

Archaeological Evidence for the Minor Role of Dairying in Seventeenth Century Barbados

Frederick H. Smith

North Carolina A&T State University
Department of Liberal Studies
1601 E. Market Street
Greensboro, North Carolina 27411
USA

Abstract

Archaeological investigations at a mid-seventeenth century urban domestic household site in Bridgetown, Barbados, the island's capital city and main port, add to our understanding of the culinary practices of British colonists on the early colonial Caribbean frontier. The evidence sheds new light on the way British colonists adapted to an unfamiliar and evolving dietary environment. In particular, the lack of utilitarian ceramic vessels recovered from the site, such as milk pans, milk bowls, and butter pots, show the minor role of local dairy products in early Bridgetown. The small number of utilitarian vessels associated with dairying contrasts sharply with archaeological evidence from early colonial archaeological sites in British North America. Climate, urbanity, and the economic demands of the emerging sugar industry are among the key factors reducing the practice of dairying activities in early colonial Barbados. Evidence for alcohol consumption is also disproportionately higher than British colonial sites elsewhere.

Key Terms: Archaeology, Barbados, Dairying, Alcohol, Caribbean, Chesapeake, Sugar, Rum

In the seventeenth century, British colonists in Barbados faced the challenge of creating a safe and palatable diet on the Caribbean frontier. The hot climate of the tropics undermined the colonists' pursuit of traditional British food production and food preparation techniques, and plantation owners used almost all their arable land for cash crops, especially sugarcane, rather than Old World staples. Colonists imported familiar foods and beverages from Europe, but the long sea voyage to the Caribbean limited the availability of many perishable foodstuffs, and the high cost of imports put goods beyond the economic reach of most early colonists. In order to meet dietary demands, colonists produced substitutes from local resources. Travelers' accounts and early histories of the island describe the efforts of Barbadians to feed themselves. Visitors were impressed with the breadth of foods and beverages available on the island, and surprised at the colonists' ability to embrace unfamiliar cuisine. Yet, the documentary record is not our only source of information for early Barbadian dietary habits. Archaeological investigations at a mid-seventeenth century urban domestic household site in Bridgetown, the island's capital city and main port, add to our understanding of the culinary practices of early British colonists in Barbados and shed new light on the way they adapted to their evolving dietary environment. In particular, the lack of utilitarian ceramic vessels recovered from the site, such as milk pans, milk bowls, and butter pots, show the minor role of local dairy products in early Bridgetown. The paucity of such ceramic items in Bridgetown contrasts sharply with discoveries made at early British colonial archaeological sites in North America, where dairy-related ceramic vessels are ubiquitous.

Archaeological investigations at a mid-seventeenth century household site in Bridgetown offers evidence of the eating and drinking habits of early Barbadian colonists that were often glossed, and in many cases ignored, in documentary reports. The excavations were conducted in an area of the city known in the seventeenth century as Backside Church Street. Borehole diameter of English clay tobacco pipe stems indicated a mid-seventeenth century occupation at the site. The presence of diagnostic ceramics types, including tin-enamel glazed earthenware from Holland, sgraffito slip-decorated wares from England, and various stonewares from Germany also supported the mid-seventeenth century occupation of the site. In addition, we recovered a fragment of German stoneware *Bartmankrug* bottle at the site with the date of 1666 embossed on the shoulder of the vessel.



Figure 1. Stoneware *Bartmankrug*, 1666

Figure 1. Stoneware *Bartmankrug*, 1666

Bridgetown was an international port city teeming with a socially and economically diverse population, and it was, to some extent, segregated. While wealthy planters and merchants lived on Broad Street, the town's main thoroughfare, poor and middling classes resided on the side streets and alleys. There was a Jewish quarter, a Quaker neighborhood, and a free Black community. The residents of Backside Church Street were probably poorer classes of whites who were engaged in small-scale economic activities. Levy records from 1680-1700 indicate that property owners and residents of Backside Church Street paid one of the lowest tax rates in Bridgetown (BLR). Among the residents was John Stevens, who was identified in the tax lists as a fisherman. Backside Church Street also consisted on a number of widowed women, who paid little or no taxes. Perhaps they were the widowed wives of small farmers and mariners who left this world in debt. In the seventeenth century, the site was located near the "Butcher's Shambles," which was not considered a desirable location due to the smells and residues from butchering activities (Smith and Watson 2007; Smith and Watson 2009).

The excavations at Back Side Church Street revealed evidence of a variety of dietary habits of early Barbadians. For example, we uncovered the skeletal remains of pig, cow, sheep, and goat, which showed butchery marks and the cuts of meat that colonists enjoyed. Many of these faunal remains consisted of skull fragments and non-meaty distal limbs, which may indicate that residents of Backside Church Street placed a greater emphasis on the preparation and consumption of stewed meats. Among the faunal remains was a large tusk that may have come from one of the few wild boars that still roamed the island in the mid-seventeenth century. The bones of chicken and various species of fish were also recovered from the site. Other materials recovered from the site provide less direct evidence of the colonists' dietary habits. That evidence includes ceramic and glass fragments from vessels once used in the production, distribution, and consumption of foods and beverages. Typologies for the culinary functions of ceramic and glass vessels recovered from British colonial archaeological sites were established in the early years of historical archaeological research, and this study embraced those typologies (Beaudry et al. 1983; Deetz 1977; Stone 1987).

Comparative analysis of ceramic vessels from Backside Church Street underscores the infrequency of local dairying activity in Barbados, especially among urban inhabitants. When compared with ceramic assemblages from seventeenth-century British colonial household sites in the Chesapeake, the evidence suggests that dairying played a relatively minor role in the daily lives of Bridgetown's residents. The documentary record supports this claim.

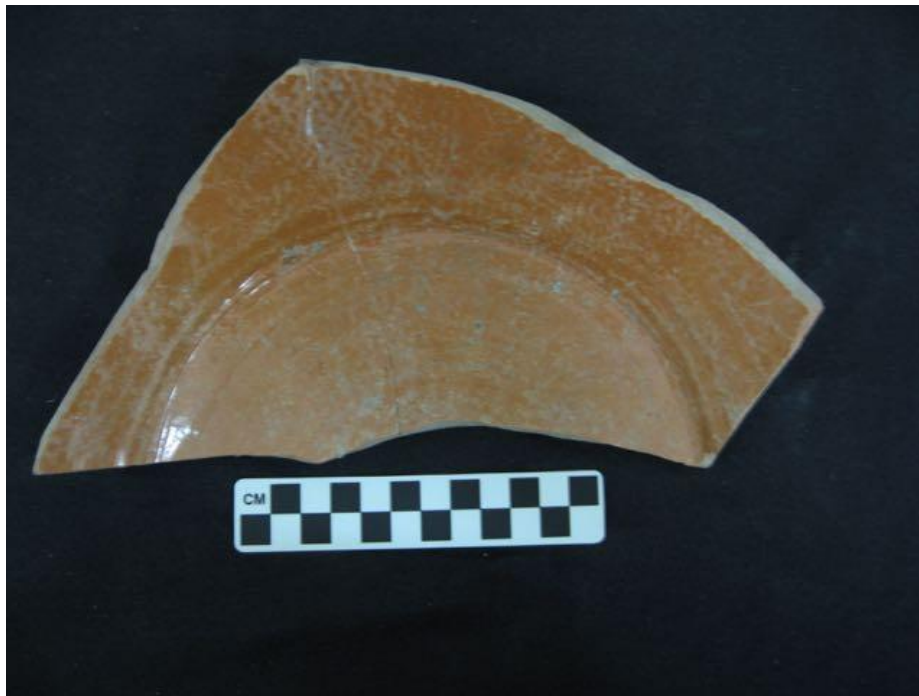


Figure 2. Fragment of a milk pan

Fragments of lead glazed earthenware milk pans, milk bowls, and butter jars indicate dairying activities at the seventeenth-century Backside Church Street site in Bridgetown and at seventeenth-century sites in the Chesapeake. Although archaeological analysis cannot confirm that these vessels were used exclusively for producing, processing, and storing dairy products, the cultural background of Barbadian and Chesapeake colonists, as well as the social context in which colonists at these sites lived, suggests that these vessels often served dairy-related purposes. Many colonists in seventeenth-century Barbados and the Chesapeake came from rural districts in West Country England, where dairying was a familiar sight and a common household activity. It was only natural that British colonists would seek to revive dairying activities in the colonies. Richard Ligon, an English Royalist who had fled to Barbados during the English Civil War, for example, complained about the lack of local milk, butter, and cheese, and noted that, as a result, colonists in Barbados paid dearly to acquire imported dairy products. In the Chesapeake, milk pans, milk bowls, and butter pots are much more common on seventeenth-century archaeological sites, and probate inventories confirm that dairy-related ceramic vessels were prominent fixtures in early Chesapeake households (Horn 1994:70-73; Yentsch 1990).

Local dairying activities in New England appear to have been even more widespread than in the Chesapeake as archaeologist James Deetz, for example, showed in his study of yeoman ceramic assemblages from seventeenth-century Plymouth, Massachusetts (Deetz 1973; see also Brown 1973). While the coarse lead-glazed earthenware milk pans, milk bowls, and butter jars found at these seventeenth-century household sites were probably used for a variety of purposes, the demand for milk and milk byproducts suggests that they were principally used for dairying activities.

Region	Site	% Dairy-related ceramics
Barbados	Backside Church Street	1
Chesapeake	Jamestown Structure 115	10
	Clifts Plantation Phase I	41
	Clifts Plantation Phase II	34
	Van Sweringen	8
	Drummond Plantation	9

Table 1. Minimum number of ceramic vessels associated with dairying

Table 1 shows the relative paucity of dairy-related ceramic vessels at Backside Church Street in Barbados. Dairy-related ceramics accounted for only 1% of the entire foodway ceramic vessel assemblage from the site, far less than that encountered at seventeenth-century domestic sites in the Chesapeake. In fact, only one coarse North Devon gravel-tempered milk bowl and one lead-glazed earthenware butter pot recovered from Backside Church Street hint at dairying activities at the site. In contrast, dairy-related ceramics represented 10% of the foodway ceramic vessel assemblage from a seventeenth-century household site in Jamestown, Virginia, known to archaeologists as Structure 115. The foodways ceramic assemblage from Jamestown Structure 115 was analyzed at the Jamestown Island Museum, National Historic Park, Jamestown, Virginia. The ceramic vessels from Jamestown Structure 115 consisted mainly of coarse lead-glazed earthenware milk pans, milk bowls, and butter pots. Other seventeenth-century household sites in the Chesapeake show an equally high, if not higher, occurrence of dairy-related ceramic vessels (see for example Yentsch 1990).

Despite the limited number of dairy-related ceramic vessels recovered from Backside Church Street, the archaeological and documentary records indicate that seventeenth-century British colonists in Barbados did indeed engage in some dairying. In 1631, Sir Henry Colt traveled to Barbados and identified the presence of milk cows in the island. Colt believed that the milk drawn from cows in Barbados tasted better than that drawn from cows in England (Colt 1631:67). Two decades later, Ligon(1657:58) wrote “some [cows] we use for the Payle,” indicating that some cows in Barbados were used primarily, if not exclusively, for milking.

How can we explain the relative dearth of dairy-related ceramic vessels at Backside Church Street? In part, the answer lies in Barbados’ tropical climate. Bacteria cause dairy products to spoil, and warm conditions speed the growth of bacteria in milk and milk byproducts. Pasteurization, the concentrated heating of milk to high a temperature, kills many damaging forms of bacteria and slows the rate of spoilage. The process of pasteurization, however, was not discovered until the nineteenth century and was, therefore, not practiced by seventeenth-century British colonists in Barbados. The tropical Barbadian climate coupled with the lack of cooling methods, accelerated the rate of spoilage in Barbados and decreased opportunities for dairying, especially in the hot low-lying port city of Bridgetown. In contrast, the North American colonies, located in more temperate climates, offered greater advantages for dairying. Cool places for storing milk were apparently easier to find in the Chesapeake. For example, archaeologists have recovered whole bottles from the cellars of seventeenth-century households in the Chesapeake that still contained trace remnants of their last contents, including milk (Kelso 1984:157). The opportunities to store and process milk would have been even greater in the cooler climes of New England.

Yet, the scarcity of dairy-related ceramic vessels in Bridgetown reflects more than simple environmental conditions. Economic factors also had a significant impact on decisions to engage in dairying activities. In seventeenth-century Barbados, few colonists could afford to purchase or raise cattle. The need for cattle as draught animals in the sugar industry made them expensive, and the value of sugar made arable land, which was at a premium in the small island of Barbados, too precious to set aside for pasture. In the larger Caribbean islands, such as Jamaica, which had big plantations and abundant land, pastures and cattle pens were much more common (see for example Delle 2014). Although sugar estates in Barbados raised some cattle, the high cost of cattle and the scarcity of grazing land discouraged Barbadian colonists from engaging in dairying on a large scale. In the Chesapeake, which had abundant land for grazing, cattle were more numerous. In fact, the Chesapeake became a primary exporter of animals to the British Caribbean, and traders received a good price for their livestock. According to Ligon (1657:113), an ox of £5 in Virginia fetched £25 in Barbados. The greater availability of cattle in the Chesapeake, therefore, increased opportunities for local dairying and, thus, resulted in a greater proportion of dairy-related ceramic vessels at Chesapeake household sites.

The hard labor that cattle in Barbados endured in the sugar industry probably also had a negative impact on levels of milk production. Cattle in Barbados were often worked to the brink of death, and many described them as ill tended and underfed. Pasture was limited, and bagasse, the spent and exhausted sugarcane stalks, was more likely to be used as fuel for sugar factories than fodder for cattle. Ligon(ibid:113) calculated that cattle died at a faster rate than they could reproduce. Hard labor and poor nutrition, as well as the epidemic diseases that occasionally swept through herds, combined to inhibit milk production in Barbadian cows and further reduce opportunities for local dairying.

Despite the impact of hard work on cattle, dairying appears to have been more widespread on rural sugar estates in Barbados than in urban settings. Among the many animals listed at the 500-acre sugar plantation of Major William Hilliard in the 1640s were “45 cattle for work [and] 8 Milch Cows” (Ibid:22). The 1647 probate inventory of plantation owner Captain Thomas Darrell included two milk bowls and six milk pans (Lucas:180). And in the late 1640s, sugar planter James Drax hosted a dinner feast that featured a wide variety of dairy products, including custards, creams, and cheesecakes (Ligon 1657:38).

Perhaps the presence of dairy cows, dairy-related ceramic vessels, and dairy products in plantation inventories and accounts reflects the higher frequency of cows on rural estates. The scant evidence of dairying vessels at Backside Church Street, therefore, may simply reflect the more limited access to cattle in the urban setting of Bridgetown. In fact, an archaeological survey of village sites of enslaved workers on rural sugar estates in Barbados conducted by archaeologist Jerome S. Handler in the late 1980s uncovered a sizeable number of glazed and unglazed red earthenware ceramic fragments that may have been from vessels once used for dairying purposes. Similarly, glazed and unglazed red earthenware ceramic vessels made up a sizable amount of foodway ceramics recovered from the village site for enslaved workers at St. Nicholas Abbey plantation in rural parish of St. Peter, Barbados (Bergman and Smith, 2014). Yet, while urban life may have reduced household dairying activities in Bridgetown, the archaeological evidence from seventeenth-century sites in Jamestown suggests that urbanity, though clearly a much more reduced level of urbanity, did not affect household dairying to the same degree.

The relative paucity of dairy-related ceramic vessels at Backside Church Street may also reflect the greater economic strength of Barbadian colonists. After the fall of tobacco prices in the mid-seventeenth century, the Chesapeake became a fairly sleepy colonial backwater. In contrast, sugar production in Barbados continued to generate enormous wealth through the end of the seventeenth century. Although levy records indicate that the residents of Backside Church Street paid one of the lowest tax rates, inhabitants of Bridgetown, one of the wealthiest port cities in the Americas, had greater access to imported luxury goods than their British colonial counterparts in the Chesapeake. The quality and quantity of other ceramic vessel types recovered from the Backside Church Street site, including fine porcelain teacups and ornate delft punch bowls, seems to support this argument (Smith and Watson 2009). Although Barbadian colonists complained about the high price of imported goods, they purchased substantial amounts of butter and cheese from North America and Europe. In 1731, for example, Reverend Robert Robertson calculated that the 4,000 firkins of butter, as well as an unknown quantity of cheese, imported into Barbados accounted for nearly 2% of the total value of all Barbadian imports. According to Robertson (1732:8-11), the 4,000 firkins of butter were enough to supply nearly 1 pound of butter per week to about half of the island's white population. Thus, the greater wealth of Barbadian colonists increased the availability of imported dairy goods and reduced the need for local dairying.

Trade routes may have also shaped local dairying activities. The lure of the profitable sugar trade attracted European merchants and traders to Barbados, and the wind and ocean currents helped ensure that Barbados was one of the first landfalls for many European sailing ships headed across the Atlantic. As a result, Barbadians often had the first choice of imported goods, including cheese and butter.

However, Ligon (1657:30) pointed out that much of the butter and cheese imported into Barbados, mainly from England and Holland, went bad even before it was offloaded from the ships. This was especially true if ships left from Europe in the warmer spring and summer months. Additional travel through the tropics would have increased the rate of spoilage so that, by the time the ships reached North American ports, the remaining supplies of cheese and butter would have likely gone bad. Merchants and sea captains, therefore, were eager to off load their dairy products in Barbados rather than risk further damage to their goods. Thus, the reduced availability of imported cheese and butter from Europe would have forced colonists in the Chesapeake to engage in dairying activities on a more regular basis.

The limited role of dairy would have had immediate physiological consequences. Perhaps the elevated levels of enamel hypoplasia observed by archaeologist Jerome S. Handler and physical anthropologist Robert S. Corruccini in the dental remains of enslaved peoples recovered from the slave cemetery at Newton plantation in Barbados were exacerbated by the limited consumption of dairy products (Handler and Corruccini 1983). The reduced availability of milk may have also had repercussions in other areas of the Barbadian diet. According to historian William Rorabaugh, the increase in North American whiskey consumption in late eighteenth century was due, in part, to the inadequacy of milk as an alternative beverage. The heavy consumption of rum and other alcoholic beverages among British colonists in Barbados may reflect similar inadequacies (Smith 2005). The large numbers of fragments of punch bowls, black glass bottles, porcelain wine cups, *Bartmankrug*, and stoneware drinking and storage vessels highlight the intense levels of alcohol drinking (Smith 2001).



Figure 3. Staffordshire punchbowl

Early British colonists in Barbados faced the challenge of creating a new diet on the colonial Caribbean frontier. The colonists sought to revive Old World eating and drinking habits and to produce the Old World staples that they left behind, but the tropical climate and lack of dependable shipping forced them to embrace unfamiliar cuisine. They exploited the culinary knowledge of Indigenous and African peoples and experimented with new food crops. Even the wealthy planter class, who were eventually able to purchase expensive foodstuffs imported from Europe, generally admired the local cuisine that had developed in Barbados. Historical archaeological methods offer fresh insights into the way that British colonists in Bridgetown adapted to their new dietary environment and allow us to explore culinary issues that might otherwise go unexamined. The investigations enhance our understanding of the dietary habits of early Barbadians, especially when placed within a comparative framework that juxtaposes different, but contemporary, regions of the British colonial world. The comparative colonial archaeological perspective highlights the way the tropical climate, the sugarcane economy, urbanity, and trade patterns dictated dairying activities in the British colonies.

References

- Beaudry, Mary, Janet Long, Henry Miller, Fraser Neiman, and Gary Wheeler Stone (1988). A Vessel Typology for Early Chesapeake Ceramics: The Potomac Typological System. *Historical Archaeology*, 17(1) (1983), 18-43.
- Bergman, Stephanie and Frederick H. Smith, (2014). Blurring Disciplinary Boundaries: The Material Culture of Improvement During the Age of Abolition in Barbados. *Slavery and Abolition* 35(3):418-436.
- BLR, Bridgetown Levy Records, Barbados Department of Archives, Black Rock, Barbados.
- Brown, Marley R., (1973). Ceramics from Plymouth 1621-1800: The Documentary Record. *Ceramics in America. Winterthur conference report, 1972*, ed. I. Quimby, Charlottesville: University Press of Virginia.
- Colt, Sir Henry (1631). *The Voyage of Sir Henry Colt. Colonising Expeditions to the West Indies and Guiana, 1623-1667*, ed. V. T. Harlow, reprinted 1967 by the Hakluyt Society from the edition originally published by the Society in 1925, Millwood, New York: Krause.
- Deetz, James (1977). *In Small Things Forgotten*, New York: Doubleday.
- (1973). Ceramics from Plymouth, 1635-1835: The Archaeological Evidence, *Ceramics in America Winterthur conference report 1972*, ed. I. Quimby, Charlottesville: University Press of Virginia.
- Delle, James A. (2014). *The Colonial Caribbean: Landscapes of Power in Jamaica's Plantation System*, New York: Cambridge University Press.
- Handler, Jerome S., (1989). *Searching for a Slave Cemetery in Barbados, West Indies: A Bioarchaeological and Ethnohistorical Investigation*, Carbondale: Research Paper No. 59, Southern Illinois University at Carbondale Center for Archaeological Investigations.
- Handler, Jerome S, and Robert S. Corruccini, 1983. Plantation Slave Life in Barbados: A Physical Anthropological Analysis. *Journal of Interdisciplinary History* 14(1):65-90.
- Horn, James 1994. *Adapting to a New World: English Society in the Seventeenth Century Chesapeake*, Chapel Hill: University of North Carolina Press.

- Kelso, William 1984. *Kingsmill Plantation 1619-1800: Archaeology of Country Life in Colonial Virginia*, San Diego: Academic Press.
- Lucas, Nathaniel 1946. The Lucas manuscript volumes, *Journal of the Barbados Museum and Historical Society*, 13:180.
- Robertson, Robert 1732. *A Detection of the State and Situation of the Present Sugar Planters of Barbados and the Leeward Islands*, (London).
- Rorabaugh, William 1979. *The Alcoholic Republic: An American Tradition*, (New York: Oxford University Press).
- Smith, Frederick H. and Karl Watson 2009. Urbanity, Sociability, and Commercial Exchange in the Barbados Sugar Trade: A Comparative Colonial Archaeological Perspective on Bridgetown, Barbados in the Seventeenth Century. *International Journal of Historical Archaeology* 13(1):63-79.
- (2007) Western Bridgetown and the Butchers' Shambles in the Seventeenth – Nineteenth Centuries: New Insights from the Jubilee Garden Archaeological Investigations. *Journal of the Barbados Museum and Historical Society* 53:185-198.
- Smith, Frederick H. 2005. *Caribbean Rum: A Social and Economic History*, Gainesville, University Press of Florida.
- Smith, Frederick H. 2001. *Volatile Spirits: The Historical Archaeology of Alcohol and Drinking in Bridgetown, Barbados*. Ph.D. Dissertation, University of Florida.
- Stone, Gary Wheeler 1988. Artifacts are not Enough, *Documentary Archaeology*, ed. M. Beaudry, Cambridge: Cambridge University Press.
- Yentsch, Ann 1990. Minimum Vessel Lists as Evidence of Change in Folk and Courtly Traditions of Food Use. *Historical Archaeology*, 24(3):24-53.