

Boundary Conditions

Macrobotanical Remains and the
Oliver Phase of Central Indiana,
A.D. 1200–1450



Leslie L. Bush

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THE UNIVERSITY OF ALABAMA PRESS
Tuscaloosa

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Tuscaloosa, Alabama 35487-0380
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Typeface: Janson Text

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The paper on which this book is printed meets the minimum requirements of American National Standard for Information Science—Permanence of Paper for Printed Library Materials, ANSI Z39.48–1984.

Library of Congress Cataloging-in-Publication Data

Bush, Leslie L.

Boundary conditions : macrobotanical remains and the Oliver Phase of Central Indiana, A.D. 1200–1450 / Leslie L. Bush.

p. cm.

Includes bibliographical references and index.

ISBN 0-8173-1434-2 (cloth : alk. paper) — ISBN 0-8173-5141-8 (pbk. : alk. paper)

1. Indians of North America—Food—Indiana. 2. Indians of North America—Ethnobotany—Indiana. 3. Indians of North America—Indiana—Antiquities. 4. Plant remains (Archaeology)—Indiana. 5. Paleoethnobotany—Indiana. 6. Indiana—Antiquities.
I. Title.

E78.I53B87 2004

641.3'009772'0901—dc22

2004008781

But when from a long-distant past nothing subsists, after the people are dead, after the things are broken and scattered, taste and smell alone, more fragile but more enduring, more unsubstantial, more persistent, more faithful, remain poised a long time, like souls, remembering, waiting, hoping, amid the ruins of all the rest; and bear unflinchingly, in the tiny and almost impalpable drop of their essence, the vast structure of recollection.

Marcel Proust, *Remembrance of Things Past, Part I: Swann's Way*

Acknowledgments

Much of the archaeobotanical data in this book and funding for the excavations that produced them were made possible because of the support of Christopher S. Peebles and the Glenn A. Black Laboratory of Archaeology, Indiana University. I am very grateful both for Chris's personal support and for his long-term commitment to Oliver research at the Laboratory. Additional institutional funding came from the Office of Research and the University Graduate School, Indiana University, which provided a Grant-in-Aid-of-Dissertation for excavation and analysis at the Heaton Farm site.

Robert McCullough and Brian Redmond, the team who started the latest phase of Oliver investigations, have generously shared information and ideas. They were also unfailingly patient during my early years at Indiana, as I learned to master an intellectual discipline and a lifestyle very different from what I'd known as an office worker on the East Coast. This research benefited greatly from the comments of my dissertation committee, especially C. Margaret Scarry, in whose laboratory I learned the basics of macrobotanical analysis. I am also grateful to Stephen Ball, Rex Garniewicz, Mike Strezewski, Mary Pirkel, Staffan Peterson, and Laura Pate for wide-ranging conversations about archaeology, history, food, and drink.

Those who operated the flotation machines of the Glenn A. Black Laboratory of Archaeology during my time there deserve special commendation. After two summers I was happy to turn the flotation process over to the talented Tim Wright, who spent many hours standing in flip-flops on the storm drain grate behind the laboratory, working over a machine only three feet high. Cindy Adkins, Devin Fishel, and several others also achieved exemplary separation of flotation samples in later years, when their work and their backs were aided by a newer—and taller—machine. Laboratory jobs may include amenities such as access to restaurants and restrooms that field assignments lack, but

power outages in summer, frozen hoses in winter, forever-wrinkled fingers, and my constant insistence on perfect separation cannot have been always easy.

Several Indiana archaeologists read and commented on portions of this manuscript. Special thanks are due to Don Cochran, Beth McCord, Brian Redmond, and Bob McCullough for improving chapter 3. Their own works, cited many times herein, form much of the basis for current understandings of Late Prehistoric Indiana. Andy White and Bob McCullough responded generously to importunate requests for data and shared unpublished findings from Castor Farm (12H3). Their report on that site should be available soon after the publication of this book through the IPFW (Indiana University–Purdue University at Fort Wayne) homepage at <http://www.ipfw.edu/archsurv/Home.html>. David Stothers, another major contributor to current interpretations of Indiana archaeology, graciously shared unpublished manuscripts, as did Andrew Schneider.

I am grateful to Bill Green and Kris Gremillion, whose comments vastly improved the quality of this work. Judith Knight, at the University of Alabama Press, was a calm and gentle guide through the early stages of publication, and Dawn Hall provided excellent copyediting. All remaining problems are entirely the responsibility of the author.

On the home front, special thanks go to members of the Shady Hollow Babysitting Cooperative, especially Heather Freeman, Ramona Pope, Julia Ragsdale, and Aida Rice, for emergency childcare and for listening with apparent interest to my impromptu lectures on such motherly topics as Chippewa weaning methods. Karine Foucher also stepped in more than once with last-minute babysitting services. My husband, Jim Buhler, provided logistical support of all kinds and excellent advice on the practical aspects of publication. For his emotional support, and that of our daughter, Judith, I am grateful beyond words. Finally our cat, Kate, deserves special mention—not because she was particularly helpful, but because she took such an intense interest in the project, chasing the computer cursor and shedding fur over nearly every phase of manuscript production.

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I

Defining Oliver

De gustibus non disputandum

When James B. Griffin wrote his entry on the Late Prehistory of the Ohio Valley for the *Handbook of North American Indians*, he was able to indicate the “Oliver complex” only as a vaguely placed marker on his map of the region, and he could summarize what was then known about it in four short paragraphs (Griffin 1978). Recent research has greatly increased archaeological knowledge of the location, duration, and nature of Oliver settlements (see, among others, Ball 2003; Garniewicz 1998; McCullough 2000, 2003; McCullough and Wright 1997a, 1997b; Redmond 1991, 1994, 2003; Redmond and McCullough 1996, 2000; Stothers and Schneider 1998, 2003; Strezewski 2002; White et al. 2002, 2003). The current understanding of Oliver, which emerged only in the late 1990s, is one of those rare instances where archaeobotanical knowledge about an archaeological culture has developed in tandem with basic facts about the culture itself. Briefly stated, Oliver people were village-dwelling horticulturalists who inhabited the White River valleys of central Indiana from roughly A.D. 1200 until A.D. 1425 or 1450 in calendar years. Oliver emerged from the blending of at least two cultural traditions whose members appear to have migrated into central Indiana within a few decades of each other. Some aspects of Oliver society appear to derive from the Anderson phase of the Fort Ancient tradition, located in western Ohio, while other aspects of Oliver appear to have roots in the Late Woodland cultures of the Great Lakes area to the north (Figure 1.1). The problem of Oliver ancestry is discussed in more detail in chapter 3.

The Oliver area borders three of the largest and best-known archaeological cultures of the Late Prehistoric Eastern Woodlands (Figure 1.2). Traveling west or southwest from the Oliver area, a thirteenth-century wayfarer would soon cross the boundary of the Mississippian world, entering the most complex society north of Mexico. The denizens of Mississippian towns left impres-

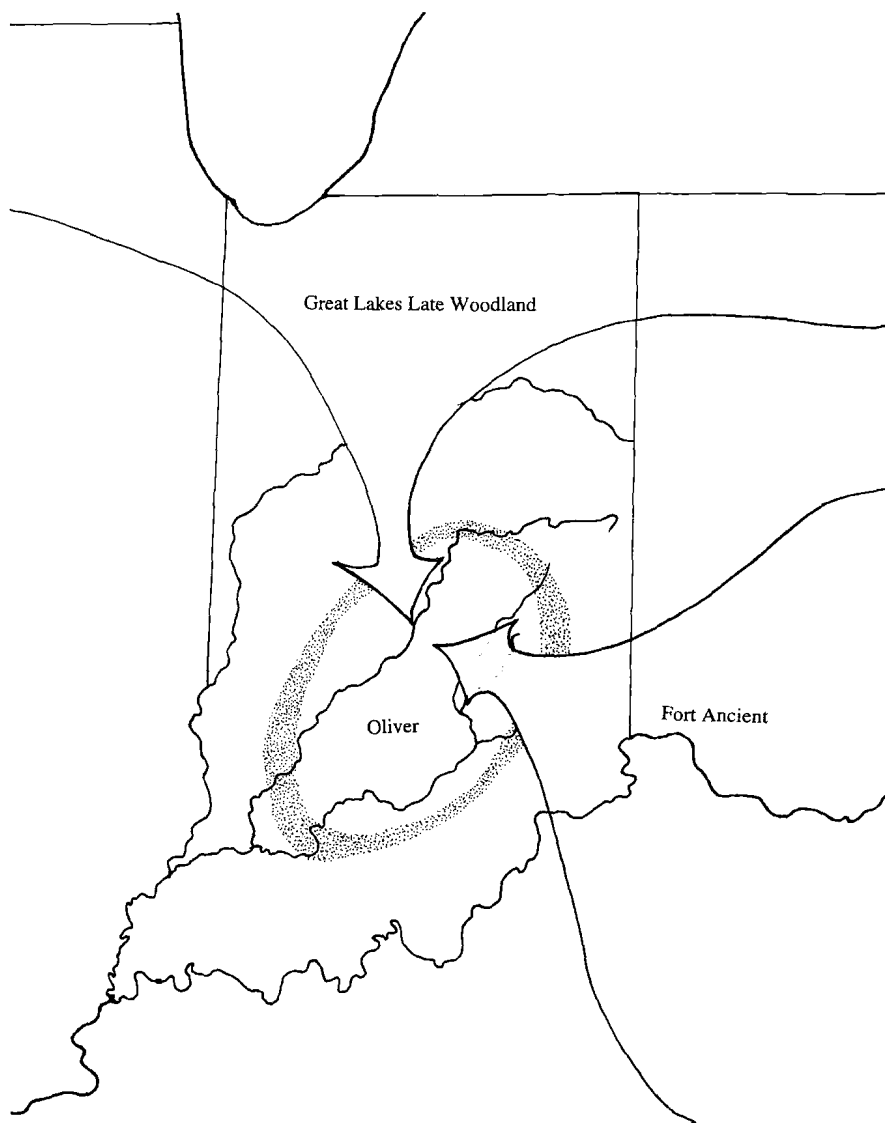


Figure 1.1 Location of the Oliver area, showing locations of Fort Ancient and Great Lakes Late Woodland groups believed ancestral to Oliver.

sive material remains: huge mounds, exotic trade goods, painted pottery, and elaborate burials. Yet the modest material evidence of Oliver sites offers no hints that their immediate neighbors practiced a lifestyle so different from their own. A *thirteenth-century traveler who walked east or southeast from the Oliver area* would soon encounter Fort Ancient villages, whose residents

seem to have been bound by more flexible ties than the stricter hierarchy characteristic of Mississippian settlement patterns. Some Oliver villages are organized in the concentric circles typical of Anderson phase Fort Ancient villages, and Oliver pottery shares vessel forms and many decorative motifs with Fort Ancient. Oliver villages, however, are smaller and less internally differentiated than those of Fort Ancient. To the northwest of Oliver lies Oneota, a widespread and variable culture that at times stretched from eastern Kansas to central Minnesota and extreme southwestern Michigan. Although some Oneota-related peoples inhabited central Indiana during Oliver times, there is only limited evidence of contact or mutual influence between the two groups (White et al. 2002:19).

OLIVER AS AN ARCHAEOLOGICAL UNIT

Oliver sites have been known since the nineteenth century (Cox 1876, 1879; Elrod and McIntire 1876; Goodspeed 1884), and individual sites have been thoroughly investigated and documented by later researchers (e.g., Dorwin 1971; Helmen 1950; Householder 1945). Understanding of Oliver as a more extensive archaeological phenomenon (i.e., as a “phase”) has emerged very recently, and only a lone article by Brian Redmond and Robert McCullough is widely available in print (Redmond and McCullough 2000). In a more narrowly focused work, McCullough has investigated the degree of social risk faced by Oliver people, and in doing so he documents Oliver chronology and ceramics (McCullough 2000). David Stothers and colleagues have attempted to trace Oliver antecedents in northwestern Ohio and northeastern Indiana (Schneider 2000; Stothers and Schneider 2003). Other aspects of Oliver culture, including botanical remains, have not yet been thoroughly and systematically documented outside contract reports and the dissertation on which this book is based.

Despite the increased knowledge gained from modern excavation, agreement as to the nature of Oliver lags behind understanding of the distribution of material culture in Late Prehistoric central Indiana. From a purely formal perspective, Oliver meets Gordon Willey and Philip Phillips’s criteria for an archaeological phase, as McCullough has pointed out:

[A phase is] an archaeological unit possessing traits sufficiently characteristic to distinguish it from all other units similarly conceived, whether of the same or other cultures or civilizations, spatially limited to the order of magnitude of a locality or region and chronologically limited to a relatively brief interval of time [Willey and Phillips 1958:22 also quoted in McCullough 2000:69].



Figure 1.2 Location of the Oliver area in relation to Oneota, Fort Ancient, and Mississippian areas during Late Prehistory (after Griffin 1967; Redmond and McCullough 2000; and Zimmerman 1997).

Unlike the Mississippian Lohmann phase or Anderson phase Fort Ancient, however, Oliver is not a phase *of* anything. Oliver's apparent lack of legitimate taxonomic parentage has led at least one research team to argue that "Oliver," as the misbegotten offspring of its eastern neighbors, does not in fact constitute a legitimate archaeological unit (Stothers and Schneider 2003:182).

In addition to its anomalous taxonomic status, Oliver as a concept has been criticized for lacking attributes that are unique to Oliver. There are no ceramic motifs, settlement patterns, or lithic technologies that Oliver villages do not share with one or more of their non-Oliver neighbors. The philosopher of science Elliott Sober calls the requirement that a population possess a defining trait a “constituent definition” (Sober 1980). Biologists have had as little success constructing constituent definitions of species as anthropologists have had with cultures. Sober points toward population thinking as a way around this so-called species problem (O’Hara 1993; Sober 1980) that is largely analogous to the taxonomic problems faced by archaeologists (Wright 1999). Concepts in population thinking are not vindicated by atomizing them, showing that each element is legitimate.

Rather, the use of one population concept is vindicated by showing how it stands in law-like relations with other concepts *at the same level of organization*. It is in this way that we can see that there is an alternative to constituent definition. . . . Explanations can proceed without this reductionistic requirement being met [Sober 1980: 372].

Hence, the idea of Oliver can be vindicated by understanding its relationship to other archaeological cultures rather than by discovering a pottery design or a verbena tea used by Oliver and only Oliver people.

The purpose of this work is to further knowledge about Oliver by describing macrobotanical remains from Oliver sites and comparing them to those from other sites that have not been identified as Oliver. Oliver plants can thus be evaluated for the kind of internal consistency that would suggest Oliver sites reflect distinctive foodways. Redmond and McCullough argue that Oliver ceramic assemblages reflect such internal coherence:

The continued documentation of numerous assemblages of both cord-impressed and incised wares in direct association with each other strongly indicates that the Oliver phase was a coherent cultural entity in its own right rather than a loose amalgamation of culturally distinct groups [Redmond and McCullough 2000:664–665].

Supporting data from macrobotanical remains would strengthen their contention, particularly since a theoretical link can be established between foodways, as reflected in macrobotanical remains, and cultural identity. If Oliver sites exhibit distinctive, shared patterns of plant remains, they may have distinctive foodways and hence, the inhabitants of those sites may have shared an understanding of appropriate uses of plants. A shared understanding would not necessarily reflect ethnicity or other ethnographic constructs that are so

easily—and often mistakenly (Green 1999; Engelbrecht 1999)—mapped onto the archaeological record. It would, however, reflect some sort of social reality (Watts 1999). The connections among foodways, social identity, and archaeological remains are explored in the next chapter.

BOUNDARY CONDITIONS

In mathematical applications such as engineering and climate modeling, a boundary condition is “a requirement to be met by a solution to a set of differential equations on a specified set of values of the independent variables” (Parker 1984). The phrase is used in a similar sense to describe a necessary characteristic of a scientific theory: “A scientific theory must be clearly delimited by boundary conditions that specify which data are relevant to them” (Root-Bernstein 1994:65). In both philosophy and mathematics, boundary conditions delimit the space, either logical or physical, in which action (analysis, exploration, explanation, etc.) takes place. Often boundary conditions are the most interesting and most useful to investigate because things may behave in unexpected ways at the boundaries. The phrase is used in two senses here. In characterizing Oliver foodways through their archaeological botanical remains, charred macroremains become the boundary-drawers, carving out a unique way of life (or more specifically, a way of plant use) from among the many lifestyles represented during the Late Prehistoric period in the Eastern Woodlands. At a larger scale of archaeological taxonomy, Oliver can be considered a boundary between the larger Fort Ancient, Mississippian, and Oneota traditions, a place where the unexpected might occur (Redmond and McCullough 1992). How and why Oliver’s boundaries might be reflected in macrobotanical remains is the subject of the next chapter.

Food, Identity, and Charcoal

There is no infallible guide to what is naturally the best food for human beings. We appear to be capable of eating (and liking) just about anything that is not immediately toxic.

Sidney Mintz

One goal of this research project is to discern a relationship between charred macrobotanical remains and foodways, specifically foodways that may be shared at the level of an archaeological unit such as Oliver and so may reflect some sort of group identity. The taxonomic identity reflected in the archaeological phase assignment usually originates in the ceramic motifs, projectile point style, and settlement pattern of a group. In addition to plant-related foodways, archaeological plant remains may represent many uses of vegetable materials: uses in architecture, tools, art objects, and medicine as well as for food. These uses link archaeobotanical remains to local ecology, technology, artistic traditions, biology, and psychology, all of which are elements in larger systems of culture. Living individuals may be said to belong to the same cultural group when they share a mutual recognition of social competence (Goodenough 1981). Thus group members, those who share a group identity, will also share a competence—or a recognition of what constitutes competence—in the construction of pots, projectile points, houses, healing ceremonies, and good meals. To the extent that cultural competence is reflected in material culture of sufficient similarity, the archaeological phase assignment can be understood as a shared competence. To the extent that they reflect foodways, macrobotanical remains also form a theoretical link between the archaeological record and a social practice that reflects notions of competence shared by a group of past people. The group that shares a notion of competence is not necessarily the archaeological phase. Depending on the scale of analysis, it may be restricted to a gender or a lineage that shares a food taboo, or it may be general to the Eastern Woodlands. At the scale of analysis employed in chapter 6, the Oliver phase does appear to represent shared ideas about plant use.

The cultural competence of creating and presenting food, a group's foodways, is a critical link between charred macrobotanical remains and cultural