Mississippian Ceramic Jars, Bottles, and Gourds as Compound Vessels

Author(s): George M. Luer

Source: *Southeastern Archaeology*, Winter 1996, Vol. 15, No. 2 (Winter 1996), pp. 181-191

Published by: Taylor & Francis, Ltd. on behalf of the Southeastern Archaeological Conference

Stable URL: http://www.jstor.com/stable/40713076

plications for Late Mississippian Intersite Relations. *Southeastern Archaeology* 14:181–194.
Perino, Gregory
1961 Unusual Pottery Vessels from the Memphis Area. *Central States Archaeological Journal* 8(4):146–150.
Phillips, Philip
1970 *Archaeological Survey in the Lower Yazoo Basin, Mississippi: 1949–1955*. Papers of the Peabody Museum of Archaeology and Ethnology, Vol. 60, pts. 1 and 2. Harvard University, Cambridge.
Phillips, Philip, James A. Ford, and James B. Griffin
1951 *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940–1947*. Papers of the Peabody Museum of Archaeology and Ethnology, Vol. 25. Harvard University, Cambridge.
Price, James E., and Cynthia R. Price
1990 Protohistoric/Early Historic Manifestations in Southeastern Missouri. In *Towns and Temples along the Mississippi*, edited by D. H. Dye and C. A. Cox, pp. 59–68. University of Alabama Press, Tuscaloosa.
Ramenofsky, Ann F.
1987 *Vectors of Death: The Archaeology of European Contact*. University of New Mexico Press, Albuquerque.
Shelford, Victor E.
1963 *The Ecology of North America*. University of Illinois Press, Urbana.
Smith, Gerald P.
1972 Explanatory note. In *Chucalissa: Burials and Excavations through 1963*, by C. H. Nash, pp. ii–vi. Occasional Papers 6. Anthropological Research Center, Memphis State University. Memphis.
1990 The Walls Phase and its Neighbors. In *Towns and Temples along the Mississippi*, edited by D. H. Dye and C. A. Cox, pp. 135–169. University of Alabama Press, Tuscaloosa.
Smith, Gerald P., and Charles H. McNutt
1991 Recent and Reevaluated Dates from Chucalissa. Paper presented at the Southeastern Archaeological Conference, Jackson, Mississippi.
Smith, Marvin T.
1987 *Archaeology of Aboriginal Culture Change in the Interior Southeast*. University Presses of Florida, Gainesville.
Starr, Mary E.
1992 Preliminary Report on Ceramic Vessels from the 1991 Oliver Salvage. *Mississippi Archaeology* 27(2):40–55.
Thomas, Cyrus
1894 *Report on the Mound Explorations of the Bureau of Ethnology*. Bureau of American Ethnology, 12th Annual Report. Smithsonian Institution, Washington, D.C.
Williams, Ray
1972 *Land Leveling Salvage Archaeology in Missouri: 1968*. Report submitted to the Midwest Region, U.S. National Park Service.
Williams, Stephen
1957 Obituary: James Kelly Hampson. *American Antiquity* 22: 398–400.
1980 Armorel: A Very Late Phase in the Lower Mississippi Valley. *Southeastern Archaeological Conference Bulletin* 22:105–110.
Young, Gloria A., and Michael P. Hoffman (editors)
1993 *The Expedition of Hernando de Soto West of the Mississippi, 1541–1543*. University of Arkansas Press, Fayetteville.

Mississippian Ceramic Jars, Bottles, and Gourds as Compound Vessels

GEORGE M. LUER

Abstract. *The shapes of many Mississippian-period ceramic bottles appear to imitate containers fashioned from gourds (*Lagenaria siceraria *and* Cucurbita pepo *var.* ovifera*). Certain of these effigy vessels suggest that some gourd containers had ritual associations with mortuary activities and, perhaps, the brewing of medicines. Two gourd-effigy vessels from west-peninsular Florida's Mississippian-period Safety Harbor culture are analyzed for vessel form, motif, and function. It is hypothesized that vessels like these were fit together and used in a combined fashion with jar-shaped vessels. The compound arrangement consisted of a jar on the bottom, a portion of a bottle in the middle, and a movable neck on top. When joined, such vessels might have served in heating their contents, and large prefired basal holes appear to have allowed passage of heat or steam through the upper two vessels. A compound use also is suggested for some Mississippian jars and bottles in Georgia, Alabama, and Arkansas.*

Archaeological and ethnohistoric data from the Southeast suggest that some Mississippian-period jars and gourd-shaped bottles were used together as compound vessels, possibly for brewing medicines and for use in mortuary ritual. Archaeological evidence from Florida, Georgia, Alabama, and Arkansas hints that some ceramic jars and bottles were used in a stacked or combined arrangement for heating their contents. In building a case for compound use, I describe and analyze the forms and functions of three pottery vessels from Florida. I then widen the analysis to suggest compound uses for some similar Mississippian vessels in other areas of the Southeast.

The three Florida vessels are from a sand mound (8SO401) of the Safety Harbor culture (ca. A.D. 900–1700). Ceramic types typical of the Safety Harbor culture are described by Willey (1949), Griffin and Bullen (1950), Sears (1967), Luer (1985, 1992, 1993), Mitchem et al. (1985), and Mitchem (1989). Some of these types occur predominantly in mortuary contexts in west-peninsular Florida, the region from the Withlacoochee River (in north-central Florida) south to the Ten Thousand Islands (in southwestern Florida). In mortuary contexts, these widespread ceramics are found with different local ceramic assemblages (Luer 1991:70–71; Luer and Almy 1987:315) in both the Tampa Bay area's Safety Harbor culture and southwestern Florida's Caloosahatchee culture.

Provenience and Dating of Vessels

The pottery vessels described below came from 8SO401, a Safety Harbor sand mound in interior eastern Sarasota County about 22 km southeast of the City of Sarasota (Figure 1). The mound is near the edge of a freshwater slough supporting marsh and hardwood swamp vegetation. Such an inland wetland setting is typical of many Safety Harbor burial mounds, such as Tatham (8CI203), Jones (8HI4), Pic-

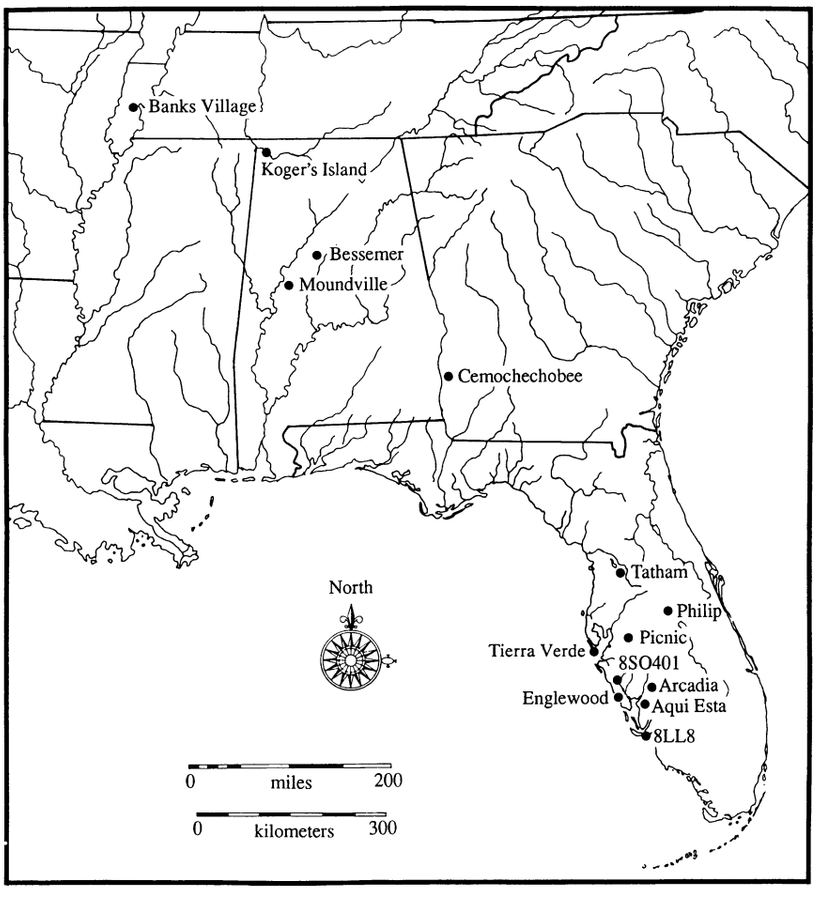

Figure 1. Key sites mentioned in the text. Note location of 8SO401 in west-peninsular Florida.

nic (8HI3), Parrish 3 (8MA3), Wilson B (8SO77), and Arcadia (8DE1), in the Withlacoochee, Hillsborough, Alafia, Little Manatee, Myakka, and Peace river drainages, respectively.

The mound was discovered in the early 1980s after it was exposed by land clearing. Besides the vessels described here, materials found include human bone, pottery sherds, and chert or agatized coral bifaces and flakes. At the time of discovery, the mound was reported to have an oval outline of approximately 23 m by 18 m, and a height of 1.2 m.

Informant interviews in the early 1990s give some indication of artifact proveniences. Vessel #1, an intact vessel, was close to the mound's southern edge at about 40–50 cm below surface. It lay beneath white sand in wet black sandy soil that had almost cemented in places, encrusting some of the vessel. Vessel #2, almost intact, was higher up near the center of the mound in dry white sand at a depth of about 45 cm. Vessel #3 also was from high in the mound, perhaps 3–4 m from where Vessel #2 was found, and consisted of a number of sizeable sherds at about 60 cm below surface.

Chronometric data for the three vessels from 8SO401 are lacking, but ceramics of the same types as these vessels have been found in other mounds that have yielded radiocarbon dates. These other cases can be used to establish general chronological control, and suggest that ceramics like those from 8SO401 were used throughout most of the Safety Harbor period, ca. A.D. 900–1550. For example, some ceramics like those from 8SO401 were found at Tatham Mound (Figure 1) where sherds from a Mississippian-style, loop-handled jar and a Safety Harbor Incised bottle occurred in the mound's upper stratum dating to ca. A.D. 1525–1550 (or the early postcontact period) (Mitchem 1989:363–364, 367, 375, 527–528). Apparent precontact occurrences of both Mississippian-style, loop-handled jars and Safety Harbor Incised bottles were in burial mounds at Tierra Verde (8PI51) (Sears 1967) and Aqui Esta (8CH68), the latter mound yielding radiocarbon dates of ca. A.D. 900–1200 (Luer 1980). For the three vessels described here, a precontact age (ca. A.D. 900–1500) is suggested; European-derived materials were not found at 8SO401.

Vessel Descriptions

Vessel #1. This intact, composite-form vessel has an upper neck, a middle rounded compartment with

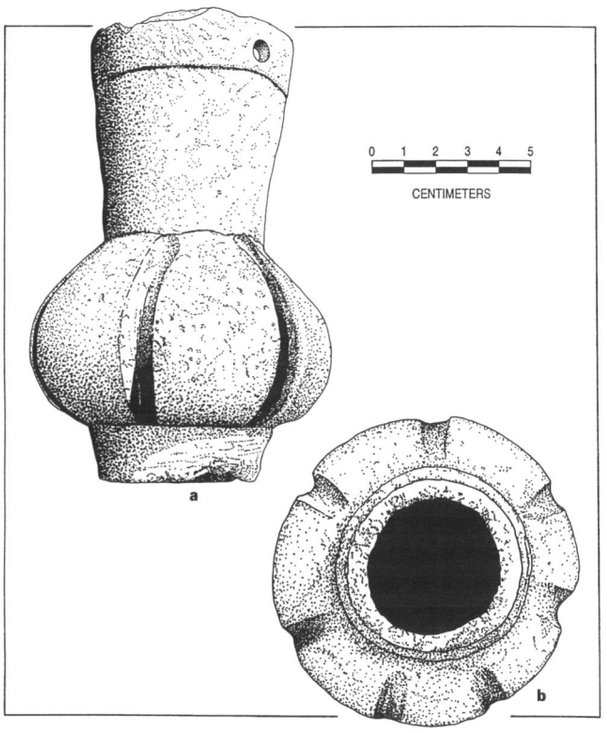

Figure 2. Vessel #1: (a) side view of intact vessel incorporating an effigy of a small, fluted, bell-shaped gourd; (b) bottom view showing the basal ring around a large prefired hole.

seven shallow flutes, and a lower basal ring (Figure 2). The vessel is small, measuring 14.7 cm in height and 9.5 cm in maximum width. Its basal ring surrounds a prefired hole that has an inside diameter of 3.7 cm. The lip of the basal ring measures 5–7 mm in thickness; most of the neck's lip is thinner and measures 3–5 mm in thickness.

The vessel's exterior surface is smooth and polished, and no soot is visible. In sunlight, its color is mottled, ranging from very dark grayish brown to grayish brown (10YR 3/2, 5/2), with a few black splotches of fire mottling (7.5YR 2/0, 10YR 2/1). The paste is tempered with quartz sand of variable percentage composition (10–25 percent) (USDA-SCS 1974:15), ranging in size from mostly very fine, fine, and medium grains (0.063 to 0.5 mm) to some coarse and very coarse grit (0.5 to 2 mm).

An incised line circles the neck about 2 cm below the lip. Another incised line, very faint, circles the base of the neck. The rim has two suspension holes, one opposite the other, that might have accommodated a cord or thong.

Vessel #1 closely resembles three other Mississippian period pottery vessels. These include two specimens from west-central Florida, one from the Englewood Mound (8SO1) (Figure 3c) and one from Arcadia (Willey 1949:Plate 46f, Figure 63f). The Arcadia vessel (Figure 3b) is the same small size as Vessel #1,

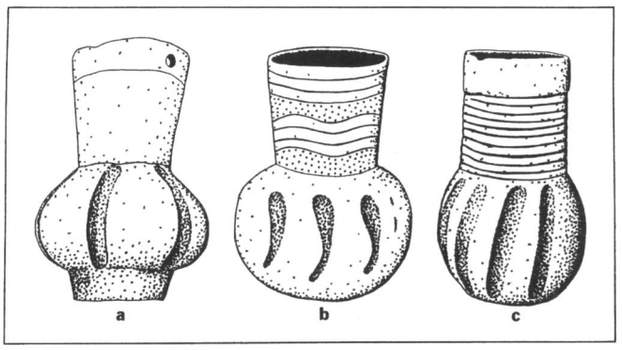

Figure 3. Three vessels incorporating effigies of small fluted gourds: (a) Vessel #1 from 8SO401; (b) from Arcadia site; (c) from Englewood Mound. The latter two are based on Willey (1949:Figure 63f and Plate 46f).

and also has a hole in its base. A third vessel from the Burial Mound at the Bessemer Site (1JE13) in north-central Alabama has a similar shape, but larger size (DeJarnette and Wimberly 1941:89, Figures 56 and 65; Welch 1994).

Vessel #2. This lower portion of a Safety Harbor Incised bottle is missing its neck (Figure 4). The orifice

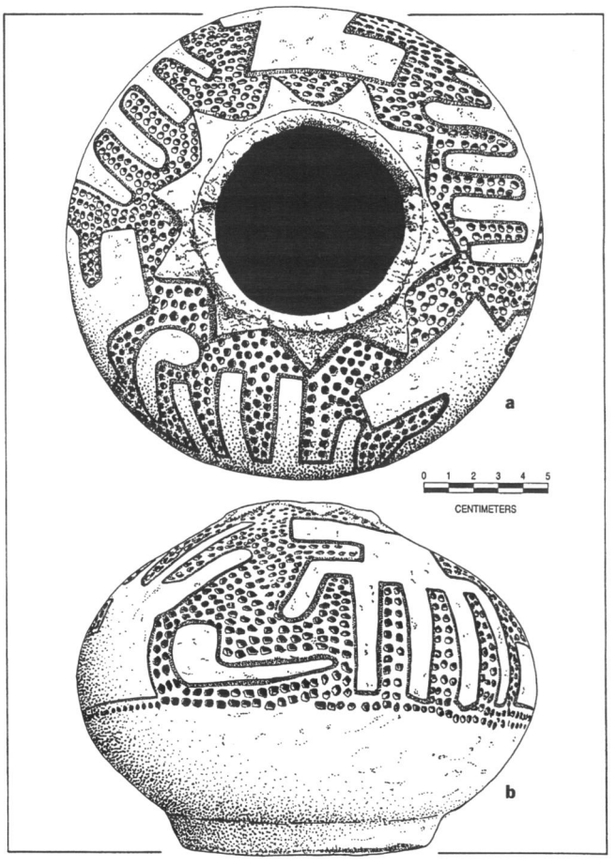

Figure 4. Vessel #2: (a) view from above showing the smoothed lip where the neck was removed; (b) side view showing the pedestal base.

is 6.3–6.5 cm in diameter, and its edge is 5–6 mm in thickness. This edge (or modified lip) is uneven and appears to have been smoothed slightly by grinding, suggesting that it was modified for use after the neck was removed (see below). Around the base of the missing neck are ten raised pendent triangles.

The vessel's maximum diameter is 19.5 cm, and its height is 14.1–14.3 cm. It has an undecorated pedestal base that is almost circular, with a diameter of 10–11 cm. In the middle of the base is a large round prefired hole, 3.8 cm in diameter, with a lip that is 5–6 mm thick.

In sunlight, the exterior surface of Vessel #2 ranges from dark grayish brown around its orifice (10YR 4/2) to brown and yellowish brown around its base (10YR 5/3, 5/4). The paste has a high percentage of quartz sand temper (approximately 50 percent) (USDA-SCS 1974:15), with particle size ranging from silt to fine sand (< .063 to .25 mm). No soot is visible on the exterior surface, which is smooth and polished except on the pedestal base where the surface is rough and sand grains protrude. The protruding temper occurs only on the flat exterior surface of the pedestal base and around its rim, and does not extend to the sloping side of the pedestal.

Prominent on Vessel #2 are incised motifs on a punctated field. The shapes of the punctations show that they were made with an implement with a square or rectangular tip. As is typical of Safety Harbor Incised pottery, punctations are large and incised lines are broad, shallow, and somewhat sloppily rendered. However, the overall design was planned with care.

Six incised human hands are on Vessel #2. The fingers of each hand alternate, pointing upward or downward. Three consecutive hands have five fingers, whereas the other three have only four fingers. The hands are accompanied by two possible forked eye motifs (Figure 5a). One of these motifs occurs with the five-fingered hands, whereas the other occurs with the four-fingered hands.

The human hands and possible forked eyes are widespread and variable Southeastern Ceremonial Complex motifs. Vessel #2's hands, with arms attached, are a variant of the hand motif occurring on widespread examples of Safety Harbor Incised pottery. In addition to 8SO401, the motif occurs at the Picnic (Bullen 1952:Figure 22i), Tierra Verde (Warren et al. 1965:Figures 1, 2, 5), Philip (8PO446; Benson 1967:Figure 9, lower left), and Laurel (8SO98) mounds (Luer and Almy 1987:306), and on a fifth unprovenienced vessel (Brown 1994:203, lower right).

Possible forked eyes are less common on Safety Harbor Incised pottery. Figure 5 shows that the motif can occur directly on a hand (where an eye motif is often depicted in Southeastern Ceremonial Complex material) or next to a hand. The motif on Safety Harbor Incised pottery has a single attenuated point resembling a "one-pronged surround" (see Phillips and Brown 1978:151–152).

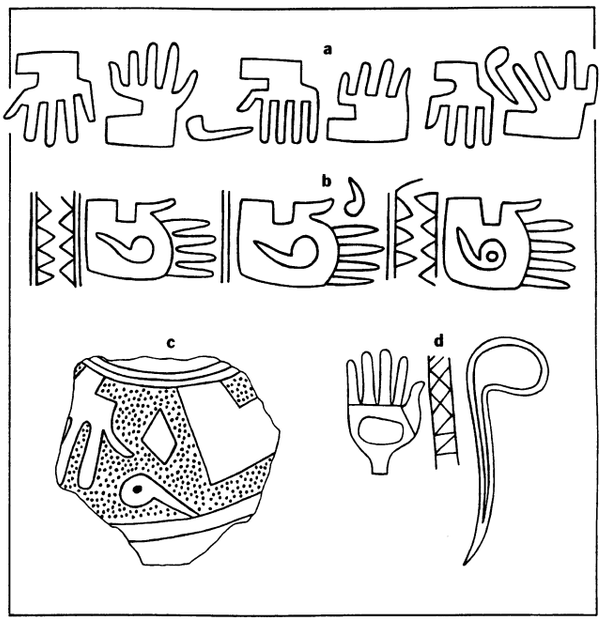

Figure 5. Human hand and one-pronged "forked-eye" motifs: (a) from 8SO401's Vessel #2 [note five versus four fingers]; (b) from Picnic Mound bottle [FLMNH cat. #76661]; (c) sherd from globular portion of a Safety Harbor Incised bottle, possibly from Philip Mound, Polk County, Florida [C. Benson collection, based on a 1983 photograph by D. Allerton]; (d) incised motifs from a bottle from Koger's Island, Alabama [cross-hatching omitted] [based on Webb and DeJarnette 1942:225, Plate 268:2].

Although speculative, this possible forked eye motif resembles a punctated motif on ceramic smoking pipes at Cemochechobee and other sites in Georgia and Tennessee, and it also resembles the shape of elbow pipes (see Schnell et al. 1981:231–232, Figures 4.22 and 4.8). If so, the motif next to human hands on Vessel #2 may be suggestive of smoking pipes.

Vessel #2's motifs, size, form, and large punctations resemble those of a Safety Harbor Incised bottle from the Picnic Mound (Bullen 1952:Figure 22i; Florida Museum of Natural History [FLMNH] cat. #76661), located about 54 km north of 8SO401. The Picnic Mound bottle also has a pedestal base and pendent triangles like those of Vessel #2. These features are so similar that they suggest a common origin for the vessels, such as fabrication by the same potter.

Vessel #3. This vessel consists of seven large matching sherds (4 body, 3 rim) from a collared jar (Figure 6). It is assigned to the ceramic type Lake Jackson Plain, though no direct connection to the Lake Jackson site (8LE1) in northwestern Florida is suggested. While the type does occur commonly at that site and in that region's Fort Walton culture, as well as in the Rood Phase of Georgia (where it is subsumed as a variety of Lake Jackson Decorated) (Schnell et al.

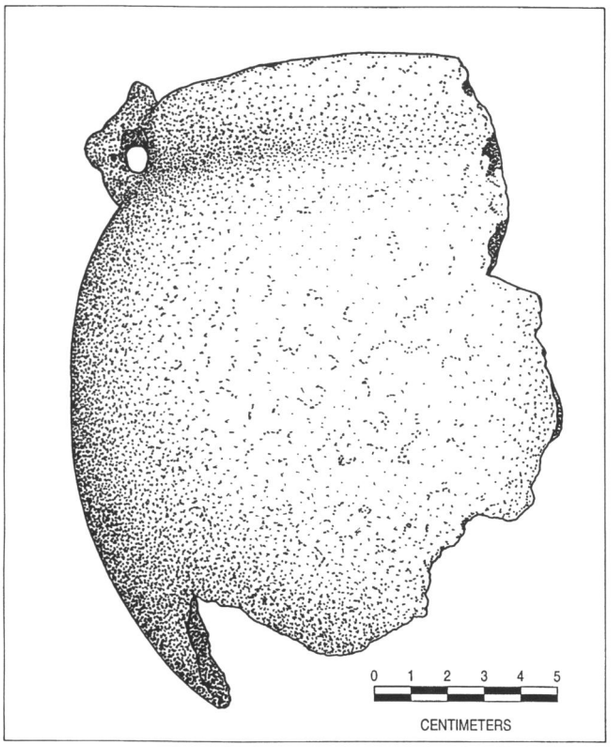

Figure 6. Vessel #3: side view of a portion of a Lake Jackson Plain collared jar with handle.

1981:163), Lake Jackson Plain is also a well-established ceramic type of the Safety Harbor culture (Griffin and Bullen 1950:10, Pl. IC-F; Luer 1980; Mitchem et al. 1985:189, Figure 6; Sears 1967:43–48, 58–59, Figure 7:1–2).

When measured on a diameter template (see Rice 1987:Figure 7.9), Vessel #3's rim sherds indicate that the vessel's orifice had a radius of approximately 14 cm. Measuring along the lips of the rim sherds shows that together they span approximately 106 radial degrees, or slightly less than one-third of the orifice circumference. One of the rim sherds has a loop handle with two projections. One projection is at the middle of the loop and points outward, the other is at the loop's top and points upward above the vessel's lip. Originally, Vessel #3 probably had four or five loops spaced around its rim that allowed attachment of a woven or leather strap or carrier around the constricted neck. Measured from the lip to the shoulder, the vessel's neck was about 3.5 cm in height. The total height of the vessel appears to have been approximately 22.5–25 cm.

The vessel's exterior surface is burnished on the rim and polished on the body, and soot was not observed. The exterior is mottled, ranging from dark to light brown (10YR 3/2, 6/3), with some black fire clouds (10YR 4/1, 5/1). Much of the interior surface is polished, and has a luster attributable to polishing. Areas that are not so highly polished show parallel facets typical of a burnished surface (see Rice 1987: Figure 5.13). Again, soot was not observed. In sunlight, the color of the interior surface ranges from brown (7YR 5/2) to light brown or light yellowish brown (7YR 6/4, 10YR 6/3, 6/4), with a few small fire clouds of dark gray to gray (10YR 4/1, 5/1).

Vessel #3's paste has a moderate percentage of quartz sand temper (approximately 25 percent) (USDA-SCS 1974:15), with grains ranging in size from silt to fine grains (< .063 to .25 mm). Many of these small grains sparkle on the polished and burnished surfaces. Freshly broken edges of the sherds reveal a gray core containing some black inclusions of coarse or very coarse size (0.5 to 2 mm) that may be carbon or a soft mineral that was in the clay.

The vessel resembles a number of Lake Jackson Plain jars, with similar loop handles, that have come from sites throughout west-peninsular Florida. In general, sherds of such jars are very rare in the area's Mississippian-period middens, although they appear to occur with some frequency in a few of the largest Safety Harbor-period shell middens around Tampa Bay (Griffin and Bullen 1950:Plate ID, E; Weisman and Newman 1994:Figure 5E–G). Otherwise, Lake Jackson Plain sherds (usually from only one, two, or three jars, but sometimes more) occur in many Mississippian-influenced burial mounds throughout west-peninsular Florida. In the greater Tampa Bay area, these include the Tatham (Mitchem 1989:375, Figure 8), Weeki Wachee (8HE12; Mitchem et al. 1985: 189, Figure 6), Safford (8PI3; Bullen et al. 1970:Plates IXa and Xh–j; Smith 1971:Figure 11b), Safety Harbor (8PI2; Willey 1949:Plates 50a and 51f), Jones (Bullen 1952:Figure 20B), Picnic (Bullen 1952:Figure 23I), Johns Pass (8PI4; Moore 1903:Figure 88; Ostrander 1960), and Tierra Verde (Sears 1967) mounds. In the Caloosahatchee region, sherds of Mississippian-period jars with loop handles have come from the Hickory Bluff (8CH5; Moore 1905:Figure 3), Aqui Esta (Luer 1980), Gasparilla Sound (8CH2; Moore 1905: Figure 5), and Lake Trafford (8CR80; Goggin 1949: 319; Luer 1992:54) mounds, and some are in a collection I have seen from the Shell Creek Mound (8LL8).

Interpretation of Vessel Function

In the remainder of this paper, I offer an interpretation of function for the vessels from 8SO401 and similar vessels from several other sites in the Southeast, including Safety Harbor-period ceramics from Florida and similar Mississippian ceramics from Georgia, Alabama, and Arkansas. All of these ceramics were part of a Southeastern stylistic horizon that included the central and lower Mississippi Valley. In addition to similarly shaped jars and bottles, shared stylistic attributes include "medallion" human faces and appliqué human hands on bottles, popeyed bird-

heads on bowls, and a number of incised and punctated motifs (Luer 1986, 1991:70–71, 1992, 1993; Schnell et al. 1981:159–188).

Vessel #1. The rounded mid-portion of Vessel #1 (Figure 2) appears to be a lifesize effigy of a fluted ovifera gourd (*Cucurbita pepo* var. *ovifera*). Ovifera gourds are small in size and have a thin hard rind that is durable and lightweight. Newsom (1987:71) suggests that Florida Indians used them as containers, and Gilliland (1975:256) suggests that some served as fishnet floats.

In Florida, seed and rind fragments of ovifera gourds have been found in archaeological deposits that are coeval with the Safety Harbor period. Ovifera gourd remains date to ca. A.D. 700–1500 at Key Marco (8CR48) (Gilliland 1975:245–246, 255–258) and ca. A.D. 750–1600 at Hontoon Island (8VO202) (Newsom 1987). A mineralized squash seed (*Cucurbita* sp.) dates to ca. A.D. 1525–1550 at Tatham Mound (Mitchem 1989:464, 485, 501, Figure 25), and an unidentified *Cucurbita* dates to ca. A.D. 1000–1450 at Buck Key (8LL722) (Scarry and Newsom 1992:390–392). In none of these cases was the shape of a gourd determined, due to the absence or fragmentary condition of rinds.

Vessel #1 is noteworthy because it seems to mimic the shape of a known bell-shaped form of ovifera gourd (see Bailey 1937:25). Some of these gourds have flutes resembling those of the effigy. The variable shapes of today's ovifera gourds appear to have some antiquity. For example, as early as A.D. 1640, an English botanist noted great variation in the color, shape, and size of ovifera gourds from the Atlantic coast of North America (Bailey 1937:3, 35–36).

Functionally, Vessel #1 might have served as a funnel or a chimney-like vent for steam (see below) that mimicked a container made by taking a gourd, cutting open its ends, and sticking a tube-like insert in the top and a ring-shaped insert in the bottom. Vessel #1's large, prefired, basal hole indicates that it was not intended to retain liquid. Moreover, the basal ring could fit into a corresponding aperture, thus helping to secure the vessel in place if used with an underlying container. Vessel #1 could rest easily on the rim of a corresponding aperture because its gourd effigy bulged outward.

Vessel #2. This vessel (Figure 4) may imitate another kind of gourd container, in this case one fashioned from a bottle gourd (*Lagenaria siceraria*). Bottle gourds are durable, lightweight, and of variable shape and size (Bailey 1937:91–95, 131; Speck 1941). However, many bottle gourds are large, smooth surfaced, and bottle shaped. A number of Florida archaeological sites have yielded pottery effigies of bottles and dippers fashioned from bottle gourds. Incised and punctated designs on some of these effigies, such as Vessel #2, may represent motifs that Indians might have carved on real gourd bottles and dippers.

The removal of Vessel #2's cylindrical neck is the same type of modification made to a number of Safety Harbor Incised bottles, such as two from the Arcadia site (Willey 1949:Figure 63a, e) and one from Tatham Mound (Mitchem 1989:Figure 5). It might have allowed a number of necks (both broken-off ones and vessels like Vessel #1) to have been used interchangeably with the remaining lower portion of the vessel (see below).

Vessel #2's large prefired basal hole is another feature shared with some other Safety Harbor Incised vessels. Additional examples of Safety Harbor Incised ceramics with a large prefired basal hole are a bottle from Tatham Mound (Mitchem 1989:Figure 5) and "cylinders" or beakers from the Circle Mound at the Myakkahatchee site (8SO397) and Tatham Mound (Luer et al. 1987:147–148; Mitchem 1989:364). Some prefired basal holes are as large as a vessel's aperture.

At least three hypotheses for prefired basal holes in Florida vessels have been proposed. One suggests that some holes allowed Weeden Island pedestalled effigy vessels to be placed on tenoned posts (Milanich and Fairbanks 1980:137; Milanich et al. 1984:99). Another hypothesis suggests that some holes helped mark special, nonmundane vessels (Milanich et al. 1984:167). A third suggests that some were "kill-holes" (Moore 1918:515–516). There appears to be some evidence supporting the first two hypotheses, but both apply specifically to certain kinds of Weeden Island vessels.

A fourth hypothesis for large prefired basal holes, such as in Vessels #1 and #2, is offered here. As implied by Vessel #1's possible function as a funnel or vent, the holes might have been passages for downward movement of liquid or upward movement of heat or steam. In this regard, Vessel #2's pedestal base may be important. An obvious function of the base was to provide stability when the vessel rested on a flat surface. However, the form of the pedestal base also might have maximized heat transfer from below. For example, a similar shape can be found today on the base of a glass carafe that sits on the heating element of an automatic filter drip coffee maker. Thus by analogy of form, the pedestal base of Vessel #2 might have functioned to help conduct heat from below. As far as heat and Vessel #2's mimicry of a bottle gourd are concerned, an experiment by ethnologist Frank Speck (1941:103–105) indicates that bottle gourds, at least when moist or filled with water, can withstand high temperatures.

The protruding temper on the exterior surface of Vessel #2's base is suggestive of attrition due to abrasion. Abrasion on the pedestal's flat bottom could have been caused by moving (dragging, pulling, and sliding) the vessel across a surface, while abrasion around the edge of the pedestal could have been caused by tipping the vessel on an underlying surface

(see Skibo 1992:114–115). Such abrasion might have been exacerbated by heat. Both thermal stress, due to repeated heating and cooling, and moisture can render a pottery surface more susceptible to abrasion (Skibo 1992:106).

Vessel #3. A number of attributes suggest that Vessel #3 was designed for cooking. In Georgia, 22 of 26 similarly shaped jars, called "Mississippian jars," had soot deposits indicating that the dominant use of this vessel form was for cooking or heating (Hally 1983:21, Figure 1E). In terms of size, Vessel #3 (with an estimated diameter of 28 cm) is well within the range of the Georgia sample, which includes "small" jars (less than 18 cm diameter) and "large" jars (20–46 cm diameter) (Hally 1983:Table 1).

The surface treatment of Vessel #3 is also consistent with cooking. Its burnished and polished interior surface would have decreased the permeability of the vessel wall, thereby increasing the heating effectiveness of the vessel (Schiffer 1990).

Thus, the form, size, and surface treatment of Vessel #3 are consistent with use to heat substances. Nonetheless, soot was not observed on Vessel #3, possibly due to a number of reasons. Perhaps soot was never present, perhaps it had leached away or had been washed off after recovery, or perhaps not enough of the vessel was found and available for inspection.

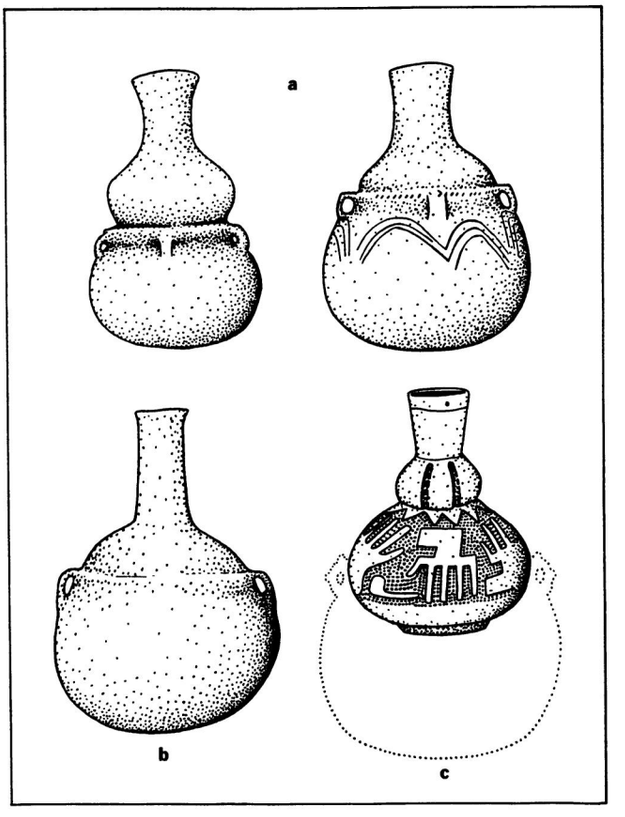

Figure 7. Compound jars and bottles: (a) two compound vessels from the Banks Village site, Arkansas [after Perino 1966:Figure 56]; (b) compound vessel from Moundville, Alabama [after Moore 1905: Figure 72]; (c) Vessels #1 and #2 in combined position; a lowermost jar, such as one like Vessel #3, is suggested by dots because its relative position is uncertain.

Discussion

The suggested practice of using combined vessels helps to interpret the functions of a number of Safety Harbor-period vessel forms, in particular those resembling Vessels #1, #2, and #3. While it is not known if these three vessels were associated with one another, their forms can nonetheless serve as examples for hypothesizing that vessels like them might have been combined and used together. Furthermore, such a practice is suggested by composite-form vessels from Mississippian sites in Alabama and Arkansas (Holmes 1903:92, Pl. XIVd; Moore 1905:182, Figure 72; Perino 1966:18, 96–98, Figures 3 and 56; Phillips et al. 1951:Figure 104k, l, n, t). Each of these compound vessels appears to be an effigy of a bottle sitting in a jar (Figure 7).

Thus, it is easy to envision that Vessel #1 could have served as a detachable and interchangeable neck on a lower neckless pot such as one resembling Vessel #2. Vessel #1's basal ring fits nicely in an orifice, like Vessel #2's, so that it can sit securely on top (Figure 7c). In turn, it is easy to imagine that such combined vessels could then sit inside, or in the mouth of, a jar such as one resembling Vessel #3. In the case of Vessel #3, its mouth is large enough to allow Vessel #2 to pass through the orifice and to sit deep within. Had they been used together, various modifications might have allowed Vessel #2 to sit higher in Vessel #3 (such as perhaps adding a packing of wet Spanish moss or boiling stones). Such adjustments could have varied considerably depending on the sizes and shapes of the particular jars, bottles, and necks involved. This adaptability suggests that the combining of three separate vessels also offered greater flexibility than a single, similarly shaped, composite-form vessel would have offered.

Given such a superimposed combination, two functions can be hypothesized: (1) liquid might have been boiled in the jar so that heat and steam were driven upward and outward through the basal holes and orifices of the upper two vessels, and (2) liquid might have been poured in Vessel #1 so that it passed downward through Vessel #2 to collect in the jar. Both functions could have taken place simultaneously. If Vessel #2 had held items for steaming, a removable Vessel #1 would have provided better access to them.

Outside of Florida, Mississippian ceramic bottles functioned as containers for liquids, and a basal hole rarely occurs in them. In Georgia, Alabama, and Arkansas, ceramic bottles and jars have been found with

burials at a number of Mississippian sites. In some cases, a pair of such vessels was placed near the head of an individual (for example, Moore 1905:170, Figure 55 and 56; Webb and DeJarnette 1942:14, Plate 8:1, 12:1, 12:4). In other cases, several bottles and jars, or their fragments, were interred with one or more burials (Perino 1966:14, Figure 49 and 50; Schnell et al. 1981:45–46; Webb and DeJarnette 1942:217–218, Plates 261–264). Often, these ceramics are of appropriate size that a bottle could have rested inside a jar or in the mouth of a jar.

Some of these paired vessels, consisting of a jar and a bottle (without a basal hole), could have been used together for heating substances in a manner suggested in Figure 7. Heat applied to a jar would have, in turn, heated a bottle. A bottle would not have been subjected directly to flames, a requirement if gourds originally had been employed in such use. A bottle would have improved the heating process and conserved heat by virtue of it being an almost enclosed container that could cover the mouth of a jar. Thus, paired jars and bottles probably would have retained heat better and required less firewood than many other forms of cooking equipment. Indeed, such a gourd or bottle would have functioned like a lid, a piece of equipment commonly associated with cooking and heating vessels.

Again, Mississippian bottles in most of the Southeast typically lack a basal hole. This contrasts with many Safety Harbor Incised bottles that have a prefired basal hole, and it contrasts with many earlier Weeden Island period vessels in Florida that also have one. Thus, it may be that a basal hole was an existing trait in Florida that was incorporated into Safety Harbor Incised bottles, perhaps to retain a practice such as passing liquid or steam through vessels as discussed above.

Regardless of their exact use, however, the effigy shapes of Vessels #1 and #2 indicate that gourd imitation was integral to the intended functions of the vessels. Prentice (1986:112–113) argues that gourds had a very long and widespread association with shamanistic power, and he cites their use as ritual containers for administering medicines by a number of Indian groups in the contact period Southeast. In one case, Milfort (1959:138–140 [1802]) describes his initiation in 1780 as a Creek war chief when a shaman and two warriors carried red-painted gourds filled with a purgative mixture of water and juice of the war medicine plant. Also in the contact period, a gourd with two holes figured prominently in frothing black drink by southern Florida Indians (Andrews and Andrews 1981:24–25), and Creek Indians also used gourds to froth black drink (Fairbanks 1979:131).

Thus, although speculative, perhaps Vessels #1 and #2 were used in preparing medicines. Besides their gourd shapes, the possibility is suggested by analogy to practices of contemporary traditional Indians in Oklahoma where two or more small vessels are typically used for medicines. There, among the Chiaha band of the Seminole Nation, cooking pots usually are large in size so that a number of people can be fed, often for a day or more. In contrast, vessels used in preparing medicines, such as steeping herbs, usually are smaller, and medicine men typically use at least two vessels to mix medicines at the time they are administered (John H. Moore, personal communication 1994).

Although methods of preparation are unclear, ethnohistoric data indicate that Mississippian-influenced Indians in Florida also prepared herbal medicines. In 1539 in the Tampa Bay region, one account relates that the wife and daughters of a chief treated an injured Spanish captive "with the juices of herbs (for having no doctors, both Indian men and women are great herbalists)" (Varner and Varner 1951:61, 65). In the early 1600s, Timucua Indians in northeastern Florida used herbs as curatives, charms, potions, and for many other purposes (Milanich et al. 1972).

Finally, it is noted again that many of the jars and bottles cited above came from mortuary contexts. This was true at 8SO401 as well as Cemochechobee, Moundville, Banks Village, and other sites. Thus, beyond technofunctional considerations, these contexts show that some jars and gourd-shaped bottles had meanings and uses in Mississippian mortuary ritual.

A clue to interpreting the mortuary/ritual significance of such vessels may be in an Apalachee myth of the 1670s (Hann 1988:81–86, 331–344). The myth prescribed and helped validate practices in Apalachee society (Keyes 1994). It specifically mentions cooking pots, squashes, and steaming in the mortuary treatment of a culture hero identified with thunder, rain, and an elite warrior rank in Apalachee society. According to the myth, the culture hero instructed:

> as soon as I die you should throw my body in some large pots with squashes, melons and watermelons and fill them with water. And put them on the fire until they boil very thoroughly so that I may leave with that steam, having been converted into mist [or smoke]. This is for when you have your fields sown. I will remember you and give you water [Hann 1988:343].

Earlier ethnohistoric data from Florida in the 1560s suggest similar mortuary practice and a similar belief linking a leader with natural productivity. The Spanish described a Tampa Bay area chief whose body was boiled in large jars (Hann 1991:318), and the French recorded a second-hand account that a Calusa chief was believed to hold power over the productivity of the environment (Laudonnière 1975:110–111).

Furthermore, the Apalachee myth prescribed requirements to achieve the high warrior status identified with the culture hero. These consisted of killing

ten warriors, including three of an upper warrior rank (Hann 1988:343). By extension, the myth's description of the mortuary treatment of the culture hero also might have prescribed the mortuary ritual for such warriors, and thus some of its elements, such as jars and squashes or gourds, could occur as mortuary paraphernalia and symbols.

As far as the sizes of the vessels are concerned, it seems that many Mississippian-period jars from mortuary contexts (such as Vessel #3) were large enough to have held dismembered body parts, although not all pieces of a body at one time. Indeed, the two accounts cited above state that a body was boiled in more than one pot. The data from Florida, however, are insufficient to assess what kinds of burials (sex, age, status, and burial mode) might have been interred with jars and gourd-effigy vessels.

Nonetheless, I speculated elsewhere that a link may exist between a leading rank of warrior and a Safety Harbor Incised gourd-shaped bottle that came from a mortuary context (Luer 1993). In terms of form and function, this particular bottle is analogous to Vessels #1 and #2, described above. In terms of iconography, the bottle's effigy bird feet and human hands are motifs included in the Southeastern Ceremonial Complex, which was associated with Mississippian elites and warfare (Hudson 1976:86–88; Knight 1986:677–678). Bird feet resembling the bottle's were depicted as part of the costume of a leading Mississippian-period warrior among the Timucua of northeastern Florida in the 1560s (Lorant 1946:57, 63; Luer 1993: 246).

Beyond Florida, some Mississippian jars and bottles also functioned in mortuary ritual in a number of Southeastern cultures. For example, at the Cemochechobee site in Georgia, fragments of jars and bottles (closely resembling those of west-peninsular Florida) were placed with secondary bundle or partially rearticulated, fragmentary adult skeletons in deep tombs within a mortuary for a kin-based (rather than achieved) elite group (Schnell et al. 1981:41–55). It should be noted that these burial modes are consistent with dismemberment and boiling of body parts, although such burials could have resulted from other activities as well. At a number of sites in Alabama, intact or mostly intact Mississippian jars and bottles accompanied primary extended burials, some of which had numerous grave goods (Webb and DeJarnette 1942:9–25, 81–92, 212–235). Thus, archaeological evidence shows that Mississippian jars and bottles functioned variably and widely in the Southeast in Mississippian mortuary ritual. Of course, they also functioned in a wide variety of mundane contexts.

Conclusions

Three Mississippian ceramic vessels from a Safety Harbor burial mound in west-peninsular Florida were analyzed for vessel form, motif, and function. One vessel incorporates an effigy of a bell-shaped ovifera gourd (*Cucurbita pepo* var. *ovifera*), another vessel is a globular portion of a Safety Harbor Incised bottle resembling a carved bottle gourd (*Lagenaria siceraria*), and the third vessel is a portion of a Lake Jackson Plain collared jar. It is hypothesized that such vessels were fit together and used in a compound arrangement with a jar on the bottom, a portion of a bottle in the middle, and a movable neck on top. When joined, such vessels might have served in heating their contents. Large prefired basal holes appear to have allowed passage of heat or steam through the upper two vessels. A compound use also is suggested for some Mississippian jars and bottles in Georgia, Alabama, and Arkansas. The effigy vessels suggest that some gourd containers had ritual associations with mortuary activities and, perhaps, the brewing of medicines.

Notes

Acknowledgments. Earlier versions of this paper benefited from comments by a number of reviewers, and I am grateful to them. In addition, many improvements in the description and analysis of vessels are owed to comments by ceramic specialist and archaeologist John Arthur. Anthropologist John Moore shared insights about contemporary Indian peoples and their uses of containers. Archaeologists Jerald Milanich, Donna Ruhl, and Ryan Wheeler, and outdoorsman Edwin Woolverton all gave helpful suggestions. Artist Theodore Morris helped prepare Figures 1, 2, 4, and 6.

Collection. Artifacts from 8SO401 are in a private collection in Sarasota, Florida. The author acknowledges the cooperation of the persons with whom it resides.

References Cited

Andrews, E. W., and C. McL. Andrews (editors)
1981 *Jonathan Dickinson's Journal or, God's Protecting Providence.* Southeastern Printing, Stuart, Florida.

Bailey, L. H.
1937 *The Garden of Gourds, With Decorations.* Macmillan, New York.

Benson, C. A.
1967 The Philip Mound: A Historic Site. *The Florida Anthropologist* 20:118–132.

Brown, R. C.
1994 *Florida's First People: 12,000 Years of Human History.* Pineapple Press, Sarasota, Florida.

Bullen, R. P.
1952 *Eleven Archaeological Sites in Hillsborough County, Florida.* Report of Investigations 8. Florida Geological Survey, Tallahassee.

Bullen, R. P., W. L. Partridge, and D. A. Harris
1970 The Safford Burial Mound, Tarpon Springs, Florida. *Florida Anthropologist* 23:81–118.

DeJarnette, D. L., and S. B. Wimberly
1941 *The Bessemer Site.* Museum Paper 17. Geological Survey of Alabama, University.

Fairbanks, C. H.
1979 The Function of Black Drink among the Creeks. In *Black Drink, A Native American Tea*, edited by C. M. Hudson, pp. 120–149. University of Georgia Press, Athens.

Gilliland, M. S.
1975 *The Material Culture of Key Marco, Florida.* University Presses of Florida, Gainesville.

Goggin, J. M.
1949 The Archeology of the Glades Area, Southern Florida. Unfinished ms. on file, P. K. Yonge Library of Florida History, University of Florida, Gainesville.

Griffin, J. W., and R. P. Bullen
1950 *The Safety Harbor Site, Pinellas County, Florida*. Publication 2. Florida Anthropological Society, Gainesville.

Hally, D. J.
1983 Use Alteration of Pottery Vessel Surfaces: An Important Source of Evidence for the Identification of Vessel Function. *North American Archaeologist* 4:3–26.

Hann, J. H.
1988 *Apalachee, The Land Between the Rivers*. University Presses of Florida, Gainesville.
1991 *Missions to the Calusa*. University Presses of Florida, Gainesville.

Holmes, W. H.
1903 *Aboriginal Pottery of the Eastern United States*. Twentieth Annual Report, 1898–1899, pp. 1–237. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Hudson, C.
1976 *The Southeastern Indians*. University of Tennessee Press, Knoxville.

Keyes, G.
1994 Myth and Social History in the Early Southeast. In *Perspectives on the Southeast: Linguistics, Archaeology, and Ethnohistory*, edited by P. B. Kwachka, pp. 106–115. University of Georgia Press, Athens.

Knight, V. J., Jr.
1986 The Institutional Organization of Mississippian Religion. *American Antiquity* 51:675–687.

Laudonnière, R.
1975 *Three Voyages*. Translated and annotated by C. E. Bennett. University Presses of Florida, Gainesville.

Lorant, S. (editor)
1946 *The New World, the First Pictures of America*. Duell, Sloan and Pearce, New York.

Luer, G. M.
1980 The Aqui Esta Site at Charlotte Harbor: A Safety Harbor-Influenced Prehistoric Site. Paper presented at the 32nd Annual Meeting of the Florida Anthropological Society, Winter Park.
1985 Some Comments on Englewood Incised, Safety Harbor Incised, and Scarry's Proposed Ceramic Changes. *Florida Anthropologist* 38:236–239.
1986 Ceramic Faces and a Pipe Fragment from South Florida, with notes on the Pineland Site, Lee County. *Florida Anthropologist* 39:281–286.
1991 Historic Resources at the Pineland Site, Lee County, Florida. *Florida Anthropologist* 44:59–75.
1992 Mississippian-Period Popeyed Bird-Head Effigies from West-Central and Southwest Florida. *Florida Anthropologist* 45:52–62.
1993 A Safety Harbor Incised Bottle with Effigy Bird Feet and Human Hands from a Possible Headman Burial, Sarasota County, Florida. *Florida Anthropologist* 46:238–250.

Luer, G. M., and M. M. Almy
1987 The Laurel Mound (8So98) and Radial Burials with Comments on the Safety Harbor Period. *Florida Anthropologist* 40: 301–320.

Luer, G., M. Almy, D. Ste. Claire, and R. Austin
1987 The Myakkahatchee Site (8SO397), A Large Multi-Period Inland from the Shore Site in Sarasota County, Florida. *Florida Anthropologist* 40:137–153.

Milanich, J. T., A. S. Cordell, V. J. Knight, Jr., T. A. Kohler, and B. J. Sigler-Lavelle
1984 *McKeithen Weeden Island, The Culture of Northern Florida, A.D. 200–900*. Academic Press, Orlando.

Milanich, J. T., and C. H. Fairbanks
1980 *Florida Archaeology*. Academic Press, New York.

Milanich, J. T., W. C. Sturtevant, and E. F. Moran
1972 *Francisco Pareja's 1613 Confessionario, A Documentary Source for Timucuan Ethnography*. Division of Archives, History, and Records Management, Florida Department of State, Tallahassee.

Milfort, L.
1959 *Memoirs, or a Quick Glance at My Various Travels and My Sojourn in the Creek Nation* (orig. 1802). Translated and edited by B. C. McCary. Continental Book, Kennesaw, Georgia.

Mitchem, J. M.
1989 *Redefining Safety Harbor: Late Prehistoric/Protohistoric Archaeology in West Peninsular Florida*. Ph.D. dissertation, Department of Anthropology, University of Florida, Gainesville.

Mitchem, J. M., M. T. Smith, A. C. Goodyear, and R. R. Allen
1985 Early Spanish Contact on the Florida Gulf Coast: The Weeki Wachee and Ruth Smith Mounds. In *Indians, Colonists, and Slaves, Essays in Memory of Charles H. Fairbanks*, edited by K. W. Johnson, J. M. Leader, and R. C. Wilson, pp. 179–219. Special Publication 4. Florida Journal of Anthropology, Gainesville.

Moore, C. B.
1903 Certain Aboriginal Mounds of the Florida Central West-Coast. *Journal of the Academy of Natural Sciences of Philadelphia* 12:363–494.
1905 Aboriginal Remains of Black Warrior River, Lower Tombigbee River, Mobile Bay and Mississippi Sound, and Miscellaneous Investigations in Florida. *Journal of the Academy of Natural Sciences of Philadelphia* 13.
1918 The Northwest Florida Coast Revisited. *Journal of the Academy of Natural Sciences of Philadelphia* 16.

Newsom, L. A.
1987 Analysis of Botanical Remains from Hontoon Island (8-VO-202), Florida: 1980–1985 Excavations. *Florida Anthropologist* 40:47–84.

Ostrander, O.
1960 The Johns Pass Mound—with a Comment by W. H. Sears. *Florida Anthropologist* 13:77–79.

Perino, G.
1966 *The Banks Village Site, Crittenden County, Arkansas*. Memoir 4. Missouri Archaeological Society, Columbia.

Phillips, P., and J. A. Brown
1978 *Pre-Columbian Shell Engravings from the Craig Mound at Spiro, Oklahoma*, vol. I. Peabody Museum Press, Harvard University, Cambridge.

Phillips, P., J. A. Ford, and J. B. Griffin
1951 *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940–1947*. Papers of the Peabody Museum of Archaeology and Ethnology 15. Harvard University, Cambridge.

Prentice, G.
1986 Origins of Plant Domestication in the Eastern United States: Promoting the Individual in Archaeological Theory. *Southeastern Archaeology* 5:103–119.

Rice, P. M.
1987 *Pottery Analysis, A Sourcebook*. University of Chicago Press, Chicago.

Scarry, C. M., and L. A. Newsom
1992 Archaeobotanical Research in the Calusa Heartland. In *Culture and Environment in the Domain of the Calusa*, edited by W. H. Marquardt, pp. 375–402. Monograph 1. Institute of Archaeology and Paleoenvironmental Studies, Florida Museum of Natural History, Gainesville.

Schiffer, M. B.
1990 The Influence of Surface Treatment on Heating Effectiveness of Ceramic Vessels. *Journal of Archaeological Science* 17:373–381.

Schnell, F. T., V. J. Knight, Jr., and G. S. Schnell
1981 *Cemochechobee, Archaeology of a Mississippian Ceremonial Center on the Chattahoochee River*. University Presses of Florida, Gainesville.

Sears, W. H.
1967 The Tierra Verde Burial Mound. *Florida Anthropologist* 20: 25–73.
Skibo, J. M.
1992 *Pottery Function, A Use-Alteration Perspective*. Plenum Press, New York.
Smith, S. D.
1971 Excavations at the Hope Mound With an Addendum to the Safford Mound Report. *Florida Anthropologist* 24:107–134.
Speck, F. G.
1941 *Gourds of the Southeastern Indians*. New England Gourd Society, Boston.
United States Department of Agriculture-Soil Conservation Service (USDA-SCS))
1974 *Definitions and Abbreviations for Soil Descriptions*. West Technical Service Center, Portland, Oregon.
Varner, J. G., and J. J. Varner (translators and editors)
1951 *The Florida of the Inca*. University of Texas Press, Austin.
Warren, L. O., F. Bushnell, and G. Spence
1965 Six Contributions to the Hand Motif from the Safety Harbor Burial Mound on Cabbage Key, Pinellas County, Florida. *Florida Anthropologist* 18:235–238.
Webb, W. S., and D. L. DeJarnette
1942 *An Archeological Survey of the Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi, and Tennessee*. Bulletin 129. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.
Weisman, B. R., and C. L. Newman
1994 National Register of Historic Places, Registration Form for Snead Island Mound Complex, Manatee County, Florida. On file, Florida Division of Historic Resources, Tallahassee.
Welch, P. D.
1994 The Occupational History of the Bessemer Site. *Southeastern Archaeology* 13:1–26.
Willey, G. R.
1949 *Archeology of the Florida Gulf Coast*. Miscellaneous Collection 113. Smithsonian Institution, Washington, D.C.

Joseph Caldwell's Summerour Mound (9FO16) and Woodland Platform Mounds in the Southeastern United States

THOMAS J. PLUCKHAHN

Abstract. *The Summerour Mound (9FO16), in the floodplain of the Chattahoochee River in northern Georgia, was excavated by Joseph Caldwell prior to the inundation of the Buford Reservoir (later Lake Lanier) in the 1950s. Often interpreted as an Early Mississippian, Woodstock phase platform mound, the site has been the subject of considerable misunderstanding, primarily because Caldwell himself was confused by the site and because the excavations were never completely reported. This paper examines the reasons for the confusion and, using notes, artifacts, and correspondence related to the excavations, provides a revised and more detailed interpretation and description of the site. An analysis of the ceramic collections, coupled with a radiocarbon date for a feature on the summit, suggest that the mound was constructed during the Late Woodland. A rectangular wall trench structure on top of the mound is also assumed to date to this period. The broader implications of the site are examined within the context of Late Woodland platform mounds in the southeastern United States.*

In early 1951, while surveying portions of the Chattahoochee River valley to be inundated for the creation of the Buford Reservoir (now known as Lake Lanier), a Smithsonian River Basin survey crew under the direction of Joseph Caldwell made an unexpected discovery. In the floodplain of the Chattahoochee in northern Georgia (Figure 1), Caldwell identified a large, previously unreported earthen mound. As he later wrote, "the mound and adjacent areas were at that time under cultivation and scattered over the surface, principally on the mound, were sherds of the Early Woodstock association with a few other earlier types. Suspecting that we may have found a mound of that period we initiated testing operations which soon developed into a small scale dig" (Caldwell 1953).

More than forty years after Caldwell's initial discovery and excavation of the Summerour Mound, the site continues to be ignored and misunderstood, primarily because Caldwell himself was confused by the site, and because the excavations were never completely reported. The mound is most often referred to as "Woodstock" and discussed within the context of the Early or Emergent Mississippian period (e.g., Hally and Rudolph 1986; Ledbetter et al. 1987; Rudolph 1991).

What is immediately apparent in looking through the collections from Summerour, however, is that true Woodstock ceramics were relatively rare on the site. Excluding the predominate plain sherds, the most common decorative types are Swift Creek and Napier Complicated Stamped. Moreover, a closer reading of the few published descriptions of the site bears out the fact that Caldwell himself never referred to the site as simply *Woodstock*, but instead as *Early Woodstock association* or *Early Woodstock focus* (Caldwell 1953, 1958, n.d.). As described in the Buford survey report (Caldwell 1953), this complex consists of the combination of Woodstock, Napier, and a fine-lined, late variety of Swift Creek, which Caldwell elsewhere referred to as "B-Complex" (Caldwell n.d.; Rudolph 1991) (Figure 2).[1] On the basis of the Buford survey and Summerour Mound excavations, Caldwell felt that these ceramic types were all in use simultaneously in the upper Chattahoochee River valley, and that the association could be placed chronologically between Early/Middle Woodland Cartersville and Early Mississippian Etowah (Caldwell 1953; n.d.).

Because the Late Woodland was omitted from regional chronologies of the time, Caldwell originally placed the complex in the Middle Woodland. However, William Sears argued that, because of its asso-