

## Introduction: bones of contention?

The purpose of this volume is to highlight the importance of the zooarchaeological evidence for our understanding of ancient Greek sacrificial rituals. The questions posed are of a fundamental nature. What can the animal bones offer us and how are they to be matched (or not) with our other sources? To what extent do these bones demonstrate a different picture than that provided by texts, inscriptions and images and are there rituals that may only be revealed by animal bones? The contributions presented here deal with these issues from different chronological and geographical perspectives, foremost from ancient Greece in the historical period, but also in the Bronze Age and as early as the Neolithic period, as well as from Anatolia, France and Scandinavia. Most papers were presented at a conference held at the Swedish Institute at Athens in September 2009, and a few have been added later to widen the scope of the volume. The results are both empirical and methodological, and point to new questions and methodological stands to be considered in the future.

The first paper, by Gunnel Ekroth, can be read as a statement of the importance of animal bones in the study of ancient ritual. Her contribution in particular addresses important specific questions concerning a seminal area of the study of Greek religion, namely sacrificial ritual. To a large extent, Ekroth focuses on methodological issues and shows by means of concrete examples why, when and where animal bones might provide crucial contributions to our understanding of Greek sacrificial practice. Zooarchaeological material complements and elucidates epigraphic and iconographic sources, concurrently providing new and vital information through the analysis of animal bone assemblages “on their own”.

But before the bones can be matched or not with our other evidence comes the tricky task of deciding whether they actually reflect some kind of ritual activity of the past or not. The complexities of interpreting the zooarchaeological evidence within the archaeological context are in fact touched upon in most papers. Armelle Gardeisen draws on examples

from proto-historical sites in southern France, asking what a faunal assemblage actually can tell us, and what we make it tell us through inference from the find context. Her paper demonstrates how the analysis of the bone material shows tangible traces of the ancient interplay between man and animal, and the presence of animals in “human” space. Gardeisen underlines that the next level of interpretation of the bone evidence, that of the character of the activities or events that created the examined deposition has to be done without an *a priori* of the surrounding archaeological conditions in general, or strict preconceived models. Zooarchaeological material from a domestic context can in fact be the remains of a religious ritual, whereas animal bones from a sanctuary context might be the remains of a domestic activity. Gardeisen thus touches upon another major issue of the volume: how to draw the line between the sacred and the profane.

In an Iron Age Scandinavian context, Maria Vretemark discusses the apparent discrepancy between the great official sacrifices of the written and iconographical sources and the rich archaeological find material. In the former, offerings of a more restricted private sphere and a domestic context are not mentioned, nor is the habit of depositing votives in wetlands or under stones. Her particular case study revolves around the distinction between zooarchaeological remains that result from a performed ritual and those that are simply kitchen or slaughter waste. At the heart of such an analysis lies the recognition of what has been deposited where: is there no functional explanation for the deposition, the find context or the treatment of an artefact? To show and discuss the complexity of votive contexts, Vretemark presents three case studies: animal offerings in bogs, in wells and waterholes, and finally in settlement contexts. She concludes with a list of criteria that may indicate ritual activity, but stresses simultaneously that any interpretation must be done on a case-by-case basis, due to the complexity of the material.

These two studies dealing with France and Scandinavia are complemented by Katerina Trantalidou’s contribution,

which discusses the range of possible interpretations of zooarchaeological evidence from Greek contexts. Not all animal bones recovered in an area designated as sacred have to derive from rituals performed there, and therefore we need to scrutinize our methodological tools and define which elements will allow us to reconstruct ritual practices. A large body of empirical evidence from recent excavations in Greece, some as yet unpublished, is taken into consideration and this material clearly demonstrates the variations in the handling of bones between different sites. Trantalidou hereby emphasizes the importance of proper field archaeological methods, a crucial aspect in the study of animal bones, in particular as regards the stratigraphy, in order to define the duration of the activities, and a constant awareness of the relation between the zooarchaeological finds and other archaeological evidence. Furthermore the quantities of animal bones recovered must be taken into consideration.

Valasia Isaakidou and Paul Halstead's article also addresses methodological questions of if and how to identify ritual and/or sacrificial activity, by means of zooarchaeological remains. A deposition of burnt animal bones discovered in the "Palace of Nestor" in Pylos is tentatively identified as the remains of a burnt bone sacrifice; this case study then opens a discussion of Mycenaean animal sacrifice in a wider chronological perspective. The authors argue that the contrast between a stress on the collective and egalitarian in the Neolithic Aegean and on the individual and social differentiation in the Bronze Age, visible in for example architecture, funerary practice and material culture, finds a correspondent in the (treatment of) animal remains. Zooarchaeological material is demonstrated to be a valuable tool in detecting ancient behaviour and changes thereof in a "fundamental and long-term" perspective. The selection and handling of particular parts of animals by burying the bones after the meat had been consumed are practices which can be traced in the prehistoric periods, i.e. long before Greek Archaic and Classical times. This observation provides important insights into how the rituals of later periods may have developed.

A striking feature of the zooarchaeological evidence is the variety that we encounter, underlining the possibilities the animal remains have in revealing the particular conditions at a particular site. Such a local perspective is brought out by Hélène Brun and Martine Leguilloux through the analysis of the material from two altars discovered in one of the sanctuaries of Sarapis on the Cycladic island of Delos (the so-called Sarapieion C). The authors reconstruct an ancient sacrifice, from the designation of the animal to be offered, to the slaughter and allotment of a portion to the gods and the final deposition of the burnt remains. The Sarapieion C has yielded two deposits that offer several possibilities for comparisons, firstly between themselves, then with other Delian finds, and finally

with finds from other sanctuaries of the oriental gods in the Graeco-Roman world, such as the Isis sanctuaries of Mainz (Germany) and Belo (Spain) and Mithraea of the Roman world in general. A contextualized analysis demonstrates not only rites specific to the sanctuary in question (in this case the Sarapieion C on Delos) and their possible development through time, but can also shed light on worship of the oriental gods at other locations.

Another study of a restricted local context with possible implications for a much larger geographical perspective is to be found in Deborah Ruscillo's paper, which presents an examination of material from the sanctuary of Demeter on Mytilene. Excavation at this site revealed a series of altars and an ash pit that in turn yielded a large quantity of burnt piglet bones. Deborah Ruscillo explores this evidence within the context of the Thesmophoria festival and its much-discussed rites: the deposition of piglets in underground caverns (the so-called *megara*) and the subsequent recovery of their rotting remains. She underlines the need for scholarly open-mindedness when studying ancient beliefs and ritual behaviour, in particular as many religious practices of the ancient world may seem absurd to modern society. Ruscillo's contribution is a thought-provoking one, as she proposes to understand the archaeological and textual sources not only in the light of the zooarchaeological remains, but with the addition of an ethological angle as well. She suggests that the presence of snakes in the *megara* pits was vital to the Thesmophoric ritual and that these animals acted not only as vague fertility symbols, as is usually assumed, but had a more concrete function to fulfil within the ritual.

In an outlook that brings us far beyond the Greek world, chronologically and geographically, Sabine Sten presents an osteological and zooarchaeological investigation of rich cremation burials from the Late Iron Age (AD 400–1050) in east-central Sweden. The bone material collected from a group of monumental burial mounds in this area is exceptionally large and Sten's study shows that the bones, hidden from view, must have matched the imposing impression the graves gave as striking landmarks in the surrounding landscape. Not only were the deceased individuals presented with food offerings, as revealed by bones from cattle, sheep and pig; the dead also set out on the journey to the world beyond in the company of horses, dogs and sometimes birds of prey. The latter in particular indicate the high status of the buried person, since they point to the practice of falconry.

The variations revealed by the zooarchaeological evidence suggest that the rituals we encounter in texts, inscriptions and images may constitute simplified versions, schematizations or ideal situations, whereas the bone material represents remains from specific rituals fixed in time and space. Of particular interest are therefore zooarchaeological assemblages that differ

or contradict the information we find in the texts, inscriptions and images, or that provide information that is only evidenced in the bone material. The issues of concern here are not only the ritual actions performed but also the animals involved, where the rituals took place and how and where the remains were deposited or dumped after the conclusion of the ritual.

Such matters are brought to the fore in Dimitra Mylona's contribution, in which she presents an intriguing deposit from the Sanctuary of Poseidon at Kalaureia on the Greek island of Poros. The deposit was found in a cistern and is datable to the Early Roman period; it was created on a single occasion or possibly over several occasions but certainly during a very short period of time. It contains a large amount of remains from a variety of animals normally not found together: "usual" sacrificial species such as cattle, sheep, pig, and goat, but also more "unusual" animals such as donkey, dogs, snakes, frogs, fish, birds and birds' eggs. Mylona goes on to contextualize her results from the analysis of these animal remains through a survey of the written sources. This in turn provokes questions of what was in fact considered "unusual" in ancient times and what is unusual to us, as well as of how to combine archaeological and zooarchaeological material with texts. When should we let the two reinforce each other and when should we leave them apart to present differing pictures of religious practices? Mylona suggests that the Kalaureia cistern provides us with an instance where the bones tell of habits of which the authors of the surviving texts for some reason chose not to make mention.

The relation between texts and bones is also touched upon by Michael MacKinnon, who discusses material from the sanctuary of Zeus at Nemea. It has long been accepted that a local pantheon might include variations of gods and myths that clash with Panhellenic deities and stories found in literary accounts and iconography; such variations clearly existed in sacrificial ritual as well. MacKinnon shows how a close examination of the zooarchaeological material indicates that Zeus of Nemea was honoured with sacrifices that differed from those of the local hero Opheltes/Archemoros; to Zeus the right legs of the animal victims were burnt, while the hero received the left legs. On the other hand, there are no zooarchaeological indications that the hero received holocausts, where the entire animal was burnt, as has often been claimed in scholarship on the basis of later written sources. Furthermore, certain remains previously thought to stem from sacrificial rituals should rather be understood as dining debris. In the case of Nemea, the presence of burnt animal bones has been used to name find contexts "ritual", "sacrificial" or similar, and MacKinnon stresses the importance of careful analysis in a strictly limited local context, as well as

against the wider perspective of our collected knowledge of Greek culture before any such labelling is done.

Another case of bone material vs. written sources derives from a Hittite context. Taking as his starting point a deliberately buried, disarticulated sheep skeleton, Peter Popkin explores the benefits of combining textual evidence with zooarchaeological data as he reconstructs a Hittite sacrificial ritual and identifies several possible stages that make up the sacrifice and deposition. His case study concerns Kilise Tepe, a site situated far from the Hittite heartland that produced most of the texts on ritual that have come down to us and which have for long dominated the research on Hittite animal sacrifice. Popkin focuses on the discrepancies between texts and zooarchaeological remains, underlining the seminal contribution of the latter for knowledge of *local* ritual habit. Smaller sites far removed from the Hittite heartland "likely engaged in regional ritual practices not officially recognized or recorded by centrally located scribes"; the zooarchaeological evidence thereby becomes of the highest importance for recognizing and understanding regional variations in ritual behaviour. The bone material from Kilise Tepe is also of importance for the discussion of how we are to define and understand the zooarchaeological material recovered. Are the bones in this particular case the actual sacrifice or do they constitute the deposition of the remains after a sacrifice has been performed?

With a case study from Scandinavia, Ola Magnell reconstructs a sacrifice, from the selection of an animal to the deposition of its bones. The importance of taphonomic evidence is demonstrated in connection with a Viking Age cult site on the Swedish island of Frösö, where bones of sacrificed animals, both wild and domestic, were deposited on the ground by a birch tree, later to be covered by a church. As in Popkin's paper, certain features of the deposition can be understood against the background of information provided through textual sources. Magnell suggests, for example, that the birch tree could have been identified in ritual with the world-tree Yggdrasil. In the Eddic verses, Yggdrasil shelters the squirrel Ratatosk and four deer feed on its leaves: among the ritually deposited material were bones of squirrel and deer. But the Frösö zooarchaeological material also calls for a cautious use of the old Norse literary evidence, because horse, in sharp contrast to its favoured position as sacrificial animal in the textual sources, was not important in the rituals at the prominent cult site of Frösö. Furthermore, the custom of hanging whole carcasses of sacrificed animals in trees, mentioned in texts, was not among the local Frösö traditions, where instead parts of animals were deposited on the ground.

As zooarchaeology provides a new category of source material there are still many and major practical and methodological issues to deal with, not at least the empirical practical-

ities of collection, analysis and presentation of the evidence. It becomes increasingly clear that proper field archaeological methods are paramount if animal bones are to be used as a source on the same level as texts, inscriptions and images. On a fundamental level, it still needs to be stressed that sieving and water flotation of a sufficiently large sample is a prerequisite if zooarchaeological remains are to constitute relevant evidence for the cultic situation at a particular site: the lack of fish in a sanctuary, for example, cannot be ascertained unless such methods have been employed. Furthermore, archaeologists need to ensure that all kinds of bones are considered, as zooarchaeological studies of sanctuary evidence often tend to focus on larger mammals, and usually the kinds we eat today.

Tatiana Theodoropoulou brings to the fore one such category of faunal remains often neglected by modern research, as well as by the ancient textual and epigraphic sources: marine invertebrates. Against the background of a shell assemblage found *in situ* in the so-called adyton of a temple in the ancient Cycladic town of Kythnos, she combines a zooarchaeological study of the identified shells with a spatial analysis of the architectural remains. Through surveys of the literary sources and remains of marine fauna found in other sanctuaries, she then proceeds to place the Kythnos shells in a wider geographical and chronological context, in order to examine what they can tell us about the worshipped deity and his or her adherents.

Another methodological issue concerning how to approach the zooarchaeological evidence is the use of practical experiments in order to elucidate or recreate a ritual, a tantalizing but tricky process. Aware of the scepticism present in the scholarly community towards experimental archaeology, Gerhard Forstenpointner, Alfred Galik and Gerald E. Weisengruber point to several successful attempts at advancing our knowledge of ancient ritual practice through this method, such as Michael Jameson's identification of a puzzling iconographic detail as a burning and curving oxtail, and the authors' own reconstruction of a *bomos keratinos*, a "horn altar". However, this paper also points to a major problem of experimental archaeology, namely foregone conclusions. The authors find the approach often to be hampered by overly biased hypotheses that foresee the result of the experiment and therefore they propose relatively simple experiments which try to clarify technical problems, which in turn will yield the most probable—and very clear—answers.

The volume is closed by the reactions and commentaries by scholars working on Greek cult from texts, inscriptions, images and other archaeological remains in order to provide something of an outsider's perspective. Scott Scullion's paper has a twofold aim: it starts by surveying old problems, to which zooarchaeology has provided new possible answers, and then ventures into the seminal discussion of Greek meat-

eating in the context (or not) of sacrificial ritual. Zooarchaeological material now shows that animal species traditionally thought not proper to offer as sacrifice to the gods were certainly consumed in sanctuaries, and from other sources it appears that meat from animals that had not been sacrificed could be eaten, even inside a sanctuary. Scullion argues that scholars have been far too categorical when drawing a sharp, not to say definite, line between the Greek concepts of sacred and profane and suggests a "tapering off" of sacrality that would allow for a much less rigorous attitude towards what can or cannot be eaten, inside and outside sanctuaries, and thereby a different attitude towards the sacred than has hitherto been postulated.

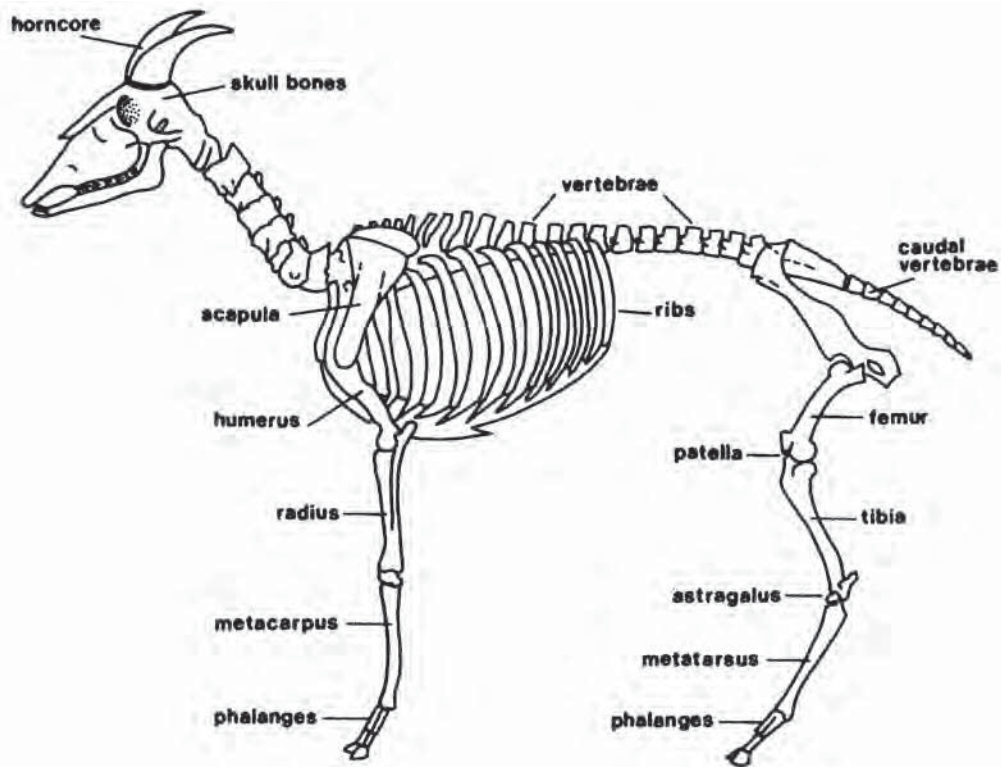
Similarly Stella Georgoudi, Véronique Mehl and Francis Prost in their concluding reflections point to the possibilities of the zooarchaeological evidence to broaden our understanding of the other sources and question some of the fundamental categories and theories of Greek religion often taken for granted, such as the Olympian-chthonian dichotomy and its validity in the study of sacrificial ritual. They suggest that the notion of "Le sacrifice grec" should be replaced by an awareness of the many "Greek sacrifices" possible in order to encompass the high degree of flexibility and occasional nature of many rituals. But they also warn against a selective use of other sources to clarify the animal bone material, for example the iconography of ancient vases, as well as putting too much faith in the zooarchaeological evidence alone. A holistic approach is to be desired, integrating various kinds of evidence, as each category presents its own difficulties and often leads to focus on one or a few aspects of animal sacrifice.

In the end, it seems that although zooarchaeology needs and should be integrated with other kinds of sources, the independent study of animal remains is of utmost importance. Bones can provide a different "reality" than that encountered in literary, epigraphic and iconographic sources and it is essential that this "reality" is explored in an unbiased manner, not influenced, guided by or adapted to the information found in texts, inscriptions or images, and not only with the intent to clarify or match the other sources. In this process the methodological difficulties inherent in each category of evidence should not be overlooked. Naturally no one can be an expert in all areas and this fact brings out the importance of collaboration over the disciplines between scholars working on different kinds of material. The guiding principle must be a mutual respect for each other's competences and knowledge. Furthermore, different specialists must define their own particular needs and which kind of information they desire from their colleagues.

We may conclude that the study of zooarchaeological material as part of the exploration of ancient Greek religion, as well as other cult practices of the past, is a process that has

barely started, but which has excellent prospects to develop and enrich our understanding of Greek cult. A database of the extant zooarchaeological deposits in ritual contexts around the Mediterranean would be of great help to map this situation. For Greece, comparative material from domestic settings is also needed to complement the evidence from sanctuaries. The present volume, *Bones, behaviour and belief*,

can be seen as a part of the current development where bone material is taken as seriously as are ancient texts, inscriptions and images, even though this may lead to the re-evaluation of many of today's given scholarly truths. Considering the pace in which the study of animal bones is progressing, a conference on the same or similar theme within a not too distant future would be of great interest.



*Skeleton of a goat with indications of major bones. Illustration from D. Reese, 'Faunal remains from the Altar of Aphrodite Owania, Athens', Hesperia 58, 1989, 65, fig. 1. Used with permission.*

