FIG. 15) places the site in the same grouping as Harlow, Great Chesterford, and Uley, although the dominance of sheep/goat is not so marked. However, the bones were very fragmentary, many not being identifiable to species, and Hamilton-Dyer allocates the majority of the unidentifiable limb bone fragments to small artiodactyl, suggesting that the original percentage of sheep/goat was higher than the table indicates.[48] The sheep/goat bones were all sheep where this could be distinguished, and a significant number of neonate or very juvenile bones was identified. Mature sheep were also present, so the exclusive selection of lambs, such as at Great Chesterford, was not taking place at Lowbury. It is likely that the assemblage consists largely of sacrificial or votive remains of sheep, deliberately brought to this remote site. Mixed with this are the probable remains of meals eaten by worshippers.

TABLE 8. LOWBURY HILL
(data from Hamilton-Dyer 1994, microfiche 1, 22, Table M8; Somerville 1994, microfiche 1, 29, Table M11)

Ox	Sheep/ Goat	Pig	Horse	Dog	Cat	Chicken	Birds	Oyster (total valves)
124	338	105	6	3	1	6	5	487

[43] Bedwin 1980, 219–20.
[44] Bedwin 1980, 177; see also Somerville 2001.
[45] However, similar zonation is seen at some of the Gallic sites, e.g. Fesques (Méniel 1997). See Discussion, below.
[46] Fulford and Rippon 1994, 158–60, 166–77; *Britannia* 24 (1993), 299.
[47] Hamilton-Dyer 1994.
[48] Hamilton-Dyer 1994, 185.

A notable faunal deposit from the temple enclosure, close to the peripheral wall, was a large quantity of oysters. The site is a long distance from the sea, and, like Chanctonbury, the oyster deposit appears to be a form of votive offering or ritual meal eaten at the site.[49]

HENLEY WOOD, SOMERSET

This temple is linked to an adjacent hillfort, very like the site at Uley. It is positioned on a hilly promontory jutting into the drained marshland of the North Somerset levels, just under the hillfort situated to its south.[50] The temple itself probably post-dates the hillfort, being either Late Iron Age or early Roman in origin, but its main phases are late Roman, third to late fourth century A.D., with a conventional Romano-Celtic temple constructed *c*. A.D. 270/90.[51]

The animal bones come from the later Roman phases, and are dominated by sheep/goat (Table 9; FIG. 15). There were at least six animal burial deposits from in and around the temple buildings. Most of these consisted of partial remains of sheep/goat, from more than one animal, leading Watts and Leach to interpret them as representing individual sacrifices.[52] Many bones

TABLE 9. HENLEY WOOD, ALL PHASES
(data from Watts and Leach 1996, 134–7)

Ox	Sheep/Goat	Pig	Horse	Dog	Cat	Red deer
30	138	40	2	1	1	5

Fallow deer	Hare	Other mammals	Chicken	Birds	Fish
5	3	4	3	5	3

also came from the temenos ditch to the east of the temple, and probably represent clearance of sacrificial remains from the courtyard area.

It should be noted that the site was excavated in the 1960s, and it is now difficult to ascertain the reliability of the analysed assemblage.[53]

LAMYATT BEACON, SOMERSET

The square Romano-Celtic temple in an elevated position at Lamyatt Beacon has been badly damaged by looters, and excavations were conducted to recover the surviving data. As a result, dating and the nature of the assemblage are not absolutely clear-cut, but there is enough evidence to show that the site is late third to fourth century A.D., with a secondary phase that may run into the fifth century. To the north of the temple, and underlying a probably post-Roman cemetery, were at least nine red deer antlers buried in shallow pits. They are contemporary with the temple, and the excavator interprets them as votive deposits linked to Cernunnos, but it should be noted that the bronze statuettes from the site suggest a Mars equivalent was probably the main deity.[54] Antlers are known from other temple sites, such as Brean Down and Maiden Castle, which may

49 Somerville 1994.
50 Watts and Leach 1996, 5–8.
51 Watts and Leach 1996, 16–29.
52 Watts and Leach 1996, 134–7.
53 Watts and Leach 1996, 134.
54 Leech 1986, 266–8, 271–2; Everton 1986, 325.

also have been deliberately deposited as offerings.[55] The other bones from the site were largely from areas of modern looters' disturbance, and consisted of sheep, ox and pig, with some horse, hare, rabbit, and chicken. The assemblage was interpreted as domestic refuse or remains of meals, rather than ritual deposition.[56] There were also 50 oyster valves, but their significance as a possible ritual deposit could not be determined.

BRIGSTOCK, NORTHAMPTONSHIRE

Two shrines, one circular and one polygonal, were excavated at Brigstock in 1961; they probably formed part of a larger group of small shrines in one complex. They are not situated in a distinctive topographical position, but seem to be part of a small settlement. The temples are linked to several finds of bronze horse and rider figurines, and it has been suggested that a Mars-type deity was worshipped at the site.[57]

Both shrines, dating to the late third to late fourth century A.D., had floors of earth, into which deposits of animal bones had been inserted, or lay on the surface. Most of these were articulated lower limb bones of cattle, from the circular shrine, and limb bones or whole carcasses of sheep/goat, from both shrines (Table 10; FIG. 15).[58] The sheep/goat bones seem to have been placed in small pits, while the cattle bones tended to be incorporated into the floor itself. In a couple of

TABLE 10. BRIGSTOCK
(data from Biek and Cripps 1963; Greenfield 1963, 234, n. 1)

Ox	Sheep/Goat	Pig	Red deer	Chicken
46	79	11	2	14

cases, coins were found near the mandibles of the sheep/goat burials, suggested by the excavator to be coins deliberately placed in the mouths of the animals, and analogous to human burial practice.[59] One deposit in the circular shrine was a chicken skeleton, but this species was not found elsewhere. In terms of overall numbers, sheep/goat was most common, followed by ox second, which is unlike the usual pattern for late Roman sites, but is not as distinctively selective as sites like Uley or Harlow. As the excavators conclude, the bones probably represent deposition of votive offerings within the temples, after having been consumed in part by worshippers. This would account for the selective nature of the articulated limb bones in the floors.[60]

BANCROFT, BUCKINGHAMSHIRE

This site also has a circular shrine of late Roman date (mid- to late fourth century A.D.), which lay close to the site of an earlier (mid- to late second century A.D.) Romano-Celtic temple-mausoleum of normal double square form with a chamber under the *cella* for sarcophagi. Both were in enclosures on the ridge of a low hill overlooking a Roman villa, to which the temple site was clearly linked.[61]

55 Leech 1986, 271–2; Brean Down: ApSimon 1965, 204, 220.
56 Everton 1986.
57 Greenfield 1963, 228–30; Dix 1986, 129–30.
58 Greenfield 1963, 234–5, 237, 261; Biek and Cripps 1963.
59 Greenfield 1963, 234, 237.
60 Biek and Cripps 1963; Greenfield 1963, 261.
61 Williams and Zeepvat 1994, 11–12, 88–113.

The circular shrine contained a central pit with iron spear-heads (many non-functional or miniatures), coins, and a semi-articulated post-cranial skeleton of a young pig, *c*. 3–6 months old. Outside the shrine was another skeleton that was probably contemporary with it, of a butchered adult female goat.[62] These specific deposits of probably sacrificed animals are the only faunal remains that can be clearly linked with the circular shrine. This is because the animal bone report has grouped the bones from both this shrine and the temple-mausoleum together, despite their different phasing. This is mainly due to the low total of bones from this area of the site (Table 11), and it seems that animal offerings were not common at either temple.[63] In fact,

TABLE 11. BANCROFT TEMPLE-MAUSOLEUM AND SHRINE
(data from Holmes and Rielly 1994, table 42)

Ox	Sheep/Goat	Pig	Horse	Dog	Cat	Red deer	Hare	Fox	Birds
23	32	6	5	1	3	14	3	2	6

earlier domestic occupation and subsequent Saxon levels both had significantly more bones, and it thus seems likely that the lack of bones in the temple-mausoleum and shrine phases represents a genuine reflection of ritual practice, rather than a result of preservation factors. Despite the low total, there was a high percentage of sheep/goat bones (if the skeletons are discounted), which is unusual for late Roman assemblages, and was not observed in either earlier or later phases, which were dominated by ox. This may represent small-scale offering of sheep/goat at the temple sites, mixed in with a small assemblage of meals left by visitors. Also of interest are the relatively high percentages of horse, dog, and red deer from the shrines, together with the presence of fox and hare, which may be linked with the deposition of spears at the shrine to suggest a hunting element in the cult.[64]

FOLLY LANE (VERULAMIUM), ST ALBANS, HERTFORDSHIRE

Folly Lane lies just outside the Iron Age *oppidum* and Roman *municipium* of Verulamium, alongside the Roman road to Colchester. It is located on a low hill overlooking the town, and probably played a significant role in the religious life of the citizens.[65] The site was originally used for a wealthy aristocratic or royal burial of Late Iron Age date, *c*. A.D. 35–55, placed in a large pit within a formal enclosure.[66] A Romano-Celtic temple of normal form was constructed in the Flavian period just to the west of the burial pit, so that the open-air altar on its east side would overlie the burial itself.[67] The temple continued in use to the third century A.D. Just to the south of the temple enclosure were a number of shafts, dated mid-second to third century A.D., which almost certainly had a ritual purpose.[68]

There were *c*. 14,000 animal bones from various parts of the site (Table 12; FIG. 17).[69] Some of them may not be ritual in nature, especially the large pit AET which more closely resembles a military-style deposit of broken-up cattle bones for soup or glue, than a ritual deposit as found

62 Williams and Zeepvat 1994, 107–9; Holmes and Rielly 1994, 529–30.
63 Holmes and Rielly 1994, 515–19.
64 Holmes and Rielly 1994, 517, 531, 535–6.
65 Niblett 1999, 70–1, 408–17; 2001, 59–60, 71; Haselgrove and Millett 1997, 286.
66 Niblett 1999, 17–64.
67 Niblett 1999, 64–72.
68 Niblett 1999, 83–8.
69 Locker 1999.

TABLE 12. FOLLY LANE, ST ALBANS
(data from Locker 1999)

Phase	Ox	Sheep/ Goat	Pig	Horse	Dog	Red deer	Chicken
2, LIA	20	34	12	-	1	-	13
4, R-C temple, l 1st-m 2nd c.	13	24	1	5	-	-	-
5, R-C temple, l 2nd-3rd c.	102	94	45	23	12	3	7
3-6, enclosure, m 1st-3rd c.	69	63	9	48	11	-	6
5/6, pit AET, l 2nd-3rd c.	2307	43	19	9	75	1	-
4/6, shafts, l 1st-3rd c.	84	78	30	98	14	3	14

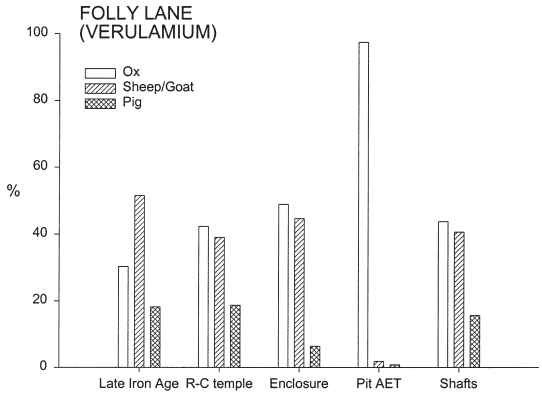

FIG. 17. Folly Lane, St Albans: bar graph of species representation by phase (data from Table 12).

at other temple sites.[70] The relative proportions of the species represented at Folly Lane are not unusual for secular sites in Roman Britain (FIG. 2), and it may be the case that the ox, sheep/goat, and pig bones are the remains of meals left by worshippers and visitors to the site, probably coming from the town of Verulamium immediately adjacent.

One aspect of the assemblage does stand out, however, namely the high representation of chicken, horse, and dog bones (FIGS 6, 13 and 14). Numbers of horse are high in the ditch of the ceremonial enclosure and the shafts, where cranial and vertebral elements dominate. These may be sacrificial deposits, perhaps linked, in subsequent ritual practice at least, to the regal status (and hunting associations?) of the Iron Age burial. Chicken percentages are highest in Phase 2, the Late Iron Age mausoleum itself, when the number of bones in total is quite low: they may represent offerings, including a chicken foot, at the time of the burial.[71]

WITHAM (IVY CHIMNEYS), ESSEX

The excavations at Ivy Chimneys, Witham, uncovered a complex site running from the Iron Age to the Late Roman period.[72] The site lies within a substantial Late Iron Age enclosed settlement that was bisected by the London–Colchester Roman road shortly after the Conquest. Evidence

70 See King 1978, 225 and Van Mensch 1974 for discussion of this type of deposit.
71 Locker 1999, 342–4.
72 Turner 1999.

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for buildings was minimal, indicating post-built wooden structures, some of them large in size. The excavator suggests that one of these was a wooden Romano-Celtic temple, in Phase 4, late third century A.D.[73] The main deposits of votive material came from an artificially dug 'pond' and associated shallow pits and depressions. There was definite evidence for ritual deposition from the second century A.D., and there may have been a Christian element in Phase 6, mid-fourth century A.D. Deposition of votive material resumed in Phase 7, late fourth to early fifth century, and most of the animal bones derived from this phase (Table 13; FIG. 18).[74]

The animal bone assemblage does not differ much from non-temple sites,[75] except for the fact that bones are present in high numbers, *c*. 17,000. As at Folly Lane, the bones perhaps represent meals left by worshippers or visitors to the sacred areas. Of interest as possible sacrificial deposits, however, are the horse bones. These are present in relatively high percentages (FIG. 13), and show evidence of butchery in the Late Iron Age and in the later Roman period.[76] There were also deposits of horse crania and other articulated skeletal elements in ditches of the later Roman period, some of them in association with dog teeth.[77] The percentage of horse cranial

TABLE 13. WITHAM
(data from Luff 1999, 205)

Phase	Ox	Sheep /Goat	Pig	Horse	Dog	Red deer	Roe deer	Hare	Other mammal	Chicken
2, LIA	168	30	48	11	1	3	-	-	-	-
2.3, m-l 1st c.	731	437	107	89	1	60	-	-	-	4
3, 2nd-m 3rd c.	975	100	27	51	10	6	8	-	-	1
4, l 3rd c.	24	20	6	1	-	-	-	-	-	-
5, e 4th c.	247	24	15	30	-	9	-	1	-	3
6, m 4th c.	857	169	81	124	-	9	2	-	-	5
7, l 4th-e 5th c.	1846	262	218	397	20	43	6	1	5	17
4-7, m 3rd-5th c.	9073	1612	867	1634	186	91	15	3	5	35

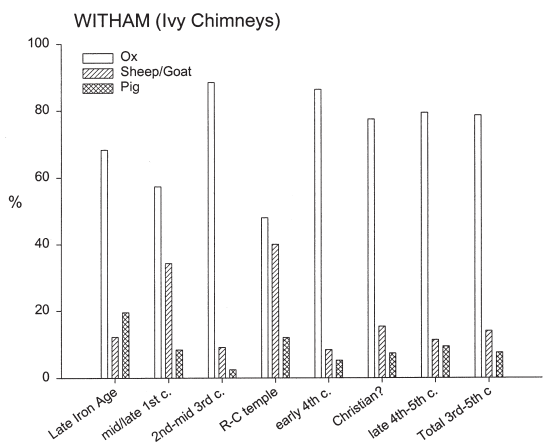

FIG. 18. Witham: bar graph of species representation by phase (data from Table 13).

73 Turner 1999, 240–5.
74 Turner 1999, 253–5.
75 Luff 1999.
76 Luff 1999, 206–7.
77 Turner 1999, 46–7.

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bones relative to other elements also rises significantly in this period to 71 per cent.[78] The presence of the horse bones is highlighted in the interpretation of the site as a manifestation of a local Trinovantian cult, rather than evidence for a more widespread cult such as Epona.[79]

CHELMSFORD, ESSEX

This temple site, on the periphery of the small town of *Caesaromagus* on the London–Colchester Roman road, presents a contradictory situation as far as the faunal deposits are concerned. Prior to the temple construction, features dating to late first to late second centuries A.D., of unknown but possibly ritual purpose, contain an assemblage that is dominated by sheep/goat, almost exclusively sheep to judge from the metrical analysis.[80] In the early post-Conquest period, the relative percentages are not radically out of line with non-religious sites (FIG. 2), but by Phase VI, mid/late second century A.D. (Table 14; FIG. 15), the high percentage of sheep/goat (70 per

TABLE 14. CHELMSFORD
(data from Luff 1992, 116)

Phase	Ox	Sheep /Goat	Pig	Horse	Dog	Roe deer	Fox	Chicken
VI, rel?, m-l 2nd c.	126	508	96	-	8	1	-	-
VII, R-C temple, l 3rd-4th c.	123	57	21	6	5	-	1	-

cent) is unusual for small towns in eastern Britain, and a ritual explanation is quite probable. After an apparent hiatus in the mid-third century A.D., a polygonal Romano-Celtic temple was constructed in the late third/early fourth century, that continued in use to the late fourth century before demolition and robbing.[81] The animal bones from this phase, however, are dominated by ox, and are quite similar in relative percentages to the normal pattern for late Roman sites in eastern Britain.[82] It is possible that the assemblage is not in fact ritual in origin, since the total number of bones is low and archaeological evidence indicates truncation of deposits down to foundation level, implying that any surface deposition contemporary with the temple had been cleared away in later phases. It is also possible that the bones represent meals eaten at the temple by worshippers.

Returning to the early Roman assemblage, Luff notes that the age-at-death for sheep favours Payne's Stage C, 6–12 months, and suggests a similar pattern of slaughter to Harlow. There is also an abundance of mandibles, and some butchery evidence for skinning, as at Great Chesterford. Horn-cores are low in number and appear to have been deposited elsewhere. It is also likely that skulls were deposited in (or displayed near?) the enclosure ditches, since seven sheep/goat skulls, a dog skull, and horse bones came from these features.[83] Overall, the early Roman assemblage, although not associated with a temple structure, presents characteristics similar to Harlow, Great Chesterford, and, to a lesser extent, Uley.

78 Luff 1999, 206.
79 Green 1999, 255–6.
80 Luff 1992, 116–18.
81 Wickendon 1992, 32–43, 130.
82 King 1984, figs 4 and 7.
83 Luff 1992, 118–22. See note 10 for reference to Payne's methodology.

SPRINGHEAD, KENT

The rural sanctuary at Springhead consisted of several Romano-Celtic temples in a precinct on the London–Canterbury Roman road, focused on the nearby spring of the river Ebbsfleet. Recent and on-going excavations around the spring have revealed a Late Iron Age and Roman period ritual site with animal burials in pits, ritual areas, and viewing platforms.[84] The earlier excavations of the Romano-Celtic temples were undertaken in the 1950/60s and do not have quantified bone reports. However, from Temple 1, a few cattle, sheep/goat, and chicken bones were recovered, mainly from the rubble over the temple.[85] The association of the temple precinct with infant burial and possible infant sacrifice[86] may imply rituals linked to human fertility that did not include other species in the ritual activity to any significant extent.

NETTLETON, WILTSHIRE

Nettleton is a settlement on the Fosse Way Roman road between Bath and Cirencester, dominated by an unusual and complex octagonal Romano-Celtic temple and precinct, dedicated primarily to Apollo Cunomaglos. The cult appears to have had a healing function associated with water, as the temple is immediately adjacent to a small stream where the Roman road crosses it.[87]

Animal bones were recovered from the excavations, which took place 1956–71, but unfortunately have not been spatially differentiated, so there has been mixing of the bones from the shrine area and the rest of the settlement. Nevertheless, the figures from the largely late Roman (third/fourth-century A.D.) assemblage indicate a higher than expected percentage of sheep/goat (Table 15). Hall noted a high percentage of immature sheep bones (goat not being mentioned by him), together with a high proportion of forelimbs.[88] This may reflect a ritual component within the overall assemblage. It is possible that some sacrifices of young ovicaprids took place, at a shrine largely focused on an aquatherapeutic cult.

TABLE 15. NETTLETON
(data from Hall 1982)

Ox	Sheep /Goat	Pig	Horse	Red deer	Small mammal	Birds	Human
180	263	27	8	11	29	37	239

BATH, NORTH SOMERSET

Probably the best-known religious site in Roman Britain, Bath is a little disappointing in terms of its animal bone data. Excavations in the temple precinct produced *c.* 16,000 bones, mainly from levels above the floors of the courtyard. Period 5, fourth to sixth centuries A.D., yielded the greatest number (Table 16; FIG. 15). In nearly all respects, the assemblage seems to be typical of non-religious sites in the late Roman period, and Grant concludes that the bones are probably

84 Andrews, pers. comm.; Harker 1980, fig. 12.1.
85 King, J.E., 1959.
86 Scott 1999, 86–8; Harker 1980, 288.
87 Wedlake 1982, 1–3.
88 Hall 1982, 178.

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TABLE 16. BATH, PHASE 5, FOURTH–SIXTH CENTURIES A.D.
(data from Grant 1985, microfiche 3, frames D2-3)

Ox	Sheep/Goat	Pig	Horse	Dog	Other mammal	Birds
2092	1170	766	14	60	31	217

domestic refuse rather than the remains of ritual activity.[89] The late date of the assemblage coincides with maintenance of the temple complex, but also its gradual decline and decay.[90] Unlike earlier periods, i.e. the temple's *floruit* in the late first to third centuries A.D., material was being allowed to accumulate within the precinct, which suggests that the use and deposition of faunal remains was not important or encouraged when the temple was in full operation. Only with the decline of the site did practices change, and the Period 5 'domestic' assemblage accumulate. This may represent remains of meals, etc., left by visitors to the cult centre.

LYDNEY, GLOUCESTERSHIRE

The rural sanctuary at Lydney, situated within an old Iron Age hillfort within sight of the river Severn, has been excavated several times over a long period of time. Recent excavations established its chronology as being late third to mid-fourth century A.D., but unfortunately the published report does not comment on the faunal remains.[91] This is possibly due to their low numbers. The excavations of the 1920s yielded many bones of ox, pig (including several very young individuals), sheep/goat, horse, chicken, red deer, and fish, noted chiefly from the prehistoric and later Roman restructuring of the ramparts of the hillfort. From the temple itself only the remains of cattle from the structure of one of the secondary inserted walls was specifically mentioned, and it is unclear how many animal bones came from the temple and its precinct.[92] The site has been interpreted as a healing shrine, with provision of a hostel for pilgrims. It seems from the material culture associated with the site that many of the finds (apart from coins, figurines, and more obvious ritual objects) had a 'domestic' nature, probably associated with the hostel and its guests. The animal bones from the site perhaps fit into this context rather than a specifically ritual or votive interpretation.[93]

PAGANS HILL, CHEW STOKE, NORTH SOMERSET

The Pagans Hill octagonal temple and its precinct are important architecturally, but have not yielded a significant assemblage of animal bones. The site is of late third- to fourth-century A.D. date, and renewed excavations in 1986 revealed a deposit of bones on the slope *c*. 20 m to the south of the temple. Cattle bones dominated this small assemblage of *c*. 200 bones, and Gilchrist

[89] Grant 1985, 164–9, 172, microfiche 3, frames D2–3. Henig (1989, 224) considers the bone assemblage to be votive in nature, on the basis of the preponderance of female ox bones, linked to the female deity, Sulis-Minerva. However, most cattle assemblages are dominated by female remains, where this can be ascertained (because of the nature of cattle herd structure and husbandry), so there may not in fact be any ritual significance to the assemblage.

[90] Cunliffe and Davenport 1985, 66–75, 184–5.

[91] Casey and Hoffmann 1999; for the earlier excavations see Wheeler and Wheeler 1932, 1–3, 22ff. and Casey and Hoffmann 1999, 81–2.

[92] Wheeler and Wheeler 1932, 6, 9; Watson 1932.

[93] The pottery and glass reports in Casey and Hoffmann 1999 and Wheeler and Wheeler 1932 do not have any obviously non-domestic characteristics.

considered it to be domestic in nature, being typical of many late Roman sites.[94] The bones may, therefore, represent meals eaten by visitors or worshippers. The excavators remark on the clean state of the temple and its immediate surroundings, especially the well to the west. This appears to be a result of the cult practices at the temple, which did not involve deposition in the ground to any extent. It is therefore possible that the temple was associated with a healing cult, and a link to Apollo is suggested by Boon on the basis of the dog sculpture found there.[95]

THE MITHRAEA AND OTHER EASTERN CULT PLACES

WALBROOK, LONDON

This well-known mithraeum in the heart of Roman London was excavated under difficult circumstances, and the recovery of faunal remains is a tribute to the skill of the excavators. The initial structure (Phases I–II, Floors 1–4), dated A.D. 240/50 to early fourth century, is accepted by all commentators to be a fine, if not entirely typical, example of a Mithraic temple.[96] In Phase III (Floor 5), however, it is possible that the cult changed, and Henig, in particular, has proposed that Bacchus became the primary focus of worship.[97] The site was used in this altered state during the early to mid-fourth century (Phases III–IV, Floors 5–9), until eventual abandonment in the late fourth/early fifth century A.D.

The animal bones support the change in use, to a certain extent (Table 17). They were recorded in individual groups,[98] so that it is possible to see the deliberate deposition of what were apparently the remains of ritual meals (or detritus from other ritual practices). They are not always in their primary deposits, however, but in some cases seem to have been incorporated into constructional layers for the successive floors and features of the temple. In Phases I and II, chicken bones from adult individuals were the most common, followed by pig. Male chicken were almost exclusively represented, to judge from the surviving tarsometatarsi.[99] Another significant avian bone from this period of the temple is a wing bone of a raven (*Corvus corax*), from Floor 3 (CB353) of the nave,[100] which can possibly be linked to the mithraic grade of the Raven. In terms of spatial distribution in the temple, burnt bones, usually of chicken, occur in the apse but not elsewhere.

By the later periods, the rank order of species is the same (except for ox now being more common than sheep/goat), but there is less emphasis on chicken, while pig and ox contribute significantly more remains. The pig bones are predominantly cranial and from the fore-limb, and several of the specimens were of very young, even neonate, individuals. This suggests specific offerings or meals of selected parts of the carcass. Also of interest are the bones of duck (*Anas* sp.) from both early and late periods of the temple. This species was only found within the building, and the remains are considered to be ritual depositions.[101] By contrast, material from outside the temple included a number of cattle horn-cores, which were interpreted as the remains of horn-working in the vicinity of the building, consistent with the debris of manufacturing found in the area around the temple.[102]

94 Gilchrist 1989, 359.
95 Rahtz and Watts 1989, 361; Boon 1989.
96 Shepherd 1998, 220–7.
97 Henig 1998; Shepherd 1998, 227–9.
98 Macready and Sidell 1998, 208–11, tables 33–42.
99 Macready and Sidell 1998, 213–14.
100 Macready and Sidell 1998, 214; see Clauss 2000, 133 for raven bones from a pit outside the mithraeum at Wiesloch, near Heidelberg.
101 Macready and Sidell 1998, 212, 214.
102 Macready and Sidell 1998, 211–12.

TABLE 17. WALBROOK MITHRAEUM, LONDON
(data from Macready and Sidell 1998, tables 33–42)

Total bones from in and near the mithraeum

Ox	98	Chicken	192
Sheep/Goat	28	Duck (dom.)	4
Pig	58	Duck sp.	2
		Goose sp.	1
		Scolopax rusticola	1
		Corvus corax	1

Individual deposits (definitely from the mithraeum)

	Ox	Sheep /Goat	Pig	Chicken	Duck
Construction layer of temple (CA149)	-	-	1	25	-
Hole in floor surface 2 (CB354)	2	1	5	60	-
Beneath floor 3 (CB358)	1	3	2	9	-
Gully related to floor 3 (CB347)	1	2	3	20	3

Individual deposits (post-dating possible change of use of the mithraeum)

	Ox	Sheep/ Goat	Pig	Chicken	Duck	Goose
Beneath floor 6 (CB344)	2	-	3	8	2	-
Beneath floor 7 (CB345)	2	2	2	5	-	-
Beneath floor 8 (CB320)	4	-	5	4	-	1
Beneath stone block in dais (CB288)	-	-	2	5	-	-
Beneath stone block in dais (CB292)	2	3	5	15	-	-

The animal bone deposits, therefore, suggest a change in emphasis in the rituals at the temple, particularly in the diminished use of chicken. This would offer some support to the hypothesis of a change in cult in the early fourth century A.D. Ritual meals of pork, beef, or chicken evidently continued, however, which would be consistent with the proposed Bacchic use.[103]

CARRAWBURGH (HADRIAN'S WALL), NORTHUMBERLAND

The mithraeum at Carrawburgh, just to the south of the Hadrian's Wall fort, was very well preserved due to the deliberate water-logging of the site in the late Roman period.[104] The temple was built early in the third century A.D. (Phase I), enlarged not long after construction (Phase II), and continued with some alterations until the end of the century. A fire and possible deliberate destruction followed, and then it was reconstructed for renewed use (Phase III) as a mithraeum until the mid/late fourth century A.D.[105]

Bones were noted by the excavators in several specific locations (Table 18). The floor of the *narthex* of Phase IIa (early/mid-third century A.D.) had many bones of pig, sheep/goat, and ox on it, all from young animals. The pig bones were from the cranium or fore-limb, for the most part,

[103] Henig 1998, 230.
[104] Richmond and Gillam 1951, 1–2, 43–4.
[105] Richmond and Gillam 1951, 4–44.

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TABLE 18. CARRAWBURGH MITHRAEUM
(data from Fraser 1951; Platt 1951)

	Ox	Sheep /Goat	Pig	Chicken	Goose
Narthex, Phase IIA	2	7	13	-	-
'Ordeal-pit', Phase IIB	-	2	-	-	-
Nave, Phase IIC	-	3	5	-	-
Ante-room, Phase IIC	-	2	6	-	-
Bench revetments, Phases II and III	-	-	3	'many'	8
Nave, Phase III	1	3	5	-	-
Deposit beneath altars, Phase III	-	-	-	cranium	-

as at Walbrook, and were considered by the excavators to be the remains of ritual meals.[106] In the next phase, IIb (mid-third century A.D.), the floor of the nave was covered with heather (*Calluna vulgaris*), in amongst which were leg and wing bones of chicken, interpreted as ritual offerings, either general sacrifices to Mithras or as part of an initiation ceremony and subsequent ritual meal.[107] The nave in Phase IIc (late third century A.D.) contained a few bones of young pig and sheep/goat, similar to Phase IIa, and the wooden wattlework supporting the benches on either side of the nave contained remains of chicken, adult male where identifiable, goose and pig. The bird species were interpreted as foundation sacrifices for the reconstruction of the benches, whilst the pig bones (three vertebrae) were perhaps fortuitous.[108] This practice continued in the wattle benches of Phase III (early to mid-fourth century A.D.), and there was also the deliberate deposition of the head and neck of a chicken, together with charred pine-cone (*Pinus pinea*), in a pottery vessel carefully positioned within the foundation rubble for the altars at the apse end of the temple.[109] Finally, after the collapse or partial demolition of the mithraeum in the late fourth century A.D., domestic refuse with a large quantity of bones of an entirely different character, mostly ox and sheep/goat, was dumped in the ruins of the building.[110] This emphasises the highly specific nature of the ritual deposits that accompanied the shrine when it was in use. This took the form of the remains of ritual meals or sacrifices on a small scale, but carried out with deliberation, and clearly of significance to the participants involved.[111]

VERULAMIUM (ST ALBANS), HERTFORDSHIRE — 'TRIANGULAR TEMPLE'

This enigmatic temple lies on the south-eastern outskirts of the Roman town, at a fork in the road system, which dictated the trapezoidal shape of its enclosure. It has different interpretations according to which aspect of its material record is considered. Architecturally, it is a variant on the Romano-Celtic form, with a *cella* and ambulatory set on the north-west side of the enclosing courtyard.[112] However, the artefacts and depositions within the courtyard suggest an eastern cult, possibly Cybele and Attis.[113] These finds include pine-cones of *Pinus pinea*, small votive

106 Richmond and Gillam 1951, 12; Fraser 1951.
107 Richmond and Gillam 1951, 16–18.
108 Richmond and Gillam 1951, 21–4; Fraser 1951; Platt 1951.
109 Richmond and Gillam 1951, 35–6; Platt 1951; Fraser 1951.
110 Richmond and Gillam 1951, 40.
111 It is clear from the surviving evidence that the mithraeum at Caernarfon, Gwynedd, was similar. Bones did not survive because of the acidic soil conditions, but in Phase I there were some calcined bones within the building, including a sheep/goat metacarpal (Boon 1960, 146).
112 Wilson 1975, 24–5; Niblett 2001, 110.
113 Wheeler and Wheeler 1936, 113–20; Lewis 1966, 95–6; Henig 1984, 113, 159.

pots and incense burners, charcoal and animal bones. The bones are not quantified or separately studied, but are listed as burnt bones of small birds (Pit 1), burnt bones of pig, a mustelid, a small and large bird (Pit 2), burnt bones of a small bird and a pig jaw (Pit 4), and many bones of sheep/goat and ox, some juvenile and many calcined, and small birds (Pit 9). Finally, a complete ox skull was carefully positioned in a tile-lined cist next to an altar-base in the courtyard.[114]

The character of the faunal remains is sufficiently different from Romano-Celtic practice (as outlined above) to consider the assemblage to be associated with an eastern cult. The presence of *Pinus pinea* would reinforce this interpretation, and it is probable that rituals involving burnt offerings of birds, pig, and other mammals, together with the burning of pine-cones, formed a significant element of the cult. If the cult is Cybele and Attis, as suggested above, the best parallel, indeed the only one in the northern provinces, comes from Arras (Pas-de-Calais), where a probable *collegium* with votives to this cult also contained a pit with bones and other material. The bones were mainly pig, hare, and sheep/goat, together with chicken, goose, and other birds.[115] Birds accounted for 25 per cent of the assemblage, which is unusual. There were also many foot bones amongst the mammals, and many very juvenile pig bones. The high number of pig and birds appears to correspond with the Triangular Temple evidence, but the Arras pit did not have evidence of burnt bones, which is a significant difference. The attribution to Cybele and Attis must therefore remain open, although the suggestion of an eastern cult of some sort is still the most likely interpretation on the basis of the faunal remains.

The problem of the Romano-Celtic architectural form remains, however, since it is not like the usual shrines associated with eastern cults. A possible resolution of the problem is to suggest that the temple was originally Romano-Celtic, of early second-century A.D. origin over possible earlier, pre-Roman and mid-first-century A.D. ritual material.[116] The local cult was either worshipped alongside an eastern cult introduced during the second century, or the latter took over the temple site not long after the buildings were constructed. Certainly the eastern cult was dominant in the surviving depositional evidence.

ROCESTER, STAFFORDSHIRE

This site is not clearly religious in nature, but is included because the excavators suggest that it has unusual characteristics. It lies in a ditched enclosure adjacent to a road leading south from the nearby Roman fort, and is within its *vicus*. The main phase is dated *c*. A.D. 90–130, contemporary with the fort, and consists of a simple two-celled building, 8 m by 6 m, aligned east–west, and various pits.[117] The excavators postulate a religious interpretation largely on the basis of the presence of a patera handle, an altar fragment, and the remains of stone pine (*Pinus pinea*), date (*Phoenix dactylifera*), and grape (*Vitis vinifera*), as well as apparent structured deposition of the material assemblage in the pits, ditches, and elsewhere.[118] This may be the case, and if so, the site's religious affinities appear to lie more with an eastern cult than a local deity. Certainly the plant remains fit with those found at Walbrook, Carrawburgh, Mainz ,and elsewhere.[119]

The animal bones, unfortunately, do not either assist or hinder the religious interpretation. All come from secondary deposits in pits and ditches, so there is no opportunity to detect individual

[114] Wheeler and Wheeler 1936, 117–19, 190–3, pls LIX, LX A, CX B, CXII B; Henig 1984, figs 72, 79.
[115] Lepetz 1990; 1996, 28; Jacques *et al.* 2002.
[116] Haselgrove and Millett 1997, 291; Niblett 2001, 63, 78.
[117] Ferris *et al.* 2000, 5, 8–9, 72.
[118] Monckton 2000; Ferris *et al.* 2000, 72–82.
[119] Shepherd 1998, 155, 161; Blackburn 1951; Zach 2002; also Witteyer and Hochmuth 2002. A funerary interpretation is also possible; see Becker *et al.* 1999, 248–54.

TABLE 19. ORTON'S PASTURE, ROCESTER
(data from Hammon 2000)

Ox	Sheep /Goat	Pig	Horse	Dog	Red deer	Rodent	Chicken	Birds
129	45	28	1	2	1	2	3	3

offerings, as at Walbrook or Carrawburgh. The species found conform largely with the pattern expected of a military site in Britain (Table 19), and Hammon does not press a religious interpretation on the assemblage.[120]

DISCUSSION

In order to discuss the foregoing collection of evidence, it seems appropriate to group them according to major characteristics (Table 20).

Group A sites have high numbers of animal bones, and relative proportions of species that are distinctive and unlike non-temple sites. There is often evidence of sacrifice or ritual killing at certain ages, implying seasonal offerings or specific festivals. The selection of species for sacrifice was clearly a significant part of the cult, and may be linked in some cases to the deity venerated, e.g. Mercury at Uley associated with goat, sheep, and chicken. Harlow, Great Chesterford, Lowbury, and Chelmsford (early Roman) have high sheep numbers, and in some respects are similar, but on present evidence it would be premature to suggest that they were dedicated to the same deity. The same applies to the similarities between Hayling Island and Wanborough, characterised by high sheep and pig numbers. An important aspect of Group A, indeed all the groups, is that domestic species are in the vast majority, implying that the selection of species for most rituals came from readily available stock, rather than wild species, which would have been more difficult to acquire.

Some of the sheep and goat assemblages are dominated by young animals. Legge has suggested that this represents seasonal sacrifice patterns, usually in the autumn, but sometimes also in the spring, particularly at Uley, Great Chesterford, and Harlow.[121] Similar juvenile patterns are also seen at Hayling, Lowbury, and Chelmsford. Although the methodology of tooth wear and eruption for assessment of age-at-death has its limitations, and is not really precise enough to pinpoint a particular month or period when the animals were killed, nevertheless the peaks at Payne's stages C and D, or around birth,[122] are striking, and at the very least indicate a strong preference for lambs or kids. Given the probability that most of the young ovicaprids would have been born at the same period, i.e. spring, under normal circumstances, then the large numbers of juvenile bones at these temple sites support Legge's hypothesis of a common period for their sacrifice. The numbers also suggest communal sacrifice, perhaps at festivals.

It is tempting to see an aspect of Iron Age tradition in the high percentages of sheep/goat bones at most of these temples. As outlined in the introduction, high sheep/goat percentages are a feature of Iron Age sites in Britain, particularly in Wessex, and it could be the case that Romano-Celtic religion preserved this into the Roman period, despite the general shift in dietary

[120] Hammon 2000, 65.

[121] Legge and Williams 2000. Young cattle were detected at Elst (90 per cent killed in their second year) and Empel in the Netherlands (Lauwerier 2004, 68). This may also represent seasonal sacrifice, but the method of ageing was not precise enough to be certain of the time of year.

[122] See note 10.

TABLE 20. TEMPLES IN ROMAN BRITAIN WITH ANIMAL REMAINS

Site	Type	Total bones	Characteristics
Group A			
Uley	Rom.-Celt.	232322	High numbers of goat (sheep outnumbered 4:1), also chicken; large dumps of bones in temple precinct; probable seasonal sacrifice for goat and sheep; high proportion of male goat and sheep.
Harlow	R-C	3671	High numbers of sheep, mainly juvenile; probable seasonal sacrifice; possible evidence for skinning.
Gt Chesterford	R-C	4000 +	High numbers of juvenile and very juvenile sheep; probable seasonal sacrifice; possible evidence for skinning.
Hayling Island	R-C	7280	High numbers of sheep, pig; deposition mainly in SE sector of temple area; mainly juvenile in IA phase; possible seasonal sacrifice; mainly meat bones (sheep) and mandibles/crania (pig).
Wanborough	R-C	880	High numbers of sheep/goat, pig; some calcined bones.
Chanctonbury	R-C	5484	Pig, sheep and ox crania in specific deposits; good evidence for zonation of deposition; dump of oysters.
Lowbury	R-C?	588	Relatively high numbers of sheep, mainly juvenile or very juvenile; dump of oysters.
Chelmsford	R-C	3192	Relatively high sheep/goat in early phases, but similar to RB average in later phases; mainly juvenile sheep/goat; probable seasonal sacrifice.
Group B			
Bancroft	R-C	?	Deposits of goat and pig skeletons in and near circular shrine.
Brigstock	R-C	138	Deposits of sheep/goat and ox in floors of temples.
Henley Wood	R-C	246	Relatively high numbers of sheep/goat; partial skeletons in individual deposits.
Lamyatt Beacon	R-C	?	Burials of red deer antlers; other bones probably domestic or meals.
Springhead	R-C	?	Animal burials adjacent to spring site.
Group C			
Folly Lane	R-C + mausol.	14099	Relatively high horse, dog and chicken numbers; otherwise similar to RB average.
Bancroft	R-C + mausol.	?	Relatively high horse and dog numbers; range of wild species present.
Witham	R-C?	17303	Relatively high horse numbers; otherwise similar to RB average.
Group D			
Bath	R-C/class.	c. 8000	Similar to RB average – possibly not ritual deposits; few bones from main period of temple and baths.
Lydney	R-C	?	Relatively few bones from temple precinct, but evidence uncertain.
Nettleton	R-C	555	Relatively few bones; higher than expected sheep/goat; many juvenile sheep.
Springhead	R-C	?	Few bones from temple precinct; human infant skeletons predominant.
Pagans Hill	R-C	205	Few bones from near temple; probably domestic in nature.
Group E			
Walbrook	mithraeum	445	Deposits of chicken and pig within temple; later phases have relatively fewer chicken, and possible change to a different eastern cult.
Carrawburgh	mithraeum	60+	Deposits of chicken and pig within temple.
Verulamium, Triangular	eastern?	?	Deposits of pig, sheep/goat, ox and birds in temple courtyard.
Rocester	eastern?	202	Similar to RB average – possibly not ritual deposits.

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patterns towards more ox and pig. This is essentially a socio-cultural explanation, however, that may not be so easy to sustain in more purely religious terms. Firstly, the degree of selectivity of species is often much higher at the temple sites than at the average Iron Age site, and secondly, there are several temples in Gaul and Germany that have high sheep/goat numbers, which cannot be referred back to a local Iron Age cultural memory. Of interest in this respect is the dump of religious material at Karden (Kr. Cochem-Zell) in the Mosel valley, where a high percentage of sheep/goat (47.3 per cent of ox, sheep/goat, and pig, n = 2,821) for a German site, can be linked with an age-at-death suggesting 3–4 or 5–8 months.[123] This seems very similar to the British Group A sites, and it is likely that, like them, some sort of Autumn and/or Spring festival was held, involving the sacrifice of young sheep/goat. The Karden site is adjacent to an access route to the hilltop sanctuary on the nearby Martberg, to which pilgrimages may have taken place.[124] Other temple sites with high sheep/goat numbers include Empel (Noord-Brabant), Dalheim (G-D de Luxembourg), Tintignac (Corrèze), and Lioux (Vaucluse).[125] It seems likely, therefore, that cult practices had a significant role to play in the selection of animal species for sacrifice and offering. This is not to say, of course, that social constraints and the limitations of animal husbandry did not affect the choice of species and their availability, but that religious criteria were the primary consideration in the establishment of rituals at the temple sites.

Chanctonbury has been placed in Group A because of the strong evidence for sacrifice of pig, but it also stands out for another reason, namely the zonation of deposition. This takes the form of pig within a subsidiary cult building, ox and sheep/goat in the ditch surrounding the temenos, and oyster behind the main temple. Such depositional characteristics have not yet been detected elsewhere in Britain, but are a feature of some of the Gallic temples, particularly in their Iron Age phases, e.g. Gournay-sur-Aronde (Oise) or Bennecourt.[126] The best parallel is Fesques (Seine-Maritime), where the outer enclosure ditch has a strong preponderance of cattle bones, whilst the inner enclosure and temple structures have mainly pig bones, but very few cattle.[127] It should, however, be noted that structured deposition within pits and shafts is seen elsewhere in Britain, both at temple sites, e.g. Great Chesterford, Folly Lane, Muntham Court, and Jordan Hill, and elsewhere, e.g. Newstead. This, too, has parallels in Gaul, at temple sites such as Les Mersans, Argenton, and in other pits and shafts.[128]

In general, Group A consists of large and well-established Romano-Celtic temples, often with Iron Age origins. They usually had a precinct or *temenos* that could house the sacrificial activity and, presumably, the worshippers. All except Chelmsford are rural sites, often in relatively isolated positions.

Group B is smaller than Group A, and may in fact be a sub-group of the latter. It is distinguished by specific deposits of bones, often articulated limbs or part/whole skeletons. These are within the temple buildings in the cases of Bancroft and Brigstock, or in the precinct in the cases of Henley Wood, Lamyatt Beacon, and Springhead (spring site). The deposits appear to represent individual acts of votive deposition, presumably following personal offerings and sacrifices,

123 Benecke 1999, 159, 163.

124 Benecke 1999, 158; Horne and King 1980, 449–50.

125 Discussed in Nickel 1999, 168–70; Empel: Seijnen 1994; Dalheim: Schulze-Rehm 2000; Tintignac: Maniquet 2004, 102; Lioux: Borgard 1994, n. 5. It should be noted that Lioux is in an area of high sheep/goat numbers (King 1999, 177, fig. 6) and so may in fact reflect a local situation in south-eastern Gallia Narbonensis.

126 Méniel 1985, 131–4; Bourgeois 1999, 22–4.

127 Méniel 1997, 93. At Les Bolards, Nuits-St-Georges (Côte-d'Or), ox bones were most frequent in the courtyard to the south-east of the temple, whilst pig predominated in the hemicycle to the west; Poulain 2001, 402–5.

128 Muntham Court: see note 41. Jordan Hill: Drew 1931; Isserlin 1994, 49–50. Newstead: Clarke 1999; Ross and Feachem 1976. Argenton: Rodet-Belarbi 1994. Shafts and pits: Lepetz 1996, 28; Petit 1989; Ross 1974, 50–4; Ross 1968. Note also Ashill, Norfolk, which may be a rectangular temenos with shafts within it; Gregory 1977; Isserlin 1994, 51–2.

rather than the mass deposition of animal remains associated with Group A. The temple sites were probably not linked with festivals involving animal sacrifices in any great numbers, with the result that overall numbers of animal bones are lower, and the individual depositions can be distinguished. The bones found at these sites also suggest that some remains represent the rubbish of meals by worshippers or visitors, but it should be noted that all of them have assemblages that are dominated to a greater or lesser extent by sheep/goat, thereby linking them with one of the distinguishing features of Group A. The implication is that there was a degree of selectivity even in the relatively small numbers of animals and meals/food offerings brought to these sites.

Although partial skeletons are found at these sites, there is little evidence so far from Britain for whole animal deposition after sacrifice, as seen in Gaul at various sites, e.g. Vertault (Côte-d'Or), where *c*. 40 horse and *c*. 200 dog skeletons, all males where the sex could be ascertained, were carefully buried in mid-first-century A.D. pits under the site of a Romano-Celtic temple complex.[129] The best parallel for this practice in Britain is at Cadbury (Somerset), where pits adjacent to the first-century A.D. rectangular building N5, a presumed temple, contained cattle skeletons: two complete adults and at least thirty calves in more fragmentary condition.[130] Even at Cadbury, however, these burials are more akin to the structured deposits in Iron Age and Romano-British sites, than the highly organised depositions at Vertault.[131]

Group C consists of three sites linked by the relatively high representation of horse. Two of these, Folly Lane and Bancroft, are temple-mausolea, and therefore there may be a chthonic element at these temples reflected in the faunal assemblages. A hunting motif may also be present, linked with the high status of the temple-mausolea: at Folly Lane both horse and dog are well represented, and at Bancroft horse, dog and a range of wild species, including red deer, fox, and hare. This aspect has also been seen in aristocratic La Tène burials in Gaul, e.g. Tartigny (Oise), and the species there may be grave offerings to celebrate an activity enjoyed by the deceased.[132] The two British sites, particularly Folly Lane, perhaps saw the development and transformation of burial rituals into commemorative cults, and thus the continued deposition of species linked with the original burial.

One of the notable features at Folly Lane is the deposition of horse in the ditch of the enclosure, which immediately brings to mind the similar situation at Gournay.[133] The analogy should not be pressed too far, since in other respects Gournay is very different from Folly Lane, but there is another Gallic site, Vertault, which is of interest because of its high horse and dog numbers. The site has been discussed above,[134] and it is possible that Vertault and Folly Lane may have had similar acts of sacrifice, although the subsequent depositional practices were markedly divergent. The temple at Vertault was close to a zone of human burials, dating to the mid-first century A.D. and contemporary with the animal burials. It appears that, like Folly Lane, which dates to the same period, a chthonic element was significant. Another parallel is the late second/early third-century shrine at Cambridge, which had carefully positioned burials of a horse, dogs, and a bull.[135] The deposition of horse and dog skeletons or bones may be linked to the notion of the divine hunt, regarded as a metaphor for death and rebirth.[136]

[129] Lepetz and Méniel 2002, 52–3; Méniel and Jouin 2000; Méniel 1992, 47–90.
[130] Barrett *et al.* 2000, 169–78; Hamilton-Dyer and Maltby 2000, 279, 281–2.
[131] See note 128 above, and associated text. Wellington (2002, 7, 9–10) suggests that the deposits at Vertault mark a phase of large-scale episodic rituals in La Tène C, before the growth in individual, small-scale offerings later in the Iron Age.
[132] Méniel 1992, 113–20; see also Lepetz 1996, 148–53; Green 1992, 124–5.
[133] Méniel 1985; 1992, 63–7.
[134] See note 129.
[135] *Current Archaeology* 61, 1978, 57–60; Green 1992, 110.
[136] Green 1992, 60–5, esp. 65.

At Witham, where a chthonic aspect appears not to be present, the high representation of horse was linked to Epona by the bone analyst, but Green, in her discussion of the religious nature of the site, preferred a local cult.[137] As a temple site, Witham is hard to characterise because of the limited structural evidence, but obviously saw a lot of ritual activity, to judge from the quantity of votive offerings. What is also apparent for this and the other Group C sites, is that the other animal bones, often quite numerous, are less significant than those of horse and dog discussed above. Both Folly Lane and Witham probably had many visitors and worshippers at the temples, who were perhaps present at the time of festivals or processions from the adjacent towns. The bones are very similar to domestic refuse, and probably represent meals or feasts consumed within the temple precincts rather than overtly votive offerings.

Group D is more difficult to comment on, largely because the animal bones at these temples appear not to be significant, or only marginally so in the case of Nettleton. Bath in particular is interesting for the lack of faunal evidence from the main period of the temple's use. The conclusion must be drawn that either animal sacrifice was not practised, or that animal remains were deposited outside the precinct of the temple and baths, or that they were carefully cleared away. The first hypothesis seems most likely, since the cult was almost certainly dedicated to healing humans. In these circumstances, the presence of potentially disease-carrying animals within the temple area, amongst sick persons, would be an obvious risk. It seems more likely that non-animal offerings were made at the altars in the temple precinct.

The link between all the temples in this group is their association with human healing or fertility. Nodens at Lydney, Sulis Minerva at Bath, Apollo Cunomaglos at Nettleton, probably Apollo at Pagans Hill, and unknown deities linked to infant death/sacrifice at Springhead have all been interpreted as therapeutic cults, usually associated with water.[138] In Gaul, healing shrines, such as Sources-de-la-Seine (Côte-d'Or) and Chamalières (Puy-de-Dôme), also have little reported evidence for animal bones, but they do have sculptures or figurines of animals, such as dogs, horses, bulls, and birds. Aupert suggests that these images represent animals brought to the site for healing, in much the same way as the human images appear to represent people seeking cures.[139] Two sites, Chamalières and Halatte (Oise), have in fact yielded sculptures of horse limbs, similar to the parts of the human body from the healing shrines.

The possibility that healing shrines had a veterinary aspect seems preferable to Deyts' suggestion that the animal representations at Sources-de-la-Seine, particularly of dogs, were images of animals offered to the deity, and thus presumably sacrificed.[140] The animal bones from this site do not support this, and seem wholly domestic in character, reflecting meals eaten by pilgrims and officiants at the shrine: dog bones are in fact quite rare in this assemblage.[141]

It remains to be seen whether any of the British temples had a veterinary healing element in their cult practices. Certainly the low numbers of faunal remains at Bath and the other healing shrines suggests, at the least, a desire to exclude animals, and may reflect a respect for the lives of animals in the context of cults dedicated to (human) healing.

In *Group E*, individual deposits are the main characteristic. At the two mithraea that have animal remains recorded, Walbrook and Carrawburgh, small groups of chicken and pig bones

[137] Luff 1999, 222–3; Green 1999, 255–6. A local cult is also suggested for the large deposit of horse bones (more than 10,000) at Longueil-Sainte-Marie (Oise), where much smaller numbers of dog bones and a few of other species were also found (Gaudefroy and Lepetz 2000).

[138] Green 1986, 153–66; Henig 1984, 152, 159–62.

[139] Aupert 1992, 73. See other sections in the same volume for brief descriptions of several healing sanctuaries.

[140] Deyts 1994, 10–11.

[141] Poulain 1983. The basic statistics are ox 293, sheep/goat 582, pig 801, horse 23, dog 1, chicken 19, red deer 45, pig (wild) 20, fox 1, hare 2. The domestic species are represented by a mixture of parts of the body and a generally adult age-at-death.

were found. A different form of ritual deposition was clearly taking place, compared with the Romano-Celtic temples, one which can probably be linked to specific ritual actions. In this respect, the presence of a raven's wing at Walbrook is noteworthy, since it may be associated with the grade of the Raven.[142]

The literature for mithraic temple sites indicates marked similarities of practice, as far as the faunal remains are concerned.[143] Künzing (Niederbayern), Martigny (Valais), and Orbe (Vaud) have high percentages of chicken and pig, and similar depositional activity to the British sites. Septeuil (Yvelines) also has the same predominance of species, with many burnt bones; the pig remains being largely juvenile and the chicken remains adult males. Tienen/Tirlemont (Brabant-Vlanderen) consists largely of chicken bones, adult males for the most part, with a lower representation of pig and sheep/goat, mainly juvenile. At this site, the age-at-death of *c.* 2/3 months for the mammal species has led the excavator to suggest slaughter in June/July, possibly at the summer solstice. She also interprets the assemblage as the result of a single episode, implying some sort of festival or mithraic banquet.

This raises the principal difference between the continental mithraea and the British sites, which is the large total of bones at these sites compared with relatively small numbers at Walbrook and Carrawburgh. Tienen/Tirlemont has *c.* 12,000, possibly deposited in one event, Septeuil has *c.* 14,000 from a period of activity of thirty years, and Martigny has over 10,000. Such high numbers seem to be the result of intense episodes of ritual deposition, probably after feasts or other rituals. It is also possible that high numbers of bones imply significant numbers of adherents to the cult at these sites. Whether the reverse is true of the British mithraea, i.e. few adherents or a lack of feasts resulting in intensive deposition of bones, remains to be seen, since it is possible that bone-rich depositional contexts are yet to be located in or near the British sites.

The other two sites in Group E only require brief discussion. The assemblage at the Triangular Temple, Verulamium, is similar in general character to the mithraea, as is its best parallel, at Arras (Pas-de-Calais), and the Isis and Magna Mater temple at Mainz.[144] It is possible that there was a common element of ritual practice at many of the temples to eastern cults, focused upon depositions of male chicken and juvenile pig, for the most part, often as burnt offerings. Remains of stone pine (*Pinus pinea*) are also a common element, presumably burnt as a form of incense, and this species was also found at Rocester. It is an important part of the evidence drawn upon by the excavator to suggest a possible temple site there, but for this site a funerary interpretation is also possible, since pine cones and exotic fruits are also found in burials, such as at the *bustum* at Xanten.[145]

CONCLUSION

The main conclusion to be drawn from this review of Romano-British temples is that some sites had a significant element of selection in the species chosen for sacrifice and ritual consumption. At temples in Group A, such as Uley, Hayling, Harlow, and Great Chesterford, animal sacrifices were probably an important part of the rituals, and the animals carefully selected. Indeed, it is possible that temple flocks and herds were maintained for this purpose, especially in the case

[142] See note 100 above and associated text.

[143] Lentacker *et al.* 2004, 86–90 provide the most recent full discussion of animal remains from mithraea. See in particular, Driesch and Pöllath 2000 (for Künzing), Olive 2002 (for Martigny and Orbe), Gaidon-Bunuel 2002 (for Septeuil), Lentacker *et al.* 2004, Martens *et al.* 2002 (for Tienen/Tirlemont). See also Vermaseren 1956/60, s.v. bones in the index; Clauss 2000, 115, 117; Kane 1975, 350.

[144] See note 115 and associated text. For Mainz, Witteyer and Hochmuth 2002.

[145] Becker *et al.* 1999, 248–54. See above, note 116, and associated text.

of Uley, where the unusually high numbers of goat stand out in a province dominated by sheep rather than goat husbandry. Alternatively, the catchment area for the temples may have been extensive, so that worshippers from a large territory contributed animals for sacrifice. This would imply a form of pilgrimage to these sites, and indeed their location, often in elevated positions or on islands, would support this. Pilgrimage also suggests specific dates or festivals for worshipping at the temples, a notion that is supported by the age-at-death evidence from sites such as Uley, Harlow, and Great Chesterford. The autumn, and to a lesser extent spring, appear to be favoured, and may, of course, correspond to *samain* and *beltain* respectively.[146]

Most of the temple assemblages consist of fragmented and butchered bones, probably the remains of sacrificial meals following acts of ritual slaughter and offering. Some sites, such as Chanctonbury, have crania and mandibles in significant numbers, however, and this can be interpreted as ritual deposition of important parts of the animal. Some of the temples also have evidence of specific acts of ritual deposition, e.g. Henley Wood, Bancroft.

The pattern of selection shows some similarities between temples, as discussed above, but the local nature of each temple's rituals is also an important factor, as borne out by the differences apparent between the graphs for each site, and also the specific details of deposition recorded at many of the temples. A traditional or accustomed set of sacrificial practices appears to have become established at several of the temples, in such a manner that, once in place, there is little change thereafter, and each site takes on its own characteristics. The continuity over long periods at sites such as Uley, Harlow, and Hayling is noteworthy.

At other temples, animals perhaps had a lesser role in the rituals, and there is little evidence of selection. This was probably particularly the case at healing shrines, where any animal sacrifices would probably have taken place in locations away from the areas used for healing humans. The two main healing shrines in Britain, Bath and Lydney, have little evidence for deposits of animal remains. Any animal remains present are more likely to represent meals consumed at the temple and its precincts. As such, they may also have had a ritualistic association, but to a lesser extent than temples where animal sacrifice was a significant component of the ceremonies.

In contrast to the Romano-Celtic temples, animal remains at the shrines of eastern cults have very different characteristics. The individual animal deposits, usually chicken or pig, appear to be linked to specific rituals within the cult buildings. The British mithraic sites have many similarities to the continental evidence, and there are likely to have been more universal ritual practices associated with these very widespread cults than the more localised rituals of the native temples.

The importance of faunal remains at religious sites in Roman Britain has been amply demonstrated by this review of the current evidence. Future excavations of temples should lay emphasis on the nature of the deposition of bones and other faunal evidence, as this can yield significant insights into the nature of their cults and ritual practices. This is underlined when the temples of Roman Britain are put into a longer-term perspective. In the Iron Age, temple sites are extremely rare until the first century B.C., so that the evidence for animal sacrifices and offerings tends to take the form of structured deposits in pits within hillforts and elsewhere. These continued into the Late Iron Age and early Roman period in ways that are only beginning to be recognised and explored. At the same time, Romano-Celtic temples emerged as a distinct architectural form, possibly, but debatably, linked with Graeco-Roman influences coming into North-West Europe.[147]

[146] See Henig 1982, 218–19; Green 1986, 15, 74; Isserlin 1994. A large deposit of animal and human bones at Gordion, Galatia, has been interpreted as a *samain* ritual on the basis of the age-at-death data for the animals; Dandoy *et al.* 2002, 48–9.

[147] See Fulford 2001; Green 2001, 39–47; Millett 1995; Hill 1995, esp. 102–5; King 1990 for discussion of these issues.

The practice of animal sacrifice at the temple sites becomes established with the emergence of the temples themselves, and we have what are probably new rituals becoming visible in the archaeological record. These form part of the range of features that make Romano-Celtic religious forms different from those of the Iron Age, and which apparently make many aspects of Iron Age religion detectable for the first time. This was a comparatively short-lived phenomenon, however, since, in Britain at least, Romano-Celtic worship was overtaken by Christian and Germanic rituals and religion by the fifth century A.D. Thus, the archaeological evidence for animal sacrifices at Romano-Celtic (and indeed eastern cult) temples in Britain is relatively rare, and the surviving evidence needs to be valued accordingly.[148]

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[148] This paper was first given at a Table Ronde on *Archéologie du sacrifice animal en Gaule romaine* at the Muséum National d'Histoire Naturelle, Paris, October 2002, and is the product of two long-running personal research interests, in animal bones and Romano-Celtic religion. The excavations at Hayling Island were the catalyst for this conjunction of interests, and I would like to acknowledge the long-term contribution of my colleagues Grahame Soffe, Martin Henig, and the late Tom Blagg. I would also like to thank William van Andringa and Sébastien Lepetz for inviting me to participate in the Table Ronde, and David Rudling, David Williams, Philip Andrews, and Richard Brewer for providing information on animal bones from sites they have been excavating.

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