

absent. Nonetheless, this volume deserves to be widely read and reflected upon within archaeology and all heritage disciplines.

REFERENCES

- Brophy, K., 2018. The Brexit Hypothesis and Prehistory. *Antiquity*, 92(366): 1650–58. doi: <https://doi.org/10.15184/aqy.2018.160>
- González-Ruibal, A., González, P. & Criado-Boado, F., 2018. Against Reactionary Populism: Towards a New Public Archaeology. *Antiquity*, 92(362): 507–15. doi: <https://doi.org/10.15184/aqy.2017.227>

- Hamilakis, Y., ed. 2018. *The New Nomadic Age: Archaeologies of Forced and Undocumented Migration*. Sheffield: Equinox Publishing.
- Meskel, L. 2018. *A Future in Ruins: UNESCO, World Heritage, and the Dream of Peace*. Oxford: Oxford University Press.

EMILY HANSCAM
Durham University, UK

doi:10.1017/aaa.2019.10

László Bartosiewicz and Erica Gál, eds. *Care or Neglect? Evidence of Animal Disease in Archaeology* (Oxford: Oxbow Books, 2018, 300pp., several illustr., pbk, ISBN 978-1-78-570889-3)

This volume, published in early 2018, is a collection of papers stemming from the sixth meeting of the Animal Palaeopathology Working Group of ICAZ (the International Council for Archaeozoology) held in Budapest in May 2016. The conference brought together international scholars with an interest in the reconstruction of past animal health and disease, with the aim of providing an overview of the growing field of animal palaeopathology.

The edited proceedings are composed of a foreword, an introduction by the editors of the volume, and seventeen chapters devoted to studies in animal palaeopathology, spanning site reports, case studies, species-specific reviews, and problem-driven research. The temporal and geographic scope of the papers is wide, ranging from the early Neolithic to the modern period, and from the Baltic Sea to the Mongolian steppe. Due to the conference's location in Hungary, an unusually strong focus is on central and eastern European archaeology (nine out of

seventeen chapters)—a refreshing perspective in a discipline that is often western and northern Europe-centric.

In a short introductory chapter, the editors argue that the osteological paradox, the anthropological paradigm expressed by James Wood and colleagues in 1992 (Wood et al., 1992) which states that 'better health makes for worse skeletons', is equally relevant to animal remains, despite the fundamental anatomical, taphonomical, and cultural differences between the two types of assemblages. The volume title is, indeed, a direct reference to this paradox: the presence of severe pathological lesions on animal remains may be envisioned both as evidence of animal ill-health, and therefore of poor keeping and neglect; and as a testimonial to chronic conditions, indicating the individual's survival of disease and possibly the care it was afforded. In this respect, the question mark in the book's title is key: indeed, the volume does not provide answers nor—slightly disappointingly—many examples of past animal care or neglect; rather, it interrogates the

subtleties of past animal-human relationships that may be glimpsed through the study of pathological bones.

The first four contributions (Chs 2–5) focus on site analyses, reporting all pathological elements found at specific settlements. Their quality is relatively uneven, both in terms of scientific rigour and of relevance to the field; they are most useful when they provide correctly-computed ‘prevalence rates’ that may be used as comparative data, and when they move beyond the description of the evidence to search for patterns. Of particular interest is László Bartosiewicz and colleagues’ attempt in Chapter 3 (‘Palaeopathology at the Eneolithic Tell Settlement of Polyanitsa (Bulgaria) Investigated by Sándor Bökönyi’) to correlate pathology levels with age of slaughter, on the premise that older animals may have accumulated more lesions through life, a well-known issue that is to date insufficiently explored.

These general studies are followed by seven more specific contributions, focusing on the palaeopathology of two domestic species, the dog (Chs 6–8) and the horse (Chs 8–12). The special position that these two species have held in many cultures often afforded these animals articulated burials, a situation more conducive to palaeopathological examination than the commingled, butchered remains of livestock found in ordinary settlement refuse. This particularity is exploited by Chapters 6 and 8, which explore dog and horse burials in Hellenistic Beirut (Ch. 6, by Yasha Hourani) and Avar-period Vienna (Ch. 8, by Henriette Baron) respectively; the inclusion in both studies of all burials, including non-pathological ones, is noteworthy, improving the data’s potential for future reuse. Pathological elements stemming from food refuse can nevertheless be an occasional source of valuable information: Chapter 11 (‘Pelvic Fracture in

Horse: A Late Medieval Case from Karcag–Orgondaszentmiklós, Eastern Hungary’, by Kyra Lyubyanovics) provides such an example, with the short case-study of a severe pelvic fracture in an early modern horse, the healing of which most likely required specialist intervention and care. Chapter 12 (by László Bartosiewicz) then offers a review of horse palaeopathology in Hungary from the Roman period to late medieval times, investigating along the way how deposition type and taphonomic biases may impact researchers’ perceptions of horse palaeopathology.

The last contributions to this section, and in my opinion the most interesting, are a series of three problem-driven studies that employ palaeopathological analyses to further our understanding of past human-animal relationships on a cultural scale. In Chapter 7, Lauren Bellis explores the welfare of domestic dogs in Roman Britain. After analysing the eventual pathologies present on a collection of sixty-eight Roman dogs, she tests through multivariate analysis the eventual association of lesion presence and of lesion type with body size, archaeological period, and site type. She concludes that the animals were in relatively good skeletal health for a population lacking significant veterinary care, and that abuse does not appear to have been prevalent. Large animals, urban animals, and early Roman animals appeared however to be more likely to have suffered from pathological conditions than— respectively—smaller taxa, rural animals, and late Roman individuals.

Chapter 9 provides an outstanding contribution to the archaeological identification of horseback riding, and to its distinction from chariot driving. In an impeccably scientific demonstration, William Taylor and Tumurbaatar Tuvshinjargal use contemporary Mongolian ethnoarchaeological sources and bone material to demonstrate that the current

Mongolian practice of left-handed riding with a particular bridle can cause a distinctive deformation of the nasal bone and of the premaxilla, then identify these lesions in a small number of Mongolian Bronze-Age horses, raising the possibility that these animals were ridden.

Chapter 10 also focuses on the horse, but to explore the gendered roles mares and stallions were assigned in past societies, and the different levels of care they were afforded. Assuming, as suggested by historical evidence, that stallions were predominantly used for transportation and mares for reproduction, Pamela Cross explores whether these roles impacted the lesions displayed by Roman to modern British horse skeletons. Though the sample is too small to allow for conclusive evidence, her preliminary results suggest that irregular dental wear and chronic lamming pathologies may be more prevalent among females.

The final part of the volume is composed of a miscellaneous series of papers. Three deal with instances of pathology in mammal domesticates: Chapter 14 by Annamária Bárány investigates an unusual dental anomaly abundantly observed on early medieval pig mandibles on the site of Zalavár (Hungary), arguing that far from being evidence of a local breed or of back-crossing with wild boars, the anomaly is probably a consequence of the absence or malposition of the upper tusk. Chapter 15 by Yves Darton and Isabelle Rodet-Belarbi offers a rigorous investigation of the often horrifying lesions permanent fetters cause on the present-day sheep of the island of Delos, providing a solid ground for the detection of this practice in archaeological specimens. Chapter 16 (Márta Daróczi-Szabó & László Daróczi-Szabó) then proceeds to describe a series of four-horned sheep skulls all originating from late-medieval Budapest.

The book's final three contributions are perhaps the most novel, as they deal with

rarely-investigated species, providing researchers with sorely needed data. Henriette Baron (Ch. 13) takes advantage of an exceptional archaeological sample of over 300 chicken skeletons from the single site of Vienna Csokorgasse, Austria, to compile a thorough inventory of the species' skeletal pathology in that place and time. Jennifer Harland and Wim Van Neer (Ch. 17) then turn to the seriously under-documented issue of fish palaeopathology, attempting to develop the first classification of pathological fish elements, and demonstrating along the way that non-domestic species are also prone to disease and injury. A further study of fish pathology in an early modern assemblage from the Baltic Sea (Ch. 18) concludes the volume highlighting the diversity of factors likely to have caused these deformations.

All in all, this volume is a typical example of edited conference proceedings, bringing together a diverse and uneven collection of papers of varying perspectives, datasets, and levels of expertise. Nevertheless, considered as a whole, it succeeds in its goal of illustrating the current development of the field: the overview provided by this loose collection allows the reader to draw out the main strengths and weaknesses of animal palaeopathology as zooarchaeologists pursue it today.

Regarding the strengths, the effort is notable in most papers to move away from the fruitless 'interesting specimen' approach (Thomas & Mainland, 2005) and to offer data of wider relevance. Most site reports—be they general or relating to a single species—adopt a populational approach, providing 'prevalence rates' and quantitative data on the general bone assemblage, and several attempt to identify patterns in the data. Similarly, most case studies go beyond the merely descriptive, offering either new pathological interpretations or social perspectives on the case.

The inclusion of true research papers in the volume is also much appreciated.

The second great quality of the book is the reflection it offers of the growing community of researchers interested in animal palaeopathology, with papers by both rising stars and veterans of the discipline. The many contributions by early career scholars, in particular, testifies to the vitality of the field.

A number of weaknesses plague this volume, however; issues that also appear generally prevalent in animal palaeopathology today. The first relates to the basis of pathology: the diagnostic process. Certain authors appear to have an insufficient familiarity with veterinary medicine, nomenclature, and methods, and offer debatable diagnoses and interpretations. Many more tend to rely too heavily on the secondary data of archaeological publications as their main or sole source of information on animal disease. Although the seminal works of Baker and Brothwell (1980) and of Bartosiewicz and Gál (2013) are an immense source of palaeopathological knowledge, and are cited as such by no fewer than thirteen out of seventeen contributions, neither is intended as a diagnostic guide. The diagnostic process is indeed an elaborate process that demands an extensive understanding of pathology and goes much further than matching lesions to images. It is unfortunate that no paper among the proceedings cites the methodological works of Vann and Thomas (2006) or of Lawler (2016), two excellent contributions to palaeopathological diagnosis. It is equally unfortunate that the veterinary literature—current and historical—does not feature more prominently in the bibliography of this book.

Along the same lines, I observe among the authors of this book a general overreliance on macroscopic examination for the diagnosis of pathological conditions. Only

three papers make use of imaging techniques to confirm their interpretations, and no other use of complementary examinations appears in the volume. An integration of laboratory techniques such as palaeoparasitology and ancient DNA would have been a very welcome addition.

The second major issue is one of data presentation and interpretation. Many papers attempt to classify the lesions they observe into pathological categories to help with the interpretation of their data. Unfortunately, these classifications are very inconsistent, both between authors, and more seriously, in themselves. Several make use of a mainly interpretative classification ('environmental'; 'age-related'), interspersed with some anatomical ('dental') and aetiological ('infection') categories. This poses both issues of category intersection (is a periodontal abscess a dental affection or an infectious lesion?) and overlooks equifinality, through which a same lesion (e.g., osteoarthritis) can have multiple origins (e.g., age-related, activity-related, housing/keeping-related). The lack of consistency between authors also prevents any type of inter-assembly comparison. A similar problem is observed with the expression of 'prevalence rates', which are computed inconsistently, and occasionally quite incorrectly, between papers.

These issues may actually inadvertently form one of the main take-away points of the collected proceedings: the need for animal pathology as a discipline to formulate agreed-upon nomenclatures and codes of practice. O'Connor once assessed animal palaeopathology as 'an inchoate discipline, pursued by a relatively small number of analysts' (O'Connor, 2000); if the latter is no longer the case, the former still appears mostly true. This volume demonstrates, however, that the field is now probably mature enough for such an endeavour.

REFERENCES

- Baker, J. & Brothwell, D. 1980. *Animal Diseases in Archaeology*. London: Academic Press.
- Bartosiewicz, L. & Gal, E. 2013. *Shuffling Nags, Lame Ducks: The Archaeology of Animal Disease*. Oxford: Oxbow Books.
- Lawler, D. 2016. Differential Diagnosis in Archaeology. *International Journal of Paleopathology*, 19: 119–23. doi: <http://dx.doi.org/10.1016/j.ijpp.2016.05.001>
- O'Connor, T.P. 2000. *The Archaeology of Animal Bones*. Stroud: Sutton Publishing Ltd.
- Thomas, R. & Mainland, I. 2005. Introduction: Animal Diet and Health: Current Perspectives and Future Directions. In: J. Davies, M. Fabiš, I. Mainland, M. Richards & R. Thomas, eds. *Diet and Health in Past Animal Populations. Proceedings of the 9th Conference of the International Council of Archaeozoology, Durham, August 2002*. Oxford: Oxbow Books.
- Vann, S. & Thomas, R. 2006. Humans, Other Animals and Disease: A Comparative Approach Towards the Development of a Standardised Recording Protocol for Animal Palaeopathology. *Internet Archaeology*, 20. doi: <http://dx.doi.org/10.11141/ia.20.5>
- Wood, J.W., Milner, G.R., Harpending, H.C. & Weiss, K.M. 1992. The Osteological Paradox: Problems of Inferring Prehistoric Health from Skeletal Samples. *Current Anthropology*, 33: 343–70. doi: <http://dx.doi.org/10.1086/204084>

ANNELISE BINOIS-ROMAN

*Université Paris 1 Panthéon-Sorbonne,
France*

doi:10.1017/ea.2019.5

William Anderson, Kristin Hopper and Abby Robinson, eds. *Landscape Archaeology in Southern Caucasia: Finding Common Ground in Diverse Environments. Proceedings of the Workshop held at 10th ICAANE in Vienna, April 2016* (Oriental and European Archaeology 8. Vienna: Austrian Academy of Sciences Press, 2017, 167pp., 64 b/w and colour figs, 2 tables, hbk, ISBN 978-3-7001-8204-7)

Diversity and landscape have been persistent themes in the history and archaeology of the Caucasus. From Burney and Lang (1971) to Smith (2003) and Sagona (2004), the South Caucasus has frequently been defined by its place between the steppes of Russia and the sown fields of Mesopotamia. It is alternatively envisioned as difficult to penetrate, both militarily and conceptually, and yet seated at the crossroads of empires, thriving as a meeting place and passageway. The diversity of cultural development in this region is highlighted by its description as a mountain of tongues, and its history of violent contestation over national borders and ethnic identity. Anthropological and

historical research in the Caucasus has long looked to these mountains as a forceful formative power in the lives of their occupants, the environment and geography forming a determinative background for cultural and historical narratives. Landscape archaeology sees environment and culture as interactive; human activity is shaped by landscapes, but also shapes these landscapes in turn. Smith (2003) has argued, for example, that the shaping of both the physical landscape and perceptions of it was instrumental in the establishment of authority in early complex polities.

The volume reviewed here reflects the young face of archaeology in the South