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DECORATION OR HAPPENSTANCE: EXPERIMENTAL ARCHAEOLOGY AND BASKETRY IMPRESSED PALMETTO WARE

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ABSTRACT

Basketry impressions on Palmetto Ware (*Palmettan Ostionoid* ceramics), sometimes referred to as “mat marked”, have been noted since archaeologists began studying Pre-Columbian Lucayan sites in the Bahamas and the Turks and Caicos. The first real systematic description of Palmetto Ware was presented by Charles A. Hoffman, Jr. in his Ph.D. dissertation (unpublished, 1967) on excavations at the Palmetto Grove site (SS2) on San Salvador, Commonwealth of the Bahamas. Hoffman interpreted the basketry impressions as a byproduct of the ceramic production process which he felt were without significance, instead of a decorative motif. This interpretation has remained common among Caribbean archaeologists, without experimental verification. As a potter of 30-years experience, I disagree with this premise. This paper will show the appearance of basketry impressions were not made as Hoffman described is not simply a consequence of pottery manufacture. Evidence will be presented that refutes this assertion based on experimental work, and will show how these impressions could have been made by the Lucayan potters. In addition, I will discuss a few possible explanations for these impressions.

INTRODUCTION

From my first glance I have been curious as to why the Lucayan Indians of San Salvador would have put basketry impressions on their pottery. I knew basically how they were made, and believed then, as I still do now, that they are purposeful and have significance. Unknown to me, I was entering into a discussion that had run

through the Caribbean since the 1960s, but may well have begun in the 1880s in North America with Mississippian fabric impressed ceramics (see Holmes 1884).

I will present here reasons why I believe these pottery impressions to be purposeful. I will review the published accounts by Bahamian archaeologists concerning impressed pottery. I will also present experimental data to illustrate why I do not believe the published accounts offer a plausible scenario for how the impressions came to be on the Lucayan ceramics. Lastly I will discuss possible explanations for how impressed pottery was made by the people who greeted Columbus (Keegan 1997:99, 1992).

BACKGROUND HISTORY

Palmetto ware, which is primarily plain, is the primary indigenous ceramics of the Lucayans, at least in the central Bahamas. This ceramic style was believed to have little in the way of decoration, although Granberry commented on “twined fabric” impressions in the mid 1950s; he did not specify whether they were decorations (Granberry 1956:130). The general opinion of the basketry impressions has been that they are a by-product of ceramic production. The first real systematic description was published by Charles A. Hoffman, Jr. (1967).

In 1967 Hoffman describes how he felt the basketry impressions were made on Lucayan ceramics:

“It may be that the impression was produced by pressing soft clay onto a mat. It appears as though a mat had been placed

on the ground as a working surface and a lump of soft clay was then spread over the mat. As the clay was pressed flat the impressions would be produced on the under surface. Thus the basketry impressions do not seem to have been a form of decoration, but simply a byproduct in the manufacture of griddles and flat bottomed vessels” (1967:46).

Hoffman repeats this belief more assertively in a 1970 article, concluding that “They are not a form of decoration, but a by-product of the manufacture of griddles or flat-bottomed vessels” (1970:12). Hoffman does list weave types at the Palmetto Grove site as “checkerwork”, “twillwork”, “wickerwork”, and “twined” (1967:53; 1970), even if he does not include their percentage of the ceramic assemblage in either paper. After my analysis of the Palmetto Grove impressions (Hutcheson 2001), I found that Hoffman’s identification of weaves for the site was basically correct, the exception being that the twined impression was a true fabric and not basketry (Hutcheson 2001:190).

In Shaun Sullivan’s Master’s Thesis in 1974, he followed Hoffman (1967, 1970) and James MacLaury (1970) when stating the impressions were not purposeful, but by-products of ceramic production and notes that “It appears that ceramic vessels were made and probably left to dry on woven mats” (1974:33). Sullivan does illustrate four weaves, but makes no attempt to identify the types (1974:Fig. 2, p. 38). Sullivan’s survey of 15 Eleutheran sites produced a total sherd count of 1,418 vessel sherds and two unfired clay lumps (Sullivan 1974:18-28) with 95.4 percent of this assemblage being “Palmetto Ware Plain” (Sullivan 1974:30) and “Palmetto Ware mat marked” comprising 3.7 percent (Sullivan 1974:32). However, William Sears and Shaun Sullivan in their 1978 article “Bahamian Prehistory” do express the opinion that the impressions are purposeful.

In 1982, Richard Rose did not comment in his first article on the Pigeon Creek site about

the nature of the impressions, but did indicate that the majority of his sherds are plain Palmetto ware from hemispheric “bowls”, with rough surfaces, while others were probably used in food preparation & storage. Rose notes that a number of the sherds were mat marked, these being flat or slightly concave griddles which made up 14 percent of his ceramic assemblage (Rose 1982:133). In 1987, Rose is more specific about his position on the impressions when he says

“Griddle sherds generally have mat-marked impressions on their bottom surface. Rather than a design, the impressions result from the clay having been modeled on plaited fiber mats. This would have facilitated the handling of the large, heavy griddles which were 12-inches or more in diameter. In addition to fiber-plated mats, palm leaves were sometimes used to support the griddles as indicated by sherds marked with leaf impressions on their surface” (1987:326).

In other regions, there are numerous examples of fabric impressions, such as those described from the Mississippian Culture site of Wickliffe Mounds, Kentucky, by Penelope Ballard Drooker (1992). The “salt pans”, as these vessels are called, of the Mississippians are entirely covered on the exterior by fabric and netting impressions. Drooker believes these were made from fabrics lining the molds dug in the ground which were used to create the salt pans and that they are not decoration, but had the functional purpose of aiding in the removal of the pan from the earthen mold (Drooker 1992:152; see also Orr 1951; Keslin 1964; Kuttruff 1987; Kuttruff and Kuttruff 1986, 1996; Holmes 1884, 1886, 1896, 1903).

The strongly held beliefs about how these impressions came to be on the ceramics in Caribbean archaeology, has been that not only were the pots made on the basketry mats, allowed to dry there, but also that the entire unit – pot and mat – was then carried to the open fire

where the mat was burned up while the pot was fired. This latter part has never actually appeared in print to my knowledge. I have had several Caribbeanists tell me that unless I did this entire process and then analyzed the ash, they would never believe that this is not what happened. It seems unlikely that even *if* the pots were made and left to dry on the basketry that the Lucayans burned a mat with each pot.

EXPERIMENTAL INVESTIGATION

Experimentation was carried out to determine possible ways in which the basketry impressions might have come to be on the Lucayan ceramics. My goals were to produce vessels as described in the literature and then to make additional pots in a fashion that seemed most likely to replicate the artifact remains, but also to gain comparative data so as to provide a plausible scenario for how these impressions came to be (Berman and Hutcheson 1997, Hutcheson and McWeeney 1999). I ran the two-part study twice, once with soil gathered from San Salvador and then again with a quality commercial stoneware.

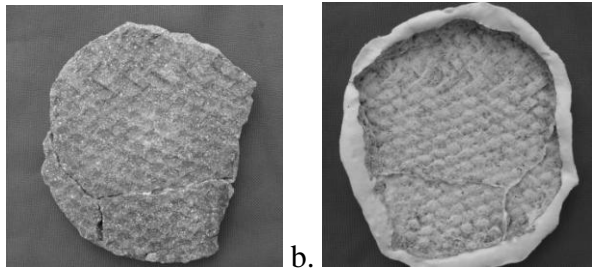


Figure 1. This Pigeon Creek sherd (a) and mold (b) show a very clear, crisp impression with sharp edges to the elements throughout. There is some post depositional damage to the sherd surface affecting the clarity of the impression in areas.

My original assessment of the basketry impressions was that they were too clear to be accidental. This is clearly seen in Figure 1. Potters are aware there is a small window in the production of a pot where clear crisp impressions can be made. If the clay is too wet,

the impressions have a smeary-suction-look to them. In the very early stages of pottery production, when the vessel is still quite wet and plastic, any manipulation will distort its shape and potentially cause partial or complete collapse. If the clay is too dry, usually by the time it reaches the “leather-hard” stage, the impression will not be deep and will not show a complete nor clear replication of the object being used and may create cracks from pressure exerted when making the imprint. The “leather-hard” stage is best suited for inscribing, incising, and appliqué. Neither of these instances describes the Palmetto ware impressions. Figure 2 shows impressions made at both of these stages of production.

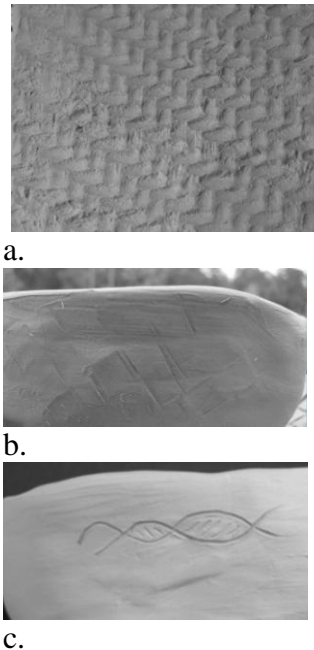


Figure 2. The clay was too wet to make a clean, clear impression in 2a, while it is too dry in 2b. A nice set of incised lines with crosshatching is achieved on the leather-hard bowl in 2c.

The act of drying causes the clay to shrink. I predicted that if the pot was made on the mat, due to the forces involved some clay would become lodged in the weave, which would act as an anchor preventing the pot from smoothly sliding over the surface as it dried. This would result in what is called an S-crack in the base of the vessel, rendering it useless. To

prevent an S-crack from forming, especially on large flat-based vessels, the potter must either work the clay on both interior and exterior surfaces or make it on a flat smooth surface so as to allow movement as drying occurs. If the piece is made on, and then allowed to dry undisturbed on a basketry mat, this movement is hindered. Additionally, the Lucayan vessels have a finished edge around the base showing that the potters smoothed and worked this surface while the clay was still damp to leather-hard, not bone dry. Modern potters often use Formica “bats” (portable working surfaces) if they are leaving a pot to dry in place. The pot usually comes free of this surface before it is bone dry, thus allowing lower edges to be smoothed and finished.

The Experiment

I gathered Bahamian Red “Pineapple” Loam, which is described as clay in the Bahamas (Hoffman 1967, 1970:2; MacLaury 1970; Sears and Sullivan 1978; Winter, 1978; Rose 1987; Granberry and Winter 1995; Keegan 1997), from below the waterline of Oyster Pond for my initial ceramic replication experiment. Larry Davis and Neil Sealey told me actual clay particles come from the Sahara on spring winds and settle in the ponds and low swales; Davis also mentioned these clay particles mix with clay-sized soil particles (personal communication Larry Davis 1997, and Neil Sealey 2000). I believed this location was as reasonable a location as any to gathered material. The pond was easily accessible to me. It does not mean that there are not other locations. The Lucayans had many ponds and swales to choose from (In 2011 Sealey gathered a small sample of some higher quality clay for me from an undisclosed location). I also gathered some non-diagnostic *Codakia orbicularis* to process for non-plastic temper (Berman and Hutcheson 1997).

According to Prudence Rice “...in most cases where shell is added as temper it is present in relatively large quantities (ca. 20%-30%)”; shell in its natural state is difficult to crush so it

is often calcined, or heated, to about 500° centigrade, which renders it easier to crush (Rice 1987:410). Sears and Sullivan indicated Palmetto ware contained approximately 20-25% shell temper (Sears and Sullivan 1978, also Hoffman 1970). Dean Arnold notes that 25% of variously sized temper aids drying and helps prevent shrinkage (Arnold 1985:22).

Several *Codakia orbicularis* were heated for 1-hour in a conventional oven at 500° Fahrenheit, which caused enough change to allow easy crushing with a *Strombus gigas* shell. Figure 3 shows the clam shell before and after crushing. To approximate the percentage of the non-plastic shell temper in my collection, I made sample squares at 5% increments up to 40%. I then visually compared the samples with several Palmetto ware sherds to determine the percentage of temper needed to match the artifacts. Palmetto ware from Pigeon Creek appeared to have roughly 30% poorly sorted angular shell temper (Orton et al. 1993, Fig. A.4; after Mathew, Woods and Oliver 1991; Orton et al. 1993: 239 Fig A.5; A.6) ranging in particle size from 0.5 to 4.0 mm (Berman and Hutcheson 1997).

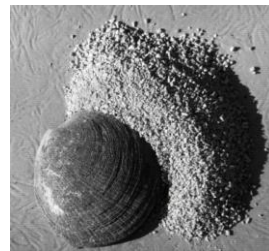


Figure 3. *Codakia orbicularis* shell after being heated and crushed in preparation for temper.

I processed the red pineapple loam by drying it and sifting out the larger components such as pebbles, small rocks, snail shells, twigs and so forth. The dry soil and crushed shell were combined by weight with a ratio of 30% temper to 70% soil and then rehydrated (Berman and Hutcheson 1997). Ethnographically, it has been noted that many cultures minimally process and prepare their clay (Rice 1987:120-124, Rye 1981). It is quite possible that the Lucayans did little other than removing the larger debris and

preparing the shell temper. I do not find contaminants such as pebbles or voids from burnt twigs or other large organics, so I believe they likely did something similar to the process I used. Next I performed two experiments with the appropriately tempered pineapple loam and then repeated both with high quality commercial stoneware to ascertain how the impressions in the Lucayan ceramics might have been made, as well as to determine if they were deliberately or accidentally created.

Experiment 1. The prepared pineapple loam was made into several slabs (miniature griddles) and a complete vessel on a mat, allowed to set-up to a point where they could be handled, then removed with the edges and base cleaned and finished. These were then purposefully impressed. The slabs were impressed with a twill mat made from split reeds and the vessel with a wicker basket, after which they were allowed to dry off of the basketry (Berman and Hutcheson 1997).

Experiment 2. Next, a coiled bowl was made with the pineapple loam and was left to completely dry on a mat of sweet grass and cut palmetto fronds without any additional cleaning or finishing (Berman and Hutcheson 1997).

Repeat of the Experiment. These two experiments were repeated with high grade commercial stoneware clay. Several bowls were made on palmetto mats. The initial markings were removed and then the basketry markings were re-impressed; they were dried off of the basketry. Next a small coiled bowl was made on a palmetto mat and a 30 cm griddle with a low lip was made on a shallow basket woven from thin whole reeds and thinly split reeds; these were dried in place without further processing.

Experiment Results. Wet and dry weights were taken of all the shapes and vessels. The pineapple loam averaged 45% shrinkage in weight. This is extremely high. The stoneware averaged a shrinkage rate of 13%. Commercial stoneware averages a shrinkage rate of 11%-

13% while commercial earthenware generally shrinks 6%-8% percent. Neither of these is comparable to the Pineapple Loam I sampled on San Salvador. It should simply be noted that the Lucayan potters were experts to get viable pots, even of short usage, due to their local materials.

There is a sharp difference between the results of the two parts of this experiment, yet the same results were present for each part from the different materials tested. The results in Experiment 1 for both the Pineapple Loam and the commercial stoneware appear to generally replicate the Lucayan ceramics as regards the impressions, as well as the general overall condition of the vessels. There were no chipped edges, undercuts, or jagged protrusions in the impressions of these examples. The element edges were at right angles to the downward line of the impression. Figure 4 shows the purposeful impressions on a miniature griddle/slab and coiled bowl. Clear straight vertical lines were visible in the walls of the impression from the cut veining of the basketry materials, especially in the case of the palmetto fronds. The impressions were crisp and clear, closely resembling those in the archaeological record (Berman and Hutcheson 1997; Hutcheson and McWeeney 1999, Hutcheson 2001, 2008, 2011).

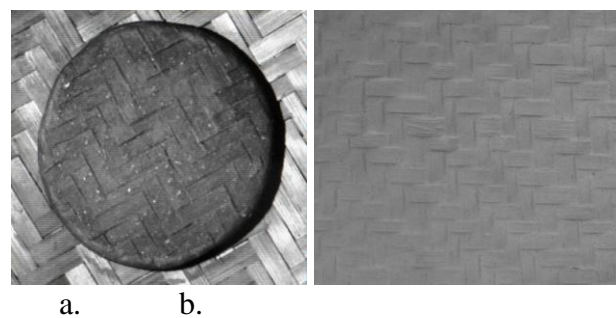


Figure 4. The original miniature griddle/slab (a) purposefully impressed on a basket of 3/3 Twill split reeds, and a close-up of the base of the stoneware bowl (b) also purposefully impressed on a 2/2 twill palmetto mat.

Experiment 2 had very different results. S-cracks developed with varying degrees of severity in the bottom of each vessel with both

materials. The bowl made with the Pineapple Loam was totally unusable with an S-crack nearly cleaving it in two. The S-cracks in the stoneware bowl and griddle were not as severe, but made it futile to continue processing them. In all of these vessels there were jagged clay protrusions, broken edges where the elements cut into the clay, and undercutting of the design. If these vessels are fired in this condition, the surface would have numerous razor sharp protrusions. Firing any of these damaged vessels would enlarge the cracks (Berman and Hutcheson 1997). Figure 5 depicts the base of the original bowl made from the Pineapple Loam with a large S-crack as well as the stoneware griddle with the less dramatic, but still severe s-crack.

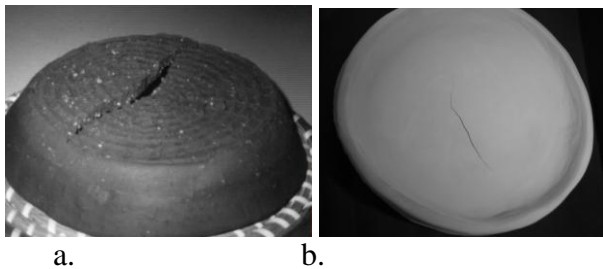


Figure 5. Results of the second experiment where the vessels were made on the mats and left to dry. 5a is the Pineapple Loam and 5b is the stoneware.

Based on these results, it was determined that the impressions are purposeful in Lucayan ceramics. Figure 6 shows how clear the impressions are in many of the artifacts, even when there is some damage to the sherd surface from roots.

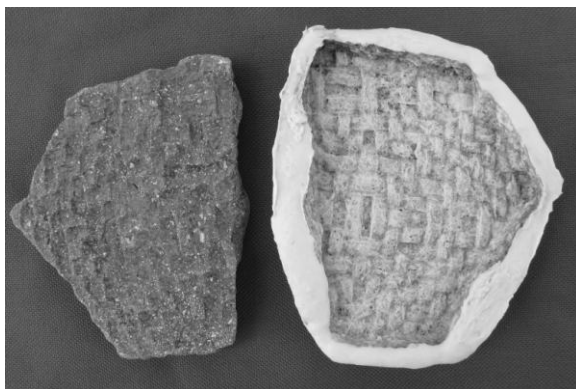


Figure 6. A very clear, complex multi-A pattern weave is seen in this Pigeon Creek sherd (Inv. no. 3000). The sherd is to the left while the mold is on the right.

DISCUSSION

The generally accepted notions of how the basketry impressions came to be on the Lucayan ceramics are problematic. As noted above, many researchers believed they were a by-product of ceramic production and that the clay was spread out on a mat and left to dry (Hoffman 1967, 1970; MacLaury 1968, 1970; Winter 1978). My experiments have shown, with materials from San Salvador and commercial clay that such a process will produce the imprint of basketry on clay, but one will not have an image that replicates the archaeological artifacts or generally end with a viable vessel, which is the ultimate goal. Figure 7 shows a slab construction that was spread onto a palmetto mat and left to dry. Note the chipped and broken edges on much of the impression and the clay that was forced into the weave from the pressure of creating the slab. Some clay remains stuck in the weave and prevented the vessel from moving as it shrank. On any piece, it is certainly possible that some areas will have clear markings, as the pressure of construction will not be completely uniform, but enough clay will be caught in the weave to cause damage.

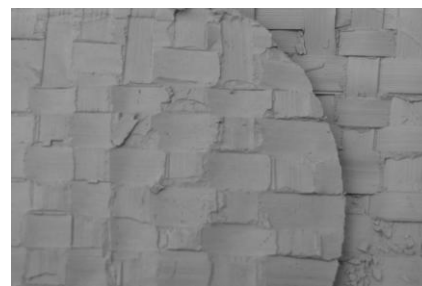


Figure 7. Slab construction made on and dried on a *S. palmetto* mat with clay remaining in the weave which acted as an anchor while the piece dried.

The Lucayans may well have used a basketry mat as a working surface for their

pottery. This is not uncommon in the Americas. That is not to say that they left those initial impressions in place. I believe they would have removed them in the process of finishing the exterior of the vessels. There is ethnographic data to corroborate this.

Jens Ydes asked a WaiWai woman to demonstrate the steps involved in making a ceramic pot. The woman initially formed the vessel on a mat, but when it came to finishing and shaping the bottom with a gourd, she removed the mat markings in the process (Ydes 1965:182). I believe this is what happened with the initial basketry markings on Lucayan pottery. Afterwards, fresh impressions could easily be applied to certain vessels. Not all Lucayan ceramics have impressions, although they are frequently on cassava griddles and the bases of flat bottom vessels (Berman and Hutcheson 1997, 2000; Petersen et al. 1999; Keegan 1997; Granberry and Winter 1995; Hoffman 1970:2; Sears and Sullivan 1978; Winter, 1978; Rose 1987). Examples of unimpressed sherds can be seen in Figure 8. The two sherds were constructed differently: the griddle (8a) is made from two thick slabs pressed together while the bowl base (8b) is a single-layered slab that had coils attached to form the body of the vessel. The bowl base is completely flat, while the griddle is slightly curved.

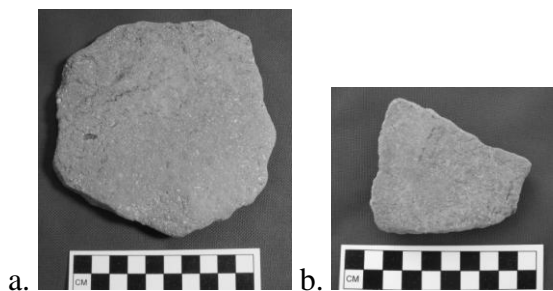


Figure 8. Unimpressed griddle (a), and large bowl base (b). Both sherds are from the New World Museum Collection, unnumbered.

I have several tall cylindrical vessels with sporadic non-contiguous wicker impressions scattered from the base to the rim (Berman and Hutcheson 1997, 2000). These are

interesting vessels as they all have heavy charring on the interior lower third. An example can be seen in Figure 9.

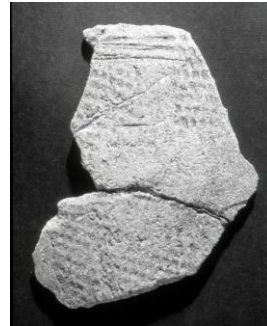


Figure 9. Tall vessel with sporadic noncontiguous wicker impressions and non-woven plant impressions at the rim. Pigeon Creek sherd no. 2186.

If “mat markings” are truly a byproduct of ceramic production, why aren’t these specific impressions contiguous? Why don’t all bases and griddles have impressions? If the impressions are not decoration and thus have no significance, why bother removing them from some vessels, or why not from all vessels? The fact that on San Salvador the impressions range between 4-14 percent of the ceramic assemblages at the various sites I’ve investigated (Pigeon Creek, Palmetto Grove, Long Bay) would suggest they have some meaning, which has yet to be fully understood (Berman and Hutcheson 2000, Hutcheson 2001, McWeeney and Hutcheson 2006).

A Question of Function. The fabric impressions of the American Southeast do seem to be created as part of the saltpan production (Drooker 1992; Kuttruff 1987; Kuttruff and Kuttruff 1986, 1996, Orr 1951). Even so, some believe they are decorative as well as functional. William Henry Holmes began looking at fabric and basketry impressions on Native American ceramics in 1884 (Holmes 1884, 1886, 1896, 1903). He believed fabric impressions on Mississippian salt pans were decorative (Holmes 1884:398) and purposeful since *they did not appear on all salt pans* (Holmes 1896:450, emphasis mine), but also that they were

functional with the fabric serving “as exterior supports in holding or handling the vessel while it was still in a plastic condition” (Holmes 1903:71).

The molds used by the Mississippians were fairly deep holes dug into the ground (Drooker 1992:16) and remains of clay lining such “basins” have been found in situ at the Kincaid site with the same diameters as “Kincaid salt pans” (Orr 1951:316, 318; also see Keslin 1964:72-73 in Drooker 1992:16). Kenneth Orr postulated the fabric and leaf impressions on the salt pans functioned as linings between these earthen molds and the vessels to help separate and lift them from the ground without distortion (Orr 1951:316).

I do not disagree with Drooker and the others concerning the Mississippian impressions, but I also do not believe there is such a clear-cut function for the Bahamian markings. The Lucayan ceramics are coiled pots and slab-formed griddles. There was no need to utilize a piece of fabric or pliable basketry to remove the vessel from the working surface. Many of the Palmetto ware markings are from wicker, which is not pliable. The open counter twined (Hutcheson 2001), and twill (Hutcheson 2011), fabrics are very fine and may not have supported heavy vessels. Rose (1987) did think the mat and leaf impressions were used to help move large griddles. I made a 30 cm diameter griddle and at all stages, this sized griddle was not difficult to manipulate. Consequently, I do not think the mats necessarily aided the Lucayans very much after the initial creation of the griddles and other vessels. Again, not all bases or griddles have impressions. There are other materials that can be used as a working surface besides basketry, such as other ceramics, large leaves, and flat pieces of wood or stone. The basketry is not necessary for ceramic construction.

The palm frond and other leaf impressions in the Pigeon Creek sample would be useless for lifting or moving a ceramic vessel of *any* size. The two leaf impressions in Figure 10 demonstrate this. It would be easier to make a pot on the ground than on these leaves. It may

be, however, that once the pot exterior had been worked, the piece could have been set on the leaves while it finished drying. This does not indicate a purposeful decoration. However, again, as noted above, not all bases or girdles were purposefully impressed.

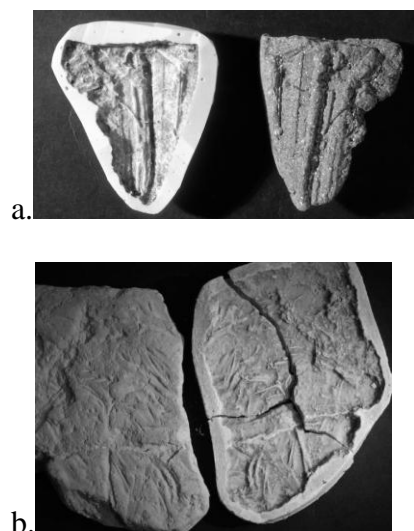


Figure 10. Non-woven plant impressions. The mold and sherd of Pigeon Creek, no. 2511, (a) is a palm frond, and the cast and mold from Palmetto Grove, no. 228, (b) remains unidentified.

Experiments on increased heating effectiveness of textured surfaces in cooking vessels were carried out by Lisa Young and Tammy Stone on corrugated ware in the American southwest. They found this treatment did not enhance heating effectiveness over non-corrugated vessels (Young and Stone 1990 in Schiffer 1990:374). Corrugation produces a similar textured surface effect much like the Lucayan basketry impressions, thus I do not believe the impressions served to improve heating efficiency or similar functions on Lucayan ceramics.

Decorations are meant to be seen. It has been suggested that the impressions cannot be decoration if they are not visible and since they are primarily on the bottoms of Lucayan vessels they cannot easily be seen (Hoffman personal communication 1998); Drooker feels much the

same about the Mississippian saltpan impressions (Drooker 1992:151); hence these researchers believe the markings are unlikely to be decorative. I do not know how the Mississippians stored their salt pans between uses, but Columbus reports that the Lucayans stored belongings in open rafters (Dunn and Kelly 1989; Keegan 1992, 1997:56-57) where the bottoms of containers would be within view. There is ethnographic data indicating that some South American cultures variously decorate the bottom of their pottery, and that when griddles are stored, they lean against a wall with the decorated bottom facing outward (*rf.* Evans and Meggers 1960). This would perhaps help keep the interior cooking surface clean.

Our modern western perspective of visibility, especially of cooking vessels, is very different from that of the Lucayans and their contemporaries. Consequently, I do not think that decorations on the bottom of vessels and griddles were necessarily invisible.

Burning the Mat. I believe William Holmes has an appropriate response to the idea of the fabric, or in our case basketry, being burned with each vessel when he says in 1884:

“It seems incredible that even an Indian would be so prodigal of their time and labor as to make the necessary quantity of well-twisted cord or thread, and weave it into shape for the mere process of serving as a mold which must be destroyed in the making of a single copy” (Holmes 1884:398).

As was found to be true of the fabrics of the Mississippians, the variety of basketry types and materials would argue against such wasteful expenditure. The labor involved in the production of both fabric and basketry far surpasses that of making a pottery vessel when the cultivating, gathering, processing, spinning and weaving of the fabrics is taken into account (Holmes 1884, 1896; Kuttruff 1987; Drooker 1992; Anderson 2005). The hands-on time expended in making fabric is measured in weeks

while that of making a pot in hours (Drooker 1992:147); making a basket from the gathering of material to the finished product takes days or weeks. It is simply not energy or material efficient. As a consequence, the idea that with each pot made a basket or piece of fabric was destroyed seems extreme and impractical.

It is true that 17 of the 260 impressed sherds examined from Pigeon Creek had some broken and repaired elements (Berman and Hutcheson 2000:428). Repairing baskets is not a simple task; it is in many ways easier to make a new piece. It is totally unclear why such baskets would be used to make impressions, since the vast majority of the basketry is in perfect shape and is beautifully crafted. One speculation is that the meaning and symbolism attached to these baskets outweighed the fact that they were no longer perfect. Drooker reports frayed and torn fabric impressions as well, some so much so that she feels they would be useless in lifting the salt pans from the molds (Drooker 1992). This aspect of the impressions in both cultures deserves closer scrutiny.

Ritual nature of baskets. Among the Yekuana, David Guss relates how every action of production, especially basketry, which includes selecting design elements, has social and ritual meaning with material production always tied to and incorporated into the greater cosmic perspective (Guss 1989:70). “Baskets had great symbolic meaning in Native Cultures” and a weaver’s place in society may rest upon her skills in basketry, according to Kat Anderson when speaking specifically of Natives of California (Anderson 2005:188). Otis Mason notes in 1904 that “All industry leads to fine art, and all savage arts begin at the foot of the ladder and end ‘beyond the bourne of sunset’...the basket maker must be botanist, colorurist, weaver, designer, and poet, all in one” (Mason 1988 [1904]).

Fabric and basketry are deeply rooted in ritual for the Natives in the Americas. There are specific rituals that surround the cultivating, gathering, and processing of basket and fabric materials carrying through to rituals that govern

the production of daily use objects (Holmes 1884, Roth 1924, 1929, Wilbert 1975, 1993; Reichel-Dolmatoff 1985; Guess 1989; Kehoe 2001; Anderson 2006). They are everywhere imbued with the mythic and symbolism of the otherworld (Guess 1989). Alice Kehoe believes that due to the symbolism carried by Nez Perce twined bags, that their impression on ceramics may indeed carry comparable significance to their users (Kehoe 2001:220). We know that the basketry weaves throughout South America carry great cosmological significance (Wilbert 1975, 1993; Reichel-Dolmatoff 1985; Guess 1989; Roth 1924, 1929), thus it is not such a stretch to imagine the same is true for the Lucayans (Hutcheson 2007). If indeed this is the case, then the specific pots that carry basketry impressions may have ritual and cosmological significance. Their numbers in the various assemblages would suggest that there are too many to be an accident yet too few to simply be a by-product of ceramics manufacturing (Hutcheson 2001, McWeeney and Hutcheson 2006, Berman and Hutcheson 1997).

CONCLUSIONS

Both basketry and ceramics assist archaeologists in examining chronology, technology, cultural behavior and identity, relationships, and symbolic meaning and behavior (Adovasio 1974, 1977). Basketry impressed ceramics first appeared in the Bahamas in the mid to late 11th century, and thus can be used as a temporal marker, as the initial settlers in A.C. 800-900 did not make basketry impressions on their ceramics (Berman and Hutcheson 2000:419). In the lowlands of South American basketry designs and weaving grammar are visual signs of group identity and in many cases opposing groups feel their weaving skills and patterns are superior to those of their neighbors (Guess 1989). These basketry weaves act as cultural and boundary indicators but also convey cultural rules and information within a group (Berman and Hutcheson 2000:423). It is quite possible that the basketry and basketry impressed ceramics in the

Bahamas held similar cultural guidelines for the Lucayans. Each pattern would give specific cultural cues, identify various segments of the group, and/or denote individual deities (Wilbert 1975, 1993; Reichel-Dolmatoff 1985; Guess 1989). We do not know for certain what the weaves on Bahamian ceramics mean, but I think that they mean something, especially since there is such a wide variety of weave types and patterns in a variety of materials (Hutcheson 2001, 2007, 2008, 2011).

I believe my experimental work has shown that published descriptions of the process by which the impressions were made on the Palmetto ware are not wholly satisfactory. While I cannot unequivocally state that my production methods are the same as the Lucayans, I suspect that they closely replicate their procedures. It may be that the ideas about the Lucayan impressed ceramics potentially originated many years and miles from the Caribbean with those very early debates about North American impressed ceramics, beginning in the time of William Holmes (1884). These discussions would not have been unfamiliar to most of the early Bahamian archaeologists. It is certain that the conversation concerning Lucayan impressed ceramics will continue. Any conclusions about production methodology should be based on good pottery technique and the performance of local materials. Empiric analysis suggests that Lucayan pottery production was relatively sophisticated given their materials, and that older ideas of their methodology do not sufficiently explain the origin of the “mat markings”. Conclusions about whether impressions are symbolic versus functional, or are totally irrelevant, are more difficult and certainly merit further study.

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