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BIG POTS FOR BIG SHOTS: FEASTING AND STORAGE IN A MISSISSIPPIAN COMMUNITY

John H. Blitz

In small-scale societies, ritual feasts are often an important setting for social integration and status competition. Material evidence of feasting and food storage may be preserved in community ceremonial precincts, such as platform mounds. To identify food-consumption activities, ceramic samples from mound and village contexts at the prehistoric Lubbub Creek site in Alabama are compared. There are no significant differences in the distribution of decorated types, ware categories, or vessel shapes. However, the mound has a more restricted range of vessel sizes and disproportionately larger vessels than the village sample. These results, together with supporting feature and faunal data, suggest that mound activities included large-group feasts and food storage.

En las sociedades de menor escala, los festejos rituales son frecuentemente un escenario importante para la integración social y competición de status. Restos arqueológicos de festejos y almacenaje de alimentos pueden ser preservados en zonas ceremoniales de la comunidad, por ejemplo en los montículos. Para identificar las actividades de alimentación, se comparan muestras de cerámica procedente del montículo y del pueblo con la del sitio prehistórico de Lubbub Creek en el estado de Alabama. No hay una diferencia significativa en la distribución de tipos de decoración, la categoría de fabricación, ni de las formas de las vasijas. Sin embargo, el montículo tiene una escala más restringida en lo que se refiere a los tamaños de las vasijas y tiene un número desproporcionado de vasijas más grandes que las muestras encontradas en el pueblo. Estas vasijas grandes son evidencia de grandes festejos y el almacenaje de comida. Los restos óseos también apoyan esta misma interpretación.

Archaeologists have long been concerned with understanding the nature and development of social ranking in nonstate societies. Theories of chiefdom development often promote the idea that formal offices of leadership appeared in response to demographic or environmental stresses that demanded “managers” to oversee intensified food production and external relationships (Johnson and Earle 1987; Peebles and Kus 1977; Service 1975). Others emphasize how internal social demands may stimulate resource intensification and status differences. In one such “social” model (Bender 1979, 1985), generation of food surpluses need not be a demographic or environmental imperative, but rather a social strategy to extend alliances, reinforce obligations, and promote prestige. Kin groups that amassed more food held the advantage in the competitive arena of feasts and gift giving that serves to bind together households in small-scale societies (Hayden 1990; Steponaitis 1986).

In both perspectives on the rise of social ranking, control of access to resources emerges as a

John H. Blitz, Department of Sociology/Anthropology, Bowdoin College, Brunswick, ME 04011

central factor. "Big men" and chiefs alike attempt to gain access to wealth and make it available to reward a body of followers. Such activities may initiate a complex interplay between material and ideological processes that serves to stimulate increased social differentiation in cultural evolution (Friedman 1975; Sahlin 1972). Because kin-based societies rely primarily on consensus rather than physical coercion to negotiate acceptance of political decisions, success in extending control over community resources requires authority to be legitimized through ideological mechanisms (Earle 1989; Wolf 1982; Wright 1984).

In any examination of how the temporary "big man" role of intensifier and provider could become institutionalized as a formal office of chief, the social manipulation of surpluses within a ritual format is of critical importance. Ideological sanctity and control of resources may converge within the confines of a specialized facility where the pooling and disbursement of food between households occurs during large-group feasting. If ritual and political spheres of activity are localized in such places, one might concede that "society's central decision-making organization should be reflected in the morphology, distribution, and functional associations of its public architecture" (Spencer 1982:137). The remains of "public" ceremonial precincts—men's houses, ancestor shrines, temples—may preserve the physical evidence archaeologists require to examine the proposed relation between manipulation of food surpluses, group ritual, and emergence of social ranking.

In the southeastern United States, maize intensification, increased social differentiation, and earthen platform mounds became widespread soon after A.D. 1000 as part of the broad cultural development collectively referred to as "Mississippian." Mississippi period platform mounds have been interpreted as elite residences (Lewis and Kneberg 1946; Polhemus 1987), temple/charnels (Brown 1985; Neitzel 1965; Schnell et al. 1981), public earth lodges (Rudolph 1984), and as earth symbols (Knight 1986) but it has not always proven possible to specify mound-related activities. In this paper, I present evidence of feasting and storage activities associated with a platform mound at the Mississippi period site of Lubbub Creek. Mound features, artifacts, and ecofacts, when contrasted with materials elsewhere in the community, establish a social context in which ritual feasting and food storage may have amplified formal authority.

Particular attention is focused on the ceramic evidence for feasting and storage. Emphasis on ceramics is appropriate, first, because potsherds are often the most abundant (or even the only) remains recovered in many archaeological situations. Second, the commonplace observation that pots are made for food preparation, consumption, and storage underlies the assertion that a few rather simple measures of ceramic function and size may reveal something of the social context in which the vessels were put to use.

THE LUBBUB CREEK SITE

The Lubbub Creek site is located on a large "horseshoe" bend of the Tombigbee River in Pickens County, Alabama (Figure 1). The site is one of several small, single-mound Mississippian centers along the central Tombigbee River. It is 55 km west of the multiple-mound regional center of Moundville and shares a similar material-culture tradition.

A settlement pattern of small farmsteads, dispersed around Lubbub Creek and other local centers, coincides with maize intensification in the region. While most researchers have attempted to explain Tombigbee regional maize intensification as a response to hypothetical population-resource imbalances (Cole et al. 1982; Scott 1983; Welch 1990), it is equally plausible that internal social demands arising from prestige competition were the principle motivation for increased cultivation. Whatever the causes, the shift to widespread farmsteads and an apparent effort to maximize large, high-energy species (Scott 1983:322–324) are interpreted as changes in labor organization to accommodate the new mode of production. Analysis of farmstead excavations suggests that logistical and defensive problems created by maize intensification were resolved by large-scale food storage and regular population aggregation at a fortified center (Blitz 1991).

Excavations at Lubbub Creek by the University of Alabama and the University of Michigan documented the development of the community between A.D. 1000 and 1600 (Blitz 1991; Jenkins 1982; Peebles 1983). Although the Mississippian occupation was distributed over 23 ha within the

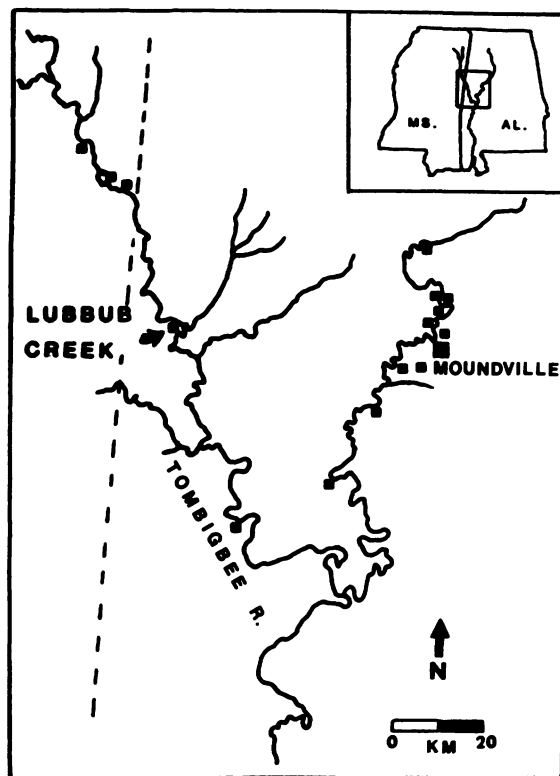


Figure 1. Location of the Lubbub Creek site. Squares represent Mississippian mounds (from Blitz 1993: Figure 1). From *Ancient Chiefdoms of the Tombigbee* by John H. Blitz, © 1993 The University of Alabama Press. Used by permission.

river bend, a 12-ha area was the focus of intensive excavations. Major community features include remains of bastioned palisades, a dry moat or fortification ditch, a cemetery, 25 wattle-and-daub structures, and an earthen platform mound.

PLATFORM-MOUND EXCAVATION

The platform mound at Lubbub Creek was completely excavated. The upper portion of the mound could not be directly investigated because it had been bulldozed away in the 1950s. Despite this destruction, excavations determined the sequence of construction, secured material remains with which to reconstruct mound-related activities, and documented the initiation of a ceremonial precinct on the premound surface around A.D. 1000, at the very beginning of the Mississippi period occupation (Blitz 1983, 1991).

Intact mound-construction stages were revealed as alternating zones of clay and sand. These remnant stages showed that the mound was a pyramidal platform with a square base, two ramps, and sharp angular corners. The dimensions at the base of the final construction stage were 39 m by 40 m. When first recorded early in this century, the mound was 3.35 m high (Moore 1901:504–505). Vertical profiles established that the mound was constructed in four distinct episodes. Although samples of fired daub and other artifacts were recovered from the clay construction stages, none of these foundation surfaces had escaped modern destruction. Consequently, structural remains associated with mound stages were not preserved.

Fortunately, beneath the intact base of the mound were the remains of six superimposed buildings, which had been erected on the original ground surface prior to mound construction. Superposition

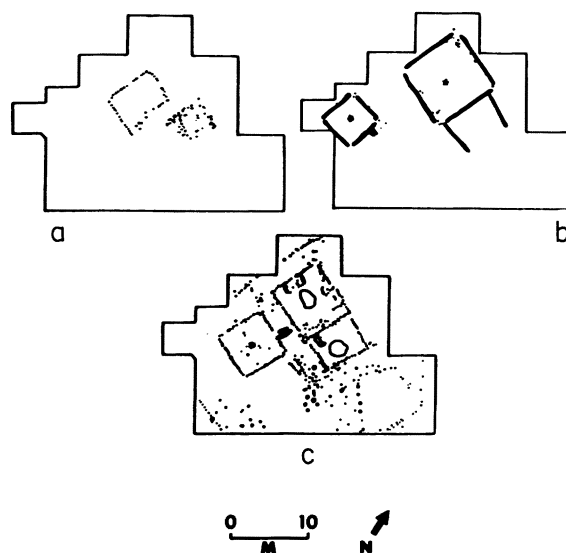


Figure 2. Premound structure arrangements: (a) initial; (b) second; (c) final.

of features revealed the sequence of construction. The premound precinct consisted of paired structures that were periodically destroyed and rebuilt in three sequential arrangements (Figure 2). In each arrangement, one large building was paired with a smaller structure. The paired building arrangements span what must be at least several decades at the beginning of the Mississippi period occupation. This specialized precinct became the focal point around which a community plan formed. A line of post molds surrounded the final paired arrangement to form an enclosed compound. Subsequently, after the compound was razed, the area was capped by a rectangular clay platform that initiated the first stage of mound construction.

METHODS AND ANALYSIS

Ceramic Measures of Mound-Related Activities

The premound complex of structures represents the establishment of a special activity precinct located within the community, yet spatially demarcated and architecturally distinct from it. Potsherds were the most abundant artifacts found in both mound and village (nonmound) refuse. If the mound was the location of specialized activities—feasts or storage—then the mound and village pottery samples might be expected to vary in an informative way. In order to explore this possibility, the total sherd sample from Lubbub Creek was subdivided into a mound sample ($n = 5,992$) and village sample ($n = 50,159$) for comparative purposes.

The mound ceramic sample was recovered from a variety of primary and secondary contexts, indicating that broken pottery was discarded in several ways. Potsherds, sometimes associated with ash and faunal remains, were recovered from structure floors, post molds and concentrations within the premound compound, volume samples of intact construction stages, volume samples of the plow-zone-disturbed mound base, and debris dumped down from the summit into a midden formed along the south ramp and mound base. In this latter context, dumping from the mound summit was inferred from the manner in which midden was superimposed over the basal slope of the final mound stage as a talus-like deposit and because dumping from the direction of the village was prevented by an open barrow pit. It was from this barrow pit that earth for mound construction was obtained and therefore it is unlikely that the mound matrix included artifacts redeposited from village areas.

The village ceramic sample consisted of sherds or vessels recovered in primary and secondary

contexts from floors, pits, and post molds associated with domestic dwellings, middens in the vicinity of house remains, grave offerings, and plow zone volume samples. The depositional circumstances that formed the mound and village ceramic samples differ principally in that mound deposits are exclusively composed of debris generated as a result of mound-related activities, whereas the village sample is drawn from multiple, dispersed locations within the site. Because the temporal span of mound and village samples are coeval, aggregate samples are appropriate for comparative purposes.

Lubbub Creek represents a local variant of the Moundville culture and shares the same ceramic tradition (Mann 1983; Steponaitis 1983). The pottery is shell tempered, and more than 90 percent of the assemblage is undecorated. Technological, stylistic, and contextual evidence from Moundville has led some investigators to conclude that certain decorated types are the product of part-time craft specialists (Hardin 1981; Peebles and Kus 1977; Steponaitis 1983; van der Leeuw 1981; Welch 1991). At Lubbub Creek, however, there are no decorated types restricted solely to mound or village contexts, nor is there any indication of restricted social access to these types within the community (Blitz 1991:189–224). This discovery shifted the focus of mound and village ceramic comparisons from decorative style to more directly functional concerns of vessel use and size.

In ethnographic examples of small-scale, kin-based societies, a common responsibility of community leaders is to supervise the pooling of food and to host large-group feasts that are the principal setting for ritual and political activities. Differences in the ratios of serving, cooking, and storage vessels at various community locations might indicate an emphasis on such activities (Drennan 1976). The serving, cooking, and storage distinctions in the Lubbub Creek pottery can be identified by (1) coarse-ware/fine-ware categories, and (2) vessel shape.

Two basic ware categories are defined by a coarse-temper/fine-temper dichotomy in paste composition and by a burnished/unburnished distinction in surface treatment. Technological studies indicate coarse shell temper is resistant to thermal shock whereas fine shell temper facilitates production of thin, durable walls in various shapes (Steponaitis 1983:33–45). In addition, coarse shell temper highly correlates with unburnished ware, and fine shell temper highly correlates with burnished ware. The burnished category used in this case also includes a dark surface treatment (“black filmed”) that is the result of smudging and firing in a reduced oxygen atmosphere. Because the black-filmed surface is destroyed when exposed to fire, it is unlikely that this ware was used for cooking (Steponaitis 1983:33). Based on these observations, the ratio of burnished to unburnished sherds should provide a measure of serving/cooking activities. If the mound was the scene of feasting, then it was expected that a greater proportion of fine serving ware would be discarded there than in more mundane domestic contexts elsewhere in the community.

Vessel-shape classes provide further functional clues (Figure 3). Recent southeastern studies provide a basis for inferring functional uses from vessel shape. Following the morphological and use-wear criteria outlined by Steponaitis (1983) and Hally (1986), bottles and flaring-rim bowls are considered to have predominantly a serving function, standard jars a cooking or storage function, and simple bowls a cooking or serving function.

When the ceramic sample was divided into burnished and unburnished categories that reflect the serving/cooking distinction and compared between mound and village contexts, it was discovered that, although the mound has a slightly higher proportion of serving ware as expected, this difference is not very dramatic (mound = .08; village = .06). Similarly, when a chi-square test was conducted to determine if the four major vessel-shape classes—standard jar, bottle, flaring-rim bowl, and simple bowl—are independently distributed across mound and village samples, no important difference in the distribution of vessel shapes was revealed ($\chi^2 = 4.77$; $df = 3$; not significant at .05 level). The composition of mound and village ceramic assemblages is similar. Ratios of ware categories and vessel shapes vary little throughout the community.

Vessel Size

Given that mound and village ceramic samples share a similar composition of vessel shapes, ware categories, and decoration, vessel size might be more informative about mound activities. Differences in vessel size may be more directly related to: (1) the volume of food prepared and

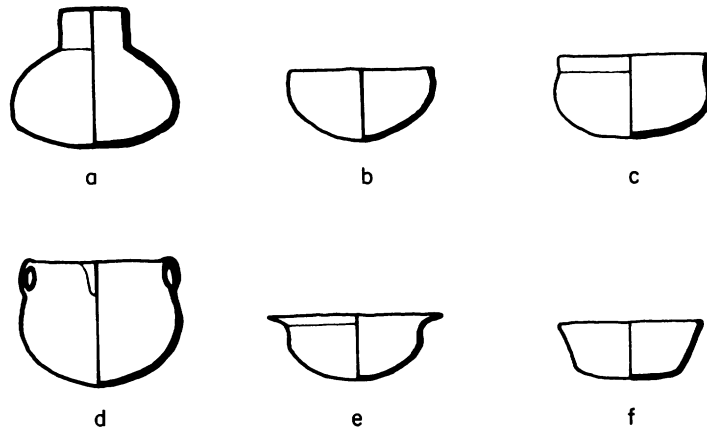


Figure 3. Major vessel shape classes: (a) subglobular bottle; (b) simple bowl; (c) short-neck bowl; (d) standard jar; (e) flaring-rim bowl; (f) outslanting bowl.

served and, by implication, the size of the serviced social group and (2) the variety of food-processing tasks.

Presumably, the greater volume of food consumed by a large group will necessitate larger cooking and serving vessels than required for a smaller group of people (e.g., Turner and Lofgren 1966). Of course, it is also possible that the needs of large-group food consumption could be met merely with more vessels, rather than vessels of greater capacity. Ethnoarchaeological commentary on the relation between vessel size and social group size is not extensive. One study discovered a weak but positive correlation between vessel size and social group size in Maya peasant households (Nelson 1981). Among the Shipibo of Peru, large ceramic vessels are produced for the express purpose of brewing and consuming manioc beer at community fiestas (DeBoer and Lathrap 1979).

The variety of food-processing tasks is also expected to influence vessel-size ranges. Ethnographic observations have noted the correlation between the diversity of food-preparation and other household activities that involve pottery and the use of different vessel sizes (Nelson 1981, 1985). Different needs are met in the manufacture of various sizes within each shape class, frequently designated by specific names (DeBoer and Lathrap 1979). If these observations are broadly applicable, domestic contexts are expected to represent the most diverse set of activities and thus have the greatest range of sizes. Specialized contexts, with a limited set of activities, are expected to have a more restricted range of sizes. These observations are not offered as universal principles. They pose an empirical question to be examined anew in each case. If differential distributions of vessel size occur, then it is a justified inference to conclude that the social context of food consumption has shaped this distribution.

If the Lubbock Creek mound is a location of large-group food consumption and if the village ceramic sample primarily reflects small-group household use, then (1) a higher relative frequency of large vessels is expected in mound contexts when compared to village contexts, and (2) there should be a correspondingly narrower size range in the mound sample than is found in the village sample. In order to evaluate these expectations, the first step was to gather information on vessel size. Because the ceramic data consist almost entirely of sherds, orifice diameter was used as an indirect estimate of vessel size. To test this assumption, correlation coefficients revealed a positive relation between orifice diameter and vessel height for a sample of 17 complete standard (globular) jars and 10 complete simple bowls available in collections from Moundville. Orifice diameter and height relations for other bowl forms were not tested with whole vessels; however, it is expected that orifice diameter can be used as an indirect measure of vessel size for these forms as well, because orifice diameter and height relations are a function of the relatively simple geometric forms represented. This orifice/height positive relation would not be expected to hold for the highly restricted

Table 1. Mound Ceramic Sample for Vessel-Size Analysis at Lubbub Creek.

Unit/Artifact Number	Vessel Form ^a	Rim Diameter (cm)	Context ^b
5991/1	SJ	27	S
7006/4	SJ	22	S
7002/1	SJ	20	S
4535/418	SJ	37	C
4535/419	SJ	34	C
4535/624	SJ	42	C
4541/65	SJ	29	D
4541/68	SJ	38	D
4541/316	SJ	29	D
4541/322	SJ	35	D
4588/107	SJ	28	D
4588/108	SJ	36	D
4588/109	SJ	45	D
4588/114	SJ	27	D
8972/1	SJ	41	D
8972/3	SJ	40	D
8972/4	SJ	38	D
8972/6	SJ	39	D
8972/7	SJ	41	D
4541/505	SJ	21	D
4588/687	SJ	40	D
4541/317	SJ	23	D
4588/683	SJ	32	D
5950/1	SJ	28	PC
5882/90	SJ	20	PC
4517/6	SJ	33	P
4517/11	SJ	28	P
4517/13	SJ	37	P
4517/15	SJ	28	P
4517/344	SJ	32	P
4517/345	SJ	34	P
4517/349	SJ	36	P
4523/10	SJ	40	P
4542/26	SJ	34	P
4515/26	SJ	40	P
4503/4	SJ	27	P
4542/356	SJ	24	P
5989/1	SB	27	S
5989/2	RB	35	S
5997/136	SB	20	S
6557/1	OB	36	S
7038/95	FB	36	S
6504/50	FB	19	S
4587/178	NB	28	C
4588/111	FB	36	D
4588/115	SB	17	D
4588/117	NB	37	D
588/118	OB	33	D
4588/121	SB	17	D
8972/2	NB	25	D
8972/12	SB	15	D
8972/1282	FB	32	D
4541/480	FB	44	D
4541/475	FB	41	D
8972/11	RB	20	D
8972/10	FB	33	D

Table 1. Continued.

Unit/Artifact Number	Vessel Form ^a	Rim Diameter (cm)	Context ^b
5882/13	SB	14	PC
5882/17	OB	35	PC
5950/2	SB	26	PC
5882/89	FB	32	PC
3757/41	SB	33	P
3757/43	OB	41	P
4517/16	OB	36	P
4540/245	SB	28	P
4541/318	SB	32	P
4542/20	UB	41	P
4542/24	SB	33	P
4544/7	OB	32	P
4542/325	FB	32	P
4542/362	FB	22	P
4521/63	SB	24	P
4541/479	SB	17	P
4549/1085	FB	32	P
4542/359	SB	16	P
4548/12	SB	24	P
4542/357	FB	27	P
4543/23	FB	30	P
4592/3	FB	28	P

^a SJ = standard jar, SB = simple bowl, RB = restricted bowl, OB = outslanting bowl, FB = flaring-rim bowl, NB = short-neck bowl, CB = cylindrical bowl, UB = unidentified bowl form.

^b S = structure, C = construction stage, D = midden deposit from summit, PC = premound compound, P = plow-zone disturbed mound.

orifices of bottle forms and, as few bottle-rim sherds of a measurable size were recovered, this vessel-shape class was excluded from the samples.

For each rim sherd sufficiently large to determine vessel shape, orifice diameter was measured by matching the curvature of the rim arc with a series of concentric circles separated by 1-cm increments. Generally, it was discovered that small sherds with an arc of less than about 10° could not be adequately measured on the template and were excluded. Tables 1 and 2 present provenience, form, rim diameter, and context information for each sherd used in the vessel-size analysis. Size/frequency histograms of mound and village jar and bowl forms are shown in Figure 4.

Are there size-range differences for jars and bowls between mound and village contexts? For jars (cooking/storage), a greater size range is found in village than in mound contexts. Specifically, the mound has an overrepresentation of the largest vessels, with the smallest sizes absent. For bowls (cooking/serving), the same pattern holds. Large bowls are overrepresented, and the small end of the range is absent in the mound sample. Median orifice diameters for jars (mound = 34 cm, village = 26 cm) and bowls (mound = 32 cm, village = 19 cm) differ substantially.

Another way to perceive these differences is to examine cumulative curves of orifice diameters of jars and bowls in the village and mound samples (Figures 5 and 6). The distributions of both jar and bowl rim diameters were compared using the normal approximation for Mann-Whitney's *U* statistic, appropriate when sample sizes are large or there are ties across classes (Blalock 1972:259–260). For both jars ($z = 3.38128$; $p < .01$) and bowls ($z = 4.9799$; $p < .01$), mound samples are significantly different from village samples. Mound jar and bowl distributions are missing the lower tails of the village distributions.

To summarize, functional characteristics of ceramic samples from mound and village contexts were compared. There are no significant differences in the distribution of vessel shapes, nor are

Table 2. Village Ceramic Sample for Vessel-Size Analysis at Lubbub Creek.

Unit/Artifact Number	Vessel Form ^a	Rim diameter (cm)	Context ^b
3586/1180	SJ	35	S
3586/1181	SJ	38	S
3586/1182	SJ	36	S
3586/1187	SJ	28	S
3610/538	SJ	34	S
3613/109	SJ	24	S
3614/82	SJ	33	S
4859/9	SJ	24	S
8609/5	SJ	15	S
2520/196	SJ	34	F
3249/124	SJ	24	F
3594/853	SJ	19	F
3597/448	SJ	30	F
3619/775	SJ	42	F
4123/9	SJ	22	F
4123/10	SJ	20	F
4123/31	SJ	24	F
4123/49	SJ	29	F
4123/50	SJ	28	F
4124/977	SJ	28	F
4125/1238	SJ	12	F
4345/492	SJ	34	F
4345/494	SJ	44	F
4345/493	SJ	21	F
4702/6	SJ	27	F
5248/80	SJ	44	F
8143/1	SJ	34	F
9054/5	SJ	24	F
9320/46	SJ	17	F
4345/11	SJ	33	F
4345/495	SJ	30	F
5353/25	SJ	14	F
7481/110	SJ	32	F
4345/1134	SJ	22	F
2109/404	SJ	22	F
4124/984	SJ	12	F
5417/44	SJ	29	PM
6201/6	SJ	20	PM
6693/75	SJ	24	M
9491/3	SJ	26	B
4385/291	SJ	17	B
5604/2	SJ	12	B
3277/101	SJ	26	FD
3277/105	SJ	22	FD
7186/1	SJ	39	FP
3471/224	SJ	22	AC
2472/1128	SJ	25	PZ
5054/17	SJ	32	PZ
6478/4	SJ	32	PZ
1539/105	SJ	16	PZ
4757/122	SJ	23	PZ
3196/232	NB	27	S
3586/1183	OB	31	S
3586/1186	UB	23	S
3634/333	SB	30	S
5451/17	OB	45	S
5550/4	SB	19	S

Table 2. Continued.

Unit/Artifact Number	Vessel Form ^a	Rim diameter (cm)	Context ^b
3122/288	RB	16	S
2546/273	SB	19	S
3612/400	SB	6	S
4072/61	SB	19	F
4123/8	RB	20	F
4123/26	RB	12	F
4123/44	NB	9	F
4123/46	UB	18	F
4123/51	NB	12	F
4124/992	NB	10	F
4139/94	SB	10	F
4345/496	NB	8	F
4385/288	SB	8	F
4708/72	SB	33	F
4920/18	SB	35	F
5527/5	SB	17	F
5717/20	FB	36	F
9320/47	NB	27	F
2074/201	SB	21	F
4345/1092	SB	21	F
3594/1156	SB	8	F
4124/1209	SB	28	F
4954/1	SB	21	F
4125/1532	SB	22	F
2941/27	SB	16	F
2321/2753	SB	12	M
2321/2756	UB	29	M
4315/191	OB	17	M
4316/4807	SB	24	M
4316/4809	SB	8	M
4316/4824	NB	6	M
4123/46	UB	18	F
4123/51	NB	12	F
4124/992	NB	10	F
4139/94	SB	10	F
4345/496	NB	8	F
4385/287	SB	8	F
4708/72	SB	33	F
4920/18	SB	35	F
5527/5	SB	17	F
5717/20	FB	36	F
9320/47	NB	27	F
2074/201	SB	21	F
4345/1092	SB	21	F
3594/1156	SB	8	F
4124/1209	SB	28	F
4954/1	SB	21	F
4125/1532	SB	22	F
2941/27	SB	16	F
2321/2753	SB	12	M
2321/2756	UB	29	M
4315/191	OB	17	M
4316/4807	SB	24	M
4316/4809	SB	8	M
4316/4824	NB	6	M
5048/298	SB	25	PZ
6478/6	NB	27	PZ
6482/297	RB	14	PZ

Table 2. Continued.

Unit/Artifact Number	Vessel Form ^a	Rim diameter (cm)	Context ^b
6605/53	NB	24	PZ
6605/56	UB	19	PZ
6603/51	SB	18	PZ
4719/439	FB	20	PZ

^a See Table 1 for notes.

^b S = structure, F = pit feature, PM = post mold, M = midden, B = burial offering, FP = fortification, AC = artifact concentration, PZ = plow zone.

there important differences in the ratio of serving to cooking wares. However, the mound sample has a more restricted range of vessel sizes and disproportionately larger vessels than the village sample. These results are interpreted as evidence that the broad range of vessel sizes in the village samples reflects a variety of domestic household activities, while the narrower range in the mound suggests primary emphasis on large-group food consumption and storage.

DISCUSSION

Additional mound-artifact associations, faunal remains, and architectural patterns provide parallel sets of evidence that tend to complement and reinforce the implications of the ceramic analysis. The mound associations, if considered in isolation, would not provide sufficient evidence about mound-related activities. Only when mound material associations are compared to village associations, as was done with the ceramic samples, does it become clear that the mound was the focus of specialized activities centered on rituals, feasts, and storage.

For example, although lithic artifacts and debris were not abundant at Lubbub Creek (Allan 1983), many utilitarian stone artifacts common in village refuse are absent at the mound, implying a more restricted set of activities in this portion of the community. In contrast to village samples, minute amounts of debitage from pre mound structure floors indicate very occasional tool maintenance, but not tool production. Several artifacts recovered from the floors of the larger pre mound buildings suggest nonutilitarian items consistent with a ritual format. Unmodified mica (muscovite) fragments, a nonlocal resource, are probably an element of costume or ornamentation. An incised and ground sandstone-disk fragment from the mound is an artifact type sometimes referred to as a "palette," which is usually incised with geometric or Southeastern Ceremonial Complex motifs (Webb and DeJarnette 1942:287-291). These palettes evidently served as grinding surfaces for the preparation of mineral pigments, traces of which have been found on some examples (Webb and DeJarnette 1942:287). Other disk fragments were found on a domestic structure floor elsewhere in the community.

Numerous large lumps of chalk, hematite, limonite, and conglomerate capable of producing white, red, and yellow pigments were present within the pre mound compound. Although the size and density of mineral lumps found at the mound were exceptional, such minerals were commonly encountered in village contexts as well. In short, while the mica, the stone-disk fragment, and pigments may indicate ritual paraphernalia, only tiny scraps of mica were unique to the mound context.

Faunal remains, analyzed by Susan Scott (1983), are far more revealing about mound activities than the limited amount of lithic artifacts. In a community-wide sample of more than 33,000 identified skeletal fragments, the bones of several bird species are unique to the mound: Carolina parakeet (*Conuropsis carolinensis*), cardinal (*Cardinalis cardinalis*), bluejay (*Cyanocitta cristata*), crow (*Corvus brachyrhynchos*), mockingbird/brown thrasher (*Mimidae*), and a merlin (*Falco columbarius*). The birds represented here probably were not used for food; instead their bright plumage

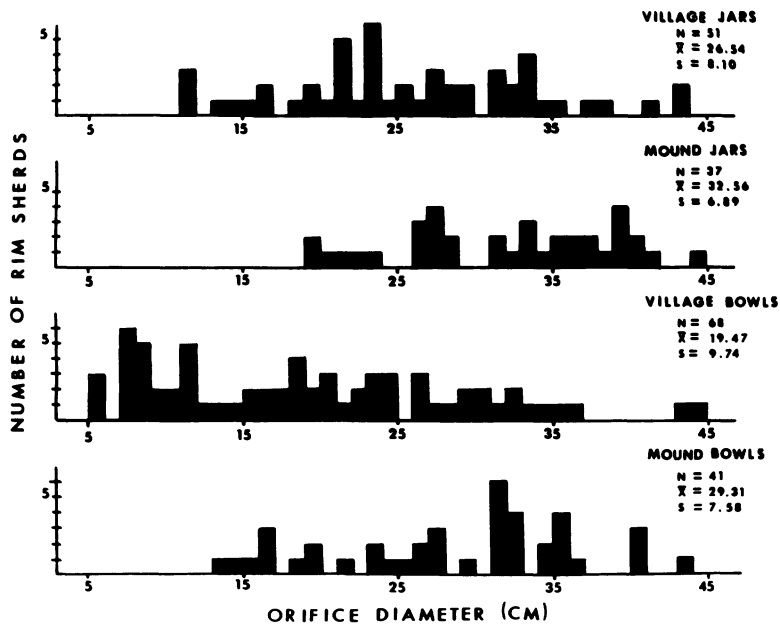


Figure 4. Size/frequency histograms of mound and village jars and bowls (from Blitz 1993:Figure 21). From *Ancient Chiefdoms of the Tombigbee* by John H. Blitz, © 1993 The University of Alabama Press. Used by permission.

most likely contributed to costume or ritual paraphernalia. Interestingly, several of these species played important mythological roles in historic southeastern belief systems. Moreover, the early European observers repeatedly mention bird symbolism in connection with southeastern temples. Carved wooden birds were affixed to the roof, and stuffed birds were arranged around the “altar” (Swanton 1911:164). The symbolic implications of the bird remains provide valuable insights into

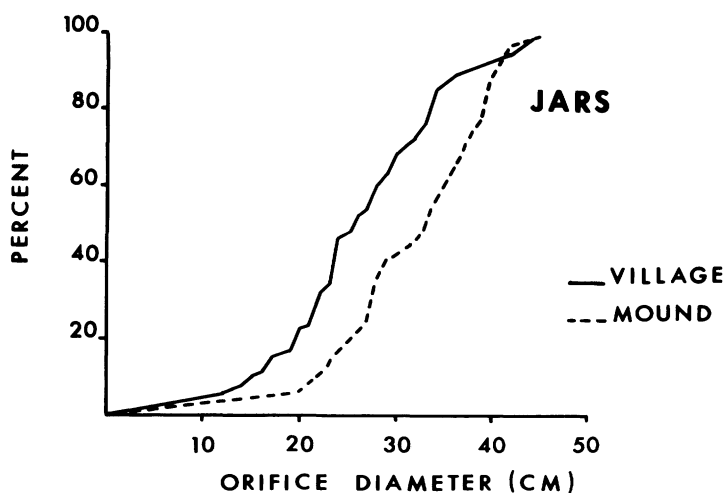


Figure 5. Cumulative curves of orifice diameters: village and mound jars (from Blitz 1993:Figure 22). From *Ancient Chiefdoms of the Tombigbee* by John H. Blitz, © 1993 The University of Alabama Press. Used by permission.

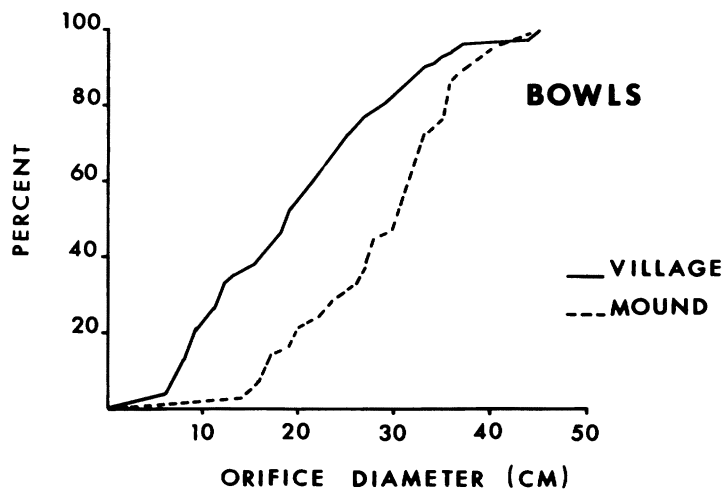


Figure 6. Cumulative curves of orifice diameters: village and mound bowls (from Blitz 1993:Figure 23). From *Ancient Chiefdoms of the Tombigbee* by John H. Blitz, © 1993 The University of Alabama Press. Used by permission.

Mississippi period mound ceremonialism and are discussed at length elsewhere (Blitz 1991:136–137; Scott 1983:349–350). Suffice it to say that, together with mica fragments and abundant mineral pigments, the unique bird remains are additional accoutrements for ritual activities.

Food consumption is also implicated in the faunal remains. Scott (1983) compared faunal samples between mound and village contexts. By bone weight, large mammals (principally deer) dominate both mound and village samples. However, bone weights of deer mandibles, hindlimbs, and especially forelimb skeletal elements were overrepresented in the mound debris, although the differences were not great and the possibility of variable bone fragmentation presented comparative problems (Scott 1983:356–357). Similar distributions at other Mississippi period sites have been interpreted as differential high-status access to “choice cuts” of venison (Belmont 1983; Bogan 1980; Cleland 1965; Penman 1983; Rudolph 1984). In addition, the mound sample contained a higher relative frequency of fish and turtle remains than the village sample. Clearly, there is a distinct social context of food consumption at the mound, but it cannot be assumed that access was restricted solely to the elite. Ceremonial feasts that included participants drawn from various social positions within the community could produce such a pattern. Finally, almost half of the mouse and rat bones recovered at Lubbub Creek came from the mound; a possible indication of the location of large-scale food storage (Scott 1983:356).

Elite, wealthy, or influential persons often have larger households and thus bigger dwellings than do others, even in societies without institutionalized wealth differences (Wilk 1983). Do the disproportionately larger mound vessels reflect communal feasting or, instead, consumption by a big elite household? An answer to this question requires a measure of social-group size independent of the ceramic evidence. If the median size of mound vessels is far greater than could possibly be needed by a family, then we would suspect communal feasting. House-floor area can serve as a relative measure of social-group size. Comparative archaeological (e.g., Lewis and Kneberg 1946; Neitzel 1965) and ethnohistorical (Swanton 1911:158–164, 260–261, 269) sources indicate that the larger compartmented structures in the paired pre-mound arrangements are not domestic dwellings, but special-purpose buildings without counterparts in the community. The smaller pre-mound structures appear to be similar architecturally to domestic houses in the village area. However, the median floor area of these latter mound buildings (30 m²) is less than that for village house floors (35 m²), despite the fact that mound median vessel size is on the order of one-third greater than village vessels. Of course, orifice diameter is not equivalent to vessel volume, and it is the amount of food

that is significant here; but if actual vessel volumes were available, the disparity between mound and village vessel sizes would be even greater. So it is unlikely that differences in mound and village vessel sizes can be explained by evoking large elite families in residence at the mound.

CONCLUSIONS

The sharing of a meal by a large group is often an important event, an opportunity to reaffirm social unity, as well as to promote personal ambition. Archaeologists interested in understanding the development of social ranking must pay greater attention to the role of feasting and storage in nonstate societies. Material evidence of such activities may be concentrated within special community facilities. Platform mounds and other such facilities have a high archaeological visibility, but the specialized nature of use-related activities may only become apparent when associated materials are contrasted with generalized domestic patterns.

In this paper I have applied vessel function and size measurements to identify feasting and storage activities in a Mississippian community. In those frequent archaeological situations where ceramic assemblages display a high degree of homogeneity in vessel shape, fabric, or decoration, vessel size may prove to be the most informative measure of intrasite or intersite use-related activities (e.g., Shapiro 1984). I propose that variation in vessel size is directly related to the size of the social group and the variety of food-processing tasks. Such appears to be the case at Lubdub Creek, where there are no significant differences in the distribution of decorated types, ware categories, or vessel shapes, but where the mound has a more restricted range of vessel sizes and disproportionately larger vessels than village samples. These results, supported by additional architectural and faunal data, suggest that mound activities included feasts and large-scale food storage.

These observations have implications for the manner in which authority was delegated and formalized. Current theoretical perspectives tend to polarize the issue of whether chiefdom formation was coercive or voluntaristic (cf. Earle 1989). The question of how chiefs may be "system-serving" or "self-serving" (Flannery 1972:423) must be placed in a developmental perspective. In the Tombigbee region, the logistics of maize intensification and the need to protect dispersed farmsteads and their harvests created a situation in which the storage and disbursement of food by farmstead members at a fortified center was a pragmatic solution. Analysis of excavation data from throughout the settlement system reveals that farmstead and local center populations were not independent economic and social entities, but instead were engaged in regular population aggregation at the local center (Blitz 1991:157–188; Scott 1982:146–151). The person standing in the family farmstead maize field in June may have been the same individual who consumed "choice cuts" of venison with kin in a ceremonial building atop a mound at the local center in December.

Under such conditions, delegation of authority over communal food storage and disbursement may have arisen in an atmosphere reinforced by sanctity and ritual regulation. Voluntaristic food storage and feasting, localized in a ceremonial precinct, served as a launching pad for ambitious personages and as an impetus for further development of social ranking. At the small social scale of resource mobilization between farmsteads and local center the system-serving advantages of pooled surpluses and the self-serving political strategy to extend personal authority must have been mutually reinforcing and coevolutionary.

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IDENTIFYING INDIVIDUAL VESSELS WITH X-RADIOGRAPHY

Christopher Carr

The individual vessel, rather than the sherd, is the relevant unit of analysis in many kinds of behavioral studies. Economical methods for assigning the sherds of multiple vessels to their vessels of origin are introduced for household-made ceramics. The methods employ visible surface indicators of vessel individuality as well as radiographically detectable ones such as temper quantity, size distribution, spatial distribution, and material type, void spaces, and fracture systems. A hierarchical, sequential sorting strategy and certain radiographic methods, which are optimal for revealing the internal features of ceramics, make this application possible.

La vasija individual, en vez de los pedazos de vasija, es la unidad de análisis pertinente en muchas clases de estudios de conducta humana. En este trabajo, se introducen métodos económicos para designar los pedazos de vasijas múltiples a sus vasijas de origen en cuanto se refiere a la cerámica fabricada domésticamente. Los métodos utilizan indicadores visibles de superficie de la individualidad de las vasijas así como indicadores detectables radiográficamente como cantidad de degasante, distribución de tamaño, distribución espacial, y tipo de material, espacios vacíos, y sistemas de fractura. Una estrategia jerárquica y secuencial de clasificación y ciertos métodos radiográficos, los cuales son óptimos para revelar los rasgos internos de la cerámica, hacen posible esta aplicación.

Archaeologists use ceramics to reconstruct many kinds of past behaviors and ideas. Community occupation span, household size, culinary and other processing activities, subsistence change, mobility patterns, the frequency of trade and social interaction between communities, community social

Christopher Carr, Department of Anthropology, Arizona State University, Tempe, AZ 85287