

Michael J. Allen, ed. *Molluscs in Archaeology: Methods, Approaches and Applications* (Studying Scientific Archaeology 3. Oxford: Oxbow Books, 2017, 448pp., 107 illustr., 36 in colour, hbk, ISBN: 978-1-785-70608-0)

There is probably no archaeologist who has never dug up a mollusc shell. Land snails, clamshells, periwinkles, etc. are omnipresent in all kinds of archaeological contexts dating from 140 kya to historical times and today. Frequently, they appear in overwhelming quantities forming ‘shell middens’, best known to European archaeologists in the context of the Ertebølle culture. The distribution of such shell middens is in fact global, and the term ‘midden’ is certainly not the correct one to describe some of these sites that reach up to 20 m in height. Humans have used molluscs and their shells for an enormous variety of purposes from relieving hunger to facilitating monetary transactions, and from keeping evil eyes away to producing colourfast dye for (presumably) textiles. Then there are also the molluscs, mostly land snails, which crawl into human habitats even when unwelcome. In addition to their significance for and in human life, molluscs create high-precision environmental and climatic archives by being highly selective about their immediate environments and by recording the chemical properties of their ambient environment in their incrementally growing shells.

If molluscs are everywhere in archaeology, and if they are full of useful information on past human life and environments, then why is the study of archaeological molluscs a niche specialization? Well, it is easier said than done. Two decades ago, a student wanting to write a thesis (bachelor’s, master’s, or PhD) on archaeological molluscs would have had only two textbooks available from which to start: Cheryl Claassen’s *Shells* published in the Cambridge

Manuals in Archaeology series from 1998, and J. G. Evans’s *Land Snails in Archaeology* from 1972—which are largely mutually exclusive in terms of content and geographical coverage. Prospective archaeomalacologists would not know where to even begin!

Molluscs in Archaeology: Methods, Approaches and Applications, part of the new Studying Scientific Archaeology series from Oxbow Books, aspires to redress this deficiency by offering *the* new textbook of archaeomalacology. But does it cover all aspects of molluscs in archaeology, as one would expect from *the* textbook? Or is it just the latest in a series of recent collections of archaeomalacological studies, some of which were also published by Oxbow Books (e.g. Bailey et al., 2013; Bar-Yosef Mayer, 2005; and my own edited volume Çakırlar, 2010). How does Allen’s book differ from these works and from the recent collections of articles published as Special Issues (e.g. Bar-Yosef Mayer & Horwitz, 2015; Jerardino et al., 2017)? Does it provide a comprehensive ‘introduction to the whole world of molluscs in archaeology’ (p. 3; Chapter: ‘Introduction’ by Allen and Payne)?

Molluscs in Archaeology is an edited collection of twenty-three chapters, born out of a conference which took place in London in 2014, jointly organized by the Conchological Society of Great Britain and Ireland and the Association for Environmental Archaeology. They are organized into five parts: Parts 1 and 2 focus on the use of archaeological molluscs for palaeoenvironmental reconstruction; Parts 3 and 4 deal with the use of molluscs as food and artefacts in the past; and the

final Part 5 consists of discussions on the utilization of molluscan isotopic compositions for (again) palaeoenvironmental reconstruction and dating.

Most chapters in the book (Chs 1–3, 13, 15, 16, 18, 22, and 23) are introductory in character. These have mostly captured the textbook spirit and can be recommended as reading material in bachelor's and post-graduate courses without any reservations, especially in UK contexts of higher education and continuous learning (e.g. training pertaining to CRM work), because they use mostly examples and case studies from UK contexts. This geographical focus is understandable and even unavoidable considering the experiences and backgrounds of the authors, but the relevance of the material might not be immediately obvious to students and archaeologists focusing on areas outside the UK.

Chapters 1 and 2 derive from the editor's own expertise on land snails in archaeology and related geological contexts. Chapter 1 ('Land Snails in Archaeology') covers the study of archaeological land snails in general, answering the question of why one should collect and study them at all, while Chapter 2 ('The Geoarchaeology of Context: Sampling for Land Snails on Archaeological Sites and Colluvium') details the methods to sample land snails in the field—probably a must-have for field archaeologists. Chapter 3 by M. Law ('Numerical Approaches to Land Snail Palaeontology') is the obvious follow-up to the first two chapters, outlining the methods used to quantify land snails to reach palaeoenvironmental interpretations. It is a very interesting read, but not necessarily for beginners who are not familiar with the enormous amount of ink (and in some cases almost blood) that has been spilled in discussing the topic of quantification in bioarchaeology. It misses the textbook structure, which would begin with an

introduction to targeted variables, then to the quantification units that are typically applied, and then proceed with a discussion of their respective pros and cons for addressing different research questions in different stratigraphic situations. Chapter 13 by Somerville, Light, and Allen ('Marine Molluscs from Archaeological Contexts...') deals with marine mollusc remains globally, as informants on former economies and environments. This chapter is truly introductory, complete with a figure strikingly similar to Figures 5 and 6 in Claassen's *Shells*, describing the features (a.k.a. body parts) and measurements of bivalves and gastropods. Chapter 15 by K. Hardy ('Shell Middens') is one of the most interesting and useful chapters in the book, because it not only provides an introduction to what shell middens are and how they are excavated (i.e. description and archaeological method), but also an ethnographic insight into living shell middens which represent ritual and economic use. This chapter is accessibly written and refreshing. Chapter 16 by G. Campbell ('The Collection, Processing, and Curation of Archaeological Marine Shells') is a very useful guide to curating archaeological molluscs—one that I will probably use next academic year in the fieldwork part of my introductory zooarchaeology course. Chapter 18 by K. Szabo ('Molluscan Shells as Raw Materials for Artefact Production') handles the issue of reconstructing production processes of shell artefacts and is a necessary read for all beginners, really filling a gap in the available introductory literature. Chapter 22 by K. Douka ('Radiocarbon Dating of Marine and Terrestrial Shell') explains the challenges of 'reading' radiocarbon dates from marine and terrestrial mollusc shells in a very accessible and concise manner, and is unique as such. This chapter could easily form part of the reading list for a scientific dating course in a bachelor's

program. Chapter 23 by A. Colonese ('Stable Isotope Ecology of Terrestrial Gastropod Shells') discusses the uses and associated caveats of assessing archaeological terrestrial gastropod shells for stable isotope chemistry. This chapter would be useful for more advanced courses in archaeological science, and for archaeologists interested in using these durable and highly visible organic remains in isotope-based palaeoenvironmental reconstructions.

The remaining chapters are regional or site-specific case studies and partly overlap with the introductory chapters, but they too are very interesting. For example, Light's and Walker's discussion in Chapter 19 ('How Strong is the Evidence for Purple Dye Extraction from the Muricid Gastropod *Nucella lapillus* (L. 1758), from Archaeological Sites in Britain and Ireland?') of the use of marine gastropods for producing dye in UK contexts is an intriguing read for a researcher like me, who has never worked in the UK but has dealt with the same subject in eastern Mediterranean contexts—where the topic is more at home, if you will, due to its Biblical connotations. I am sure many murex dye enthusiasts will feel the same way when they read this critical summary. It was very good to learn more about land snail middens in Chapter 12 ('Land Mollusc Middens') by Taylor and Bell: field archaeologists who encounter land snail middens and are uncertain how to sample, analyse, and interpret them now have an accessible reference. Chapter 14 ('Oysters in Archaeology') by J. Winder is probably interesting for a global audience, despite its focus on a single taxon, since oysters are widely distributed and very common in archaeological deposits along the world's oceans and even inland, e.g. in Roman Europe. J. Ridout-Sharpe's Chapter 17 ('Shell Ornaments, Icons, and Other Artefacts from the Eastern

Mediterranean and Levant') on shell ornaments from the eastern Mediterranean and the Levant is a good recap of this scholar's earlier works on the same subject. Fernandes' and Dreves' Chapter 21 ('Bivalves and Radiocarbon') on the potential of mollusc shell radiocarbon for studies of dietary pathways and environments is perhaps the most specialized, yet most forward-looking chapter of this edited book.

However, with *Molluscs in Archaeology*, we do not quite reach the point of glimpsing the 'whole world of archaeomalacology' in a single textbook. Some universally important issues in archaeomalacology are missing, perhaps because the starting point of the book is the study of terrestrial gastropods in UK contexts for palaeoenvironmental reconstruction. Throughout the twenty-three chapters, the book remains rather limited in scope, barely covering some crucial methodologies and important (theoretical) questions. The issue of seasonality of shellfish/land snail harvesting, for example—which features prominently in the archaeomalacological literature—is barely touched upon by any of the authors. It would have been desirable to see an extensive chapter discussing incremental analysis combined with stable isotope analysis—which is the most useful tool to study seasonality of both collection and climate—preferably coupled with case studies on bivalves and gastropods, and guidelines on how to conduct fieldwork to construct modern incremental growth baselines. Use-wear research also seems to have been omitted, despite the fact that results from this type of research have been instrumental in adjusting our ideas about human origins in Africa and Europe (e.g. Vanhaeren et al., 2013). At least one chapter on the use of ethnographic information to reconstruct shellfish use from behavioural ecological and social archaeology perspectives would have been welcome. Chapters assessing the

contribution of archaeomalacology to the study of major transformations in human past (e.g. the Mesolithic–Neolithic transition) and chapters illustrating the contribution of archaeomalacological work to conservation studies would also have made the book more complete. Finally, some minor issues are that the case studies speak mostly to a UK audience, as noted above, and related to this, text boxes with bibliographic references to identification manuals etc. consist almost exclusively of references most useful for work in the UK.

I enjoyed the book very much, learned a great deal from it, and was happy to hear familiar voices from the small world of archaeomalacology as well as some (to me) new voices. I would recommend the book to archaeologists working in development-led archaeology, in particular those who focus on the archaeology of the UK. I would also recommend it to students of archaeology, especially the chapters singled out above as potential classic methodological papers. These chapters are a very welcome update (and sometimes correction) to Classen's *Shells* (1998). But they are to be appreciated in combination with some of the previous literature, and some very recent publications such as the special issue on archaeomalacological methods by Jerardino et al. (2017), not as their replacement—or perhaps we need a *Molluscs in Archaeology Volume 2*.

REFERENCES

- Bailey, G.N., Hardy, K. & Camara, A. eds. 2013. *Shell Energy: Molluscs and Shells as Coastal Resources*. Oxford: Oxbow Books.
- Bar-Yosef Mayer, D.E. ed. 2005. *Archaeomalacology: Molluscs in Former Environments of Human Behaviour*. Oxford: Oxbow Books.
- Bar-Yosef Mayer, D.E. & Horwitz, L.K. eds. 2015. Malacological Studies from the Past and Present: A Special Volume in Honor of Henk K. Mienis. *Quaternary International*, 390: 1–146.
- Claassen, C. 1998. *Shells* (Cambridge Manuals in Archaeology). Cambridge: Cambridge University Press.
- Çakırlar, C. ed. 2010. *Archaeomalacology Revisited: Non-Dietary Use of Molluscs in Archaeological Settings*. Oxford: Oxbow Books.
- Evans, J.G. 1978. *Land Snails in Archaeology*. London: Seminar Press.
- Jerardino, A., Faulkner, P. & Flores, C. eds. 2017. Current Methodological Issues in Archaeomalacological Studies (Special Issue). *Quaternary International*, 427 (Part A): 1–250.
- Vanhaeren, M., d'Errico, F., van Niekerk, K.L., Henshilwood, C.S. & Erasmus, R.M. 2013. Thinking Strings: Additional Evidence for Personal Ornament Use in the Middle Stone Age at Blombos Cave, South Africa. *Journal of Human Evolution*, 64(6): 500–517. doi: 10.1016/j.jhevol.2013.02.001

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Pierre Pétrequin, Estelle Gauthier and Anne-Marie Pétrequin. *Jade : Objets-signes et interprétation sociales des jades alpins dans l'Europe néolithique* (Vols 3 & 4, Cahiers de la MSHE Ledoux 27, Série Dynamiques territoriales 10. Besançon: Presses universitaires de Franche-Comté and Centre de Recherche Archéologique de la Vallée de l'Ain, 2017, 1468pp., numerous b/w and colour illustr., hbk, ISBN 9782848675756)

Jade : Objets-signes et interprétation sociales des jades alpins dans l'Europe néolithique (Vols 3 & 4) represents an essential

contribution not only to our knowledge on the specific jadeite tools and ornaments, and related megalithic artworks, dealt with