

# THE LAMB SITE (11SC24): EVIDENCE OF CAHOKIAN CONTACT AND MISSISSIPPIANIZATION IN THE CENTRAL ILLINOIS RIVER VALLEY

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*The analysis of materials recovered from salvage excavations at the Lamb site (11SC24) in the central Illinois River valley (CIRV) has generated new insight into the Mississippianization of west-central Illinois. The evidence reveals a context of converging but still very much entangled Woodland and Mississippian traditions. The Lamb site residents appear to have been selectively adopting or emulating aspects of Mississippian lifeways, while maintaining certain Bauer Branch traditions during the period of contact with Cahokia Mississippians.*

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The eleventh and twelfth centuries A.D. comprised an era during which many Native American groups throughout the Midwest and Southeast altered their cosmological beliefs and socioeconomic relationships to participate in a Mississippian way of life. The causes of Mississippianization were variable and complex but often involved intensified negotiations among social groups with different geographical origins. Cahokia, the earliest and most complex Mississippian polity, played an important role in these far-flung negotiations. Indeed, the Mississippianization of the Midwest is one of the best-documented examples of culture contact in pre-Columbian North America.

Beginning around A.D. 1050, stylistically Cahokian material culture appeared in a number of discontinuous portions of the Midwest. Mississippianization resulting from contact between Cahokians and different Woodland groups has been examined within several different methodological and theoretical frameworks. A range of direct and indirect contact scenarios have emerged from this theorizing, from detached emulations of Cahokia by local people, to limited engagements with or small-scale movements of Cahokians, to whole-group site-unit intrusions of Cahokians into the northern Midwest (e.g., Conrad 1991; Delaney-Rivera 2000, 2007; Emerson and Lewis 1991; Emerson et al. 2007; Green and Rodell 1994; Harn 1978; Pauketat and Emerson 1997; Richards 1992; Stoltman 1991, 2000; Stoltman et al. 2008).

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The central Illinois River valley (CIRV) represents an important locus in which to examine the northern expanding Mississippian frontier. Excavations at the Rench site by McConaughy et al. (1993) in Peoria County, Illinois have revealed that by A.D. 1050 some local Late Woodland groups in the region were selectively emulating Cahokian architectural and ceramic traditions. Cahokian individuals or small groups were likely present in the northern portion of the CIRV at this time. While regional scholars have documented the trajectory of Mississippianization in broad terms (e.g., Caldwell 1967a, 1967b; Conrad 1972, 1989, 1991; Esarey 1996, 2000; Harn 1975, 1978, 1991; Wray and MacNeish 1958), more detailed studies of individual sites are needed to advance our understanding of this historical process.

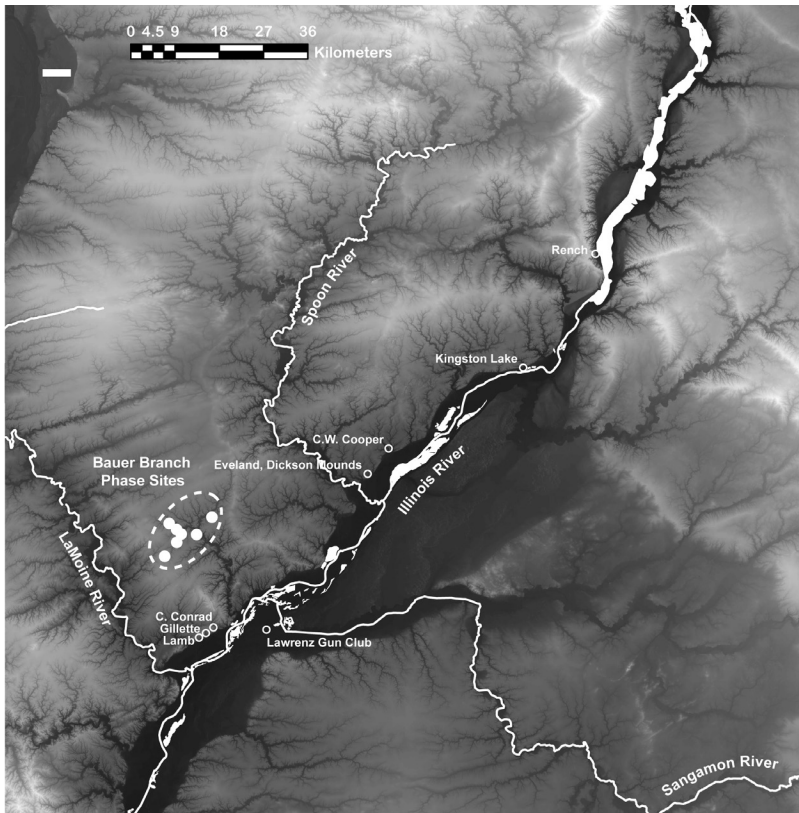
The 1990 excavations at the Lamb site (11SC24) in Schuyler County, Illinois provide insight into Mississippianization two to three generations after the initial Cahokian intrusion into the region. Analysis of the Lamb site material is presented in a series of articles. This one provides background information on the site and its cultural context and offers a synopsis of major findings. The following five articles provide details on ceramics, features, lithics, and botanical and faunal remains.

### **History of Investigations**

Lamb (11SC24) is an early Eveland phase (A.D. 1100–1150) site located on a loess-mantled slackwater terrace at the base of the western bluffs of the Illinois River valley floodplain in Schuyler County, Illinois (Figure 1). Several pit features were encountered at the site during the construction of a grain storage bin on the farm of Lafe and Dorothy Lamb. In April 1990, salvage excavations were conducted at the site by avocational archaeologists Glenn and Mary Hanning, assisted by a local volunteer work force that occasionally included professionally trained archaeologists. Excavations were conducted in two areas, Areas 1 and 1B (Figure 2), separated by about 74 m. Area 1, to the west, encompassed a total surface area of approximately 166.7 m<sup>2</sup>, and Area 1B was approximately 102.3 m<sup>2</sup>.

No structures were encountered in the excavations, but a number of pit features were defined. The Hannings assigned feature numbers from 1 to 18 in Area 1. In Area 1B, the known feature numbers run from 2 to 15 but three numbers were used for pairs of intersecting pits (10A and 10B, 4N and 4S, and 8N and 8S). While this indicates a potential of 35 or 36 features (depending upon why there is no Feature 1 from Area 1B), only 33 features are shown on the site plan map prepared by the Hannings (Figure 2), 16 in Area 1 and 17 in Area 1B. In a further complication, detailed records were not found for all the features shown on the map, but there were records for some not shown. The feature analysis presented in a following article is based on pits for which adequate data were available.

Features were bisected and excavated in natural levels, with profiles drawn in cross section before the second half of the feature was removed. Artifacts were collected during excavation but feature fill was not screened. The majority of artifacts



*Figure 1. Map of the central Illinois River valley with relevant sites.*

recovered were from feature excavation; however, some materials were collected from the ground surface. While artifacts collected from survey and artifacts with unknown provenience were included in total site assemblage counts, they were excluded from specific feature-level analyses. The material categories recovered from the excavations at the Lamb site include ceramics, chipped-stone and ground-stone artifacts, botanical remains, and faunal remains. No human remains were encountered in the excavations. The vast majority of the material recovered from the site was found during excavation; botanical material and a small number of items from other categories (e.g., ceramics, small animal bones) were recovered from flotation samples.

### **Environmental Setting**

The CIRV encompasses several distinct physiographic zones based on upland/bottomland location, soil type, and vegetation communities (Harn 1978, 1994). The Lamb site is located within the Western Forest-Prairie zone, which is characterized by

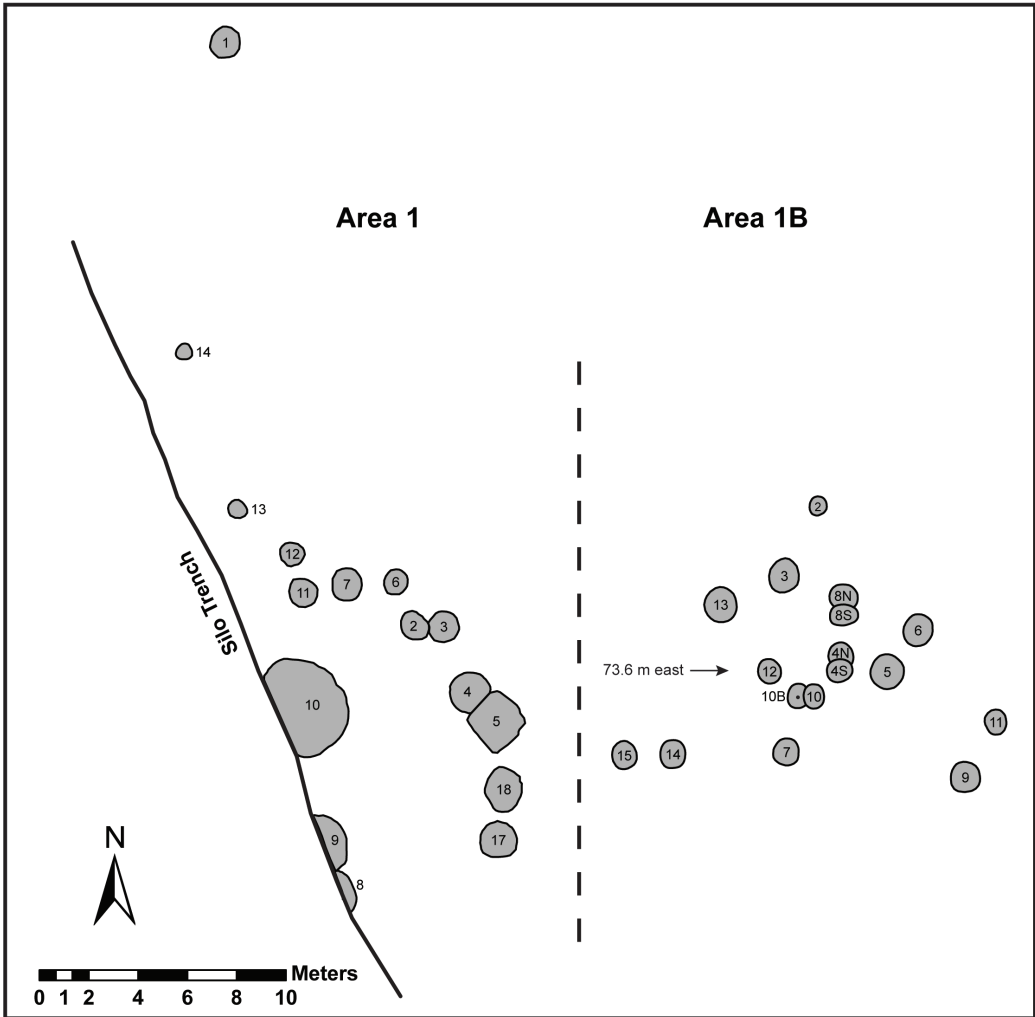


Figure 2. Plan map of the Lamb site excavations.

oak-hickory forests with some sections of open prairie (Harn 1978, 1980, 1994). This zone boasts abundant wild plant forage, including a variety of fruits such as sumac (*Rhus* spp.), elderberry (*Sambucus canadensis*), persimmon (*Diospyros virginiana*), wild cherries and plums (*Prunus* spp.), and pawpaw (*Asimina triloba*), along with nuts including acorn (*Quercus* spp.), hickory (*Carya* spp.), black walnut (*Juglans nigra*), and hazelnut (*Corylus* spp.) (Harn 1980:6). The oak-hickory forest soils, which compose about 75 percent of the Western Forest-Prairie zone, are excellent for agriculture (Harn 1994:4–5); average maize (*Zea mays*) yields from 1956–1966 ranged from 75–98 bushels/acre (Harn 1978:Table 9.1). Modern regional climate is classified as temperate with a mean growing season of 177 days and an annual precipitation of 34 inches (Harn 1980:5).

## Late Woodland in the Southern CIRV

Previous examination of site distribution and ceramic stylistic data indicates that two contemporaneous Terminal Late Woodland groups occupied the CIRV, represented by the Bauer Branch phase in the southern CIRV and the Maples Mills and subsequent Mossville phases in the northern part of the region (Esarey 2000; Green and Nolan 2000). Our discussion below primarily focuses on the Bauer Branch phase, as it represents the social and environmental backdrop for the development of Mississippian culture in the Lamb site locality.

Green (1976, 1987; Green and Nolan 2000) originally defined the Bauer Branch phase as dating between A.D. 600 and A.D. 950 and centered in the Sugar Creek and the LaMoine River drainages in Schuyler and Brown counties. However, recent investigations have extended the spatial boundaries of the phase to include the southern central Illinois River valley and into the northern part of the lower Illinois River valley (Green and Nolan 2000:362; see also Esarey 1988). It is important to note that the Lamb site ceramic data presented in this report reveal that the Bauer Branch phase extended until around A.D. 1100, at which point interactions with Mississippian groups from the greater Cahokia resulted in important changes to artifact and architectural traditions and subsistence practices (see Bardolph 2014; Wilson et al. 2016).

Bauer Branch phase ceramic assemblages are characterized by a distinctive punctated pottery series consisting of cordmarked, grit-tempered jars and miniature vessels with high rims, pinched lips, and punctated shoulders (Green and Nolan 2000:364–365). Vessel rims are often weakly squared off with slightly raised corners. Lithic assemblages are primarily characterized by expedient flaked-stone technologies and the exploitation of local cherts (Green 1977). Patterns of regional settlement mobility and site distribution are not particularly well understood for this time period. The Bauer Branch settlement pattern appears to be represented primarily by dispersed communities of small upland habitation sites and associated small, earthen-mound mortuary sites (Esarey 2000:398; Green and Nolan 2000:362). In his dissertation on Late Woodland economy and technology, Green (1987) characterizes upland Bauer Branch subsistence as a pattern low-level food production (of maize and starchy seed crops), combined with the collection of wild plants including nuts, fruits, and greens. Simon's recent (2014) reanalysis of AMS dates and archaeobotanical records from western Illinois and the American Bottom calls into question the use of maize in the Late Woodland period; according to Simon, maize from Late Woodland contexts across the region likely represents contamination from later prehistoric agricultural activities. Indeed, her review of the archaeobotanical records from both the American Bottom and western Illinois revealed an absence of maize from Late Woodland components unless later maize agriculturalists' occupations were present (Simon 2014:97). Regardless, it appears that the Late Woodland inhabitants of the CIRV expanded their system of low-level food production around A.D. 800, with plant cultivation (including of starchy/oily seeds) increasingly supplementing the collection of wild nuts, fruits, and greens. Animal exploitation at Bauer

Branch sites appears to have focused on deer, fish, and freshwater mussels (Green and Nolan 2000:367). Extensive pedestrian surveys of the Illinois River from Naples to the Peoria Lock and Dam have also identified a number of village-sized Bauer Branch sites on natural levees and floodplain ridges in the southern CIRV (Esarey 2000:392). These floodplain sites are poorly understood due to a lack of excavation data. However, the presence of dispersed upland habitation sites and larger riverine sites is a pattern that mirrors the contemporaneous Maples Mills settlement pattern in the northern CIRV.

### **The Early Mississippian CIRV**

The Mississippian occupation of the CIRV spans the Eveland (A.D. 1100–1200), Orendorf (A.D. 1200–1250), Larson (A.D. 1250–1300), and Crable (A.D. 1300–1450) phases, which correspond roughly to the growth and florescence of Mississippian culture in the American Bottom. Limited evidence of early contact with Cahokia in the Illinois Valley is present during the Late Woodland Mossville phase in the northern CIRV (A.D. 1050–1100, coeval with the Lohmann phase in the American Bottom) (McConaughy et al. 1993). However, a strong Cahokian influence is not apparent until the subsequent Eveland phase (A.D. 1100–1200) (Conrad 1991). The early Eveland phase settlement pattern consists of small farmstead-sized sites linked to a number of small ceremonial complexes. The Eveland and Dickson sites are the best understood of these complexes (Caldwell 1967a, 1967b; Conrad 1989; Esarey 1996; Harn 1991). The Eveland site consists of an arrangement of four elaborate ceremonial buildings and two habitation structures located at the base of the western Illinois River bluff. The Dickson Mounds mortuary site is located on a bluff spur above Eveland; it contained 250 early twelfth-century burials. Four additional early twelfth-century bluff-top cemetery sites have been identified in the region along with several early Mississippian cemeteries that can only be generally dated to the twelfth century (Figure 1). Each of these sites likely represents the mortuary facilities for one or more small-scale corporate groups and may have been paired with Eveland-like temple complexes that have not yet been identified due to their small size and a lack of systematic survey throughout the area (Wilson 2012).

Two other early Eveland phase sites have been identified near the Lamb site: J. Gillette and C. Conrad (see Figure 1). Excavations at the bluff-top C. Conrad site uncovered a number of pit features filled with a mix of early Mississippian and Late Woodland pottery. J. Gillette is a bluff-top cemetery site located 3 km north of the Lamb site. The looting of several burials at J. Gillette yielded a variety of early Eveland phase mortuary artifacts including an elaborate Ramey Incised jar, marine-shell beads, copper-covered wooden earspools, and a copper-covered cedar imitation blade (Conrad 1991:147). These findings indicate that J. Gillette may have been an important mortuary and ritual complex for settlements in the surrounding area including the Lamb and C. Conrad sites. Early Eveland phase ceramics have also been recovered from several other sites in southern CIRV such as Lawrenz Gun Club and Star Bridge (Conrad 1991).



While patterns from the aforementioned sites have been summarized and generalizations about Eveland phase lifeways and Mississippian influence have been made, there is a current dearth of detailed excavation data available for Early Mississippian sites in the CIRV, particularly data reported in a way that are useful for quantitative comparisons. We present the results of our analyses of the Lamb site materials with the goal of clarifying the nature of Late Woodland/Mississippian interaction in the Eveland phase CIRV at the household level, as well as to provide data that can be used in future comparative studies.

## Discussion

This article and those that follow comprise a report on salvage excavations at the Lamb site. The data presented in these articles provides insight into the early twelfth-century Mississippianization of the central Illinois River valley. The evidence reveals a context of converging but still very much entangled Woodland and Mississippian traditions. The Lamb site residents appear to have been selectively adopting or emulating aspects of Mississippian lifeways while maintaining certain Bauer Branch traditions during the period of contact with Cahokia Mississippians. The Lamb site ceramic assemblage differs from the earlier Mossville phase (A.D. 1050–1100) Rensch site assemblage, in which the majority of vessels were still Woodland in style and in which the Mississippian vessels appear to have been imports rather than locally produced. The majority of Lamb site vessels display strong Mississippian stylistic influences and appear to have been manufactured from local clays. However, the Lamb assemblage also included a small number of Bauer Branch style jars. Thus, two generations after the initial Cahokian intrusion into the region, some local potters were still making and using pots in a traditional late Woodland manner.

Examination of the Lamb site feature, faunal, and botanical data also reveals that foodways more generally consisted of an entanglement of Mississippian and Woodland practices. The Lamb site residents manufactured and used Mississippian-style vessels but still employed a number of traditional Woodland conventions involving how and where foods were stored, processed, and cooked, and in what social contexts it was consumed. Some of these persistent practices, including earth-oven cooking, indicate a continued emphasis on aspects of communal social relations that had been abandoned in the American Bottom during Cahokia's Lohmann phase regional consolidation (Bardolph 2014; Wilson and VanDerwarker 2015). While the Lamb site inhabitants intensified maize cultivation, they also relied to a small degree on native cultigens and wild nuts, fruits, and greens consumed in the Late Woodland CIRV. The Lamb site residents practiced a broad-based faunal exploitation strategy in which fish and white-tailed deer were the primary prey; while this pattern is consistent with other Mississippian sites documented in the region, we lack a comparative baseline for comparing Late Woodland and Mississippian faunal assemblages in the CIRV. Future excavations may yield

additional data that can be used to test changes in faunal exploitation from the Late Woodland to Mississippian periods.

Archaeological research in the Richland Complex in the eastern uplands of the American Bottom has also revealed a situation where early Mississippian groups selectively incorporated some Cahokian practices while retaining a number of Woodland traditions (Alt 2001, 2002). Unlike Richland Complex groups, however, the inhabitants of the Lamb site had little access to centrally controlled Cahokian items and raw materials (e.g., basalt celts from the St. Francois mountains, Mill Creek hoes, and unworked marine shell). There is also scant evidence that the early Mississippian inhabitants of the Lamb site intensified their food or craft production in order to economically provision Cahokia. Transporting bulk surplus foodstuffs south to Cahokia would have been prohibitively costly. The exchange of deerskins or other more transportable materials, however, would have been more practical. Indeed, a number of end scrapers were recovered from the Lamb site excavations; such hide-scraping tools are common additions to Mississippian and Oneota lithic assemblages throughout the northern Midwest (Boszhardt and McCarthy 1999). Thus, it is possible that the early Mississippian inhabitants of the CIRV provided Cahokians with limited numbers of deerskins. End scrapers, however, continued to be made and used by Mississippian and Oneota groups long after the collapse of the Cahokia polity and the depopulation of much of the greater American Bottom (Emerson et al. 2007:106–107). Hence, it is unlikely that the midwestern deerskin industry was primarily generated and sustained by Cahokia (Theler and Boszhardt 2006). Despite their far-flung cultural connections, the Lamb site inhabitants relied almost exclusively on locally available stone and clays for their ceramic and lithic industries and depended on local food production to fulfill their subsistence needs. These patterns indicate that while interactions with Cahokians may have culturally transformed the early Mississippian CIRV, the inhabitants of the Lamb site did not have strong political and economic ties to the Cahokian polity.

### **Concluding Thoughts**

The Lamb site was a small homestead or hamlet that was part of a dispersed community of early Mississippian farmers. The site's inhabitants created their social and cultural world through the innovative assembly of local and nonlocal traditions. Their adoption of Mississippian lifeways was selective enough to allow for the persistence of important Woodland-era forms of communal social interaction. However, the changes that did take place were important. For example, recent bioarchaeological research has revealed little evidence of intergroup violence during the early Mississippian occupation of the CIRV (Hatch 2015). This finding corroborates Pauketat's (2007:155–156) earlier argument that Cahokia's northern entanglements entailed peacemaking among disparate Woodland groups with long-standing conflicts. The collective participation of such groups in a Cahokia-inspired religious tradition may have assisted in the elimination or at least softening of what once were highly localized social boundaries circumscribed



by histories of hostility and mutual avoidance. Minimally, the region-wide adoption of Cahokia-style material culture could have eliminated some of the more visible material differences among groups located throughout the Illinois Valley as well the Apple River valley of northwestern Illinois and the Red Wing Locality in northwest Wisconsin and southeast Minnesota. This era of relative peace in the CIRV continued until the early thirteenth century, when the CIRV's inhabitants began to establish nucleated villages on defensible bluff-edge locations. We currently know little about the causes for these changes. However, they correspond with intensified hostilities in the region. The outbreak of warfare in the region likely resulted in the creation of new social boundaries as an era of relative peace ended, and it was no longer safe for Mississippian groups to live and move freely through the region (Wilson 2012).

In sum, the Mississippianization of the Midwest and Southeast during the eleventh and twelfth centuries A.D. catapulted in motion a series of complex, far-flung cultural negotiations. Detailed studies of individual sites such as the Lamb site serve to advance our understanding of this historical process. The generation of future comparative datasets, including ceramic, archaeobotanical, faunal, lithic, and feature data, will further add to our knowledge of the growth and expansion of the Mississippian frontier.

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### References Cited

Alt, Susan M.

2001 Cahokian Change and the Authority of Tradition. In *The Archaeology of Traditions: Agency and History Before and After Columbus*, edited by Timothy R. Pauketat, pp. 141–156, University Press of Florida, Gainesville.

2002 Identities, Traditions, and Diversity in Cahokia's Uplands. *Midcontinental Journal of Archaeology* 27(2):217–235.

Bardolph, Dana N.

2014 Evaluating Cahokian Contact and Mississippian Identity Politics in the Late Prehistoric Central Illinois River Valley. *American Antiquity* 79:69–89.

- Boszhardt, Robert, and Joelle McCarthy  
1999 Oneota End Scrapers and Experiments in Hide Dressing: An Analysis from the La Crosse Locality. *Midcontinental Journal of Archaeology* 24(2):177–199.
- Caldwell, Joseph R.  
1967a The House that “X” Built. *The Living Museum* 28:139–42.  
1967b New Discoveries at Dickson Mounds. *The Living Museum* 29:139–42.
- Conrad, Lawrence A.  
1972 1966 Excavation at the Dickson Mounds: A Sepo-Spoon River Burial Mound in the Central Illinois Valley. Unpublished Master’s Thesis, Department of Anthropology, University of Wisconsin, Madison.  
1989 The Southeastern Ceremonial Complex on the Northern Middle Mississippian Frontier: Late Prehistoric Politico-Religious Systems in the Central Illinois River Valley. In *The Southeastern Ceremonial Complex: Artifacts and Analysis*, edited by Patricia Galloway, pp. 93–113. University of Nebraska Press, Lincoln.  
1991 The Middle Mississippian Cultures of the Central Illinois Valley. In *Cabokia and the Hinterlands: Middle Mississippian Cultures of the Midwest*, edited by Thomas E. Emerson and R. Barry Lewis, pp. 119–156. University of Illinois Press, Urbana.
- Delaney-Rivera, Colleen  
2000 Mississippian and Late Woodland Cultural Interaction and Regional Dynamics: A View from the Lower Illinois River Valley. Unpublished Ph.D. Dissertation, Department of Anthropology, University of California, Los Angeles.  
2007 Examining Interaction and Identity in Prehistory: Mortuary Vessels from the Schild Cemetery. *North American Archaeologist* 28(4): 295–331.
- Emerson, Thomas E., and R. Barry Lewis (editors)  
1991 *Cabokia and the Hinterlands: Middle Mississippian Cultures of the Midwest*. University of Illinois Press, Urbana.
- Emerson, Thomas E., Phillip G. Millhouse, and Marjorie B. Schroeder  
2007 The Lundy Site and the Mississippian Presence in the Apple River Valley. *The Wisconsin Archeologist* 88(2):1–123.
- Esarey, Duane  
1988 An Archaeological Survey of the Illinois River from Naples to the Peoria Lock and Dam. Technical Report 88–460-10. Quaternary Studies Program, Illinois State Museum, Springfield.  
1996 Summary of the 1957–1995 Investigations at the Eveland Site (11F353): A Site Management Tool. Illinois State Museum Quaternary Studies Program Technical Report No. 96–000-6, Springfield.  
2000 The Late Woodland Maples Mills and the Mossville Phase Sequence in the Central Illinois River Valley. In *Late Woodland Societies: Tradition and Transformation Across the Midcontinent*, edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 387–412. University of Nebraska Press, Lincoln.

Green, William B.

1976 Preliminary Report on the Bauer Branch Complex, a Late Woodland Manifestation in West-Central Illinois. *The Wisconsin Archeologist* 57:172–88.

1977 *Final Report of Littleton Field Archaeological Survey, Schuyler County, Illinois*. Upper Mississippi Valley Archaeological Research Foundation Reports on Archaeology No. 1. Mississippi Valley Archaeological Center, LaCrosse, Wisconsin.

1987 Between Hopewell and Mississippian: Late Woodland in the Prairie Peninsula as Viewed from the Western Illinois Uplands. Ph.D. dissertation, University of Wisconsin, Madison. University Microfilms, Ann Arbor.

Green, William B., and Roland L. Rodell

1994 The Mississippian Presence and Cahokia Interaction at Trempealeau, Wisconsin. *American Antiquity* 59: 334–359.

Green, William B., and David J. Nolan

2000 Late Woodland Peoples in West-Central Illinois. In *Late Woodland Societies: Tradition and Transformation across the Midcontinent*, edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 345–386. University of Nebraska Press, Lincoln.

Harn, Alan D.

1975 Cahokia and the Mississippian Emergence in the Spoon River Area of Illinois. *Transactions, Illinois State Academy of Science* 68(4): 414–34.

1978 Mississippian Settlement Patterns in the Central Illinois River Valley. In *Mississippian Settlement Patterns*, edited by Bruce D. Smith, pp. 233–268. Academic Press, New York.

1980 *The Prehistory of Dickson Mounds: The Dickson Excavation*. Reports of Investigations No. 35. Illinois State Museum, Springfield.

1991 Comments on Subsistence, Seasonality, and Site Function at Upland Subsidiaries in the Spoon River Area: Mississippianization at Work on the Northern Frontier. In *Cahokia and the Hinterlands: Middle Mississippi Cultures of the Midwest*, edited by Thomas E. Emerson and R. Barry Lewis, pp. 157–163. University of Illinois Press, Urbana.

1994 *Variation in Mississippian Settlement Patterns: The Larson Settlement System in the Central Illinois River Valley*. Reports of Investigations No. 50. Illinois State Museum, Springfield.

Hatch, Mallorie A.

2015 The Social Costs of War: Investigating the Relationship between Warfare and Intragroup Violence during the Mississippian Period of the Central Illinois Valley. Unpublished Ph.D. Dissertation, Department of Anthropology, Arizona State University, Tempe.

McConaughy, Mark A., Terrance J. Martin, and Frances B. King

1993 Late Late Woodland/Mississippian Component. In *Rench: A Stratified Site in the Central Illinois River Valley*, edited by Mark A. McConaughy, pp. 76–130. Reports of Investigations No. 49. Illinois State Museum, Springfield, Illinois.

- Pauketat, Timothy R.  
2007 *Chiefdoms and Other Archaeological Delusions*. Altamira 2007, Landham, Maryland.
- Pauketat, Timothy R., and Thomas E. Emerson  
1997 *Cahokia: Domination and Ideology in the Mississippian World*. University of Nebraska Press, Lincoln.
- Richards, John D.  
1992 Ceramics and Culture at Aztalan, a Late Prehistoric Village in Southeastern Wisconsin. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Wisconsin, Milwaukee.
- Simon, Mary L.  
2014 Reevaluating the Introduction of Maize into the American Bottom and Western Illinois. *Midwest Archaeological Conference Inc. Occasional Papers* 1:97–134
- Simon, Mary L., and Kathryn E. Parker  
2006 Prehistoric Plant Use in the American Bottom: New Thoughts and Interpretations. *Southeastern Archaeology* 25:170–211.
- Stoltman, James B. (editor)  
1991 *New Perspectives on Cahokia: Views from the Periphery*. Monographs in World Archaeology No. 2. Prehistory Press, Madison, Wisconsin.  
2000 A Reconsideration of the Cultural Processes Linking Cahokia to its Northern Hinterlands during the period A.D. 1000–1200. In *Mounds, Modoc, and Mesoamerica: Papers in Honor of Melvin L. Fowler*, edited by Stephen A. Ahler, pp. 439–454. Scientific Papers Vol. XXVIII. Illinois State Museum, Springfield, Illinois.
- Stoltman, James B., Danielle M. Benden, and Robert F. Boszhardt  
2008 New Evidence in the Upper Mississippi Valley for Premississippian Cultural Interaction with the American Bottom. *American Antiquity* 73:317–336.
- Theler, James L., and Robert F. Boszhardt  
2006 Collapse of Crucial Resources and Culture Change: A Model for the Woodland to Oneota Transformation in the Upper Midwest. *American Antiquity* 71:433–472.
- Wilson, Gregory D.  
2012 Living with War: The Impact of Chronic Violence in the Mississippian Period Central Illinois River Valley. In *The Oxford Handbook of North American Archaeology*, edited by T.R. Pauketat, pp. 523–533. Oxford University Press, Oxford.
- Wilson, Gregory D., and Amber M. VanDerwarker  
2015 The Functional Dimensions of Earth Oven Cooking: An Analysis of an Accidentally Burned Maize Roast at the C.W. Cooper Site in West Central Illinois. *Journal of Field Archaeology* 40(2):165–174.
- Wray, D. E., and R. S. MacNeish  
1958 The Weaver Site: Twenty Centuries of Illinois Prehistory. Ms. on file at Dickson Mounds Museum, Lewistown.