



The Prehispanic Ethnobotany of Paquimé and its neighbors – book review

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Book Review

The Prehispanic Ethnobotany of Paquimé and Its Neighbors, authored by Paul E. Minnis and Michael E. Whalen. The University of Arizona Press, 2020, pp 177, \$67.00 (Hardcover), \$63.65 (eBook), ISBN 9780816540792 (Hardcover), ISBN 0816540799 (eBook).

The Prehispanic Ethnobotany of Paquimé and Its Neighbors, authored by Paul E. Minnis and Michael E. Whalen, offers a comprehensive exploration of the relationships between ancient human communities and their botanical environments in northwestern Chihuahua, Mexico. Covering the period approximately AD 1200 - 1450, known as the Medio period, this book emphasizes economic, ecological, and cultural dimensions of plant use by prehistoric societies in the region. In revisiting the findings of the Joint Casas Grandes Expedition (JCGE), the authors critique the prevailing narrative that positions Paquimé primarily as a cultural conduit between Mesoamerica and the U.S. Southwest. Instead, they propose a more localized and ecological perspective, arguing that the exceptional agricultural productivity of the Río Casas Grandes valley enabled the development of food surpluses, which in turn supported complex sociopolitical structures such as communal feasting. Structured across five chapters, the authors begin by placing Paquimé within a broader environmental and archaeological framework, clearly detailing the area's diverse ecosystems - from mountain forests to arid desert grasslands - and climatic variability.

Chapter 1 provides a comprehensive overview of the ecological landscape and environmental conditions of the Casas Grandes region in northwestern Chihuahua, Mexico, emphasizing the significance of ecological context in interpreting prehispanic agricultural strategies and ethnobotanical practices. The authors characterize the region as an ecological mosaic comprising diverse topographic zones, including the rugged Sierra Madre Occidental mountains to the west and expansive desert plains and grasslands to the east, with central river valleys such as the Río Casas Grandes playing a critical role in prehistoric agriculture. The climate, defined as arid to semi-arid with a bimodal rainfall pattern, significantly influenced vegetation and agricultural productivity. Five distinct biotic communities are identified based on elevation and climatic conditions, ranging from high-elevation coniferous forests rich in timber to lower-elevation woodlands and grasslands suited for agriculture and foraging, down to the driest desertscrub areas offering limited seasonal resources. The chapter further discusses historical environmental changes, highlighting modern transformations like reduced water availability and irrigation infrastructure, which complicate ecological comparisons between past and contemporary landscapes.

Chapter 2 presents a detailed analysis of food practices within the prehispanic societies of the Casas Grandes region, emphasizing both domestic and community-level contexts. The authors meticulously examine plant remains recovered through archaeobotanical research, highlighting the diversity and complexity of dietary patterns beyond the dominant focus on maize. The chapter thoroughly investigates the differences in plant use between lowland and upland sites, demonstrating variations in dietary preferences, agricultural strategies, and resource availability influenced by local environmental conditions. Particularly notable is the exploration of the role of communal feasting in reinforcing social structures and political hierarchies, suggesting that agricultural surpluses enabled social elites to sponsor community rituals and gatherings. The authors effectively illustrate how specific plant species, such as chile, agave, and barley, contributed significantly to daily nutrition and ceremonial practices, underscoring the multifaceted nature of ethnobotanical usage. While the analysis is comprehensive, the interpretation of ceremonial contexts could benefit from additional comparative examples or ethnographic analogies from related cultural traditions. Nonetheless, this chapter provides a robust contribution to the understanding of how plant-based resources shaped both everyday life and socio-political dynamics in ancient Paquimé.

Chapter 3 provides a comprehensive examination of agricultural practices within the Casas Grandes region, emphasizing the technologies, social organization, and management strategies employed by prehispanic societies. The authors meticulously detail various agricultural methods, including terrace farming, irrigation systems, and specialized field usage, which were essential for sustaining the dense populations of the Medio period. They effectively describe diverse agricultural infrastructures such as riverine floodplain fields, upland terraces (*trincheras*), and rock mulch features, illustrating significant environmental adaptation and substantial labor investment. A key strength of this chapter lies in its detailed presentation of archaeological evidence for communal agricultural features, notably terraces and "chief fields," indicative of centralized planning and elite supervision. These communal structures are analyzed not merely as functional agricultural systems but also as reflections of socio-political dynamics, highlighting the considerable influence elites exerted through managing and redistributing agricultural surpluses. Additionally, the authors incorporate ethnographic perspectives and contemporary ecological research to contextualize ancient agricultural practices, significantly enriching the analysis of how agricultural systems adapted to environmental variability. Nevertheless, the discussion could benefit from a more explicit acknowledgment of methodological limitations associated with interpreting archaeological data related to agricultural practices. Despite this minor critique, Chapter 3 substantially advances scholarly understanding of ancient agricultural systems and underscores their pivotal role in shaping social complexity and political structures in the Paquimé region.

Chapter 4 provides an in-depth and comprehensive analysis of wood use among the prehispanic inhabitants of the Casas Grandes (Paquimé) region, highlighting its significance not only as a material for construction and fuel but also as a reflection of broader social, economic, and environmental dynamics. Utilizing extensive flotation data, the authors meticulously examine patterns of wood selection and distribution across domestic, ceremonial, and communal contexts, while noting critical distinctions between upland and lowland sites. Their analysis reveals a clear preference for specific types of wood, such as pine and juniper, used predominantly in structural contexts and transported over considerable distances, indicating sophisticated resource procurement strategies and potentially elite control mechanisms. The discussion effectively illustrates the economic and ecological complexities inherent in ancient wood procurement, emphasizing the organized labor and logistical networks necessary for resource transportation. Additionally, the authors challenge traditional archaeological perspectives by emphasizing wood as a culturally significant material, embedded within broader patterns of ritual and architectural expression. This chapter significantly advances our understanding of the role of wood resources within ancient Paquimé societies, underscoring their importance in maintaining economic, social, and environmental stability.

Chapter 5 thoroughly explores the anthropogenic ecology of the Casas Grandes (Paquimé) region, analyzing how ancient human activities impacted local environmental conditions and ecosystems. The authors provide a detailed examination of botanical remains, such as seeds and pollen, to reconstruct changes in vegetation patterns directly influenced by agricultural practices, settlement expansions, and resource extraction. They highlight significant shifts, including an increased presence of weedy species, indicative of human-induced disturbances and agricultural intensification. Furthermore, the chapter effectively considers how these environmental modifications affected resource availability, sustainable practices, and social structures within Paquimé societies. The authors also address the resilience of local ecosystems, noting that despite intensive use, there is evidence of ecological stability and adaptive management strategies. However, they caution against simplistic interpretations of past environmental conditions, emphasizing the complexities involved in reconstructing historical ecologies due to limited paleoecological data and modern environmental alterations. Overall, Chapter 5 provides valuable insights into the reciprocal relationships between ancient communities and their environment, contributing meaningfully to discussions on sustainability and ecological adaptation in archaeological contexts.

In conclusion, represents a substantial scholarly contribution to the study of ancient human-environment relationships in the Greater Southwest. By adopting an interdisciplinary approach that integrates archaeological findings, ethnobotanical data, and ecological theory, the authors construct a nuanced portrait of how the inhabitants of Paquimé interacted with and adapted to their botanical environment. The volume offers a detailed exploration of food systems, agricultural practices, wood utilization, and anthropogenic ecological impacts, situating these within broader socio-political and ritual contexts. Notably, the authors move beyond prevailing narratives that depict Paquimé merely as a corridor for cultural transmission, instead emphasizing its internal complexity, environmental acumen, and local agency. While opportunities remain for deeper comparative and symbolic interpretations, the book's methodological rigor, analytical depth, and clarity of argument render it an essential resource for scholars in archaeology, anthropology, paleoecology, and environmental history. Ultimately, this work enriches our understanding of the sophisticated and adaptive strategies employed by prehispanic communities in managing their plant-based environments.

The appendices in this book offer essential supplementary material that significantly enhances the scholarly value of the volume. Appendix 1 outlines the methodological framework used in the collection, flotation, and analysis of archaeobotanical samples, contributing to the transparency and reproducibility of the research. Appendix 2 presents a comprehensive catalog of taxa recovered from excavations, including both scientific and common names, while Appendix 3 contains detailed data tables summarizing the presence and ubiquity of plant remains and wood samples across various sites and excavation units. These appendices are well-organized and clearly presented, providing a valuable reference for scholars wishing to conduct further comparative analyses or replicate the study's findings. Their inclusion reflects the authors' commitment to methodological rigor and data accessibility, making them an indispensable component of the book's contribution to paleoethnobotanical research.

Overall, this book significantly enhances understanding of the complex prehistoric human-plant interactions in the Paquimé region, making it a valuable resource for academics and practitioners in archaeology, anthropology, and natural resource management.

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