cataloguing the issues resulting from archaeological collaboration with communities: multivocality and power sharing; knowledge making and new narratives; the role of elites, politics, and the AHD; and the nature of community participation itself. The next dimension of this discourse is to plumb the now ample case-study data for theoretical insights into the best ways to vary the form of public engagement in response to variations in social, cultural, economic, and political contexts. The next dimension is to develop heightened clarity on the goals of community/public archaeology, the metrics by which successful impacts will be measured, and the techniques that can be used to measure them. The next dimension will take us beyond archaeology as it was to archaeology as it must become. For that, the essential contribution from Jameson and Musteaţă's book is that it delivers a capstone to past publications and in so doing, begins to make the next dimension conceivable.

Hunter-Gatherer Adaptation and Resilience: A Bioarchaeological Perspective. DANIEL H. TEMPLE and CHRISTOPHER M. STOJANOWSKI, editors. 2019. Cambridge University Press, Cambridge. x + 395 pp. $99.99 (cloth), ISBN 978-1-107-18735-1.

Reviewed by Douglas K. Charles, Wesleyan University

In brief, resilience theory arose in ecology as a counter to cybernetic systems theory. Ecological systems neither remain constant nor seek to maintain equilibrium. Central to resilience theory is the notion that systems persist through variability and adaptation. The system is generally depicted as the infinity symbol to represent a continuous adaptive cycle entailing four phases: growth or exploitation (r), conservation (K), release (Ω), or sudden change, and reorganization (α). In the introductory chapter, editors Daniel Temple and Christopher Stojanowski are at pains to orient our perceptions of hunter-gatherers away from a model of cultural evolution that necessarily leads from foraging to agriculture. Instead, they view hunter-gatherers as purposeful social actors. They wish to examine the persistence via resilience of hunter-gatherer groups, as well as the adaptations that allow cultural or ecological continuity, the instances of transformation (adaptations resulting in a new system), and in some cases, the collapse of the system. The particular emphasis of the volume, as the subtitle indicates, is the application of bioarchaeological methods to hunter-gatherer studies within the framework of resilience theory.

Although the authors employ a range of approaches that address health, trauma, diet, biomechanics, identity, and ideology (mortuary practices are considered within the domain of bioarchaeology), they also provide a wide survey of archaeological and ethnohistorical cases. Susan Pfeiffer and Lesley Harrington (writing about hunter-gatherers) and Michelle Cameron and Jay Stock (on hunter-gatherers and herders) examine cases from the Late Stone Age in southern Africa. Valeria Bernal, Ivan Perez, Maria Postillone, and Diego Rindel compare the responses of populations in southern and northwestern Patagonia to the Pleistocene-Holocene transition. Rick Schulting considers the resilience of European hunter-gatherers in the face of the 8.2 kya event—an abrupt cooling trend that spanned some 100–400 years or so—and the Mesolithic-Neolithic transition. Daniel Temple investigates the effects of climate changes on populations during the Jomon period in Japan (16,500–2400 BP). Pedro Da-Gloria and Lucas Bueno investigate interior Brazil, where populations persisted from 10,500 to 7000 BP, but after that, the archaeological record becomes sparse, and mobility and territoriality change across the broader region. Erin Borneman and Lynn Gamble analyze the response to European contact among the Chumash of southern California. Eric Bartelink, Viviana Bellifemine, Irina Nechayev, Valerie Andrushko, Alan Leventhal, and Robert Jurmain focus on the San Francisco Bay Area, where levels of violence appear to correlate with sociopolitical changes rather than climate fluctuations. Christopher Stojanowski's case study is situated in Niger, and he analyzes dental evidence to address the question of whether the Middle Holocene inhabitants were hunter-gatherers or pastoralists. Bryn Letham and Gary Coupland track changes in mortuary practices in the Northwest Coast of North America between 3500 and 700 BP. Two studies look farther north: Lauryn Justice and Daniel Temple to Alaska, where persistence of mortuary practices is evident over a period of dramatic socioecological changes from 1600 to 400 BP; and Charles Merbs to Hudson Bay, where the Sadlermiut rapidly became extinct in the face of European-introduced disease during the late nineteenth and early twentieth centuries AD. Similarly, Littleton addresses demographic collapse following European occupation of the Western Riverina region of southeastern Australia.

Jane Buikstra's concluding chapter bookends the volume with an overview of anthropology's changing view of hunter-gatherers, a brief history of the bioarchaeology of hunter-gatherers in North America, and a discussion of modeling change in archaeology (full disclosure: Buikstra was my dissertation advisor, and we have since collaborated). She also offers a critical discussion of the contributions to the volume, noting that there is certainly a role for bioarchaeology in the study of hunter-gatherer resilience and adaptation

https://doi.org/10.1017/aaq.2020.31 Published online by Cambridge University Press

demonstrated by the chapters but also pointing to areas of needed improvement if the full potential is to be attained.

I largely agree with Buikstra's assessment of the various chapters, but I would add a note on the volume as a whole. Taken individually, the chapters provide fascinating descriptions of hunter-gatherers in a variety of circumstances. The relationship between the case studies and resilience theory, however, seems somewhat forced, and the resilience theory does not always add much to the arguments being made. There is an inconsistency in the identification and measurement of resilience, as Buikstra notes, that undermines the authors' attempts to make the case for a bioarchaeological component to resilience studies. The bioarchaeological analyses could easily stand alone. Nevertheless, this volume serves as an important first step in initiating a bioarchaeological contribution to resilience studies and also as an indication of the challenges facing this endeavor.

Social Perspectives on Ancient Lives from Paleoethnobotanical Data. MATTHEW P. SAYRE and MARIA C. BRUNO, editors. 2017. Springer, New York. x + 180 pp. $119.99 (hardcover), ISBN 978-3-319-52847-2.

Reviewed by Heather Trigg, University of Massachusetts, Boston

The chapters in this volume take a welcome and compelling approach to paleoethnobotanical analyses. Paleoethnobotanists have long realized that the myriad roles plants play in human societies and in human articulation with the environment mean that botanical data provide a powerful window on past cultures. For years, however, paleoethnobotany was relegated to investigations of diet and vegetation reconstruction, and analysts were viewed as technicians. Social paleoethnobotany, well illustrated by the chapters in this volume, directly engages social archaeology with its emphasis on power, agency, gender, and sociality. Many chapters in this volume build on the work of Christine Hastorf and began as papers presented in her honor as the recipient of the Fryxell Award for Interdisciplinary Research in 2012. They demonstrate an approach to social paleoethnobotany that more fully realizes the potential of plant remains to elucidate past lifeways.

In the introductory chapter, editors Bruno and Sayre provide a brief overview of paleoethnobotanical analyses and their contributions to archaeological theory, highlighting issues of diet and domestication that were the subjects of much research from the 1960s through the 1980s. They then pivot to a description of social paleoethnobotany, and they introduce major themes developed further by chapters in the volume.

The next six chapters present case studies that illustrate the value of the approach for understanding domestication, taskscapes, and ritual, and for interrogating common analytical categories (domestic/wild, ritual/quotidian). Chevalier and Bosquet muster detailed micro- and macrobotanical data to explore the spread of agriculture across northern Europe during the early Neolithic. Testing models derived from human behavioral ecology and from historical ecology, the authors find that historical ecology better explains how these processes unfolded. Next, Fritz, Bruno, Langlie, Smith, and Kistler explore chenopods, contrasting two centers of domestication: eastern North America and South America. Using paleoethnobotanical data and exploring the processes of domestication, the authors demonstrate the differing sociocultural contexts and trajectories between the North American domesticated *Chenopodium*, which fell out of use by AD 1200, and the South American species, which was domesticated in the Andes by 1500 BC and continues to be an important food source today. In the next chapter, Korstanje explores and critiques the common dichotomy applied to food plants —wild or domestic. Korstanje uses macrobotanical samples from rockshelters in Argentina to consider whether wild plant use declines or increases following the adoption of agriculture. She finds that, far from becoming unimportant, wild plants continued to be used by agriculturalists. This research has implications for the nature of the relationship between humans and plants, complicating what we know was a spectrum of relationships rather than a dichotomy. Farahani, Chiou, Cuthrell, Harkey, Morell-Hart, Hastorf, and Sheets also make use of exceptional preservation contexts, this time at Joya de Cerén, El Salvador. Volcanic dust and debris have preserved this prehispanic Maya village with many artifacts in place. The authors use the spatial distribution of artifacts and botanical and faunal remains to explore taskscapes. Although little paleoethnobotanical data is presented here, GIS enables holistic views of plant remains in spatialized food production contexts. Next, Sayre and Whitehead present macrobotanical remains from Conchopata to investigate ritual practices and domestic usage in Middle Horizon cultures in the Andes. Reconstructing the patterns of food produced for rituals and for consumption within homes, they find little difference in paleoethnobotanical remains found in the spaces associated with domestic or ceremonial activity. This finding brings the authors to an important conclusion: dichotomies between quotidian and ritual may not be

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