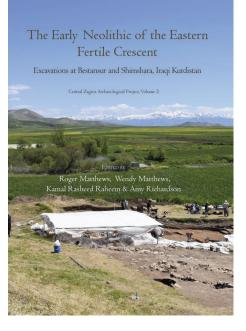
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Review of Roger Matthews, Wendy Matthews, Kamal Rasheed Raheem and Amy Richardson (eds.), 2020. *The Early Neolithic of the Eastern Fertile Crescent: Excavations at Bestansur and Shimshara, Iraqi Kurdistan.* Central Zagros Archaeological Project 2. Oxford: Oxbow Books. ISBN: 9781789255263 (hardcover). € 89.-

The emergence of early domestication and sedentism is usually understood as the most important development in human life as it paved the way for all following developments. The so-called Fertile Crescent in southwest Asia has yielded the earliest evidence for these fundamental changes. Though the eastern Fertile Crescent, particularly the Zagros, was host to pioneering fieldwork in the mid-twentieth century, much of which was guided by Robert J. Braidwood who established interdisciplinary research on early domestication and sedentary life in the region, later research concentrated in the Levant. Braidwood undertook excavations at different sites, e.g. Jarmo (correctly: Charmo), Karim Shahir, Asiab and Sarab. Although he never fully published his expedition to the Iranian Zagros, his work paved the ground for the subsequent excavations at a number of Neolithic sites (Guran, Ganj Dareh, Ali Kosh, Chogh Sefid and Abdul Hussein) in the 1960-70s. On the Iraqi side of the Zagros, however, no early Neolithic/ PPN site has been excavated since his work in the 1950s. After a long hiatus, investigations have recently been resumed under the co-direction of Roger and Wendy Matthews, whose fieldwork, the Central Zagros Archaeological Project (CZAP), started in 2008 with the excavation of Sheikh-e Abad and Jani in Kermanshah. Although research on these two sites has not been completed yet, they published the results of the first phase of their long-term project in 2013. While maintaining the project's title, in its second phase the project moved to Iraqi Kurdistan (western Zagros). Here not only was the previously unexcavated site of Bestansur on the Shahrizor Plain, Sulaimaniya Province, extensively excavated but also some rescue excavation was undertaken in the lower levels of Shimshara on the Rania Plain. In addition, a brief intensive survey was directed at an area surrounding the Zarzi Rockshelter; this fieldwork was undertaken jointly with the Sulaimaniya Directorate of Antiquities and Heritage. The final report on this fieldwork and accompanying analyses has now been published in a large volume which is the subject of this review.

Apart from being a field report, this volume integrates multidisciplinary results on the finds recovered during the second project phase from 2011-2017. In addition, archive reports on all field seasons have been made available online at: https://www.czap.org/. Compared to the first volume, which was based on a single season of excavation, this second volume benefits from longer and succeeding seasons of excavations in a larger area and more data. This has permitted the contributors to present sufficient information, specifically when their chapters are based on interdisciplinary methods such as



micromorphology or bio-archaeological approaches. However, due to bioturbation or poor preservation at the sites insufficient data – especially from charred plant remains – may have hampered research, but this may also relate to a delay in the spread of woodlands across the Zagros. In some cases, bioturbation or anthropogenic activity allowed later material to penetrate into the early Neolithic levels. As indicated by their late dates, supposed Neolithic plant remains turned out to be intrusive from Neo-Assyrian or later layers. If such samples had not been dated, they would have been considered as representing early Neolithic plant subsistence. This issue highlights much of the complexity of, and fallacies relating to, excavations at stratified mounds in the eastern Fertile Crescent.

A large amount of human burials (c. 78 individuals) was found within a large building at Bestansur (Building 5) allowing adequate information on the demography, diet and health at the site to be obtained. Along with on-site excavations and test pits, boreholes were carried out around the higher part of the site in order to study its geomorphology, geoarchaeology and to delineate its original extent. Although the *in situ* Neolithic deposits suggest that the site should have been <1ha in size, the surface Neolithic finds are scattered over an area of c. 4ha. Other off-site investigations included an ethnoarchaeological survey in the nearby modern village, with an emphasis on land use and herding strategies, and paleo-climatology research.

The volume covers many subjects, from reports on field work to the various scientific analyses, and the interpretive discussion of results as associated with the project objectives (see below). The introduction begins with a brief note on the role of archaeology in investigating long-term human-environment interaction. This discussion is related to dimensions of better understanding modern issues such as, for example, ecological education and policy making in (also global) environmental concerns such as climate change, sustainability in food resource management, transformation of societies and their health, and how these issues relate to foundations laid in the early Neolithic. After a short history of research in the Zagros and the Iranian southwestern lowlands (seen as part of the southern Zagros), the key themes of the project are discussed: human-environment interaction, early sedentarisation, society, rituality, resource management, diet, health, material engagement, networks.

The next two chapters present methods of excavation, sampling and documentation and an overview of geography and paleo-environment of the Zagros; investigations of new paleoclimatic proxies of the project are still on-going and cannot yet be used for the reconstruction of palaeoclimatic conditions of the region. As noted above, an intensive survey was carried out along with excavations to identify late Epipaleolithic and early Neolithic occupations in the vicinity of the Zarzi Rockshelter, which led to the recovery of a handful of new open-air sites and a symmetrical Acheulian hand axe. These finds of the survey are discussed in Chapter 4 which, unfortunately, lacks any drawings of the stone tools. However, one of the sites (labelled ZS3) appears to be promising, and is planned to be the subject of future investigations.

Prior to, and during, excavations at Bestansur a geophysical survey was undertaken at the site to detect subsurface structures. During seven excavation seasons 13 trenches were opened; in eleven of them early Neolithic traces were uncovered with Trench 10 yielding the most substantial architectural remains. The volume lacks any aerial image of the site and of the excavations; instead, some satellite images are shown. Readers also do not find any general view of Shimshara. The chronology of the two sites is based on a limited number of AMS dates from Bestansur (*c*. 7700-7100 BCE) and a single one from lower Shimshara (*c*. 7300-7200 BCE).

The results gained by a wide range of scientific and interdisciplinary methods in micromorphology, microarchaeology, geochemistry, biomolecular analyses, archaeozoology, archaeobotany and palaeoanthropology (Chapters 11-19) constitute the major part of the volume; apart from the introductory and concluding chapters, one may see these chapters, particularly those associated with micromorphology, as the "cornerstones" of the volume. Daily activities, pest control, diseases and health, construction management, diet and resource management and living conditions are among the main topics that are targeted and discussed using the micromorphological evidence. A thorough understanding of this discussion requires a deeper knowledge of the associated scientific methods.

Regarding early domestication at Bestansur, a limited amount of evidence is available. Similarly to other sites in the Zagros, cereals, wild or domestic, are rare while pulses are well attested. This is in agreement with the "diversity" explanation for early Neolithic subsistence in southwest Asia. However, domestic emmer and einkorn and possibly lentil were retrieved from the site. No morphologically domestic animal species have been identified yet, and though micromorphological analysis suggests the use of dung as fuel, excavation so far did not testify to animal pens. Wild goats and sheep and later wild boar are predominant in the assemblages. As Bestansur is located outside the natural habitats of wild goats, it is suggested that the site's inhabitants herded this animal. Due to the presence of a coprolite sample of wild boar/ pig, the possible management of this species is considered for the end of the site's occupation.

The analysis of molluscs is interesting, showing that they might have been cooked and consumed. The analysis of knapped flint goes beyond the usual techno-typological classification in the discussion of their life history, from the quarrying of raw materials, to detaching techniques and their possible daily usage and final discard. In this regard, issues such as the nature of occupation, food procurement, craft activities and exchange networks are considered. The presence of heavily retouched blades, known as Çayönü tools, is striking. These tools were made of obsidian and seem to have been used for manufacturing marble objects. The small finds such as clay figurines, and particularly beads of stone and shell, are analysed to consider the early Neolithic exchange networks. Some of the tiny disc beads documented as stone items, however, appear to have been made of Spondylus. Ground stone implements at Bestansur show little wear, suggesting that food grinding was limited at the site.

It is noteworthy that the important results from Bestansur triggered their presentation to the public and local authorities. Moreover, a great achievement is the site's accession to the UNESCO World Heritage Tentative List in 2017.

The concluding chapter of the volume, on the application of integrated interdisciplinary approaches, sheds light on the early Neolithic's main archaeological issues, specifically on early sedentism and food resource management. Obviously, the CZAP has widely benefited from such approaches, providing new clues on the causes of the transition from hunting-gathering to farming and sedentary life in the Eastern Fertile Crescent. However, Bestansur and lower Shimshara date to the 8th millennium BCE and do not provide earlier evidence of the transition to the Neolithic period (c. 9700-8000 BCE) in the western and central Zagros. This highlights the need for more evidence from this stage, to be researched at earlier sites such as Sheikh-e Abad. The third phase of the project (2018-2023), entitled Middle East Neolithic Transition: Integrated Community Approaches (MENTICA), opens opportunities for the directors to follow such goals.

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