

Reviews

Thomas E. Levy, Mohammad Najjar and Erez Ben-Yosef (eds.) 2014 *New Insights into the Iron Age Archaeology of Edom, Southern Jordan: Surveys, Excavations, and Research from the University of California, San Diego & Department of Antiquities of Jordan, Edom Lowlands Regional Archaeology Project (ELRAP)*, Monumenta Archaeologica 35, Los Angeles, CA: Cotsen Institute of Archaeology Press, 978-1-931745-99-4, Vol. 1: 482 pp., Vol. 2: 1043 pp., USD 169.

Reviewed by Juan Manuel Tebes

Once a fringe, unexplored region, the biblical land of Edom in modern southern Jordan is nowadays one of the most excavated areas in the Levant. The jewel of Edom was the Faynan district, the largest source of copper in the southern Levant and the location of almost pristine archaeological remains of ancient mining and metallurgy dating back to the Chalcolithic period. Initially explored by archaeologist Nelson Glueck in the 1930s, Faynan's forgotten history only came fully to light with the archaeological and archaeometallurgical studies of British and German expeditions carried out since the early 1990s. Following the Jabal Hamrat Fidan Project initiated in 1997, a multidisciplinary project, the Edom Lowlands Regional Archaeology Project (ELRAP) began in 2002. It was sponsored by the University of California, San Diego (UCSD) and the Department of Antiquities of Jordan (DOAJ), and led by UCSD Professor Thomas E. Levy. This is the much anticipated final report of those decade-long archaeological excavations and surveys. It comprises two massive volumes (Vol. 1: Chs. 1-5; Vol. 2: Chs. 6-10) and a DVD, and is co-authored by Levy and colleagues Mohammad Najjar, formerly of the DOAJ and now at UCSD, and Erez Ben-Yosef, formerly at UCSD and now at Tel Aviv University. Although these and other scholars have already published a large number of articles and preliminary reports on this project, this is the first time one book combines the different archaeological, archaeometallurgical, petrographic, radiocarbon, osteological, epigraphic and digital studies. Since ELRAP was also conceived as a field school for UCSD graduate students, many of the chapters comprise substantial parts of the PhD dissertations written and defended by Neil G. Smith, Marc A. Beherec, and Ben-Yosef himself.

Chapter 1, *The Iron Age Edom Lowlands Regional Archaeology Project: Research Design and Methodology*, provides an outline of the two volumes, presents the history of the project and the theoretical framework in which it was embedded, and explains the different methodologies followed during and after work in the field. From the outset the authors make clear that the historical approach adopted by the project is very different from that

previously applied to scholarship on Edom. Rather than viewing Iron Age Edom as a by-product of the expansion of the Neo-Assyrian empire in the Late Iron Age II and its key geographical position astride the lucrative trade routes for south Arabian incense (a view which largely hinges upon the use of the Wallerstenian 'world-system' model; cf. Tebes (2008)), they see the sociopolitical development of Edom beginning in the Early Iron II because of endogenous factors. These were a consequence of changes in the mostly-tribal organization that have permeated the society of southern Jordan for most of its history. This perspective has already been defended by Levy et al. in previous publications. The chapter also explains the environmental setting of Faynan, highlighting the essential geographical and geological features that made Faynan the key source of copper in the Levant.

The chapter also describes the pioneering use and application of digital technology, both in the field and in the laboratory (cyber-archaeology). The authors go to great lengths to explain all the phases of recording and processing of the digital data; archaeologists will find in this chapter a good source for their own project methodologies. This is particularly true with regard to the application of terrestrial laser scanning, a method relatively new in archaeology which involves the capture of three-dimensional points of archaeological features, sampling geometry and color of objects. Although the use of the Leica ScanStation 2 can be rather burdensome, if supervised by an experienced user the acquisition of field data has proved to be relatively straightforward. During the post-excavation laser processing, the laser scan records can be visualized with a degree of accuracy previously unseen in archaeology, showing for example close-ups of walls and floors with the precise locations of artefacts and correlation of radiocarbon samples. Here ELRAP breaks new ground, for cyber-archaeology is not only used as a mere tool for depicting the usual data more punctiliously, it identifies key points for discussion, especially those concerning the use and validity of radiocarbon data. Field laser scanning permits linking vital 14C dates with their appropriate loci and, in the authors' own words, '[t]his tool enables ELRAP researchers to 'revisit' the excavation on the day the data were recorded and reexamine these spatial contexts that are of key importance for locking down chronological issues' (46). Other methods of critical importance are explained in this chapter, including portable XRF in the field, three-dimensional artefact scanning, and large-scale high-definition virtual reality visualizations of archaeological images.

Chapter 2, *Excavations at Khirbat en-Nahas 2002-2009: Unearthing an Iron Age Copper Production Center in the Lowlands of Edom (Southern Jordan)*, presents the final results of the research in the largest excavated site in the Faynan area, the square fortress of Khirbat en-Nahas (KEN). Dig areas were opened in seven parts of the site, most particularly the fortress gate, an internal building devoted to the processing of copper, two large

elite buildings, and industrial slag mounds. According to the authors, the fortress at KEN was founded in the tenth century BCE in an area already occupied by remains of copper metallurgical activities. After a century or so of operation, there was a massive re-organization of the site, which included the decommissioning of the fortress gate and turning it into a large public building. Although the general layout and chronology of KEN is already known from preliminary publications, this is the first detailed locus-by-locus report on the site, providing a new set of Bayesian radiocarbon dates (now totalizing 28). Therefore it is possible to link previously known artefacts and ¹⁴C dates, the core of which were performed by Thomas Higham at the Oxford Radiocarbon Accelerator Unit, found in the site with their specific archaeological contexts.

Chronology was a particular focus, especially the date of the construction of the four-chambered fortress gatehouse (Area A). This has been a point of severe scholarly criticism. The main issue has been Levy et al.'s methodology, which relies on ¹⁴C dates of samples taken from slag mounds – i.e., industrial waste – and not from occupation levels. It has been argued that slag heaps are prone to disturbance if not being fundamentally *non-stratigraphic* (Finkelstein and Singer-Avitz 2009: 213). According to the excavators, stratigraphic data confirm that the earliest layer of the gatehouse (A3b) lies above a layer of crushed slag (A4a) predating its original construction. Old and new radiocarbon dates can now be visualized in three-dimensional images through the use of laser scanning and 'revisited' in their original loci. These radiocarbon data would place the construction of the fortress in the mid-tenth century BCE and 'demonstrate conclusively that the fortress was not built during the eighth or seventh centuries BCE as some scholars have suggested (Finkelstein 2005)' (97).

It was clear from the very beginning that the chronology of sites excavated in the lowlands of Faynan extended back to a period not covered by the classical 'Edomite' sites that were established in the highlands immediately to the east in the Late Iron II. In order to test the relationship between the two phenomena, Smith led excavations in a few short-lived highland sites, Kh. Al-Malayqtah, Kh. al-Kur, Kh. Al-Iraq Shmaliya, and Tawilan (previously excavated by Crystal M. Bennett), and a reconnaissance survey between Dana and Ash-Showbak. The results are presented in Chapter 3, *From Lowlands to Highlands: Iron Age Excavations and Surveys on the Edom Plateau near Shawbak*. The important results of this research include the identification of 48 sites (17 dating to the Iron Age) and the dating by means of radiocarbon and pottery finds, including decorated *Late Iron Age Southern Transjordan-Negev* 'Edomite' pottery, of the excavated sites to the Late Iron II. It thus confirms the chronological distance between the Early Iron II lowland sites and these more recent settlements.

One of the most controversial issues is the chronology of the pottery found at Faynan, particularly that from KEN. A preliminary publication of this pottery (Smith and Levy 2008) has already sparked fierce controversy, chiefly because the authors attribute it mostly to the tenth-ninth centuries BCE on the basis of associated radiocarbon dating and ceramic parallels from Trans- and Cisjordan. Some scholars have pointed out that ceramic parallels would not allow this pottery to be earlier than that of the eighth century BCE (van der Steen and Bienkowski 2006; Finkelstein and Singer-Avitz 2008; but see a middle-ground position in Tebes 2013: 100-102).

In Chapter 4, *Iron Age Ceramics from Edom: New Excavations, New Perspectives*, Smith, who wrote his dissertation on this topic parts of which are reproduced here, and Levy again present the pottery from Kh. en-Nahas and other excavated sites, Kh. al-Jariya, Rujm Hamrat Ifdan (in the Faynan district) and Kh. Al-Malayqtah, Kh. al-Kur, Kh. Al-Iraq Shmaliya, and Tawilan (in the Edomite highlands). Smith and Levy build a ceramic typology primarily based on morphological attributes and secondarily on ware analysis and petrographic data, comparing each type and subtype with ceramic parallels from Edom, northern Transjordan, the Negev and central Israel. According to the authors, these ceramic parallels demonstrate a clear separation between the Early Iron II assemblages (eleventh to ninth centuries BCE), represented by the lowlands sites and Rujm Hamrat Ifdan Sounding A, and the Late Iron II assemblages (eighth to sixth centuries BCE), found in the sites on the Edomite plateau. Against previous criticism, they assert that the highland types are considered as more recent derivatives of the earlier,

Rather, our ceramic analyzes demonstrate that many of the Late IA II sites had a number of technical styles of vessel shape and rim form with earlier lowland antecedents. These clearly later forms are the product of minor deviation or adaptation from earlier forms throughout the entire Iron Age II period in southern Jordan (449).

The study of Smith and Levy provides a wealth of new information on the pottery of Edom that scholars will have to test against other assemblages, in particular that coming from Rujm Hamrat Ifdan, as it shows the apparent development of the local ceramic traditions across the whole Iron Age II.

Petrographic studies on the most important pottery samples were carried out by Smith and Yuval Goren at Tel Aviv University, the results of which are presented in Chapter 5, *Petrographic Perspectives on Iron Age Edom: From Lowland to Highland*. Local or subregional fabrics originating from the (Lower Cretaceous) Kurnub sandstone formation predominate in the ceramic assemblage. The pottery from KEN has a high percentage of slag inclusions originating from the industrial metal production. Imported pottery (Cisjordanian, Cypriot,

Phoenician, Greek and Qurayyah pottery) was very rare and belonged mostly to the Early Iron II assemblages.

Chapter 6, *Local Iron Age Trade Routes in Northern Edom: From the Faynan Copper Ore District and Beyond* presents the results of an archaeological survey conducted across three ascents, Naqb al-Ghuwaiba, Naqb al-Jariya and Naqb ad-Dahl. The study aimed to respond to one of the most important questions in the archaeology of Edom: what were the ancient routes that linked the Wadi Arabah and Faynan with the Late Iron II site of Buseirah, the administrative center of the classical Edomites? In addition to recording the geographical landscape, the survey documented a large number of architectural remains, pottery scatters and rock-art dating to the Iron Age and later periods. Two locations, FBR Sites 27 (presumably a Late Iron II open air shrine) and 50 (a rock-art site), provided exciting material that deserves to be fully studied in the future.

More results from surveys, this time around the Wadi al-Jariya/Wadi al-Ghuwayba and Wadi Fidan catchments, are presented in Chapter 7, *Patterns of Iron Age Mining and Settlement in Jordan's Faynan District: the Wadi al-Jariya survey in Context*. A vast amount of information is provided for the first time about these areas including local agricultural sites, architectural features, cairns, campsites, cemeteries, metallurgical sites, mines, rock shelters, tumuli and sherd scatters. These data can now be compared with similar archaeological features found in better (the Negev) and less known (northwest Arabia) neighbouring regions.

The rate at which the traditional 'biblical archaeology' has adopted the concepts and methodology of mainstream archaeology is best exemplified in Adolfo Muniz's zooarchaeological study of the faunal material from KEN, Chapter 8, *Feeding the Iron Age Metalworkers at Khirbat en-Nahas: Zooarchaeological Perspectives*. Predictably, sheep and goat were predominant as meat source, followed from afar by cattle, paralleling similar data from contemporary sites in the Negev that reveal the predominantly pastoral economy current in the area in the Iron Age. Equally expected was the absence of pigs in the animal assemblage and the presence of donkeys and camels used as beasts of burden.

In Chapter 9, *Wadi Fidan and Mortuary Archaeology in the Edom Lowlands*, the authors present the final result of the excavations in the enormous cemetery at Wadi Fidan 40 (WF 40), in the western side of the Faynan district. WF 40 is unique not only because it contains the almost only known burials from Iron Age southern Jordan, but also because of its large size, a minimum of 1,380 graves, and significant finds. The 245 cist graves were studied by Beherec in his dissertation. Here he presents and discusses the many finds, including architectural features (mostly standing stones), personal adornments, beads, and pottery. According to the excavators, the people buried at WF 40 constitute the nomadic population of Early Iron II Edom,

whom they identify as the 'Shasu' of the New Kingdom Egyptian sources. Although the chapter provides invaluable information on the cemetery's human remains and material culture, the question still remains as to what was the exact relationship between these people and the fortified centres such as KEN, located further east.

As already mentioned, one of the most complex issues of the archaeology of Iron Age Edom is the relationship between the Faynan lowland sites and those located in the highlands. The site that seems more promising in helping solving this riddle is Rujm Hamrat Ifdan, the only lowland site so far with archaeological evidence from the Early and Late Iron II. ELRAP carried out two soundings in different parts of the site, the results of which are presented in Chapter 10, *A Picture of the Early and Late Iron II in the Lowlands: Preliminary Soundings at Rujm Hamrat Ifdan*. Two areas, one in the summit (Area A) and other in the base (Area B), were occupied according to the pottery and the 14C datings in those different periods without overlapping. A significant difference between both areas was the presence of metallurgical remains and abundant handmade pottery in Area A vis-à-vis its absence in Area B, 'suggesting in the later Iron Age II sequence a shift toward greater dependence on sedentary domestic production with the decline of metallurgical activities in the Faynan region' (736). The site provides invaluable information on the diachronic development of the material culture of Iron Age Edom, which should be carefully contrasted with the other one-period sites in the area.

Epigraphic material was not common in the Faynan sites, and unfortunately no written 'Edomite' texts were found. However, the authors invited renowned epigraphist Christopher A. Rollston (George Washington University) to write a chapter on the Iron Age Edomite script and language, Chapter 14, *The Iron Age Edomite Script and Language: Methodological Strictures and Problems*. Rollston concisely manages the limited but precious epigraphic evidence to establish the guiding principles for identifying 'Edomite' traits in ancient inscriptions and for locating the Edomite language within the Canaanite dialects (not Aramaic). This study will become a standard reference in scholarship of the Edomite and Northwest Semitic inscriptions. A great consolation prize for the dearth of epigraphic finds was the relatively large number (16) of Egyptian amulets unearthed, most of them originating in KEN, which confirmed the significant role that Egypt played during the last part of the Late Bronze and the Iron Ages. A concise study of every amulet, scarab and seal by expert Stefan Münger (Universität Bern) is presented in Chapter 11, *The Iron Age Egyptian Amulet Assemblage from the Edom Lowlands Regional Archaeology Project*, together with the historical implications of these unique finds. Of the highest significance is the discovery of a scarab with the name of Shoshenq I found in Khirbat Hamra Ifdan. Shoshenq's list of conquered sites on the Bubastite Portal at Karnak probably mentions 'Edom'.

Chapter 12, *New Iron Age Excavations at Copper Production Sites, Mines and Fortresses in Faynan, Jordan*, describes the ELRAP excavations at the Early Iron II fortresses of Kh. al-Jariya, Kh. al-Ghuwayba, the Jabal al-Jariya mines, and the Late Iron II Ras al-Miyah fortress system. These excavations were supervised by Ben-Yosef and much of this chapter is already known from his dissertation. Whereas the pattern of occupation in most of these sites paralleled, with some variations, that one known in Early Iron II KEN, the two small fortresses at Ras al-Miyah are, together with Rujm Hamrat Ifdan, the only archaeological sites in Faynan dated to the Late Iron II and thus probably associated with the nearby Edomite site of Buseirah. Given that the remains of metallurgical activities were meager, the question arises as to whether this reflects a decline in the technology of metal production or a different function, more defensive-oriented, of these sites.

Ben-Yosef presents another product of his dissertation, this time an in-depth study of the archaeometallurgical material found in Faynan, Chapter 13, *The Material Culture of Iron Age Copper Production in Faynan*. This consists of remains such as ore and flux, ground stones, charcoal and wood, furnaces, pottery, tuyères and bellow pipes, slag, raw metal and prills, molds, crucibles, and ingots. One important conclusion is that two main copper smelting technological traditions existed in Faynan and Timna, one that is a continuation of the Late Bronze practices and that ceased abruptly in the late tenth-early ninth centuries BCE to be replaced by a newer and more effective technology accompanied by a big reorganization of production, which the authors link to Shoshenk I's campaign in the southern Levant. The amount of material studied is impressive and doubtless will become indispensable for comparing with other ancient sites with remains of early mining and production.

Conclusions are presented in Chapter 15, *Conclusion: New Insights into the Iron Age Archaeology of Edom, Southern Jordan: Surveys, Excavations and Research from the Edom Lowlands Regional Archaeology Project (ELRAP)*. Although the authors offer diverse alternatives for the sociopolitical history of Iron Age Edom along the lines of foreign vs. local control models, ultimately they draw strongly from ethnographic research of 'segmentary' societies to highlight what they call the 'oscillating tribal segmentary social system model' operating in Iron Age Edom. This model helps to explain the process by which the predominantly tribal, semipastoral societies of Late Bronze–Iron I Ages southern Jordan developed into the Iron II small secondary state-level societies.

The DVD supplements with low-definition photographs of excavations, surveys and artefacts, plus reference tables.

Insights into the Iron Age Archaeology of Edom is a ground-breaking study of one of the most important areas of the Levant. Although ELRAP is not the first archaeological or archaeometallurgical project studying Iron Age southern Jordan, it is certainly the largest and most exhaustive to date. ELRAP's use of cyber-archaeology will become a landmark in the archaeology of Jordan and probably the Near East, raising the bar very high, maybe too high, given the costs involved. One possible limitation, inevitable in a co-authored book of this magnitude, is the lack of uniformity between chapters. To be sure, more is better than less, but there is much repetition especially in chapters derived from dissertations. Thus chapters often resemble the structure of journal articles. These comments of course should not overshadow the colossal work completed by Levy and his team during the last decade. *Insights* will become a must-read book for anyone interested in the history and archaeology of the first millennium BCE Levant, northern Arabia and the ancient Near East, and in the archaeology of early mining and metallurgy in general.

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