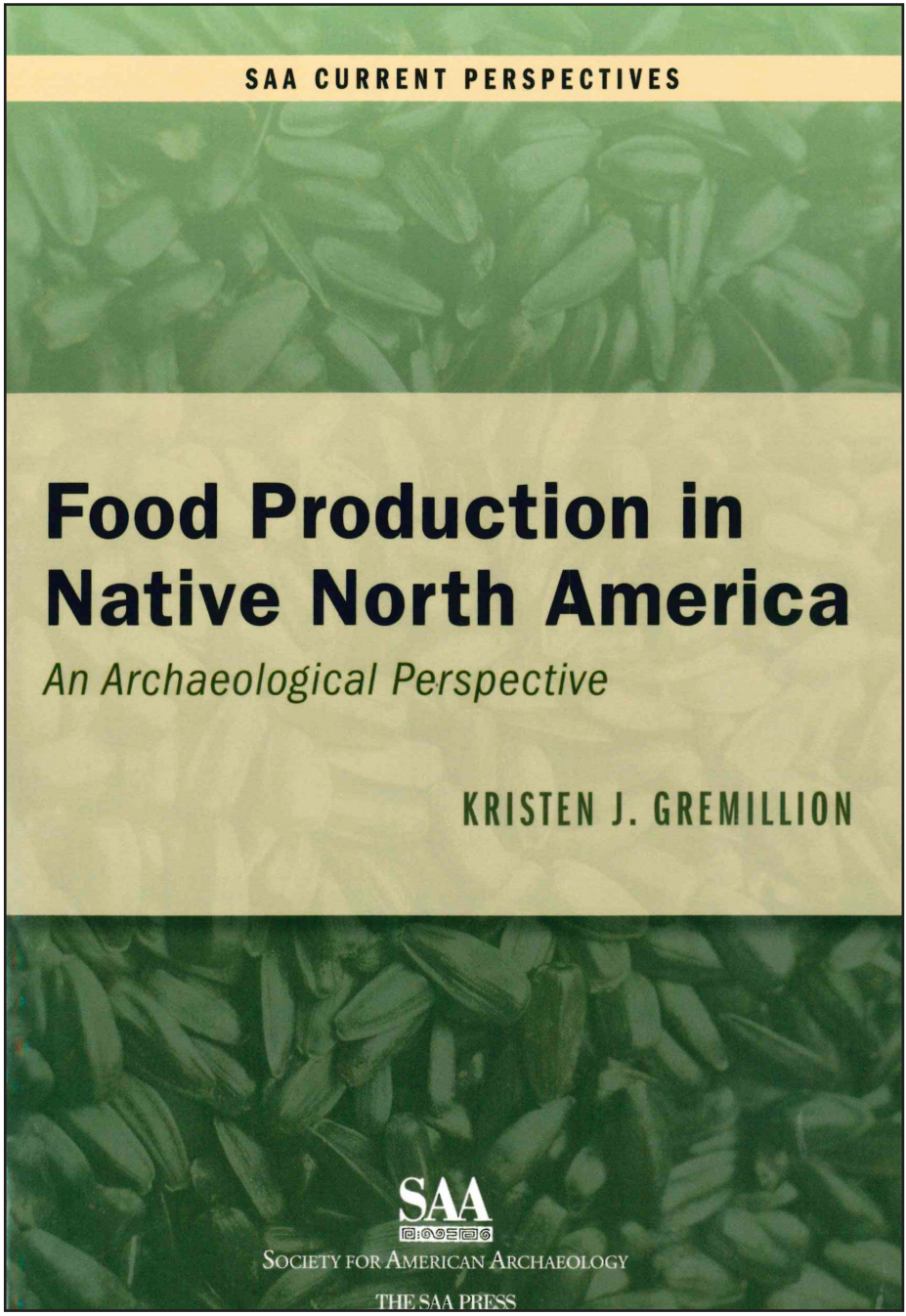

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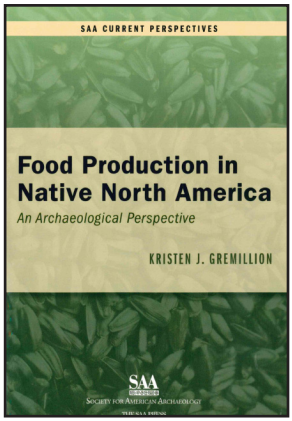

Food Production in Native North America: An Archaeological Perspective

Kristen J. Gremillion. 2018. The Society for American Archaeology Press. v+194 pp. 12 figures, 6 tables, appendix, references, index. $31.95 non-SAA member price, $24.95 SAA members only (Paper), $9.99 (Kindle).

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In her recent volume, Kristen J. Gremillion makes an important contribution to understanding the state of current paleoethnobotanical research in North America. While the science on which it relies is dense and highly technical, Gremillion's book is very readable, and the image she builds of Native human-plant histories is compelling and a pleasure to consider.

Gremillion explores major themes central to the discussion of Native ethnobotany supported within a framework of evolutionary and ecological theory that references the natural and cultural variability intrinsic to the North American landscape over deep time. Moving beyond traditional categories of subsistence, Gremillion reviews the substantial archaeological evidence for nuanced traditions of intensification and adaptation and offers us an archaeological view of food production in the prehistoric past.

Gremillion's opening chapter provides a thorough discussion of the 21st century advances in archeobotanical method and theory that have revolutionized the study of prehistoric food production. No longer is the discipline constrained by traditional concepts of foraging vs. farming, but instead acknowledges intricate and unique pathways to food production that vary along myriad dimensions. With increasing enthusiasm, the archaeological community recognizes a continuum of human-plant interactions which includes diverse management systems influenced by a broad range of cultural and ecological factors.

Taking as a point of departure David Rindos' coevolutionary continuum perspective, Gremillion summarizes critical work within the research community to set the stage for her volume (Rindos 1984; Harris 1989, 2007; Smith 2001; 2011). Gremillion reviews terminology surrounding contemporary discussion of human-plant coevolution, places these relationships in broad ecological contexts, and defines major environmental regions within which she explores native food production systems.

Chapter 2 explores eastern North America as an independent center of plant domestication. Gremillion details the botany and ecology of Eastern Agricultural Complex member plants and traces their cultural history. She goes on to discuss the socioeconomic and ecological variables that influenced the adoption of and reliance on the Eastern Agricultural Complex and highlights patterns of regional variability in the role of indigenous crops in Native societies. Gremillion underscores the importance of the shift to greater reliance on Eastern Agricultural Complex crops during the Middle Woodland period coincident with the introduction of maize, again affirming the dynamic complexity of Native food production systems.

Chapter 3 provides a rich discussion of the mechanisms of maize introduction and the development of maize-based agriculture in the American Southwest. Production strategies and risk management by farmers in an arid environment relied upon the development of unique tactics and investment technologies (such as irrigation, water control and conservation, irrigation, and development of drought hardy crop strains). Gremillion then considers interesting patterns of variability within the greater Southwest culture region from the introduction of maize around 2000 BC to its emergence as a cultural staple 1000 years later.

In Chapter 4, Gremillion traces the archaeological evidence for the spread of Mesoamerican crops across the Eastern Woodlands. Early historical accounts emphasize the importance of maize-centered agriculture in Native societies at the time of European contact. An expanding archeobotanical database is allowing researchers to develop a more complete history of the rise of maize, beans, and squash within the species palate of late prehistoric peoples in the East. Gremillion underscores the important contribution of specialized methods for microbotanical extraction, carbon isotope studies, and accelerator mass spectrometry dating in identifying the arrival of Mesoamerican cultigens and their integration into Native food production systems. She details the transition of maize from a minor crop plant to its central role as a food staple. Weighing various explanations for the track and timing of maize reliance, Gremillion convincingly argues that the success of maize farming societies in the region was a direct product of accumulated ecological knowledge.

Chapter 5 reconsiders the forager-farmer dichotomy and focuses on the lifeways of "low-level food producers" (Smith 2001). Employing two case studies, Gremillion provides support for an inclusive definition of food production in which reliance on crops and field cultivation is not a perquisite for social complexity. Low-intensity forms of food production such as land tenure, maritime management, and natural resource husbandry are explored in support of a more complete understanding of native food production strategies.

Chapter 6 explores the effects of European contact on Native food production in North America, tracing the introduction and impact of new plants, animals, and pathogens on indigenous landscapes and societies. While acknowledging that the colonial encounter had transformative effects on both ecosystems and cultural landscape, Gremillion shines a light on themes of human resilience, social learning, and openness to innovation by Native people in the face of dramatic change.

Chapter 7 synthesizes the previous chapters, bringing together the historical, ecological, and socioeconomic factors influencing traditions of Native food production systems across North America, and explores causal explanations for these variable histories. To move the research forward, Gremillion encourages the use of more integrated datasets and specialized studies to enhance paleoethnobotanical analyses.

In this slim but essential volume, Gremillion presents a valuable summary of the state of current research on the evolution of Native food production systems in North America. But its real gift is that it offers an inclusive framework that acknowledges the role of mutualism, social learning, embedded knowledge, and cultural innovation in

shaping highly variable North American ecologies and societies. The work encourages the archaeological community to incorporate a broader perspective of human-plant histories. This book will make a valuable contribution to the library of anyone interested in the history, archaeology, and ecology of North America.

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