

a point addressed by Schuhmacher in his concluding discussion. The finds are presented by object type and typologised by formal characteristics. The differentiation of categories, such as spatulas ('*Spatel*') and small knives ('*Messerchen*'/'*couteaux*'), or simple discs ('*Plättchen*') and pieces of raw or unworked material ('*Teilweise bearbeitete Stücke*'), is notoriously difficult. Here it is unfortunate that the project did not encompass bone-working, as well as ivory-carving, as the specific material of many objects could not be precisely determined. Spatulas, for example, are almost exclusively made of bone (ribs). Pins and needles, however, can be made of either material—ivory or bone—but due to their small size, they can rarely be distinguished by macroscopic analyses. The presentation of the finds is hampered to some extent by the limited number of illustrations. Although, as stated in the foreword, all the objects retrieved from museums and storerooms were drawn and photographed, not all are illustrated here. In particular, section drawings of the more complex pieces such as the *pyxides* (cylindrical boxes) would have been useful.

Focusing largely on the secondary literature, Schuhmacher very briefly describes the various sources of ivory, besides the African and Indian elephant, exploited across north-west Africa, including the hippopotamus, walrus, sperm whale and narwhal. But, reflecting his principal focus on the Western Mediterranean, he relies on older literature when it comes to Egypt and the Near East. Here, however, both the hippopotamus and the Syrian elephant have been well studied and discussed in recent years (e.g. Fischer 2007).

Of great interest for the archaeometrist is Schuhmacher's description of the varied analytical techniques, mostly based on spectroscopy and isotope analyses, developed by the interdisciplinary research group (INCENTIVS) at Mainz University. These methods are of importance for the wider research community, offering the potential to differentiate categories of ivory and their origins, and hence contributing to discussions on resource procurement and management. In general, archaeological finds are compared with modern reference materials. But the degradation of archaeological ivory, both in its organic and inorganic components, provides a major obstacle for these kinds of procedures. This issue can be addressed by expanding the amount of comparative data, as Schuhmacher does here with 68 newly analysed samples. The results are quite astounding, pointing to the use of African (*Loxodonta*) as well

as Indian (*Elephas*) ivory and, unusually, sperm whale—the latter possibly from animals stranded on the African shore. In contrast, hippopotamus teeth, which were frequently used in the Levant and Egypt, seem to have been uncommon in the Maghreb.

With these results in mind, Schuhmacher sketches a model of inter-regional exchange for each period, considering the Maghreb as more focused on the export of unworked ivory (and ostrich-shell), at least in the Chalcolithic and Early Bronze Age, than on the production of finished artefacts. The resulting exchange seems to have contributed to the construction of social elites both north and south of the Straits: ivory moved north, and pottery and metal artefacts moved south. Ivory artefacts were never as popular in the Maghreb as they were in Iberia.

This volume is an excellent example of interdisciplinary research combining traditional archaeological questions with modern analytical methods, leading to new observations and conclusions. It adds to the many recent studies that treat the subject of carved ivory holistically, not simply from an art-historical perspective. The results open new avenues for future research on objects made of ivory, bone and other materials. More generally, the volume will undoubtedly become indispensable for anyone interested in the prehistoric archaeology of Iberia and north-western Africa.

References

- FISCHER, E. 2007. *Ägyptische und ägyptisierende Elfenbeine aus Megiddo und Lachisch* (AOAT 47). Münster: Ugarit.
- SCHUHMACHER, T.X. 2013. *Elfenbeinstudien: Faszikel 2: Chalkolithische und Frühbronzezeitliche Elfenbeinobjekte auf der Iberischen Halbinsel* (Iberia Archaeologica 16.2). Darmstadt: Philipp von Zabern.

DIRK WICKE

Institut für Archäologische Wissenschaften,
Goethe Universität Frankfurt am Main, Germany
(Email: wicke@em.uni-frankfurt.de)

ÁLVARO FERNÁNDEZ FLORES, LEONARDO GARCÍA SANJUÁN & MARTA DÍAZ-ZORITA BONILLA (ed.). *Montelirio: un gran monumento megalítico de la Edad del Cobre*. 2016. 553 pages, numerous colour and b&w illustrations. Sevilla: Junta de Andalucía; 978-84-9959-236-7 paperback €20.



A revolution is under-way in the archaeology of Copper Age Iberia. Over the past 20 years, the discovery and excavation of enclosure sites, such as Valencina de la Concepción, Marroquies Bajos and

Perdigões, and large interdisciplinary investigations, often stimulated by development works, are reshaping our understanding of long-distance regional interactions and social complexity in the third millennium BC. This lavishly illustrated volume on the Montelirio megalith, dated to c. 2800 BC, is an excellent example of this new research.

Discovered in 1998 and excavated between 2007 and 2010, Montelirio is a tholos tomb associated with the enclosure site of Valencina de la Concepción-Castilleja de Guzmán, in Andalucía, Spain. Montelirio overlooks the fertile Guadalquivir Valley and is located just a few hundred metres from other important contemporaneous tombs, including La Pastora, Matarubilla, Ontiveros and the awkwardly named Structure 10.042–10.049 del Sector PP4-Montelirio. Hundreds of other unexplored structures have been identified in its vicinity. This volume, edited by Álvaro Fernández Flores, Leonardo García Sanjuán and Marta Díaz-Zorita Bonilla, includes 22 chapters organised into five sections: introduction and contextualisation, architecture, material culture, organic deposits and interpretation. The chapters, written by scholars from Spain, Germany, the UK and the USA, include abstracts in both English and Spanish. A range of cutting-edge methodologies and technologies, including geophysical survey, raw materials sourcing, isotope studies, geomorphological analyses and Bayesian statistics, have been brought to bear on the site and provide tantalising new glimpses into landscape use, ritual, identity, power, trade, gender and artistic expression in Copper Age Iberia.

Although in overall plan—an atrium, an east-facing corridor, a large chamber and a smaller annexed chamber—the architectural organisation of Montelirio can be viewed as relatively ‘simple’, the site is exceptional in every other way. Its linear extent, for example, is greater than any other prehistoric burial monument known in the Iberian Peninsula. Its corridor, 39m in length, was divided into three sections, and made up of slabs of slate, granite and

sandstone painted red with cinnabar (the nearest sources of which are 270km to the north-east, in Almadén). To move through parts of the corridor, an adult would have had to crawl. Altars and offerings were placed along the corridor, as were human burials (mostly secondary). The corridor led into a large chamber, nearly 5m in diameter, made of slate slabs painted with designs using cinnabar. A decorated clay stela was found on the floor, with offerings, and at least 20 adults, most if not all female, were laid to rest in primary burials. The dome of the chamber was possibly of clay, which would be unique in Iberia. A tumulus, 75m in diameter, covered the corridor and chambers.

Among the artefacts found at Montelirio is an abundance and variety of goods rarely seen in prehistoric Europe. The largest assemblage of amber objects known in Iberia was recovered from the site: 250 beads and pendants (the site with the next largest assemblage of amber is Los Millares, in Almería, with 10 objects). The amber appears to have come from Sicily. Eighteen embossed gold sheets were found, some with the same ocular motif seen on ceramics and slate plaques at other south Iberian sites. An estimated one million beads, made of shell and stone, were found in close association with the individuals in the large chamber; they were most probably sewn into burial clothing or shrouds, which have not survived. Also recovered were around 200 exquisitely flaked hollow-based arrowheads made of flint and rock crystal, which, as with most of the other flaked lithics at the site, show no signs of use. The large number (100+) of animal figurines, combs and other items made from African ivory further attests to the social distinctiveness and regional connections enjoyed by the Montelirio community.

All this labour was apparently devoted to the memorialisation of, minimally, 26 individuals, the majority of whom were female. No children have been identified, in contrast with most other Copper Age burials in Iberia. There are no signs of traumatic injuries, although some pathologies (enamel hypoplasia and periostitis) are present; one individual had polydactyly (6 digits). Isotope studies indicate their diet consisted primarily of terrestrial resources. High levels of mercury (from the cinnabar) were detected in the bones of many of the individuals, which must have been absorbed while they were alive. A fuller bioanthropological report (Pecero Espín *et al.* 2012) was prepared prior

© Antiquity Publications Ltd, 2017

to this monograph, which may explain why the presentation of the human remains here is rather brief and poorly integrated into the discussion of the site and its social history. This is unfortunate as, given the spectacular nature of the site and its finds, the reader will be naturally curious about the people to whom all this attention was given. It is also unfortunate that the 2012 reference is not included in the chapter's bibliography.

The greatest strengths of the volume are the stunning photographs of the site and its finds, many in colour, and the beautifully rendered plans and reconstructions. The maps and charts that compare Montelirio with other contemporaneous sites in Iberia are also particularly useful, as they illustrate the distinctiveness of the site. Other than the summary bioanthropological chapter, additional weaknesses include labelling that is sometimes too small to read (e.g. figs 6 & 7 in Chapter 4) and the map (fig. 1) in Chapter 1, where the site of Zambujal is incorrectly located.

Overall, however, this monograph, as with Montelirio itself, represents an impressive feat of monumental labour, drawing together the specialised skills of a large and diverse team.

Reference

PECERO ESPÍN, J.C., J.M. GUIJO MAURI & R. LACALLE RODRÍGUEZ. 2012. Caracterización antropológica de los restos óseos procedentes del dolmen de Montelirio, Sevilla. Unpublished report.

KATINA T. LILLIOS
Department of Anthropology,
University of Iowa, USA
(Email: katina-lillios@uiowa.edu)

RACHEL OPITZ, MARCELLO MOGETTA & NICOLA TERRENATO (ed.). *A mid-Republican house from Gabii*. Ann Arbor: University of Michigan Press. 978-0-472-99900-2, <https://doi.org/10.3998/mpub.9231782> \$150.



Located 20km east of Rome, Gabii was one of the most important cities of Latium during the early and middle Republican periods. While much has been done in recent

years to improve our understanding of urbanism in the late Republic and, especially, the imperial period, the same cannot be said about the initial phases of urbanisation in central Italy. Innovative topographical survey and landscape studies, integrating a wide range of data sources, have been conducted on only a handful of Italian sites, specifically the Etruscan cities of Veii and Vulci, and the Latin city of Gabii. The publication under review derives from the major ongoing fieldwork at the latter site, led by Nicola Terrenato. The project draws on a number of scholarly traditions, deployed in an original and sophisticated analytical and presentational framework. *A mid-Republican house from Gabii* by Rachel Opitz and her colleagues is an online publication that provides both an innovative format and a significant contribution to the study of urbanism. It therefore offers the opportunity for debate about publication formats, as well as helping to define various research agendas for the coming years.

The publication begins with a detailed introduction explaining in clear and intelligible terms the technical format of the information, the rich and innovative methodological background to the study and the present state of knowledge about Republican-period urbanism, especially in southern Etruria and Latium. Attention then turns to the development of the Gabii research project and to the key questions that it set out to address: the emergence and earliest phases of urbanism in central Italy, the relationships between cities and between city and countryside, and the organisation of public and private spaces.

The publication exhibits a number of innovations in terms of presentation and format. First, and most obviously, it was planned and structured from the outset as a digital publication using an evolved form of hypertext. The innovation, however, also extends to the narrative, text and illustrations, which tell the story of Gabii's historical development from an unusual perspective: the in-depth analysis of features and events evidenced within a single residential structure, the so-called Tincu House. Another interesting aspect lies in the rejection of the traditional structure of scientific publications—that is, starting with the presentation of data, followed by analysis and interpretation, contextual discussion and, finally, conclusions. Here, by contrast, the authors cut straight to the chase, starting with their overall interpretations and pointing the reader, via links, to the more detailed evidence, analysis and