

To conclude, I see the value of this book for two categories of readers. The first obvious group is Swedish undergraduate students in archaeology. The text provides an accessible overview of the archaeological material in different regions, including new finds, and could function as a solid source to grasp the diversity of the Mesolithic in Sweden. This places the book in a category somewhat separate from an academic publication and more in the course book category. These books are very useful and a great service to the discipline, but given their place in the curriculum, they should also model the craft of scholarship with solid use of references, and cast a wide net to define the field. Here the book falls short. The other readership category that will find this book useful is archaeologists who want to gain an overview of Swedish Mesolithic sites in a language that is accessible to them. In the end, I believe this book, when read with adjusted expectations, provides a useful summary of the Swedish Mesolithic archaeological record. I further believe that it would have benefited from a more engaged and critical editor.

Peter Rowley-Conwy, Dale Serjeantson and Paul Halstead, eds. *Economic Zooarchaeology: Studies in Hunting, Herding, and Early Agriculture* (Oxford & Philadelphia: Oxbow Books, 2017, xvi and 298pp., 80 b/w illustr., hbk, ISBN 978-1-78570-445-1)

Editing a posthumous tribute volume is a difficult task: it is no mean feat to produce a fitting send-off that reflects the subject's career while also attracting high-quality original papers. It is a credit, then, both to the editors of *Economic Zooarchaeology* and to the respect with which the late zooarchaeologist and economic prehistorian Tony Legge was held, that the 33 papers making up this volume dedicated to him manage to create a real sense of history—

- ### REFERENCES
- Conneller, C. 2004. Becoming Deer. Corporeal Transformations at Star Carr. *Archaeological Dialogues*, 11(1): 37–56.
- Fuglested, I. 2017. *Rock Art and the Wild Mind: Visual Imagery in Mesolithic Northern Europe*. London: Routledge.
- Schmidt, R. 2000. Shamans and Northern Cosmology: The Direct Historical Approach to Mesolithic Sexuality. In: R.A. Schmidt & B. Voss, eds. *Archaeologies of Sexuality*. London: Routledge, pp. 220–35.
- Strassburg, J. 2000. *Shamanic Shadows: One Hundred Generations of Undead Subversion in Southern Scandinavia, 7,000–4,000 BC* (Stockholm Studies in Archaeology 20). Stockholm: Stockholm University.
- Zvelebil, M. 2003. Enculturation of Mesolithic Landscapes. In: L. Larsson, H. Kindgren, D. Loeffler & A. Åkerlund, eds. *Mesolithic on the Move: Papers Presented at the Sixth International Conference on the Mesolithic in Europe, Stockholm 2000*. Oxford: Oxbow Books, pp. 65–73.

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or rather biography—while also representing a valuable and largely coherent body of new research and critical review. In the Introduction, the editors explain the simple brief given to contributors: to write ‘about something that would have interested Tony’ (p. xi; Legge is referred to affectionately as ‘Tony’ throughout much the volume, and I will follow that lead here). In this, the authors have surely succeeded. In several cases the volume has

been the stimulus for dusting-down and completion of long-shelved studies with some link to Tony: a valuable contribution in itself. Some of the more data-heavy papers might have found a more natural home in a journal—Simon Davis' very thorough metrical study of sheep vs. goat astragali (Ch. 9), for example, includes a breathtaking eighteen pages of raw data that would be more usable online—but their publication here allows for a more thoughtful, discursive tone, and is fitting. 'But where's the data?!', Tony would famously ask when presented with nebulous theories or opaque analyses; to quote Chris Stimpson (p. 40), 'here's the data, Tony'.

The volume is divided into six parts, the first ('Bone Man: The Career and Influence of Tony Legge') explicitly biographical; the others each addressing a broad topic that featured highly in Legge's career: zooarchaeological method and theory (Part II), the dairying controversy (Part III), hunting in farming societies (Part IV), British prehistory (Part V), and finally a catch-all section for his research interests elsewhere in Europe (Part VI, 'Continental Europe and the Mediterranean').

The six short contributions in Part I cover various aspects of Tony's life, from an overview of his career (Ch. 1 by Robin Dennell) to a lively account of a single hunting expedition in Australia (Ch. 5 by James O'Connell). Andrew Moore (Ch. 3) focuses on a project that spanned most of Tony's career, namely the analysis of the vast assemblage from Abu Hureyra in Syria—epic both in scale and in importance for the understanding of the transition to farming in the region and beyond—while also mentioning more recent projects in Dalmatia. Closer to home, David Jacques (Ch. 6) describes Tony's generous support of a small field project at Mesolithic Blick Mead in England. Harvey Sheldon (Ch. 2) details Tony's role in adult education via the University of London's Department of

Extra-Mural Studies, taking the opportunity to lament changes to UK higher education that have reduced opportunities for mature students like Tony himself—a point also made by the editors in their Introduction (p. xiii). Charles Higham's contribution (Ch. 4) focuses on the author's own research on early rice cultivation, which was initially inspired by a flotation system demonstrated to him by Tony early in their respective careers. Tony's development of sieving devices, and evangelism for their use ('sieve everything!'), is a recurring theme, mentioned in every paper in Part I. Other aspects of his views and personality—the two were always hard to separate—that feature frequently are his outspoken preference for robust methods and hard data over fashionable theories and unprovable assertions; his direct manner and unwillingness to suffer fools gladly; his practicality and deep, hands-on, understanding of hunting and farming; and his belief in zooarchaeology as fundamentally archaeological rather than zoological.

Moving to the more research-oriented portions of the book, the 'Economic' in the title should largely be read in the tradition of Cambridge palaeoecology, i.e. preceded by a silent 'subsistence'. This is clear in the opening sentence of the Introduction: '[e]conomic archaeology is the study of how past peoples exploited animals and plants' (p. xi). Such a narrow definition, though contestable, fits Tony's intellectual roots in the Cambridge 'Bone Room' under Eric Higgs (another recurring theme), and his extreme caution regarding overinterpretation. It also reflects a strong focus, in the volume as in Tony's career, on prehistory: in her illuminating history of British zooarchaeology (Ch. 13), Dale Serjeantson notes the limitations of Cambridge palaeoeconomy for understanding more recent periods, as well as Higgs' assertion that the study of post-Neolithic societies is 'froth'. In keeping with this tradition, and

Tony's interests, only one chapter here deals primarily with a historical period, and relatively few tackle even the Iron Age.

Part II, a loose collection on 'Zooarchaeological Method and Theory'—more of the former than the latter—opens with two papers by Tony himself. Chapter 7 presents data from Australian feral pigs hunted during the expedition related by O'Connell earlier, while Chapter 8, written up by co-author Chris Stimpson following Tony's death, revisits Higgs' analysis of the barbary sheep from Haua Fteah in Libya, the authors ultimately concluding that there is no evidence to contradict Higgs' original assertion of long-term morphological conservatism. Angela Perri offers 'A Typology of Dog Deposition in Archaeological Contexts' (Ch. 11), developing five useful, more-or-less objective if inevitably slightly fuzzy, categories of deposit that avoid the loaded term 'burial'. The most theoretical contribution here, Chapter 12 by Sebastián Muñoz and Mariana Mondini, is a thoughtful discussion of concepts of marginality, emphasising their relativity and historiographical and political aspects but grounded in the ecology of southern South America. Tony Waldron's Chapter 10 ('Down Among the Dead Men') is a departure from animals, but it's assault on 'wishful thinking' in human palaeopathology would surely have appealed to Legge's own sensibilities.

As the editors note, the origin of milking is probably the single theme with which Tony is most widely associated, ever since his argument for Neolithic dairying at Grimes Graves, England, based on sex ratio and high calf mortality (Legge, 1981) was published almost simultaneously with Sherratt's (1981) opposing Secondary Products Revolution model. Part II ('The Zooarchaeology of Milking Controversy') is dedicated to this ongoing debate, with contributions from both veterans and rising stars. Appropriately

enough, Paul Halstead and Valasia Isaakidou open by asking 'Was Tony Legge Right After All?' (Ch. 14). Revisiting the argument that infant culling impacts milk let-down, and informed by Greek ethnoarchaeology, they caution against uncritical use of extant 'primitive' breeds as models for prehistoric livestock. Chapter 15 by Angelos Hadjikoumis is a more formal ethnozooarchaeological study of sheep and goat herd management in Cyprus. There are no easy answers here for zooarchaeologists, but much food for thought. Both Chapters 14 and 15 mention refugees (from the 1923 and 1974 conflicts respectively) who brought with them, and maintained, subtly different herding practices to their neighbours, adding yet another dimension to the sheer complexity of decision-making that, as the authors show, underlies the mortality data ultimately encountered by archaeologists.

In Chapter 16, Rosalind Gillis—one of the most innovative contributors to the milking debate over the last decade—evaluates Tony's contributions, largely in the light of her and her colleagues' work. While most chapters in this section mention the sea-change caused by direct evidence from lipid residues for early Neolithic milk use (Evershed, 2008), only Alan Outram tackles this directly, with an important critical comparison of zooarchaeological and organic pottery residue data (Ch. 18). As Outram rightly argues, the way forward lies in finding better ways to harness both sets of proxies in tandem. His analysis is limited, however, by an almost exclusive focus on lipids at the expense of proteins. Contrary to the immunoassay techniques he mentions, modern proteomic methods do not require targeting at specific proteins/taxa, and can detect both protein source (e.g. milk vs. blood) and taxon, sometimes to species level. Indeed, proteins seem likely to eclipse lipids as a source of dietary

information in the coming decade. In Chapter 17 ('Rethinking Dairying in the Irish Iron Age') Pam Crabtree reviews a period where evidence is very limited: lack of pottery rules out residue analyses; projection back from rich early medieval historical sources ignores likely influences of the Roman world and of Christianization; and finally the bone data is biased towards royal sites with a ritual dimension. Her conclusion of Iron Age dairying owes as much to Crabtree's deft use of Occam's Razor as it does to evidence from Dún Ailinne that she admits is circumstantial. Robust argument from first principles also features heavily in Chapter 19, where Peter Bogucki sets out the unavoidable importance that salt sources must have had for cattle in Neolithic central Europe, and especially for dairy economies.

Part IV, 'Farmers That Hunt', is disappointingly short for such an interesting topic. Jonathan Driver and Shaw Badenhorst (Ch. 20) provide a useful discussion of garden hunting and resource depression around sedentary communities, although the focus on farmers *without* domestic animals limits its applicability somewhat. Haskel Greenfield's contribution on middle Neolithic Stragari-Šljivik, Serbia, has been eagerly awaited by Balkanist zooarchaeologists: with previous central Balkan data overwhelmingly from the earliest and latest Neolithic, Stragari helps to fill a gap and provides some comparison for the earliest phases of Tony's own study at Selevac (Legge, 1990). The Stragari fauna feature a remarkable dominance of wild specimens, far exceeding even the c. 45 per cent at Selevac I. Finally, Carlos Tornero and colleagues (Ch. 21) use sequential isotope analysis of teeth to demonstrate a restricted birth season of gazelles in the PPNB Middle Euphrates. This would have been quite a relief to Tony, whose model of seasonal gazelle exploitation at Abu Hureyra depended on the assumption of a short, spring birthing season.

Peter Rowley-Conwy opens Part V ('Prehistoric Britain') by revisiting his own seminal revisitation (with Tony) of the bones from Mesolithic Star Carr (Legge & Rowley-Conwy, 1988). Rather than adjusting the seasonality yet again, he proposes a new explanation for burning around the site: deliberate clearance of a landing point for canoes. This then forms the basis for a wider consideration of Star Carr's place in the landscape. Hypothetical boats of a larger size feature in Chapter 24, in which Roger Mercer discusses cross-Channel contacts in the Mesolithic and Neolithic. Glynis Jones and Amy Bogaard (Ch. 25) tackle the role of wild *vs.* domestic plant resources in the Neolithic, noting that Tony was a staunch advocate for substantial cereal agriculture in southern Britain, *contra* some revisionist models. From taxonomic and isotopic analysis of burnt grain at Lismore Fields, they infer a mixed farming regime that lends support to Tony's view. Structured deposition in Neolithic pits might seem an unlikely topic for this volume, but Richard Bradley (Ch. 26) describes an under-recognised study in which Tony brought his famously pragmatic approach to bear on a set of Grooved Ware pits at Down Farm, Dorset, concluding that the bones deposited therein had been collected from the surface, with size the main criterion (Legge, 1991). Sticking with Dorset, Mark Maltby (Ch. 27) reviews zooarchaeological evidence from the Mesolithic to Bronze Age in the county. Finally, in the entertaining Chapter 28, 'Reconsideration of the "Mesolithic harpoon" from Westward Ho!, Devon', Sonia and Terry O'Connor review the evidence for this beach find and conclude that it is neither Mesolithic nor a harpoon, but rather a recent possible corn-crake rattle fashioned from baleen.

Part VI is less coherent than the others, with papers from the Neolithic Mediterranean to post-medieval Russia.

Paul Croft (Ch. 29) revisits an old Neolithic assemblage from Tenta, Cyprus, in the light of revised regional chronology, while Suzanne Pilaar Birch (Ch. 30) presents brand new data from Vela Špilja on Lošinj, Croatia, showing a very abrupt change at the start of the Neolithic that supports the idea of incoming herders rather than indigenous adoption of livestock. In her analysis of social stratification at the Iron Age fortified village at Mas Castellar de Pontós, Lúdia Colominas (Ch. 31) tackles the kind of question Tony typically avoided—not because he questioned its importance, but because he doubted the possibility of answering it from bone evidence. Comparing four excavated houses, Colominas argues that the patio of one was used specifically for communal meals, based on a remarkable conjunction of architectural, taxonomic, anatomical, and taphonomical evidence that would surely have convinced even Tony there was a case to answer. Alexei Kasprov's contribution (Ch. 32), the only firmly historical paper in the volume, situates the bones from fifteenth- to seventeenth-century Vyborg, present-day Russia, in the proper historical context of the Swedish Empire. In the final chapter (Ch. 33), Salima Ikram and Louise Bertini present an entertaining account of their acquisition of a mysterious deer skeleton—originally presented as an ibex!—for their reference collection in Cairo, and the subsequent efforts to identify its species and possible origin. Though light-hearted, there's a serious message here about the less obvious misidentifications that likely lurk within reference collections.

Like Pilaar Birch (p. 263), I met Tony while a student in the Grahame Clark laboratory in Cambridge, where he spent the final portion of his career. Like her, I found him an intimidating figure at first, though as a less frequent user of the lab I must admit that I never fully got past this stage. I

nonetheless recognised many of the quirks and catchphrases celebrated in this volume, but it was eye opening to read so many professional stories, lesser-known anecdotes, and warm tributes from such a wide and distinguished range of colleagues. *Economic Zooarchaeology* left me with a profound sense of regret at not having made more of the opportunity to get to know Tony Legge.

REFERENCES

- Evershed, R.P., Payne, S., Sherratt, A.G., Copley, M.S., Coolidge, J., Urem-Kotsu, D., et al. 2008. Earliest Date for Milk Use in the Near East and Southeastern Europe Linked to Cattle Herding. *Nature*, 455: 528–531. doi: <https://doi.org/10.1038/nature07180>. doi: <https://doi.org/10.1038/nature07180>
- Legge, A.J. 1981. The Agricultural Economy. In: R.J. Mercer, ed. *Grimes Graves, Norfolk: Excavations 1971–1972*. London: HMSO, pp. 79–103.
- Legge, A.J. 1990. Animals, Economy and Environment. In: R. Tringham & D. Krstić, eds. *Selevac: a Neolithic Village in Yugoslavia*. Los Angeles: University of California, pp. 215–242.
- Legge, A.J. 1991. The Animal Remains from Six Sites at Down Farm, Woodcutts. In: J. Barrett, R. Bradley & M. Hall, eds. *Papers on the Prehistoric Archaeology of Cranborne Chase*. Oxford: Oxbow, pp. 54–100.
- Legge, A.J. & Rowley-Conwy, P.A. 1988. *Star Carr Revisited. A Re-Analysis of the Large Mammals*. London: University of London.
- Sherratt, A.G. 1981. Plough and Pastoralism: Aspects of the Secondary Products Revolution. In: I. Hodder, G. Isaac & N. Hammond, eds. *Patterns of the Past: Studies in Honour of David Clarke*. Cambridge: Cambridge University Press, pp. 261–305.

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