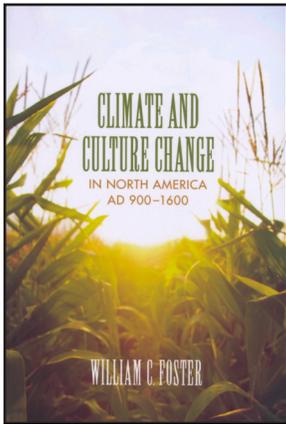


CONTENTS

IX	PREFACE
1	INTRODUCTION
14	CH. 1 THE TENTH CENTURY
33	CH. 2 THE ELEVENTH CENTURY
49	CH. 3 THE TWELFTH CENTURY
64	CH. 4 THE THIRTEENTH CENTURY
87	CH. 5 THE FOURTEENTH CENTURY
107	CH. 6 THE FIFTEENTH CENTURY
120	CH. 7 THE SIXTEENTH CENTURY
149	SUMMARY AND CONCLUSION
169	NOTES
189	BIBLIOGRAPHY
201	INDEX



Climate and Culture Change in North America AD 900–1600

William C. Foster. 2012. Clifton and Shirley Caldwell Texas Heritage Series, University of Texas Press, Austin, TX. 234 pp., 4 maps, references, index. \$36.85 (hard cover), \$16.72 (paper).

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Climate and Culture Change in North America AD 900–1600 is an ambitious synthesis of archaeological and historical evidence concerning the effects of climate on human societies. However, the geographic scope of this volume is far more limited than suggested by the title. In fact, William C. Foster's book only covers that part of North America "in the lower latitudes of the North American temperate zone, which is divided into four major regions—the American Southwest, the Southern Plains, the Trans-Mississippi South, and the Southeast" (pp. 5–6). Thus, many parts of the continent are omitted. This issue aside, the volume covers a wide swath of terrain and a diverse range of cultures with divergent histories. Written for a general audience, the book is clearly written and moves at a brisk pace. Foster does a very nice job of covering the topic and presenting the reader with a solid view of how archaeologists and historians (for the Contact periods) understand the nature of how climate and culture interact. However, I am also ambivalent about the book for exactly for this same reason: specifically, I am ambivalent about how many archaeologists treat the subject, and I think the author has done a very good job capturing the general approach to climate and culture in the archaeological and (scantly) historical record. I come back to this matter below.

Foster's volume is divided into an introduction and conclusion and seven chapters, each chapter covering a century. The chapter for each century is organized with its own introduction and summary, with the main part of each chapter subdivided by region from west (or Southwest) to east (or Southeast). The chapter structure is standardized and this makes the volume easy to follow and would allow an instructor, for example, to assign sections for a class without having to worry about losing continuity. The only disadvantage of the format is that some repetition creeps in to each chapter, notably in the introductory parts. The repetition, however, allows each chapter to stand on its own.

The book takes an interesting view set forth in the introduction. The author begins by discussing how European climate historians (not paleoclimate specialists) have developed an understanding of how climate affected Western Europe in the Medieval and early Modern periods. Drawing notably on the work of H. H. Lamb, but specifically citing some archaeological syntheses, Foster identifies the Medieval Warm Period (MWP) and Little Ice Age (LIA) as significant episodes in climate and culture history, and notes that most of this sort of work has ignored or underemphasized North America (an assertion with which Brian Fagan might take umbrage). The purpose of the book therefore is to "review archaeological

Book Review

site reports and other scientific studies and other documentary information currently available to assess the effects of the Medieval Warm Period and the early centuries of the Little Ice Age on the Native cultures and peoples” of the study area (pp. 2–3).

Two things stand out immediately in the introduction. First, the volume makes no pretense at being about climate history itself. In fact, the author very specifically cites a 2006 National Research Council (NRC) volume (*Surface Temperature Reconstruction for the Last 2,000 Years*) as the major source for understanding climate trends. Few other climate data sources are cited, beyond those mentioned within the archaeological reports culled for the synthesis of climate effects. This approach demonstrates the challenges of trying to synthesize the fast-moving and seemingly ever-changing field of climate research. Foster emphasizes the reality of the MWP and LIA and, using historical data from European sources, argues these were important and major sources that in some way drove culture change. The problem here is that recent work [*see, for example, PAGES 2k Consortium (2013) report on Continental-scale temperature variability during the past two millennia*] suggests that the MWP especially, and the LIA to a lesser extent, are at best only reflections of very general trends at a large scale and cannot be taken as singular events that have homogeneous spatial or temporal reality (a point, in fact, made in the original NRC report). Another problem is that Lamb's books and his specific conclusions about the relationships among climate and culture change, while very widely known and cited, are contested by historians even in Western Europe where his findings are arguably most relevant (this applies also to the whole field of historical paleoclimatic reconstruction in Western Europe in the period ca. 900–1600).

The second issue is that the author assumes a direct connection between climate change and culture change. Again citing the NRC study, Foster notes that it says: “agrarian societies such as those found throughout Europe and in parts of North America during the study period were exceptionally vulnerable to rapid climate change” (p. 3). The author presents a justification for this position but ends up with a somewhat circular argument, noting that the NRC volume he relies on so heavily argues that understanding climate effects on agrarian societies in areas where writing is lacking (e.g., North America) can be deduced from studying archaeology. So, archaeology is used to show evidence of the effect climate change on agrarian societies in cases where climate's effects are assumed to change culture. To be fair, however, the author is not alone in arguing both of these cases. The reality of the MWP and LIA are hotly debated and uncertain and Foster is only voicing a widely held notion that climate change is an important driving of culture and history.

Following the introduction, each chapter does a good job covering the general archaeological evidence about climate change and its effects in the century being discussed. One aspect I especially appreciate is that the author does a very good job covering the southern Plains and the often ignored peoples who occupied the regions between the Southwestern and Southeastern culture areas. On the other hand, as a specialist, I note that the author emphasizes the writings of a relatively small number of scholars and that in the Southwest and Southeast he tends to focus on only a few sites (e.g., for the Trans-Mississippi South he largely focuses on the George C. Davis

Book Review

and Toltec sites, while Cahokia and Moundville generally stand in for the Middle Mississippi and Southeast). Furthermore, it is not always clear how climate and culture change are linked with some of his examples. For instance, Foster discusses Toltec in his chapter on the tenth century but in no place does he try to make a case or cite an author who makes a case for climate actually affecting Toltec.

However, the major issues I have with the volume are a reflection of how we tend to see climate change as a driving force for culture change. The various archaeological reports and authors' cited reflect an ambivalent approach to climate causation. To cite only a couple of many examples, Cahokia's history "may have" been influenced by rapid climate change in the twelfth century (p. 59), while the fifteenth century Classic Hohokam "collapse" "may have been a change in environment or climate" (p. 111). These qualifications represent the state of the art. The archaeological community recognizes that climate's effects are real but we very often lack the proverbial smoking gun that takes us from correlation to causation. And the author does acknowledge this in many places. But in the chapter summaries, what had been qualification often gives way to causation. Drought causes Chaco and Cahokia to "begin to falter" in the twelfth century (p. 63), while the "increasing impact of the Little Ice Age...became evident in the fourteenth century" (p. 106).

I think some of my problems with Foster's book arise from his attempts to synthesize and generalize about a large part of the continent with an assumption that climate change is both spatially and temporally relatively coherent and that we have some understanding of climate's effects on culture change. In the first instance, the available data and our understanding of climate change today do not support the notion that there is homogeneity across space or through time. The author cites the historical accounts of various Spanish explorers in the Southeast and Southwest as an example that shows how the "documentary record demonstrates that the Little Ice Age dramatically affected the climate in the lower latitudes of North America throughout the sixteenth century as it did the climate of Europe and the North Atlantic" (p. 148). Actually, I'd argue these accounts do nothing of the sort. They indicate—possibly, depending on one's reading—that there were some winters with severe weather but they don't show that the climate itself was especially bad. Weather recorded (inexactly at best) by some explorers does not translate into climate change across a century.

Perhaps more to the point, the author (and, to be fair, many in the archaeological community) fails to grasp that even if there is climate change, the effects of these changes are always mediated by human social structure: kinship, religion, politics, technology, and mobility, to name only some prominent structural forms. The archaeological community as a whole has to move beyond the simple assertion that "climate changes culture" to grapple with the devilish details of how, and why. Perhaps in some instances the circumstances are straightforward. Drought might well debilitate a culture's ability to sustain agricultural production. But often the things we hope to explain—the decline of Cahokia, the transformation of Hohokam, the curious demise of Toltec in the Arkansas River valley—are clearly complicated and complex processes that play out over time. Recent work in the Southwest that shows that political and

Book Review

social reorganization, settlement changes, mobility, warfare, alterations in economic and trade patterns, and technological adaptation are part of a suite of responses to changing climatic and cultural contexts in the twelfth and thirteenth centuries. Climate may play a role in these and other changes in North America, but if so, we are far from connecting the dots and understanding how climate influences the social structure and how these structures respond.

Despite my ambivalence about this book's conclusions regarding late precontact culture change and implied climate-change causality, I am very glad the author has taken on the daunting task of synthesizing the 700 years of climate and Native history in a good portion of North America. This isn't an easy task and the author deserves accolades for doing such a good job. The book is suitable for a range of audiences and I think it could make a good text for a course on climate and culture change or one on North American archaeology. I would not use it as a stand-alone volume, but it would make a nice companion to specific readings that explore some of the issues raised in more detail. The book deserves to be read as a beginning point for a long, thoughtful discussion about climate and culture change in North America and is a welcome addition to the literature on the subject.

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