MIDCONTINENTAL JOURNAL OF ARCHAEOLOGY
2027, VOL. 52, NO. 2, 000–000

Establishing the Significance of the Fisher Mounds and Village Site in Upper Mississippian Northern Midcontinental Native History

Thomas E. Emerson,[a,b] Kjersti E. Emerson,[a] and Kristin M. Hedman[a]

[a]Illinois State Archaeological Survey, 2204 Griffith Drive, Champaign, IL 61820; [b]Upper Mississippi Valley Archaeological Research Foundation, Macomb, IL 61455

ABSTRACT

Prior to its destruction in the first half of the twentieth century, the Fisher Mounds and Village site (11WI5) was one of the most prominent Native sites in late precontact northern Illinois. Fortunately, salvage excavations by avocational archaeologist George Langford recovered extensive material remains and produced outstanding documentation of the Native occupation. The authors' two decades of research of these collections have revealed that the site contained key evidence for the timing of the introduction of maize agriculture into the upper Illinois River valley in the 1100s CE, provided additional confirmation of the regional chronologies, recorded the in situ transformation of Terminal Late Woodland into Upper Mississippian cultural practices, preserved proof of the immigration of new populations into the region in the 1200s CE, exposed the prevalence of endemic warfare, had unique local patterns of domestic architecture and settlement organization, and manifested several millennia persistence as a place of interment of the dead. The destruction of the Fisher site was a tremendous blow to Native history; however, the reexamination of these century-old collections has provided valuable glimpses of the long history of the Native regional occupation in a period marked by dramatic cultural transitions.

KEYWORDS

Upper Mississippian; late precontact chronology; upper Illinois River valley; dietary isotopes; village organization; persistent places

The Fisher Mounds and Village site (11WI5; hereafter, a.k.a. Fisher site) was a major late precontact habitation and mortuary site on the south bank of the Des Plaines River, situated just above its junction with the Kankakee River, where the two rivers join to form the headwaters of the Illinois River. As described by early visitors, it consisted of a dozen mortuary areas and 50 house depressions stretching for approximately 1,200 ft along the riverbank. Estimated to cover minimally 17 acres, it was destroyed by gravel mining in the early to mid-twentieth century (Figure 1). Providentially, prior to its destruction, salvage investigations were carried out by avocational archaeologist George Langford. His efforts and documentation form

CONTACT Thomas E. Emerson teee@illinois.edu
© 2027 Midwest Archaeological Conference

MCJA 52_2 Emerson.indd 1 11/5/26 2:41 PM

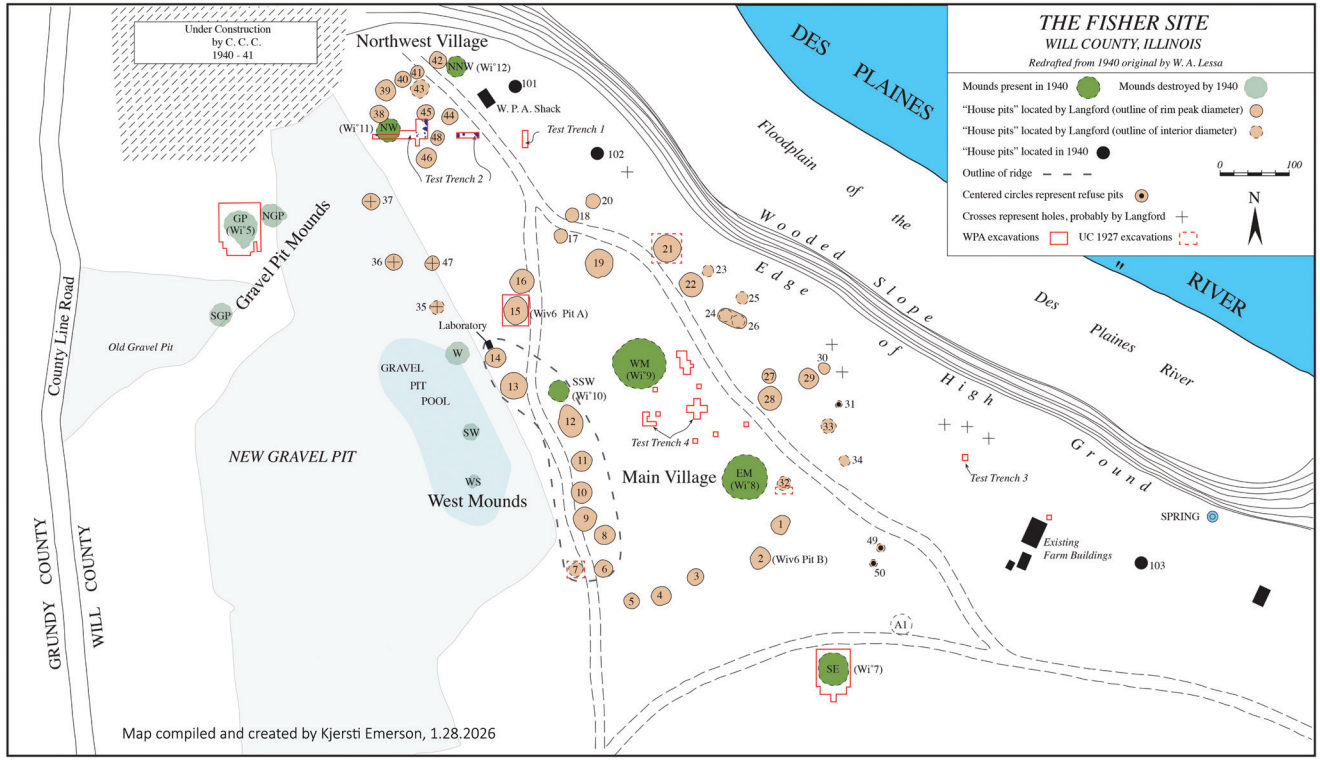

Figure 1. Composite map (revised version 1.28.2026) of archaeological features, historical excavations, and modern impacts through 1941 at the Fisher site (11WI5). The map is based on Griffin's 1946 (2024 [1946]:Figure 2) site map (itself derived from the WPA field map made by W. A. Lessa in the 1940 excavation season). House pit shapes and sizes are based on George Langford's 1928 map. The scale is from the 1928 map but should be considered as no more than a close approximation. Area "A1" is positioned based on the sketch provided by Langford in his Book V. The outline of the "ridge" is based on Langford's maps and descriptions. Test Trench 4 and smaller squares between the two Big Mounds are based on WPA-UC field notes (Book III of Trench 4, Catalogue #213FN), as well as Griffin's (2024 [1946]) Figure 24. The locations of House Pits 38 and 45 were slightly adjusted from Griffin's 1946 overall site map to reflect the layout shown in his (2024 [1946]) Figure 28, which indicates House Pit 38 overlapping the NNW mound and House Pit 45 being partially excavated by Test Trench 2. The spring location along the bank is an approximation based on an early Langford sketch map. (Created by Kjersti E. Emerson, version dated January 28, 2026.)

MCJA 52_2 Emerson.indd 2
11/5/26 2:41 PM

the foundation for subsequent researchers' understanding of this important site (Christenson 2025; T. Emerson and K. Emerson 2024, 2025a).

Langford was a reluctant excavator who, after his attempts to interest the archaeological community in the site and his failed efforts to purchase and preserve it were unsuccessful, undertook his investigations in the mid-1920s only after he realized that the site was being actively destroyed. He published several reports on his mortuary excavations; equally important, he deposited numerous, often duplicate, copies of his key written, photographic, and cartographic records in at least a half-dozen institutional repositories (e.g., T. Emerson and K. Emerson 2024). Creating access to Langford's long-neglected research has been an important goal of the Fisher Site Historical Documentation Project (HDP; K. Emerson and T. Emerson 2025; T. Emerson and K. Emerson 2024, eds. 2024; Langford et al. 2025).

Langford's excavations provided the primary material collections, contextual documentation, and field interpretations on which the University of Chicago research of John Griffin (2024 [1946]) and Charles Gillette (2024 [1949]) was grounded. Their 1940s analyses provided the archaeological understanding of the Fisher site cultural assemblages for the next half century. Griffin's (2024 [1946]) research focused on identifying the Upper Mississippian components at the multicomponent site, incorporating the materials recovered from the extensive rescue excavations of George Langford in the 1920s, the brief forays by University of Chicago (UC) students in 1927, and the 1940 Works Progress Administration excavations led by Gretchen Cutter (K. Emerson and T. Emerson 2008, 2024a).

The interpretation of the site's archaeological context was challenging given the complex array of stratified and superpositioned features, including structures, burials, storage/refuse pits, and middens. These challenges were compounded by the shallow nature of the deposits and disturbances from plowing and earlier curiosity seekers, as well as the excavation methodologies of these pioneer investigators. Placing the site in chronological context in the 1940s was difficult given the lack of absolute dating technologies such as radiocarbon assay. Regional comparison was hampered by the absence of published archaeological information, and Griffin and Gillette often found themselves drawing on distant New York or Ohio assemblages for analogies. In nearby Wisconsin, McKern's (1945) Upper Mississippian research was somewhat applicable, while Barrett's (1933) Aztalan assemblages were less so, and in Illinois, Maxwell's (1946) work with the Dillinger assemblages, Bennett's (1945) ongoing research in the Jo Daviess County sites, and Cole and Deuel's (1937) Fulton County field schools provided limited contemporaneous comparative datasets.

However, Griffin was able, using George Langford's detailed excavation notes and the vast array of material remains collected, to isolate and identify the unique mortuary and habitation practices of two distinctive late precontact groups that we now recognize as representing people associated with the archaeological Fisher and Langford phases (Griffin 2024 [1946]). His analyses confirmed

Langford's earlier interpretations of a Fisher phase habitation and mortuaries that were subsequently overlain by a Langford phase occupation and mortuaries, as well as extensively detailed the associated material assemblages. These assemblages provide one of the largest collections of Upper Mississippian Langford and Fisher phase material culture available to archaeologists, and his interpretations continue to represent one of the primary sources for understanding late precontact Native history and lifeways in northeastern Illinois.

Subsequently, Charles Gillette's (1949, 2024 [1949]) research focused on the Terminal Late Woodland (TLW) component at the site. His thesis, while incorporating Langford and University of Chicago materials, focused on Cutter's 1940 Works Progress Administration (WPA) excavations in Wi°5 (K. Emerson and T. Emerson 2024a). The interpretation of the archaeological context was demanding due to the presence of post-Woodland occupations and a postcontact-era reutilization of the site locality. Despite these issues, Gillette was able to isolate and identify the distinctive grit-tempered ceramic wares that he characterized as the "Des Plaines Complex." He demonstrated that it was related to the Tampico phase and likely preceded the Upper Mississippian occupations, although at the time its chronological placement was uncertain (Gillette 1949, 2024 [1949]). Additionally, based on his analysis of Cutter's WPA Mound Wi°5 materials, he was able to document a rich array of stone and bone tools, as well as a series of distinctive mortuary behaviors associated with the Terminal Late Woodland peoples (e.g., see Emerson, Emerson, et al. 2019).

One aspect of Gillette's thesis research illustrates a historical period in North American physical anthropology when scholars were struggling with the identification and validity of racial typologies—an approach now generally abandoned as problematic. His analysis was important in demonstrating that the anthropometric techniques employed by Langford, following Hrdlička (1920), to distinguish distinct tribal populations in the mortuary remains based on cranial morphology were unsupported. Conversely, his interpretations of the archaeological evidence continue to be foundational in establishing what would later be formulated as the "Des Plaines" phase of the Terminal Late Woodland (e.g., Emerson, Emerson, et al. 2019), and the Fisher site material he described and interpreted provides valuable insights into TLW Native practices from this period.

As important as this HDP effort has been, it was only part of a larger three-decades-long research agenda by the authors to investigate the lifeways of those groups in northern Illinois characterized archaeologically as Upper Mississippians. While this effort was primarily restricted to the analysis of legacy collections from sites such as Fisher (K. Emerson 2007, 2017, 2025; K. Emerson and T. Emerson 2024a, 2024b; Langford et al. 2025; Tufano 2025), Gentleman Farm (Brown et al. 1967; Emerson et al. 2005), Oakwood Mound (Strezewski et al. 2012), Material Service Quarry (Emerson et al. 2010), and Palos Village (Esarey and Emerson 2021), it also incorporated insights from recent excavations at the habitation sites of Hoxie Farm (Jackson 2017; Jackson and Emerson 2014), Joe Louis (Baltus and Bryant

2024), Keeshin Farms (Emerson, ed. 1999; Emerson and Titlebaum 2000), Reeves (Craig and Galloy 1996), and Middle Grant Creek (McLeester and Schurr 2020). These analyses yielded significant insights on Terminal Late Woodland and Upper Mississippian social interactions, settlements, subsistence, and dietary practices, as well as produced refined chronologies (K. Emerson and T. Emerson 2024b; Emerson et al. 2005; Emerson, Emerson, et al. 2019; Emerson et al. 2022; Emerson et al. 2025). Such focused, long-term investigations have served to clarify the history and lifestyles of the Upper Mississippian populations in northern Illinois, as well as to provide additional insights into the aboriginal use of the Fisher site locality. This article concentrates on the specific contribution of the Fisher site to that endeavor.

Fisher Site Chronology

The early twentieth-century excavations and the contemporaneous in-depth analyses of the Fisher site materials were conducted in the preradiocarbon era, when Midwestern archaeologists were struggling to create foundational relative cultural chronologies. In fact, in 1932, Thorne Deuel (1932) was still reporting as noteworthy discoveries from the 1930–1931 UC field seasons in Fulton County the identification of stratified and superimposed deposits that established the relative chronological order of Black Sand, Red Ochre, Hopewell, and, most recently, Mississippian components/cultures. That chronology-building process was grounded in principles of seriation, limited stratigraphic evidence, the concept of progressive unilinear technological change, and cultural evolutionary perceptions of developing ever-increasing levels of social and artistic sophistication.

Based on his excavations, observations, and interpretations, Langford proposed the first chronology for the Fisher site employing evidence from the postcontact records, chronologically diagnostic postcontact-era artifacts, burial conditions and context, and internal stratigraphy and superpositioning. As presented in his chronological chart (Table 1), he principally established his timeline based on his interpretation of the perceived stratigraphic sequence of the Lower, Middle, and Upper Levels of burials in the Big East and Big West Mounds (Langford 1927, 1928a) in combination with the obvious later postcontact burials associated with European artifacts. He did not recognize any great time depth of Native occupation at the site. This is not surprising since the professional anthropological and geological consensus at that time generally adopted the "short chronology" advocated by Aleš Hrdlička, who believed that the Indigenous inhabitants of the Americas arrived only about 3,000 years ago (Meltzer 2005). What is most perceptive in Langford's chronology (see Table 1) is that he presciently estimated the main precontact occupations at the Fisher site as having occurred between 900 CE and 1525–1600 CE (Table 2)—a timeline that does not differ significantly from that accepted today based on radiocarbon assays and comparative regional cultural associations.

Table 1. Estimated Fisher Site Chronology after Langford, circa 1930.*

1828–1800	Traces of camps with objects of iron, brass, and porcelain.
1800–1750	Post-European mound with extended burials and a mixture of Indian's and White Man's relics.
1750–1650/1600?	Pre-European: crouching burials, grit-tempered clay pots, stemmed arrow points, and a few bone and copper implements.
1600–1525	Upper Level: many crouching burials with only a few grit-tempered clay pots, stemmed flints, stone hatchets, and bone implements.
1500/1475–1350/1300?	Middle Level: brachycephalic individuals lying upon their backs with legs bent; shell-tempered pottery; small triangular arrow points; and many implements and ornaments made of stone, bone, copper, and shell.
1400–1100/1000?	Lower Level: mesocephalic individuals in sprawling postures without relics.
900–800	Crouching dolichocephalic individuals in concealed graves without relics.

*Langford states that dating these people was challenging, and the methods used for estimating the age of the burials were based on the coloration and density of the soil in and around them. This chronology is thought to have been created by Langford about 1930, although it may date as late as 1964.

Table 2. Upper Illinois River Valley Late Precontact Cultures and Chronology.

Cultural Unit	Chronology*
Terminal Late Woodland	
Des Plaines Phase	ca. 800 CE to 1125 CE
Upper Mississippian Tradition	
Langford Phase	ca. 1100 CE to 1400s CE
Fisher Phase	ca. 1200 CE to 1500s CE
Huber Phase	ca. 1450 CE to 1630 CE

* General time ranges presented. For detailed dates and discussion see text.

The first attempts to establish an absolute chronology for the Fisher site began when Jeske and Hart (1988) dated a wood post from Horner's 1946 excavations (Horner 1947) of House Pit 48 that produced a one-sigma cal date of 1185–1275 CE. Later Emerson et alia (2006) tested a mixed charcoal sample from Pit 5 within House Pit 48, which yielded a one-sigma date of cal 1206–1295 CE (94% probability). These two dates provided a pooled date range of cal 1207–1282 CE (99% probability) for this Langford phase structure. In the early 2000s, Strezewski (2006; personal communication 2025) inventoried the incidence of violence at the site that included at least one mass burial of victims. As part of that project, he obtained two radiocarbon dates from burials in the Big East Mound. Burial EM69 yielded a date range of cal 1230–1400 CE (95.4%), while EM81 was cal 1180–1300 CE (95.4% probability; see Supplemental Table 1).

A concerted effort to understand the chronological sequences of the Fisher site occupations began in 1995 with a systematic dating program tied to the collection of dietary isotopes of late precontact inhabitants of Illinois. That research demonstrated a significant time depth for Native utilization of the Fisher locality. A radiocarbon date on an individual burial from beneath Langford's GP Mound yielded two dates: 4510 ± 25 BP (A3685) and 4445 ± 20 BP (A4332). These, respectively, provide calibrated ranges at 95.4% probability of 3349–3101 BCE (median 3210 BCE) and 3326–3019 BCE (median 3093 BCE). The date of the interment

suggests this individual lived and died during the transitional Middle to Late Archaic times, a period marked by a documented diversity of burial practices (e.g., Milner et al. 2009). Little is known about this individual whose remains were recovered during the WPA salvage of the GP Mound during its demolition by gravel mining. No associated artifacts were recorded, and the field record for this individual is missing. Given the dominance of individual interments lacking in diagnostic markers recovered from across the site, it is possible that there may have been multiple Archaic burials present.

A further early time marker for the Fisher site was revealed in a reexamination of the excavation records of SE Mound in George Langford's manuscripts (Emerson 2023:186–187; Langford 1928b). He discovered a heavily burned 5-foot diameter pit, with human cremations, that contained two distinctive Red Ochre blades. The Red Ochre blades of dark gray chert are badly burned and measure 10.2 cm and 14.6 cm in length (Emerson 2023:Figure 6). Gillette's (2024 [1949]) subsequent analysis identified the presence of Marion Thick ceramics in the mound fill. While no radiocarbon dates are available for these artifacts at Fisher, the diagnostic blade form and context allow researchers to link the feature to the Red Ochre complex, which in Illinois is generally dated between 1200 BCE to 1000 BCE and 500 BCE, crossing the cultural boundary of the terminal Late Archaic and Early Woodland traditions (Emerson 2023:143–144; Esarey 1986). These Archaic and Early Woodland burials indicate the recognition by the regional inhabitants of the Fisher locality as a notable place on the landscape, one that had been a burial place for at least 2,500 years by the time the Terminal Late Woodland residents employed it as such circa 800 CE—clearly an important Native "persistent place" (i.e., Skousen and Antoniuk 2025).

Strangely missing is clear evidence of Middle Woodland occupations, although the presence of some copper objects with burials may be linked to this time. Early investigators Langford (1930a), Griffin (2024 [1946]), and Gillette (2024 [1949]) all remark on the apparent absence of significant Middle Woodland utilization of the site locale, although Langford records that he collected projectile points and decorated pottery that researchers would now recognize as associated with the Middle Woodland period from nearby locations throughout the Des Plaines River valley. Griffin (2024 [1946]) likely provides the most complete inventory of copper artifacts, mostly with burials, from the excavations. Possible Middle Woodland copper included celts and many copper beads. These artifact forms have been demonstrated to be the most common components of Middle Woodland assemblages (e.g., Emerson and Farnsworth 2022) in Illinois. While the lithic assemblage from the site has been depleted through years of curation, an assessment of the remaining points has revealed some Middle Woodland forms (Tufano 2025). There is reason to suspect that the apparent absence of a Middle Woodland utilization of the site may be due to limited investigations of the site locale and the intense reutilization and disturbance of the site's cultural deposits through time. Of the 12 recognized mortuary areas, 5 were not investigated and only the

two Big Mounds and Mound 5 were thoroughly examined. Most burials revealed in the site explorations had no associated diagnostic artifacts. While numerous house pits were explored, many were not, and little of the broad habitation zone was excavated. The discovery of the Archaic and Early Woodland interments was the product of serendipitous encounters rather than systematic investigations, and the scattered presence of potentially Middle Woodland diagnostic copper items with interments suggests it likely also served as a repository for deceased individuals from that era.

The Fisher site assemblages remain a key component of the authors' long-term research agenda to understand the interactions and transitions of late precontact lifeways of the Late Woodland, Mississippian, and Upper Mississippian inhabitants of northern Illinois. To be able to interpret the intricate relationships of these historical variables requires establishing a detailed timeline. To that end, over the course of this research, an additional 34 radiocarbon dates were obtained from the Fisher site (see Supplemental Table 1). The purpose of establishing these dates was to distinguish the chronological context of the Des Plaines Terminal Late Woodland and the Fisher and Langford phase utilizations of the site. Past analyses by Griffin (2024 [1946]) and Gillette (2024 [1949]) had established the general relative sequence of the components, thus confirming Langford's (1927) earlier hypotheses, but the intense mixing of diagnostic materials within the village and the almost general absence of diagnostic burial accompaniments with interments continued to make chronological refinements problematic. The new radiocarbon research focused on delineating the chronological history of the burials. These radiocarbon assays were accompanied by the analyses of C_4 dietary isotope evidence designed to trace the appearance and adoption of maize consumption and agriculture in the upper Illinois River valley and Sr isotopic evidence to address population stability/movements (Emerson, Emerson, et al. 2019; Emerson et al. 2025).

The Terminal Late Woodand Occupation

Critical to these studies was the evidence collected from Langford's Gravel Pit Mound (later renamed "Wi°5" by the UC) that was extensively excavated during the 1940 WPA salvage project (K. Emerson and T. Emerson 2008, 2024b; Gillette 1949, 2024 [1949]). Gillette's (2024 [1949]) study demonstrated that the mound was primarily utilized in the Terminal Late Woodland (TLW) era, a finding subsequently confirmed by analysis that designated the TLW component as the Des Plaines phase (Emerson, Emerson, et al. 2019; also, Emerson and Titlebaum 2000). Twenty-one radiocarbon dates were obtained from individual burials in Mound Wi°5 (see Supplemental Table 1). While the dates' distribution indicated that there had been use of the burial area both prior to and after the TLW (i.e., Late Archaic and Upper Mississippian), the authors were able to identify a core group of 16 individuals whose modeled median dates begin circa 890 CE and terminate about 1100 CE. This date range correlates well with the modeled Des Plaines habitation

evidence from other sites, with a duration of 813–1022 CE to 975–1195 CE (95.4% probability; Emerson, Emerson, et al. 2019).

Culturally, an examination of the Des Plaines phase habitations and mortuary practices suggests ties with the broader horizon of groups using Late Woodland collared wares stretching east–west across the bottom of Lake Michigan from Indiana into Iowa, with the most apparent ties being to the Albee phase groups in western Indiana (Emerson, Emerson, et al. 2019:150–151; also Benn and Green 2000; Kelly 2002; Rosebrough 2010; Salkin 2000; Stoltman and Christiansen 2000). In Illinois, the Des Plaines phase is characterized by the presence of small spatially dispersed family campsites, suggesting a constrained yet mobile lifestyle, perhaps of families socially linked through a communal, multigenerational mortuary facility such as Wi°5 (Emerson 1999:12–19; Emerson, Emerson, et al. 2019; Emerson and Titlebaum 2000). The lack of dense habitation evidence for the TLW component within the Fisher site locality strongly suggests it was an aspect of this broader pattern. While the widespread but sporadic occurrence of TLW ceramics (e.g., rarely in mound fills) across the site was recorded by early excavators, the intense disturbances by Upper Mississippian mortuary and habitation practices precluded the identification of TLW habitation features, although the authors suspect that it was not densely occupied during TLW times (Emerson, Emerson, et al. 2019; Gillette 2024 [1949]). Its primary TLW significance seems to have been as a persistent place for mortuary and social ritual and related activities.

The Upper Mississippian Occupations

Despite the apparent subsequent development of the Langford phase material culture out of an earlier ancestral TLW Des Plaines phase foundation (e.g., summarized in Emerson 1999), the earliest significant habitations at the Fisher site may be related to the Upper Mississippian Fisher phase. These people can be identified as intrusive in the thirteenth century into the northeastern Illinois area, having ties to groups in the east (K. Emerson 2017; T. Emerson and K. Emerson 2025b; Emerson et al. 2022). The Fisher phase habitation areas at the site are extensive and well documented (K. Emerson and T. Emerson 2024b; Langford et al. 2025), and a substantial portion of the mortuary activities, especially in the Big East and Big West Mounds excavated by Langford (1927), can be associated with these people. Langford (1927, 1928a) identified a series of stratigraphically placed burials within the Big Mounds, which he relatively labeled as the "Upper," "Middle," and "Lower" levels. He interpreted the Middle Level burials as correlated with the site's distinctive shell-tempered and grit-tempered ceramics. John Griffin's (2024 [1946]:71–76; also, Strezewski 2006) reexamination of the Upper Mississippian components within the Big Mounds indicated that the stratigraphy within in the mounds was more ambiguous than Langford believed, but a few instances of burials associated with shell-tempered (Fisher phase) ceramics did seem to stratigraphically precede those associated with later intrusive grit-tempered wares (Langford phase).

Langford's (Langford et al. 2025) extensive excavations within the habitations and village areas confirmed that general order; however, the intermingling of the grit-tempered and shell-tempered wares in many contexts did little to clarify if their users were sequential, interdigitated, or, perhaps, even contemporaneous (e.g., K. Emerson and T. Emerson 2024a; Langford et al. 2025; Strezewski 2006). Investigators noted the presence of a "black seam" that represented the development of a humus zone within the two Big Mounds, which indicated that they had experienced periods of disuse, perhaps suggesting times of site abandonment (Griffin 2024 [1946]:71–72; Langford 1927). The similarity of the Fisher and Langford phases' nonceramic material assemblages further hampered the separation of the components at the site (Langford et al. 2025). A recent detailed inventory and analysis of the remaining curated ceramic and lithic materials have not enabled the authors to clarify those relationships (e.g., K. Emerson 2007, 2025; Tufano 2025). Given the broader regional chronology showing that Langford phase sites predate the entry of Fisher phase groups into the area by one to two centuries, it is feasible that the earliest occupation in some portions of the site may have been by Langford people. While Langford features consistently superimpose those from the Fisher phase within the main habitation area, the somewhat isolated Northwest Village (see Figure 1), which represents a single-component Langford occupation, may predate the Fisher occupation.

A site such as Fisher might be seen as an ideal laboratory to identify ceramic stylistic development through time given its at least six-centuries-long occupational sequence marked by episodic occupation and abandonment. As discussed, the cultural transition from Des Plaines to Langford phase material seems well established, especially in terms of ceramic forms, and has generally been accepted by regional researchers (e.g., Emerson 1999). Stylistic and cultural changes within the subsequent Langford phase have been postulated within the Illinois Valley by Catherine Bird (1997) based on the geographical distribution of Langford components, but the sample size is modest and wider study is required to confirm the pattern. The Fisher phase ceramic patterns were first examined for possible chronologically based stylistic changes by Faulkner (1972:160–173). He tentatively suggested that it was possible to distinguish an early Fisher phase ceramic component characterized by the Fisher Trailed style at the Fisher site and a later Fisher phase characterized by Fifield Trailed and Fifield Bold ceramic forms in northwestern Indiana.

A later, more comprehensive comparative study by Kjersti Emerson (2017)—drawing on new investigations of Fisher phase site ceramics—documented a pattern of spatial variation across the region that she attributed primarily to differential outside stylistic influences and the lengths of sites' occupations. However, she did acknowledge that in a broad sense there appeared to be a shift through time driven by the well-documented and widespread regional stylistic change in decorative patterns characterized by the transition from curvilinear to rectilinear motifs, noted long ago by James Griffin (1960) and many subsequent scholars. Unfortunately, the present lack of adequate chronologically and contextually

secure Fisher phase ceramic assemblages makes confirmation of this stylistic shift challenging (although see recent research at Hoxie Farm Fortified Village [Emerson and Emerson 2014:319–325] and the Joe Louis site [Baltus and Bryant 2024]).

The persistent use of the Fisher site for repeated mortuary purposes and habitations suggests continual revisits occurred and, along with the dates, strongly suggests the authors are seeing the early through the middle eras of the Fisher phase. The curvilinear designs mark the earliest period, whereas jars with only the rectilinear designs are almost certainly later. What appear to be missing are ceramic wares that the authors have identified as late Fisher at the Hoxie Farm or Joe Louis sites (Emerson and Emerson 2014). The radiocarbon dates do not suggest a late Fisher utilization of this locality. However, a more detailed definition of "early" or "middle" Fisher phases would require discrete assemblages for comparative purposes, as researchers have for late Fisher. Unfortunately, no such contextually and temporally restricted early or middle Fisher site has yet been discovered to provide such a sample.

Given the short chronological duration and probable fluid social and political complexity of Fisher society, the possibility of detecting a comprehensive, all-encompassing ceramic "evolutionary" sequence within the region may be problematic. Emerson and Emerson (2014:316–319) contextualize ceramic production within Fisher phase sites as occurring at the household level in what they recognize as a tribally organized society. Within such societies, social gatherings such as that represented within the Hoxie Farm Fortified Village are fluid and characteristically composed of segments of socially and economically similar family households. It is the potential seasonality and political fluidity of such gatherings that create the milieu generating the frequent separation and shifting reintegrations of these independent households and provide a fertile context to produce a dynamic and heterogeneous material inventory. While the constantly shifting interactions, both within and between Fisher groups as well as with neighboring groups, are perhaps reflected in such broad regional trends as the recorded shift from curvilinear to rectilinear motifs, any systematic chronological changes in local ceramic designs seem obscured by the observed intensity of artistic variations.

Radiocarbon Assays

To add chronological clarity, the authors undertook a systematic Bayesian dating program (IntCal20, OxCal ver. 4.4.4 [Bronk Ramsey 2009; Reimer et al. 2020]) at the Fisher site, concentrating on establishing the chronological relationship of the three major components (see Supplemental Table 1). As noted above, the placement in time of the TLW Des Plaines phase was facilitated by the examination of the Mound Wi^{o}5 WPA evidence, which contained a generally discrete TLW population spatially separated from the later Fisher and Langford components.

Unraveling the chronological placement and relationship of the Fisher and Langford components was a greater challenge. The known mortuary components from these phases are primarily contained within the Big East and Big West

Mounds. Despite Langford's extensive explorations during which he recorded that he encountered 603 individuals, in keeping with the common practices of the day, he generally did not remove the human remains from the mounds. Given that the partial remains of only 150 individuals, then curated by Indiana University, were documented by Strezewski (2006),[1] this suggests that 75%–80% of the individual remains identified by Langford in the field within the burial mounds were left in situ and were subsequently destroyed by the mining operations (Strezewski 2006:Table 1).

Radiocarbon accelerator mass spectrometry (AMS) dates are available for 12 individuals associated with the Big East and Big West Mounds (see Supplemental Table 1). When modeled (Bayliss 2009; Reimer et al. 2020), these dates ranged between cal 1220–1265 CE and cal 1300–1395 CE (95.4% probability), with a median range of cal 1240–1330 CE. Depending on how one views the representativeness of the dates, the span of the Upper Mississippian occupations occurred during a period somewhere between 90 and 175 years in length. Three of these burial dates have *probable* Langford associations, with two additional Langford phase dates obtained from House Pit 48 (Supplemental Table 2). An examination of this subset of five modeled dates yielded a start date of cal 1115–1285 CE and a termination date range of cal 1285–1460 CE (95.4% probability), with a median range of cal 1235–1325 CE. Two dates from burials *presumed* to be associated with the Fisher phase are cal 1225–1270 CE and cal 1300–1395 CE (see Supplemental Table 1); clearly these assays are unhelpful in distinguishing the relative chronological position of the two Upper Mississippian components at the site.

In the end, the one line of evidence that still holds true is that produced by Langford's 1920s documentation that in the Main Village numerous Fisher phase features were superimposed by Langford phase features but never the reverse. In a broader review of Fisher and Langford chronology in northeastern Illinois, Emerson and colleagues (2022:152–154) concluded that the upper Illinois River valley (UIRV) presence of the Langford phase ranged from 1052–1177 CE to 1256–1327 CE, confirming a suggested Langford peak duration as 1050 CE to 1325 CE. They estimated the Fisher occupation in the UIRV occurred between 1225 CE and 1500 CE. These timelines suggest an overlap of the two groups in the thirteenth and early fourteenth centuries. While at one level these Fisher site dates have assisted in establishing the chronological range of the UIRV Native occupations, the available radiocarbon assays do not have the necessary context or resolution to untangle the complex intermingling of the Upper Mississippian components at the Fisher site.

Permanence and Migrations

The period between 1000 CE and 1500 CE has increasingly been characterized by researchers as one marked by a fluid social and political landscape, evoking images of disbanding, reaggregating, shifting ethnicities and migrations among

Native populations in the northern midcontinent (e.g., T. Emerson 1999, 2007, 2012; T. Emerson and K. Emerson 2014, 2025b; Emerson et al. 2022; Esarey and Emerson 2021). These perspectives of fluctuating Native lifeways in northeastern Illinois superseded earlier archaeological traditions of enduring multimillennia-long regional population stability and in situ evolution (e.g., Brown 1990; Brown and Sasso 2001; Emerson and Brown 1992; Faulkner 1972). The reality of the late precontact history of northern Illinois Native groups, however, is more complex than previously envisioned. What is striking is that the emerging archaeological evidence reveals a dichotomy between one of the classic examples of long-term in situ cultural development—the six-centuries-long transition from the TLW Des Plaines to the Langford cultural tradition—and the contrasting evidence for the intrusion of nonlocal Fisher phase peoples into the UIRV. The cultural evidence for both events has been reviewed in detail previously (Emerson 1999; T. Emerson and K. Emerson 2025b; Emerson, Emerson, et al. 2019; Emerson et al. 2022); consequently, here the authors concentrate on the bioarchaeological evidence that provides additional insights into population stability and movement.

Strontium isotope analysis is an important tool in identifying residential mobility for individuals in precontact archaeological contexts. It has been applied to questions of population movement in the midcontinent, revealing evidence for diversity in place of origin and broad regional interactions within other precontact communities and population centers in Illinois and the greater Midwest (Cook and Price 2015; Fort et al. 2024; Graham 2016; Hedman et al. 2018; Price et al. 2007; Slater et al. 2014). Here the authors assemble existing stable isotope data to examine isotopic evidence for population movement at the Fisher site (Fort et al. 2024; Hedman et al. 2009; Hedman et al. 2018; Slater et al. 2014).[2]

Enamel samples purified for stable isotope analysis were prepared and analyzed for strontium ($^{87}Sr/^{86}Sr$) isotopes, which can provide insight as to the place of origin and the movement of an individual over a lifetime. Strontium isotope ratios of local bedrock, soils, and water are reflected in tissues of the plants and animals (including humans) that grow and feed in a particular region (Bentley 2006; Price et al. 2002). In studies of human migration, differences in Sr ratios in the fourth decimal place between—for example, different teeth of the same individual, between individuals, or between an individual and an estimated "local signature" for a region—are considered significant in identifying human movement (Price et al. 2012:405). The local strontium range established for the upper Illinois region of northeastern Illinois is 0.70945–0.71262, calculated as the mean ± 2 SD of $^{87}Sr/^{86}Sr$ for tooth enamel from nonmigratory fauna (n = 8) from Will and Cook Counties (Hedman et al. 2018). The "local" strontium range for the Fisher location was also calculated using the mean ± 2 SD of $^{87}Sr/^{86}Sr$ for (Fisher) human strontium ratios (0.71013–0.71267). This calculation resulted in a slightly narrower range that may better reflect the expected strontium range for people living at the Fisher location (see Burton and Hahn 2016). Strontium ratios that fall above or below this established range are considered nonlocal to the Fisher locality and used to identify

residential mobility for an individual. It is important to note that the established strontium range for northeastern Illinois and the Illinois River valley generally is quite broad and, further, that similar or overlapping $^{87}Sr/^{86}Sr$ ratios may occur in different geographical locations that share similar geological characteristics (e.g., Hedman et al. 2009). Thus, a definitive determination of place of origin for an individual is rarely possible using strontium alone. It is possible, however, to identify nonlocal individuals whose strontium ratios differ from those of a defined region and, in some cases, to correlate those nonlocal signatures with possible places of origin.

Details of protocol and methodology used in strontium analysis are presented by Hedman and colleagues (2018; see also Fort et al. 2024 and Slater et al. 2014 and references therein). Strontium analysis was conducted using tooth enamel sampled from 103 teeth representing 77 individuals from the Fisher site. Several burial locations are represented, including GP Mound (Mound 5), East Mound, West Mound, South Southwest Mound, and the Village area (Mound 6). Sampled teeth included one deciduous second molar, one permanent lateral incisor, 29 permanent first molars, 16 permanent second molars, 27 premolars (PM1 and PM2 combined), and 29 permanent third molars (Supplemental Tables 3–4). Enamel from these tooth types reflects diet and regional strontium characteristics during fetal development and infancy, infancy/early childhood, and later childhood/adolescence. Paired teeth were sampled for 25 individuals, allowing the authors to consider changes in diet and place of origin over the life of these individuals by considering the difference in Sr values between early and late developing teeth and the local Sr signature of the region in which they were buried.

The Sr ratios for nearly all teeth fall within the local Sr range estimated for Fisher based on either faunal or human Sr ratios. This might suggest that most individuals interred at Fisher were local to the region and argue for *regional* continuity over time. Individuals with paired teeth show only slight differences in Sr between early and late developing teeth. These differences could be accounted for by minor dietary changes between infancy/childhood and later childhood/adolescence. Five individuals are associated with Sr ratios that fall below the local Sr range for Fisher based on the mean human strontium ratio; only one tooth also falls below the local range for Fisher based on faunal values. These lower ratios are associated with three first molars, two premolars, and one third molar—thus (except for the third molar) reflecting the diet and geographic location during infancy/early childhood. Only one tooth was sampled from each of these individuals, so the authors are unable to say whether these individuals moved to the Fisher location as children or moved after adolescence. When evidence for "movement" is considered, the authors have attributed differences between Sr values of paired teeth of 0.001 or greater as reflecting movement (vs dietary changes associated with weaning; Slater et al. 2014). One individual (GP Individual 43) shows a difference in Sr between the first and third molars of 0.00101. Although each tooth falls within the local Sr range for the Fisher site, this difference is large

enough to suggest it may reflect mobility between regions that have overlapping Sr ranges (i.e., Supplementary Table 4).

As documented previously for Cahokia and surrounding American Bottom sites (Hedman et al. 2018; Slater et al. 2014), the authors found more variability among earlier developing teeth (M1, M2, and PM) and showed more variability among individuals, including evidence for nonlocal origins, suggesting immigrants to Fisher either spent their infancy and early childhood elsewhere or were born to recent-immigrant mothers (see Slater et al. 2014). Across all Fisher mounds/contexts, later developing teeth (M3s) show less variation in Sr among individuals and tend to fall within the local range for Fisher (Supplemental Table 4). Available demographic information suggests that three of the five individuals with nonlocal Sr ratios are identified as male, one as female, and one of undetermined age or sex. If differences across mounds/burial contexts are considered, the average strontium ratio for each mound/context, and for the sampled population, is similar. East Mound and West Mound show the greatest variation among individuals, most notably in earlier developing teeth (see Supplemental Table 3). Individuals with nonlocal values include Individuals 74 and 94 (GP Mound/Md5), EM 28 and EM 75 (scalped individual), WM 28 (survived scalping); that is, only 2 of 12 individuals with documented perimortem trauma included in the Sr study have Sr values nonlocal to the Fisher location. No nonlocal Sr values were identified for the individuals from SSW or Md6/Village contexts. Across all Fisher mounds/contexts, later developing teeth (M3s) show less variation in Sr among individuals (see Supplemental Table 4).

Strontium ($^{87}Sr/^{86}Sr$) isotopes provide evidence of limited movement into the Fisher locality, with at least five individuals spending a portion of their lives in an area characterized by a lower Sr signature than that of Fisher. Unfortunately, for questions of mobility, paired teeth are not available for these individuals, and the age at which they may have come to the Fisher region remains undetermined. Although most individuals have strontium values that fall within the local Sr range for Fisher, it cannot be definitively stated whether Fisher individuals were local to the Fisher region or may have lived in regions that share/overlap with the strontium signature of Fisher. Several regions have strontium signatures that overlap to some degree with that of Fisher and many that encompass the nonlocal strontium ratios identified at Fisher: for example, American Bottom, lower and central Illinois River valley, Aztalan in southern Wisconsin, and Fort Ancient sites to the east (Cook and Price 2015; Fort et al. 2024; Graham 2016; Hedman, Curry, et al. 2009; Hedman, Slater, et al. 2018; Price et al. 2007; Slater et al. 2014), among others. One individual (GP Ind 45) does show a significant difference in Sr between the first and third molars, suggesting a geographical change between infancy/early childhood and later childhood/adolescence; however, strontium ratios for both teeth fall within the local range for Fisher. This suggests there was population mobility at Fisher that cannot be detected by strontium ratios alone. Early developing teeth show greater variability in strontium ratios than later-developing

teeth, suggesting immigrants to Fisher were likely born elsewhere or to nonlocal mothers. Demographic information is lacking or unconfirmed for many individuals, preventing an assessment of possible differences in mobility between males and females, although it is noted that three of the five nonlocal ratios are associated with males. There are also differences in variability in strontium across burial locations. Variability in strontium for third molars is greatest among individuals in the GP Mound—while overall East and West Mound individuals show the greatest variability in Sr, supporting archaeological evidence for increased movement and regional interaction during the late thirteenth through fourteenth centuries, perhaps related to the slightly earlier population instability generated from Greater Cahokia (Hedman et al. 2018).

The Sr evidence is suggestive of locally shifting populations due to expanding and contracting boundaries rather than significant long-distance targeted migrations by either individuals or groups outside the region. Such findings are in line with current archaeological modeling that suggests both local stability and incremental fluctuations by regional groups, with the TLW shift to Langford cultural patterns essentially developing in situ in the UIRV, while the expansive Fisher groups represented later intrusions into the region from the region known in modern times as Indiana (T. Emerson and K. Emerson 2025b). While not represented at the Fisher site, the archaeological evidence for the later intrusion of Huber phase people southward into the UIRV from southeastern Wisconsin is an even more marked sixteenth-century example of this pattern of regional shifting of ethnic boundaries (Esarey and Emerson 2021).

Maize Adoption and Consumption

An important research focus of the Upper Mississippian project in northern Illinois was assessing the timing and significance of maize consumption in local subsistence practices (Emerson et al. 2005; Emerson, Emerson, et al. 2019; Emerson et al. 2025). Investigations of maize's introduction and consumption levels within Greater Cahokia (Emerson et al. 2020) demonstrated that maize first appeared as a significant dietary staple at about 900 CE. However, microbotanical research in the Northeast and Great Lakes has posited that maize may have been present as early as 300 BCE (Albert et al. 2018). Consequently, the authors were interested in examining the timing and scale of maize consumption in the upper Illinois River valley—an area intermediate between Greater Cahokia and the Great Lakes. Broad studies of Native maize consumption across Illinois generally seem to confirm that maize consumption did not assume importance in the area prior to the onset of the Terminal Late Woodland period (Emerson et al. 2025; Simon 2014).

A series of 38 radiocarbon dates, discussed above, have been key in demonstrating that the Fisher locality had a virtually continuous Native utilization/occupation beginning between cal 880–1025 CE to cal 1225–1370 CE (95.4%

probability; see Supplemental Table 1). This roughly five-century time span saw dramatic lifestyle changes in the upper Illinois River valley—especially, the authors suspect, in terms of subsistence practices. The question became whether the UIRV occupants were part of the Great Lakes pre-BCE maize regime or had followed the dietary practices in which little or no maize was consumed prior to 900 CE, as evinced by dietary isotopes and macrobotanical studies at Greater Cahokia (Emerson et al. 2020; Simon 2014). Given its continuous occupation, the Fisher site's dietary isotope evidence was key to revealing that maize only became an important subsistence crop in the UIRV in the post 1050–1100 CE period (see Supplemental Table 1). Dietary isotope research has shown that diets high in C_4 resources (e.g., maize) have bone collagen $\delta^{13}C$ values ranging between approximately −13‰ and −8‰ (e.g., see references in Emerson et al. 2025:29–30). The $\delta^{13}C_{collagen}$ values analyzed for 18 Fisher individuals who lived prior to a median date of cal 1100 CE (94% probability) averaged −15.9‰ (range −17.5‰ to −13.9‰), suggesting a mixed C_3/C_4 diet (Emerson, Emerson, et al. 2019). Isotopic differences among these individuals indicate that maize consumption varied. Some individuals consumed little to no maize, while others showed moderate levels of maize consumption (also Emerson, Emerson, et al. 2019). For the 18 individuals who lived after a cal 1160 CE median date, all consumed maize as a significant part of their diets, averaging −12.2‰ $\delta^{13}C_{collagen}$ (range −13.7‰ to −9.8‰). This pattern is very similar to that observed in the American Bottom during the TLW circa 900–1000 CE, where there was significant variation across individuals, with some consuming little to no maize and others consuming moderate (or higher) maize amounts (see Emerson et al. 2020). At Fisher there is isotopic evidence for significant maize consumption circa 1000–1100 CE, a pattern similar to that displayed in American Bottom populations (see Emerson et al. 2020:Figure 3). The Fisher site population dietary evidence provides substantiation for a lag time for the spread and adoption of significant maize consumption from post–900 CE era Cahokia north to the Mississippianized societies of the Illinois River valley.

Violence

The eleventh to sixteenth precontact centuries in central and northern Illinois have long been thought to have been characterized as times of high levels of internecine warfare, localized abandonment and migration, ethnogenesis, fluctuating cultural boundaries, and unpredictable climatic variation (e.g., T. Emerson 2007, 2012; T. Emerson and K. Emerson 2025b, 2026; Emerson et al. 2022; Milner 1999). In the central Illinois River valley (CIRV) and upper Illinois (UIRV) River valley, the period is characterized by the appearance of numerous fortified and burned villages (Conrad 1991; Conrad et al. 2019; T. Emerson 2007; Jackson and Emerson 2014; Wilson 2012, 2015). An even more vivid indication of troubled times has been revealed in the traumatic injuries documented across the CIRV and, more

particularly, in individuals buried at sites such as Orendorf (Steadman 2008) and Norris Farm (Milner et al. 1991; Milner and Smith 1990). The Orendorf site complex included five Spoon River Mississippian settlements, including at least one catastrophically burned fortified village and multiple mortuary mounds (Conrad et al. 2019) on a bluff top in Fulton County. Exploratory and salvage excavations of several mounds identified 268 individuals representing a population cross section of the thirteenth-century communities. Examination of these individuals indicated that 16% of the adult males and females showed signs of interpersonal trauma, including scalping, decapitation, embedded or internal projectile points, or blunt-force cranial fractures (Steadman 2008:58). During the fourteenth century Oneota intrusion into the central Illinois River valley, violence appeared to increase based on evidence from the Norris Farm cemetery. Milner and Smith (1990; also Milner et al. 1991) report that almost one-half (46%) of the 120 adults identified showed evidence of scalping, decapitation, blunt force trauma, projectile injury, and scavenger gnawing of their abandoned bodies. Such a scale of violence as identified at Norris Farms would have pushed the community to the brink of survival and likely was a factor in the ultimate abandonment of the CIRV in the fifteenth century. The CIRV evidence is a dramatic indicator of the level of violence researchers suspect was widespread among late precontact Mississippianized societies in the twelfth through fifteenth centuries.

There are indications that violence was not unknown among the TLW period inhabitants of the Fisher site locality. While the TLW Md°5 of Langford's Gravel Pits mounds was investigated and over 120 interments recovered by the WPA (K. Emerson and T. Emerson 2008, 2024a; Emerson, Emerson, et al. 2019), those individuals have never been fully analyzed for evidence of trauma. However, as these mounds were being destroyed by gravel mining, Langford (1927) observed exposed human remains as well as diagnostic Des Plaines phase ceramics in the disturbed earth. Among these remains he noted a triangular chert projectile point embedded in a left metatarsal, a humerus with an impact wound, and a pierced cranium—likely by an associated bone arrow point, as well as several other bones that appeared to have been pierced and various healed fractures of long bones (Langford 1928a, 1928b, 1930b, 1930c). The documentation of increased violence during Woodland times across the Eastern Woodlands has been recorded by regional scholars (e.g., McElrath, Emerson, et al. 2000; McElrath, Nolan, et al. 2025; also chapters in Emerson et al. 2000) and often attributed to the widespread adoption of the bow and arrow as well as increased population density and possible resource competition. The establishment of Des Plaines phase multigenerational mortuary zones at the Fisher site suggests the introduction of TLW territorial boundaries, which by default exclude others and provide a nexus for potential intergroup conflict.

Intertribal warfare has been suggested as one of the possible contributing causative factors in the TLW to Langford phase social, economic, and cultural transition in the upper Illinois River valley (Emerson 1999). From a detailed review

of the social construct of tribal formations and ethnogenesis, it is apparent that such processes are tied to periods of social, environmental, and political stress, especially along boundary zones between different societies, such as the incipient Upper Mississippians of the UIRV and the Mississippians of the CIRV. Such transitions seem to be characterized in the archaeological evidence available for the formation of the early Langford phase societies in the UIRV (Emerson 1999). In the case of the emerging Langford phase societies, Emerson (1999:7–12) observes that "[s]uch disruptions should lead to (1) coalescence of population into larger aggregations, (2) increasing centralization of leadership, perhaps reflected in centralized rituals and activities, (3) escalated levels of violence, and (4) increased territorial boundedness" (Emerson 1999:12).

Emerson (1999:33–41) proposed that the appearance of Mississippianized chiefdoms in the central Illinois River valley not only created a chaotic political landscape in the CIRV but also spread intergroup violence to the neighboring inhabitants of the UIRV. The presence of diagnostic CIRV Mississippian Spoon River culture material items and practices, such as CIRV bean pots, discoidals, copper ear spools, wall-trench building construction, marine shell beads, and diagnostic ceramic styles (Griffin 1943:269–283; Griffin 2024 [1946]; also T. Emerson and K. Emerson 2025b, 2026), at the Fisher site serves to signify such interactions. While there are no currently known fortifications associated with Langford villages, this may be due to the lack of investigations rather than their absence. It is known, of course, that by the fourteenth century the Fisher phase inhabitants of Hoxie Farm on the Chicago Lake Plain felt the necessity of protecting their village with multiple ditches and berms and a palisade. That such an atmosphere of violence existed is supported by the recovery of individuals with blunt-force cranial trauma and evidence of scalping from a small Fisher phase cemetery adjacent to and probably contemporaneous with the Hoxie Farm Fortified Village (Hargrave et al. 2017).

The clearest proof of past violence is the evidence of personal trauma to individuals. The legacy collections from early academic and salvage investigations (1920s–1940s) of UIRV mortuary sites provide an uneven perspective on the variation in Langford phase personal trauma. The 1928 UC excavation of 150 individuals from the eleventh- to thirteenth-century Langford phase Oakwood Mound (11WI1) in Joliet is remarkable by the near absence of any signs of trauma that could be aligned with intergroup violence (Strezewski et al. 2012). The partial salvage of the floodplain mound at the Gentlemen Farm (11LS27) site, near the bluff-top Material Service Quarry site, yielded the remains of 48 individuals from an estimated burial population of 200–300 (Brown et al. 1967). Unfortunately, this population has never been examined for perimortem trauma (Emerson et al. 2005:Note 2). However, as 1960s mining was destroying the thirteenth-century Material Service Quarry site (11LS50), a series of rescue excavations recovered 35 individuals from the badly damaged and looted mound (Emerson et al. 2010) that likely may have included well over 200 interments at one time. While the examined population is small, analysis showed at least five instances of blunt-force

trauma and at least two examples of scalping. The limited and somewhat ambiguous evidence from these sites would seem to belie an image of the UIRV as a zone of universally intense internecine warfare.

However, the discoveries at the Fisher site provide a stark contrast to the view of a tranquil late precontact scenario in the UIRV. Hints of a more violent past began to emerge with Langford's (1930d) Fisher investigations of the mortuaries that revealed examples of bone fractures and embedded projectile points, later supplemented by his excavations in the village that revealed the prevalence of scattered and fragmented, sometimes burned, human remains from across the village area, and what often appeared to be widespread evidence of the probable catastrophic burning of many of the houses dating to both the Langford and Fisher phases that he investigated (K. Emerson and T. Emerson 2024b; Griffin 2024 [1946]; Langford 1928a, 1928b, 1930b, 1930c; Langford et al. 2025). While the bioarchaeology of Fisher site populations has unfortunately never been thoroughly documented, we are fortunate that targeted research by Michael Strezewski (2006) on trauma has revealed the extent of violence therein.

Strezewski (2006) was able to examine for trauma the crania of individuals then curated by Indiana University from Langford's burial excavations at the Fisher site. Of the 125 adult individuals from the Big East and Big West Mounds, a little over 6% (mostly males) showed evidence of having been scalped and/or killed by blows to the head by celts or by spiked war clubs. In the sample of 22 crania from the Big East Mound examined by Hedman, 7 showed signs of scalping, and most individuals had been killed by celt blows to the head. The most obvious evidence of violence at the site was the discovery of a mass burial pit containing the disarticulated and jumbled remains of men, women, and juveniles in what Langford referred to as the South-Southwest Mound (SSW). Examination of his notes suggests that SSW Mound was not a constructed mound but rather an expediently employed burial area. Strezewski (2006:Figure 2) presents a plan and profile sketch drawn from Langford's notes of the SSW mound mass burial showing its clear superpositioning and intrusion into earlier burials and cache pits. Interestingly, the mass burial pit intruded on at least 2 refuse pits that contained grit-tempered ceramics (presumably of Langford phase derivation), indicating it is later in the occupation sequence. Of the about 40 individuals recorded in the mass burial, Strezewski (2006:258, Table 2) was able to examine the remains of 9 who ranged in age from 9 months to middle age. He identified at least 6 instances of perimortem blows to the head, primarily from celts, and 2 examples of scalping. He noted that the predominance of females and the presence of juveniles among the victims suggest that this event occurred as a direct raid on the village and that none were spared. This scenario is supported by the available Sr information indicating that individuals with perimortem trauma were "local." Coincidentally, the wounds on the females indicated that they were likely fleeing when killed, whereas those on the males indicated they were facing their attackers at the moment of death.

The evidence of burned houses mentioned earlier supports the scenario of a village raid as does the discovery of the fragmented and sometimes burned human remains in the village and houses (e.g., Griffin 2024 [1946]; Langford et al. 2025). Based on his interpretation of a series of 11 relative fluorine dates and two AMS assays from the Big East Mound, Strezewski (2006:262–264) suggests one period of violence occurred between cal 1225 CE and cal 1300 CE. New radiocarbon dates from two individuals from the SSW Mound provided cal 1285–1375 CE and cal 1320 CE and cal 1410 CE, suggesting a slightly later date for the event (see Supplementary Table 1). While the dated individuals are from the mass burial pit, which superimposed a series of earlier burials, their detailed provenience within the pit is uncertain.

Though violence in terms of the percentage of deaths in the populations does not appear to have reached the dramatic levels of the chiefdoms of the CIRV, it is apparent that the threats were ongoing and could escalate to significant village raids that resulted in the deaths of women and children as well as warriors and may have led to village destruction and abandonment. Scholars in the CIRV have documented the negative social, political, and health effects of such persistent patterns of raids (Milner 1999; Milner et al. 2013; Milner and Ferrell 2011; Vanderwarker and Wilson 2016; Wilson 2012, 2015). The unpredictable climatic conditions, shifts in subsistence patterns, fluid population movements, and presence of adjacent potentially hostile CIRV neighbors must have created an unstable and stressful context for life in the late precontact period UIRV.

Langford and Fisher Phase Structures

Despite being the largest and most thoroughly investigated late precontact Upper Mississippian habitation in northern Illinois, the potential contributions the Fisher site can make to understanding domestic structures from this period have been undervalued. To some degree, this is due to the previous limited awareness of and access to Langford's archival documents by researchers (but see Christenson 2025; Griffin 1943:269–283), the WPA 1940 excavation records (K. Emerson and T. Emerson 2024a), and unpublished documents such as Griffin's thesis (2024 [1946]). The authors' reexamination of these sources and new research at other Upper Mississippian sites have provided insights into Upper Mississippian domestic architecture in the UIRV.

From the onset of his involvement with the Fisher site, Langford (Langford et al. 2025) suspected that the 50 or so depressions he observed were most likely the remains of aboriginal dwellings. He postulated that they might resemble the earth lodges recorded for the Mandan in the Missouri River valley. While he found central fireplaces and what appeared to be floor debris, his search for large central posts or other structural evidence of walls yielded few insights as to the form of the dwellings' superstructures (Figure 2). To some degree, this may have been due to his pitting technique that involved irregular holes excavated rapidly down to

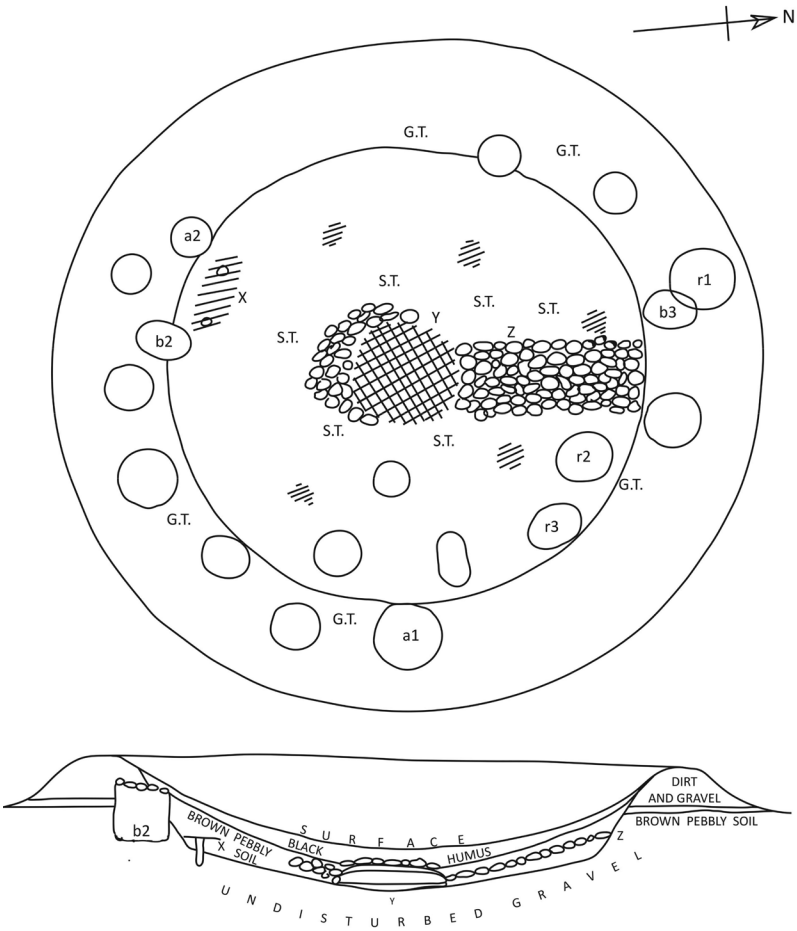

Figure 2. Key: (a) ash hole; (b) partly cremated child burial; (r) refuse hole; (x) charred layer over small posts; (y) red over gray ashes; and (z) ramp of large gravel. Redrawn map of HP 19 field sketch by Langford highlighting the distribution of S.T. (shell-tempered) and G.T. (grit-tempered) large pot fragments and the main features of the structure as well as a cross section of the house pit basin. The interior floor diameter was 29 ft while the diameter of the surrounding berm was measured at 40 ft. Note the definition of two posts and possible charred wall section on the south portion of the structure floor, as well as a large central hearth and what is interpreted as a sloped graveled entry ramp. (Courtesy of Kjersti Emerson.)

the level of what he considered significant cultural materials. While he was concerned with vertical stratigraphy, he did not open wide horizontal areas—the lack of which would have made the identification of post molds a challenge.

From 1927 through 1929, Langford (Langford et al. 2025) tested nearly two dozen house depressions seeking evidence of domestic construction techniques, with limited results. During this period, the UC students also performed a systematic grid-based excavation of House Pit 21. However, like Langford's explorations, it failed to reveal any architectural evidence despite exposing both the structure floor and some of the surrounding embankment. It was not until Cutter's 1940 WPA

controlled excavations of House Pit 15 revealed a double wall-trench structure that the architectural form of some Fisher site dwellings was confirmed (Figure 3).

Griffin (2024 [1946]) conducted detailed stratigraphic ceramic analyses of the house depression and various features seeking to determine the cultural association of the dwelling, but with moderate success. Perhaps the most compelling

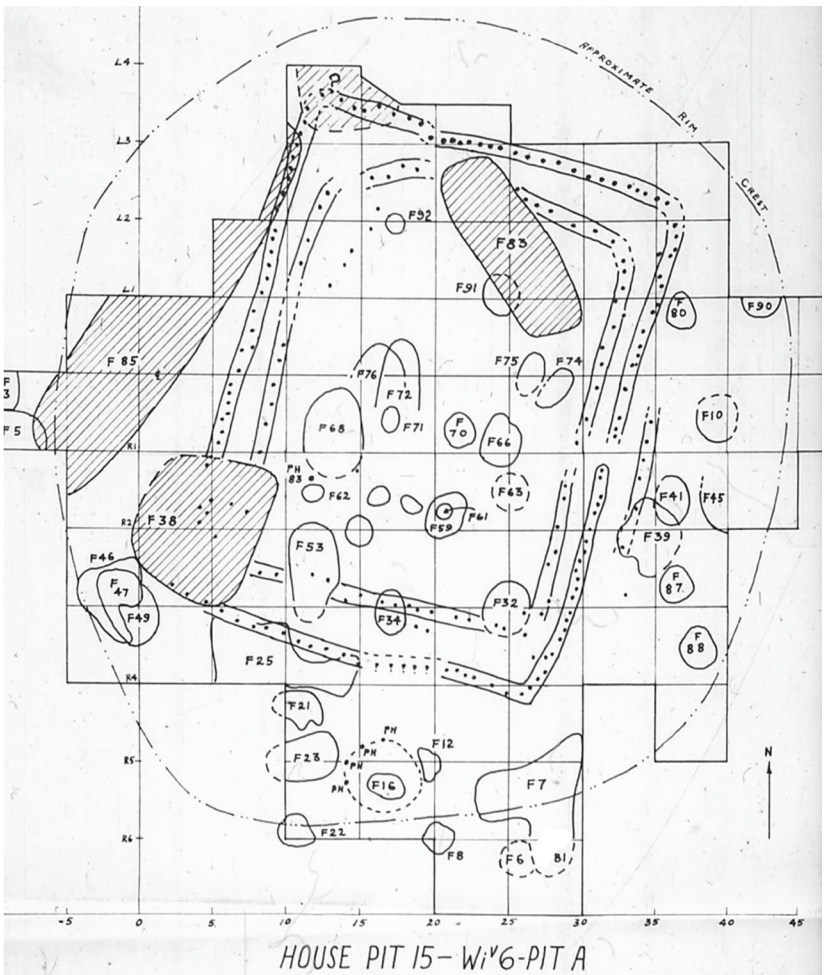

Figure 3. Map of the 1940 WPA excavations of House Pit 15 (UC Wi^{V}6—Pit A) that first revealed the presence of wall-trench architecture at the Fisher site. The outer wall trenches encompassed an area 35 ft in length and 25 ft in width. Postholes are indicated by black dots, uncertain limits of features and trenches by broken lines, Langford's excavated areas by hachured fill, and the unique sweat bath by the dashed lines (encircling Feature 16; Griffin 2024 [1946]:Figure 21). The basin contained the foundations of two structures indicating the rebuilding and replacement of the smaller (57.4 m^2) house with a larger (87.5 m^2) second dwelling. Griffin (2024 [1946]) suggests that the inner wall trenches likely represent the foundations for benches bordering the outer wall, while K. Emerson and T. Emerson (2024b) raise the possibility that the two sets of wall trenches represent a rebuilding of the structure. The short exterior wall on the east side seems to have acted as a screen for the entryways indicated by aligned 3-foot-wide gaps in the two walls. A low spot in the outer rim embankment at this spot suggests a ramped entryway. (Figure modified courtesy of Kjersti Emerson.)

line of evidence was provided by the presence of both shell-tempered and grit-tempered sherds in the wall-trench fills, seemingly indicating that the house must have been constructed during the later Langford phase occupation. A revealing aspect of the HP 15 excavation was the WPA excavators' recognition of a unique small single-post structure interpreted as a steam bath just to the south outside the dwelling, the only occurrence of such a facility that the authors are aware of in a Langford phase context.

There is moderate evidence for the use of wall-trench construction techniques by Langford phase groups. The identification of wall-trench structures associated with Langford habitation has been recorded at the Grand Village of the Kaskaskia near Starved Rock (Brown 1961:22–25). The site also yielded single-post patterns suggestive of oval structures, but their cultural association is unclear (Brown 1975:11–13). Single-post patterns suggestive of dwellings were observed at the single-component Langford phase Reeves site (Craig and Galloy 1996). Perhaps the most intriguing set of Langford phase structural data has come from the multicomponent Noble-Wieting site (11ML24) in central Illinois. Excavations there have revealed mixed CIRV Mississippian and Langford occupations that produced both single-post and unusual wall-trench structures (Miller et al. 2019; Schilt 1977). Miller and others' (2019) review of possible Langford dwelling forms indicates that these groups likely utilized variants of wall-trench construction that suggest, but do not duplicate, those employed by central Illinois River valley Mississippian societies (e.g., Emerson, Conrad, et al. 2019). In the CIRV, the late thirteenth-century through early fourteenth-century intrusion of northern Oneota groups into the Mississippian societies of the central valley is marked by the appearance of single-post domestic structures constructed by the Oneota people versus the wall-trench buildings of the Indigenous inhabitants (O'Gorman and Conner 2023). However, the diversity of structure forms does not appear to have been part of the CIRV groups' move into the prairie lands surrounding the roughly contemporaneous Noble-Wieting site.

More intriguing evidence of dwelling configurations at the Fisher site is that which appears attributable to the Fisher phase. An examination of Langford's (Langford et al. 2025) detailed records of house pit explorations suggests Fisher phase dwellings may have been unique among regional late precontact groups. Although the Fisher site house structures and mortuary areas had been severely damaged by several years of heavy plowing prior to Langford's explorations, his observations and detailed records make it clear that these houses had unique characteristics. They seem to have been oval to circular pit dwellings, ranging in size from 15 ft to 30 ft in diameter, excavated between 3 ft and 5 ft into the basal gravel, and surrounded by a raised embankment of spoil gravel often reaching 2 ft to 4 ft in height, creating a floor that might have been as much as 8 ft below the top of the surrounding berm. Typically, such dwellings had a large central hearth, few subfloor pits, unique sidewall pits, an occasional sloping entry ramp, and sparse floor debris suggesting they were cleaned often (Figure 4).

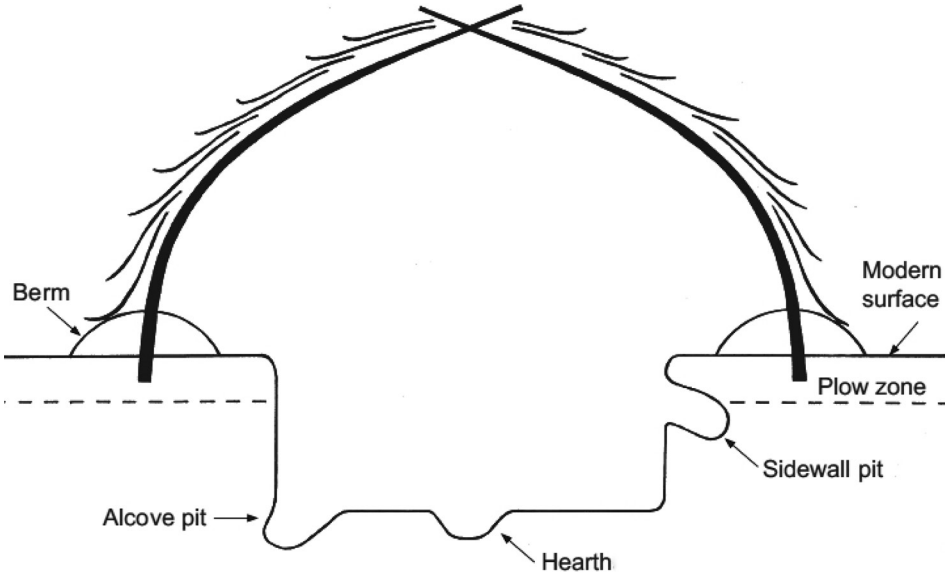

Figure 4. Suggested reconstruction of a Fisher phase subterranean pit dwelling from the Hoxie Farm site. (Modified from Jackson and Emerson 2014:Figure 5.1.)

Langford searched for but seldom encountered evidence of any posts in the floor area that would have indicated roof or internal supports. Similarly, the UC excavations in HP 21 failed to discover evidence of posts. However, given a retrospective review of Langford's findings and subsequent research at the Hoxie Farm Fortified Village (Jackson and Emerson 2014), it is possible to offer a likely interpretation of the roof construction of the site's Fisher phase dwellings. Because many of the dwellings were destroyed by fire, Langford was able to record numerous examples of large sections of burned thatch, sometimes interwoven or cross-hatched, and multiple burned branches. Based on architectural examples from contemporaneous sites, these most likely represent portions of collapsed, burned gable or bent-pole mat roofing. Because Langford was expecting to find heavy posts and sturdy wall framing, early in his investigations, he interpreted these woven thatch and branch remnants as representing insubstantial windbreaks and concluded the dwellings were unroofed.

The apparent construction of deep subterranean pit houses lacking any trace of wall posts on their floors has a potential analogy from the Fisher phase houses excavated by Douglas Jackson (2014:74–140) in the fortified village at the Hoxie Farm site. This village represented the short-term palisaded settlement of a group evidently under threat. The pit houses were rather small (~8 ft to 18 ft in length), were crowded together, likely had surrounding raised berms (as suggested by early settler postcontact accounts), and had small hearths and few subfloor or wall pits. They were occupied for only a short period of time, presumably in response to a perceived immediate threat. Despite their expedient nature, they do provide

insights into Fisher phase building practices. Like at the Fisher site, these dwellings lacked any evidence of floor posts; however, Jackson (2014:77–78) proposed that they were covered with a bent frame thatched roof, with the wall posts' butt ends embedded in the top of the surrounding berms (Figure 4). At both Hoxie and Fisher these berms were destroyed by plowing prior to excavations, thus eliminating potential evidence of the buildings' superstructures.

Settlement Organization

UC investigators estimated the area of the Fisher Mounds and Village site as covering at least 17 acres (see Figure 1). While the most visible features of the Fisher site involved the two prominent central mounds and their surrounding structure depressions, which the authors have labeled the "Main Village," the locality also includes a smaller separate cluster of dwellings, which the authors consider the "Northwest Village" (as recognized earlier by Griffin 2024 [1946]). It is also possible to distinguish several discrete clusters of mortuary features, such as the three TLW Gravel Pit Mounds, a row of three small burial areas (i.e., Langford's WM, SW, and WS mounds [here the "West Mounds"]) to the west of the gravel ridge, and an isolated postcontact Native cemetery south of the Main Village. There are hints in the available records that other less visible mortuaries and structures were scattered across the Fisher locality.

The Fisher site is typically described as having contained 12 mounds—a description that may be somewhat misleading (Figure 5; Table 3) since few of the features so identified seem to represent culturally constructed mortuary monuments and all are not contemporaneous. The minimal height of a number of these burial complexes led Langford to wonder if they were simply intensively employed cemeteries whose slight elevations were the result of repeated use. Our understanding of these mortuary areas is constrained since they were not explored until after they had been subjected to several years of plowing that modified their heights while increasing their diameters, and in numerous cases, the mortuary features were either unexplored or investigations by Langford were restricted to small test pits.

One separate cluster of three discrete mortuaries, the Gravel Pit Mounds, lies to the far west of the Main Village and represents the mortuary area of Terminal Late Woodland Des Plaines phase people. One of these mounds (SGP) was destroyed prior to being documented by Langford (Langford 1927:186–187; Langford et al. 2025); however, the other two (GP and NGP) were recorded as being 1.5 ft to 2 ft in height, with diameters of 25–30 ft and 40 ft (see Table 3). The GP mound (relabeled Wi°5 by the UC) was partially salvaged by WPA crews in 1940 (K. Emerson and T. Emerson 2008, 2024a) and later analyzed and reported by Gillette (2024 [1949]) and Emerson and colleagues (Emerson, Emerson, et al. 2019), providing evidence for its functioning as an intergenerational interment area from the late ninth to early eleventh centuries CE. The GP burial complex was challenging to

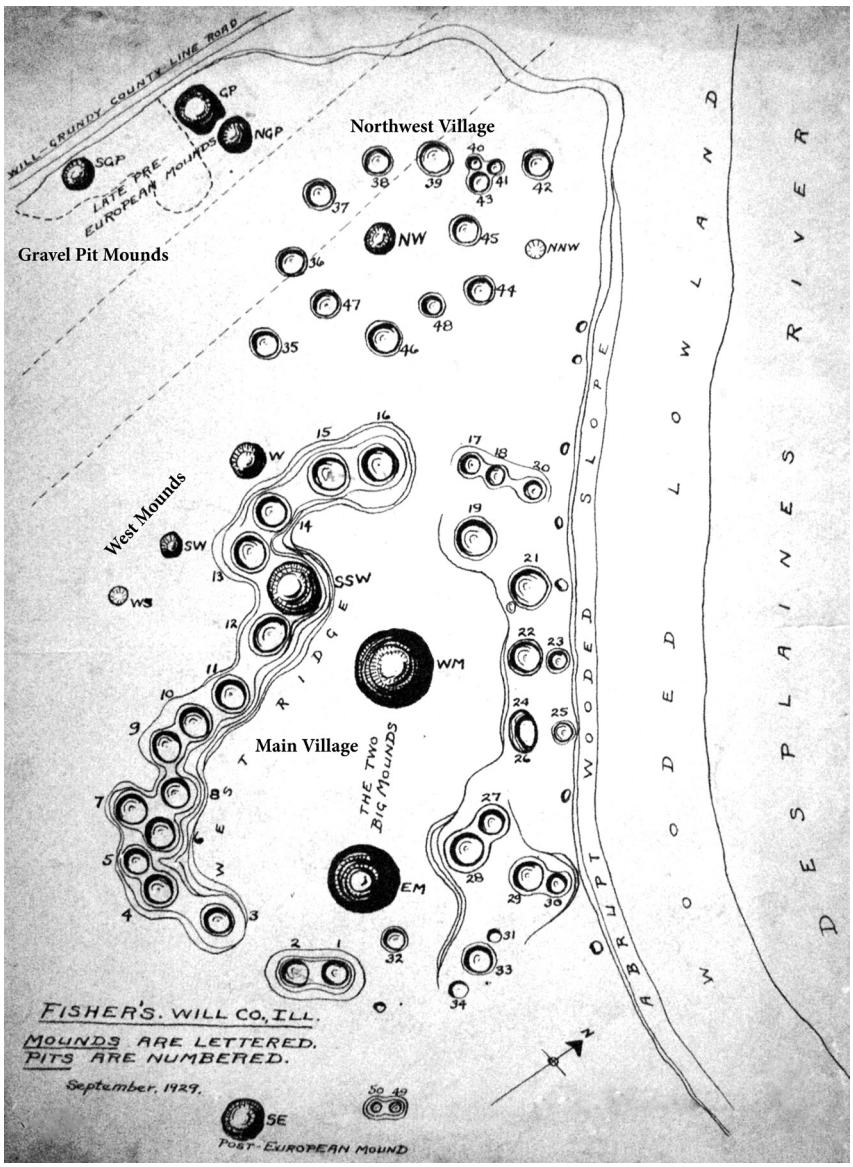

Figure 5. Topographic rendition (unknown scale) of the Fisher site prepared by George Langford in September 1929 with the authors' internal site labels added. (Modified from Langford Archives, Illinois State Archaeological Survey.)

interpret but included a black seam (possible humus zone), suggesting a period during which use of the burial area was abandoned. Burials were primarily beneath the black seam, but some seemed to cut through it. The widespread disturbance of the burials, both through Native grave digging that cut through earlier burials and later looting by collectors, resulted in only 35 intact burials encountered by excavators, despite the remains of approximately 120 individuals having been identified (Gillette 2024 [1949]). Grave inclusions were rare, although isolated nonmortuary caches of artifacts, ceramics, and two discrete dog interments

Table 3. Fisher Site Mounds and Cemeteries.

Mortuary Area	Dia. (ft)*	Ht (ft)*	UC Md #s.	Cult. Assoc.
Big East Mound	40–50	6	Wi°8	UM
Big West Mound	50–60	8	Wi°9	UM
GP	40	1.5	Wi°5	TLW
NGP Md	25–30	2	None	TLW
NNW			Wi°12	?
NW Md	10	1	Wi°11	?
SE	25–30	3	Wi°7	Postcontact
SGP			None	TLW
SSW (Mass Burial)	20	1	Wi°10	UM
SW Md	20	2.5	None	?
W	25	1.5	None	?
WS			None	?

Note: Except for the Big Mounds and perhaps the Gravel Pit Mounds, there is reasonable doubt as to whether the other "mounds" may represent the slight buildup of soils in frequently reused cemeteries rather than culturally constructed mound features.

* Throughout Langford's, Griffin's, and Gillette's accounts the estimated heights and diameters for the mounds vary.

were discovered. As many as 200 individuals may have been interred in Wi°5, and if the mortuaries represented in SGP and NGP contained a similar density of the dead, it suggests a high concentration of TLW people in this area. These centralized mortuaries represent a stark contrast to the contemporaneous TLW settlement pattern of low-density, dispersed campsites.

Seven other mortuaries are reported at the Fisher site and summarized by John Griffin (2024 [1946]). A north–south alignment of three small low mounds (W, SW, and WS [i.e., the West Mounds]) lies to the west of the gravel ridge that holds House Pits 11 through 15. These mortuary areas range in height from 1 ft to 2.5 ft and are about 20 ft to 25 ft in diameter. Limited testing in two of them revealed human remains but no cultural materials.

The status of SSW as a mound is questionable, and Griffin suggests that the 30-foot diameter area located on the ridge between HP12 and HP13 represents a conglomerate of storage pits, middens, and burials like other areas of the village, rather than a constructed mound. This is the location of the large pit that contained the remains of the massacre victims discussed earlier.

A small feature about 10 ft in diameter and 1–2 ft high was recorded within the Northwest Village, a small circular cluster of 14 Langford phase house pits (HPs 35–48) northwest of the Main Village. Testing by Langford revealed evidence that to Griffin (2024 [1946]:80) suggested that this was likely a house pit that had been filled with midden into which burials had been inserted, perhaps subsequently turned into a cemetery adjacent to the courtyard area of this circle of houses—maybe analogous to the pattern observed in the Main Village, with its central mortuaries in the Big Mounds.

To the north of the Northwest Village, a small NNW "mound" was mapped along the bank edge in which three interments were discovered during limited explorations by Langford; no other information is available for this feature. An isolated burial area (SE) southeast of the central village was discovered by looters and later

investigated by Langford (1927) and the WPA crews (Gillette 2024 [1949]); it represented a postcontact American Indian cemetery dating to the late 1700s through early 1800s. Postcontact records and Canadian trade silver encountered led the investigators to believe that these individuals may possibly have been associated with the occupation of the area by a Potawatomi band. Although separated and discrete from the precontact Main Village, there is little doubt that the presence of the Fisher site mounds served as a draw to the newly arrived Algonquian immigrants from the east, even several centuries after the site had been abandoned.

The Main Village area of the site is represented by two large mortuary mounds (6–8 ft in height and 40 ft to 60 ft in diameter) that were exhaustively investigated and reported by Langford (1927; also, Griffin 2024 [1946]; Gillette 2024 [1949]). These mounds, designated as the "Big West" (WM) and "Big East" (EM) Mounds, contained hundreds of interments minimally associated with the Upper Mississippian occupations of the site, as well as many individuals of unknown cultural affiliation. The information obtained from these investigations contributed to identifying the Upper Mississippian Langford and Fisher cultural phases (Griffin 2024 [1946]; Langford 1927).

The pivotal location of the two Big Mounds and the adjoining vacant space encircled by house pits is an unusual village organization in northern Illinois. However, a possible comparable village layout can be observed at the Noble-Wieting village in central Illinois. This village seems to represent a multiethnic occupation by Langford phase and central Illinois Valley Mississippian peoples during the fourteenth century. Geophysical investigations at the 6-acre site revealed a circle of about 40 structures surrounding a central cleared zone that, according to postcontact accounts, had once contained a mortuary mound (Miller et al. 2019:Figure 2).

During the WPA excavations at Fisher, crews placed several test squares in the areas between and near the Big Mounds to confirm their interpretation that the areas around the Big Mounds were deliberately kept clear of storage pits and houses. Griffin's (2024 [1946]:112–117) analysis of these test trenches demonstrated that, while only a minimal amount of habitation debris was found in the surface deposits, one set of trenches ("i") immediately adjacent to the mounds revealed a series of unaffiliated burials that he interpreted as dating to the post–Upper Mississippian occupations. In observing the thickness of deposits in this central space between and around the mounds, Gillette (2024 [1949]) noted that some areas appeared to have been "stripped" of soil (including the berms of a house). He suggested these soils had been used to construct the big mounds and that the inclusion of these midden deposits accounted for the appearance of the occasional intrusive TLW ceramics in the Upper Levels of the Big Mounds.

Some of the great unknowns at this site are the number and cultural affiliation of structures in the village. While Langford and the UC mapped 50 suspected house pits, only some of them were investigated, and results suggest that a few of the depressions might have been storage-pit clusters rather than houses. More intriguing were the identification and numbering by WPA crews of an additional

three houses (HPs 101–103) spread along the bank edge that are recorded on UC maps (see Figure 1). An examination of the WPA field notebooks failed to reveal any information on the nature of these discoveries. The authors assume they were identified based on rather shallow surface indications since they were not observed by earlier investigations, unless these are the small bank-edge features depicted by Langford on his September 1929 topographic map (see Figure 5). The presence of these dwellings raises the possibility that there may have been numerous other houses with shallow or nonexistent basins that were not recorded. This suggests a larger population for the Fisher village than currently expected—an interpretation in line with the large mortuary populations at the site.

Dissecting the village layouts is challenging due to the authors' inability to discern the chronological and cultural associations of the various structures. While the authors have examined Langford's (Langford et al. 2025) archival records in detail and inventoried the existing ceramic (K. Emerson 2025) and lithic (Tufano 2025) collections, the information on context and material associations within structures is generally limited. In broad terms, there appears to be a consensus among researchers (K. Emerson and T. Emerson 2024b; Griffin 2024 [1946]; Langford et al. 2025) that three discrete groupings of structures can be recognized (see Figure 5). The most obvious is the Northwest Village's roughly circular arrangement of 14 house pits (HPs 35–48), possibly with a central mortuary area, located several hundred feet northwest of the Main Village occupation. This bank-edge cluster is spatially discrete from the larger Main Village settlement to the east. Few investigations were carried out in this area, but fortunately Horner (1947) investigated HP 48 in 1947, revealing a wall-trench Langford phase dwelling. Limited tests in HPs 42 and 46 and test squares by the WPA yielded only grit-tempered sherds (Griffin 2024 [1946]). As mentioned above, two radiocarbon assays on HP 48 yielded a date range between cal 1207 CE and cal 1282 CE. This western house cluster forms the currently best-known example of a small early thirteenth-century Langford settlement in northern Illinois.

The Main Village structures arranged in an oval (see Figures 1 and 5) around the two Big Mounds can be divided into a northeastern generally linear riverbank group, minimally including 17 structures (HPs 17–34). Langford (Langford et al. 2025) and Griffin (2024 [1946]) generally interpret these riverbank dwellings as having been occupied during the Fisher phase. The southwestern cluster of structures, HPs 3–16, to the west of the Big Mounds, was strung along a raised gravel ridge. The evidence suggests that this group of dwellings predominantly dates to the Langford phase; however, given the significant presence of diagnostic Fisher phase materials, they seem to have been built over an earlier Fisher phase occupation. These patterns may represent the construction of Langford structures in earlier Fisher house depressions. Langford's notes (Langford et al. 2025) and the existing material assemblages have provided only limited insights into the identification of the final occupations of these house-pit basins, and the cultural affiliations presented here should be considered tentative at best.

This complex pattern of mixed cultural assemblages and superpositioning seems to indicate the possible multiple reutilizations of structure basins by both Fisher and Langford peoples across the Main Village. However, the general pattern of an earlier Fisher phase occupation subsequently overlain by Langford phase occupations seems to hold true throughout the Upper Mississippian presence in the Main Village. At the same time, Griffin (2024 [1946]) observes that both the Langford and Fisher phase structures show evidence of having been destroyed by fire, confirming a complex history of multiple episodes of destruction, abandonment, and reoccupation. The periods of abandonment may have been of some duration given the development of humus horizons in the Big Mounds. The existence of two spatially discrete villages involving HPs 35 to 48 and HPs 3 to 16 certainly seems to represent two distinct, likely noncontemporaneous, occupations by Langford inhabitants. The image that emerges from the Fisher site evidence is that, while the locality served as a place of persisting mortuary emphasis for TLW, Fisher, and Langford people, it was only densely inhabited during the Upper Mississippian era. Regional studies (Emerson, Emerson, et al. 2019; Emerson and Titlebaum 2000) have shown that the TLW groups in this region tended to live in small, dispersed family settlements rather than in dense villages as did contemporaneous TLW peoples to the south (Emerson et al. 2024). From his analysis of the Fisher site Upper Mississippian occupations, Griffin (2024 [1946]) estimated that the structures represented a sequential palimpsest of moderate-sized, discrete clusters of 15 to 20 structures. However, the possibility remains that there were at least two circular villages surrounding a central gathering space focused on mortuary activities (i.e., like the layout of the Noble-Wieting site). Even at this scale of occupation, it is probable that residential populations did not exceed 200 to 300 individuals. This pattern stands in stark contrast to the densely occupied Fisher phase Hoxie Farm Fortified Village with its estimated hundred or more dwellings and potential population of one thousand. Thus, the Fisher site stands out as even more intriguing in its restricted habitation use versus the intensive and extensive use of the locality as a mortuary for hundreds of years.

Persistent Mortuaries

While George Langford had long been aware of the aboriginal features at the Fisher site, he had done little in terms of investigation at the site. However, in 1922 the land began for the first time to be plowed for agricultural use. The plowing severely affected both the mounds and the house pits. Additionally, he observed the Gravel Pit Mounds on the far west edge of the Main Village were being destroyed for local road improvements. These factors led Langford to undertake investigations especially targeting the mortuary areas during the period of 1924 through 1927 (Langford 1927, 1928a, 1930b; Langford et al. 2025). Ultimately, Langford would explore many of the identified burial areas as well as discover additional burials when he turned his attention to the village area in 1927. Subsequent work

by WPA investigators in 1940 revealed other burials across both the Main Village and in Mound Wi°5 (K. Emerson and T. Emerson 2024b; Griffin 2024 [1946]).

Interpreting the cultural affiliation, chronological placement, and burial context of the numerous interments encountered at the site has challenged investigators for nearly a century and, for the most part, remains unresolved (e.g., Gillette 2024 [1949]; Griffin 2024 [1946]; Langford 1927). Consequently, here the focus of discussion is on an unacknowledged aspect of the Fisher site locality—its apparently fundamental role in at least six centuries of late precontact Native mortuary ritual in the UIRV. The scale and duration of interments at this location stand in stark contrast to other known mortuary complexes in the immediate vicinity. Salvage excavations at other Langford phase mortuary sites, such as Gentlemen Farm (Brown et al. 1967) and Material Service Quarry (Emerson et al. 2010), and UC excavations at Oakwood Mound (Strezewski et al. 2012) have suggested the presence of at least one intergenerational accretional mortuary mound, associated in each case with a village, that may have contained the remains of more than 200 individuals. This mortuary behavior appears to have been derived from the Langford phase people's ancestral ties with the TLW Des Plaines peoples responsible for mound Wi°5. We know little about Fisher phase mortuary practices, but a series of small cemetery plots were discovered at the Hoxie Farm site containing 73 individuals, presumably associated with the same Fisher phase occupation responsible for the adjacent fortified habitation area (Hargrave et al. 2017). The limited regional information seems to confirm that Langford groups, like their CIRV Mississippian neighbors and perhaps their TLW ancestors, clearly built accretional burial mounds to house the remains of their deceased members, whereas Fisher phase people employed flat cemeteries.

Langford presented composite sketch maps in 1927 (Langford 1927:Figures 2 and 3) illustrating the location and position of individuals buried in the Big East and Big West Mounds. He included the burial numbers, where known, with open circles representing the position of pottery. The depictions do not show the vertical differentiation of interments, thus flattening the chronological perspective and obscuring any cultural stratigraphy. It seems apparent that the Big Mounds represent the creation of an initial more or less "flat" cemetery overlain by subsequent mound-building customs; such a sequence would align with the preferences of the Fisher phase people for cemeteries and the demonstrated Langford phase practices of mounded burials. It is apparent that not all burials coincide with the mound limits, suggesting they may predate (or postdate) the construction of the mortuary mound (Langford 1927; also Griffin 2024 [1946]).

While it continues to be difficult to disentangle the history of mortuaries at the Fisher site, our new research has demonstrated it was a place selected for the interment of the dead by 3000 BCE, a practice sporadically traced through the terminal Late Archaic–Early Woodland transition and that dramatically expanded in scope in TLW and Upper Mississippian times. While it is difficult, given the nature of the archaeological evidence, to provide precise numbers of the dead interred

at the Fisher site, the authors estimate that the three TLW mounds may have included as many as 500 to 600 burials (Emerson, Emerson, et al. 2019). Langford (1927) indicates that he encountered 603 individuals in his exploration of the Big Mounds. Both Langford and the WPA encountered dozens of burials in the small mortuaries and in scattered locations across the village; it is impossible to determine the scale of those interments given the limited testing performed (e.g., Gillette 2024 [1949]; Griffin 2024 [1946]). From the curated collections and the records, it is apparent that only a limited number of select elements (primarily crania) were removed from the site, with perhaps 90% of the identified burials ultimately obliterated by farming and mining. What can be determined is that the Fisher site was the location at which at least 1,500 individuals were interred, and this practice had deep roots going back as far as 3200 BCE and continuing into the early nineteenth century, when postcontact documented tribes buried their dead there. It was truly a persistent place and, to the authors' knowledge, one without equivalent in the Native history of the UIRV.

Implications for Regional Native History

A little under a century ago, one of the most significant American Indian sites in Illinois was partially destroyed to provide gravel for the construction of the now-abandoned Dresden Island Lock and Dam on the Des Plaines River. Within the next few decades, continued gravel mining would complete that destruction, leaving a gaping hole in the riverbank that would ultimately become a modern marina. During this process, this unique village and mound complex was brought to the notice of prominent archaeological institutions, but none was able to or interested in investigating these remains. Given this lack of interest, it fell to local engineer George Langford and his companions Alfred Tennik and Tom Dudley, two local laborers, to recover what they could of the human remains and archaeological materials in the face of the site's annihilation. Their effort resulted in the creation of one of the most important legacy collections in Illinois archaeology.

The documentation and analysis of these legacy assemblages have been the focus of the Fisher Mounds and Village Site Historical Documentation Project (HDP) by the authors for the last two decades, with the goal of ensuring that the evidence from this site makes its rightful contribution to an understanding of late-precontact Native history (T. Emerson and K. Emerson 2024). The HDP has made considerable primary data and new analyses available to regional scholars (K. Emerson 2007, 2017; K. Emerson and T. Emerson 2024a, 2024b;T. Emerson and K. Emerson 2025a, 2025b; T. Emerson and K. Emerson, eds. 2024; Emerson, Emerson, et al. 2019; Emerson et al. 2022; Emerson et al. 2025; Langford et al. 2025).

The insights gained from a reexamination of these pioneering archaeological investigations and equally important curated collections and documents help add substance to the authors' perspectives on a critical era of Native history—the centuries prior to the initial impacts of European contacts in the northern

midcontinent. Reviews of Native societies during this period by Milner and colleagues (2001) illustrate a regional distribution pattern of discrete population clusters seemingly separated by significant areas of underutilized or "empty" zones. A detailed review of the archaeological evidence from the post–1000 CE period identified a similar cultural context in the Midwest and indicates it is an era marked by the emergence of distinctive ethnic identities (Brown and Sasso 2001; T. Emerson 1999, 2007, 2012). During this period, late precontact Native populations in the UIRV were concentrated on the Lake Plain and along the headwaters of the Illinois River around modern-day Chicago (Emerson et al. 2022). They were isolated from contemporary groups in Wisconsin and Indiana by apparently unoccupied zones and had sporadic and uncertain interactions with the substantial neighboring Mississippian societies in the CIRV. Brown and Sasso's review (2001) illustrates how sparse our knowledge is of this era, confined as it is to limited exploration of habitation sites from the 1100–1400 CE period. It has taken a careful reexamination of legacy collections and modern excavations at the Hoxie Farm Fortified Village (Jackson and Emerson 2014) and the Joe Louis (Baltus and Bryan 2024) sites to provide insights into Fisher phase occupations, while Langford phase habitation data is confined to the Reeves site (Craig and Galloy 1996).

It is this dearth of secure archaeological evidence that enhances the value of the insights that can be gleaned from the century-old legacy collections from the Fisher site. The knowledge gained from the HDP efforts is a demonstration of the value of curated collections and the challenges of working with such materials. Even more, it is a documentation of the archaeological understanding that can be generated by three decades of focused research, most of which was unfunded—a testament to the benefits of adopting a slow science philosophy (e.g., Stengers 2018).

Decades of research have provided new insights into the history and lifeways of Native people who lived on the banks of the Des Plaines River. One of the challenging aspects for researchers of Native history in northern Illinois has been the establishment of a late precontact chronology. However, ongoing research has established a considerable chronological foundation of radiocarbon dates from this period (e.g., Baltus and Bryant 2024; Emerson et al. 2022; Emerson, Emerson, et al. 2019; Jackson and Emerson 2014). The Fisher site has played a key role in this effort, especially regarding the ninth to twelfth centuries CE dating of the TLW Des Plaines phase. A long series of mortuary dates for the Fisher and Langford occupations of the site were less successful because of the authors' inability to distinguish the cultural affiliation of the individuals dated but demonstrated a virtually continual occupation and mortuary use of the site from the eleventh to the fourteenth centuries by Upper Mississippian peoples (see Supplemental Table 1). Nevertheless, a review of the archaeological evidence confirmed earlier findings by Langford (Langford et al. 2025) and Griffin (2024 [1946]) that the documented instances of Langford phase occupations clearly superseded the earlier Fisher phase habitations in the Main Village. There are no recorded instances of Fisher phase features superimposing Langford phase features.

A review of the legacy data and chronology reinforces the perspective that the Fisher site held a special status in Native history as a place of the interment of the dead. The evidence of use from the Middle/Late Archaic, Early Woodland, and probable Middle Woodland eras is admittedly scant—primarily, the authors suspect due to the vagaries of the sampling and the techniques employed in the investigations. While the authors' evidence for significant levels of habitation is limited to the Upper Mississippian era, the persistent choice of the locality for burial may have had a four-millennia duration—making it regionally unique based on researchers' current state of knowledge.

The concept of "persistent places" has recently reemerged in archaeological discussions, occasionally leading to the disconnect of place and human agency (e.g., see comprehensive review in Skousen and Antoniuk 2025). However, in the case of the persistence of the Fisher locality as a repository of the dead, the authors do not seek to identify otherworldly causality—what led to the initial burial of an individual in a specific place can be variously hypothesized but is ultimately unknowable (i.e., Pauketat 2001). What can be demonstrated is that this portion of the Des Plaines River bluff near its junction with the Kankakee River to form the Illinois River behaved as an intermittent but persistent draw on Native groups as a place for the dead. It seems evident that the humanly created landscape visibly manifested by the constructed Early Woodland, TLW, and Upper Mississippian mortuary mounds subsequently served to draw disconnected populations to this place to bury their dead.

This perspective draws on Rosemary Joyce's (2015) insightful discernment of materialities as *traces*. Here, researchers might think of Joyce's detailed explorations of traces as materialities as a sign of history that binds temporalities together, creating past practices active in the present: for example, the assemblages that create landscapes (Joyce 2015:185). This tendency of earlier human activities to attract subsequent activities to a place creates a temporal landscape palimpsest of such traces. A striking example of similar modern behavior, long known in law enforcement circles, is that unremoved graffiti soon draws layers of overlying graffiti. In the case of Fisher, the apparently historical and spiritual power of this place, with its materially manifested mortuary traces, was its inducement to the newly arrived early nineteenth-century Algonquian immigrants to the region. These people also chose the Fisher site confines to place their dead, thus inserting and mingling their deceased within the traces of those earlier people (Gillette 2024 [1949]; Langford et al. 2025).

The Fisher site was also key in illustrating the timeline for the introduction and adoption of maize agriculture in the UIRV. Analysis of dietary isotopes and macrobotanical evidence pertaining to the introduction and adoption of maize in Illinois has generally confirmed that it first became a dominant subsistence crop in Greater Cahokia at about 900 CE (Emerson, Hedman, and Simon 2025; Emerson, Hedman, Simon, et al. 2020). The Fisher site dietary isotope data have been important in providing a UIRV record for maize adoption stretching from

circa 800 CE to 1400 CE. These findings demonstrate a low level of potential maize consumption between 900 CE and 1100 CE, with a significant increase in maize dependence in the post–1100 CE era (see Supplemental Table 1). The Fisher site dietary information suggests a one to two century timeline for the introduction and spread of maize farming up the Illinois River valley to the UIRV societies from Greater Cahokia. The adoption of maize agriculture by the UIRV inhabitants was transformative and, with other factors such as intergroup warfare and new cultural interactions, may have been causal in the emergence of Langford lifestyles.

The Fisher site provides unique evidence of variation in Langford and Fisher phase settlement organization (see Figure 5). A distinct example is the small (~0.5 ha) Northwest Village Langford phase settlement of perhaps a dozen structures and a mortuary area lying a couple of hundred feet northwest of the main village (Griffin 2024 [1946]; Langford et al. 2025). The larger Main Village occupation zone paralleled the riverbank, encompassing an area of about 2.3 ha, with at least three dozen structures dating to both the Fisher and the sequential Langford occupations. The oval ring of habitations encircled a large unoccupied central zone containing two large mortuary mounds as well as unmounded cemeteries. These village layouts have parallels to the Noble-Wieting settlement in central Illinois, where geophysical investigations identified an approximately 2.4 ha oval settlement of perhaps 40 structures around a central plaza containing a mortuary area (Miller et al. 2019). Noble-Wieting is interpreted as representing a fourteenth-century multiethnic settlement of Langford and CIRV Mississippian groups (Skousen et al. 2026). Adoption of settled villages by the Langford phase groups may suggest that such circular villages with central plazas were derived from earlier CIRV Mississippian settlement forms (e.g., Conrad 1991; Emerson 1999; Emerson, Conrad, et al. 2019).

However, there is a distinct difference between the Upper Mississippian and CIRV peoples' relationships between the living and the dead. For example, at the contemporaneous Orendorf village in the CIRV, the mortuary mounds are all located outside the fortified village boundary along the adjacent bluff edge (Conrad et al. 2019). On the other hand, the Fisher site inhabitants (and apparently those at Noble-Wieting) chose to locate their dead in major mortuary mounds encircled by their habitations as well as in cemeteries interdigitated among the houses and living areas. This tendency to encapsulate the ancestral remains within the realm of the living may also be reflected in the use of culturally enhanced middens to construct the mounds themselves (Gillette 2024 [1949]; Griffin 2024 [1946]), a trait also noted with the Langford phase Material Service Quarry mound (e.g., Emerson et al. 2010). In general, the CIRV mound fills are devoid of habitation inclusions—perhaps deliberately or simply because they are located outside the main habitation areas.

Because of researchers' inability to distinguish between Langford and Fisher structures within the Main Village due to limited available documentary evidence, the authors can say little about the Fisher phase pattern beyond that it may follow the Langford village arrangement of an oval to circular alignment of structures around a central plaza and mortuary zone. Both Langford (Langford et al. 2025) and Griffin (2024 [1946]) suggested that the Fisher phase occupation followed a

linear alignment to the northeast of the Big Mounds paralleling the riverbank, whereas the Langford phase structures were primarily on the gravel ridge to the southwest of the Big Mounds: in other words, there were two separate and distinct habitation areas. However, given the mixing of ceramic assemblages in houses to the southwest of the Big Mounds, the authors are inclined to identify both Fisher and Langford phase occupants in that area. The site's Fisher phase village stands in stark contrast to the tightly clustered small Fisher phase pit dwellings enclosed within the palisaded and ditched Hoxie Farm Fortified Village in Cook County, which represents a population under pressure from enemy groups. This suggests that the Fisher phase villagers on the Des Plaines River did not expect violent attack—a belief that is belied by the evidence of catastrophically burned houses and personal trauma revealed in the archaeological record.

In terms of domestic architecture, the Fisher site has provided researchers with evidence of the correlation of Langford phase people with the construction of wall-trench houses, presumably incorporated via their interactions with CIRV Mississippian groups (i.e., Alt and Pauketat 2011; Pauketat and Alt 2005; also Emerson 1999). More importantly, a reexamination of the records from Langford's (Langford et al. 2025) explorations at the Fisher village assisted in expanding and clarifying recent information on Fisher phase structures gained from the Hoxie Farm Fortified Village (Jackson 2014; Jackson and Emerson 2014). While portraying aspects of typical Fisher phase structures, the Fisher site demonstrated that Hoxie Farm site's small dwellings densely crowded within the surrounding fortifications were likely nontypical expedient constructions hastily created in response to a time of crisis. Fisher phase structures at the Fisher site, on the other hand, when free of such constraints, were oval- or circular-shaped pit houses dug up to 5 ft into the ground with a surrounding berm adding another several feet in height, seemingly roofed by bent poles whose foundations rested in the berms and with apparent woven thatch or matting coverings. These deeply entrenched pit houses seem unique in the region.

Regional studies have shown that the post–1000 CE era was rife with violence, especially in the CIRV (e.g., Emerson 2007; Milner et al. 1991; Steadman 2008; Wilson 2015). Information on levels of violence in the UIRV has been ambiguous in the past and it was generally assumed to have been low, but many of the large legacy collections of human remains had not been examined for trauma. However, this situation changed when Michael Strezewski (2006) scrutinized the Fisher site human remains for evidence of trauma. His findings revealed the presence of a mass grave of victims who had suffered violent deaths at the site, which when considered in conjunction with the burned houses and other evidence of trauma from the village indicates a period marked by violent confrontations. With additional evidence from the Material Service Quarry Mound (Emerson et al. 2010) and the heavily defended Hoxie Farm Fortified Village (Jackson and Emerson 2014), it is apparent that the UIRV felt the effects of regional violence.

A comprehensive analysis of Sr evidence, when combined with archaeological insights, demonstrated that late precontact population movements tended

to be regionally constrained to what is now known as the lower Lake Michigan zone of southern Wisconsin, northeastern Illinois, and western Indiana. For much of this era, it was a place of shifting, expanding, contracting, and overlapping ethnic boundaries rather than long-distance migrations. It saw instances of long-term continuity in the TLW-Langford transition, as well as instances of intrusive incursions by groups from the east (Fisher phase) and later from the north (Huber phase). However, near the end of this precontact era, significant population movements did occur with the movement of UIRV groups out of the area toward the west and north, possibly displaced by the newly arrived eastern Algonquian groups such as the Inohka (Mazrim 2025).

The original initiative for the HDP was to identify, locate, and reassemble (at least digitally) the dispersed materials and records created by George Langford, the WPA, and the University of Chicago pertaining to the Fisher Mounds and Village site (11WI5). This was primarily an unfunded decades-long process by the authors that required multiple queries to material repositories and archival and historical document collections, review of collections inventories, and investigative interviews with numerous curators, archaeologists, historians, and academics. The sometimes-daunting challenges were, unfortunately, largely due to past curatorial practices that resulted in dispersal of, loss of, and damage to these important collections. Despite these challenges, the project was ultimately a testament to the value of such curated legacy collections to yield important new findings. It also demonstrated the necessity of engaging in long-term focused research processes (a.k.a. "slow science") not driven by funding deadlines or academic priorities to reveal their potential and to discern new insights and knowledge concerning our shared humanity with the people of the distant past.

Notes

1. Given increased NAGPRA documentation efforts over the past several years, the current count of individuals and the location/repatriation status of the Fisher mortuary remains may differ from what is stated here. For current information, interested parties should contact Indiana University officials.
2. Isotopic analyses of Upper Mississippian individuals were initiated by the authors (KMH, TEE) in 2000 and conducted in accordance with then current policies of the lending institutions. Results of these analyses have been presented previously. In accordance with current (post-2020) programmatic and institutional NAGPRA policies, all sampled elements and prepared samples have been returned to the lending institutions as part of ongoing repatriation processes.

Acknowledgments

Access to the relevant University of Chicago documents and images, the WPA records, and various Langford manuscripts was generously provided from their archives by the Illinois State Museum, the Illinois State Archaeological Survey, the Minnesota Historical Society, the Center for Archaeological Investigations (SIU-C), Indiana University, the Spurlock Museum of

World Cultures, the University of Michigan Museum of Anthropological Archaeology, the Glenn A. Black Laboratory of Archaeology, and the Yale Peabody Museum of Natural History. Their century-long curation of these irreplaceable archives was key to the reconstruction of Langford's early archaeological endeavors. We appreciate Dr. Michael Strezewski's sharing his Fisher site research with us. The past assistance of Dr. Della Cook facilitated Dr. Hedman's research. Editorial expertise and input on this manuscript by Mary Lou Wilshaw-Watts helped clarify its presentation. Discussions with colleagues and insightful comments by two anonymous reviewers assisted in honing the refinement and conciseness of our interpretations. We appreciate the support of the Upper Mississippi Valley Archaeological Research Foundation and the Illinois State Archaeological Survey to ensure these important historical documents can be made available to the broader archaeological community.

Supplementary Material

Supplementary material for this article can be found at https://www.midwestarchaeology.org/mcja/supplemental-materials.

Supplemental Table 1. Fischer Site AMS Bayesian Radiocarbon Assays and $\delta^{13}C$ Collagen Values

Supplemental Table 2. Fisher Site Possible Langford AMS Bayesian Radiocarbon Assays

Supplemental Table 3. Fisher Sr Summary Statistics

Supplemental Table 4. $^{87}Sr/^{86}Sr$ Ratios

Funding Statement

Aspects of this decades-long research process were variously supported by the Illinois Department of Transportation, the Illinois State Archaeological Survey, and the University of Illinois as part of other ongoing investigations. While the Fisher Site Historical Documentation Project was primarily unfunded, we would like to acknowledge that partial support for travel was provided by the Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign. Additional funding and support for the original research, manuscript production, and publication was provided by the Thomas E. Emerson Trust.

Notes on Contributors

Kjersti E. Emerson is a ceramic analyst with the Illinois State Archaeological Survey, Prairie Research Institute. Her work involves analyzing and completing reports on precontact pottery assemblages recovered from sites across Illinois and has involved Early Woodland, Late Woodland, Middle Mississippian, Upper Mississippian, and protohistoric pottery assemblages. However, her primary research interest and expertise lie in the Upper Mississippian pottery of northern Illinois, for which she utilizes stylistic and technological variations to detect chronological and ethnic differences among late precontact societies. Emerson has contributed to and edited numerous published research reports and authored peer-reviewed articles based on her research. She currently holds an MA from the University of Illinois Urbana–Champaign and has been working in Illinois archaeology for more than two decades.

Thomas E. Emerson is a senior research scientist with the Upper Mississippi Valley Archaeological Research Foundation; a research affiliate with the Prairie Research Institute; professor emeritus, Department of Anthropology, University of Illinois; the retired director of the Illinois State Archaeological Survey; Illinois's first state archaeologist; and, formerly, the chief archaeologist of

the Illinois Historic Preservation Agency. Most recently, he was the principal investigator of the excavations at the East St. Louis Mound center. He is the author of numerous articles and book chapters, author and editor of various volumes on midcontinental archaeology, the editor for eight archaeological publication series, and the past journal editor of *Illinois Archaeology* and the *Midcontinental Journal of Archaeology*. Much of his publishing effort has focused on creating and publishing foundational studies of precontact Midwestern Native societies and early Euro-American inhabitants. He is the recipient of numerous state, regional, national, and international awards.

Kristin M. Hedman is an associate research scientist with the Illinois State Archaeological Survey, Prairie Research Institute. She is a bioarchaeologist and currently serves as section head of Interdisciplinary Research with the Illinois State Archaeological Survey. Her work involves the documentation of osteological human remains from archaeological sites in Illinois and the preparation of compliance-centered publications in accordance with institutional policy and state and federal regulations. Her research efforts have centered on questions of human health, subsistence, and interactions and have been published in numerous research reports, peer-reviewed publications, and edited volumes. Hedman holds a PhD from the University of Illinois Urbana–Champaign.

ORCID

Kjersti E. Emerson 0009-0001-3865-6019
Thomas E. Emerson 0000-0002-6540-3359
Kristin M. Hedman 0000-0001-5929-6887

References Cited

Albert, Roberta K., Susan M. Kooiman, Caitlin A. Clark, and William A. Lovis (2018) Earliest Microbotanical Evidence for Maize in the Northern Lake Michigan Basin. *American Antiquity* 83(2):345–355.

Alt, Susan M., and Timothy R. Pauketat (2011) Why Wall Trenches? *Southeastern Archaeology* 30(1):108–122.

Baltus, Melissa, and Paula L. Bryant (2024) Joe Louis: A Late Fisher Phase Village on the Little Calumet River. *Midcontinental Journal of Archaeology* 49(1):73–94.

Barrett, S. A. (1933) *Ancient Aztalan.* Bulletin of the Public Museum, City of Milwaukee, Vol. XIII. Milwaukee, Wisconsin.

Bayliss, Alex (2009) Rolling Out Revolution: Using Radiocarbon Dating in Archaeology. *Radiocarbon* 51(1):123–147.

Bird, M. Catherine (1997) Broken Pieces: Langford Settlement System and the Role of Material Culture in the Maintenance of Social Boundaries. PhD dissertation, Department of Anthropology, University of Wisconsin–Milwaukee.

Benn, David W., and William Green (2000) Late Woodland Cultures in Iowa. In *Late Woodland Societies: Tradition and Transformation across the Midcontinent*, edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 429–496. University of Nebraska Press, Lincoln.

Bennett, John W. (1945) *Archaeological Explorations in Jo Daviess County, Illinois.* University of Chicago Press, Chicago.

Bentley, R. Alexander (2006) Strontium Isotopes from the Earth to the Archaeological Skeleton: A Review. *Journal of Archaeological Method and Theory* 13(3):135–187.

Bronk Ramsey, Christopher (2009) Bayesian Analysis of Radiocarbon Dates. *Radiocarbon* 51(1):337–360.

Brown, James A., Ed. (1961) *The Zimmerman Site: A Report on Excavations at the Grand Village of the Kaskaskia, La Salle County, Illinois*. Reports of Investigations No. 9. Illinois State Museum, Springfield.

Brown, James A., Ed. (1990) The Oak Forest Site: Investigations into Subsistence-Settlement in the Cal Sag Area of Cook County, Illinois. In *At the Edge of Prehistory: Huber Phase Archaeology in the Chicago Area*, edited by James A. Brown and Patrcia J. O'Brien, pp. 123–283. Center for American Archeology, Kampsville, Illinois.

Brown, James A., and Robert E. Sasso (2001) Prelude to History on the Eastern Prairies. In *Societies in Eclipse: Archaeology of the Eastern Woodland Indians, A.D. 1400–1700*, edited by David S. Brose, C. Wesley Cowan, and Robert C. Mainfort Jr., pp. 205–227. Smithsonian Institution Press, Washington, DC.

Brown, James A., Roger W. Willis, Mary A. Barth, and Georg K. Neumann (1967) *The Gentleman Farm Site, LaSalle County, Illinois.* Reports of Investigations No. 12. Illinois State Museum, Springfield.

Brown, Margaret Kimball (1975) *The Zimmerman Site: Further Excavations at the Grand Village of the Kaskaskia*. Reports of Investigations No. 32. Illinois State Museum, Springfield.

Burton, James H., and Rachel Hahn (2016) Assessing the "Local" $^{87}Sr/^{86}Sr$ Ratio for Humans. In *Isotopic Landscapes in Bioarchaeology,* edited by Gisela Grupa and George C. McGlynn, pp. 113–121. Springer, New York.

Christenson, Andrew L. (2025) George Langford at the Fisher Site, 1924–1929: Pioneer Stratigraphic Studies in the Midwest. In "Investigations of the Upper Mississippian Habitations at the Fisher Village Site (11WI5): George Langford and the University of Chicago Explorations of the House Pits (1927–1940)," by George Langford, Kjersti E. Emerson, and Thomas E. Emerson. Special issue, *The Wisconsin Archeologist* 106, in press.

Cole, Fay-Cooper, and Thorne Deuel (1937) *Rediscovering Illinois.* University of Chicago Press, Chicago.

Conrad, Lawrence A. (1991) *Cahokia 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.

Conrad, Lawrence A., Kjersti E. Emerson, Thomas E. Emerson, and Duane Esarey, Eds. (2019) *Orendorf Settlement D: A Burned Fortified Mississippian Town in the Central Illinois River Valley*. Research Report 50. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Cook, Robert A., and T. Douglas Price (2015) Maize, Mounds, and the Movement of People: Isotope Analysis of a Mississippian/Fort Ancient Region. *Journal of Archaeological Science* 61:112–128.

Craig, Joseph, and Joseph M. Galloy (1996) The Reeves Site (11-Wi-555): Archaeological Investigations at a Langford Tradition Settlement on the DuPage River, Northeastern Illinois. Submitted to How Incorporated, Joliet, by Hanson Engineers, Springfield, Illinois. Copies available from Illinois Historic Preservation Office, Springfield.

Deuel, Thorne (1932) Cultural Sequence in Fulton County. *Transactions of the Illinois State Academy of Science* 25:96–97. Springfield.

Emerson, Kjersti E. (2007) Examining the Place of Ceramics in Mortuary Context: Evidence from the Fisher Site, Will County, Illinois. Master's thesis, Department of Anthropology, University of Illinois Urbana–Champaign.

Emerson, Kjersti E. (2017) Spatial and Temporal Variation in Fisher Ceramics. *Illinois Archaeology* 29:253–286.

Emerson, Kjersti E. (2025) Appendix A: The Fisher Mounds and Village Site Ceramic Assemblage. In "Investigations of the Upper Mississippian Habitations at the Fisher Village Site (11WI5): George Langford and the University of Chicago Explorations of the House Pits (1927–1940),"

by George Langford, Kjersti E. Emerson, and Thomas E. Emerson. Special issue, *The Wisconsin Archeologist* 106, in press.

Emerson, Kjersti E., and Thomas E. Emerson (2008) The 1940 Fisher Site Excavations, Will County, Illinois. *Illinois Antiquity* 43(3):13–15.

Emerson, Kjersti E., and Thomas E. Emerson (2024a) The 1940 Fisher Mounds (11WI5) University of Chicago Works Project Administration Excavations, Will County, Illinois. *Illinois Archaeology* 36:19–31.

Emerson, Kjersti E., and Thomas E. Emerson (2024b) A Reassessment of Upper Mississippian Habitations and Chronology at the Fisher Mounds and Village Site in Northeastern Illinois. *Midcontinental Journal of Archaeology* 49(1):45–72.

Emerson, Kjersti E., and Thomas E. Emerson, Eds. (2025) "George Langford's Pioneering Archaeological Investigations at the Upper Mississippian Fisher Village Site in Northeastern Illinois." Special issue, *The Wisconsin Archeologist* 106, in press.

Emerson, Thomas E. (1999) The Langford Tradition and the Process of Tribalization on the Middle Mississippian Borders. *Midcontinental Journal of Archaeology* 24(1):3–56.

Emerson, Thomas E. (2007) Cahokia and the Evidence for Late Pre-Columbian War in the North American Midcontinent. In *North American Indigenous Warfare and Ritual Violence*, edited by Richard J. Chacon and Rueben G. Mendoza, pp. 129–148. University of Arizona Press, Tucson.

Emerson, Thomas E. (2012) Cahokia Interaction and Ethnogenesis in the Northern Midcontinent. In *The Oxford Handbook of North American Archaeology*, edited by Timothy R. Pauketat, pp. 398–409. Oxford University Press, New York.

Emerson, Thomas E. (2023) A Unique Early Woodland Burial and Its Implications for Terminal Late Archaic–Early Woodland Transitions in Social and Mortuary Practices in Western Illinois. *Illinois Archaeology* 35:175–200.

Emerson, Thomas E., Ed. (1999) *The Keeshin Farm Site and the Rock River Langford Tradition in Winnebago County, North Central Illinois.* Transportation Archaeological Research Report No. 58. Illinois Transportation Archaeological Research Program, University of Illinois Urbana–Champaign.

Emerson, Thomas E., and James A. Brown (1992) The Late Prehistory and Protohistory of Illinois. In *Calumet and Fleur-de-Lys: Archaeology of Indian and French Contact in the Midcontinent*, edited by John A. Walthall and Thomas E. Emerson, pp. 77–128. Smithsonian Institution Press, Washington, DC.

Emerson, Thomas E., Lawrence A. Conrad, Duane Esarey, Kjersti E. Emerson, and Madeleine Evans (2019) The Contribution of the Orendorf Settlement D Excavations to Spoon River Mississippian History. In *Orendorf Settlement D: A Burned Fortified Mississippian Town in the Central Illinois River Valley*, edited by Lawrence A. Conrad, Kjersti E. Emerson, Thomas E. Emerson, and Duane E. Esarey pp. 487–501. Research Report 50. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Emerson, Thomas E., and Kjersti E. Emerson (2014) Late Fisher Phase Ceramics at the Hoxie Farm Fortified Village. In *The Hoxie Farm Site Fortified Village: Late Fisher Phase Occupation and Fortification in South Chicago.* 2nd ed. Edited by Douglas K. Jackson and Thomas E. Emerson, pp. 245–326. Research Report 27. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Emerson, Thomas E., and Kjersti E. Emerson (2024) An Introduction to the Fisher Mounds and Village Site Historical Documentation Project. In "The University of Chicago's Archaeological Research at the Fisher Mounds and Village Site, Will County, Illinois (1927–1949)," edited by Thomas E. Emerson and Kjersti E. Emerson. Special Issue, *Illinois Archaeology* 36:1–18.

Emerson, Thomas E., and Kjersti E. Emerson (2025a) The Life and Times of George Langford: An Avocational Archaeologist and the Emergence of Illinois Archaeology. In "Investigations of the Upper Mississippian Habitations at the Fisher Village Site (11WI5): George Langford and

the University of Chicago Explorations of the House Pits (1927–1940)," by George Langford, Kjersti E. Emerson, and Thomas E. Emerson. Special issue, *The Wisconsin Archeologist* 106, in press.

Emerson, Thomas E., and Kjersti E. Emerson (2025b) Upper Mississippian Peoples: A Time of Migration, Drought, Political Turmoil, and Ethnogenesis (1100–1650). In *The Archaeology of Illinois: A Deep History of the Prairie State*, edited by Thomas E. Emerson, Dale L. McElrath, and David J. Nolan, pp. 231–248. Studies in Archaeology No. 7. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Emerson, Thomas E., and Kjersti E. Emerson (2026) Upper Mississippian Cultures of Illinois: Late Precontact Transitions and Turmoil. In *The Oxford Handbook of Mississippian Archaeology,* edited by B. Jacob Skousen and Timothy R. Pauketat, in press. Oxford University Press, United Kingdom.

Emerson, Thomas E., and Kjersti E. Emerson, Eds. (2024) "University of Chicago's Archaeological Research at the Fisher Mounds and Village Site, Will County, Illinois (1927–1949)." Special Issue, *Illinois Archaeology* 36.

Emerson, Thomas E., Kjersti E. Emerson, Kristin M. Hedman, and Matthew A. Fort (2019) Mortuary Practices, Cultural Context, Bayesian Chronology, and Maize Consumption among Terminal Late Woodland Societies in Northeastern Illinois. *Midcontinental Journal of Archaeology* 44(2):149–180.

Emerson, Thomas E., Kjersti E. Emerson, and Michael Brent Lansdell (2024) The Western Illinois Terminal Late Woodland Period. In *Before the Mississippians: Excavations at Two Dillinger Phase Villages in Southern Illinois*, edited by Kjersti E. Emerson, Thomas E. Emerson, and Michael Brent Lansdell, pp. 1–7. Research Report No. 47. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Emerson, Thomas E., and Kenneth B. Farnsworth (2022) Recognizing Copper Tool Assemblages at Middle Woodland Havana Habitation Sites: Observations on Raw Material Sources, Assemblage Content, and Tool Fabrication. *Midcontinental Journal of Archaeology* 47(3):239–276.

Emerson, Thomas E., Kristin M. Hedman, Matthew A. Fort, and Kjersti E. Emerson (2022) Late Precontact Ethnogenesis, Resilience, and Movement in the Face of Climate Variation in the Upper Illinois River Valley. In *Following the Mississippian Spread: Climate Change and Migration in the Eastern US (ca. AD 1000–1600)*, edited by Robert A. Cook and Aaron R. Comstock, pp. 139–167. Springer, Switzerland.

Emerson, Thomas E., Kristin M. Hedman, and Mary L. Simon (2005) Marginal Horticulturalists or Maize Agriculturalists? Archaeobotanical, Paleopathological, and Isotopic Evidence Relating to Langford Tradition Maize Consumption. *Midcontinental Journal of Archaeology* 30(1):67–118.

Emerson, Thomas E., Kristin M. Hedman, and Mary L. Simon (2025) Methodological Challenges to Tracking *Zea mays* (Maize) Historical Pathways through Macrobotanical, Microbotanical, and Stable Isotope Evidence: Maize's Adoption and Consumption by Precontact Populations in the North American Midcontinent. *Journal of Archaeological Method and Theory* 32(29). DOI:10.1007/s10816-025-09699-4.

Emerson, Thomas E., Kristin M. Hedman, Mary L. Simon, Matthew A. Fort, and Kelsey E. Witt (2020) Isotopic Confirmation of the Timing and Intensity of Maize Consumption in Greater Cahokia. *American Antiquity* 85(2):241–262.

Emerson, Thomas E., Kristin M. Hedman, Robert E. Warren, and Mary L. Simon (2010) Langford Mortuary Patterns as Reflected in the Material Service Quarry Site in the Upper Illinois River Valley. *The Wisconsin Archeologist* 91(1):1–78.

Emerson, Thomas E., Robert J. Jeske, and Leighann Calentine (2006) A New Radiocarbon Date from a Langford Tradition House at the Fisher Site (11WI5). *Illinois Archaeology* 17:168–172.

Emerson, Thomas E., Dale L. McElrath, and Andrew C. Fortier, Eds. (2000) *Late Woodland Societies: Tradition and Transformation across the Midcontinent*. University of Nebraska Press, Lincoln.

Emerson, Thomas E., and Anne R. Titlebaum (2000) The Des Plaines Complex and the Late Woodland Stage of Northern Illinois. In *Late Woodland Societies: Tradition and Transformation across the Midcontinent*, edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 413–428. University of Nebraska Press, Lincoln.

Esarey, Duane (1986) Red Ocher Mound Building and Marion Phase Association: A Fulton County, Illinois Perspective. In *Early Woodland Archeology*, edited by Kenneth B. Farnsworth and Thomas E. Emerson, pp. 231–243. Kampsville Seminars in Archeology No. 2. Center for American Archeology, Kampsville, Illinois.

Esarey, Duane, and Kjersti E. Emerson, Eds. (2021) *Palos Village: An Early Seventeenth-Century Ancestral Ho-Chunk Occupation in the Chicago Area*. Studies in Archaeology No. 14. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Faulkner, Charles H. (1972) *The Late Prehistoric Occupation of Northwestern Indiana: A Study of the Upper Mississippi Cultures of the Kankakee Valley.* Prehistory Research Series 5(1). Indiana Historical Society, Indianapolis.

Fort, Matthew A., Kristin M. Hedman, and Thomas E. Emerson (2024) Employing Biomolecular Analyses and Radiocarbon AMS Chronologies to Disentangle Complex Mortuary Assemblages: Reinterpreting the Kane Mortuary Complex Enigma in Greater Cahokia. *Journal of Archaeological Science: Reports* 55:104464.

Gillette, Charles E. (1949) Late Woodland Occupations of the Fisher Site, Will County, Illinois. *Transactions of the Illinois Academy of Science* 42:35–40.

Gillette, Charles E. (2024 [1949]) The Non-Mississippi Manifestations at the Fisher Site, Will County, Illinois. In *The University of Chicago's Archaeological Research at the Fisher Mounds and Village Site, Will County, Illinois (1927–1949)*, edited by Thomas E. Emerson and Kjersti E. Emerson. Special Issue, *Illinois Archaeology* 36:143–205.

Graham, Deborah D. (2016) Abstract: Reconstructing the Origins of the Perrins Ledge Cremains. *American Journal of Physical Anthropology* 159(S62):159.

Griffin, James B. (1943) *The Fort Ancient Aspect: Its Cultural and Chronological Position in Mississippi Valley Archaeology*. University of Michigan Press, Ann Arbor.

Griffin, James B. (1960) A Hypothesis for the Prehistory of the Winnebago. In *Culture in History: Essays in Honor of Paul Radin,* edited by Stanley Diamond, pp. 809–865. Columbia University Press, New York.

Griffin, John W. (2024 [1946]) The Upper Mississippi Occupations of the Fisher Site, Will County, Illinois. In "The University of Chicago's Archaeological Research at the Fisher Mounds and Village Site, Will County, Illinois (1927–1949)," edited by Thomas E. Emerson and Kjersti E. Emerson. Special Issue, *Illinois Archaeology* 36:32–142.

Hargrave, Eve A., Kristin M. Hedman, Douglas K. Jackson, and Matthew A. Fort (2017) Mortuary Practices and Human Remains. In *The Hoxie Farm Site Main Occupation Area: Late Fisher and Huber Phase Components in South Chicago*, edited by Douglas K. Jackson, pp. 325–414. Research Report 40. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Hedman, Kristin M., B. Brandon Curry, Thomas M. Johnson, Paul D. Fullagar, and Thomas E. Emerson (2009) Variation in Strontium Isotope Ratios of Archaeological Fauna in the Midwestern United States: A Preliminary Study. *Journal of Archaeological Science* 36(1):64–73.

Hedman, Kristin M., Philip A. Slater, Matthew A. Fort, Thomas E. Emerson, and John M. Lambert (2018) Expanding the Strontium Isoscape for the American Midcontinent: Identifying Places of Origin for Cahokian and Pre-Columbian Migrants. *Journal of Archaeological Science: Reports* 22:202–213.

Horner, George R. (1947) An Upper Mississippian House-Pit from the Fisher Village Site: Further Evidence. *Illinois Academy of Science Transactions* 40:26–29. Springfield.

Hrdlička, Aleš (1920) *Anthropometry.* The Wistar Institute of Anatomy and Biology, Philadelphia.

Jackson, Douglas K. (2014) Features. In *The Hoxie Farm Site Fortified Village: Late Fisher Phase Occupation and Fortification in South Chicago*. 2nd ed. Edited by Douglas K. Jackson and Thomas E. Emerson, pp. 71–182. Research Report 27. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Jackson, Douglas K., Ed. (2017) *The Hoxie Farm Site Main Occupation Area: Late Fisher and Huber Phase Components in South Chicago*. Research Report 40. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Jackson, Douglas K., and Thomas E. Emerson, Ed. (2014) *The Hoxie Farm Site Fortified Village: Late Fisher Phase Occupation and Fortification in South Chicago*. 2nd ed. Research Report 27. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Jeske, Robert J., and John P. Hart (1988) *Report on Test Excavations at Four Sites in the Illinois and Michigan Canal National Heritage Corridor, La Salle and Grundy Counties, Illinois*. Prepared by Northwestern Archaeological Center, Contribution No. 6. Submitted to the National Park Service, Midwest Archaeological Center, Lincoln, Nebraska, Contract CX-6000-6-0027.

Joyce, Rosemary A. (2015) Transforming Archaeology, Transforming Materiality. *Archeological Papers of the American Anthropological Association* 26(1):181–191.

Kelly, John M. (2002) Delineating the Spatial and Temporal Boundaries of Late Woodland Collared Wares from Wisconsin and Illinois. Master's thesis, Department of Anthropology, University of Wisconsin–Milwaukee.

Langford, George (1927) The Fisher Mound Group, Successive Aboriginal Occupations near the Mouth of the Illinois River. *American Anthropologist* 29(3):153–205.

Langford, George (1928a) Stratified Indian Mounds in Will County. *Transactions of the Illinois State Academy of Science* 20:247–253. Springfield.

Langford, George (1928b) The Fisher Site, Will County, Illinois: Report of Work Done in 1928. Manuscript on file, Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Langford, George (1930a) Aboriginal Surface Sites in and Adjacent to Will County, Illinois. Book I, Fisher Site. Langford Archives, on file at the Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Langford, George (1930b) The Fisher Mound and Village Site. Symposium on Illinois Archaeology. *Transactions of the Illinois State Academy of Science* 22:79–92. Springfield.

Langford, George (1930c) Field Notes on the Small Mounds and on the Pits. Book V, Fisher Site. Langford Archives, on file at the Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Langford, George (1930d) The Two Big Mounds Field Notes. Book IV, Fisher Site. Langford Archives, on file at the Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

Langford, George, Kjersti E. Emerson, and Thomas E. Emerson (2025) "Investigations of the Upper Mississippian Habitations at the Fisher Mounds and Village Site (11WI5): George Langford and the University of Chicago Explorations of the House Pits (1927–1940)." Special issue, *The Wisconsin Archeologist* 106, in press.

Maxwell, Moreau (1946) A Designation of the Dillinger Focus. Master's thesis, Department of Anthropology, University of Chicago, Chicago.

Mazrim, Robert (2025) The Great Transition: American Indians, Europeans, and the Dawn of "The Illinois Country" (1600–1700 CE). In *The Archaeology of Illinois: A Deep History of the Prairie State*, edited by Thomas E. Emerson, Dale L. McElrath, and David J. Nolan, pp. 249–268.

Studies in Archaeology No. 7. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

McElrath, Dale L., Thomas E. Emerson, and Andrew C. Fortier (2000) Social Evolution or Social Response? A Fresh Look at the "Good Gray Cultures" after Four Decades of Midwest Research. In *Late Woodland Societies: Tradition and Transformation across the Midcontinent*, edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 3–36. University of Nebraska Press, Lincoln.

McElrath, Dale L., David J. Nolan, Mary L. Simon, and Thomas E. Emerson (2025) The Late Woodland Cultures of Illinois. In *The Archaeology of Illinois: A Deep History of the Prairie State*, edited by Thomas E. Emerson, Dale L. McElrath, and David J. Nolan, pp. 169–192. Studies in Archaeology No. 7. Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois Urbana–Champaign.

McKern, Will C. (1945) *Preliminary Report on the Upper Mississippi Phase in Wisconsin*. Bulletin of the Public Museum City of Milwaukee, Vol. XVI, No. 3.

McLeester, Madeleine, and Mark R. Schurr (2020) Uncovering Huber Lifeways: An Overview of Findings from Four Years of Excavations at the Huber Phase Middle Grant Creek Site (11WI2739) in Northern Illinois. *Midcontinental Journal of Archaeology* 45(2):102–129. DOI:10.1080/01461109.2020.1770397.

Meltzer, David J. (2005) The Seventy-Year Itch: Controversies over Human Antiquity and Their Resolution. *Journal of Anthropological Research* 61(4):433–468.

Miller, G. Logan, Robert G. McCullough, and B. Jacob Skousen (2019) A Wall-Trench Structure from the Langford Tradition Village of Noble-Wieting (11ML24), McClean County, Illinois. *Illinois Archaeology* 31:1–29.

Milner, George R. (1999) Warfare in Prehistoric and Early Historic Eastern North America. *Journal of Archaeological Research* 7(2):105–151.

Milner, George R., David G. Anderson, and Marvin T. Smith (2001) The Distribution of Eastern Woodlands Peoples at the Prehistoric and Historic Interface. In *Societies in Eclipse: Archaeology of the Eastern Woodland Indians, A.D. 1400–1700*, edited by David S. Brose, C. Wesley Cowan, and Robert C. Mainfort Jr., pp. 9–18. Smithsonian Press, Washington, DC.

Milner, George R., Eve Anderson, and Virginia G. Smith (1991) Warfare in Late Prehistoric West-Central Illinois. *American Antiquity* 56(4):581–603.

Milner, George R., Jane E. Buikstra, and Michael D. Wiant (2009) Archaic Burial Sites in the American Midcontinent. In *Archaic Societies: Diversity and Complexity across the Midcontinent,* edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 115–135. State University of New York Press, Albany.

Milner, George R., George Chaplin, and Emily Zavodny (2013) Conflict and Societal Change in Late Prehistoric Eastern North America. *Evolutionary Anthropology* 22(3):96–102.

Milner, George R., and Rebecca J. Ferrell (2011) Conflict and Death in a Late Prehistoric Community in the American Midwest. *Anthropologischer Anzeiger* 68(4):415–436.

Milner, George R., and Virginia G. Smith (1990) Oneota Human Skeletal Remains. In *Archaeological Investigations at the Morton Village and Norris Farms 36 Cemetery,* edited by Sharon K. Santure, Alan D. Harn, and Duane Esarey, pp. 111–148. Reports of Investigations 45. Illinois State Museum, Springfield.

O'Gorman, Jody A., and Michael D. Conner (2023) Making Community: Implications of Hybridity and Coalescence at Morton Village. *American Antiquity* 88(1):79–89.

Pauketat, Timothy R. (2001) Practice and History in Archaeology: An Emerging Paradigm. *Anthropological Theory* 1(1):73–98.

Pauketat, Timothy R., and Susan M. Alt (2005) Agency in a Postmold: Physicality and the Archaeology of Culture-Making. *Journal of Archaeological Method and Theory* 12(3):213–236. DOI:10.1007/s10816-005-6929-9.

Price, T. Douglas, James H. Burton, and R. Alexander Bentley (2002) The Characterization of Biologically Available Strontium Isotope Ratios for the Study of Prehistoric Migration. *Archaeometry* 44(1):117–135.

Price, T. Douglas, James H. Burton, Andrea Cucina, Pilar Zabala, Robert Frei, Robert H. Tykot, and Vera Tiesler (2012) Isotopic Studies of Human Skeletal Remains from a Sixteenth to Seventeenth Century AD Churchyard in Campeche, Mexico: Diet, Place of Origin, and Age. *Current Anthropology* 53(4):396–433.

Price, T. Douglas, James H. Burton, and James B. Stoltman (2007) Place of Origin of Prehistoric Inhabitants of Aztalan, Jefferson Co. Wisconsin. *American Antiquity* 72(3):524–538.

Reimer, Paula J., William E. N. Austin, Edouard Bard, Alex Bayliss, Paul G. Blackwell, Christopher Bronk Ramsey, Martin Butzin, et al. (2020) The IntCal20 Northern Hemisphere Radiocarbon Age Calibration Curve (0–55 cal kBP). *Radiocarbon* 62(4):725–757.

Rosebrough, Amy L. (2010) Every Family a Nation: A Deconstruction and Reconstruction of the Effigy Mound "Culture" of the Western Great Lakes of North America. PhD dissertation, Department of Anthropology, University of Wisconsin–Madison.

Salkin, Phillip H. (2000) The Horicon and Kekoskee Phases: Cultural Complexity in the Late Woodland Stage in Southeastern Wisconsin. In *Late Woodland Societies: Tradition and Transformation across the Midcontinent*, edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 525–542. University of Nebraska Press, Lincoln.

Schilt, Arlene Rose (1977) Noble-Wieting: An Early Upper Mississippian Village. Master's thesis, Department of Anthropology, Illinois State University, Normal.

Simon, Mary L. (2014) Reevaluating the Introduction of Maize into the American Bottom and Western Illinois. In *Reassessing the Timing, Rate, and Adoption Trajectories of Domesticate Use in the Midwest and Great Lakes,* edited by Maria E. Raviele and William A. Lovis, pp. 97–134. Midwest Archaeological Conference Inc. Occasional Papers No. 1. University of Illinois Press, Champaign.

Skousen, Jacob B., and Caitlyn Burkes Antoniuk (2025) Rethinking Persistent Places: Relationships, Affects, and Atmospheres. *Journal of Archaeological Method and Theory* 33:7. DOI:10.1007/s10816-025-09743-3.

Skousen, Jacob B., G. Logan Miller, Abigail Chipps Stone, Logan R. Pappenfort, and Elizabeth Watts Malouchos (2026) Emotions, Affective Field, and Creating a Coalescent Community at the Noble-Weiting Cultural Site. *American Antiquity* 91(3). DOI:10.1017/aaq.2025.10129.

Slater, Philip A., Kristin M. Hedman, and Thomas E. Emerson (2014) Immigrants at the Mississippian Polity of Cahokia: Strontium Isotope Evidence for Population Movement. *Journal of Archaeological Science* 44:117–127.

Steadman, Dawnie W. (2008) Warfare Related Trauma at Orendorf, a Middle Mississippian Site in West-Central Illinois. *American Journal of Physical Anthropology* 136(1):51–64.

Stengers, Isabelle (2018) *Another Science Is Possible: A Manifesto for Slow Science*. Polity Press, Cambridge, United Kingdom.

Stoltman, James B., and George W. Christiansen (2000) The Late Woodland Stage in the Driftless Area of the Upper Mississippi Valley. In *Late Woodland Societies: Tradition and Transformation across the Midcontinent*, edited by Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier, pp. 497–524. University of Nebraska Press, Lincoln.

Strezewski, Michael (2006) Patterns of Interpersonal Violence at the Fisher Site. *Midcontinental Journal of Archaeology* 31(2):249–279.

Strezewski, Michael, Kristin M. Hedman, and Thomas E. Emerson (2012) Oakwood Mound: A Langford Mortuary Site in Will County, Illinois. *The Wisconsin Archeologist* 93(2):3–107.

Tufano, Adam A. (2025) Appendix B: The Fisher Mounds and Village Site Lithic Assemblage. In "Investigations of the Upper Mississippian Habitations at the Fisher Village Site (11WI5): George Langford and the University of Chicago Explorations of the House Pits (1927–1940),"

by George Langford, Kjersti E. Emerson, and Thomas E. Emerson. Special issue, *The Wisconsin Archeologist* 106, in press.

VanDerwarker, Amber M., and Gregory D. Wilson (2016) War, Food, and Structural Violence in the Mississippian Central Illinois Valley. In *The Archaeology of Food and Warfare: Food Insecurity in Prehistory*, edited by Amber M. VanDerwarker and Gregory D. Wilson, pp. 75–105. Springer Nature, Cham, Switzerland.

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 Timothy R. Pauketat, pp. 523–533. Oxford University Press, New York.

Wilson, Gregory D. (2015) Incinerated Villages in the North. In *Medieval Mississippians: The Cahokian World*, edited by Timothy R. Pauketat and Susan M. Alt, pp. 99–104. School for Advanced Research Press, Santa Fe, New Mexico.