EARLY SHELL TEMPERING IN FAR WESTERN KENTUCKY
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ABSTRACT

The Late Woodland to Early Mississippian transition is not fully documented in western Kentucky. Surface and plowzone sites demonstrate a Baytown Late Woodland presence, but have not provided well-dated deposits. Effigy stumpware surface-collected in Ballard County and Varney red-filmed sherds in AD 1100-1175 deposits at Wickliffe (15BA4) indicate an Emergent Mississippian horizon in the area. Marshall (15CE27) and Rowlandtown (15McN3) yielded deposits with ceramics that can be characterized as transitional between Baytown and Mississippian types. The $2\sigma$ ranges of the 14C dates are fairly wide, but argue for a pre-AD 900 introduction of shell tempering.

Introduction

Shell-tempered ceramics characterize the Middle Mississippi period of western Kentucky. As a rule of thumb, grog-tempered ceramics of the Baytown series are typical of the Late Woodland period. Types include Baytown Plain, Mulberry Creek Cord-marked, and Larto Red-filmed (Philips, Ford and Griffin 1951).

Several scholars (e.g. Lewis 1986; Wesler 2001) have noted that grog does not disappear in Mississippian assemblages, although it becomes a minority ware. Grog-tempered sherds that are typologically Baytown are a consistent trace element of Wickliffe (15BA4) assemblages, for example, between AD 1100 and 1350 (Wesler 2001). The Mississippian type Wickliffe Thick also typically contains grog temper throughout the Mississippi period.

Thus it would seem that shell temper is introduced into western Kentucky before AD 1100. However, deposits relating to the crucial introductory date are incompletely documented.
Late Woodland

Personnel from the University of Illinois conducted survey and test excavation projects in the Ohio and Mississippi Rivers borderlands of western Kentucky in the 1980s and early 1990s (Edging 1985, 1990, 1995; Kreisa 1988, 1990a, 1990b, 1991; Lewis 1986; Stout 1985, 1987, 1989; Sussenbach 1993; Sussenbach and Lewis 1987). These projects recovered Baytown ceramics from numerous surface contexts, documenting a widespread Late Woodland presence. This work also indicated that intact midden deposits of the Late Woodland period exist. At the largely Mississippian Adams site (15Fu4), for example, a test excavation identified a 30 cm-thick Baytown midden (Lewis, ed. 1984:30). However it was not analyzed separately from the Mississippian deposits. At Indian Camp Lake (15Ce19), survey indicated an extensive dispersal of Baytown ceramics that became denser towards the bluff (Sussenbach and Lewis 1987). Two test units found middens below the plowzone, but the single 14C date of 3220±70 BP (ISGS-1542; Sussenbach and Lewis 1987:95) is too early to date a Late Woodland component. A later, brief Murray State University controlled surface collection at Indian Camp Lake (not yet published) documented clusters of Baytown ceramics (Figure 2) that suggested separate houses or house compounds, but explored no intact and datable deposits.
Sussenbach and Lewis (1987) also identified a Baytown component at the White site (15Fu24), but it was not isolated from the Mississippian deposits in the small test excavation. Kreisa (1988) reported Baytown ceramics from the Twin Mounds site (15Ba2), as well. His description of the Unit 3 excavation (1988:51-54) makes it seem that no Baytown period midden could be distinguished, but in his summary, Kreisa (1988:98) refers to an “intact Late-Woodland Early Mississippian period midden,” leaving the issue somewhat unclear. In any case, the apparent Baytown materials were not associated with a 14C date. On the other hand, Kreisa notes the presence of two sherds of stumpware (Kelly et al. 1984), supporting the idea of an Early or Emergent Mississippian presence. Effigy stumpware from the Ballard County bottomlands in a private collection underscores the case (Figure 3).
Other small tests conducted by University of Illinois personnel reveal similar situations: at the Burcham (15Hi15; Kreisa 1988) and Crawford Lake (15McN18; Kreisa 1990) sites, Baytown sherds were found in middens, but either they were mixed with shell-tempered sherds or the small tests were unable to isolate Baytown contexts. More intriguing, the Rice site (15Fu18) yielded only one typologically Mississippian sherd (Wickliffe Thick) among Baytown series ceramics and one stumpware sherd (Kreisa 1988). Unfortunately there was no 14C date.

Finally, a brief Murray State University project at the Pecan Tree site in Ballard County (not yet published) detected Baytown ceramics (Figure 4) on the surface and placed a 1 x 2 m test unit, but found no deposits beneath the plowzone.

*Summary*: Late Woodland deposits, characterized by grog-tempered ceramics of the Baytown series, have been documented in western Kentucky but not dated.

![Figure 4. Baytown ceramics from the Pecan Tree site, Ballard County.](image)

**Mississippian**

Mississippian sites in western Kentucky are characterized by shell-tempered ceramics of numerous types and varieties. Excavations have produced middens, features and mound zones from the Adams (15Fu4; Lewis ed. 1984), Turk (15Ce6; Edging 1985, 1990, 1995), Twin Mounds (15Ba2; Kreisa 1988), Wickliffe (15Ba4; Wesler 2001), Rowlandtown (15McN3;
Wesler 2006), and Chambers (15M1109; Pollack and Railey 1987). The 14C dates generally place these sites in the 12th-14th centuries AD. As noted previously, grog-tempered ceramics of Baytown series types are found in trace frequencies throughout this period. In some cases (as at Adams and Twin Mounds), Late Woodland ceramics from earlier occupations may have been incorporated into later deposits due to Mississippi period activities. However, no earlier middens have been found at Wickliffe or Turk, suggesting that the grog-tempered ceramics may be a typical but very small component of Mississippian assemblages.

These deposits indicate that shell was the predominant temper after AD 1100 in western Kentucky.

**Transition**

Two sites have produced ceramics that appear to be intermediary between the Late Woodland and Middle Mississippian types already known from western Kentucky.

Tom Sussenbach (Sussenbach and Lewis 1987) placed test units in the Marshall site (15Ce27). His Test 1 revealed a complex set of deposits which he interpreted as several superimposed house basins under a plowzone, with features and a modern disturbance to further confuse the picture (Figure 5).

![Figure 5. Stratigraphy of Marshall site Test 1, adapted from Sussenbach and Lewis (1987).](image)

Sussenbach’s ceramics analysis wrestled with a set of sherds that appeared to be “transitional”: they lacked shell temper but had the consistency of Mississippian ceramics. As a rule of thumb, local Baytown ceramics feel less well fired than the Mississippian wares; the original typologists referred to a “chalky” feel (Phillips, Ford and Griffin 1951:76). Sussenbach proposed new varieties of the Baytown series and of Kimmswick Fabric-impressed to incorporate the “transitional” sherds. Even in the lowest level of the unit, shell-tempered ceramics were mixed with the non-shell sherds, but the distribution shows that non-shell types increase in relative frequency with depth (Figure 6).
Figure 6. Relative frequency of shell-tempered and grog-tempered sherds in Marshall site test 1 (from Sussenbach and Lewis 1987).

Sussenbach obtained two 14C dates from these deposits (Table 1). The earlier date, with a $2\sigma$ range of cal 763-999, came from a Feature 11 which intruded House Basin 2. House Basin 2 produced a charcoal sample dated to cal AD 1020-1258 at $2\sigma$. It would be nice to associate the earlier date with material dredged up from the deepest house basin, and with the “transitional” sherds, but this is obviously not permissible with the data at hand.

At Rowlandtown (15McN3), the lowest zones of the mound and the underlying midden produced an assemblage that accords well with Sussenbach’s transitional wares (Wesler 2006). The sherds are almost evenly divided between cordmarked and plain surfaces. There is a heavy component of grog and much less shell in the temper (Figure 7). Because of the presence of some shell, and having completely forgotten about Sussenbach’s description of the Marshall ceramics, I referred the Rowlandtown specimens to the types Mississippi Plain and Crosno Cordmarked, but admitted that I could have argued for many of them being Baytown Plain and Mulberry Creek. They are more highly fired than the Baytown series sherds at Wickliffe, without the chalky feel. There are also two Barton Incised sherds, one with a cordmarked body, and two red-filmed sherds that strongly resemble the Varney Red-filmed from Zebree (Morse and Morse 1990). The overall assemblage resembles the description of the Marshall site transitional ceramics. There is also a trace of Yankeetown Filleted in both sites.
Four samples from Rowlandtown produced 14C dates (Table 1; Figure 8). Two from the mound, associated with shell-tempered ceramics, were appropriately 13th-century dates. But the lower two samples provided quite different dates. The deepest (McN3/03) was a sample of charcoal from the basal midden, Zone 11. This sample produced two possible calibrated ranges at 2σ, cal A.D. 675-901 (p = .91) and 916-967 (p = .09).
Sample McN3/04 was a small amount of charcoal from a posthole intrusive into Zone 10, the lowest mound construction zone. It produced a single 2σ calibrated range, cal A.D. 883-1156. Although the 2σ range overlaps with that of McN3/03, the two dates are statistically different at the 95% probability level (as calculated by CALIB 5.0).

Both the midden and the first mound episode, Zone 10, are considerably earlier than the occupation of the Wickliffe site and of the construction of the upper mound zones, and may fairly be called Emergent Mississippian. Even though the Marshalltown date from Feature 11 is stratigraphically out of sequence, it is quite compatible with the earlier Rowlandtown dates.

One further site should be mentioned here, although it falls more into the realm of a lost opportunity than a significant dataset. Allen (1976), using sketchy notes from a late-1960s excavation, analyzed materials from the Dedmon site, 15MI68. He noted that only two test units in one of five large trenches were screened. The artifacts were found mostly in the plowzone, but a few truncated features were identified. Baytown series ceramics were by far the majority, with a significant number shell-tempered Mississippian types in only one of the trenches. As at Marshall and Rowlandtown, there is a small number of Yankeetown ceramics.

Allen (1976) reported three 14C dates from features at Dedmon (Table 1). He reported them as AD dates with standard deviations, which I have assumed were directly translated by subtraction of the BP dates from AD 1950. The latest date, cal AD 1167-1424 at 2σ, came from a sample recovered from Feature 38, which contained only Baytown ceramics. The date seems too late for a grog-tempered assemblage in this region. Feature 7, with a mix of grog- and shell-tempered sherds, produced dates with cal AD 2σ ranges of 992-1268 and 1013-1264. The lower end of these ranges reaches into the early Mississippian period, and overlaps with the early dates from Marshall and Rowlandtown (Figure 9), but the context appears mixed.

Most interesting in terms of this discussion, Allen defined a new variety of Kimmswick Fabric-impressed, var. Dedmon, with both shell and grog temper. It would be interesting to revisit this collection in light of the Marshall and Rowlandtown analyses, but the 14C dates and their contexts do not help to date the introduction of shell temper in the region.

Figure 9. Distribution of 14C dates and 2σ ranges mentioned in text.
Summary

It appears that the earlier Rowlandtown contexts, particularly the Zone 11/submound midden, offer the best dates regarding the introduction of shell tempering in far western Kentucky. The Zone 11 date (Rowlandtown 3) places the transitional ceramics between cal AD 675 and 901. The dates are imprecise, and additional well-documented and 14C dated contexts for later Late Woodland and early Mississippian occupations are badly needed before we can begin to understand the transition properly in this region. The current literature suggests strongly that the deposits are there, waiting to be investigated.

Table 1. 14C dates discussed in the text.

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Context</th>
<th>Lab #</th>
<th>Uncalibrated BP</th>
<th>Cal AD at 2σ*</th>
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<tr>
<td>Marshall 1</td>
<td>House basin 2</td>
<td>ISGS-1505</td>
<td>900±70</td>
<td>1020-1258 (p = 1.0)</td>
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<td>Feature 11</td>
<td>ISGS-1504</td>
<td>1160±70</td>
<td>763-999 (p = .89)</td>
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<td>Feature 9</td>
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<td>1263-1325 (p=.59)</td>
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<td>540±50</td>
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<td>1013-1264 (p=.999)</td>
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</table>

*Calibrated with CALIB 5.0; 2σ ranges less than p=.15 not listed for brevity.

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