

short, standardized description of the features, accompanied by relevant bibliographical references, but also a standardized plan with symbols clearly marking the furnaces and the direction the hot air would have traveled. A map of the Mediterranean shows where each bath is located. A useful short description introduces the catalog, explains the aim and method of compiling it as well as why certain bath houses were omitted from it. This should become a model of how to publish catalogues that are easily comprehensible in their design, giving future researchers the tools to use them correctly.

The illustrations are clear and of good quality throughout the book. Especially laudable is the high number of color illustrations, which render excavation photos more easily understandable and are indispensable for some contributions. The book was professionally edited; the reviewer did not find any obvious mistakes.

To summarize, the book offers plenty of important contributions to Greek baths, including three significant survey papers, presentations on seven key sites, and a catalog describing the entire corpus of known bath houses. This publication considerably improves our knowledge of Greek baths and provides a base upon which further studies can build.

***The Archaeology of Agro-Pastoralist Economies in Jordan.* Edited by Kevin M. McGeough.**

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The Archaeology of Agro-Pastoralist Economies in Jordan is comprised of three excellent analyses of botanical and faunal materials: (1) “Telling Seeds: Archaeobotanical Investigations at Tall al-‘Umayri, Jordan,” by Jennifer Ramsay and Natalie Mueller (1–26); (2) “Crop Storage and Animal Husbandry at Early Iron Age Khirbat al-Mudayna

al-‘Aliya (Jordan): A Paleoethnobotanical Approach,” by Alan Farahani, Benjamin W. Porter, Hannah Huynh, and Bruce Routledge (27–90); and (3) “Faunal Remains from the Mamluk and Ottoman Occupations in the Middle Islamic Period Palace at Karak Castle, (Qal’at al-Karak),” by Robin M. Brown and Kevin Rielly (91–134). All three papers are sophisticated studies of complex assemblages of botanical or faunal materials, rich in analytic potential, well presented, and thought-provoking.

The excavations at Tall al-‘Umayri are part of the long-running Madaba Plains Project with an especial focus on regional food systems and settlement patterns. The investigations reported on here center on the period from the Late Bronze Age II through the Hellenistic Period, a long span showing regional demographic decline at the beginning (although not especially on the site itself), followed by intensification in the Iron Age, decline in the Persian and early Hellenistic periods, and again intensification toward the end of the sequence. Botanical remains were collected in 38 samples covering the entire span, from 19 different contexts (including one indeterminate). Samples taken by excavation staff but floated by the analysts suggest that the sampling strategy, which one might characterize as opportunistic, is appropriate for understanding individual contexts rather than making site-wide generalizations. An impressive range of plant species was recovered, including cereals (varieties of barley and wheat, rye, and millet), legumes (two kinds of vetch, peas, lentils, chick peas, sweet peas, and vetchlings), fruits and nuts (olives, grapes, figs, and pistachio), and a wide range of wild and weedy plants, some likely used as spices or medicinal herbs. The presence of crop by-products and weeds indicates local farming and not imported food. Specific functions of rooms and features are suggested, correlating with physical remains (storage, kitchen, offerings), but variability between find contexts is great and makes it impossible to ascertain trends between periods. Nevertheless, a general picture of subsistence practices and environment is evident.

Khirbet al-Mudayna al-‘Aliya is an Early Iron Age hill fort, typical of the al-Mujib settlement system, in itself similar to other contemporary fortified systems such as that of the Negev Highlands. An introduction to the site is followed by a summary of the 431 identifiable bones recovered from nine general excavation units, including

domestic ungulates (cattle, goat, sheep, horses, donkeys, camels, pigs), wild ungulates (deer, onager?), rodents, hedgehog(?), and freshwater crabs. The primary focus of the research is the botanical assemblage. Based on 85 samples (including 20 from a previous study by E. Simmons), the assemblage was divided into basic categories (in order of frequency): fragmented seeds, whole seeds, unidentified seed fragments, large charcoal fragments, dung, rachis, unknown whole seeds, and Poaceae culms. Major domestic seeds identified included two species of barley, at least two species of wheat, figs, grapes (including raisins), lentils, other legumes, millet, and bitter vetch. Another 20 species of weedy or wild plants were also common in the assemblage. In addition to contextual analysis, the authors differentiate between storage and non-storage contexts using correspondence analysis, suggest interpretations including deliberate foddering, communal storage facilities, and create environmental reconstructions emphasizing the use of the local wetlands. In conclusion, the authors note the integration of different subsistence practices with the basic features of Iron Age community organization, noting also the importance of systematic sampling, allowing comparison between samples to achieve such conclusions.

The final study concerns animal exploitation from Middle Islamic Karak Castle, the assemblages deriving from excavations conducted in the late 1980s. Following an introduction to the site, its chronology, and its historical context, a detailed analysis of 404 identifiable bones and 497 unidentifiable fragments (901 total) is presented. These are divided into two phases (1b and 2), the earlier Mamluk (13th–15th century CE) and the succeeding Ottoman (16th–19th century CE). Not surprisingly, among the ungulates sheep and goat dominate the assemblage followed by cattle and equids. No camels are present, and one bone of a gazelle was recovered. Cattle are absent in the Ottoman assemblage, in spite of relative abundance in the earlier phase. Chicken is common in both phases. Other identifiable species (dog, cat, other species of birds) are represented by a single bone each. Fish bones, unidentified to species, indicate trade. Culling patterns are difficult to reconstruct given low numbers, but a high proportion of sheep/goat young suggests consumption preferences for younger animals. The Karak assemblage is then compared to roughly contemporary

assemblages from Dhiban, Hisban, Shawbak, Wadi Farasa, and Wu'ayra. This comparison considerably expands the species list to include critical animals such as camels, horses, pigs (attributed to Christian occupations), donkeys, a large list of wild mammals (gazelle, deer, goat, boar, onager, leopard, and more), wild birds, one tortoise, and both freshwater and marine fish. The general overview of animal exploitation in the Middle Islamic period is especially useful, integrating historical sources with the archaeological, and tying the faunal trends to historical changes.

Taking an overview of these papers, all three struggle at some level with the issue of archaeological sampling, whether that of mere sample size or, more importantly, representativeness. Archaeological sites are never homogeneous. Samples retrieved from one room/structure/locus may reflect activities and processes profoundly different from those retrieved from another, and this is especially the case for large sites from economically complex societies. Sites are never completely excavated, and sampling is thus always limited. Differences in micro-context may differentially affect preservation, and post-depositional processes may alter the composition of assemblages through forms of mixing and destruction, giving rise to other biases. To the great credit of all the researchers here, each recognizes this fundamental problem, and conclusions are tempered with an understanding of the limitations of the samples and contexts. The challenge will always be for later researchers to incorporate earlier data in order to make our samples ever more representative.

Even given the high quality of each of these reports, one wonders about the underlying themes linking them one to another. These analyses focused on disparate periods, with two presenting analyses of botanical remains and one of faunal remains, the ostensible commonalities being their general focus on subsistence in Jordan in ancient times. However, there is really little to link these three papers and no real effort was made here to identify common threads, for example such themes as subsistence farming versus cash crops, elite consumption versus that of commoners, etc. The studies are not even methodologically similar. Of course, the fact that all three derive from modern Jordan can hardly be relevant to ancient societies. This question of commonality

is not an idle one. One may ask why these analyses were not published in journals which would be far more accessible than the ASOR Annual, at a cost of \$84.95 for all of 134 pages. Even assuming that everyone now breaks the rules of copyright and puts their papers online immediately on publication, there is a cost involved in producing such books, presumably paid for by membership dues. While one can justify books dedicated to specific subfields, where the collection of diverse papers on a specific subject offers the reader in-depth perspectives on that subfield, in these days of murderous publish or perish, younger scholars should be encouraged to publish their work in venues which offer them prestige for obtaining jobs and promotions.

Bones of Complexity: Bioarchaeological Case Studies of Social Organization and Skeletal Biology.

Edited by Haagen D. Klaus, Amanda R. Harvey, and Mark N. Cohen.

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Bones of Complexity is the seventeenth volume published since 2007 in the University Press of Florida's *Bioarchaeological Interpretations of the Human Past* series. The series, like others focusing on bioarchaeology from other presses and new journals like the *International Journal of Paleopathology* (started in 2011), is an example of the growing importance of bioarchaeology as an interdisciplinary approach to understanding humanity's past. Volumes and articles that apply bioarchaeological techniques to various topics in prehistory such as violence, identity, ethnicity, care-giving, colonization, the origins of agriculture, and even childhood abound. However, the work under review here is the first edited volume to explicitly take on the issue of socio-political complexity and its impact on human biology as expressed in skeletal remains.

While not a book specifically focused on the eastern Mediterranean region, I believe the volume includes several chapters that will be of interest to readers of *JEMAHS*. Moreover, for those readers who would like to know more about what light bioarchaeological research can shed on the cultures and polities of the eastern Mediterranean, I think they will find this work an accessible and enlightening read. The volume includes seventeen chapters with an introductory chapter by the editors and a concluding chapter by them and Marie Danforth. In between are fifteen chapters, unevenly divided into three sections. The first section (three chapters) looks at growth and stature, the second (three chapters) examines aspects of sex and gender, and the third (nine chapters) contains case studies that use bioarchaeological data to assess the impact of complexity on human bodies or otherwise understand the nature of socio-political complexity.

As with any edited volume, some chapters are stronger than others. However, those chapters that deal with contexts from the eastern Mediterranean are some of the volume's strongest. For example, chapter five by Sonia Zakrzewski examines six Egyptian skeletal samples represented by 150 adult individuals and nearly 1,000 long bones from the Badarian (5500–3800 BC) to Middle Kingdom (2040–1785 BC) periods. Zakrzewski analyzes mean estimated adult stature across both sexes and a measure of sexual dimorphism in estimated height across this 3,500-year timespan. She finds that the development of social hierarchy involved increased skeletal diversity linked to sexual dimorphism and that the greatest degree of dimorphism occurred at the same time as the development of social ranking. However, she found no differences in stature between archaeologically identified social statuses in the samples. The author attributes the increased sexual dimorphism to an increasing distinction in social roles between males and females and possibly better nutrition and medical care for men.

Chapter 6 by Lynne Schepartz and colleagues poses two questions: (1) does rank in Mycenaean society correlate with skeletal or dietary differences? and (2) are there gender-based patterns in Mycenaean diet and health? Their skeletal sample comes from twelve chamber tombs and three tholoi from the Late Bronze Age (ca. 1500–1000 BC) site of Pylos and includes 179 individuals. Schepartz