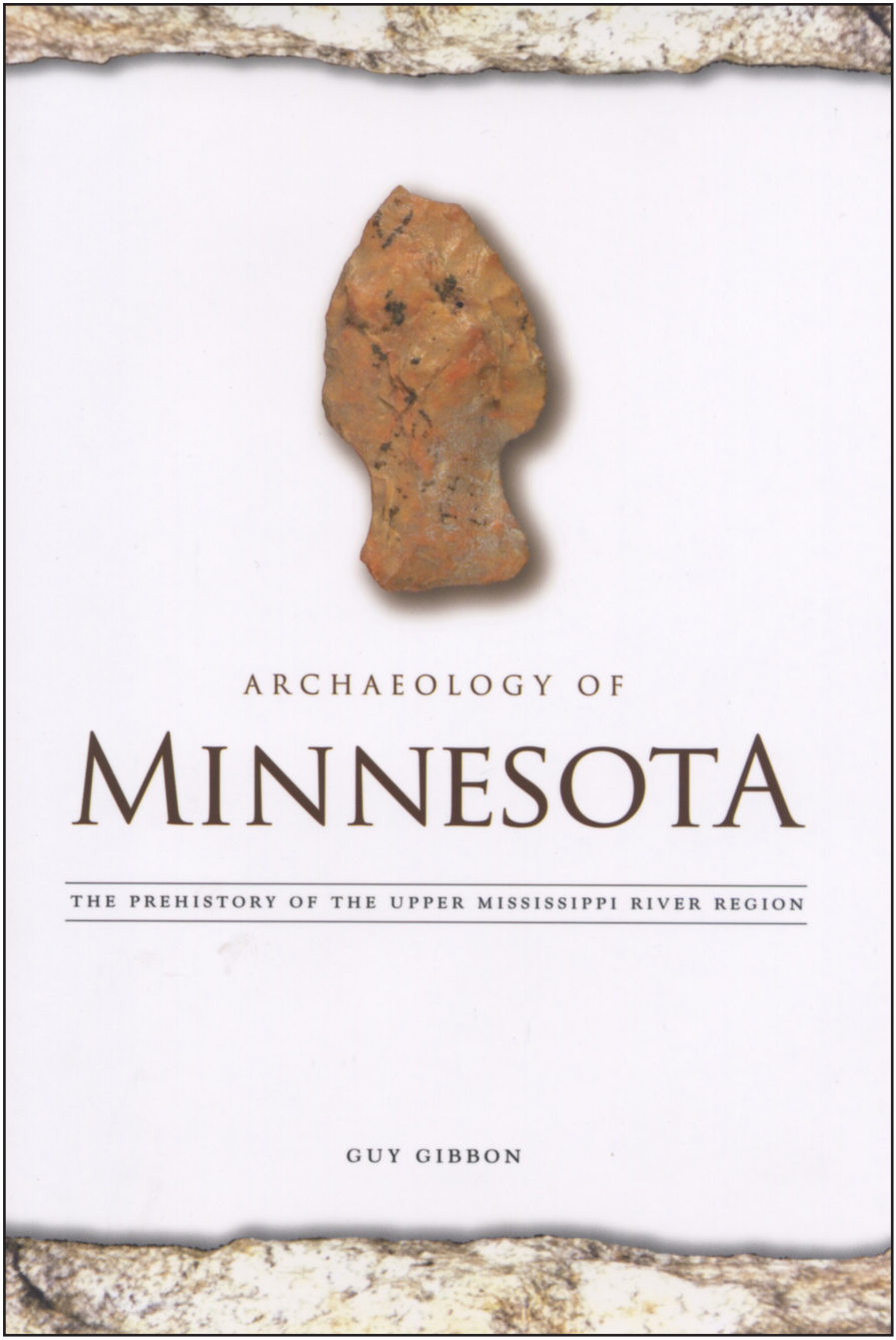

MINNESOTA/ARCHAEOLOGY

"Guy Gibbon constructs a multifaceted story of precontact Minnesota from thousands of archaeological discoveries. Carefully interweaving crucial environmental variables with dynamic cultural processes, the character of indigenous lifeways found throughout the state over the past 13,000 years emerges. *Archaeology of Minnesota* offers both an admirable chronicle of the state's deep history as well as a compelling case for why understanding the archaeological past matters." LYNN M. ALEX, UNIVERSITY OF IOWA, OFFICE OF THE STATE ARCHAEOLOGIST

"In *Archaeology of Minnesota*, Guy Gibbon chronicles the 13,000 year prehistoric record in the state. Much more than just dates, artifact lists, and site summaries, Gibbon presents Minnesota archaeology in a highly readable and informative manner that is both stimulating and challenging. This tour de force on Minnesota's past was long awaited, and Gibbon, whose record of scholarship and familiarity with Minnesota archaeology is well known, does not disappoint." JOSEPH A. TIFFANY, MISSISSIPPI VALLEY ARCHAEOLOGY CENTER, UNIVERSITY OF WISCONSIN–LA CROSSE

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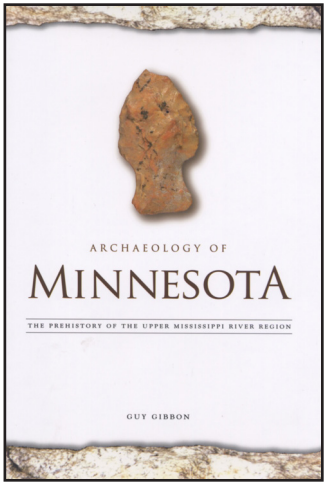

Archaeology of Minnesota: The Prehistory of the Upper Mississippi River Region

Guy Gibbon. 2012. University of Minnesota Press, Minneapolis. x+263 pp., figures, references. $34.95 (cloth).

Reviewed by William Green, Logan Museum of Anthropology, Beloit College, Beloit, Wisconsin.

Lewis Binford may be gone, but his influence persists and may even be growing if Guy Gibbon's fascinating *Archaeology of Minnesota* is any indication. Gibbon wholeheartedly adopts the "processual dynamics" of Binford's *Constructing Frames of Reference* (2001) as his principal tool for interpreting Minnesota prehistory. Guided by the 'Binfordian' hand, *Archaeology of Minnesota* promotes a "way of seeing" the past that focuses on understanding "long-term patterns of change in social organization" (p. 14).

Gibbon begins by briefly and gently leading readers through the thicket of Upper Midwest archaeological systematics and nomenclature, recognizing the confusion that can arise from the multiple classification systems that have been used by Minnesota archaeologists. He wisely decides not to rename taxonomic units and to use them principally as employed by their original authors. He then lays out his "tools of the trade," the principal one being Binford's cross-culturally derived model of environment and societal development. Derived from data on over 300 ethnographic studies, the model can be used to predict a long-term trajectory that proceeds through a sequence involving population growth, packing, and pressure; concomitant resource-use and social-organizational shifts; and emergence of sedentary, tribal lifeways. Other tools in Gibbon's kit include Morton Fried's ever-useful summation of the characteristics of band-, tribal-, and chiefdom-level social organization, and the writer Ken Wilber's distinction between individual/collective and interior/exterior perspectives on humans and societies.

In the "Environments of Minnesota" chapter, Gibbon notes that the state is characterized by enormous climatic and biotic variability. Prehistoric environments also were diverse (some having no modern analogues) and often changed rapidly. Gibbon discusses salient environmental characteristics of the different regions within the state, supplying useful background material for interpreting regional archaeological variability. He cites quite a few primary-source studies of Minnesota paleoenvironments by H. E. Wright, Jr., and colleagues but also makes largely uncritical use of Reid Bryson's episodic model of Holocene climate change, which Wright and Scott Anfinson effectively critiqued from the standpoint of Minnesota archaeology (Anfinson and Wright 1990). Gibbon also makes extensive use throughout the book of "Effective Temperature" (ET) as a tool to reconstruct past environments and to assess the significance of environmental changes at different times. According to Binford (2001:58–59), ET, calculated on the basis of mean temperatures of the warmest and coldest months, provides an estimate of ambient warmth in °C as well as biologically relevant in-

formation such as length of growing season. How does one calculate ET for prehistory? Gibbon uses a computer program Bryson and colleagues developed that supplies several climatic variables for the Late Pleistocene and Holocene for locations across North America (Bryson and DeWall 2007). Gibbon relies heavily on these estimates because "Binford's predictions about social content and change depend on the availability of regional paleoclimatic data" (p. 12). How accurate are the ET estimates that Gibbon depicts for several time periods in tenths of °C at dozens of locations across Minnesota? Gibbon does not say, nor does he explain the basis for Bryson's temperature estimates in the first place. For all of the book's explication of regional environments and social-historical models, it would not seem unreasonable for readers to expect to learn how the ETs were determined and how confident we should be in them.

The heart of the book is a series of chapters on time periods from Paleoindian through Terminal Woodland and Mississippian for different parts of the state. Early periods have extensive descriptions of paleoenvironments, while all chapters feature an "archaeological record" section covering diagnostic artifacts, important sites, data from bioarchaeological studies, and comparisons to other regions. Each chapter also contains a "lifeways" section that interprets population density, mobility, and social organization within the 'Binfordian' frame of reference. Gibbon determines that the patterns he has identified—regional continuities of band-level societies gradually packing the landscape, shifts and intensification of resource use, and finally a rapid transformation to emergent sedentary, tribal societies—conform to the predictions of Binford's model. He also emphasizes that Minnesota's environments and biota promoted an emphasis on terrestrial-mammal hunting, and that extensive plant and aquatic resource use only developed late in prehistory as a result of resource pressure and external stimuli. The penultimate section effectively shows how Terminal Woodland and Oneota sedentism and "tribalization" may have developed in the context of contact with and opposition to Mississippian chiefdoms (à *la* Fried). The concluding chapter addresses the study of long-term patterns and processes of cultural change in terms of its value in more fully understanding the modern world.

Gibbon mentions that he discovered while writing this book that Binford's model predicted—and to an extent explained—the patterns he was finding while compiling data on Minnesota prehistory, though he also notes that his interpretations of lifeways are tentative and in need of testing or refinement. Might there be other ways of interpreting the data? Binford's model has been critiqued on a number of bases (e.g., Shennan 2004), and the conceptualization of pre-agricultural Midwestern societies in general as small-scale, band-level, egalitarian, highly mobile, and conservative has been challenged quite forcefully along with its neo-evolutionary, adaptationist (i.e., processual) theoretical framework (e.g., McElrath and Emerson 2009; McElrath et al. 2009; Sassaman 2010). One need not buy into any postprocessual school of thought to realize that there might be viable alternative views of midwestern prehistory. Gibbon's book fairly promotes its point of view, as the works just cited do theirs, but readers would benefit from knowing about the discord that characterizes current interpretations of social organization and history, particularly of the Archaic.

One significant design flaw mars this book: the paucity of maps showing archaeological site locations. The book has only two such maps, one of the Rainy River area (showing four Minnesota sites and one Canadian site) and one of the Red Wing locality (showing five Minnesota sites and four Wisconsin sites). Most readers will not know where these places are located because there are no inset location maps. And readers have no way to determine locations for the scores of other sites name-checked throughout the book. The book mentions county names for many sites—but there is no map of the state showing county names! Many maps show deglaciation history, vegetation communities, and Effective Temperature reconstructions, but none show archaeological sites. I can't think of another state archaeological synthesis that lacks site location maps.

A few other quibbles: the table of contents includes no list of figures, and the subtitle's reference to "the Upper Mississippi region" unfairly limits the book's scope, which encompasses the Lake Superior, Hudson Bay (via the Red River of the North), and Missouri River drainages as well as that of the Mississippi River. Pictographs and petroglyphs are missing, though rock art might be considered an individual, subjective aspect of culture (in Wilber's perspective) and thus outside the scope of the book. Also, while there are useful references to recent CRM work as well as earlier studies, there is no chapter on the history of Minnesota archaeology. Such a discussion, while not essential, would have helped readers understand more about the formation and biases of the state's written and collected archaeological record. Fortunately, Gibbon and Anfinson have completed a manuscript on this subject.

In sum, *Archaeology of Minnesota* applies a particular "way of seeing" to a large body of data, interpreting ancient lifeways within a processual framework derived from ethnographic analogy and paleoenvironmental reconstruction. It stands well in comparison to other statewide and regional archaeological syntheses. As long as readers are aware of limitations or alternatives to the conceptual model, the book is a suitable supplemental reading for undergraduates or graduate students in a Midwestern or North American archaeology course. It is also a useful reference and synthesis for professional and advanced avocational archaeologists interested in the Upper Midwest. And it can serve as a source of new information and ideas for educated lay readers who are interested in both the big pictures and some of the fine details of Minnesota archaeology.

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