AN INTEGRATED GEOARCHAEOLOGY OF A LATE WOODLAND SAND MOUND

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The Graveline Mound (22JA503) is a sand platform mound in Jackson County, Mississippi, built on a low, late Pleistocene terrace on the Mississippi Sound. The Late Woodland mound (A.D. 590–780) is composed of local soils, and its presence today is a testament to the ancient builders’ knowledge of earthen construction materials and methods. Central to the study of the mound is an integrated geoarchaeological approach that uses stratigraphy and micromorphology to decipher material source and selection, construction techniques, and periodicity, in combination with more traditional artifacts, revealing the activities that created this ultimately monumental space. The mound was built in three rapid stages beginning with a low earthwork demarcating a ritual precinct used during late spring/early summer. Stage II quickly followed with a series of alternating zoned fills, sealing the space that was then subsequently covered by Stage III, a massive hard red surface that marked the location with a platform mound.

Monumental earthworks composed of sand and used as tumuli, embankments, and platforms are documented throughout the world (e.g., Griffiths 2011; Lightfoot and Luby 2012; Milner 2004). They are prevalent on the coastal plain of the American Southeast, where quartz sand is a major constituent of available earthen building material (e.g., Frierson 2002; Irwin et al. 1999; Milanich 2002; Russo 1996; Scudder 2008; Thomas and Larsen 1979). While sand (technically defined as particles .1–2 mm in size) in the vernacular is thought of as impermanent, it is esteemed by modern engineers as an ideal medium to support heavy loads, such as highways, if it is prepared at optimal moisture and compaction levels (Holtz and Kovacs 1981; Winterkorn and Fang 1991). The physical properties of sand as a construction material are significant when one considers that precolombian sand mounds have withstood high rainfall and high-energy storms for centuries.

The presence of these cultural features on the landscape today is a testament to the ancient builders’ knowledge of earthen construction materials and methods, paired with a probable desire and expectation that these monuments were to be permanent parts of the cultural landscape, or “persistent monumental places” (sensu Thompson and...
Pluckhahn 2012:50). Such realizations about the physical properties of mounds and the complex ways they were constructed have gained greater empirical support as the result of an “integrated geoarchaeological approach” to their investigation (Sherwood and Kidder 2011).

Relatively few Woodland platform mounds have been excavated with modern methods or attention to stratigraphy and building materials. Those that have exhibit diverse residential, mortuary, or communal functions (Jefferies 2009; Knight 1990; Mainfort 1988; Pluckhahn 1996). In a survey of excavated mounds, Lindauer and Blitz (1997) identify a temporal trend in which most early platform mounds (200 B.C.–A.D. 800) lack evidence of substantial buildings or production debris but often have food remains and broken pottery, suggesting relatively open access to mound activities by small groups of people engaged in feasting and associated ritual activities of short duration. Early in our investigation of the Late Woodland Graveline Mound we suspected that the mound might be a ritual space of temporary aggregation spatially removed from habitation areas and household domestic activities.

To address research questions regarding the cultural significance and function of earthen mounds, we must routinely integrate stratigraphy and construction techniques with the traditional focus on chronology, food remains, building arrangements, and artifacts. Earthen mound deposits become “artifacts” in the sense of complex analytical units that reveal cultural choices in construction material, engineering skills, symbolic expression, and the duration and periodicity of monument construction and use (Sherwood 2006; Sherwood and Kidder 2011:69). In this report, we describe the methods and results of an integrated geoarchaeological approach in the relatively rare opportunity to conduct limited excavation of a Late Woodland platform mound.

Research at Graveline Mound

The Graveline Mound (22JA503) is a sand platform mound in Jackson County, Mississippi. The mound is on a late Pleistocene terrace at 5.9 masl and 165 m north of the Mississippi Sound, a shallow body of the Gulf of Mexico (Figure 1). Graveline Mound is remarkably well preserved; the original configuration is still evident as a flat-topped pyramidal platform that measures 30 m north–south, 25 m east–west, and 1.65 m in height above the current ground surface. Within 500 m of Graveline Mound, there are five additional mounds. They remain uninvestigated, and so it is not known if they are contemporaneous with the larger, centrally located Graveline Mound. In addition, an extensive shell midden once existed along the shoreline 200 m west of the mound. Hemmed in by suburban development, which restricted our access to these other site locations, our 2010 investigation focused on Graveline Mound and a 70-x-50-m area surrounding the mound. Our research objectives were to document the number, duration, and configuration of mound-building episodes and identify mound-related activities.

The geophysical survey of the mound and surrounding area employed a gradiometer, ground-penetrating radar (GPR), and electrical resistivity tomography (Johnson et al. 2011). The GPR survey was the most informative technique, detecting an “ovoid” anomaly approximately 1 m below the surface corresponding to the general shape of the mound, which was interpreted at the time as possible midden deposits and features. Systematic shovel testing was also carried out across the 70-x-50-m area surrounding the mound (Downs 2011). The excavation that followed the exploratory work sought to minimize impacts to the mound from possible erosion. Therefore horizontal exposures were avoided, and a strategy of deep sounding excavations was implemented with excavation units aligned in an east–west transect to create a cross section of mound strata and to intersect detected anomalies. These excavations consisted of 14 1-x-2-m units placed on and off the mound (Figure 2). The project excavations and subsequent artifact, botanical, and faunal analyses have generated a detailed picture of mound chronology, form, function, seasonality of use, and related activities (Blitz and Downs, eds. 2011).

Geoarchaeology at Graveline Mound

We anticipated that geoarchaeology would help us identify the source and composition of earthen building materials, interpret the methods of mound construction, and document the duration and peri-
The demography of mound construction and use. An integrated geoarchaeological approach to the excavation of earthen mounds and other earthworks begins with the premise that the composition of earthen construction materials and the manner of their acquisition and arrangement in the building of monuments reveal much about the cultural significance of these sites (Sherwood and Kidder 2011). The approach emphasizes (1) a more standardized terminology for the types of construction deposits, (2) identification of the sources and therefore the selection and transportation distance of the earthwork soils and sediments, (3) a delineation of construction methods, and (4) an understanding of the submonument surface and deposits prior to earthwork construction (Sherwood and Kidder 2011). When integrated with the more routine analysis of traditional artifacts (e.g., pottery, lithics, food remains) and radiocarbon dates, geoarchaeology promises a more comprehensive understanding of earthwork stratigraphy, function, symbolism, and chronology.

**Local Soils and Geomorphology**

A comprehensive understanding of ancient earthworks requires identification of the earthen building materials and how the choice of these materials was constrained by the available soils and geology (Sherwood and Kidder 2011). Graveline Mound presented a special challenge to analysis because the building materials are composed of sands, whereas most platform mounds examined by geoarchaeologists thus far are composed of loams, silts, and clays. The surficial geology along the Mississippi Sound is limited in building materials, consisting mostly of quartz sand from fluvial, beach, and aeolian sources (marsh muds are also plentiful but were not identified among the mound sediments). The local soils are mapped as Paleudults, which in a quartz sand–rich environment indicates that they have been stable for thousands of years. The soil in the site vicinity is mapped as the Wadley Series, a loamy, siliceous, subactive, thermic Grossarenic

Figure 1. Location of the Graveline Mound (22JA503) on the Mississippi Gulf Coastal Plain.
Paleudult (Johnson 2006). The profiles generally consist of a thin humic A horizon over a series of E horizons. These E horizons form when weak organic acids strip the organic material and iron coating from the sand grains and leach these compounds down into the subsoil. The light color of the E horizon is due to the natural color of the dominant quartz sand. Below the E horizons are deep Bt or Btv horizons where there is a significant accumulation of clay and iron. The “v” subhorizon refers to plinthite, a dense red clay and sand material, typically developing as much as 200 cm below surface. Plinthite (from the Greek plinthos, “brick”) is an iron-rich, humus-poor, reddish material that is firm or very firm when moist but can harden irreversibly when exposed to air or repetitive wetting and drying (Buol et al. 2003; Padmanabhan and Eswaran 2006).

**Methods**

The primary methods used to study the mound stratigraphy were detailed profile observation, particle size analysis, and soil/sediment micromorphology thin sections (Sherwood 2011). Detailed profile observation proved to be the most informative method for deciphering the building sequence, followed by micromorphology. A total of 78 linear meters of vertical profiles from the 14 excavation units were examined (Figure 2). The particle size and micromorphology analyses were used to source the mound fill. In particular, particle size was used to determine if the clean “white” sand layers in the mound were obtained from the nearby beach or from the local E horizon. The statistical parameters of particle size indicated that the mound building material was likely derived from local soils composed of fluvial sands (Sherwood 2011). Micromorphological analysis of 17 5-×-7-cm thin sections increased the resolution of the macrostratigraphic observations. Petrographic analysis of the thin sections, under plane and crossed polarized light at 10x to 400x magnification, allows for the identification of specific sediments (mineral, organic, and microartifacts) and
their spatial arrangement (Courty et al. 1989; Stoops 2003). These techniques increase the interpretive potential of mound deposits and provide a more comprehensive understanding of site formation processes and artifact context (Goldberg and Macphail 2006).

**Materials and Methods of Mound Construction**

Mound construction materials were derived from the major soil horizons described above. We use the geological term *facies* to refer to stratigraphic units with distinct lithologies that come from a common source (*sensu* Stein 1987), designated here by the color matching the major soil horizons from which they were derived. Black, white, and red facies were used to create the mound, probably obtained from borrow pits like the one detected in Unit 3 off-mound (see Sherwood 2011). Black facies, derived from A horizon material, are organically rich (relative to other facies) and typically include anthropogenic sediments such as bone and charcoal (Figure 3a–b). White facies are homogenized medium sand with < 10 percent silt and organic matter, typical of the local E horizon (Figure 3a–b). Red facies consist of medium sand and slight increases in the silty clay fraction (from illuviated clay) and are derived from Bt or Btv horizons (Figure 3c–d). Red facies were primarily limited to the outer surface of the mound. Careful delineation of facies can reveal a transition in the use of mound surfaces, such as a hiatus between construction episodes or significant shifts in the types of deposits laid down. The distribution and layout of these facies identify three stages in mound building. Stages I–III are further defined in specific areas by adding lowercase letters representing distinct layers, termed “zones,” among the facies. Figure 4 provides a schematic of the mound by stage, created by vertically exaggerating scaled drawings of the unit profiles in an east–west transect.

**Stage I**

Stage I is the initial mound construction stage, a low feature recorded in only three excavation units: Unit 13 on the west side and Units 4 and 10 on the east side of the mound (Figure 4, Figure 5). The majority of the artifacts and all features at the mound were found on or just off the east side of Stage I (Figure 4). Stage I overlies the original ground surface, the Ab horizon, and is covered in light-colored sand (white facies) designated Zone Ia and topped by a black facies primarily composed of A horizon and midden material (Zone Ib). Zone Ib on the east side of the structure includes artifact concentrations deposited as dumping episodes and A horizon material (Figure 6). Several lines of evidence suggest that Stage I represents an earthwork built to designate a special-purpose, nonresidential place, separate from mundane activities: (1) the lack of substantial remains of a building; (2) artifact concentrations deposited as discrete, rapidly formed dumping episodes with unusual preservation and content; (3) variation in the spatial distribution of charcoal and artifacts, suggesting discrete deposits; and (4) the spatial discontinuity of Stage I.

Post molds originating in Zone Ib intrude into the E horizon. The post molds (n = 12) average 9 cm in diameter. The small post size and the absence of a structure pattern suggest temporary shelters, racks, or partitions of flexible saplings or cane (charred remains of cane *Arundinaria* sp. were present [Peles and Scarry 2011:Table 8.2]). There were no hearths or anything to indicate the presence of a heavy-frame permanent structure.

Three kinds of concentrated macroartifact deposits were distinguished in Zone Ib. Shell concentrations (n = 15) were distinct heaps of marine shells, carbonized material, animal bone, and potsherds. Pottery concentrations (n = 2) consisted of potsherds from multiple vessels likely broken elsewhere and then collected and dumped to form a small pile. Charcoal concentrations (n = 2) were distinct dumping events deposited in the same manner as the shell and pottery concentrations. Organic remains from the dump concentrations are not what one might expect from a domestic context. Of the bone recovered, 98 percent is fish, in marked contrast to the usual diversity of Woodland faunal assemblages in the Lower Southeast (Scott 2011:121). Also present were seeds of yaupon (*Ilex vomitoria*), a stimulant, and morning glory (*Convulvus/Ipomea* spp.), a plant with cathartic or psychotropic properties (Peles and Scarry 2011:145). Although we do not have food remains from domestic contexts at the site for comparison, a special-purpose use of these species is supported by their context.
Figure 3. Examples of the various facies used to build the mound: (a) representative photograph illustrating a white facies over a black facies (Unit 4, north profile); (b) photomicrograph showing the typical composition and microfabric (bottom) at the contact of a white facies (top) and a black facies (bottom) (Sample GM14, plane polarized light); (c) representative photograph illustrating a red facies in the mound (Unit 14, north profile); (d) photomicrograph showing the type of horizon likely used to create the red facies—note the illuvial clay coatings (representative coatings indicated by arrows) typical of the local Btv/Bt horizon.
Figure 4. Vertically exaggerated schematic of the mound stages, north profile. The stages are indicated in roman numerals (adapted from originals in Blitz and Downs 2011).

Figure 5. Stage I exposures with zones/horizons marked. Stage I consists of Zone Ia (white facies) under Zone Ib (black facies) overlying the original ground surface (Ab/E). The Unit 13 profile is 1 m wide, and Unit 4/10 profile is 2 m wide.
Figure 6. Unit 1/8, south profile, revealing the blending of the Ab horizon and Zone Ia at the outer eastern edge of Stage I. Zone Ia joins the Ab horizon and includes artifact concentrations, small-diameter postholes (note the few clasts of the E horizon [white facies material] that have been reworked into Zone Ia), and the shell concentration.
Stage I presented a stratigraphic puzzle during excavation. Stage I deposits were visible in profile on the east and west sides of the mound but absent in the center excavation units. In other words, Stage I is not a continuous platform that spanned the center of the mound. We were confident that the east and west Stage I exposures represented the same construction episode or feature because both (1) rested on the original ground surface, (2) were composed of the same earthen material and constructed in the same way (Figure 5), and (3) spatially correlated with the outline of the mound platform (Figure 2, dotted line). In addition, Stage I corresponds in depth and scale to the “ovoid” anomaly detected by the GPR survey noted above, which was interpreted as a distribution of midden deposits similar to the concentrated dump events found with Stage I in the excavation units (Johnson et al. 2011:Figures 2.5–2.6). The GPR results lack the precision to determine conclusively if the ovoid anomaly is an oval-shaped or subrectangular earthwork or a discontinuous oval pattern of dump deposits. Nevertheless, while the spatial extent of our excavations was limited, the identification of Stage I as an earthwork enclosure with an associated dump concentration best fits the available evidence. Stage I likely enclosed a special or sacred “inside” space for activities, and the artifact concentrations could be the activity residues collected and dumped to the “outside” of this space on the exterior flank of the earthwork. We note that recent excavations and coring at the Jackson Landing site, a contemporaneous Late Woodland mound on the coast 90 km west, also identified “premound midden deposits” marking the periphery of the mound (Boudreaux 2011a:244, 2011b). This phase of deposition left an open area in what would become the center of the mound, much like Stage I at the Graveline Mound.

The original ground surface inside Stage I is noticeably different from the surface outside Stage I and immediately beneath Zone 1a. Figure 7a shows the abrupt contact between the white facies of Zone 1a and the abundant charcoal in the Ab horizon below. Compared with this surface “outside” and beneath the Stage I earthwork, the buried A “inside” Stage I has significantly less charcoal (Figure 7b) and very few macroartifacts or microartifacts (Blitz and Downs, eds. 2011:Appendix D; Sherwood 2011). The devoid area contained inside the Stage I earthwork and the artifact concentration dumps to the outside of Stage I suggest an end product of a ritualized activity involving food consumption in a place of special cultural significance, removed from mundane domestic contexts. We suggest that the debris itself was regarded as special and thus kept close to the ritual precinct. Mound-flank middens are associated with many excavated Woodland and Mississippian mounds (Knight 2001; Lindauer and Blitz 1997:173; Smith and Williams 1994). The cleaning of ritual spaces and dumping of the debris into a heap that was maintained, regarded as sacred, and kept within the confines of the ritual precinct continued into historic times in the ceremonial Square Grounds of native Southeastern peoples (Knight 1989:283).

Stage II

Stage II is the penultimate construction stage, composed of distinct, homogeneous layers of alternating white and black facies (Figures 4 and 8); this is a construction method termed “zoned fill” (Sherwood 2006; Sherwood and Kidder 2011:77). Stage II forms the core of the mound; it covers Stage I and the “inside” space to a height of 1.5 m. Artifact recovery from Stage II was minimal, with a few potsherds in the black facies likely incorporated from surface sediments in the source areas (Blitz and Downs, eds. 2011:Appendix D). No features were present. The absence of artifacts, features, or other residues suggested to us that the layers of alternating white and black facies in the zoned fill were not occupation or activity surfaces but, instead, were added to cover the symbolically charged Stage I ritual space and increase the height and breadth of the mound.

Zoned fill is a building technique that can be used to maintain a steep slope and a balanced moisture regime. Alternating sand facies, instead of one homogeneous deposit or randomly piled “basket loads,” spread the distinct layer over a larger area, enhancing shearing strength and reducing shear stress. Shear stress can cause the deformation of earthen constructions via movement along planes parallel to the imposed stress, which in this case is the ca. 20° mound slope. The builders of Graveline Mound placed the planes of weakness, the break between facies, oblique to the
surface gravitational force, a construction choice that substantially increased slope stability. Compared with the clays and silts commonly used to build mounds in the interior Southeast, compacted sand grains act to increase the shearing strength because the grains interlock and help keep slopes stable (Kirchner et al. 1990), whereas the finer particles of silts and clays require more moisture and thus have a high potential for shrink-swell and deformation.

Figure 7. (a) Unit 4, south profile, “outside” the center of the mound area, associated with Stage I. The upper photomicrograph shows the abrupt boundary between Zone Ia and the Ab horizon, and the lower photomicrograph shows the concentration of charcoal in the enriched Ab horizon. (b) Unit 9, north profile, the Ab horizon “inside” the mound, beneath Stage II: the photomicrograph on the right from this Ab horizon indicates the significant decrease in charcoal relative to the area beneath Zone Ia. Note: All three photomicrographs are in plane polarized light and at the same scale.
Stage III

Our ability to understand Stage III, the final stage of mound construction, was limited by extensive bioturbation from the vegetation that covers the mound and burrowing rodents and insects. Some of the postdepositional disturbance to Stage III was from previously documented causes such as looter holes and trees uprooted by Hurricane Katrina, but the dimensions of the mound have not been substantially altered from when it was first mapped in 1992 (Blitz and Mann 2000:35). We found intact portions of Stage III, currently covered by a thin A horizon, indicating a relatively homogeneous red facies layer(s) of plinthite derived from the local subsoil horizon(s) (Figures 4 and 9). Plinthite would have been an ideal choice to cover the mound because it forms a hard layer that diverts water from potentially erosive surfaces and could also help maintain balanced internal moisture levels. Also, its red color is noted among building materials at other mounds (exposed surfaces in particular), and the color red is thought to have specific symbolic meanings (Charles et al. 2004; DeBoer 2005; Pursell 2004; Sherwood and Kidder 2011).

As with Stage II, only a few artifacts, likely in secondary context, were associated with Stage III. There were no features or midden, which was unexpected since the flat summit suggested a surface for activities. While it is possible that heavy precipitation and tropical storms have eroded the terminal surface and redeposited materials off-mound, we documented only minimal slope wash deposits in profile, and as noted above, very few artifacts were found in the shovel tests surrounding the mound (Downs 2011). If Stage III was used for activities, we found no evidence of it.

Duration and Periodicity of Mound Construction and Use

The mound construction sequence was established
by superposition of strata. Mound chronology was further defined by relative ceramic dating and radiocarbon assay. Eight accelerator mass spectrometry radiocarbon assays from Stage I artifact concentrations (six samples) and specific zones (two samples) bracket the mound ca. A.D. 590–780 (Blitz and Downs 2011:Table 4.2). Associated ceramic temporal markers (late varieties of Marksville Incised) have long time spans. While these methods establish calendric parameters, we relied on other data to meet the research objectives. The relative duration of construction stages can be roughly measured by the absence of micro-graded bedding/slope wash, which accumulates as exposed surfaces erode over time (Sherwood and Kidder 2011:80). The periodicity of mound construction can be measured by the development of an A horizon, which marks an unmaintained hiatus of use, and the establishment of vegetation between stages. Faunal remains provide data on seasonality of mound use.

The core of Stage I (Zone Ia) was built rapidly; there were no slope wash deposits at the base of the mound flanks. We recognize that these could have been destroyed by bioturbation, but typically one would expect at least fragments or clasts of this original bedding if it existed. The event(s) that created Zone Ib and the dumped artifact concentrations occurred over a short interval, as indicated by (1) well-preserved and -articulated delicate fish bones, attached bivalve shells, and the absence of erosion on potsherd surfaces; (2) the absence of A horizon phytolith concentrations or dense fine roots in thin section; (3) the spatially discrete and concentrated dumped materials, which were not dispersed by subsequent activity; and (4) a season of procurement for the fish and shellfish largely restricted to late spring/early summer (Andrus et al. 2011; Scott 2011). No significant stratigraphic disconformities or slope wash sediments were present “inside” Stage I, evidence that the area was covered by Stage II in...
a short period of time. The standardized construction of the zoned fill of Stage II and the absence of a clear buried A horizon representing a stable surface within or at the contact between Stages II and III (or any disconformities) suggest that the stage was built rapidly, likely in one endeavor. While this interpretation of the timing of mound construction is largely based on negative data, one must also consider that the engineering capacity of such a zoned fill can only be realized when consecutive alternating layers are deposited. The mound would have been unstable during the lag time between layers if these were added on a seasonal or yearly basis. Interpretation of the interface between Stage II and III was complicated by bioturbation, but the absence of a midden, features, or a prepared surface and a paucity of artifacts suggest that the intensity and duration of use for both of these stages were even less than occurred at Stage I. The relatively rapid additions of Stages II and III without additional use as occupation surfaces are best interpreted as a termination ritual to seal Stage I and the interior space it created and mark them with a monumental, durable edifice.

Conclusions

Geoarchaeology, integrated with more traditional archaeological data, provides a comprehensive understanding of Graveline Mound. With detailed stratigraphic data recovery including fine-scale profile observations, particle size, and micromorphology, we determined the materials, methods, duration, and periodicity of mound construction and use. Graveline Mound was a ritual facility separated from habitation sites and built with sandy soil material from the local soil horizons. The first construction stage was a low earthwork raised rapidly to demarcate a ritual precinct where fish, shellfish, and medicines were consumed in one to several events over a short time period during late spring/early summer. Following soon after the conclusion of these events, a stage of zoned fills sealed the special space, and in turn, this sand edifice was promptly encased by a final stage that was likely primarily composed of red plinthite, which marked the location with a platform mound. Graveline Mound was not used as a long-term place of habitation or as a mortuary facility. The construction and use of the mound did not have involved a large number of people or a hierarchy of permanent leadership, but they did require an in-depth knowledge of earthen building materials and their application to create a stable and enduring monument.

An integrated geoarchaeology proved invaluable to our efforts to identify how the building materials of Graveline Mound were utilized to create, consecrate, terminate, and monumentalize a ritual space that was only used for a brief interval. Our discipline has reached the point where geoarchaeology should not be seen as a specialty to choose to include or exclude in field studies. Attention to landscape evolution and stratigraphy is central to any archaeological inquiry, as it is the first step in documenting context. This attention to soils and strata as both context and artifact, especially in “built” environments, is essential.

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References Cited

Andrus, C. Fred T., John H. Blitz, and Lauren E. Downs

Blitz, John H., and Lauren E. Downs

Blitz, John H., and Lauren E. Downs (editors)
2011 Graveline: A Late Woodland Platform Mound on the Mississippi Gulf Coast. Manuscript on file, Historic Preservation Division, Mississippi Department of Archives and History, Jackson.

Blitz, John H., and C. Baxter Mann
2000 Fisherfolk, Farmers, and Frenchmen: Archaeological...


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