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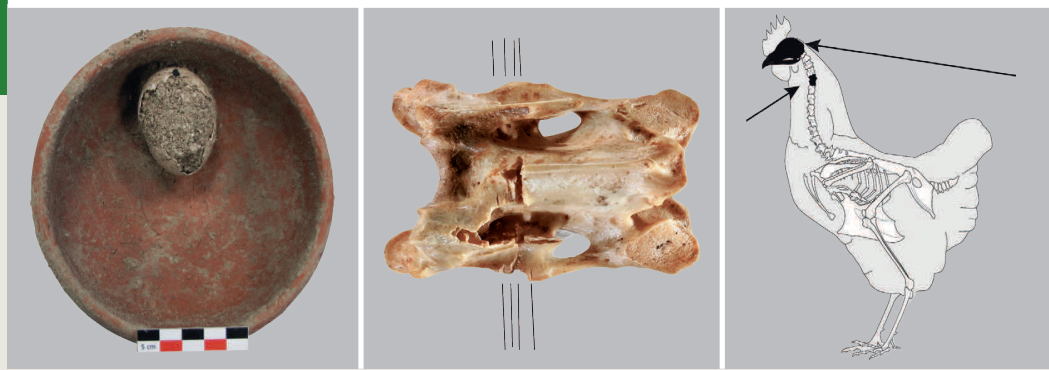
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# KOLLOQUIEN ZUR VOR- UND FRÜHGESCHICHTE 26



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  
Deputy Director

Alexander Gramsch  
Head of the editorial office

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(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.





# In the belly of the earth: bones and the closing of sacred space in central Italy

by *Angela Trentacoste*

## Keywords

banquets, feasting, Etruscan, Roman, central Italy, animals, ritual, rubbish

## Schlüsselwörter

Bankette, Festessen, etruskisch, römisch, Zentralitalien, Tiere, Ritual, Abfall

## Mots-clés

banquets, festin, Étrusque, Romain, Italie centrale, animaux, déchets, rituels

## Introduction

From its earliest days, the history of Rome was entangled with that of its Etruscan neighbours. Although these two peoples spoke different languages and had distinct material cultures, their close proximity and interconnected development yielded many common practices and tastes<sup>1</sup>. This sense of shared history extended back to the beginnings of Rome itself, when Romulus summoned Tuscan specialists to assist with the rituals required for the foundation of the city<sup>2</sup>. An Etruscan origin was ascribed to enduring symbols of power: the sceptre, throne, *fasces* (bound bundle of wooden rods and an axe), and purple-edged *toga*<sup>3</sup>. Commonalities were also shared between the object and architectural styles of the two cultures<sup>4</sup>, and Rome absorbed Etruscan religious practices, particularly those related to divination and augury<sup>5</sup>. From Roman sources we know of the

*Etrusca disciplina*<sup>6</sup>, texts on Etruscan religious doctrine that covered a variety of topics on rituals, the interpretation of signs, and the revelations of prophets. Even as the distinctiveness of Etruscan culture faded with conquest and incorporation into the Roman state, Etruscan religious traditions continued to influence Rome, who carried these divinatory practices throughout the Western Empire<sup>7</sup>.

Excavation of central Italian archaeological sites has revealed a further practice shared on both sides of the River Tiber: the deliberate closure of significant subterranean structures with fills rich in animal bones<sup>8</sup>. Excavation of the *area sacra* of the Etruscan port town of Pyrgi brought to light several wells, all purposefully filled with a variety of archaeological materials, including a wide range of faunal remains<sup>9</sup>. Deliberately closed

1 See NIJBOER 2015; TORELLI 2017.

2 PLUTARCH, *Life of Romulus* 11.1–4. Tradition also held that Rome's 5<sup>th</sup> and 7<sup>th</sup> kings were Etruscan. See FORSYTHE 2005.

3 SILIUS ITALICUS, *Punica* 8, 483–494.

4 POTTS 2015; WINTER 2017.

5 BEARD et al. 1998, 60; 101–102.

6 On Etruscan religion, including the *Etrusca disciplina*, see JANNOT 2005; for a list of sources referring to these texts see DE GRUMMOND 2006.

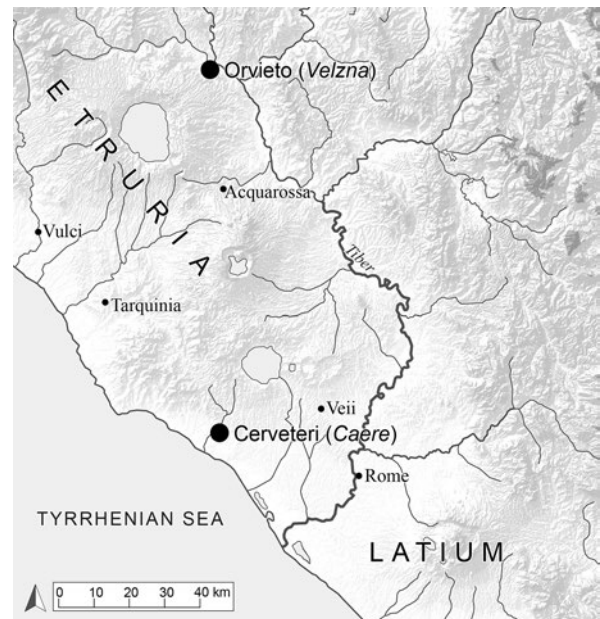
7 BRIQUEL 2004.

8 See RASK 2014.

9 For two wells in front of temple A: CALOI/ PALOMBO 1980; CALOI/ PALOMBO 1988/89; COLONNA 1988/89. For well in area C, adjacent to temple B: CARDINI 1970; COLONNA 1970.

wells with bone-rich fills are also found at Veii<sup>10</sup> and Cetamura<sup>11</sup>; the later of these produced evidence of a long history of ritual deposits, with possible early links to Mithraic cult activity. Similarly, the fill of a subterranean tunnel at Centocelle, dated to approximately the 3<sup>rd</sup> to 4<sup>th</sup> centuries BC, has been associated with cultic activity on the basis of the conservation and character of the animal remains<sup>12</sup>. Of course, not all fills of this sort necessarily result from ritual activity<sup>13</sup>, and the tradition of using bone-rich fills in the closure of underground structures accounts for just one way in which animals were used in ancient cult activity in central Italy<sup>14</sup>. Nevertheless, bone-rich fills were repeatedly deposited in subterranean structures throughout Etruscan and Republican central Italy, and the origins of these practices ran deep. Caves throughout Italy have produced animal bone deposits with a symbolic and seemingly chthonic character<sup>15</sup>, suggesting that this tradition dates back at least as far as the Late Bronze Age.

This paper examines animal remains from two subterranean structures, both purposefully closed with bone-rich fills during the 5<sup>th</sup> century BC (*fig. 1*). The first assemblage was recovered from a small semi-subterranean shrine in Cerveteri, Roman *Caere*, known to the Etruscans as *Cisra*<sup>16</sup>. The second collection of material derives from a large dis-used quarry in Etruscan *Velzna*, modern Orvieto. Discussion focuses on the fills of subterranean ‘structures’ (e. g. wells, cisterns, tunnels, quarries) independently from other types of underground man-made features (pits, tombs), because the former typically had a life prior to its use as a place of disposal. While pits can be sized to house a particular body of material (e. g. foundation deposit or votive offering), in the case of subterranean structures, the fill must fit an



1 Map of central Italy (Adapted from Ancient World Mapping Center map of ‘Rome and Environs’).

existing space. This logistical aspect of closing an extant structure, and the types of activities that produced such a fill, warrant consideration separate from that of other types of ‘ritual’ deposits, although there are, of course, many similarities shared between these types of contexts. The bone-rich fills discussed here are one element that was shared in Etruscan and Roman tradition, and a better understanding of Etruscan practice and how it did – or did not – influence Roman habits can help shed new light on the development of Roman ritual and what makes it specifically, ‘Roman’<sup>17</sup>.

10 CUCINOTTA et al. 2010.

11 CORBINO / FONZO 2017.

12 DE GROSSI MAZZORIN 2004.

13 E. g. CLARK 1989; CLARK 1993 appears more related to industrial debris.

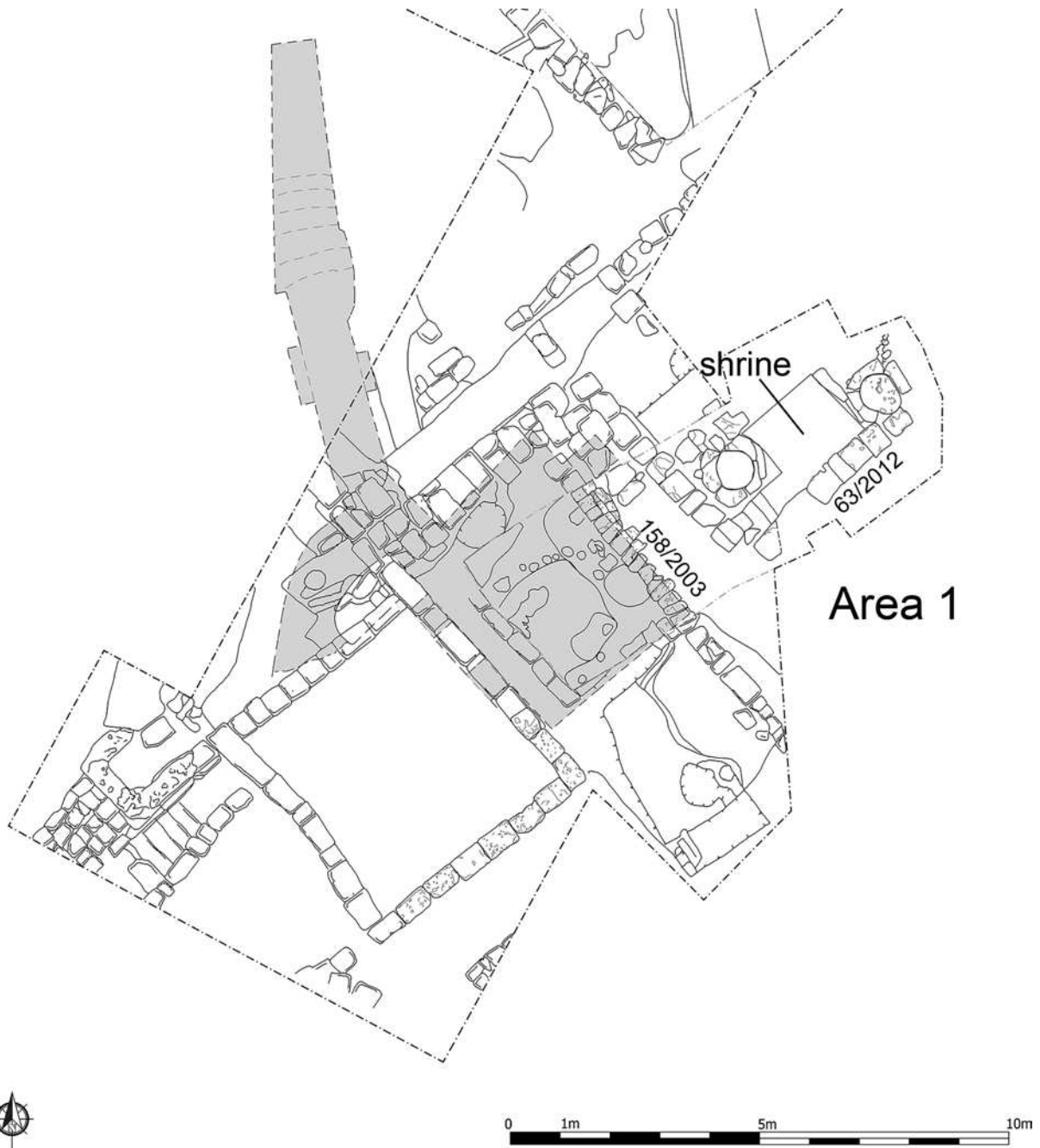
14 Other examples include use of animals in funerary contexts (e. g. MINNITI 2012), votive deposits (e. g. BAGNASCO GIANNI 2005; DE GROSSI MAZZORIN / MASCIONE 2010), and buried accumulations of

material in sanctuaries (e. g. WILKENS 2008). See RASK 2014 and BOUMA 1996, 215–248 for useful summaries.

15 E. g. Sorgenti della Nova: DE GROSSI MAZZORIN / MINNITI 2002. See also WILKENS 1995; SILVESTRI et al. 2017.

16 For the Etruscan name of the city see WALLACE 2016.

17 Although the significance of a practice will change with its context, e. g. the perceived ‘foreignness’ of Etruscan divination may have been an important part of its power and appeal; BEARD et al. 1998, 20.



2 Map of *Caere* excavations (Area 1) showing the location of the *hypogeum* of Clepsina (shaded) and semi-subterranean shrine (Image courtesy of M. Di Lieto, *Caere* Project).

## *Caere* – a semi-subterranean shrine

### Background

Cerveteri (Roman *Caere*) was one of the largest and most powerful cities of Archaic central Italy<sup>18</sup>. Today, it is best known for its monumental necropolis, and the materials

recovered from these tombs demonstrate the wealth of the local aristocracy and skill of Etruscan artisans, as well as rich trade connections with the Eastern Mediterranean. The city centre housed substantial civic and religious buildings that further attest to *Caere's* impor-

18 For a general introduction see Troccoli 2006; Torelli 2016.

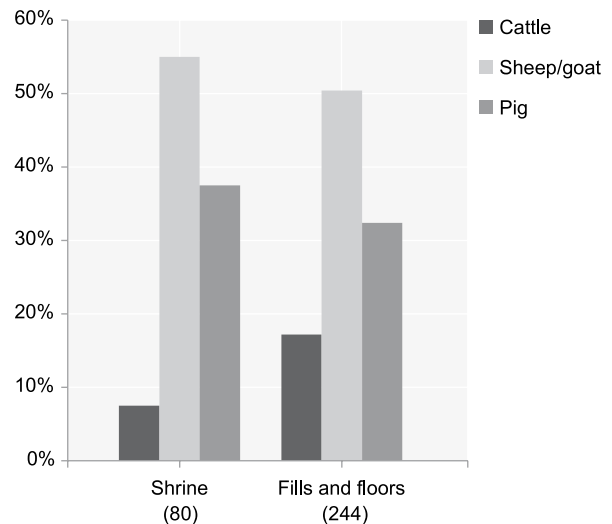


tance<sup>19</sup>. Queen's University has been conducting excavations in the urban area of Etruscan *Caere* since 2012<sup>20</sup>. The project is exploring an area within the city around the *hypogeum* of Clepsina (fig. 2), a subterranean monument used for the celebration of the *Rosalia* festival during the Imperial period. As part of the project, excavations explored a semi-subterranean structure, about 1.7 m by 1.5 m in dimension and approximately 3 m in depth, which was interpreted as small shrine on the basis of the architecture and associated finds<sup>21</sup>. The structure was entered by a rock-cut stairway that descended to a space containing three niches: a small niche in the southern wall, and two larger niches, c. 1.3 m in height, which began at the floor level in the northeast and northwest walls. A cut in the floor of the northwestern recess was capped with a block. These features and the underground location of the shrine suggest a role in chthonic ritual. This structure was intentionally closed with a fill rich in ceramic fragments (Greek pottery, coarse ware ceramics, architectural terracottas) and animal remains, the highest levels of which were partly destroyed by a modern pipe trench.

## Faunal remains

Animal remains from the 2012–2014 excavations, including those from the fill of the semi-subterranean shrine (US97), were published in a recent report<sup>22</sup>. More recent zooarchaeological work expanded the number of identified specimens from Etruscan contexts (excluding the shrine) and has refined some identifications. The data presented here reflect the current state of research, which should be considered preliminary as the work is on-going. Animal remains were recorded using a system of diagnostic zones<sup>23</sup>; results presented below only include specimens with zones. Full study of the avian fauna, led by Chiara Corbino, is in progress.

Although the quantity of faunal material from the fill of the shrine was fairly modest<sup>24</sup>, this assemblage differed from other Etruscan contexts from the excavations in several aspects. Firstly, the shrine yielded a larger range of avian taxa than found in other Etruscan layers (tab. 1). Bird remains from the shrine included



3 Livestock representation in Etruscan contexts at *Caere*. Sample size in parentheses.

chicken (*Gallus gallus*), goose (*Anser anser*), wood pigeon (*Columba palumbus*), coot (*Fulica atra*), and – interestingly – barn owl (*Tyto alba*). Cut marks on goose and wood pigeon bones suggest these birds were consumed, or at least butchered. Compared to floors and construction fills, the shrine contained a similar proportion of livestock remains (fig. 3), but with a relatively higher percentage of pigs and lower proportion of cattle. Livestock frequencies are comparable to other central Italian sites of the period<sup>25</sup>. Medium mammal rib fragments were more abundant in the fill than in other contexts, and many of these were near complete. None of the animal remains from the shrine were gnawed, suggesting a quick burial. The preservation of complete ribs and joining pieces of an unfused sheep pelvis indicate that at least some of the fill was in its primary place of deposition. Butchery modifications on mammal bones were rare: only one cattle radius and one sheep/goat femur had cut marks. In-depth assessment of patterns in body part distribution (tab. 2) was precluded by the modest quantity of material, especially for cattle; however, the pelvis and femur were the most abundant element from sheep/goats. The distribution of elements from pig was more diverse. No clear patterning was visible in the distribution of right or left sided elements.

19 FIORINI/ DE GRUMMOND 2014; BELLELLI 2016.

20 COLIVICCHI et al. 2016.

21 COLIVICCHI et al. 2016, 376–381.

22 COLIVICCHI et al. 2016.

23 For full explanation see COLIVICCHI et al. 2016.

24 Other faunal material from the highest layers of the fill may have been lost due to a modern pipe trench which cut the upper

part of the structure; COLIVICCHI et al. 2016, 376. If animal remains were found on the first few steps of the shrine by the University of Perugia excavations, these were also unavailable; TORELLI/ FIORINI 2008.

25 See TRENTACOSTE 2016. Northern Etruscan cities typically have a higher proportion of pig, potentially as a result of their different environmental or economic context.

|            | Shrine (US 97) |     | Floors and fills |
|------------|----------------|-----|------------------|
|            | NISP           | MNI | NISP             |
| Cattle     | 6              | 1   | 42               |
| Sheep/goat | 37             | 2   | 104              |
| Sheep      | 6              |     | 14               |
| Goat       | 1              |     | 5                |
| Pig        | 30             | 3   | 79               |
| Equid      |                |     | 3                |
| Dog        | 2              | 1   | 12               |
| Fox        | 3              | 1   |                  |
| Dog/fox    | 2              |     |                  |
| Hare       | 1              | 1   |                  |
| Grouper    | 1              | 1   |                  |
| Tortoise   |                |     | 1                |
| Fish       |                |     | 2                |
| Human      |                |     | 1                |
| Total      | 89             |     | 263              |

 Tab. 1 Number of identified specimens from Etruscan deposits at *Caere*. Excludes bird remains still under study.

|                             | Cattle |       | Sheep/goat |     | Pig     |           |
|-----------------------------|--------|-------|------------|-----|---------|-----------|
|                             | MNE    | MAU   | MNE        | MAU | MNE     | MAU       |
| Lower dp4                   |        |       | 1          | 0.5 | 1       | 0.5       |
| Lower M3                    |        |       | 3          | 1.5 |         |           |
| Atlas                       |        |       | 1          | 1   | 1       | 1         |
| Axis                        | 1      | 1     |            |     |         |           |
| Scapula                     |        |       | 3          | 1.5 |         |           |
| Humerus                     |        |       |            |     | 1       | 0.5       |
| Radius                      | 1      | 0.5   | 3          | 1.5 | 1       | 0.5       |
| Ulna                        |        |       | 1          | 0.5 | 3       | 1.5       |
| Metacarpal (MC III / MC IV) |        |       | 1          | 0.5 | (2 / 3) | (1 / 1.5) |
| Pelvis                      |        |       | 4          | 2   | 1       | 0.5       |
| Femur                       |        |       | 4          | 2   | 2       | 1         |
| Tibia                       |        |       | 2          | 1   | 5       | 2.5       |
| Calcaneum                   |        |       | 3          | 1.5 | 1       | 0.5       |
| Astragalus                  |        |       |            |     | 1       | 0.5       |
| Metatarsal (MT III / MT IV) |        |       |            |     | (2 / 3) | (1 / 1.5) |
| Phalanx I                   | 2      | 0.25  | 4          | 0.5 |         |           |
| Phalanx II                  | 1      | 0.125 |            |     |         |           |
| Metapodial                  |        |       |            |     | 1       | 0.5       |
| Horn core                   |        |       | 1          | 0.5 |         |           |

 Tab. 2 Body part distribution in the shrine at *Caere*. Minimum number of elements (MNE) and Minimum animal units (MAU) follows BINFORD (1984).

## Orvieto – Cavità 254

### Background

Modern Orvieto occupies the Etruscan city of *Velzna*, a wealthy and powerful centre believed to be the site of the federal sanctuary of the *Fanum Voltumnae*<sup>26</sup>. The city is located on a prominent butte of volcanic tuff, which gives it a commanding position over the surrounding landscape (*fig. 4*). The Etruscan necropolises at the foot of the plateau are well documented<sup>27</sup>, but the ancient city that occupied the summit is obscured by the current town<sup>28</sup>. Information on the Etruscan urban area is derived primarily from investigation of subterranean structures and tunnels cut into the tuff plateau<sup>29</sup>. Cavità 254 is one of these rock-cut spaces beneath the modern city (*fig. 5*), which was located on the edge of the Etruscan urban area. Excavation of this underground structure began in 2012 and has since revealed a large, roughly square cavern (c. 9 m by 9 m at the current level of excavation)<sup>30</sup>. Recent excavation has uncovered large moulded blocks, still *in situ*, which suggest that the space initially functioned as a quarry. This quarry was deliberately filled in a short space of time the end of the 5<sup>th</sup> century BC, possibly in a single act. The fill was composed of series of dumps; these dumps are composed of large amounts of Etruscan material culture, believed to derive from the restructuring of the urban area: a few architectural terracottas and huge quantities of tile and Etruscan ceramics (common wares, bucchero) – many of which bear inscriptions<sup>31</sup> – as well as black and red figure Greek pottery. The dumps differed significantly in their composition; some were rich in pottery and organic remains, while others were dominated by building materials<sup>32</sup>. Some of these dumps contained large quantities of animal remains. Over 4500 remains have thus far been identified, and zooarchaeological work is on-going as excavation progresses. The faunal remains were recorded using a system of diagnostic zones, following the methodology used at *Caere* with a few exceptions<sup>33</sup>. Again, only specimens containing zones were included in the analyses below. The preliminary results presented

here build on those of a previously published short summary<sup>34</sup>. Full study of the avian fauna, led by Chiara Corbino, is in progress.

### Faunal Remains

One of the most striking aspects of the animal remains recovered from Cavità 254 was their excellent state of preservation. The surface preservation of the majority of the remains is extremely good. This quality of preservation suggests the material was deposited more or less directly into the Cavità, a supposition further supported by the recovery of articulating bones, uncovered still in anatomical connection. Most of the articulating remains are lower foot bones from sheep/goats and, interestingly, hares; articulating medium and large mammal vertebrae were also recovered. Alongside the well preserved remains is a small proportion of material (c. 9% of the post-cranial assemblage) with lower quality surface preservation. Many of these remains are also darker in colour. Considering the presence in the fills of residual pottery from earlier periods, these darker and more abraded bones may also be re-contextualised from earlier deposits on the plateau.

The quantity of faunal remains varied between contexts, with the dumping events represented by US 37 and 40 producing the greatest quantity of mammal remains (*tab. 3*). Overall the mammal assemblage is dominated by the remains of pigs (48%) and sheep/goat (44%), with relatively few elements from cattle (4%). These proportions are similar to those of other Archaic sites in central Italy<sup>35</sup>, although cattle are relatively underrepresented. Canids (2%), and other mammals, including cat (*Felis* sp.), and wild taxa (2%) are less abundant. The frequency of domestic livestock varied between contexts, with a higher proportion of pig remains in deeper levels (*fig. 6*). Bird bones are still under study, but analysis of those from US 37 and 40, undertaken with Chiara Corbino, offers a preliminary look at the exploitation of avian

26 STOPPONI 2013.

27 FERUGLIO 2003; BIZZARRI 2016; BINACO / BIZZARRI 2018.

28 Furthermore, the medieval organisation of the current city does not follow the preceding Etruscan plan; BIZZARRI 2002; BIZZARRI 2013.

29 BIZZARRI 2013.

30 BIZZARRI / BINACO 2015; GEORGE 2015; GEORGE / BIZZARRI 2015; GEORGE et al. 2017.

31 GEORGE 2015; Especially interesting are those inscribed *CAVI*, perhaps an abbreviation of *cava(tha)*, a female deity associated

with Persephone and the underworld. For discussion of Etruscan chthonic deities, see DE GRUMMOND 2004.

32 For a description of the stratigraphy see GEORGE / BIZZARRI 2015.

33 See COLIVICCHI et al. 2016. Long limb bones (humerus, radius, femur, tibia) have 3 (proximal epiphysis, diaphysis, distal epiphysis) rather than 4 zones. The cranium has 3 zones (zygomaticus, frontal – orbital part, occipital condyle).

34 GEORGE et al. 2017.

35 See TRENTACOSTE 2016.



4 Plan of the western plateau of Orvieto with the location of Cavità 254 (star) and the ancient monumental entrance to the city. The double line corresponds to the so-called Muro di Via della Cava terracing wall (Adapted from FERUGLIO 1998).

taxa. Over one-hundred bird remains were recovered from this deposit; most of these were from chickens, followed by wood pigeon (*Columba palumbus*) with a smaller number of bones identified goose (*Anser anser*),

duck (*Anas platyrhincos*), western jackdaw (*Corvus monedula*), and common starling (*Sturnus vulgaris*). The presence of owls is especially interesting: little owl (*Athene noctua*) and tawny owl (*Strix aluco*).

| Context (US) | 32  | 33 | 34 | 35 | 36  | 37   | 38  | 38/45 | 39 | 40   | 44 | 45  | Total |
|--------------|-----|----|----|----|-----|------|-----|-------|----|------|----|-----|-------|
| Cattle       | 8   | 2  | 2  | 3  | 18  | 94   | 11  | 1     |    | 58   |    | 6   | 203   |
| Sheep/goat   | 61  | 24 | 29 | 31 | 168 | 577  | 135 | 20    | 6  | 509  |    | 90  | 1650  |
| Sheep        | 9   | 3  | 3  | 9  | 37  | 123  | 26  | 6     | 1  | 66   |    | 11  | 294   |
| Goat         | 1   |    | 1  |    |     | 16   | 7   |       |    | 18   |    |     | 43    |
| Pig          | 65  | 26 | 26 | 18 | 191 | 758  | 170 | 38    | 2  | 749  | 1  | 150 | 2194  |
| Dog          | 1   |    | 2  | 2  | 7   | 24   | 7   |       |    | 27   |    | 2   | 72    |
| Canid        |     |    |    |    |     | 2    |     |       |    | 1    |    |     | 3     |
| Dog/fox      |     |    |    | 1  | 2   | 2    |     | 2     |    | 2    |    | 2   | 11    |
| Cat          |     |    |    |    |     | 7    | 1   |       |    | 3    |    |     | 11    |
| Hare         | 1   |    | 1  | 1  | 4   | 16   | 8   |       |    | 19   |    | 18  | 68    |
| Badger       |     |    |    |    |     |      |     |       |    | 1    |    |     | 1     |
| Roe Deer     |     |    |    |    |     | 5    | 1   |       |    | 4    |    |     | 10    |
| Red deer     |     |    |    |    | 1   |      |     |       |    |      |    |     | 1     |
| Total        | 146 | 55 | 64 | 65 | 428 | 1624 | 366 | 67    | 9  | 1457 | 1  | 279 | 4560  |

Tab. 3 Number of identified specimens from Orvieto, Cavità 254. Excludes bird remains still under study.





5 Interior of Cavità 254 in 2018. Abundant pottery and animal bones are visible in the mounded fill (Photo courtesy of Alistair Potts).

Cattle teeth were predominantly from adult animals, but post-cranial remains included a significant proportion of unfused bones (*tab. 4*). Mandible wear stages for sheep/goat demonstrated a culling pattern spread across various age groups, with one peak in the latter first year of life and a second peak in between approximately the third and sixth years (*fig. 7*). Although a focus on the slaughter of juvenile animals can be an indication of cultic activity, similar mortality patterns are present in non-ritual, habitation-related assemblage from Forcello and Padova<sup>36</sup>. Pig mandible wear stages (*fig. 8*) suggested a degree of seasonality in slaughter strategy. Several peaks were apparent: the first at a very young age (stage 2) and three subsequent peaks around stages 8, 18, and 26. In other contexts, similar peaks in mandible wear stages have been interpreted as seasonal slaughter at mid-winter<sup>37</sup>. Assuming the fill of Cavità 254 represents a single event, the variability in this patterning could be explained by local variation in breeding season, e. g. if births were spread over several months, and/or if sows farrowed more than once annually. Further vari-

36 TRENTACOSTE 2016. Although these sites are in northern rather than central Italy.

ability might be expected if animals were drawn from a catchment area beyond Orvieto itself. Investigation of strontium isotopes from sheep tooth enamel has demonstrated that sheep from at least three ‘iso-zones’ were deposited in Cavità 254<sup>38</sup>; although the precise locations where these sheep were raised are unclear, isotopic analyses suggest several places of origin. The well separated peaks in the mandible wear stages of young pigs may reflect locally bred animals, with greater variability in the ages of older pigs introduced by the movement of animals from a larger number of husbandry locations and thus systems.

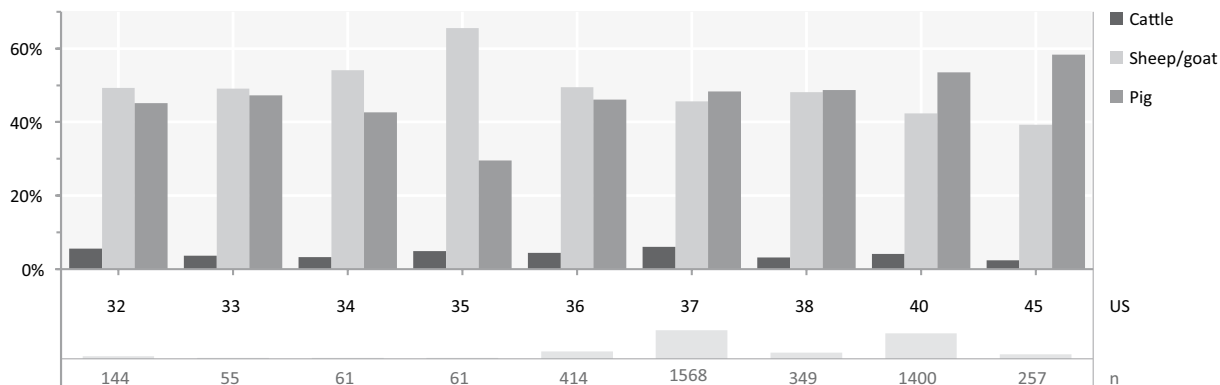
|                     | Year fused | Fused | Unfused |
|---------------------|------------|-------|---------|
| Scapula             | 1          | 4     | 2       |
| Pelvis              | 1          | 3     | 0       |
| Radius – proximal   | 1 to 2     | 1     | 0       |
| Phalanx I           | 1 to 2     | 20    | 5       |
| Phalanx II          | 1 to 2     | 14    | 6       |
| Humerus – distal    | 1 to 2     | 1     | 0       |
| Metapodial – distal | 2 to 3     | 9     | 6       |
| Tibia – distal      | 2 to 3     | 2     | 1       |
| Humerus – proximal  | 3+         | 0     | 0       |
| Femur – proximal    | 3+         | 5     | 0       |
| Tibia – proximal    | 3+         | 2     | 0       |
| Calcaneum           | 3+         | 4     | 2       |

Tab. 4 Cattle bone fusion for Orvieto, Cavità 254. Unfused epiphyses excluded. Fusion ages follow SILVER (1969).

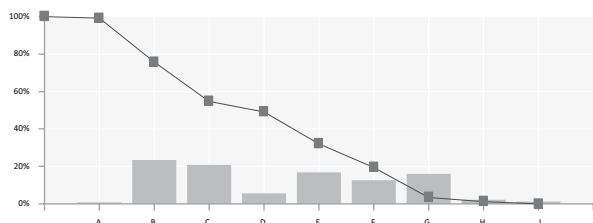
Investigation of body part distribution demonstrated that small elements were underrepresented across all taxa considered, probably due to recovery through hand collection. These analyses also revealed an underrepresentation of the sheep/goat hindlimb (*tab. 5*; *fig. 9*). Considering the age structure of the sheep/goat assemblage, density-mediated bias probably impacted the survival and recovery of late-fusing bones (e. g. femur, proximal tibia); however, the underrepresentation of the distal tibia and metatarsal cannot be similarly explained. Furthermore, there appears to have been a preferential selection of right femora (*fig. 10*). Examination of pig body part distribution (*tab. 5*; *fig. 11*) again revealed an underrepresentation of the hindlimb, though not as pronounced as in sheep and goats. Interestingly, in pigs, the astragalus was only half as abundant as the calcaneum and tibia, and pig knucklebones also demonstrated a side-bias not visible in other pig elements (*fig. 12*). Special treatment of astragali was further evidenced by recovery of seven

37 WRIGHT et al. 2014.

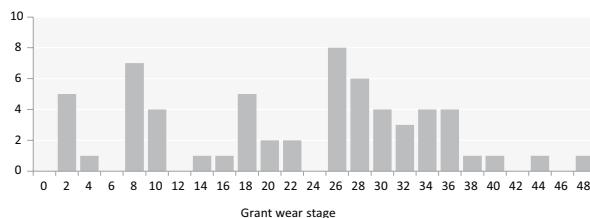
38 TRENTACOSTE et al. 2020.



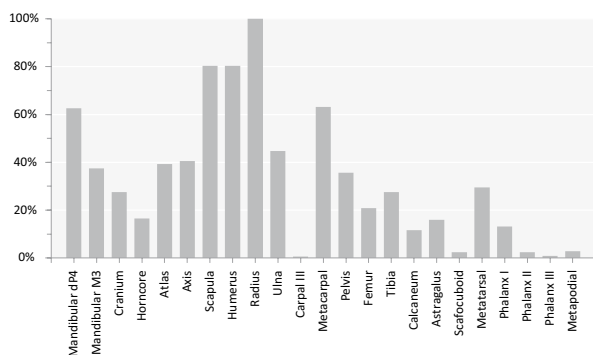
6 Livestock representation in Cavità 254 by context. Only includes contexts with livestock NISP > 50. n = sample size.



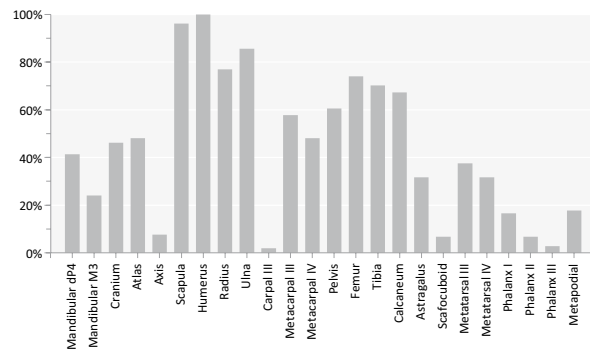
7 Mandible wear stages for sheep/goat from Cavità 254. n = 115. Wear stages follow PAYNE (1973).



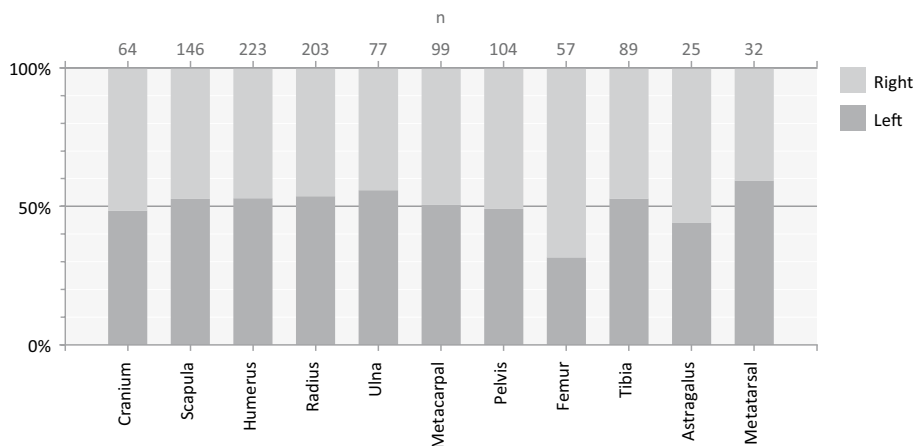
8 Mandible wear stages for pigs from Cavità 254. n = 61. Wear stages follow GRANT (1982).



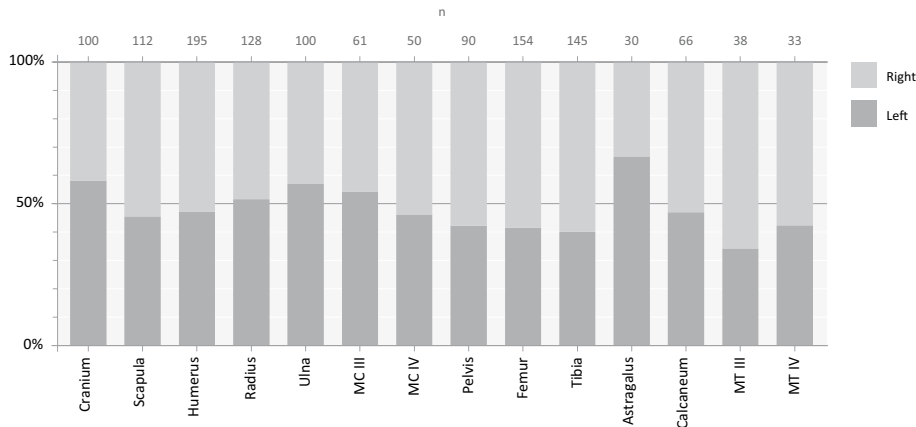
9 Skeletal element abundance (% MAU) for sheep/goat remains from Cavità 254. Expressed as a percentage of max MAU (radius = 81.5). See table 5 for MAU values.



11 Skeletal element abundance (% MAU) for pig remains from Cavità 254. Expressed as a percentage of max MAU (humerus = 52). See table 5 for MAU values.



10 Left/right distribution of sheep/goat remains from Cavità 254. Only includes elements with NISP > 20. n = sample size.



12 Left/right distribution of pig remains from Cavità 254. Only includes elements with NISP > 20. n = sample size.

|                             | Cattle |       | Sheep/goat |       | Pig       |               |
|-----------------------------|--------|-------|------------|-------|-----------|---------------|
|                             | MNE    | MAU   | MNE        | MAU   | MNE       | MAU           |
| Lower dP4                   | 2      | 1     | 102        | 51    | 43        | 21.5          |
| Lower M3                    | 5      | 2.5   | 61         | 30.5  | 25        | 12.5          |
| Cranium                     | 4      | 2     | 45         | 22.5  | 48        | 24            |
| Horncore                    | 3      | 1.5   | 27         | 13.5  |           |               |
| Atlas                       | 1      | 1     | 32         | 32    | 25        | 25            |
| Axis                        |        |       | 33         | 33    | 4         | 4             |
| Scapula                     | 8      | 4     | 131        | 65.5  | 100       | 50            |
| Humerus                     | 3      | 1.5   | 131        | 65.5  | 104       | 52            |
| Radius                      |        |       | 163        | 81.5  | 80        | 40            |
| Ulna                        | 2      | 1     | 73         | 36.5  | 89        | 44.5          |
| 3 <sup>rd</sup> Carpal      | 4      | 2     | 1          | 0.5   | 2         | 1             |
| Metacarpal (MC III / MC IV) | 15     | 7.5   | 103        | 51.5  | (60 / 50) | (30 / 25)     |
| Pelvis                      | 4      | 2     | 58         | 29    | 63        | 31.5          |
| Femur                       | 3      | 1.5   | 34         | 17    | 77        | 38.5          |
| Tibia                       | 3      | 1.5   | 45         | 22.5  | 73        | 36.5          |
| Calcaneum                   | 6      | 3     | 19         | 9.5   | 70        | 35            |
| Astragalus                  | 2      | 1     | 26         | 13    | 33        | 16.5          |
| Scafocuboid                 | 1      | 0.5   | 4          | 2     | 7         | 3.5           |
| Metatarsal (MT III / MT IV) | 7      | 3.5   | 48         | 24    | (39 / 33) | (19.5 / 16.5) |
| Phalanx I                   | 24     | 3     | 86         | 10.75 | 69        | 8.625         |
| Phalanx II                  | 21     | 2.625 | 16         | 2     | 28        | 3.5           |
| Phalanx III                 | 11     | 1.375 | 6          | 0.75  | 12        | 1.5           |
| Metapodial                  | 1      | 0.25  | 9          | 2.25  | 37        | 9.25          |

Tab. 5 Skeletal element distribution from Orvieto, Cavità 254. Minimum number of elements (MNE) and Minimum animal units (MAU) follow BINFORD (1984).

modified knucklebones (three pig, two sheep, two sheep/goat), which had their medial and/or lateral sides smoothed or cut away (e.g. fig. 13). One of the modified pig astragali also had a small hole drilled into the medial side. These modifications suggest use as gaming pieces, or more probably a role in divination<sup>39</sup>. When the distribution of cattle body parts was considered, metacarpals

appeared somewhat more common than other elements (tab. 4). There was no clear indication of a left/right side bias in the selection of cattle limbs. Modifications on cattle metapodials and horncores suggest bone and horn working occurred on the summit of the plateau. Cattle may have been raised in the surrounding lowlands, where there was easier access to water, graze, and agricultural

39 DE GROSSI MAZZORIN / MINNITI 2013.

fields, with select cattle parts brought to the top of the plateau, e. g. for consumption or use in craft activities, after the animals were butchered.

Domestic livestock remains accounted for the vast majority of the fill, but other taxa presented interesting trends. Unusually for Etruscan sites, hare was the most abundant wild taxon<sup>40</sup>; typically red deer and wild boar are more common<sup>41</sup>. Preliminary results from the avian assemblage are also interesting for their taxonomic diversity, especially for the presence of rare birds like little owl (*Athene noctua*, *Strix aluco*) and starling (*Sturnus vulgaris*). About one third of the 63 canid post-cranial bones had butchery modifications, mostly cut marks. Dogs played an important role in Etruscan and Roman ritual practice, especially those associated with rites of passage<sup>42</sup>, and the modification on bones from Orvieto suggest that dogs were dismembered and perhaps also filleted and consumed.



13 Examples of modified astragali from Cavità 254.

## Discussion

The assemblages from the shrine at *Caere* and Cavità 254 share features that link them to the chthonic realm and a long tradition of purposeful deposition of animal remains. Both are subterranean structures, deliberately closed in short periods of time with fills rich in animal bones, ceramics and architectural elements, including a significant quantity of high-status materials. Some aspects of these contexts are more strongly associated with the cultic or symbolic sphere, such as the niches and conduit at *Caere* and certain pieces of inscribed pottery at Orvieto. However, their materials are not exclusive to cultic or even elite domain. Courseware pottery was common in both cases, and even the animal bone assemblages partly resemble domestic debris. Neither assemblage contained an elevated or unusually high percentage of a particular taxon, body part, or age group, which can be a defining feature of cultic assemblages in central Italy. Instead, both collections of material are dominated by common domestic livestock, although they are distinguished from habitation assemblages in more subtle ways: preservation of the material, differential treatment of fore versus hind limbs, side bias in

choice elements, and exploitation of a range of taxa not typically considered as food, most notably some wild birds. Depending on their context, modified astragalus and butchered dog bones can also be suggestive of the use of animals for religious or symbolic purposes<sup>43</sup>. Thus, the assemblages present evidence for the consumption and special treatment of animals, although this conclusion cannot be extended to every specimen in the fills. What then can we conclude about the 'ritual' treatment of Etruscan animals, other than that there was a tendency to include faunal remains in the fill when closing a significant subterranean space?

## Faunal remains, feasts, and the re-making of urban space

The deposition of meat-bearing bones, quickly buried in association with cooking ceramics and banqueting vessels immediately calls to mind a feast. There are a myri-

<sup>40</sup> A deposit associated with feasting at the *andreion* in Praesos, Crete also contained a significant proportion of hare remains: MADGWICK 2018.

<sup>41</sup> DE GROSSI MAZZORIN / MINNITI 2009; TRENTACOSTE 2016.

<sup>42</sup> See SMITH 1996; DE GROSSI MAZZORIN / MINNITI 2006; WILKENS 2006.

<sup>43</sup> For example, when associated with temples, cultic contexts, or tombs. For astragali see DE GROSSI MAZZORIN / MINNITI 2013; for dog butchery in non-ritual contexts see CURCI / SERTORI 2019; for ritual use of dogs see SMITH 1996, DE GROSSI MAZZORIN / MINNITI 2006, and WILKENS 2006.



ad of ways to define and theorise feasting<sup>44</sup>, although nearly all include sharing of food in a way that is special or at least non-mundane. Although definitions of feasting can also encompass small events, the size of the deposit from Orvieto suggests a visible and large-scale activity. Although the zooarchaeological recognition of feasting is difficult<sup>45</sup>, following the criteria proposed by Twiss<sup>46</sup>, the material from Cavità 254 has several features that would permit its identification as a special consumption event, if not a feast:

- (1) consumption of large quantities of food,
- (2) consumption of symbolically important foods (dogs?),
- (3) special locations and public ritual (use of a large subterranean space, quarried for a monumental – probably civic – building project),
- (4) displays of wealth and/or status (banqueting ceramics, minimally processed bones, large quantities of meat) and
- (5) special serving vessels.

Thus, while no one feature warrants definition of the material as a feasting deposit, when the materials and their context are considered as a whole, there is good evidence for large, possibly ceremonial, consumption event, probably accompanied by distribution of meat, as represented by the underrepresented sheep/goat hindquarters<sup>47</sup>. Furthermore, sealing of the debris into the Cavità would warrant its inclusion in a sixth criterion: commemoration, as the process of depositing the consumption debris into a monumental subterranean space memorialises the event and forever closes the structure. Considering that the animal remains in the Cavità are mixed with debris from a major restructuring of the urban area, the memorialised occasion was probably the urban re-development and closing of the associated quarry.

Turning to the bone assemblage from *Caere*, the deposit shares some key elements with that of Orvieto. Again, we have a fill containing high status materials and serving ceramics alongside cook wares and minimally processed animal bones. However, the size of the shrine's faunal assemblage is much smaller than that of

the Cavità, in line with the physical size of the space. The presence of bisected vertebrae and well preserved ribs suggests the deposition of meaty parts of animals, but it is unclear whether these represent food offerings or food debris. The limited quantity of material makes it difficult to identify preferences for certain sides or skeletal parts. Although we cannot necessarily assume the material deposited into shrine represents the sum of all activity related to the structure's closure, the quantity of material suggests a relatively small-scale food offering to the divinities of the shrine, or perhaps the remains of a meal, represented by the well preserved ribs, vertebrae, and limb bones<sup>48</sup>. Like at Orvieto, the structure's decommissioning occurred during a period of urban re-development in the 5<sup>th</sup> century BC, when a quarry was filled, existing structures demolished, and new temple built in the adjacent Vigna Parrocchiale<sup>49</sup>. While the size of the shrine suggests a private, restricted ritual practice within the space itself<sup>50</sup>, its closure may have been one part of a more visible, public event, with only a portion of the associated activity deposited in the shrine<sup>51</sup>.

Banqueting was a primary mode of aristocratic self-representation in Archaic Italy – an activity which served a central role in the construction of status and the demonstration of material wealth and cultural affiliations<sup>52</sup>. Scenes of banqueting are prominent in Etruscan architecture and funerary art: from the painted tombs of Tarquinia, to the terracotta friezes of Murlo and Acquarossa, and reclining diners on Etruscan sarcophagi, communal drinking and dining was a central theme in the iconography of Etruria<sup>53</sup>. Finds of bronze and ceramic vessels, alongside cauldrons, spits, and other dining equipment, reinforce banqueting's important social role across the religious, domestic, and funerary spheres, and illustrate the economic investment made in the objects required for entertaining in style<sup>54</sup>. However, the food and drink consumed at such banquets are more difficult to detect in the archaeological record. Organic remains recovered from tombs and foundation deposits provide evidence of ritual meals and food offerings<sup>55</sup>, but – as at *Caere* – their quantity points to consumption on a relatively modest scale. Outside the

44 See esp. ROWLEY-CONWY 2018 and references therein. Also DIETLER / HAYDEN 2001; JONES 2007; TWISS 2008; HAYDEN 2014.

45 KANSA / CAMPBELL 2004; ROWLEY-CONWY 2018.

46 TWISS 2008.

47 Especially those from the left side. For the use of specific limbs or the left/right sides of animals in Classical cults see MAC-KINNON 2010; EKROTH 2008; EKROTH 2013.

48 Similar elements have been found in funerary contexts. See MAINI / CURCI 2013.

49 COLIVICCHI et al. 2016, esp. 437.

50 Interpretation of the original standing architecture of the shrine is obscured by destruction of its upper part, but the above-

ground component was probably modest rather than monumental. For religious architecture in Etruria see POTTS 2015.

51 Modified astragali and butchered dog bones have been recovered from other contexts at *Caere*.

52 D'ARMS 1984; ZACCARIA RUGGIU 2003; COLIVICCHI 2017; KISTLER 2017.

53 MARINIS 1961; LOCATELLI 2008; RATHJE 2013.

54 PIERACCINI 2000; ZACCARIA RUGGIU 2003; COLIVICCHI 2017; KISTLER 2017.

55 E. g. BAGNASCO GIANNI 2005; MINNITI 2012; MAINI / CURCI 2013.

56 DIONYSIUS OF HALICARNASSUS, *Roman Antiquities* 4:49; CORNELL 1995, 294–295.

bone-rich fills discussed above, large organic deposits of food debris produced by or deposited in unique events, rather than through long-term patterns of discard, are uncommon. This situation may result from the scale of banqueting in general, for example if banquets typically involved a limited, rather than large, number of people (e.g. religious officials at temples, families and officiants at tomb); alternatively taphonomic factors may have a role: if consumption focused on wine rather than dining, or if the remains of such meals were typically disposed of like common debris or outside the settlement. If banquets were generally exclusive occasions, feasting in Etruscan Orvieto may have been exceptional even within a banqueting society, potentially linked to the regional religious prominence of the site and distinct modes of dining (and negotiating social relationships) in the seat of a major federal sanctuary. Parallels may be found south of the River Tiber, in the *Feriae Latinae* held in spring on the Alban Mount<sup>56</sup>. This ancient festival re-affirmed cooperation amongst Latin peoples, and cities sent representatives and food offerings, as well as animals to the festivities. These livestock were slaughtered and consumed as part of a communal meal, and meat offerings distributed.

## A palimpsest of activity

While questions remain about the nature of the events that created these fills, the deposits provide a clear sense that subterranean spaces were the proper place to lay to rest certain groups of material. This practice was not exclusive to *Caere* and Orvieto, and the two examples presented here form part of a wider practice in central Italy of using bone-rich fills to close subterranean structures<sup>57</sup>. Debris produced by a wide variety of activities apparently warranted this form of burial, ranging from food offerings and food remains, to assemblages dominated by cranial elements that resemble trophy accumulations<sup>58</sup>. Ritual deposits from the Etruscan sanctuary of Poggio Colla suggest that particular animal remains were selected for deposition with objects of significance<sup>59</sup>. Similar acts of debris curation may also have occurred at a larger scale.

Even within a single assemblage, a range of activity types are represented by the remains of food and non-food animals. This sense of diverse materials ‘belonging’ to a space is echoed in the structured decommissioning of sacred places throughout central Italy. The destruction of sacred buildings was frequently accompanied by the deliberate and sometimes very careful burial of objects and architectural pieces associated with the structure. The best known example is probably the burial of the roof statues of the Temple of Apollo at Veii, but comparable practices are found throughout central Italy<sup>60</sup>. Varro refers to subterranean chambers under the precinct of the Capitoline temple that were used to house votive offerings and statues that had fallen off the temple<sup>61</sup>. In this context, dedications and elements of the sanctuary could be considered akin to what Rowley-Conwy calls “ritually charged garbage”<sup>62</sup>, which required deposition in a safe, or at least appropriate, location. Perinatal human remains, which were deposited within domestic space rather than necropolises, were another form of material that necessitated burial within (or outside of) certain locations<sup>63</sup>.

Certain animal remains received similar treatment, although the means through which they acquired a special, ‘charged’ status would have been very diverse. Evidence points to a wide variety of Etruscan ritual practices involving animals, some of which required live animals, while other rituals necessitated their slaughter<sup>64</sup>. Even when an animal was killed, the primary symbolic role was not necessarily held by the meat, but possibly by the internal organs, blood, skin, or even the action of butchery itself<sup>65</sup>. This range of activities would be expected to produce an equally diverse range of debris, some of which – the “ritually charged garbage” – necessitated deposition in a particular location. Over a period of time, this deposition and re-deposition of ‘charged’ debris would create a palimpsest of faunal remains and other material culture generated by symbolic activities. During redevelopment of an area, ‘charged’ materials might be divided or mixed with other fills as required by the logistics of construction. Equally, ‘charged’ debris could have been used to transfer significance from a previous structure or event to a new one, or to mark a change in function<sup>66</sup>.

57 See refs 9–15.

58 For example, the marked proportion of pig cranial elements in well 469 at Veii, CUCINOTTA et al. 2010. For trophy accumulations represented by collection of bones or curation faunal elements, e.g. after a feast or ceremonial meal see TWISS 2008; HAYDEN 2016, 61; ROWLEY-CONWY 2018.

59 Specifically a bronze *patera*, statues bases, and a bronze plaque. TRENTACOSTE 2013.

60 GLINISTER 2000. Also WARDEN 2012.

61 AULUS GELLIUS, *Noctes Atticae* 2.10.

62 ROWLEY-CONWY 2018.

63 TRENTACOSTE et al. 2018

64 RASK 2014, forthcoming.

65 RASK 2014, forthcoming.

66 In northern Italy, human remains could be used similarly. See ZANONI 2011; TRENTACOSTE et al. 2018.

Consideration of these fills as a palimpsest of symbolic activity also offers a coherent way of interpreting the presence of supposed non-food animals in the fills – owls, for instance. Owls are a rare occurrence on central Italian sites, and are absent from habitation assemblages in the region<sup>67</sup>. In contrast, the remains are more frequent in cult places, subterranean structures, and sanctuaries, including the shrine at *Caere* and *Cavità 254*<sup>68</sup>. Although owls may be attracted to human habitation by commensal prey, their repeated appearance in cultic deposits, suggests that their bones were not simply intrusive. Birds were instrumental in Etruscan and also Roman religion through their role in augury – the interpretation of omens observed in the flight of birds<sup>69</sup>. Owls were considered inauspicious omens and portents of death<sup>70</sup>. The recovery of owls from contexts like *Caere's* semi-subterranean shrine and a pit in Orvieto's Cannicella sanctuary (located with-

in a necropolis) reinforces the association of these birds with the underworld. In Rome, the presence of an owl was a hazard that had to be mitigated by catching and killing the bird, and rewards were offered to incentivise the process<sup>71</sup>. Owls could also be killed and displayed to protect crops and households from misfortune<sup>72</sup>. In this context, the killing of owls is preformed neither for food nor a votive offering or sacrifice, but rather as a kind of apotropaic pest control. The texts give a sense of these birds as dangerous portents, whose power continued after death. The distribution of owl bones in central Italy suggests that sanctuaries and subterranean contexts were appropriate places of deposition for these dangerous birds of the night. Rather than reflecting activities occurring within these religious spaces, the spaces themselves may have the safest place to dispose of animals and other items that 'belonged' to underworld.

## Conclusion

Ritual can be understood as "a special type of action which is somehow connected to the belief system"<sup>73</sup>. In Etruscan religion, an animal and its remains could be subject to a range of actions imbued with symbolic significance: selection, transport, killing, butchery, distribution, consumption, and also deposition. Contextual information can provide clues on the processes that produced a body of faunal material, but a key problem with interpretation of 'ritual' in zooarcheology is identifying which action(s) were ascribed as symbolic meaning. Are the bones the debris of a ritual activity? Or is the burial itself the ritual? Or both? In some cases, the ritual treatment of animals may have comprised a series of prescribed formal actions beginning with selection and ending with slaughter and consumption, while other 'rituals' might be better understood as traditions simply related to disposal. In faunal assemblages from significant subterranean spaces we find many layers of small and large symbolic activities, encompassing events associated with the closing of the space itself, to previous ritual and mundane activities in the area. These palimpsests provide a very rich record of ancient life, whose

texture is lost if the entire deposit is lumped into a single broad category. The more specific we can be as specialists in our consideration of taphonomy and assemblage formation, the better we can understand the variety of ancient ritual.

The bone-rich fills discussed here offer a strong sense that certain materials belonged in subterranean spaces, even though the properties that mandated their inclusion in such space could be very diverse. Food and feasting debris were one category of material, and food consumption and deposition had an important role in the re-development of urban space and associated closure of subterranean structures; however, without thorough integrated studies it is difficult, if not impossible, to assess the nature, and therefore meaning of the consumption event(s) that produced these faunal assemblages. The scale of activity at Orvieto suggests a large event, potentially civic in nature, and presumably orchestrated by the same people who organised construction of the city's monumental structures. This interpretation fits well with the site's identity as home to a major federal sanctuary, and the role of urban centres and

67 See TRENTACOSTE 2014, 35; 145; 154; A small owl bone has been identified at Forcello near Mantova in northern Italy.

68 *Atene noctua*: Rome – Centocelle (DE GROSSI MAZZORIN 2004), Tarquinia – Pian di Civita (Phase I; BEDINI 1997), Pyrgi – well in *Area sacra C* (CARDINI 1970), Orvieto – Cannicella sanctuary (WILKENS 2008), Cetamura (CORBINO / FONZO 2017; also *Tyto alba* in Roman levels).

69 See DE GROSSI MAZZORIN 1990.

70 PLINY, *Natural History* 10.16.

71 The bird was then burnt and its ashes scattered. Julius Obsequens, *Prodigies* 26, also 53.

72 COLUMELLA, *On Agriculture* 10.337–50.

73 BOURQUE 2000, 20.

sanctuaries as foci for competitive display and the redistribution of agricultural produce by local elites<sup>74</sup>. But is consumption on this scale a more pronounced version of the same phenomenon we find in smaller assemblages like that from *Caere*? Or does it have a different motive or intended audience? Banqueting offered a means to assert cultural identity and affirm local social standing, but for whose benefit? Aristocratic inter-family rivalries within the ancient city could produce similar archaeo-

logical patterns as inter-city competition and the promotion of regional solidarity<sup>75</sup>. Resolution of these and similar questions require further zooarchaeological and specialist work, as well as sustained dialogue with researchers working more broadly on protohistoric communities. Nonetheless, these bones demonstrate that from the banqueting table to the belly of the earth, animals and animal remains had a vital role in ritual life of Archaic Italy.

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<sup>74</sup> See NIJBOER 2004; BECKER 2009; POTTS 2015; BIELLA 2019. For animal redistribution see BARKER 1989; TRENTACOSTE 2016.

<sup>75</sup> Orvieto presents evidence for a broad, urban middle- to upper-class during the Archaic period. See AMANN 2017a; AMANN

2017b. However, ROWLEY-CONWY 2018 hypothesises that “ritually charged garbage” that requires special burial should result from competitive rather than solidarity feasts.

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Fig. 1: Map adapted from Ancient World Mapping Center map of 'Rome and Environs'. – Fig. 2: Image courtesy of M. Di Lieto, Caere Project. – Fig. 4: Adapted from FERUGLIO 1998. – Fig. 5: Photo courtesy of Alistair Potts. – All other figures: Author.

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## Abstract

Romans and Etruscan shared many cultural practices, including religious traditions. One such practice was the use of bone-rich deposits to deliberately close significant subterranean spaces and structures. The faunal material in these fills can often be separated from common domestic debris on the basis of associated materials and by patterns in the treatment of animals and choice of species. This paper presents new data on two urban deposits from pre-Roman central Italy: bone-rich fills from a semi-subterranean shrine in Cerveteri and a large rock-cut quarry in Orvieto. Both of these structures produced assemblages dominated by livestock remains with a smaller quantity of wild specimens. Comparison of the faunal material from these deposits revealed commonal-

ities in the treatment of animals, which may suggest a set of shared practices related to the chthonic nature of both contexts. Considered in relation to other subterranean contexts with deliberate bone fills, this study sheds new light on the origins of Roman ritual practices conducted in an urban setting. However, analysis of these deposits also raises methodological questions surrounding the recognition of ancient feasting and the ritual treatment of animals, as well as the origins of material encountered in 'ritually closed' spaces. These findings challenge us to be specific in how we articulate the logistics of closing a sacred space and the role of animals – and animal remains – in the process.



## Zusammenfassung

### Im Bauch der Erde: Knochen und die Schließung heiligen Raumes in Mittelitalien

Römer und Etrusker teilten viele kulturelle Praktiken und religiöse Traditionen. Eine dieser Praktiken war das bewusste endgültige Verschließen bedeutender unterirdischer Räume und Strukturen mit an Tierknochen reichen Verfüllungen. Das Faunenmaterial in diesen Schichten kann oft von gewöhnlichem Hausschutt durch Muster bei der Behandlung von Tieren und der Auswahl der Arten unterschieden werden. In diesem Beitrag werden neue Daten zu zwei städtischen Befunden aus dem vorrömischen Mittelitalien vorgestellt; es sind knochenreiche Schichten aus einem halbunterirdischen Heiligtum in Cerveteri und einem großen Steinbruch in Orvieto. In beiden Befunden dominieren Haustierreste; sie enthielten nur geringe Mengen an Wildtierresten. Der Vergleich des Faunenmaterials aus diesen beiden Befunden zeigt Gemeinsamkeiten in der Behandlung von

Tieren, was auf gemeinsame Praktiken hindeutet, die mit den chthonischen Kontexten beider Orte zusammenhängen könnten. In Bezug auf andere unterirdische Befunde mit absichtlichen Knochenverfüllungen wirft diese Studie ein neues Licht auf die Ursprünge römischer ritueller Praktiken in städtischem Kontext. Die Analyse wirft jedoch auch methodologische Fragen auf, die die Durchführung antiker Feste und die rituelle Behandlung von Tieren sowie die Herkunft des Materials betreffen, das in „rituell verschlossenen“ Räumen angebracht wurde. Diese Befunde fordern uns heraus, zu überlegen, welche Rolle Tiere – und Reste von Tieren – bei der endgültigen Schließung eines heiligen Raumes spielten und an welchen Orten die Riten hierzu vollzogen wurden, bevor die Überreste als abschließende Verfüllung der Ritualräume und -gruben dienten.

## Résumé

### Dans le ventre de la terre : les os et la fermeture de l'espace sacré en Italie centrale

Les Romains et les Étrusques partageaient de nombreuses pratiques culturelles, y compris les traditions religieuses. L'une de ces pratiques consistait à amonceler des os pour fermer d'importants espaces et structures souterrains. Les os de ces dépôts se distinguent souvent des déchets domestiques par le matériel associé, les types de traitement des animaux et la sélection des espèces. Cet article présente de nouvelles données concernant deux dépôts urbains préromains de l'Italie centrale: des remplissages riches en os provenant d'un sanctuaire semi-souterrain de Cerveteri et d'une grande carrière à Orvieto. Les deux structures ont livré des ensembles constitués principalement de restes de bétail avec une faible quantité de spécimens sauvages. La comparaison du matériel des deux dépôts a révélé des paral-

lèles dans le traitement des animaux qui suggère un ensemble de pratiques communes liées à la nature chthonienne des deux contextes. Cette étude, considérée par rapport à d'autres contextes souterrains avec remplissage d'os intentionnel, apporte un nouvel éclairage sur les origines des pratiques rituelles romaines observées en milieu urbain. Toutefois, l'analyse de ces dépôts soulève des questions méthodologiques sur l'identification des festins antiques et le traitement rituel des animaux, ainsi que sur les origines du matériel trouvé dans les espaces « fermés rituellement ». Ces découvertes nous incitent à être précis dans notre manière de formuler les aspects logistiques de la fermeture d'un espace sacré et le rôle joué par les animaux – et restes animaux – dans ce processus.