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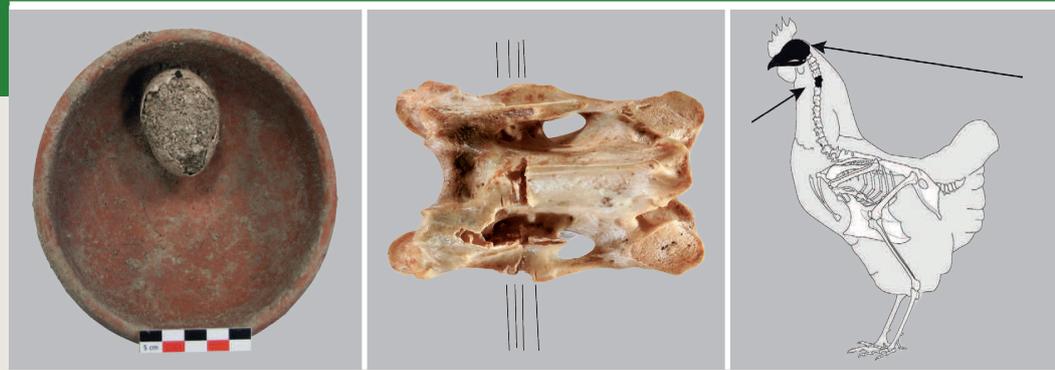
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# KOLLOQUIEN ZUR VOR- UND FRÜHGESCHICHTE 26



Sabine Deschler-Erb | Umberto Albarella  
Silvia Valenzuela Lamas | Gabriele Rasbach

## ROMAN ANIMALS IN RITUAL AND FUNERARY CONTEXTS

Proceedings of the 2<sup>nd</sup> Meeting of the  
Zooarchaeology of the Roman Period Working  
Group, Basel, 1<sup>st</sup>–4<sup>th</sup> February 2018

This volume includes a number of papers that were originally presented at the conference *Roman Animals in Ritual and Funerary Contexts*, which was held in Basel (Switzerland) from 1<sup>st</sup>–4<sup>th</sup> February 2018. The conference represented the second meeting of the International Council for Archaeozoology (ICAZ) Working Group on the *Zooarchaeology of the Roman Period*.

The articles present ritually deposited animal remains across a wide geographical range and incorporate both archaeological and zoological findings. The integration of these two strands of evidence is also one of the central concerns of the ICAZ Working Group, as in the past they have often been dealt with separately. However, it is precisely this interdisciplinary cooperation that opens up new perspectives on ritual practices in a wide variety of contexts. In this volume we see the enhancement of our understanding of ritual treatment of animals in central sanctuaries, in rural areas, at natural sites, and as part of building construction processes.

The case studies presented in this volume demonstrate how animal remains such as bones and eggshells provide information beyond diet, economy, and differences in social hierarchy. Their interdisciplinary investigation additionally enables insights into practices governed by cultural, religious, and ideological conditions.

The aim of the Zooarchaeology of the Roman Period Working Group (<https://alexandriaarchive.org/icaaz/workroman>) is to represent a network of exchange and collaboration across borders and to enable the understanding of the interconnections between the research questions associated with animal remains from this important historical period.

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Sabine Deschler-Erb, Umberto  
Albarella, Silvia Valenzuela Lamas,  
Gabriele Rasbach  
ROMAN ANIMALS IN RITUAL  
AND FUNERARY CONTEXTS

DEUTSCHES ARCHÄOLOGISCHES INSTITUT  
Römisch-Germanische Kommission, Frankfurt a. M.

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# Vorwort zur Reihe „Kolloquien zur Vor- und Frühgeschichte“

In Händen halten Sie, liebe Leserin und lieber Leser, den 26. Band der „Kolloquien zur Vor- und Frühgeschichte“, der Ihnen neu und doch vertraut vorkommen mag. Denn diese Reihe, die von der Römisch-Germanischen Kommission (RGK) und der Eurasien-Abteilung des Deutschen Archäologischen Instituts (DAI) gemeinsam herausgegeben wird, existiert seit 23 Jahren, seit im Jahr 1997 die Akten des Internationalen Perlensymposiums in Mannheim als Band 1 publiziert wurden. Neu ist aber, dass die RGK erstmals die Herausgabe eines Bandes im neuen Reihenformat des DAI betreut hat. Die Aufmachung der „Kolloquien zur Vor- und Frühgeschichte“ (KVF) entspricht nun der Aufmachung zahlreicher weiterer Publikationsreihen des DAI. Das neue Layout ist moderner, attraktiver und nutzerfreundlicher. Es ist nun für viele DAI-Publikationsreihen nutzbar und hat einerseits einen hohen Wiedererkennungswert, erlaubt andererseits individuelle Anpassungen und Nutzungen.

Auch der vorliegende Band ist, wie es seit ihren Anfängen prägend für die KVF ist, ein Beispiel international ausgerichteter, Forschungstraditionen und -regionen übergreifender Wissenschaft. Inhaltlich schließt dieser 26. Band an eine ganze Reihe von KVF-Sammelbänden mit interdisziplinärer bzw. fachübergreifender Ausrichtung an. Mit KVF 26 stehen diesmal interdisziplinäre Untersuchungen zu Mensch-Tier-Beziehungen in den verschiedenen regionalkulturellen Kontexten des Römischen Reiches im Mittelpunkt und insbesondere die Rolle von Tieren in Zusammenhang mit Bestattungen und anderen Ritualen.

Knochengewebe vermag sehr gut, viele verschiedene Spuren menschlichen Handelns zu konservieren, und diese Spuren können wir als Zeugnisse dieser Handlungen, aber auch der dahinterstehenden Überlegungen, Absichten und Traditionen verstehen. So erlauben Tierknochen, aber auch andere Überreste wie Eierschalen, die Verknüpfung zoologischer Methoden und Fragen mit jenen einer sozial- und kulturhistorisch orientierten Archäologie. Tierreste sind also in jedem Sinne *archäologische* Funde, die nicht nur zu Ernährungs- und Wirtschaftsfragen Auskunft geben können, auch nicht allein zu sozialhierarchisch begründeten Unterschieden bei Bestattungsbeigaben, sondern auch zu *per se* kulturhistorischen Fragen wie eben jenen nach kulturell, religiös

bzw. weltanschaulich bestimmten Praktiken, nach Differenzen in ihrer Ausübung, nach ihren regional spezifischen Bedeutungen und nach ihren Veränderungen.

Damit liegt ein informativer und instruktiver 26. Band der KVF vor mit neuen Ansätzen, neuen Fragen und neuen Einsichten in einem neuen gestalterischen Gewand. Die Aufnahme der Reihe KVF in die einheitliche Publikationsgestaltung des DAI ermöglicht auch, diesen und weitere KVF-Bände in Zukunft in der *iDAI.world* – der digitalen Welt des DAI – unter *iDAI.publications/books* online zugänglich zu machen und zum Abruf im Open Access bereitzustellen. Zwar dient auch den interdisziplinär arbeitenden Altertumswissenschaften das gedruckt erscheinende Werk nach wie vor als Hauptmedium fachwissenschaftlichen Austauschs, doch stehen uns durch die digitale Vernetzung unterschiedlicher Daten- und Publikationsformate mittlerweile zahlreiche weitere Möglichkeiten der Veröffentlichung wissenschaftlicher Inhalte zur Verfügung. Das neue Publikationsformat ermöglicht die zukunftsweisende Verknüpfung von Print und digitalen Dokumentations- und Publikationsressourcen, z. B. durch das zeitgleiche Bereitstellen digitaler Supplemente.

Das Erscheinen von 26 Bänden in kurzen Abständen zeigt, dass die vor über 20 Jahren konzipierte Reihe erfolgreich war und ist, innovativ bleibt und in eine lebendige Zukunft blickt. Auch künftig werden Eurasien-Abteilung und RGK die Reihe „Kolloquien zur Vor- und Frühgeschichte“ im neuen Gewand und – wo sinnvoll und notwendig – als hybride Verknüpfung analoger und digitaler Wissensvermittlung fortführen. Und wie bisher werden wir in die KVF Beiträge von Tagungen und Symposien aufnehmen, an deren Vorbereitung und Durchführung wir personell bzw. organisatorisch beteiligt waren.

Zuletzt noch ein Dank an alle an der vorliegenden Publikation Beteiligten. Für die Möglichkeit im neuen Reihenformat des DAI publizieren zu können, danken wir ganz herzlichen den Kolleginnen und Kollegen der Redaktion der Zentrale. Die Bildbearbeitung der Beiträge lag in den Händen von Oliver Wagner. Johannes Gier war für das Lektorat der Beiträge verantwortlich. Lizzie Wright redigierte die englischen Texte, Hans-Ulrich Voß betreute die Drucklegung des Buches. Ihnen wie den Herausgeber\*innen des Bandes danken wir sehr für die hervorragende Vorbereitung und Durchführung der Publikation.

Frankfurt am Main, den 12.11.2020

Eszter Bánffy  
Erste Direktorin

Kerstin P. Hofmann  
Zweite Direktorin

Alexander Gramsch  
Redaktionsleiter

# Preface to the series “Kolloquien zur Vor- und Frühgeschichte”

In your hands, dear reader, you hold the 26<sup>th</sup> volume of the series “Kolloquien zur Vor- und Frühgeschichte”: It might seem to you different, but still familiar, because this series, concomitantly published by the Romano-Germanic Commission (RGK) and the Eurasia Department of the German Archaeological Institute (DAI), has been in existence for 23 years. The first volume, published in 1997, consisted of the proceedings of the “Internationales Perlensymposium” held in Mannheim. What is new is that the RGK has published a volume in the new DAI series format for the first time. The layout of “Kolloquien zur Vor- und Frühgeschichte” (KVF) now matches the layout of numerous other DAI publication series. This modern layout is more attractive and more user-friendly; the new format is mirrored across many DAI publication series. Not only does it have a distinctive design; it also enables individual adaptations and uses.

The present volume, as is characteristic of the KVF series from its beginnings, is an example of internationally oriented scholarship spanning diverse research traditions and research fields. In terms of content, this 26<sup>th</sup> volume continues a long tradition of conference proceedings with an interdisciplinary or cross-disciplinary orientation published within KVF. The focus of KVF 26 is on interdisciplinary studies of human-animal relationships in different regional-cultural contexts of the Roman Empire. In this, particular emphasis lies on the role of animals in burial and other ritual contexts.

Bone tissue excellently preserves many different traces of human actions. These traces can be interpreted as the evidence of these actions as well as of the underlying reflections, intentions, and traditions. Animal bones as well as other remains such as eggshells therefore make it possible to link zoological methods and issues with those related to socially and cultural-historically oriented archaeology. Animal remains are thus *archaeological* finds in every sense: They provide information not only about diet and economy, or about differences in grave goods based on social hierarchy. They touch on key cultural issues such as culturally, religiously or ideologically determined practices. Moreover, zooarchaeological analyses allow us to detect differences in these practices, to identify regionally specific meanings and the changes therein.

Thus, an informative and instructive 26<sup>th</sup> volume of the KVF series is available in a new design, including new approaches, new research questions, and new insights. In the future, through the incorporation of the KVF series into the common DAI publication design this and further volumes can be published online: on the *iDAI.world* platform – the digital world of the DAI – under *iDAI.publications/books* and in Open Access. Printed publications admittedly still serve as a main medium for subject-specific exchanges for interdisciplinary archaeological studies. The new publication format allows digital networking of various data and publication formats providing us with numerous additional possibilities for the publication of scientific content and enabling the future-oriented linking of print and digital documentation and publication resources, for example through the simultaneous provision of digital supplements.

The publication of 26 KVF volumes at short intervals shows that this series conceived over 20 years ago has been successful, remains innovative, and looks ahead to a lively future. From now on the Eurasia Department and the Romano-Germanic Commission will continue the series “Kolloquien zur Vor- und Frühgeschichte” in the new design and, where this seems reasonable and vital, in the form of a hybrid connection of analogue and digital knowledge. As in the past, in the KVF series we will continue incorporating proceedings of meetings and symposia in the preparation of which we are involved personally or organisationally.

Lastly we want to express our gratitude to all who participated in producing the present publication. We thank our colleagues from the editorial office at the Head Office of the German Archaeological Institute for the opportunity to publish in the new DAI series format. The digital imaging of the contributions was carried out by Oliver Wagner. Johannes Gier was responsible for the copyediting of the contributions. Lizzie Wright edited the English texts. Hans-Ulrich Voß was in charge of the editorial process. We are very grateful to all these people and to the editors of the volume for the outstanding preparation and realisation of this publication.

*Translated by Karoline Mazurié de Keroualin.*

Frankfurt am Main, 12 November 2020

Eszter Bánffy  
Director

Kerstin P. Hofmann  
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Head of the editorial office

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RPWG  
BASEL  
2018



(Logo: Stefanie Deschler)

# Preface

by Sabine Deschler-Erb / Umberto Albarella / Silvia Valenzuela Lamas / Gabriele Rasbach

This volume includes contributions that were originally presented at the conference *Roman Animals in Ritual and Funerary Contexts*, which was held in Basel 1<sup>st</sup>–4<sup>th</sup> February 2018 and organised by Sabine Deschler-Erb. The conference represented the second meeting of the International Council for Archaeozoology (ICAZ) Working Group on the *Zooarchaeology of the Roman Period*.

ICAZ Working Groups are largely informal and independent collectives of researchers engaged with a theme of common interest. Their association with ICAZ allows them to connect to a larger international community and benefit from a number of shared facilities, such as the ICAZ web page <<https://www.alexandriaarchive.org/icaz/index>> (last access: 20.10.20)> and Newsletter <<http://alexandriaarchive.org/icaz/publications-newsletter>> (last access: 20.10.20)>. They also enjoy the opportunity to share the ICAZ ethos of collaboration, mutual aid, and international solidarity.

The *Zooarchaeology of the Roman Period* ICAZ Working Group was originally proposed by Silvia Valenzuela Lamas and Umberto Albarella and approved by the ICAZ International Committee in 2014. The aspiration to create such a group emerged from the awareness that the Roman World was intensively connected. Nevertheless, much research on the use of animals in Roman or Romanised areas has been carried out at a localised level, often oblivious of parallel studies undertaken in other regions of Roman influence. It was clear that many of the investigated research themes – such as the use of animals in religious contexts, livestock trade, and husbandry improvements, to mention just a few – would benefit from greater integration and enhanced international synergies. This applied to the methodological approach, as well as the actual evidence from different areas of the Empire. With this objective in mind, the first meeting was organised in Sheffield (UK) 20<sup>th</sup>–22<sup>nd</sup> November 2014 by the two Working Group promoters and focused on *Husbandry in the Western Roman Empire: a zooarchaeological perspective*. The core objective of the meeting was to bring together researchers operating in different areas of the former Roman World and contiguous regions, which was successfully achieved. Some of the contributions to that conference were published in a monographic issue of the *European*

*Journal of Archaeology* (Volume 20, Special Issue 3, August 2017).

The focus on the western Empire that characterised the first meeting led to the need to open up geographically for the second meeting and focus on a thematic investigation which would be of fully international relevance. Sabine Deschler-Erb proposed to organise the second meeting in Basel (Switzerland) and this, at the very core of Europe, proved to be a very successful location. She suggested a number of possible topics to the informal membership of the group and the theme of ‘ritual’ was chosen. This was another fruitful move as there was hardly any shortage of material to present, and the conference provided a whirlwind of case studies across different areas, whose connections and shared questions could clearly be identified. The objective of the second meeting to move beyond the focus on the Western Empire was fully achieved. The list of papers included in this volume clearly shows the great geographic range on display, with different contributions presenting research based in the south, north, east, and west of the Roman area. The modern countries featured in the book include Austria, Belgium, Britain, Egypt, France, Germany, Greece, Italy, Malta, the Netherlands, Romania, Serbia, Switzerland and Turkey.

The Basel conference and its proceedings should provide an ideal springboard for further success and interconnection of researchers investigating the use of animals in Roman times.

Last but not least, we would like to express our great gratitude to all of the institutions and people who made the Basel conference and these proceedings possible. We thank the University of Basel, especially the Integrative Prehistory and Archaeological Science, for hosting the conference, as well as for technical and administrative support; the Swiss National Foundation, the Provincial Roman Archaeology Working group of Switzerland, and the Vindonissa chair of the University of Basel for their financial support; the Römerstadt Augusta Raurica, the Kantonsarchäologie Aargau, and the Römerlager Vindonissa for their warm welcome and generous catering; the organisation team, Monika Mráz, David Roth, and Viviane Kolter-Furrer, whose help was essential before, during, and after the conference; all student volunteers, Florian Bachmann, Debora Brunner, Marina Casaulta,

Laura Caspers, Sarah Lo Russo, Hildegard Müller, and Benjamin Sichert, who worked with great commitment; and the Romano-Germanic Commission, Frankfurt, who accepted these proceedings for their series. We thank Hans-Ulrich Voß and Johannes Gier, who carried out an excellent editing job.

The next conference will take place in Dublin (Ireland) on 11<sup>th</sup>–13<sup>th</sup> March 2021 and will be organised by Fabienne Pigière on the topic of *Animals in Roman economy*. It will certainly provide new opportunities for cross-fertilisation, collaboration, and exchange of ideas.



# Cremated animal bone from two ritual/ ceremonial sites in Britannia

by Clare Rainsford/ Anthony C. King/ Susan Jones/ Rose Hooker/ Gilbert Burleigh

## Keywords

Roman Britain; cremated animal bone; Roman ritual and religion.

## Schlüsselwörter

Römisches Britannien; verbrannte Tierknochen; römische Riten und Religion

## Mots-clés

Angleterre romaine; os d'animaux incinérés; culte et religion romains

## Introduction

Most temple and ritual sites in Roman Britain have assemblages of animal bones<sup>1</sup>, and display characteristics that mark them out from other types of assemblage, to a greater or lesser extent. On a minority of temple sites, the phenomenon of burning of animal bone can be observed, sometimes at high temperatures equivalent to those achieved during the cremation process for human remains. This raises questions about the role of this phenomenon in the activity at these sites. Was it an integral part of the ritual of offering and sacrifice, e. g. some sort of *holocaustum*, or a secondary, but important activity to cleanse a ritual area after a ceremony or feast had taken place? The act of cremating animals or portions of an animal victim is not depicted on altars or other imagery<sup>2</sup>, and where *holocausta* are depicted, they show apparently liquid libations being poured into the flames on the *focus* of an altar<sup>3</sup> or a tripod brazier. This negative indication would imply that a secondary procedure or ritual is to be preferred as a working hypothesis.

In the wider geographical and historical context, burnt offerings are a significant feature across the Roman Empire and in ancient Greek religion. Stephen J. Davis gives several examples of Greek sites where selected portions of sheep or pigs have been heavily burnt, all associated with temple sites<sup>4</sup>. In the Roman Near East, burnt offerings, such as the large deposit of mainly post-cranial sheep remains from Omrit, Israel<sup>5</sup> suggest foundation or sacrificial practice which may be linked to Roman practice, or to Jewish and other eastern religions. On the domestic scale, discrete clusters of burnt bone from local animals (chicken, sheep/goat, etc.) have been found in gardens at Pompeii and interpreted as domestic ritual practice<sup>6</sup>. Links to human cremation procedures are also widely evident, with animal burnt offerings present at many cemetery sites across the Roman world<sup>7</sup>.

With this in mind, this paper will explore the evidence from two recent excavations on ritual/ceremonial

1 KING 2005; ALLEN 2018a.

2 Cf. for example HUET 2008.

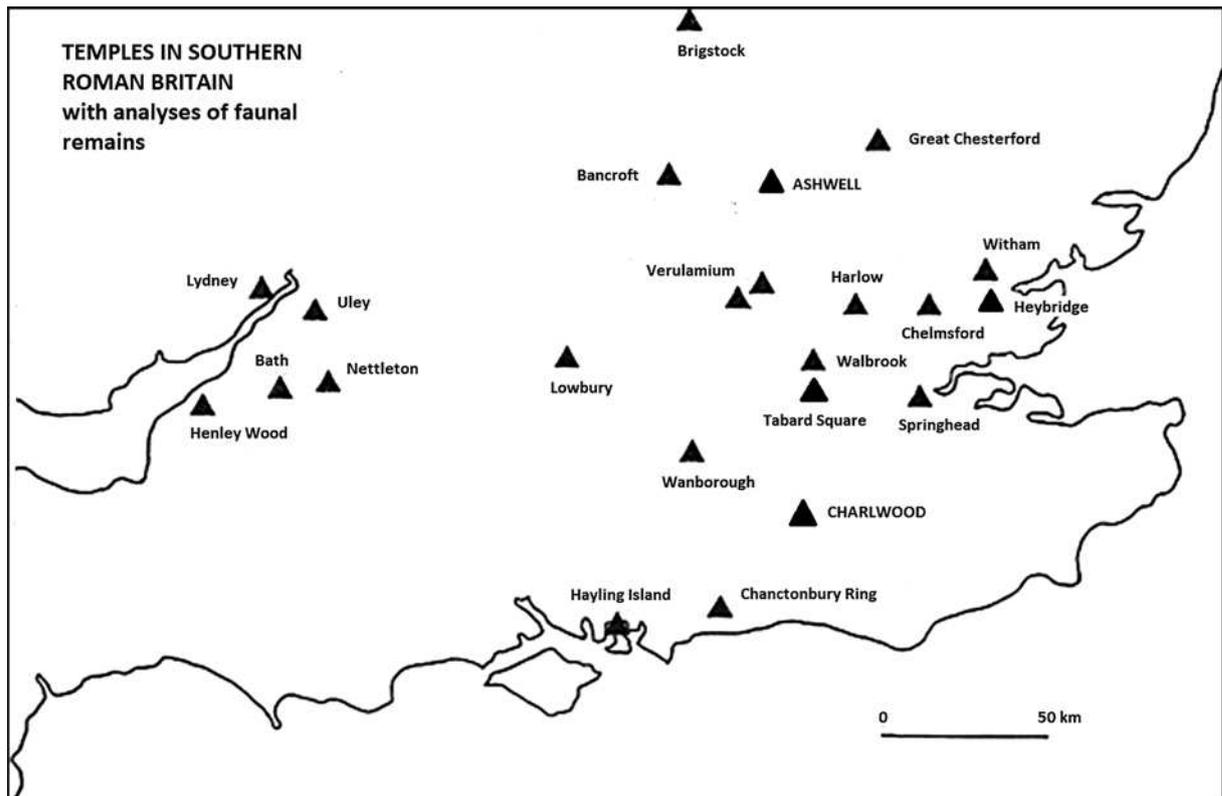
3 HUET 2008, cat. no. 33; 34; 51; 52; 80.

4 DAVIS 2008.

5 HESSE forthcoming.

6 HESSE 2019.

7 Cf. OLIVE 2008; WORLEY 2008.



1 Southern Britain, showing temple sites with animal bones, and the two sites considered in this paper. (From KING 2005, fig. 1 with modifications).

sites of Late Iron Age and early Roman date from southern Britain (*fig. 1*); Ashwell in Hertfordshire, to the north of the Thames in a region of wealthy Late Iron Age occupation and relatively dense settlement<sup>8</sup>, and Charlwood in Surrey, by contrast a region of fairly sparse Late Iron

Age and early Roman settlement<sup>9</sup>. Both sites have characteristics of open-air ceremonial spaces, where ritual activity took place in defined locations, but not focussed on buildings such as a temple, or on obvious altars or offering positions.

## Ashwell, Hertfordshire

The site is located 6 km north of the Roman town at Baldock, below the chalk scarp of the Chilterns, and near the west bank of the river Rhee<sup>10</sup>. The main discovery that led to the excavation of the site was a hoard of temple treasure found by metal detector in 2002<sup>11</sup>. The hoard sheds new light on religion in the province, comprising some 27 gold and silver objects, notably a hollow-cast silver-gilt figurine resembling Fortuna, and a pedestal

inscribed to *Dea Senuna*, a hitherto unknown Romano-Celtic deity<sup>12</sup>.

Subsequent excavation revealed a circular open area c. 14 m in diameter, with evidence for rituals involving feasting, the deposition of votives, and possibly the commemoration of the dead<sup>13</sup>. Initially, a possibly natural hollow in the ground, surviving to c. 1 m in depth, had been used from the Late Iron Age by removing the

8 BURLEIGH 2015.

9 BIRD 2004, chap. 6.

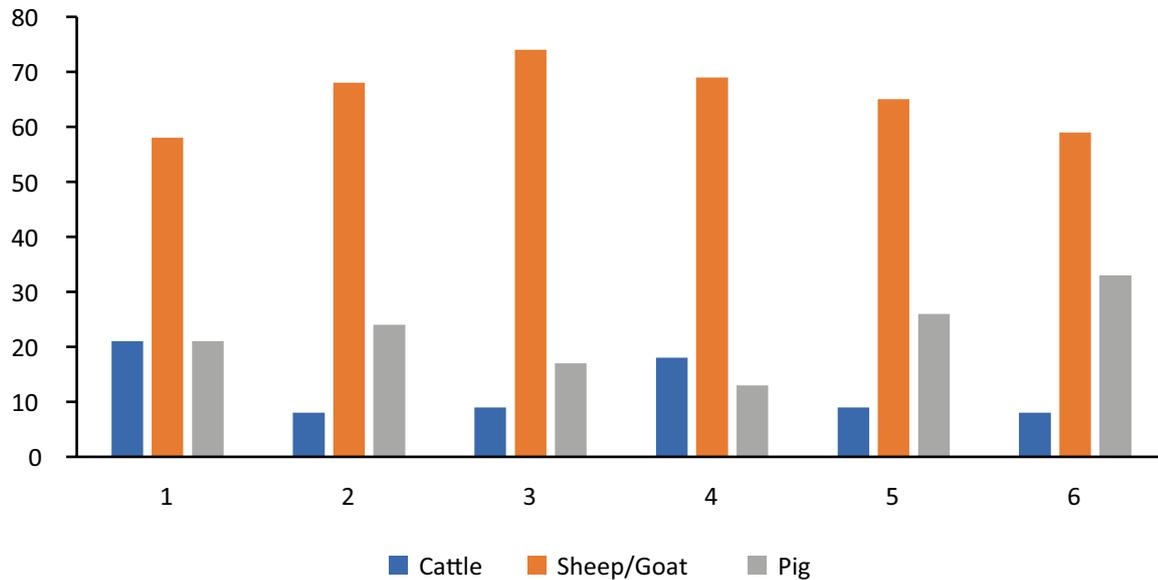
10 BURLEIGH 2015, 94–9.

11 JACKSON / BURLEIGH 2018, 1–3.

12 JACKSON 2018, 18–20.

13 BURLEIGH 2018a.

## ASHWELL: main species (%), by phase



2 Ashwell. Species percentages for Cattle, Sheep/Goat and Pig, by phase.

topsoil and laying gravel and making a hearth positioned on the natural clay. This hearth was associated with abundant artefactual and ecofactual material, including a great quantity of very fragmentary calcined animal bone. On its east side a small pit held a structured deposit of animal bone and pottery, including sherds of an imported fine ware beaker. The hearth was the first in a series of hearths arranged in an ellipse around a central clay surface. On this surface lay debris from feasting, including abundant broken pottery, animal bone and oyster shell, and artefacts that may have been deliberately deposited as part of the rituals. These included halves of two querstones, fragments of pipe-clay figurines, stone and pottery spindle whorls and metalwork such as Iron Age coins, iron objects and items of personal dress. The last hearth in the sequence dated to the 3<sup>rd</sup> century AD. Cut through the central clay surface were also several small pits, each containing calcined bone and ash.

Apparently as a result of ritual feasting, an organic soil formed across the original hollow and above the hearths and gravel surface. This context was rich in material, including pottery, animal bones, calcined bones,

oyster shells and many apparent votives, including Venus and Mercury figurine fragments. Periodically, the soil deposits were sealed by a chalk pebble surface, after which, ritual activities recommenced. Within these deposits, towards the end of the sequence, partly dismembered skeletons of pigs were found, apparently a development of the earlier ritual procedures evident on the site<sup>14</sup>. Altogether, three such surfaces were laid, forming a sequence from the 1<sup>st</sup> to 3<sup>rd</sup> centuries AD. The temple hoard was a subsequent deposition, in the 4<sup>th</sup> century.

## Cremated bone from Ashwell

The excavations produced a total of 43 909 bone specimens. 41 527 of those came from deposits of fragmented, disarticulated, and commingled material whilst 2382 specimens were associated bone groups (ABGs) deposited in an articulated or partially articulated state. In total 192 contexts produced bone specimens that were associated with 9 phases of activity across the site (*tab. 1; fig. 2*)<sup>15</sup>.

14 BURLEIGH 2018a, 191–197.

15 See JONES/ KING 2018 for thorough report on this assemblage.

	1	2	3	4	5	6	7	8	9	Total
Human <i>Homo sapiens</i>		1				1				2
Cattle <i>Bos taurus</i>	45	74	85	76	102	200	19	24	5	660
Sheep/Goat	121	612	700	277	676	1660	55	104	12	4217
Sheep <i>Ovis aries</i>	4	30	19	9	30	61		2		155
Goat <i>Capra hircus</i>	1	4	9	1	9	7		1		32
Pig* <i>Sus domesticus</i>	45	221	164	56	290	1222	18	50	2	2068
Dog <i>Canis familiaris</i>	3	4	9	3	22	37		5		83
Horse <i>Equus caballus</i>	2	7	3	2	11	16		3		44
Wild Boar <i>Sus scrofa</i>						1+				1
Roe Deer <i>Capreolus capreolus</i>		2	1		1	1				5
Hare <i>Lepus</i> sp.		5	4		18	25	1	1		54
Large Mamm.	69	224	219	291	378	815	51	92	4	2143
Med. Mamm.	171	2942	2267	1240	3227	8646	252	331	59	19 135
Unid. Mamm.	18	2112	646	626	2894	5121	246	159	8	11 830
Rodent		2								2
House Mouse <i>Mus musculus</i>					1	1				2
Field Vole <i>Microtus agrestis</i>					1					1
Small Mamm.	4	20	6	10	21	30		1		87
Dom. Fowl <i>Gallus galus dom.</i>		6	8	4	11	37	2			68
Partridge <i>Perdix perdix</i>		1	2		1	3				7
Dom. Goose <i>Anser anser dom.</i>		4			3	5				12
Brent Goose <i>Branta bernicla</i>			1		2	3				6
Crow <i>Corvus</i> sp.						2				2
Woodcock <i>Scolopax rusticola</i>					1		1			2
Wood Pigeon <i>Columba palumbus</i>			1			1				2
Teal <i>Anas crecca</i>		1								1
Mallard <i>Anas platyrhynchos</i>					1					1
Small Bird						1				1
Med. Bird		35	9	13	23	59	3	6		148
Large Bird		1	3		2	3				9
Bass <i>Dicentrarchus labrax</i>					1	1				2
Other Fish		1	1			3	1			6
Frog <i>Rana</i> sp.		120	4	1		13				131
Toad <i>Bufo</i> sp.		66	11		3	3				78
Amphib.		543			1					544
Total	483	7037	4172	2609	7730	17 978	649	779	90	41 527

Tab. 1 Ashwell. Species represented (NISP) by phase. \* Additionally, there were 2382 Pig bones in associated bone groups (ABGs) from Phase 6.

Finds derived from the Late Iron Age/Early Roman Transition period (late 1<sup>st</sup> century BC to 70 AD [Phase 1]), the Roman period from 1<sup>st</sup> century AD to 4<sup>th</sup> century AD (Phases 2–7), the Post Roman to the Post Medieval (Phase 8) period and to modern activity (Phase 9). Phases 2–6 have date boundaries with considerable overlap, from the Roman transition period through to the 3<sup>rd</sup> century AD; 96 % of the bone derived from contexts of these phases. All ABGs derived from Phase 6, which may represent a culmination of activity on the site, towards the end of the Phases 2–7 date range. Activity in the subsequent periods seems to have been drastically reduced with combined deposits forming only 3 % of the assemblage. It is possible that much of the bone associated with the later phases may contain a high level of residual material from earlier phases where contexts were disturbed by ploughing.

Despite the good state of preservation, bone deposits were highly fragmented. On average each bone fragment identified to element in the disarticulated assemblage was only 8 % complete. This extremely high level of fragmentation reflects a high proportion of burnt bone in the assemblage. Indeed 41 % of the total assemblage had been exposed to heat. As would be expected, fragmentation levels were highest in phases with more burnt deposits.

Burnt bone deposits: Overall burnt bone was observed in 74 % of the contexts across the site and contributed to 41 % of the total assemblage (*tab. 2*). Results from different phases varied. In Phase 1, only 6 % of the total deposit contained burnt bone whilst Phases 2, 4, 5, 6 and 7 contained between 43 % and 64 % of fragments exposed to heat in some way. Phases 3, 8 and 9 contained between 10 and 25 % burnt fragments.

Phase	Number	% of phase total
1	31	6
2	3049	43
3	397	10
4	1515	58
5	4438	57
6	8557	48
7	64	10
8	132	17
9	23	25

Tab. 2 Ashwell. Incidence of burnt bone.

Burnt bone was well distributed across contexts in all phases. In Phases 7 to 9 the total number of contexts were too low to make viable contributions to overall patterning. In Phases 1 to 6, however, between 60 % and

91 % of contexts contained burnt bone suggesting that broad dispersion patterns across features were present across all phases. Some phases however contained large volumes of burnt bone in specific contexts. Contexts 315 and 324 contained over 2000 burnt fragments, Context 506 between 1000 and 2000 fragments and Contexts 311, 349, 505, 529, 535 and 538 contained between 500 and 1000 fragments.

Across all phases except for 7, the majority of bone was fully calcined being white in colour (*tab. 3*). In Phases 1–6 between 70 and 85 % of the burnt remains were fully calcined. Phase 7 was the only phase to show a greater proportion of incompletely burned bones, the majority of which (75 %) were grey and may infer that deposits here were created with different variables to the earlier deposits. In all the burnt bone deposits from Phases 1–6 there were less than 10 % of fragments that showed mixed colouration patterns and low levels of black, tan or grey fragments. The incompletely burnt fragments that had mixed colours or were black and tan fragments tended to be mainly distributed in contexts with only a few burnt bones in. Deposits and contexts with large volumes of burnt bone were very evenly coloured with almost all bone fully calcined and displayed characteristics similar to human cremation deposits.

Phase	1	2	3	4	5	6	7	8
White	79	75	73	83	84	77	21	63
Grey	0	11	7	5	9	10	75	0
Black	0	3	12	6	4	3	2	10
Tan	21	1	6	2	0	1	2	0
Buff, black, grey, pink, white, etc., indicative of partial burning	0	2	1	0	<1	1	0	11
Complete colouration of fragment but showing a range of combined colours	0	8	1	4	3	8	0	16

Tab. 3 Ashwell. Colour characteristics of the burnt bone assemblage, given as a percentage of the burnt total per phase.

Variability in colouration relates to a number of variables within the burning process like temperature, time exposed to heat, the presence of minerals or metals in the fire and the processes involved in the method of heating. General domestic fires where food remains or general butchery waste may have been disposed of would be expected to create a wide variety of colour patterns with many fragments likely to show incomplete combustion due to the variability of temperatures and condi-

tions across a fire. Cooking or roasting may blacken areas of bone exposed to low level heat (c. 300 °C)<sup>16</sup> and leave clear bands of colour where meat around the bone may still be adhering to the bone protecting it from direct heat. J. E. Buikstra and M. Swegle suggest that only defleshed bone can become uniformly black during the heating process<sup>17</sup>. Whilst it is likely that some fragments of bone may have been created in these conditions it is clear that for the majority of bone deposits at Ashwell other processes were being applied.

The large deposits of evenly calcined bone in many contexts suggest that effort was made to create a highly efficient burning process. Holden et al. and Shipman et al. suggest that fully oxidised bone (calcined bone) occurs when it is exposed to temperatures of greater than 600 °C for periods of time long enough to fully oxidise the bone<sup>18</sup>. The presence of warping, cracking or fissuring on long bones, articular surfaces and cranial vault fragments were also observed on many fragments of bone within the calcined assemblages. These conditions occur as a result of dehydration during the heating process and can vary according to whether bone was fleshed or defleshed at the time of heating<sup>19</sup>. It has been observed that curved fracture patterns on long bones, concentric and mosaic cracking on articular surfaces, and warping and delamination of trabecular bone can be taken as signs of thermal alteration of fleshed bone, whilst bone that has longitudinal or transverse cracks can be indicators of bone burnt in a dry or defleshed state<sup>20</sup>. All deposits from Phases 1 to 7 contained variable quantities of fragments with curved cracking and articular mosaic cracking patterns whilst only a small handful of longitudinal splits were observed, only in Phases 5, 6 and 8. This would suggest that dry bone had a minimal contribution to the deposits.

Fragmentation patterns across the burnt deposits suggested that most specimens were fewer than 2 cm in size. Phases 4 and 6 had a slightly greater proportion of fragments that lay in the 2 to 5 cm range. Such high fragmentation levels combined with the highly calcined nature of deposits may suggest that bone may have been raked or agitated during the heating process to break up bones and help complete the combustion process. It should be noted that it is possible that some smaller fragments were also missed during the collection process, as this was very largely by hand collection, with a selection of contexts sieved to recover small-sized fragments. Even colouration across fractures and fracture patterns did not suggest that a high level of post-depositional break-

age was present in the assemblage. The presence of significant proportions of bone under 1 cm ranging between 20 % and 48 % in Phases 2, 4, 5, 6 and 7 may mean that the place of combustion was close to the place of deposition (a factor dependant also on the care originally in the recovery and removal of the bone debris), and that ashes were covered over fairly soon after deposition. Fluvial action and wind can disperse smaller fragments quickly if remains are left out in the open. It is often thought that for many cremation burials a selection of the material on the pyre is chosen for deposition<sup>21</sup> and when this occurs the deposits can be biased towards larger fragments. In these deposits smaller fragments are present and may reflect a true selection of pyre or burnt material. Phase 3 was the only period that favoured slightly larger fragments. Deposits in this phase may well have reflected greater selectivity in burial practice.

The range of species represented in the burnt deposits was quite diverse. These included cattle, sheep/goat, sheep, goat, pig, horse, dog, hare, roe deer, domestic fowl, domestic goose, medium and large bird, fish and human remains. The species range for Phases 1, 7, 8 and 9 were all limited to the main domesticated species with a small amount of horse and dog in Phase 8 which may have originated in earlier deposits. The deposits in Phases 2–6 clearly reflected a more diverse species range with bird and fish amongst the vertebrates included in the cremated material. Two human bones were noted in the calcined deposits from Contexts 506 and 535. The presence of these human bones in the assemblage suggests that it is possible that some of the other small unidentifiable fragments may also be human, but no other obvious characteristics were observed.

The range of elements included in the burnt deposits included all areas of the body for the main domesticates. Dog remains were limited to limb and axial bones. No foot bones or cranial fragments were identified. Identifiable horse remains included cranial fragments, teeth and carpals. Bird bones that were identifiable were mainly wing bones, except for the femur and synsacrum of a bantam-sized fowl. Fish vertebrae and ribs were observed.

It was noted that the vast majority of bones for pig, cattle and sheep/goat that showed evidence of fusion were unfused suggesting that mainly young juvenile animals were included in the burnt deposits. In the burnt sheep/goat remains some neonatal remains were observed, suggesting that some burnt deposits were made around the time of lambing, possibly in spring. No neonatal pigs or cattle were identified in the burnt assem-

16 HOLDEN et al. 1995a; 1995b.

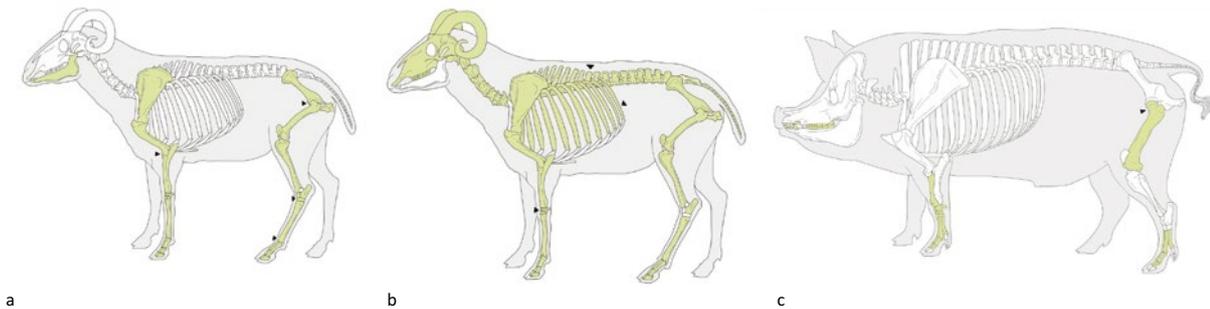
17 BUIKSTRA / SWEGLE 1989, 252.

18 HOLDEN et al. 1995a; HOLDEN et al. 1995b and SHIPMAN et al. 1984.

19 LANGE et al. 1987; MCKINLEY 1994; POPE / SMITH 2004.

20 BAKER 2003, 22; BUIKSTRA / SWEGLE 1989; WORLEY 2008.

21 MCKINLEY 1994.



3 a Charlwood. Element representation in sheep/goat. Elements shaded yellow are present. Black arrows indicate location of butchery marks. (After BARONE 1976, 23 pl. 8. Template from ArchaeoZoo.org [c. ArchaeoZoo.org/Michel Coutureau, Inrap/Vianney Forest, Inrap]). b Charlwood. Element representation in medium mammal category. Elements shaded yellow are present. Black arrows indicate location of butchery marks. (After BARONE 1976, 23 pl. 8. Template from ArchaeoZoo.org [c. ArchaeoZoo.org/Michel Coutureau, Inrap/Vianney Forest, Inrap]). c Charlwood. Element representation in pig. Elements shaded yellow are present. Black arrows indicate location of butchery marks. (After BARONE 1976, 24 pl. 9. Template from ArchaeoZoo.org [c. ArchaeoZoo.org/Michel Coutureau, Inrap/Vianney Forest, Inrap]).

blage. One juvenile hare (556) as well as a mature one was also observed in the assemblage.

A question arises from this consideration of the burnt bone deposits: was the offering of burnt animal remains, largely sheep and pigs, a core ritual at the temple? Alternatively, are the burnt deposits part of a ritual of cleansing or purifying the sanctuary? If the latter, which would account for the wide species range overall, this activity may represent a secondary ritual that took place periodically after sacrificial and feasting activity.

## Charlwood, Surrey

Compared to Ashwell, the site at Charlwood has been subjected to relatively limited excavation. The site first became known due to the discovery of a number of gold Iron Age and silver Roman coins by metal detectorists in late 2009. It lies on Wealden Clay on rising ground with a stream in the valley below. After fieldwalking and magnetometry surveys, an evaluation trench in 2014 revealed a ditch containing a large quantity of cremated animal bone and pottery. Charcoal samples were sent for  $^{14}\text{C}$  dating, yielding a result of c. 50 BC–AD 70, within a 95% probability.

Subsequent excavation in 2016/17 has clarified the extent of the site, which takes the form of two parallel ditches apparently defining the southern boundary of an enclosure around the brow of the hill. A north-south ditch lies at the west end of the parallel ditches, containing deposits that included partial but broken pots at intervals throughout the opened portion of the ditch.

These include a samian (terra sigillata) jar<sup>22</sup>, and all appear to be early Roman in date. Excavations are continuing on the site, and the evidence so far suggests a ceremonial centre rather than settlement. Evidence for other local Late Iron Age and early Roman settlement is sparse, but has been revealed at Horley about four miles (7 km) to the east, also on clay soil.

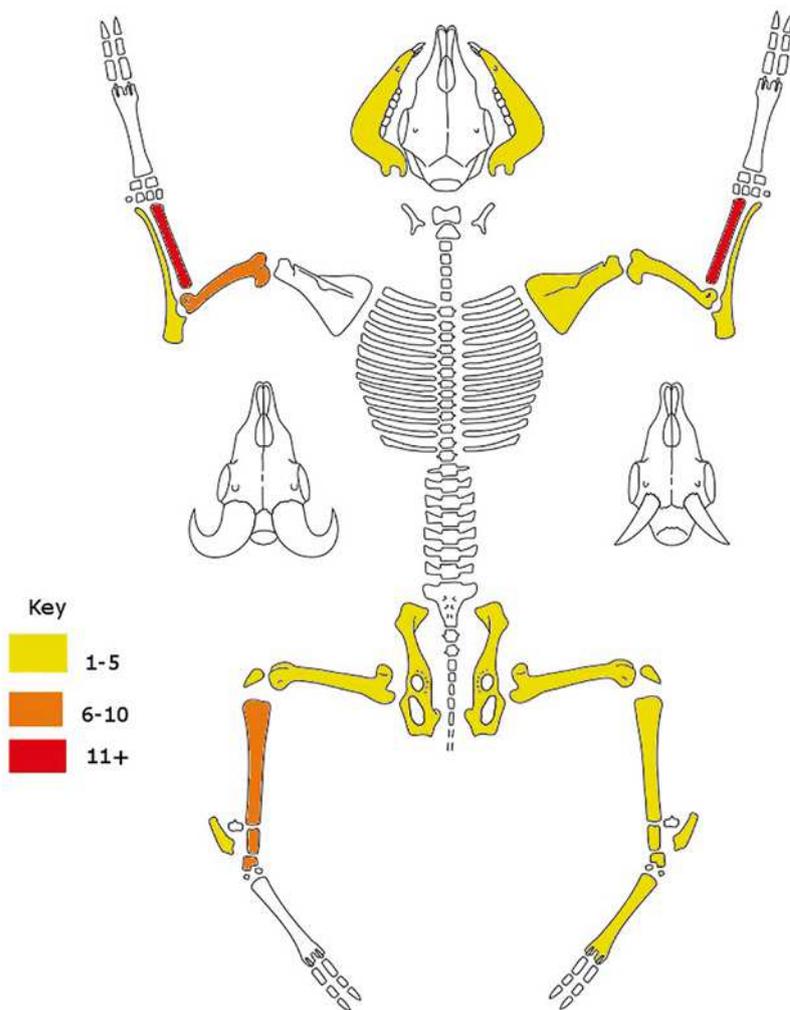
Cremated bone from Charlwood: A large deposit of cremated bone was recovered from one of the ditches, amounting to around 5.5 kg of bone, while a much smaller deposit (c. 4.5 g) was recovered from a second ditch. Within the main ditch, a thin accumulation of silty clay was noted in places between earlier and later deposits containing cremated bone, indicating more than one deposition event. The majority of the animal bone is burnt white-grey, although a small proportion of the identified material (c. 10%) is recorded as charred (colouration black/brown/red). This can result from uneven burning, caused by the element being deeply buried within muscle mass, or placed at the edge of the fire<sup>23</sup>. As at Ashwell, the cremated bone showed taphonomic features (curved cracking, mosaic cracking) consistent with the bone having been burnt fleshed rather than dry. The bone was in good general condition, with only a very few elements (6 in total) noted as having poor or eroded surfaces. The ditch was not fully excavated, meaning the bone upon which the analysis is based is only a sample of what was originally deposited, and the full extent of the original deposit is not known.

Unlike Ashwell, the cremated bone deposit at Charlwood is predominantly focused towards a single taxon. Sheep/goat remains comprised almost half of all identified fragments, and most of the rest of the assemblage

22 Dechelette 67, Flavian: pers. comm. J. Bird.

23 SYMES et al. 2015.

Caprinae (ex : *Ovis aries*)



4 Charlwood. Element representation in sheep/goat, showing right and left sides. (After HELMER 1987, fig. 6. Template from ArchaeoZoo.org [c. ArchaeoZoo.org/Michel Coutureau, Inrap/Vianney Forest, Inrap]).

was comprised of ‘medium mammal’ elements (270 fragments, 42%), much of which is also likely to be sheep (*tab. 4*). Due to the well-known difficulty of identifying between sheep and goats on postcranial bones<sup>24</sup>, all have simply been identified as sheep/goat, although they were in general consistent with deriving with sheep (*Ovis aries*). The remainder of the assemblage (c. 11% of identified fragments) is mostly comprised of pig and chicken remains. Large mammal bones are almost entirely absent from the assemblage, with only three fragments of cattle bone identified.

ID	NISP	MNI (element / side)
Sheep/goat	292	8 (radius / left)
Pig	33	2 (age data)
Cattle	3	1
Domestic fowl	15	3 (carpometacarpus / left)
large mammal	2	
medium mammal	267	
small mammal	2	
bird	16	

Tab. 4 Charlwood. Taxonomic composition of cremated bone deposit.

24 ZEDER / LAPHAM 2010.

A minimum of eight sheep were represented (*tab. 4*). However, considering the limited extent of excavation and the substantial amounts of unidentified medium mammal within the sample, the actual number of sheep contributing to the deposit is likely to have been considerably higher. The majority of the sheep fall into the age range 1.5–3.5 years, which is a typical slaughtering pattern within rural Roman Britain and represents the use of the animal for both meat and secondary products<sup>25</sup>. Unlike Ashwell, no very young sheep (< 10 months) were recorded, although one of the minimum 2 pigs in the assemblage was younger than 6 months at death.

There is no evidence for selection of particular portions of sheep or even a preference for one or other side of the carcass, with all major elements of the skeleton and both the left and right side of the carcass represented more or less equally (*figs 3 and 4*). While there are some evident variations in frequency between different elements, these can largely be attributed to taphonomic

processes common within cremations – carpals and phalanges, for instance, are common within the skeleton and their density and small size means they tend to survive burning intact; while upper limb bones (femur, humerus) and crania fragment heavily, making the remains harder to identify<sup>26</sup>. Pig elements are appreciably less common, and, aside from a couple of major limb bones, tend to be focused around teeth and feet, perhaps as these are the most recognisable elements (*fig. 3c*).

Butchery evidence from pig, sheep and medium mammal bones is scarce, but knife marks are present around most of the major joints (*see figures*) indicating disarticulation of the carcass. In addition, at least one vertebra was bisected along the anterior-posterior axis, potentially indicating splitting of the main torso into two sides. While there may have been no preference for particular portions, it is clear that sheep and pigs were for the most part not cremated as complete animals, but were instead cremated at the minimum as butchered portions.

## Discussion and Conclusions

### Ashwell and Charlwood Compared

While there are some clear differences in the specifics, the sites at Charlwood and Ashwell both yielded substantial amounts of burnt and cremated bones, which derived from multiple animals, and which were buried in discrete deposits at late Iron Age/Romano-British ceremonial sites. Both burnt assemblages, though somewhat different in the size of the assemblages, comprised a number of different animals, and were burnt to a high temperature, probably while the bone was still fleshed. For both sites, this indicates a command of pyre technology to achieve consistent and thorough cremation, and also an investment in the resources necessary to burn these offerings<sup>27</sup>.

The large assemblage from Ashwell, including both cremated and uncremated bone, almost certainly represents communal ritual activity in a feasting or festival

setting, rather than an accumulation of many individual private sacrifices. As such, it bears similarities to both Iron Age ceremonial sites<sup>28</sup> and to Roman temple sites<sup>29</sup>. The size of the Charlwood cremated assemblage would similarly indicate communal ritual activity, especially if (as seems likely from the archaeological context) the assemblage has accumulated over a relatively short span of time.

However, while the process of the ritual is similar at both sites, there are important differences between the animals considered appropriate to be burnt. While the assemblage at Charlwood is heavily focused towards sheep, the range of animals burnt at Ashwell is substantial, including both domestic and wild taxa and a small amount of human bone. By contrast, the domesticates burnt at Ashwell are predominantly juvenile with some inclusion of neonatal sheep, while at Charlwood the age representation is both less specific and focused towards adult animals. However, at neither site is there a focus towards the burning of specific portions of animals, as has been noted in similar burnt deposits from Greek temple sites<sup>30</sup>, and in unburnt Iron Age deposits from

25 ALLEN et al. 2017.

26 BOND 1996; SYMES et al. 2015.

27 See MCKINLEY 2009.

28 E. g. Llanmaes, Vale of Glamorgan, Wales: MADGWICK/ MULVILLE 2015; Ferry Fryston, West Yorkshire: ORTON 2007; Hallaton, Leicestershire: SCORE 2011.

29 Falling into KING's Group A (2005, 357–359).

30 DAVIS 2008.

Britain<sup>31</sup>. Other Roman-period ritual sites, e.g. Springhead<sup>32</sup>, also have a lack of evidence for sidedness and selectivity of this sort, so it is possible that the practice was not so prevalent after the end of the Iron Age. The differences in specific practice between Ashwell and Charlwood are consistent with the high level of variation in orthopraxy seen in the use of animal remains across Roman ritual sites in Britain<sup>33</sup>, and may or may not relate to differences in belief.

## Cremated bone and burnt offerings in Roman Britain and beyond

Cremated animal bone representing burnt offerings remains a relatively uncommon find in Romano-British temple or shrine contexts, with Ashwell and Charlwood being two of the only published examples. However, burnt animal bone is regularly present in cremations as an offering forming part of a human cremation deposit. Around 30% of all cremations in Roman Britain contain burnt animal remains, most often pigs and chickens, but also sheep, cattle, horse, and other mammal species<sup>34</sup>. The degree of burning on the deposits from both Ashwell and Charlwood suggests some cross-over of pyre technology from practices relating to human cremations, and beliefs concerning the action of cremation of bone. Both sites are located in south-east England, which saw cremation rites introduced in the later Iron Age<sup>35</sup>, and which persisted as a centre for cremation burial throughout much of the Roman period<sup>36</sup>. Ashwell has both the presence of a very small number of human calcined bones (two identified specimens) amongst the much larger calcined animal bone assemblage<sup>37</sup>, and a putative link to funerary rites in the form of stone structures for possible laying out of human bodies prior to burial or cremation<sup>38</sup>. There may have been a human cremation element to the rituals at Ashwell, but the evidence is very exiguous and circumstantial.

Burnt offerings have been found at other Romano-Celtic shrine sites in the north-west provinces. They

are infrequent in Britain, and all examples so far identified from this country have derived from the same south-eastern to south-central region as Ashwell and Charlwood. Other examples from this region include Wanborough, Surrey<sup>39</sup>, and are associated with the sacrificial practice of *holocausta* of avian offerings to eastern cults, e.g. *Verulamium* ‘Triangular temple’, St Albans, Hertfordshire<sup>40</sup>. The Tabard Square temple site, Southwark, London has individual burnt sheep buried in individual pits of 2<sup>nd</sup> century AD date, and this practice continues from ‘pre-Temple’ into temple phases, when a pair of Romano-Celtic temples, probably associated with Mars Camulos, came into existence<sup>41</sup>. Similar calcined sheep buried individually have been found elsewhere in London, of later Roman date<sup>42</sup>. Two calcined juvenile pig skulls were also used as a probable foundation deposit in a 2<sup>nd</sup> century building in Southwark, London<sup>43</sup>. However, not all calcined animal deposits are interpreted as ritual; oven-roasting for food provision to travellers and subsequent incineration of waste bone has been put forward for pits with calcined and fragmentary pig bone from the roadside settlement at Beanacre, Wiltshire<sup>44</sup>.

It is clear that temples and ritual sites did have the resources and motivation to burn and bury animal offerings, with Ashwell and Charlwood only being two examples within a diverse tradition. The usually heavily calcined bones are not simply the result of discard after cooking, which results in a different pattern of burning associated with meal preparation and consumption at temple sites<sup>45</sup>. One interesting possibility is that the two sites discussed in this article both had origins in the Late Iron Age, and therefore Iron Age antecedent beliefs may also have contributed to cremated animal bone practices. Occasional examples from earlier in the Iron Age reinforce the impression that pre-Roman traditions had developed ideas linked to the burning of animal carcasses and offerings. At Berwick Field, a middle Iron Age site close to Winchester, Hampshire, a single pit contained burnt bone representing several horse limbs, which had been burnt (although not fully calcined) on a pyre while fleshed, and were subsequently collected and buried<sup>46</sup>. Iron Age human cremations also had burnt animal offerings included in the cremated remains, e.g. at Acy-Romance, Ardennes<sup>47</sup>, and at King Harry Lane, Hertford-

31 MADGWICK/ MULVILLE 2015; ORTON 2007; SCORE 2011.

32 GRIMM 2011, 29.

33 KING 2005.

34 Cf. ALLEN 2018b; HILL 2017; WORLEY 2008; OLIVE 2008.

35 BARBER 2011.

36 SMITH et al. 2018.

37 BURLEIGH 2018b, 333.

38 BURLEIGH 2018b, 326–327; 332–333.

39 DONE 1984, 191; NICOLAYSEN 1994, 162.

40 KING 2005, 355–356; WHEELER/ WHEELER 1936, 113–120. See also Mainz: HOCHMUTH/ WITTEYER 2008.

41 RIELLY 2015, 208; 221.

42 RIELLY 2001; YEOMANS 2003.

43 AINSLEY 2002, 273.

44 HIGBEE 2018.

45 LEPETZ/ VAN ANDRINGA 2008, 23; GREEN 1992, 97–100.

46 GRUNWALD 2006.

47 MÉNIEL 1992, 120–129.

shire<sup>48</sup>. However, in both Britain and the north-west provinces as a whole, the incidence of burnt bone appears to rise following incorporation into the Roman empire, and therefore there is also a factor of Roman cultural/religious influence at play in the development of cremation as a ritual practice at sacred sites.

Cremated animal bone from Roman temple and shrine sites in Britannia and other north-western provinces is a phenomenon present on a minority of sites. It is, however, a distinctive element of ritual activity, requiring investment in resources to incinerate the remains, and probably also a desire to 'cleanse' areas of ritual activity at periodic intervals. When considered as a whole, ritual practice varied considerably from one cult site to another<sup>49</sup>, and the usage of cremation for an-

imal remains apparently became part of the orthopraxy at some, at least, of the open-air shrines associated with communal feasting. Both Charlwood and Ashwell are examples of open-air shrines which utilise cremation of animal remains, although the practices at both sites appear distinctly different. While comparable examples are limited, it is clear from those which have been reported that burnt offerings vary appreciably between sites in terms of the quantity, age and type of taxa considered suitable for offering. The study of bioarchaeological remains from ritual contexts, including Roman and Iron Age sites, is now well-established, and the identification of cremation and burnt offering practices at sites within Roman Britain offers a new angle to current understandings of Romano-British ritual practice.

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## References of figures

Fig. 1: KING 2005, fig. 1, with modifications. – Fig. 3a: After BARONE 1976, 23 pl. 8. Template from ArchaeoZoo.org (c. Michel Coutureau (Inrap)/Vianney Forest (Inrap)). – Fig. 3b: After BARONE 1976, 23 pl. 8. Template from ArchaeoZoo.org (c. Michel Coutureau (Inrap)/Vianney Forest (Inrap)). – Fig. 3c: After BARONE 1976, 24 pl. 9. Template from ArchaeoZoo.org (c. Michel Coutureau (Inrap)/ Vianney Forest (Inrap)). – Fig. 4: After HELMER 1987, fig. 6. Template from ArchaeoZoo.org (c. Michel Coutureau (Inrap)/Vianney Forest (Inrap)). – All other tables and figures: Authors.

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## Abstract

Burnt or cremated animal bone has been found at ritual sites across the Greek and Roman world, but has rarely been reported in Romano-British contexts. We discuss two examples of this practice from two sites in south-east England, Ashwell (Hertfordshire) and Charlwood (Surrey). While the process of cremation and deposition

of animal bone is similar on both sites, specific taxonomic compositions vary, indicating that this was as variable as other Roman ritual practices in Britain. Other examples from across the south and east of Britain indicate that burning animal offerings was a part of accepted orthopraxy in certain ritual contexts.

## Zusammenfassung

### Verbrannte Tierknochen von zwei Kultplätzen in Britannien

Verbrannte oder kalzinierte Tierknochen wurden an zahlreichen rituellen Stätten in der griechischen und römischen Welt gefunden, aber nur selten in römisch-britischen Kontexten untersucht. Im Mittelpunkt der Studie stehen zwei Fundorte aus Südostengland: Ashwell (Hertfordshire) und Charlwood (Surrey). Während der Prozess der Verbrennung und Deponierung von Tierknochen an beiden Stätten ähnlich ist, unterscheiden sich die spezifischen taxonomischen Zusammensetzungen,

was darauf hinweist, dass dies ebenso variabel war wie andere römische rituelle Praktiken in Britannien. Andere Beispiele aus dem gesamten Süden und Osten Britanniens deuten darauf hin, dass das Verbrennen von Tieropfern in bestimmten rituellen Kontexten ein Teil der akzeptierten Orthopraxis war.

## Résumé

### Des os d'animaux incinérés provenant de sites rituels/cérémoniels en Bretagne

On a trouvé des os brûlés ou incinérés dans des sites rituels à travers tout le monde gréco-romain, mais rarement dans des contextes britto-romains. Nous examinons ici deux exemples de cette pratique provenant de deux sites du Sud-Est de l'Angleterre, Ashwell (Hertfordshire) et Charlwood (Surrey). Alors que le processus de l'incinération et du dépôt des os animaux est simi-

laire pour les deux sites, les compositions taxonomiques spécifiques, elles, varient comme d'autres pratiques rituelles romaines en Bretagne. D'autres exemples à travers le Sud et l'Est de la Bretagne révèlent que la combustion d'offrandes animales faisait partie d'une orthopraxie acceptée dans certains contextes rituels.