ARCHAEOLOGY IN DOMINICA

Everyday Ecologies and Economies at Morne Patate

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Sourcing Coarse Earthenware at Morne Patate

The Impacts of French Colonialism and Local Exchange

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Coarse earthenware vessels are of particular interest to archaeologists because the low-firing technology employed enabled a variety of producers—from potters operating in households or small workshops to international companies producing wares in industrial factories—to participate in their manufacture. The resulting range of wares, which varied in price and function, can provide insights into enslaved and emancipated consumers' ability and choice to participate in local and global economies and exchange networks.

In this chapter we explore the coarse earthenwares recovered from household quarters of enslaved and later emancipated residents at Morne Patate Plantation, located on the island of Dominica, during the eighteenth and nineteenth centuries (ca. 1760–1880). The coarse earthenwares from Morne Patate present a prime opportunity for analyses because during much of the period that the plantation was occupied, Dominica was actively claimed by two European powers, France and Britain. Each governing body attempted to assert domain via settlement, military presence, and legal orders. The material patterning of goods like coarse earthenwares enables us to understand how these displays of colonial dominance affected the lives of Dominican residents by promoting or restricting access to certain kinds of goods and, conversely, how colonial dominance could be subverted through participation in local markets.

The Caribbean coarse earthenwares at Morne Patate exhibit significant variation in surface treatment and paste attributes, indicating several

distinct recipes or sources. The majority of sherds were wheel-thrown, but hand-built or molded vessels were also present. While there is limited historical evidence of pottery production on Dominica during the colonial period (Hauser 2011), the ceramic assemblages at Morne Patate contained numerous coarse earthenware vessels with attributes consistently associated with pottery produced in the adjacent French colonies of Martinique and Guadeloupe (England 1994; Kelly et al. 2008). This suggests the possible interisland trade of locally produced earthenwares for domestic and industrial uses. Household contexts at Morne Patate also contained an abundance of lead-glazed, European-style wheel-thrown vessels. The majority of these are consistent with published descriptions of coarse earthenwares from French production centers including Vallauris, Huveaune, and Saintonge as well as the Italian type Albisola, but there has been significant ambiguity in these type descriptions.

In this study, we sought to establish distinct coarse earthenware types for the sherds recovered from Morne Patate through patterned elemental variation (via laser ablation inductively coupled plasma-mass spectrometry, or LA-ICP-MS) as well as macroscopic attribute analysis. This combined strategy made it possible to assess whether attributes such as surface treatment or production method (e.g., wheel-throwing versus hand-building) were markers of distinct production origins or were within the range of internal production variation from the same source material or location. The resulting identification into European—mainly French—production groups speaks to the global trade networks within which the households of enslaved and emancipated residents of Morne Patate participated. The varying types of locally made coarse earthenwares also serve as material evidence of the social and economic networks that tied residents of Dominican sugar plantations to other islands in the Caribbean.

Background

The island of Dominica has a unique colonial history in the Caribbean, remaining unoccupied by Europeans throughout the sixteenth century. This was due to its status as a neutral territory for displaced native Kalinago inhabitants and its rocky coastline that discouraged exploration and settlement. It came to serve as a site of contention for British and French powers in the Lesser Antilles. Both recognized its strategic location. For France, control of Dominica cemented the country's dominance in this part of the

Lesser Antilles; conversely, Great Britain was keen to break up France's Caribbean holdings (Baker 1994:63). The mountainous terrain made planting difficult, and territorial uncertainties stifled the development of large-scale plantations until the mid-eighteenth century. Agriculture initially focused on coffee and a variety of subsistence crops, many of which went to provision Martinique. While nominally a British holding in the aftermath of the Seven Years' War in 1763, French planters carried on operating their plantations across the island as legal leaseholders. The continued presence of French planters, however, did not prevent the British from attempting to initiate a large-scale agricultural shift from coffee to sugar as the primary cash crop on the island during the last quarter of the eighteenth century (Hauser 2011).

Critically, the ports of Dominica remained free. This encouraged trade with the neighboring French colonial islands of Guadeloupe to the north and Martinique to the south. The island's status as entrepôt drew in trade from throughout the Caribbean, which also led it to become known as a locus for smuggling, especially of slaves. Despite its active role in the interisland trading networks of the eighteenth century, merchants on Dominica complained that supply ships were bypassing the island, resulting in shortages of goods. At times residents keenly suffered from a lack of even basic resources, especially in the wake of natural disasters, impacting subsistence for slaves on the plantations. This insecurity encouraged self-sufficiency and likely led to the enslaved inhabitants pursuing informal trade relationships within and beyond the island (Hauser 2014b).

The plantation of Morne Patate is located in the southwestern corner of Dominica, near the capital of Roseau. It operated as a plantation during the eighteenth and nineteenth centuries, spanning several significant political and economic transitions of Dominica: from French control to British, from diversified agriculture to large-scale sugar production, and from slavery to emancipation, which occurred on Dominica in 1838. Morne Patate has been investigated archaeologically since 2010. Excavations have uncovered evidence for plantation industrial zones, slave housing, and gardens (Harris, this volume; Hauser, this volume). The artifacts discussed here are associated with the village that housed enslaved laborers on the plantation. Due to the economic history of Dominica, it was expected that during the period in question at Morne Patate, residents would have relied upon a mixture of imported French and English goods along with materials produced on the island itself and surrounding locales.

Earthenware Production in the Caribbean

Earthenware production in the region can be loosely organized into two important and intermingling streams of influences. On the one hand, there is a long-standing tradition of ceramic manufacture by indigenous peoples who continued to produce pottery during the colonial period. On the other hand, Europeans and enslaved Africans brought their own manufacturing methods and ways of using pottery with them. These methods were then adapted by potters in the colonies. It is not the purpose of this chapter to disentangle the various cultural streams informing ceramic manufacture. Instead, we work from the premise that potters following each of these traditions influenced each other in myriad ways. Some of those influences were caught up in the matrices of power that were endemic in slavery.

While most eighteenth-century Caribbean colonies relied to some extent on European imports of coarse earthenwares for domestic and industrial uses, local economies of coarse earthenware production also developed. Previous research on these industries has focused on ceramics produced to meet two general needs: domestic earthenware cooking pots and storage jars, and industrial earthenware for sugar production or architecture such as tiles. In the British colony of Jamaica, production of Caribbean coarse earthenware was undertaken at the household level, produced using hand-building methods and non-European technologies (Armstrong 1990:153; Hauser 2008, 2011; Reeves 2011). Bowls and pots were sold through an informal, island-wide market system. Archaeological investigations at plantations in Jamaica have found these coarse earthenwares to be abundant within plantation household contexts (Armstrong 1990; Bates 2015; Galle 2017; Reeves 1997). In Jamaica, industrial earthenwares and those manufactured with European methods such as wheel-throwing and kiln-firing were not produced. Instead, the market for those goods continued to be driven by importation from Great Britain and obtained through the consignment system.

In the eastern Caribbean are a number of locations where both traditions of pottery were produced, including Barbados (Handler 1963), Antigua (Hauser and Handler 2009), St. Lucia (Hofman and Bright 2004), Martinique, and several islands in the Guadeloupe archipelago (Kelly et al. 2008). In Barbados, the production of earthenware was more formalized, with English-style factories developing early to accommodate the needs of sugar production and household activities. Planters themselves brought

over English potters to establish workshops and train indentured and enslaved workers to manufacture the necessary vessels (Bloch 2019; Handler 1963; Scheid 2015). There is very little evidence for colonial-era production of hand-built Caribbean coarse earthenware in Barbados. Hand-built wares that are present at sites such as Trents Plantation may reflect earlier pre-Columbian habitation on the island (Bloch 2019).

On the islands of the French Caribbean, pottery production was more diversified and included wheel-thrown as well as hand-built vessels. Kenneth Kelly and colleagues (2008) surveyed Caribbean coarse earthenware produced on kiln sites in Guadeloupe and Martinique (see also England 1994; Gibson 2009). They identified at least three separate compositional groups among these islands.

In contrast, Dominica's ceramic chronology is poorly studied. Less is known about pottery found on Dominican sites than that from neighboring islands. It is also challenging to draw clear distinctions between African and indigenous influences on material culture. This is due in part to the fact that the colonial settlement of Dominica was more gradual and complex, coupled with the persistence of indigenous residents, the Kalinago, on the island. This has made it difficult to parse the arrival, interactions, and disappearance of different groups archaeologically.

In Dominica, there are very few historical accounts related to pottery manufacturing. The Royal Commission for the Colonial and Indian Exhibition noted in 1886: "Coarse pottery is manufactured at the north end of the island and exported to Guadeloupe" (West India Royal Commission 1886:367), but further details on this production center were not provided. Later documents attribute pottery made during the 1890s to "Island Carib" communities in Dominica, assuming the wares to represent a precolonization tradition (Ober 1913:361; Thomas 1953). Ethnographers of the 1930s recognized that local Dominican potters were of African descent (Delawarde 1937; Taylor 1938:140) but were implementing practices they defined as "Carib."

These accounts may be referencing pottery made in the style of Cayo ware, a long-standing indigenous tradition of pottery manufacture in the Caribbean, as late as the nineteenth century. Cayo pottery includes vessels in a variety of forms and often with applied zoomorphic and other decorative designs. It has been hypothesized that the origins of the ware are in South America, given similarities to pottery styles of the Guianas such as the Koriabo complex (Boomert 2011b; Evans and Meggers 1960), and in

northern Brazil (Boomert 1986, 2011a; Hofman et al. 2019). The ware also resembles the Antillean Late Ceramic Age styles of Meillacoid and Chicoid described by Irving Rouse (1992). Two sherds with zoomorphic applique decoration were recovered from Morne Patate.

Early European visitors to Dominica described some of the ceramic forms they encountered, and the functions of these vessels have been synthesized by Corinne Hofman and Alistair Bright (2004). The most common vessels were the *canari;* the *boutéicha,* a water jar; the *toürae,* a kettle, pot, or marmite to cook stews; and the *boutalli,* a griddle. The function of a *canari* vessel is ambiguous. While some argue that it was used to ferment cassava beer (de La Borde 1674), others argue that smaller versions of it were used as a pot with which to cook stews (Barbotin 1974). Even today, the term "*conaree*" is used on some islands to describe cast-iron cooking pots. It is most likely that there was originally a specific function attributed with the term "*canari,*" but over time it became a general class of domestic pottery that could serve multiple functions (Boomert 1986).

While the vast majority of locally made earthenwares tended to be hollow forms, some coarse earthenwares recovered from Morne Patate were likely griddles. Raymond Breton's description of locally made griddles notes that

> the shape of a griddle on which the women from that time dry their starch [paste] and of which it retains the name, it is of clay, placed on three stone rocks elevated half a foot or more, heated by the fire, the manioc flour is poured over to be baked on it, such is the oven of the savages. (1892:93–94)

The starch Breton refers to has traditionally been believed to be cassava flour, but it could have also been maize flour (Pagán-Jiménez et al. 2015). Flat coarse earthenware sherds were recovered from both the estate and the village at Morne Patate. These are likely griddle fragments. They were associated with one context in the area of the estate and three different contexts located in Block B in the village. The other ceramics recovered from these contexts were primarily imported refined earthenwares, tin-enameled wares, and French coarse earthenwares. The location of the griddles in spaces occupied by enslaved individuals and their association with refined ceramics suggests they likely date to the historic occupation at Morne Patate.

European Imports

In addition to locally produced wares, imported vessels were found in domestic contexts at Morne Patate. The majority of the French earthenware exported to the Caribbean colonies in the eighteenth and nineteenth centuries came from the production centers of Biot and Vallauris and from the Huveaune Valley. Biot vessels have a buff-colored paste with a clear or slightly yellow-tinged lead glaze. The forms were predominantly very large shipping or storage jars, sometimes repurposed for water storage in domestic contexts of the Caribbean (Hauser 2017; Losier 2012:177).

Vallauris pottery has a pale paste with abundant inclusions and typically has a transparent lead glaze on the interior of vessels. The primary forms of Vallauris pottery exported to the Caribbean were marmites (cooking pots) and storage vessels, although bowls and some tableware forms were also produced (Amouric and Vallauri 2007). While the majority of sherds found at Morne Patate could not be identified to specific forms, many were from hollow, utilitarian vessels.

Huveaune pottery is typically pink to orange in color with very few inclusions and a soft texture. Some vessels exhibit slip decoration. The forms typically found on Caribbean sites include milk pans, chamber pots, and basins. Examples of milk pans were recovered from Morne Patate as well as some plates.

Finally, a few fragments of Saintonge were also recovered from Morne Patate. Produced in the southwest of France, the interiors and exteriors of these vessels can exhibit a clear lead glaze that ranges from green to yellow in color depending on the surface paste color and firing atmosphere. Common vessel types include cooking pots, skillets, mugs, colanders, storage jars, and jugs. Saintonge is most common on seventeenth-century French colonial sites such as New France (Métreau 2016; Monette 2010). Only three sherds in the Morne Patate assemblage were identified as Saintonge, and none could be identified as specific forms.

Methods

Ceramic Sourcing

Sourcing ceramics via elemental analysis relies upon measurable differences in elemental concentrations from one production location to another as a

function of the specific geological origins of the clay deposits used to produce the pottery (Weigand et al. 1977). When embarking upon a sourcing project, one must understand the underlying geological variation within the sources or regions under investigation in order to assess the likelihood of chemical variation and minerals or suites of elements that may drive patterned variation among the samples. Here we follow a broad definition of source that relies upon distinct geological provinces. It was expected that European and Caribbean earthenwares would have characteristic variation. Within these two broad regions, we anticipated subsetting into more refined groups based upon the unique depositional histories of the potential production sources. Lacking reference material from known pottery production sites, we relied upon additional lines of evidence such as previous studies and known regional geology to infer the geographic origins of the compositional groups, as described below. We focused on local Caribbean and French sources as previous research has shown these to be the most abundant wares found in the French Caribbean (Gibson 2009).

Geology

As with most of the Lesser Antilles, the island of Dominica is volcanic in origin. The majority of the landmass is composed of intermediate volcanic products in different stages of weathering (Lindsay et al. 2005:257). Areas on the west side of the island have thinner and rockier soil layers, while the older deposits on the east consist of well-weathered clayey soils (Shearn 2014:283). The terrain is very rugged, and the island is the most volcanically active in the region, especially on the southern tip near the capital of Roseau and the location of Morne Patate.

While the geology of neighboring islands of Guadeloupe and Martinique is also predominantly volcanic, caps of sedimentary carbonate rocks overlay the islands of Grande-Terre, Marie-Galante, and Désirade in Guadeloupe. This variation results in two broad soil types within this part of the archipelago. The first originates from intermediate volcanic rocks such as andesite and the other from sedimentary calcareous deposits such as limestone. These geological signatures may be used to interpret the sources of Caribbean coarse earthenwares found at Morne Patate. Volcanic soils may be quite distinctive even within small geographic ranges as the deposits from each eruption have different elemental signatures (e.g., Carr et al. 2003).

These Caribbean geological signatures contrast with potential earthen-

ware sources in Europe, which nominally include France and England. As noted above, the majority of the French earthenware exported to the Caribbean colonies in the eighteenth and nineteenth centuries came from the Mediterranean basin, especially the production centers of Biot and Vallauris, near Cannes, and the Huveaune Valley, located inland from the busy port of Marseille. The landscape of Alpes-Maritime around Cannes is composed of iron-rich kaolinitic clays weathered from crystalline rocks such as feldspar (Petrucci 1999:26). Clay deposits contain iron nodules, gypsum, and quartz grains. Vallauris and Biot pottery has been made from these clays from the sixteenth century onward, beginning with the arrival of Genoese immigrant potters. In the southeastern region of Provence containing the Huveaune Valley and Marseille, the bedrock is limestone, with very fine-grained calcareous clays developing atop it. It was expected that pottery from these two locales—Cannes and the Huveaune Valley—would have distinct elemental signatures. We also anticipated that several sherds of pottery identified as Saintonge would form their own compositional group. This pottery type, produced in southwest France in the province now known as Charente-Maritime, is composed of a kaolin-rich, pale, fine clay.

Although these French products have been described in some colonial contexts (e.g., Amouric and Vallauri 2007; Losier 2012; Métreau 2016; Mock 2006) and in limited French archaeological studies (Abel 1987; Abel and Amouric 1991; Petrucci 1999), they have not been explicitly defined through compositional analysis. In part, this is due to a lack of archaeological investigations into the pottery workshops themselves. Consequently, the results of this study provide groupings that can be further tested by future studies that focus on assemblages recovered from workshop or other production areas.

Samples

Seventy-seven sherds from the site of Morne Patate on Dominica were analyzed via LA-ICP-MS to obtain their elemental composition (Figure 7.1). They were purposely chosen from among the 3,091 coarse earthenwares recovered from excavations at Morne Patate in order to represent visually distinctive groups based on paste and surface characteristics, such as glaze or burnishing, and evidence of manufacture (e.g., wheel-thrown versus hand-built). Given the existence of European-style pottery production during the colonial period in the Caribbean, such as in Barbados (Scheid 2015)

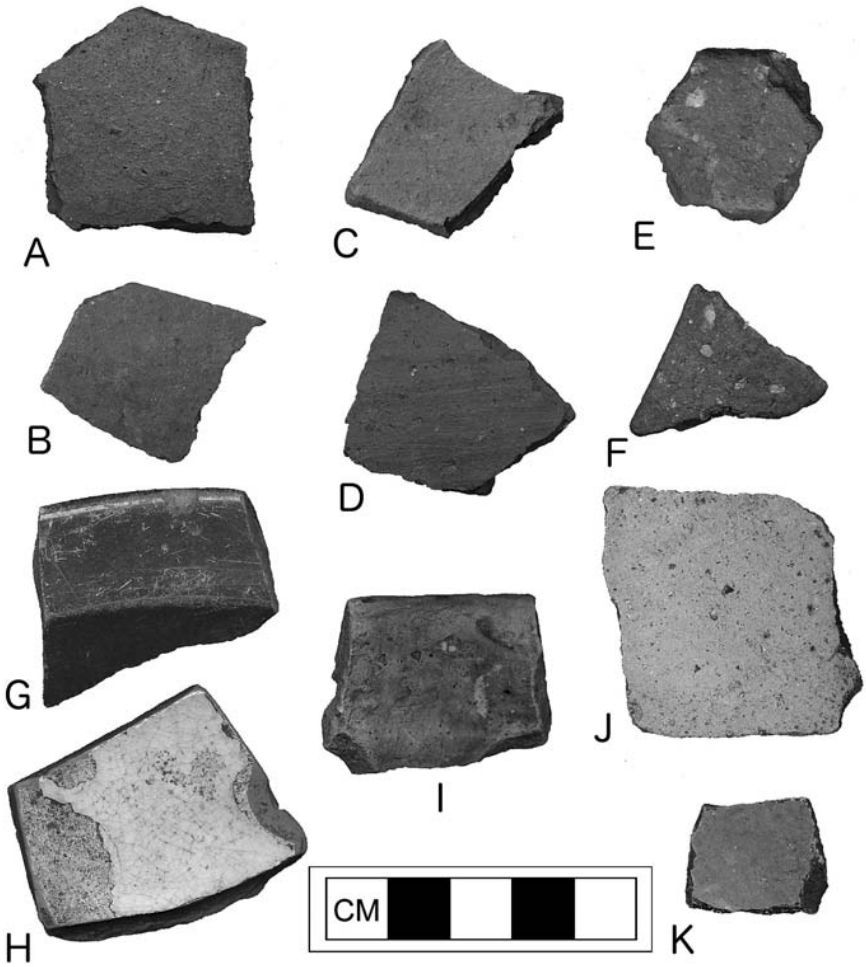

Figure 7.1. Coarse earthenwares recovered from Morne Patate.

and neighboring islands (Kelly et al. 2008), and a lack of elemental data on French types, we sampled across all coarse earthenwares recovered from Morne Patate. The study included 40 samples that were preliminarily identified as European coarse earthenwares, including Vallauris, Huveaune, and Saintonge French coarse earthenwares as well as unknown "European-like" samples. The remaining 37 coarse earthenwares were presumed to be Caribbean in origin but exhibited a range of variation in surface treatment, color, and paste inclusions. These sherds had been preliminarily sorted into three

main types based on visual differences. It was anticipated that there would be clear differences in the elemental signatures of European and Caribbean coarse earthenwares, given their distinctive geology, as described above.

Instrumentation

Lindsay Bloch conducted the LA-ICP-MS analysis in 2016 at UNC–Chapel Hill in the Mass Spectrometry Lab. The Excite 193 ultrashort pulse excimer laser and ablation system (Teledyne/Photon Machines, Bozeman, MT) was coupled to an Element XR double-focusing magnetic sector field inductively coupled plasma-mass spectrometer (Thermo Fisher Scientific, Bremen, GER). Laser ablation was chosen for this study because the small beam size made it possible to avoid large inclusions within the ceramic paste that might attenuate the chemical fingerprint. Furthermore, the results could be directly compared with previously analyzed historic coarse earthenwares from Great Britain, mainland North America, Jamaica, and Barbados (Bloch 2016, 2019).

A small piece of each sherd was removed and mounted on a microscope slide. The freshly broken edge was placed face up and smoothed to facilitate even sampling with the laser. The laser was targeted to avoid inclusions and voids larger than 30 μm, instead focusing on the fine clay matrix. This reduced the dilution effects of abundant inclusions such as quartz sand (SiO_2) or ferruginous nodules. Ablation lines were 600 μm long and 110 μm wide. Three lines were analyzed on each sample. Instrument settings followed Bloch (2016).

Data were collected on 44 isotopes. Elemental values were calculated following Bernard Gratuze (1999), averaging the results of the three ablation lines to obtain a representative sample of the clay matrix. Reference standards included NIST SRM 679 (Brick Clay) and NIST SRM 610 and 612 (Trace Elements in Glass) and were analyzed alongside samples. The resulting elemental concentrations were log-transformed and analyzed in R (version 3.4.1). Elements potassium and gold were below limits of detection for some samples, so they were removed from analysis. Lead was also removed to avoid potential contamination from glazed surfaces of sherds.

Results

Clustering

Principal components analysis (PCA) was used as an exploratory technique to understand the patterns of elemental variation within these samples. Five main groups were present within these data. Figure 7.2 shows the overall sample assemblage along the first two principal components. Axis 1 separated samples depleted in trace elements from those enriched in trace elements. In general, this distinction serves to separate Caribbean (depleted) from European (enriched) samples. Types 1 and 2 were characterized by depletion in most elements. They separated from one another according to concentrations of calcium and cesium, among other elements (Figure 7.3). Although sharing elemental similarities, Types 1 and 2 could be distinguished further on the basis of visual attributes. Type 1 exhibited a range of

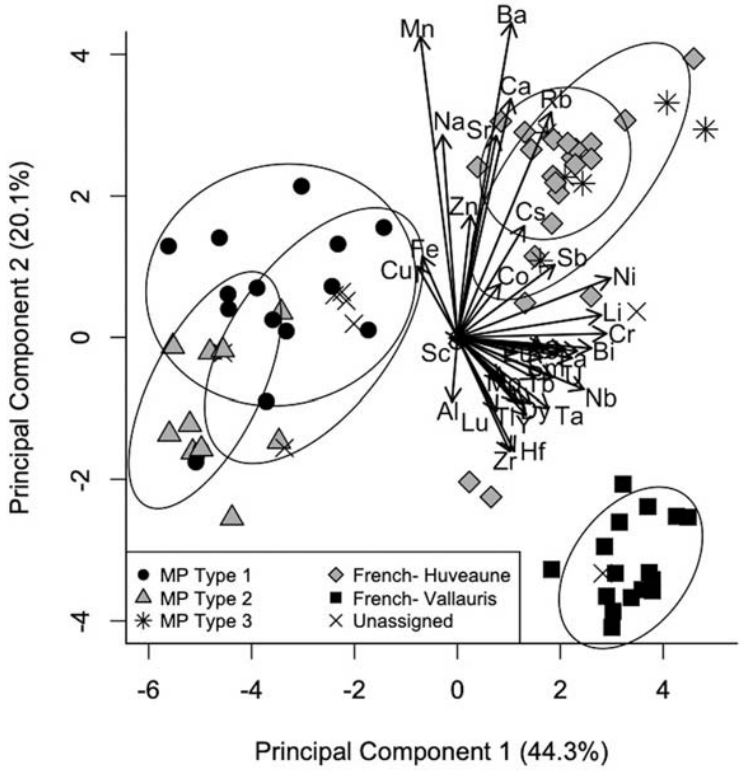

Figure 7.2. PCA biplot of LA-ICP-MS results, log ppm values for 41 elements.

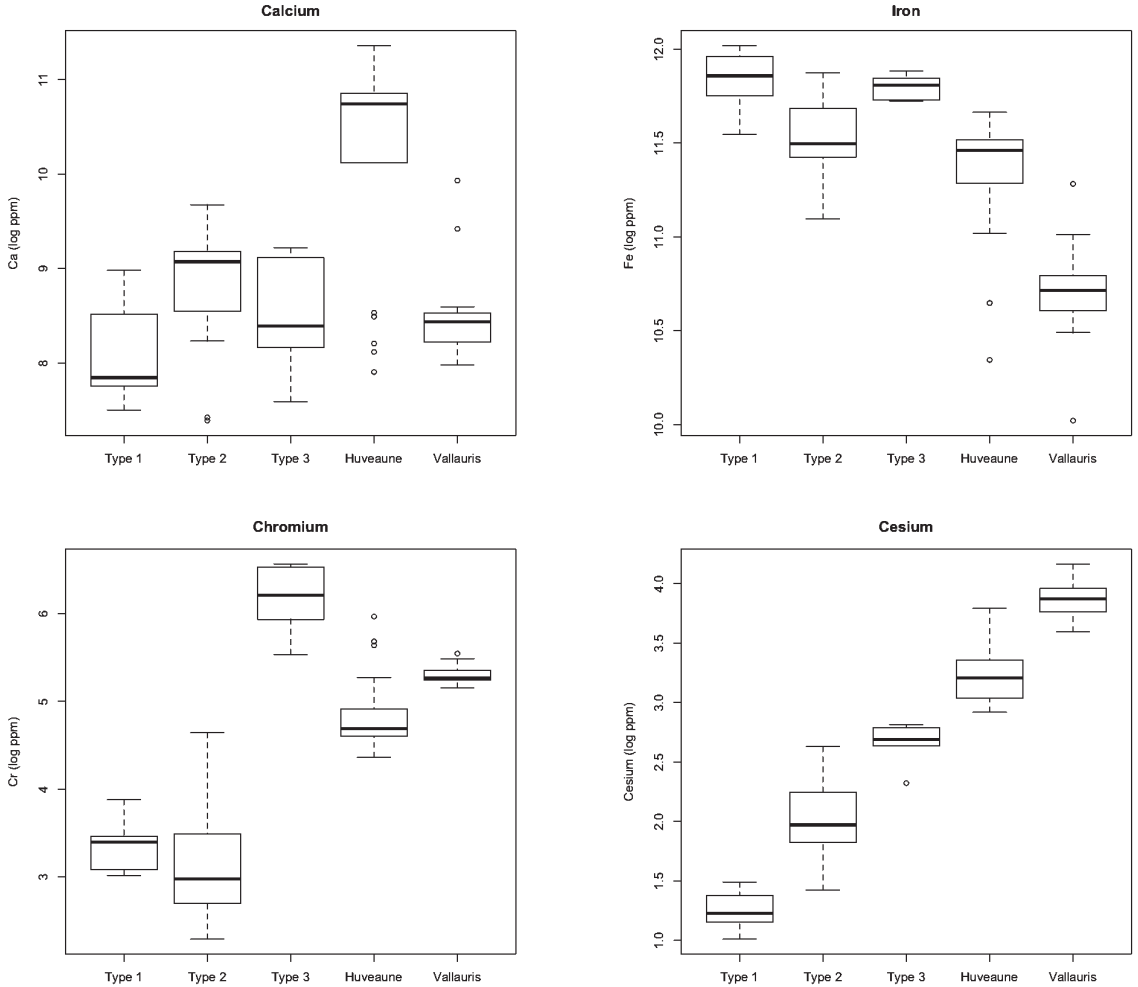

Figure 7.3. Boxplots showing average elemental concentrations by compositional group.

variation in a number of attributes, and the paste showed uneven firing colors (Figure 7.1, sherds A and B). There were two distinct variants of Type 1 based on size and density of inclusions. The paste of Type 2 sherds was finer, with few inclusions compared to Type 1. Vessels of Type 2 also tended to be very well oxidized (Figure 7.1, sherds C and D). It is likely that both Type 1 and Type 2 are products locally produced in the Lesser Antilles, prepared from similar volcanic clay sources.

Sherds identified as Type 3 were elementally the most distinctive of the Caribbean coarse earthenwares (Figure 7.1, sherds E and F). Sherds of this group were enriched in transition metals such as chromium and nickel. Type 3 was very coarse, and all examples were hand-built. This type may possibly represent Cayo or another indigenous pottery production tradition in Dominica or the adjacent islands.

The European sherds readily separated into two main groups. The larger group contained samples visually consistent with the French production group Huveaune (Figure 7.1, sherds G and H). This group was characterized by high calcium and accessory elements such as strontium and barium, which is expected for pottery produced from calcareous clays. Several sherds that did not share the formal characteristics typical of Huveaune also fell into this group, some forming a distinct subgroup (Figure 7.4). The group outliers include two of the three samples that had been preliminarily identified as Saintonge products (Figure 7.1, sherd I). One of the pale, green-glazed sherds of possible Saintonge exhibited significant elemental variation from the others, but more specimens would be needed to determine whether this was a normal range of variation for the ware type.

If these are true Saintonge, it is likely that several of the additional sherds in this cluster are also Saintonge. To date, there has been no elemental analysis conducted to define these French products. As Catherine Losier (2012:177) notes, there are a number of potential French production regions that produced wares with the same visual characteristics at this time. It is likely that this group, while defined primarily by the Huveaune products, also contained French coarse earthenwares from other production regions that share similar geological formations. Given the small sample sizes, we chose not to separate this group further.

Sherds in the final compositional group were visually consistent with published descriptions of Vallauris, another French coarse earthenware (Figure 7.1, sherds J and K). These samples were characterized by depleted calcium and iron but enrichment in alkali metals such as cesium.

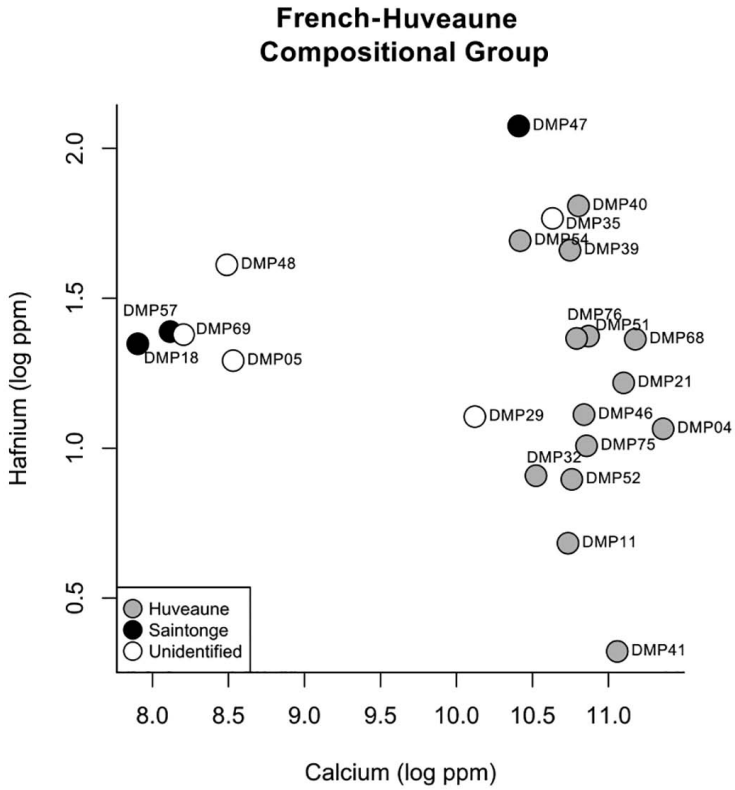

Figure 7.4. Elemental scatterplot of calcium and hafnium showing the division of Huveaune compositional group into two possible subgroups.

Following definition of the five compositional groups, we validated group assignment using Mahalanobis distance probabilities (Table 7.1). Eight sherds were unable to be assigned to a group. These sherds may represent outliers but true members of one of the existing groups or may be individual specimens of as-yet undefined compositional groups. Six were most likely Caribbean in origin, and two were likely European. Given that Dominica was a British colony for much of the time in question, we also considered whether some sherds might represent products from British production zones such as London or Liverpool. When merged with a previous LA-ICP-MS dataset of known British wasters (Bloch 2016), none of the sherds within this sample had a predicted assignment to a British source, again verified with Mahalanobis distance probabilities. This indicates that the unidentified European sherds most likely represent French or continental European

Table 7.1. Summary of sourcing results

Compositional Group	Hand-Built, unidentified	Wheel-Thrown	Total
Caribbean Earthenware Type 1	4	11	15
Caribbean Earthenware Type 2	2	8	10
Caribbean Earthenware Type 3	6	—	6
Huveaune	—	22	22
Vallauris	—	16	16
Unassigned	3	5	8
Total	15	62	77

sources. The presence of British coarse earthenwares at Morne Patate is discussed in greater detail below.

Comparison with Previous Sourcing Studies

The three Caribbean types, which formed coherent compositional groups through both elemental and physical attribute variation, were then considered alongside the previous historic pottery sourcing study in the region (Kelly et al. 2008). This study involved neutron activation analysis (NAA), which is a bulk elemental technique, and petrography of earthenwares from Guadeloupe, Martinique, and St. Martin. The elemental results could not be directly compared because the incorporation of inclusions in the NAA analyses affected the elemental ratios. However, based on their published descriptions, our Type 1 is consistent with Group 1 defined in their study, which represents earthenwares produced in Guadeloupe. This group was defined through petrographic analysis by density and type of inclusions, which included feldspars and volcanic glass, also seen in the Morne Patate Type 1 samples under 10× magnification. Kelly and colleagues (2008) also found fine and coarse variants of Group 1, as we did. Elementally, NAA results for Group 1 showed enrichment in manganese, rubidium, and rare earth elements, which was not consistent with the LA-ICP-MS results, but this discrepancy could be explained by the presence of those elements in the inclusions rather than the clay fraction of this paste.

The Morne Patate Type 2 established via LA-ICP-MS is consistent with Kelly and colleagues' Group 2. This group, which was composed predominately of waster sherds from Martinique, was characterized by enrichment

in transition metals such as chromium and iron. We found similar patterns in the LA-ICP-MS results. The description of these wares, having oxidized surfaces and reduced cores, and inclusions of abundant quartz and feldspars, is consistent with the Type 2 wares recovered from Morne Patate. Both wheel-thrown and hand-built vessels were present.

The third Caribbean earthenware compositional group in this study consisted entirely of hand-built specimens. Inclusions were very large and predominantly quartz. It is possible that this type is also equivalent to Kelly and colleagues' Group 3, but additional lines of evidence are required to assess their similarity.

Assemblage-Level Results

Based on the sourcing results and consequent type descriptions, all 3,091 sherds of coarse earthenware recovered from Morne Patate were cataloged, incorporating the new types. The results are summarized in Table 7.2. It is clear that of the European imports, France is the largest contributor, with at least 55% overall. However, it is notable that when the Morne Patate assemblage is divided into phases (Bates et al., this volume), there is a steady decrease in the proportion of European earthenwares over time. In the earliest phase (ca. 1760), French coarse earthenwares make up nearly two-thirds of the coarse earthenware assemblage, with most of those coming from Huveaune. By Phase 5 (ca. 1840), less than half of all coarse earthenwares are European, and only 41% can be concretely identified as French. Very few British coarse earthenwares were recovered from Morne Patate, but they are present in every occupation phase.

The phasing of domestic contexts at Morne Patate also demonstrates temporal variation in the Caribbean coarse earthenwares. The expansive Type 1, which has several variants, is present throughout the assemblages. However, it is most common early in the plantation occupation. Types 2 and 3 are more common during later phases of occupation. This may signal a shift from direct trade with Guadeloupe to an intensification of trade with Martinique around the turn of the nineteenth century. However, if the Type 3 sherds are pre-Columbian in origin, this suggests some of the contexts may represent depositional fill or mixed deposits.

Table 7.2. Coarse earthenware types by site occupation phase

Morne Patate		blue				Caribbean						European	
Phase	MCD	MCD[a]	Type 1	Type 2	Type 3	Unidentified	Huveaune	Saintonge	Vallauris	Albisola	British[b]	Unidentified	Total
P01	1768	1766	29	6	—	21	45	—	34	—	2	26	163
P02	1797	1792	176	58	7	32	82	—	323	4	10	55	747
P03	1818	1800	116	154	3	22	117	—	262	2	8	39	723
P04	1843	1810	177	139	47	30	130	3	563	4	4	43	1,140
P05	1866	1824	33	46	21	4	35	—	76		—	6	221
Unphased	1823	1801	33	10	—	8	12	—	23		—	11	97
Total			564	413	78	117	421	3	1,281	10	24	180	3,091

[a] Best Linear Unbiased Estimator MCD (Galle 2010)
[b] Includes Red Agate, Coarse, Slipware, Staffordshire/N. Midlands, and Coal Measures types.

Discussion

The results of these analyses—the fact that French coarse earthenwares far outweigh British wares—confirm that enslaved and emancipated inhabitants of Morne Patate continued to procure and use imported French coarse earthenwares during and long after the French had ceded their unofficial political control of Dominica. Despite the British governance, Dominican households, including those at Morne Patate, mostly relied upon French or locally made coarse earthenwares from neighboring French colonies, not British goods.

Types 1 and 2 provide tangible evidence of the trade of everyday objects with Guadeloupe and Martinique, respectively. Although we are accustomed to conceive of seas as boundaries, in the colonial Caribbean, the sea was a road that tied together colonies into extended communities sharing mutual needs. Both Guadeloupe and Dominica relied upon Martinique as the primary French entrepôt (Kelly 2009). Under French rule, Dominica became established as a provisioning ground for Martinique, creating trade networks among small landholders and large-scale planters that persisted over time.

Despite the shift to British governance, Dominican households, including those at Morne Patate, continued to rely upon French or locally made coarse earthenwares from neighboring French colonies, not British goods. French coarse earthenwares far outweighed British wares.

Yet, during the course of occupation at Morne Patate, assemblages of coarse earthenwares shifted from being dominated by French marmites and storage jars to locally made utilitarian vessels. A similar pattern is found in the British mid-Atlantic, with American coarse earthenwares nearly fully supplanting British imports over the course of the eighteenth century (Bloch 2016). Could this be evidence of plantation inhabitants choosing to buy local?

Through her analysis of Guadeloupe probate inventories, Myriam Arcangeli (2015) found that recorders were keenly aware of the origins of their coarse earthenwares, so the transition was more than simple substitution. Moreover, many other classes of goods were not replaced by local products. For example, refined earthenwares continued to be procured from European sources throughout the eighteenth and nineteenth centuries. The ability of local coarse earthenwares to supplant imported wares suggests that they were perceived to be at least as good as European wares, they were

more readily accessible or cheaper, or they possessed some other quality that we have yet to ascertain.

Conclusion

In this study we have demonstrated that residents of Morne Patate had a variety of earthenware products at hand to meet their daily needs. What is particularly striking is the persistence of French and locally produced coarse earthenwares despite the takeover of the island by the British Empire in 1763. The reasons behind the continuation of use are not immediately clear. Given that the French were allowed to maintain their landholdings in Dominica even after the British took control, it could have taken time for the primary trading networks to shift away from those focused on France and French landholdings in the Caribbean to those circulating British goods. Alternatively, Kelly and colleagues (2008) suggest that, in at least some cases, the driving factors may have been what the vessels contained—that local earthenware may have reached Dominica as a carrier for other commodities—rather than serving as the primary commodity itself. More research is needed to tease apart how these and other factors may have impacted the strategies enslaved individuals used to participate in local and global markets. Nevertheless, we show that the increased use of ceramic compositional analysis will help unravel these questions by providing a useful method of tracing the movements of ceramics over time and space.

Type Descriptions

The following type descriptions for coarse earthenwares recovered at Morne Patate were developed for use in cataloging by the Digital Archaeological Archive of Comparative Slavery (DAACS), following the DAACS Cataloging Manual (DAACS 2018).

Vallauris

General Description

Vallauris is a medium- to thick-bodied coarse earthenware whose paste color ranges fall into the buff, pink, and orange categories in the DAACS Paste Color Range. The core is often pink with whiter, oxidized sections near the exterior. It contains abundant inclusions of sand-sized particles of

iron oxides, white rock (often gypsum), and quartz. The interior is nearly always lead-glazed with a clear glaze, which results in a glazed interior color ranging from light orange to dark reddish brown, depending on firing conditions. The exterior is typically unglazed. Burned or heavily reduced Vallauris may resemble Caribbean coarse earthenwares (i.e., "locally made CEW"). Transparent yellow glaze may be an indicator that the heavily burned sherds are indeed Vallauris. Residue/sooting/fire clouding on the exterior is also common on Vallauris sherds.

Forms

According to Heather Gibson (2007:169–170) forms include marmites (cooking pots) and *poêlons* (deep skillets with long handles), both of which often have charred exteriors, showing evidence of their use for cooking on open flame. Marmites recovered have several variations: large straight-sided marmites measuring 22–25+ cm in diameter and small straight-sided marmites measuring less than 20 cm in diameter.

References

Arcangeli 2015; Gibson 2007; Losier 2012; Métreau 2016; Petrucci 1999

Huveaune

General Description

Huveaune is a thin-bodied coarse earthenware. The vessels feel lightweight for their size, and the paste is rather chalky in texture. The paste color is orange to red, and paste contains very few visible inclusions, generally redder and more refined than Vallauris. Both the interior and exterior surfaces are usually lead-glazed. Glaze colors are predominantly transparent, producing a caramel or ginger color. Some interiors have a thick, white slip, resulting in creamy white- or yellow-glazed surfaces. Green-glazed vessels are rare in Caribbean contexts, as are vessels with slip-trailed decoration.

Forms

According to Gibson (2007:171–172) shallow milk pans (milk pan–style vessel with a flat base, short inverted, truncated cone shape, and a thick folded rim) are typical, as are chamber pot–style vessels, which are taller and more narrow than milk pans with straight sides.

References

Abel 1987; Abel and Amouric 1991; Gibson 2007; Losier 2012; Métreau 2016

Saintonge

General Description

Saintonge is relatively thin with buff to pink paste that tends to have large chunks of white rock. Otherwise, Saintonge sherds are relatively smooth. Clear lead glazes can range in color from pale yellow to olive green. Green lead glaze on the interior can sometimes occur over a white slip.

Forms

Saintonge takes a variety of tableware and utilitarian forms, including jugs, storage jars, and milk pans.

References

Losier 2012; Métreau 2016; Monette 2010

Biot

General Description

Biot is a very thick-bodied, coarse earthenware with buff paste that is made gritty by abundant quartz, calcareous, and ferruginous inclusions. The interior surface is nearly always covered with a white slip covered in a clear lead glaze. The majority of the exterior surface is typically unglazed with the exception a small strip that runs from the neck to the upper body or shoulder incidental to interior glazing. These vessels were hand-built.

Forms

The most common forms are large, barrel-shaped storage jars that were used for both wet and dry goods. These jars are quite large, often between three and four feet tall.

References

Arcangeli 2015; Losier 2012; Métreau 2016

French Coarse Earthenware

General Description

The ware type "French Coarse Earthenware" is used to generally describe coarse earthenware sherds that do not easily fall into the Saintonge, Huveaune, Vallauris, or Biot ware categories. However, they display a constellation of characteristics seen in the identifiable French types, with familiar French CEW attributes in a variety of combinations and degrees. These sherds are clearly European in manufacture. Sherds whose paste color matched one of the Redware color chips and did not exhibit any similarities to French ware types (e.g., paste inclusions and density of paste) were cataloged as Redware.

Morne Patate Type 1

General Description

Type 1 exhibits a range of visible variation, which was also reflected in the compositional results. While elementally somewhat similar to Type 2, Type 1 sherds have a paler paste than Type 2 and more inclusions. The group may be separated into Type 1a and Type 1b on the basis of inclusion size and density. Type 1a inclusions are finer and are usually "Greater than 7.5%," while Type 1b inclusions are larger and usually "Greater than 15%." Type 1b inclusions are also often visible on the exterior and interior surfaces. Visible surface inclusions are not a hallmark of Type 1a. Type 1a is also more thinly potted than Type 1b, which is chunky and thicker. This may indicate a functional difference between Types 1a and 1b, though fragmentation has hampered the identification of vessel types at Morne Patate. Type 1a has very smooth exterior surfaces, likely a result of production on the pottery wheel. A self-slip is often discernible on surfaces of 1a and 1b sherds. Sooting/residue is occasionally present on 1a and 1b sherds.

Morne Patate Type 2

General Description

Morne Patate Type 2 is generally a finely potted coarse earthenware whose body is thinner than Huveaune, Vallauris, and MP Type 1. Type 2 paste

color is deep red with very few inclusions. The paste is highly fired, which produces sharp-edged breaks. The vessels are generally wheel-thrown although occasionally a sherd displays evidence of molding. Both interior and exterior are unglazed/bisque. The exterior surfaces are often smoothed or burnished, sometimes to the extent that the sand-sized quartz and volcanic inclusions cannot be seen or felt. They are often a little rougher on the interior, which does not appear to have been smoothed. Nearly all Type 2s are fully oxidized, with no firing core.

Morne Patate Type 3

General Description

Morne Patate Type 3 is composed of a thin, fine red paste with chunky, highly visible quartz inclusions. The paste is fired at a lower temperature than other coarse earthenwares at Morne Patate. The edges readily erode. Paste color is a deep red, with uneven oxidation through the body. The paste also has volcanic rock, some of which appears to be micaceous. The exterior is occasionally burnished in addition to a self-slip. The exterior and interior surfaces are unglazed. This ware type is almost always hand-built.