THE STATUS OF GRENA DA'S PREHISTORIC SITES:
REPORT ON THE 2016 SURVEY
AND AN INVENTORY OF KNOWN SITES

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Author’s Note:
The contents of this report are not intended for the general public. The sites herein are extremely vulnerable to theft and vandalism, so it is an unfortunate fact that the best way to currently protect these resources is to restrict knowledge about them. The more people that navigate to these sites and take a few ceramic sherds for themselves, the less information will be known about that site—permanently. The artifacts that go missing will be impossible to re-connect later unless proper documentation was conducted and made available to the Ministry and/or Grenada National Museum (i.e., as a legitimate archaeological project). As the late Peter Harris recommended, we must not only maintain site records, but also, “a system which limits access to individuals who can demonstrate bona fide concern for local archaeological heritage,” (Harris 2001:13, note 10). Please do not share this with anyone that does not fit that description.

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PREFACE: A CALL TO ACTION

Grenada is at a crossroads. Will it become just another beach destination for rich westerners, or will it embrace and preserve its cultural identity? Will we teach our children that heritage matters, or will we allow the past to be destroyed by unchecked construction, foreign development, sand-mining, erosion, and looting?

Cultural resource laws are in desperate need of an update and stronger enforcement. There are currently 84 known prehistoric (Amerindian) sites in Grenada. Sixteen (16) of them appear to have been completely destroyed. Each of the remaining 68 has a major threat to its existence. Only a handful have been studied. None are well-understood.

Will we take a stand and protect our heritage, or will we let the default continue and allow foreign developers to decide for us? The choice is ours. Grenada’s past hangs in the balance.

This Beausejour site (G-34) is the oldest known in Grenada— it was found as it was being destroyed

This was an unstudied Amerindian site at Levera (P-4) that has been completely bulldozed

This “type site” (P-3) for Suazan Troumassoid ceramics has become a trash dump

This Petroglyph in Victoria (M-1) has been repeatedly damaged by road maintenance

Figure 1 Examples of Grenada's Disappearing Prehistory
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BACKGROUND

Situated at 12 degrees north latitude, 61 degrees west longitude, the island of Grenada lies just 90 miles north of Venezuela and is the first island in the Antillean archipelago. As a major entry point into the Caribbean, Grenada was likely a landmark to prehistoric mariners travelling to and from mainland South America. Previous work at Pearls, one of the largest and earliest known sites on the island, uncovered exotic gemstones and faunal remains from as far south as Brazil (Boomert 1987; Cody 1990a, 1991, 1993; Laffoon et al. 2014; Newsom and Wing 2004). Ethnohistoric accounts from early Europeans in the region indicate that Grenada was a major stopping point for indigenous traders, likely for millennia (Anonymous [Benigne Bresson] 2015:13; Martin 2013:25; Williamson 1926:12).

Five archaeological reconnaissance projects have been conducted in Grenada, documenting a total of 84 prehistoric sites that range from the Early Ceramic to European settlement periods (AD 1-1650). Huckerby (1921) and Fewkes (1922), were the first archaeologically-oriented researchers to visit Grenada. In 1962, Ripley P. Bullen, of the Florida State Museum, surveyed 18 sites and conducted limited archaeological testing at five of them (Bullen 1964a). At Savanne Suazey, he named a new ceramic type that remains in widespread use. From 1977 to 1980, Henry Petitjean Roget, a French archaeologist from Martinique, conducted salvage work in Point
Salines, where a new airport was planned, and performed surface collections elsewhere on the island (Petitjean Roget 1981).

In the mid-1980s, a profit-oriented, science-travel organization called the Foundation for Field Research (FFR) conducted a number of field-school surveys throughout the island (Cody and Banks 1986). Between 1988 and 1991, FFR teamed up with the University of Florida to excavate the site of Pearls, producing the most information known about the site to date, though none of it formally published (Keegan 1991; Keegan and Cody 1990). One of the FFR co-founders, Anne Cody Holdren, went on to complete her doctoral dissertation work from 1993-1994 on Contact-era sites in Grenada (Cody Holdren 1998). From that time until 2011, when I began a community archaeology project at the St. John’s River site, little attention had been paid to Grenada by archaeologists. A notable exception was the UNC/UCL project on the sister-island of Carriacou, 20 miles north of Grenada, which has now moved further into the Grenadines (Fitzpatrick et al. 2009, 2013; Giovas 2013; Kaye 2003). Several researchers have also come to examine the island’s petroglyphs, including Dubelaar (1995) and more recently, Allen and Groom (2013).

SUMMARY OF THE 2016 SURVEY

Caribbean archaeologists have recently begun to overturn the traditional “stepping-stone” theory of the region’s colonization, long espoused by the discipline. This theory posited that Amerindians from coastal Venezuela and Guyana had slowly settled each island in the Antillean archipelago—from Grenada to Puerto Rico—in a “stepping-stone” manner. As logical as it may sound, it has become overwhelmingly apparent that there is little evidence to support this theory. In 1985, Bill Keegan challenged the idea by showing it was impossible for humans to reproduce fast enough to settle each island so quickly (Keegan 1985). More recently, Scott Fitzpatrick and others have highlighted the fact that just three radiocarbon dates from shell tools found on Barbados represent the only evidence for any Archaic Age group occupying islands south of the Guadeloupe Passage (Callaghan 2010; Drewett 2007; Fitzpatrick 2011). All of the earliest sites in the Caribbean continue to be found in the northern Antilles, with a roughly 500-year gap for the earliest Ceramic Age sites in the southernmost islands (Fitzpatrick 2006; Haviser 1997; Hofman and Hoogland 1999; Keegan 1995). Theories have abounded whether the early Ceramic peoples simply reached the northern islands first by sailing directly across the Caribbean Sea (known as the “Southward Route Hypothesis,” — Callaghan 2001; Fitzpatrick 2010a; Keegan 2000, 1985, 1989), or whether they purposefully bypassed the southern Lesser Antilles to avoid Archaic peoples (whose presence, as mentioned, is equally unconfirmed) (Giovas and Fitzpatrick 2014). Other explanations for avoidance have included volcanic activity (Callaghan 2010), rough inter-island currents and reefs (Callaghan 2001), compulsive exploration (Keegan and Diamond 1987; Wilson 2007), and lack of terrestrial resources (Jones 1985; Keegan 1989; Rouse 1992). All of these reasons, however, could apply to the northern islands as well. It seemed to me that so little research had been conducted in Grenada and the southernmost islands that there simply was not much evidence for anything, let alone major upsets to age-old paradigms. I thought the most likely reason for the lack of Archaic and early Ceramic Age sites in the southernmost islands was simply a disproportionate focus by researchers on the northernmost island groups.

The first section of this report documents the research I conducted thus far for my doctoral dissertation that aimed to better understand Grenada’s prehistory and its role in the colonization of the region. The project uses predictive models to identify areas of high probability for early settlement, soil analysis to gauge site parameters, and an ambitious radiocarbon program to build a settlement chronology of prehistoric Grenada. In the process, I discovered that actually quite a
lot of research has been conducted here, but it was never written up. The latter part of this report aims to rectify the situation by summarizing much of the past archaeological research conducted at every known site (and even some unknown sites), based on salvage work conducted at the Grenada National Museum. The emerging upshot of all this is that the “southward route hypothesis” may turn out to be correct, but it does not mean that Grenada has little to offer a revised regional colonization model. Indeed, what this report begins to show is that there are some big questions about the pre-Columbian Caribbean that have yet to be addressed.

The Predictive Model
In order to identify areas where humans would have most likely settled in prehistoric Grenada, a series of predictive models were generated using variables from analysis of known sites, ethnohistoric data, and formulae in Human Behavioral Ecology (HBE). (Charnov 1976; Kelly 1995; Kennett and Winterhalder 2006; Smith and Winterhalder 1992).

During the summer of 2015, I carried out a pilot study in Grenada using a draft predictive model. A series of environmental datasets were acquired from the GIS Unit of Grenada’s Ministry of Agriculture and areas of high probability for early settlement were identified using five variables: net primary productivity (NPP) (Zhao and Running 2010), proximities to reefs (Andréfouët et al. 2006), flat land (LP DAAC 2011), rich soils (MOA GIS 2015), and perennial freshwater (MOA GIS 2015). Because precise locations were not available, known site locations were estimated using georectified maps from previous reports. The preliminary model was then briefly tested in the field at six 500 km² areas using opportunistic walkovers at construction sites, agricultural fields, and eroded beach exposures. This fieldwork resulted in the discovery of one new site and the precise GPS recording of 15 previously identified.

Following the 2015 fieldwork, a sub-sample of 30 sites for which locational and chronological information could be confidently estimated were chosen for further analysis. Fifteen environmental variables were measured for each in ArcGIS 10.3 and then imported into R for multivariate analysis. Of the variables considered, the highest correlations were site proximities to clay sources, beaches, coral reefs and/or seagrass, and perennial freshwater (e.g., rivers). Specifically, of the 30 sites analyzed, 85% (n=26/30) were ≤950m from a clay source, ≤700m from a coral reef, ≤740m from a river, and ≤1655m from a beach. These four criteria were then used for creating an initial probability distribution that ranked habitat suitabilities across the island. These map layers were then assembled into two separate maps for suitability differences between foraging (e.g., early Archaic) and horticultural (e.g., early Ceramic) peoples (see Figure 2). In addition to resource proximities, soil types and an NPP layer were added to both maps to balance terrestrial suitability. Water fowl and chert resources were then added to the foraging model, while flat (low slope, low erosion) lands and proximity to clay sources were added to the horticultural model, along with a special soils layer that correlates well to the earliest known sites (“Period 1” soils). While no single soil variable could be isolated to characterize sites of the same time period, differentiation was accomplished using a combination of soil type, slope class, erosion susceptibility, and elevation above sea level (altitude).

Two areas were identified as highly optimal for fisher-forager peoples (0.12% of the island’s area), both situated in the NE corner of the island. Near-high probability (5/6) areas for foraging suitability (~3% of the island) overlapped with eight of the highest-ranked horticultural areas. It was these 10 areas that were selected for the 2016 survey.

As expected, the 2016 fieldwork revealed a few cases where the above models failed fantastically. We knew of one definite inland site that could not be accounted for by the predictive models
Montreuil, having just 33% probability for settlement, but I was brought to a second, even larger inland site (La Filette) that clearly demonstrated other variables at work. A third early site in a low-probability area (Beausejour) was sampled after its discovery by a road construction crew. Of course, the predictive model was only meant to account for 85% of sites, but it was instructive to investigate these areas where it performed so poorly. Along with the reanalysis of all known sites at the end of this report, these failures will help build a more robust model that will contribute to better understanding of Amerindian settlement decisions at specific points in time and—more importantly—one that will prevent other sites from being “discovered” by road construction crews. The final predictive maps will be formatted as a GIS package and (it is hoped) installed onto the network at the Ministry of Planning and the GIS Unit of the Ministry of Agriculture so that it can be used in future development planning.

![Predictive Map of Horticultural (Ceramic Age) Settlement with Known Prehistoric Sites and Areas Surveyed in Grenada, West Indies](image)

**Figure 2 Predictive Map and Sites Sampled in 2016**

(note: map reflects information known before completion of the ASIG— the new site inventory. See Figure 24 for a more accurate map of Grenada’s pre-Columbian sites)
Survey Methods
From June 26 through October 1, 2016, surveys were conducted at 10 large areas that had been identified using the predictive model described above. The 10 areas included 13 known sites, four of which turned out to have been destroyed. Six more sites were rapidly surveyed for radiocarbon samples (charcoal, shell, bone), and another eight sites were sampled from the GNM collections.1

A total of 71 auger tests (STPs) were conducted using a 4-inch, telescoping bucket auger that could reach as far as 2.5m below surface. The tests were roughly 10cm in diameter and typically extended 50-100cm below surface, with a few going as deep as 1.5m. Test points were placed using a combination of random and non-probabilistic sampling techniques and recorded using a Garmin eTrex10 GPS device.

Auger test placements were decided using a Generalized Random Tessellation Stratified (GRTS) point generator (Phillipi 2016). GRTS is a formula for producing stratified, spatially-balanced (at 30m minimum interval), random sample points from the spsurvey package in R (Kincaid and Olsen 2011). Because of the ease of batching scripts and creating ArcGIS shapefiles in R, the GRTS approach was more functional than the “spatially-balanced point” tool native to ArcGIS (Pettebone et al. 2009; Theobald et al. 2007), though the formulae behind each tool are virtually the same. The sample size was initially calculated to a 95% confidence level at 5% error margin, plus an additional 25 extra (“E”) samples for inaccessible locations (roads, houses, denial of access, etc.). These latter units were labeled in the order that they were generated to allow easy addition into the sampling regime as needed (or safely ignored if not). However, because assigned points were placed irrespective of modern development, only a small percent (between 3-11%) of each sample population could be tested on the ground. Luckily, GRTS is designed for small (<5%) sample sizes (Phillipi 2016).

Typically 2-3 days were spent in each area, with the first day spent in pedestrian survey and sampling opportunistic GRTS points loaded onto the GPS device. After the first day, the area would be re-assessed, with priority for Days 2 and 3 placed on filling major gaps left uncovered and defining the parameters of potential sites (using non-probabilistic sampling if needed) (Redman 1987:252). Because of the difficulty in accessing, finding, augering, and performing comprehensive soil analysis at each sample point, an average of six tests were dug each day. A workman was hired (Brendon Gulston) to ensure consistent help, but a colleague from the Ministry of Tourism (Michael Jessamy) was often on-hand.

Soil Analysis
After each auger scoop, the depth was measured and the soil screened separately using a small 4mm sifter with catchment that allowed smaller matrix to be analyzed before discarding. Additionally, a total of 210 pint-size soil samples were collected in sterile polyurethane bags for later pedogenic, botanical, and geochemical analyses.

Basic soil description (horizon, texture, Munsell color, consistence, structure, clay film, carbonate morphology, and clast weathering), was recorded in the field at each auger test. Back in the lab, soil samples were left to dry in the open air for a week before being weighed and sifted. Half of each soil sample (determined by weight on a digital scale) was poured into a stacked screen (up to 2mm) and sifted for organic remains— the other half remained as both a backup and to facilitate

1 In 2017, the remaining ~57 known sites will be rapidly tested for diagnostic ceramics and/or radiocarbon samples so that assemblages and/or dates exist from most, if not all, of the known sites on the island.
future geochemical tests from the same deposits. Fine fraction (< 2mm) was bagged separately, for use in phosphate testing (below), while the remaining large fraction was wet-sieved through a 0.063mm (#230) screen and left to dry on plastic sheets. After 48 hours, the samples were photographed, re-sifted for organic remains, re-analyzed for basic soil description, and re-bagged. This process provided a check on soil descriptions from the field and allowed for potential microartifacts and botanical remains to be identified. Including the phosphorus work below, each soil sample collected in the field (n=210) correlated to about one hour of processing and analysis in the lab.

![Figure 3 Lab Setup for Soil Phosphate Analysis](image)

**Soil Phosphate (P) Testing**

Of all the many geochemical analyses available for soils, the most promising for identifying past human activity is phosphorus extraction (Holliday and Gartner 2007). As an essential macronutrient with finite quantities in nature, concentrations of P form in areas where foods have been processed or disposed by humans. Phosphorus also quickly fixes to durable metals like iron and aluminum, making it far less mobile within the soilscape than other elements and artifacts, allowing legacy values of P to be maintained over long periods (Nolan 2014; Roos and Nolan 2012). Thus, an increase in phosphorus in an area associated with archaeological remains could indicate midden, processing areas, burials, and other features (Bethell and Mate 1989; Holliday and Gartner 2007; Roth 2002). While increased values of P could reflect anything from modern to prehistoric influences, it can often provide a powerful corroboration of artifactual and other evidence.

For this project, a basic field method was used for determining “available phosphorus” (largely derived from organic sources), rather than the total phosphorus present in each soil sample. Available phosphorus has been shown to be as effective in identifying archaeological features and site boundaries as total P (Eidt 1984; Nolan 2014; Sandor et al. 1986), and in some cases less obscured by the “noise” of inorganic P (e.g., Pamell et al. 2001).

The procedure used was a modified field method outlined by Terry et al. (2000), with refinements based on similar applications by Roos and Nolan (2012), Rypkema et al. (2007), and Hutson et al. (2009). It was initially tested on 60 trials conducted at the Human Paleoecology and Isotope Geochemistry Lab at Penn State. Two grams of soil were mixed with 20ml of Mehlich 2 extractant
(Mehlich 1978) for 5 minutes. Two milliliters of this solution were then filtered through a 0.45um syringe into a 10ml cuvette and diluted with 8ml of deionized water (from a Barnstead Ultrapure filter). The cuvette was then placed in a High-Range P Checker (HI-706) by Hanna Instruments, a small colorimeter internally calibrated to orthophosphoric acid (PO₄, commonly called phosphate). This first reading functions as the control sample. An ascorbic acid and molybdate-based color reagent was then added to the solution, shaken until dissolved (2 minutes), and allowed to react for five minutes before measuring again in the Checker. For half of the samples, another 2g of each soil sample were also dissolved in 20ml of deionized water for 30 minutes and measured with a Checker Plus pH tester by Hanna Instruments. All equipment was then thoroughly rinsed between samples and wiped clean.

All measurements were entered into an MS Access database— connecting them to soil description data and GPS points. Data were then exported to Surfer 11 to create 3D variograms of relative changes in P values across each site (see discussion of each survey below). The overall result was that middens and site limits were easy to identify with the phosphorus values, but I was only able to tentatively identify potential prehistoric planting areas, due to the limited extent of the auger tests. Planting area identifications would also require stable isotope analysis, micro-level paleoethnobotany (e.g. pollen, phytoliths, starches), and continued geochemical analyses— all of which may be pursued on the leftover soils in the future, funds permitting.

TIMELINE FOR CERAMIC TYPOLOGIES

For this study— and the inventory of sites that follow— I've mostly kept to Peterson et al.'s (2004) typologies, though I prefer Rouse's “Saladoid-Barrancoid” label for the period following Cedrosan Saladoid. My chronological ranges, however, are based on a revised chronology that is emerging from the radiocarbon sequence for Grenada, which disagrees with the standard dates assigned to these periods. For instance, Suazan-Troumassoid types (e.g., finger-indented rims, “scratched” designs) occur in Sauteurs Bay by calAD 660-880 (CI:95.4%) and at Savanne Suazey itself by calAD 860-1020 (CI:89.5%). As a result, I've only assigned typological associations based on diagnostic ceramic attributes, rather than relative dating. I also refrain from including a period prior to AD 250 because there is simply not enough evidence to support this at present. There are certainly "Cedrosan Saladoid" ceramics (WOR, ZIC, zoomorphic adornos) at Pearls, Beausejour, and possibly Grand Marquis and Sauteurs Bay, but that does not mean those sites were settled before AD 250.

2 The tests at Penn State used Mehlich 2 from Hach Company, but in ordering equipment for Grenada, I found a substantially reduced price for Mehlich 3 at GFS Chemicals, Inc. After some research, I was convinced that Mehlich 3 (Mehlich 1984) would work the same, if not better. I ordered 20L to Grenada through DHL hazard shipping and went through all the necessary paperwork to clear customs, only to find that my first run of tests were completely negative. Repeated attempts and variations continued to fail, and email exchanges with GFS went nowhere. I tried different reagents, ratios, extractant times, soil types, lab temperatures— all negative. The main differences between Mehlich 2 and 3 are the type of acid (Hydrofluoric vs EDTA) and the kind of Ammonium mix (Chloride vs. Nitrate). It may be that the acid difference was the culprit, but it could very well have been the mix provided by GFS. In the end— and at great expense— I was forced to purchase Mehlich 2 from Hach after all. Their product worked as expected and resulted in the phosphate findings presented here.

3 No relation to the author

This pH meter produced a fatal error mid-way through processing, so pH was not measured for ~half the sites

5 Prior lab tests confirmed that washing equipment in phosphate-free soap or HCl was unnecessary for this level of detection, although equipment was thoroughly washed with Liquinox after each day of testing. Waste disposal followed the MSDS for each chemical, which included mixing with baking soda until a neutral pH was reached (using litmus strips), diluting in water at a min 1:5 ratio, and flushing down the toilet.
<table>
<thead>
<tr>
<th>Years (AD)</th>
<th>Early Codroian Salado (Viejo)</th>
<th>Late Codroian Salado (Diamante)</th>
<th>Suazoan Troumassoid (Savanne Suazy, Savanne Bay)</th>
<th>Troumassoid Troumassoid (Salt Pond, Calivny, St. John’s River)</th>
<th>Cayo (Gaffey Bay, La Pataie)</th>
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<td>Transition (end of Pears)</td>
<td>Terminal Salado (end of Cedarosan)</td>
<td>Early Post-Salado (end of Cedarosan)</td>
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<td>Cedarosan Salado (Sivon)</td>
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<td>Late Post-Salado (end of Cedarosan)</td>
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<td>Suazoan Salado (Suazy)</td>
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**Figure 4** General Ceramic Chronologies Proposed for Grenada

**Figure 5** Collage of Photographs from the 2016 Survey
NOTE: The current section analyzes the results of the 2016 investigations. More synthetic information on each site can be found in print-outs of the Archaeological Site Inventory for Grenada (ASIG) found in Appendix I. Additional photographs, maps, and reports can be found in the ASIG database described in the final section.

Black Bay Cave (GREH-J-1)

**Dates Investigated:** June 13-19, 2016

**Team:** Jonathan Hanna, Michael Jessamy, Brendon Gulston

**Summary.** Pedestrian survey and 17 bucket-auger tests were conducted around the Black Bay Cave area. No tests recovered subsurface prehistoric remains, but surface collection atop the ridge to the east of the cave (now soursop fields) did produce small sherds of ZIC mixed with European pearlware and a kaolin pipestem. Just west of the cave, we also identified two historic structures of dry-laid stone rubble, probably dating to the battery that can be seen in the area on French-period maps (FFR also reports a third structure further to the NE). A surface collection near STP #2 produced larger pieces of European earthenware (possibly some Amerindian, but nothing definitive). A test 10m from the mouth of the cave (STP-5) was sterile. Thick, plain earthenware of historic origin was found in the topsoil of STP-12. Down on the beach to the north of the cliff, a series of at least ten workstones exhibiting cupules and “polisors” (sharpening lines) were confirmed. Workstones are known to have been used by prehistoric peoples for fashioning tools. No Amerindian remains were found in the old estate along the Black Bay River.

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*Figure 6 Survey and Phosphorus Results at Black Bay (J-1)*
Soil samples analyzed from the auger tests show phosphate levels pulling towards historic disturbance rather than whatever prehistoric component was here, except STP-7, which may indicate a deeper legacy. Unfortunately, it does not appear that any intact Amerindian remains exist in the area, and it is therefore unclear how the cave was used in pre-Columbian times. At the moment, only fleeting glimpses can be found, mostly southeast of the cave. It is possible that whatever was here has since been destroyed, but it could not have been a substantial settlement. Disturbance on the ridge has not been nearly as extensive as other sites. In the newly-planted soursop fields atop the ridge, east of the cave, large tree stumps attest to climax forest just a few years ago (modern disturbance occurred here only within the last 2-3 years). A pig farm on the ridge north of the soursop fields is also only a few years old.

Dragon Bay, Molinere (GREN-G-1)

Dates Investigated: July 11th and 27th, 2016
Team: Jonathan Hanna, Michael Jessamy, Brendon Gulston

Summary. In 1999, a major sea surge pummeled the west coast of Grenada. In the aftermath, Ministry Heritage Officer Michael Jessamy was called down to Molinere Point to investigate piles of human bones that had eroded out from the bluff on the southeast end of the beach. The bones were collected and deposited in the Grenada National Museum, but it was not known how many were still left in situ. The impact of the surge on beach erosion was severe, pushing the waterline 15-20m further inland. A local fisherman reported that many of the large boulders now half-submerged had once been on the back side of the beach, far from the water. The hillside in this area (hereafter called the “bluff”) continues to be undercut by the sea, with soil slumping down onto the beach. There was also no sign of the cannon that had been reported by FFR (see full Dragon Bay discussion in Site Inventory section), perhaps because it now lay underwater.

It was in the bluff along the SE section of the beach that pedestrian survey uncovered at least three, partially exposed human burials. After clearing around one set (Waypoint 3), it was confirmed that these were intact skeletons, despite having likely slumped down from above. In the process, two heavily rusted, rectangular, hand-wrought nails associated with the bones were collected—likely coffin nails, indicating the burials may date to the late 18th century.

Given the time period and the large number of bones from the area, this appears to have been a cemetery, likely for the sugar plantation just to the north. They could be British/French settlers or even soldiers from the small battery on the knoll above, but given the proximity to the sugar mill, the lack of many artifacts or grave goods, and their placement on a hill (rather, than a churchyard or town), it seems quite possible that these are slave burials. Only proper excavation could confirm this, and there was unfortunately no time to devote during this project.
In an effort to identify potential deposits above the bluff, pedestrian survey and five auger tests were performed on the steep hillside above, including three tests ~15m above the three exposed burials. No artifacts were found in the auger tests, but a few historic earthenware sherds were collected from the surface near STP-3 and STP-5. Further up the hill, part of an old brick and a deep kick-up base of a glass bottle were found. Based on its form, the heavily oxidized (patinated) glass base probably dates to the early to mid-19th century. It should be noted that African slave burials have been known to have broken bottles (to end the cycle of death in the household) and more coffin nails than usual (to keep the soul from escaping) (Saunders 2015). While purely conjecture at this point, these artifacts could therefore be associated with the burials now on the beach below.

A few prehistoric surface ceramics were found on the beach north of the burials (near the modern restaurant, built in 2014), as well as along the stream to the far north end of the beach. Because of the heavy disturbance, no further investigation was made. At present, geochemical tests for available organic phosphates have not yet been conducted on these soils.

*Figure 8 Survey Results at Dragon Bay, Molinere (G-1)*
Grand Bacolet Bay (GREN-D-7)

Dates Investigated: July 21-26, 2016
Team: Jonathan Hanna, Brendon Gulston

Summary. As soon as the predictive models for the 2016 survey were complete, Grand Bacolet Bay was of major interest. Beginning with Hope Estate and moving southward, sections of this area ranked highest with every horticultural variable applied, making it a bellwether for the accuracy of the model itself. In the end, it turns out that there is a site here, but it is on the fringe, outside the highest ranked areas, and was almost missed entirely!

Petitjean Roget (1981) and FFR (Banks 1993) both reported finding a few sherds near one of the rivers, however neither specified which river. Harris (2001) described the site as two loci because FFR’s report was on the beach, while Petitjean’s was up the river. The entire beach was surveyed during the initial pedestrian walkover of the area, to no avail. It became clear that behind the beach was seasonally-inundated swamp for at least 100m west, including most of the northern area selected. While this by no means precludes the presence of ancient sites, we were not prepared to deal with water-logged samples or excavation (e.g., coring would have been a more appropriate than bucket augering). Nonetheless, we tested a few dryer parts along the northern...
river (Little River of Great Bacolet) and in a recent soursop field (STP-3) where large stumps and satellite imagery indicates climax forest until ~2011. At ~30 cmbs, the dark, organic clayey soil of buried A (Ab) horizon was present in STP-2 and STP-3, on either side of the river, but no artifacts were found to indicate its age, nor charcoal or other organic samples. A well-fired sherd with fine beige paste was found between 0-10 cmbs in STP-4, likely of historic derivation. The water table was reached in STP-5 at 46 cmbs.

Before going further, we decided to walk along the southern river (just after the confluence of the St. Francis River and Great River of Grand Bacolet), which was only a few feet deep for the first ½ km, starting from the road bridge and going east. A number of prehistoric sherds were found scattered under the bridge itself, clearly displaced from road construction. Almost immediately after the bridge, a continuous scatter of ceramic sherds occur along the southern banks of the river (some with characteristic “scratched” post-Salado designs). It was evident that all the sherds had probably slid down after the upper surface had been undercut by the river. Shortly after the surface finds at Waypoint 44, the riverbanks became quite steep and the water depth increased over 6 ft., preventing further investigation. We later attempted to survey from the river mouth at the beach, but the water was several meters deep there as well.

One of the river scatters contained a concentration of large sherds, which we mapped in situ before collection (labelled “Unit 1”). Though they were likely in a natural secondary context, the soil around the sherds appeared to be the bottom of the Ab horizon later documented above. No artifacts were found below the surface, and when we troweled below, it was the same heavily mottled clay identified as the B horizon above.

We then decided to place a few auger tests above the section where the river sherds had been found. STP-6 was placed 20m southwest of the second river find (Waypoint 37) but consisted of highly mottled sand throughout, suggesting the area was disturbed (clay content increased at 50 cmbs, but no artifacts were found, nor did the soil change through 146 cmbs). STP-7 was placed further to the east but terminated at a large rock just 25 cmbs. STP-8 was placed 20m to the northeast, near where a small surface ceramic would later be found (Waypoint 54). Like STP-6,
STP-8 contained high sand content with some mottling, but at 30 cmbs the dark, organic clay of an Ab horizon emerged with ceramic sherds (likely early Troumassoid) and charcoal. At 50 cmbs, a red-mottled (iron-oxide) clay increased and ceramics were no longer visible, so we terminated at 68 cmbs. Lab analysis would later reveal that this “red” horizon still contained ceramics and charcoal. The same Ab was found in STPs 11 thru 17, going as deep as 80 cmbs in STP-13. Charcoal was found throughout, but only STP-8 had artifacts in the Ab (STP-17 had three sherds at 0-7 cmbs).

The placements of STPs 11 thru 18 were randomly assigned using the GRTS generator described earlier, which placed eleven potential points around this section of the river (the “intensive survey” boundary on Figure 9). Unfortunately, GPS failure in the field (low-batteries) led to the misplacement of STP-9 and STP-18, far from their assigned points. As can be seen in the organic phosphate measurements, an auger test just north of STP-18, where the original point was assigned, might reduce the apparent gap in phosphorus readings here. This is especially apparent with phosphorus measurements taken at 50-60 cmbs, which confirm the artifactual evidence for the site’s boundaries but shows a gap just above Unit 1, which would otherwise have been considered the site’s center. That said, STP-18 exhibited similar soils to STP-6, and may have been disturbed (STP-18 was terminated at a large rock at 46 cmbs). This may signal disturbance continuing north towards the river, but only a test to the north of STP-18 would confirm this. The phosphorus readings from other depths, including the combined maximum for each test, appear to be pulling towards recent influences such as the modern house just south of STP-11 and STP-17.

STP-9 and STP-10 were placed on the north side of the river and were devoid of artifacts or even an Ab horizon. This may indicate ancient occupation did not extend past the river or that modern farming (evidenced by nearby planting beds and irrigation tracks) have destroyed whatever was there. That said, STP-10 contained three plow-zone-like horizons extending through 150 cmbs with some charcoal present. The third Ap was a rich clay-loam speckled with charcoal from 50-150 cmbs. Given the depth and characteristics, this was either part of an historic plantation or an Amerindian field. Another test between these would be worthwhile, as would a test to the southern side of the road, to confirm the site was small-enough to center around STP-8 or if it had actually extended much further before modern disturbance. No further survey was conducted in the southernmost section of the survey area in Figure 9.

Antoine Bay Area

**Dates Investigated:** July 28- August 5, 2016  
**Team:** Jonathan Hanna, Brendon Gulston  
**Overview.** The predictive models had ranked a large section of northeast Grenada as highly suitable for early settlement, so a long transect (~1km) was placed to cross-cut the string of known sites along the coast and the areas between them. Much of the area is fallow garden, cow pasture, and dry scrub-woodlands, but ceramics can be found at many beach exposures, garden pastures, road cuts, and other exposures, indicating widespread yet dispersed prehistoric settlement. Only Savanne Suazey has been previously investigated, and the dating of sites to the south has been based on pedestrian surface collections.

Note that—as of this writing— there is not a site called “Antoine Bay,” and the survey area labelled such here is between Grenada Bay/Bathway and Antoine Bay— from High Cliff Point north to Savanne Suazey (Suazey itself was not tested). There does not appear to be a more exact name for this stretch, perhaps why FFR called it “Calabash Bay.” For this project, all paperwork and bags from the area were labelled “Antoine Bay,” with secondary labels specifying the nearest
known site. However, because there were so many sites in the Antoine Bay area, the labels could appear somewhat misleading in the future. For example, GREN-P11-STP4 is the 4th STP in the Antoine Bay area—not the 4th STP at GREN-P11.

Figure 11 Survey and Phosphorus Results in the Antoine Bay Area
High Bluff (GREN-P21)

**Summary.** Just south of Savanne Suazey, rising out of the Sallee River, is the hilltop site of High Bluff—Bullen’s site #4, now indexed as GREN-P-21. Like the other hilltop areas along this coast, High Bluff is a crumbling cliff that rises ~25m above the sea below. The geologic stratigraphy here was identified by Richard Arculus as scoria and ash beds from several pulses of explosions in the Antoine Lake crater, composed of alkali basalts (earliest) and consolidated andesites (older), which appear to have been deposited in the last ~10,000 years (Arculus 1973:31, 76, 1976). Soil has eroded a few meters back from the cliff face, where the exposed profile revealed dispersed prehistoric pottery. Three auger tests in the area had varying results. STP-1 to the NW of the open section of the cliff hit bedrock at 21cmbs, but there was a possible Ab horizon just above bedrock. STP-2 was placed directly west, just above the exposed section, and went 68 cmbs before hitting bedrock. An Ab horizon was confirmed here from 20-60 cmbs, where soil was slightly darker (10yr 3/1) and contained numerous ceramics and charcoal remains. STP-3 was placed just south of the exposed cliff and did not contain ceramics or an Ab horizon.

Phosphorus results for High Bluff were not as enlightening as Calabasse and High Cliff, showing higher levels in STP-1 than in the concentration of artifacts on the exposed section and just west in STP-2.

Calabasse (GREN-P-11)

**Summary.** Going south from High Bluff, the land descends into an alluvial valley where the Calabasse River runs into the sea. Bullen reported surface finds along the river and labelled it site #5 on his map. FFR also surveyed here in 1993 but renamed the site Calabash Bay (Banks 1993). FFR also reported that the area was slated for development, which never apparently happened. A few sherds were found along the river and auger tests STP-4, STP-5, STP-6, and STP-7 all had occasional micro-sherds. STP-5 had Suazan-Troumassoid ceramics in the upper levels, and STP-4 and STP-7 contained charcoal and micro-sherds through ~85 cmbs, at the bottom of a plowzone. Some historic rubble and earthenware were evident on the surface in parts (see map), indicating colonial-era disturbance.

Generally, the scattered sherds did not concentrate in any clear area, making the site’s boundaries enigmatic. However, the phosphorus readings indicate peak levels near the center of the main artifactual finds. This provides a nice example of how phosphorus readings can offer an alternative, independent lens from artifactual evidence.

High Cliff Point (GREN-P-20)

**Summary.** Just south of the Calabasse River, High Cliff Point rises ~50m above the sea and maintains a ridge going west from its back. Four auger tests were placed near the point itself and three more behind (to the west), as control samples. Soils are thin here, and while surface finds were found all along eastern cliff exposures, only STP-12 and STP-13 contained numerous ceramics and faunal remains through ~30 cmbs. Clearly this area was occupied during Suazan-Troumassoid times. Phosphorus levels confirm the cliff’s edge to be the densest midden area, with STP-12 measuring higher than any other sample taken during this project.

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While making the Site Inventory below, it became clear that sherds found just north of High Bluff (including one “scratched” sherd), along the Sallee River, should be considered a separate site—P-27. Later soil analysis showed that phosphorus levels pulled high in this area, though only one auger test was performed nearby (see Figure 11).
Point Salines Area

**Dates Investigated:** September 5-8, 2016  
**Team:** Jonathan Hanna, Michael Jessamy, Brendon Gulston

**Overview.** Point Salines is the tip of a peculiar peninsula that fishtails out of Grenada’s southwest corner— the southernmost point of the southernmost island in the Antillean archipelago. The peculiarity of the landmass hints at its unique geology, formed from lahar events (volcanic mudslides) beginning ~2mya that originated from the Mt. Maitland-Mt. Sinai range and covered much of St. David’s (OAS et al. 1988). Mudstone is the predominant rock in the Point Salines area and clearly evident on the eroding promontories that jut out along the southern coast. Thin layers of halite within eroded profiles of mudstone here indicate successive events of outflows and evaporation.

Ocean currents pulling outwash from South America and deeper upwellings from the Atlantic converge here and divide into the Caribbean and Atlantic waters. As such, the sea around Point Salines can be quite rough, but it also offers prized fishing opportunities. Indeed, despite the restriction of access along these beaches by airport security, we saw a fishermen every day and abundant evidence of nighttime fishing activities. The unique marine environment is perhaps why Black Point is one of just two locations where shark attacks have occurred in Grenada (the other being Grenville). In 1960, a boy’s toe was apparently bitten off while spearfishing off Black Point (GSAF 2017). Older Grenadians have also told me that these beaches were a popular alternative to Grand Anse for swimming, prior to the airport’s construction. Glass bottles and aluminum pop-top tabs found in beach shrubbery here mostly date to the mid-20th Century.

*Figure 12 Survey Results of the Point Salines Area*
Point Salines is so named because of a large salt marsh (*salina*) where large quantities of salt can be raked in during the dry season. The clay soils here limit absorption or drainage, collecting surface water that eventually evaporates and leaves behind previously dissolved minerals. As the process continues to occur over time, impressive amounts of minerals (mostly salts) accumulate on the surface and a salt pan is born.

Salt was likely as much an attraction for Amerindians as it was for later colonists, and it seems clear that a reason for settling this area was the easy accessibility of large amounts of salt. Whether it holds the same political-economic implications as a place like MC-6 in Turks & Caicos remains to be seen (Keegan 1992). One confounding factor is whether or not it was always a salt pond. Ceramics and conch shells can be seen littered across the ponds in the dry season—are these a result of historic disturbance, or has a salt pond formed on top of a site? During airport construction, the northern section of the pond was filled in and the remainder split into eastern and western ponds, separated by a small strip of reclaimed land. As will become evident below, this was just one of many landform changes that have occurred in the area since Amerindian occupation, and it is difficult to understand what the area looked like in prehistory.

Ripley Bullen’s survey in 1962 showed persistent occupation around the salt pond and down the southern beach areas. At Black Point, just southwest of the pond, he recovered early Cedrosan Saladoid ceramics associated with the first group of Saladoid peoples in the Caribbean around 500 BC. From 1977-1980, Petitjean Roget conducted salvage excavations during construction of the airport. Photos of the area from October 25, 1983 show the extent of disturbance, which Petitjean lamented in his report, saying the entire area was devastatingly transformed between two of his visits (Petitjean Roget 1981).

Because of the close proximity of sites at Black Point, Grand Bay, and Salt Pond, they are undoubtedly all loci of the same site, perhaps specific usage areas, as discussed below. Bullen’s analysis of the ceramics from each area led him to a similar conclusion and he placed them all (except the subsurface tests at Black Point) at the end of his “Pearls-Simon-Saline continuum” (Bullen 1964a). The Cato Beach sandstone anomalies (discussed under the Black Point section) give further evidence that these sites were linked as a continuous settlement, at least during times of peak population.

The sites at Point Salines may still have been occupied at the time of the first permanent French settlement in 1649. When the French first landed at Port Louis, they report firing canons to, “give warning to the Savages who stayed all trembling with fear in their cabets,” (Anonymous [Benigne Bresson] 2015:9). This statement implies that the “savages” were close enough to hear the canons. On the second day, Amerindians visited the French encampment, arriving “by sea in a long boat from the north,” (ibid). They appear to have come from the western coast, yet when this same group sails away, “they went back to the Capesterre [the eastern coast], where they had come from,” (ibid:11). Whatever the circumstances, there were probably settlements in either direction of Port Louis and there has been speculation that Point Salines was one (Cody Holdren 1998).7

Finally, one cannot talk about Point Salines without mentioning its place in world history as the focus of the American-led military Intervention in 1983. It is worth pausing for a moment to understand the politics (and appreciate the many layers of irony) behind these events. Because of insurmountable problems with the Pearls airport, the Gairy government had begun acquiring lands at Point Salines from the Julien family by 1954 to build a larger international airport that

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7 The site of True Blue (G-23) also holds potential.
would expand Grenada’s tourism industry (Steele 2003:388). Eventually, Gairy’s main opposition, the New Jewel Movement, criticized Gairy’s plans as bourgeois excess. Yet after the NJM overthrew Gairy in the 1979 coup, these plans became one of their biggest projects and longest-lasting legacy (Martin 2007:194). Division within the party over the role of tourism (centered on the airport) proved a fatal crack that facilitated the Revolution’s violent self-destruction. Meanwhile, the construction activities had also led to objections from the US government, who believed the larger airport would enable the Soviet Union to place nuclear arms and other military equipment in America’s “backyard.” The military utility of the airstrip was eventually proved when the US invaded in 1983 and used it to land equipment and mount their campaign. Nonetheless, the US then helped complete the airport’s construction, and the Point Salines International Airport officially opened in 1984. Upon President Ronald Reagan’s visit in 1986, a monument to the “Intervention” was erected at the entrance of the airport as a sign of gratitude from the Grenadian people and to commemorate those who lost their lives in battle. Likewise, a plaque was installed at the airport during a visit by Fidel Castro in 1998, to commemorate the substantial contribution of the Cuban people in the project. In 2009, the facility’s name was changed to the Maurice Bishop International Airport (MBIA).

![Figure 13 Smoke Rising from Point Salines during the 1983 American-led Intervention (Raines 2010:13)](image)

Point Salines was the main area of engagement during the 1983 Intervention, where 45 Grenadians, 29 Cubans and 18 Americans lost their lives in battle (Newswires 1998). While bombs were dropped elsewhere, it is not clear how much bombing occurred at the airport itself, since the Americans wanted to preserve the runway. However, photographs from the campaign shows potential bomb blasts off the north side of the peninsula (Figure 13). Thus, archaeological disturbance occurred not just in the airport’s construction but also in the military invasion that the construction had sparked!
The 2016 survey revealed that at least two of the five sites in the area (Bullen’s Salt Pond 1 and Black Point) were largely destroyed during these events. The sequences at Salt Pond 2 and 3 appeared stratigraphically intact, with a rich sequence spanning at least 1.2 meters into the water table. Radiocarbon samples were garnered from four loci, but only Salt Pond 2 has so far yielded promising results.

**Black Point (GREN-G-20)**

**Summary.** Black Point is the first rocky promontory jutting out from the Point Salines peninsula as one moves south-east from the westernmost tip. On some historic maps, it is sometimes labelled Laissé Point, while the Bay between Black Point and the tip of Point Salines is called Black Bay. I refrain from using “Black Bay” here, since confusion would result with the site in St. John’s (GREN-J-1). We also did not find anything worth mentioning in the Bay area during pedestrian survey, though no auger tests were conducted. Some highly eroded sherds were found towards the western side of Black Point’s base, but artifact concentrations increased significantly on the eastern side and down the beach known as Cato Bay.

Ripley Bullen’s survey of the area in 1962 produced an intriguing observation that was never investigated further. At Black Point, Bullen’s surface collection fit squarely within his Saline ceramic series, typed from the Salt Pond sites and what he considered the end of the Saladoid-era ceramics in Grenada (his Pearls-Simon-Saline series). But a shovel test he dug, “below the high-water mark in the sandy beach at the southeastern edge of the point,” (Bullen 1964a:35), produced ceramics that fit the earliest phase of his Pearls series, similar to types identified at Cedros (Trinidad), and possibly pre-dating the lowest levels of Pearls itself (Bullen 1964a:36,46). It was not until he was back in Florida that he realized this, so he asked local enthusiast Alistair Hughes to do a third collection at Black Point and send it to Florida. The result, however, was simply more Saline-type pottery. Although Bullen returned to Grenada for a salvage excavation on Calivigny Island in 1967 (Bullen and Bullen 1968) and again for the IACA meetings in 1969, he does not appear to have followed up these initial observations.

*Figure 14 Bullen’s Sub-Surface Collection at the FIMNH (courtesy B. Mistretta)*
During airport construction, Henry Petitjean Roget investigated nearby Salt Pond and other sites, but he does not mention Black Point (Petitjean Roget 1981). In her dissertation, Ann Cody relates that she was never given permission to access the Point Salines sites but that she believed, based on Petitjean’s report, that they were all destroyed (Cody Holdren 1998:45). Others have mentioned the dilemma (e.g., Boomert 2000:232–233), but as far as I am aware, our return in 2016 was the first archaeological investigation of Black Point since Ripley Bullen’s visit. Unfortunately, it appears that this important site was largely destroyed by sand-mining during construction of the airport. Nonetheless, I was able to garner quite a bit of information in the process and some radiocarbon samples (charcoal and shell) that may help solve the dilemma.

The area Bullen described for his shovel test (“the southeastern edge of the point”) is now below the low-tide line and perennially inundated. At the time, he recommended future investigations to bring, “a small bulkhead and a gasoline-driven water pump,” (Bullen 1964a:36). I, too, would now suggest similar preparations, though coring may be easier than underwater excavation. During low-tide, we did manage to place a shovel test (STP-2) on the beach, right at the waterline—as close as we could get to the area Bullen described— but no artifacts were found. The test showed a peculiar stratigraphy of 24 cm of coarse beach sand on top of a dark (10yr 3/2), pyroclastic clay extending to bedrock at 49 cmbs. Despite this, there were ceramics, spent conch shells, and shell tools dispersed around large mudstone boulders in the water. Brendon Gulston spent much of an afternoon diving around this area and retrieving a collection of water-worn, non-descript sherds and shell. Quite peculiarly, however, many artifacts were lodged under the rocks themselves, suggesting the rockfall happened post-abandonment. It also indicates that local sea level was much lower during Amerindian occupation and the shoreline extended further out.

Large sherds of Saline-type pottery were recovered from an eroded cut on the eastern base of the point, just above the beach limits (STP-1), but the ceramics were confined to the upper 10 cmbs. Another auger test (STP-10) placed just 7m NW of STP-1 was sterile and hit bedrock at 33 cmbs. In the other direction, however— 25m NE of the eroded bluff at STP-1— we identified a locus of ceramics and shell situated within a ~140m² area off the southeastern base of the Point. I am hesitant to call this a locus, however, because the area could very well be the leftovers of sifted sand during airport construction. Our initial auger tests and surface collection efforts here were impeded by the thorny shrubs and cacti, but further inquiry was prompted by the retrieval of a simple, button-eyed “manatee” adorno on the surface near STP-9 (Figure 15). It became clear...
that the area around the vegetation was sterile, both on the surface and in auger tests at STP-2,4,9, and 10. Inside the vegetation, however, piles of large brain coral and surface artifacts delineated the boundaries of a potential loci. An auger test (STP-8) in the middle of this area showed that, despite evidence of disturbance in the uppermost soils, a buried-A horizon was identified at 30 cmbs— a dark (10yr 3/2) clay-loam with plain earthenware, increasing in abundance through 45cmbs and tapering off at the interface with a C horizon (sandy eroded bedrock and clay) at 70 cmbs. This is a similar depth and artifact assemblage described by Bullen. It therefore appears that the upper layers consist of mixed modern and prehistoric artifacts in secondary contexts, but that some remnants of the Black Point site may remain below that.

While the antiquity of Bullen’s artifacts remain in question, it is unlikely that he so egregiously misstated the placement of his shovel test. The abundant artifacts currently on the seafloor, exactly where he describes digging, are most likely from the deposit he identified. Pulling together evidence presented below, it seems likely that sand-mining during airport construction drastically reduced the present shoreline, causing local water level to rise since Bullen’s visit. This scenario is corroborated by the fact that Bullen did not record one of the most interesting features of the area— a partially-inundated midden, lithified into sandstone and stretching across the entire beach east of Black Point.

The Cato Beach Sandstone Anomalies (GREN-G-28)

Situated at the low-tide mark on Cato Beach, a series of at least five sandstone eolianites stretch across the beach between Black Point and Grand Bay Point, filled with Amerindian ceramics, shell, and shell tools. The artifacts are embedded in the stone and difficult or impossible to pry out.

Petitjean Roget (1981) noted the presence of two of the five rocks during his airport salvage project and described one as, "a beach rock incrusted [sic] with pottery fragments," (1981:8).
Petitjean Roget rightly hypothesized that CaCO\textsubscript{3} from shell could have acted as a glue while these rocks were forming, solidifying the sand and permanently indurating the artifacts in sandstone.

Natural features like these (known as 'eolianites' to geologists) are common in the Caribbean and can form in just a few hundred years (Abegg et al. 2001). Indeed, the same features are found at Bathway and Pandi beach (between Grand Anse and Port Luis) in Grenada. At Bathway, the stones are said to have emerged during a heavy storm surge in the 1930s (Jessamy, personal communication). At Cato Beach, although Ripley Bullen had extensively surveyed the area—including the two points that cap Cato Beach (Black Point and Grand Bay Point)—he does not seem to have noticed them. Thus, it seems likely that these stones became exposed after Bullen's visit. Sand mining during airport construction likely had a massive effect on the area (witness the reclaimed land stretching across Hardy Bay), reducing the shoreline and exposing these rocks. This also explains how Bullen's subsurface test at Black Point (see GREN-G-20 entry) could now be underwater. The effects of sand-mining were also noticeable at Grand Bay (GREN-G-22).

The material in the rock is clearly a midden, likely left on the beach or in a natural secondary context having washed down from Salt Pond above. However, Petitjean's investigations to the north were more promising as he moved closer to the beach rocks themselves. In 1977, Petitjean's first excavation "S1" was just to the north of the rocks, where he only recovered a handful of pottery and some charcoal 46cmbs (Petitjean Roget 1981:6). He then moved north for unit "S2", which appears to have been culturally sterile (ibid:8). Unit “S3” was placed further to the east, again close to the rocks, but it, too, was culturally sterile (ibid). In 1979, Petitjean returned and placed excavation "S6" just south of his former "S3", closer to the water and the beach rocks. He did not find many artifacts there either, but he does mention a possible hearth at 1.35mbs (PJR 1981:11).

It might be useful to plan-map and draw to scale the artifacts in the rocks. This may provide clues as to the direction of their original location. A few shell fragments were also sampled for radiocarbon dating, but have not yet been processed.

**Salt Pond (GREN-G-21)**

**Summary.** In 1962, Ripley Bullen identified three loci around the salt pond for which Point Salines is named. Salt Pond 1 was a shell midden and ceramic scatter on the north edge of the pond, west of a salt warehouse and spanning across the road. During airport construction the northern section of Salt Pond was filled in, and Bullen's Salt Pond 1 loci was either destroyed or buried under the airstrip. It is unclear how much of the pond was infilled, since no accurate maps are available of its exact dimensions. Disturbance on the northern edge of the current ponds was unmistakable in the 2016 survey, though a few artifacts were found on the surface—obviously in a transposed tertiary context. Bullen identified a loci on the southwest edge of the pond (Salt Pond 2) and a large midden on the eastern edge (Salt Pond 3), which were identified and sampled in this survey, both demonstrating deeply stratified depths.

Bullen's Salt Pond 2 was described as a “sandy area near the ocean,” southwest of the pond (Bullen 1964a:35), but this area is likely heavily disturbed and was not tested during the 2016 survey. Along the southwest edge of the western pond, however, archaeological deposits are still intact (which I labeled as Salt Pond 2). An auger test here (STP-7), produced ceramics and shell artifacts from 0-55 cmbs, including within the gleyed, waterlogged redox soils that began 45 cmbs. Charcoal flecks continued throughout the sequence, so we augered until hitting the water table at 108 cmbs. At 95 cmbs, the clay became a beautiful green gley (G1 6/10GY). A piece of charcoal from the "top" of the site (just 14-25cmbs) was radiocarbon dated to calAD 770-945 (Cl:95.4%).

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At Salt Pond 3, an initial test (STP-5) proved too close to the water’s edge, hitting the water table at just 43 cmbs. Moving 7m east, STP-6 captured a complex sequence of top-level disturbance through 30 cmbs, followed by a darker Ab horizon that then transitioned into a sandier clay E-horizon from 45-105 cmbs, where the water table was found. The test continued to 119 cmbs, with ceramics, shell, and charcoal still evident.

Grand Bay (GRENG-22)
Summary. During his survey of Point Salines in 1962, Ripley Bullen conducted a quick surface collection at a site he called Grand Bay, in an eroded gulley roughly ½ mile east of Salt Pond 3 (Bullen 1964a:35). Artifacts all fit within his Pearl-Simon-Saline series. In the same area today, there is a modern retaining pond, which could be the location of Bullen’s collection. Petitjean Roget’s salvage project during airport construction also conducted excavations here (Petitjean Roget 1981:12-14). There are pockets of artifacts (shell middens and ceramics) all over the beach, but the area has been heavily disturbed by sand mining. However, we did sherds and conch in situ along the wall of the western point of the bay.

We surveyed the area as far east as Degra Bay (GRENG-G-27) and took GPS points where shell middens occurred. Some were falling out of the bluff onto the beach. A few sea-battered sherds were found amidst the middens at Degra Bay, but no diagnostic ceramics.

Rapid Surveys
A few sites were rapidly surveyed with the express aim of acquiring radiocarbon samples (shell, charcoal, or bone), much in the spirit of a radiocarbon survey (Brown Vega et al. 2013; Erlandson and Moss 1999; Kennett et al. 2012). Rather than investigated systematically, these areas were opportunistically sampled from one or two auger tests or exposed deposits.

Montreuil (GRENP-2)
Date Investigated: August 29, 2016
Team: Jonathan Hanna, Brendon Gulston

Because this is one of the few inland sites in Grenada, the character and timing of the Montreuil site is of great importance to understanding Grenada’s settlement history. Along the road, where Cody had indicated, we found pre-Columbian pottery. By the Glennelg station, we also found some historic blue pearlware and non-descript pre-Columbian sherds in a recently dug pit. Behind Devon Mark’s (formerly Monica Mark’s, his mother’s) house, we found a number of sherds scattered in the gardens. At least 4-5 board houses are on top of the site, all with gardens (the entire area is planted or fallow). As Cody described, the site appears to go from the road all the way (southeast) down to the river. Michael Jessamy also mentioned a workstone in the river near the site, but it was too overgrown and we were unable to locate it.

Two auger tests were placed in Devon’s yard, each going ~2m deep and repeatedly finding ceramics and charcoal. Most sherds appeared to be Suazoid, but some were higher-quality than is typical for that series. Devon also showed us some zoomorphic adornos, red-rimmed plate fragments, and a polished green celt—all appearing more Barrancoid in style. Unfortunately, two charcoal samples from AT-1 (one at 40-50cmbs, another at 70-76cmbs) both associated with
ceramics, came back as modern radiocarbon dates (!), indicating substantial disturbance in this area. Samples from AT-2 are currently awaiting testing.

**Figure 17 Investigations at Montreuil**

**True Blue Point (GREN-G-23)**

**Date Investigated:** August 31, 2016

**Team:** Jonathan Hanna, Brendon Gulston

**Summary.** Back in 2015, Michael Jessamy and I had recovered non-descript pottery and noted bones (some possibly human) falling out of an eroded bluff on a small beach on the eastern side of True Blue Point. This year, I returned to the site and collected some shell, pottery, bone and a metal axe-head that had recently fallen onto the beach with a scratched piece of pottery on top. In the wave-cut, it is clear that a dark, buried horizon lay just below the modern surface, indicating an area of past occupation.

The bones are most likely a human burial (at least two—one near the axe and the other near the charcoal collected, waypoint 125), and the artifacts indicate the possibility of a Contact period site, perhaps even one described in the 1655 Anonymous History as “Galibi.” Prickly Point, just to the east, was previously labelled "Pointe des Pirogues" on Colonial-era maps (e.g. Jeffrey's 1775).
Levera (GREN-P-4)

Dates Investigated: September 1, 2016
Team: Jonathan Hanna, Brendon Gulston

Summary. In his 1981 report, Henry Petitjean Roget mentioned a site his father (Jacques) had found at Levera. PJR did not visit it during his 1977-80 trips, but noted that the site was a ceramic scatter with WOR sherds and adornos, situated, “to the left of the inland road in a wood of sea grapes, just beyond the end of the cement road leading to the beach,” (Petitjean Roget 1981:28). Unfortunately, those directions were not very helpful. A bag recently found at the GNM revealed that FFR had made a collection here, too, but no description was provided as to where exactly the artifacts were found.

Petitjean’s directions most likely placed his father’s site somewhere along the road west of Levera Pond. A pedestrian survey down this road (headed north) revealed massive construction disturbance, apparently part of a controversial foreign development scheme greenwashed as “ecotourism.” (It is unclear what kind of “ecotourist” would be interested in a completely bulldozed, artificially-created environment that destroyed a protected natural reserve?) This is a case example of what happens to legally protected areas in the Caribbean: they just cost more for developers. Undoubtedly, whatever sites were at Levera have been destroyed.

Pedestrian survey along the beach did not produce any artifacts either, nor did a survey along the easternmost road near Bedford Point. An auger test was conducted at the bottom of the hill, north of the recently restored British battery, but was culturally sterile.8

La Filette (GREN-A-11)

Date Investigated: September 14, 2016
Team: Jonathan Hanna, Brendon Gulston, Dolton Charles, and Gaelle Tisserand

Summary. La Filette was first formally identified when Ripley Bullen made a small surface collection in 1962 where a house was being built. Because it is between Mt. Horne and La Filette, however, and because Bullen did not produce any maps of the site, its location has remained unknown ever since. In fact, I had assumed the house construction Bullen mentioned had destroyed the site, until local enthusiast Dolton Charles brought me to his "Mt. Horne site." He admitted it was possible this was what Bullen called La Filette, and a quick review of Bullen’s description confirmed his suspicion. In 2016, Charles also brought a team from Leiden to the site, who also correctly identified it as "La Filette" (Faculty of Leiden University 2016).

The stream-cut Bullen had described is a large midden deposit descending over 2.5m below surface. Pottery is also scattered over the surface, between cocoa trees and board houses, indicating a substantial settlement. Large pieces of pottery can also be found, suggesting that disturbance may not be as destructive as other sites. That said, there are

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8 Note that the test was recorded as P-20, before the bag at the GNM revealed that FFR had assigned Levera to P-4.
houses all over, and excavation here would require community participation.

In the stream-cut, I placed a column sample, retrieving a pint of soil every 40cm, beginning 70cmbs. Charcoal from one of these samples (SS4, 185-195cmbs), taken just above a vessel at the bottom of the ravine was radiocarbon dated to calAD 720-885.

River Antoine (GREN-P-8)
**Date Investigated:** September 14, 2016
**Team:** Jonathan Hanna, Brendon Gulston, Dolton Charles, Gaelle Tisserand
**Summary.** During preliminary model testing in 2015, Michael Jessamy and I surveyed along the road near River Antoine Distillery and found some sherds on the east side of the road. Upon visiting the area with Dolton Charles in 2016, he confirmed a large site was further back, towards the beach. Much of the area was under cultivation at the time, so we placed an auger test south of the river, where some pottery sherds were found on the surface. Aside from the surface scatter and some questionable charcoal, the test was sterile.

Simon Beach (GREN-A-10)
**Date Investigated:** September 14, 2016
**Team:** Jonathan Hanna, Brendon Gulston, Dolton Charles, Gaelle Tisserand
**Summary.** The Simon Beach site was first identified by Bullen in 1962, where he collected 635 sherds from an eroded beach cut, just south of the Simon River. The large amount of degraded, Pearls-like pottery led him to use Simon as the type site for his Simon series pottery. He also noted four human burials eroding into the sea, which he apparently did not recover (Bullen 1964a:23). Given its proximity to Pearls (~700m south), the site might well have been labeled a locus, rather than its own site. Bullen even postulated that it may have been, 'the 'port' or 'canoe landing place' for Indians living at the Pearls site," (Bullen 1964a:24).

Today, the site has been heavily disturbed by erosion and illegal dumping. While a few non-diagnostic sherds were observed in the beach cut, it is unclear if anything of the site still exists. A sample of soil taken from the beach cut did not yield any charcoal, but a walk up the Simon River is planned for 2017.
Boulogne

Date Investigated: September 14, 2016
Team: Jonathan Hanna, Brendon Gulston, Dolton Charles, Gaelle Tisserand

Summary. Dolton Charles also brought us to the site of Boulogne. Immediately upon seeing the mounds of artifacts piled up around banana trees, I was reminded of Cody's warning about Sauteurs Bay locus 2— soil from Pearls had been moved around the island, creating faux archaeological sites (Cody Holdren 1998:186). From 1986-1988, the Cocoa Rehabilitation Project removed truckloads of soil (and artifacts!) just east of the playing field at Pearls. It is not known how many truckloads or where exactly the soil went, but the National Trust was finally able to stop the extraction after two years (Cody 1990:40).

Figure 20 Artifacts from Pearls litter the ground at Boulogne

We asked a local worker if soil had come from anywhere else, to which he confirmed some had come from "the old airport." He explained the mounds around the banana trees were the remnants of sifted soil. The process may have been different elsewhere, as Cody (1998:40) seemed to think that soil from Pearls was spread around cocoa trees without sifting. At Boulogne, however, trucks would dump soil from Pearls at the entrance and workers would sift out the "rocks." They would then mix the sifted soil with manure and use it to plant seedlings of cocoa. Eventually, the pile of discarded remnants would be moved to build up other planting mounds— creating a concentration of transposed artifacts from Pearls. And that is how the Cocoa Rehabilitation Project created faux-sites all over Grenada!

Unfortunately, I have not been able to acquire a list of all areas that received soil from the project, so researchers should be circumspect about the possibility elsewhere.

It should also be noted that no sub-surface testing was conducted at Boulogne, so it has not yet been confirmed that everything is from Pearls— just everything on the surface.

Beausejour (GREN-G-34)

Date Investigated: September 20, 2016
Team: Jonathan Hanna, Michael Jessamy

Summary. During construction of a new road in the northeast section of Beausejour Bay, workmen uncovered Amerindian pottery and human bones. To his credit, the foreman called Michael Jessamy at the Ministry, but it became apparent that much of the site had been picked over for weeks beforehand. The foreman pointed us to where bones had fallen out of a newly cut
drainage ditch, saying that he had found a skull there that he had taken home (!). Just to the north of the burials, concentrations of red-painted sherds and zoomorphic adornos were observed on both sides of the road. I placed a column sample in the new drainage ditch here, taking soil samples every 20cm. Two large, red-rimmed ceramics were also collected where bones were said to have been found.

![Figure 21 Column Sample at Beausejour](image)

Back in the lab, pottery from the burial area was found to have burnt bone encrusted on the interior of the vessel's rim. This was apparently a cremation, in what was probably a large bowl with a deep-red painted and flaring rim. Radiocarbon dates from the charcoal inside the bowl came back calAD 530-635 (CI:90.9%). Meanwhile, charcoal from the bottom of the column sample came to calAD 325-410 (CI:90.8%). Interestingly, the column sample only went to the bottom of the drainage ditch—ceramics continued beyond that. This suggests the site may be even earlier.

Further testing of the site is planned for 2017.

CATALOGING THE PREHISTORIC COLLECTION AT THE GNM

In addition to the survey in 2016, an effort was also made to inventory, catalog, and thereafter acquire radiocarbon samples from the collections at the Grenada National Museum (GNM). Unfortunately, subjected to overstacking, insects, rodents, and fluctuating temperature/humidity for decades, the museum's collections (and their provenience information) were in critical condition. As a result, an emergency salvaging and cataloging effort was implemented with the help of museum volunteers, producing a searchable MS-Access database of the Amerindian collections that will eventually include photographs and detailed provenience information for all the GNM's collections. This also allowed samples to be acquired from an additional eight sites that had been previously investigated but not radiocarbon dated. The following section details these salvaging efforts.
**Prior State of the Collection**

When Ripley Bullen conducted his work in 1962, there was no national museum or other suitable place to house the artifacts he had recovered. There were also no international conventions at the time for managing cultural resources, so Bullen simply transported some 30,000 artifacts back to the University of Florida Natural History Museum, where they have remained ever since. To his credit, he did leave ¼ of his assemblage (10,000 artifacts) on the island, to be used to help set up a national museum (Bullen 1964a:1-2). But today, Bullen’s artifacts are nowhere to be found—scattered across several private collections or lost entirely. There was simply no institution or long-term plan to maintain and protect these cultural resources. In contrast, at the University of Florida, the artifacts he exported could not have been in better conditions—they are maintained in a sterile, pest-free, temperature controlled facility, continuously re-analyzed and serving as comparative collections for countless projects. Any effort by the Grenadian government to have these objects repatriated must first demonstrate that such conditions could be matched in perpetuity. The current state of the GNM collections demonstrates we are far from such a situation, but it is hoped that the present effort marks a turning point.

Like any museum, only a small percent of the GNM’s Amerindian collection is on display. Unfortunately, the “backroom” collection consists mostly of unsorted buckets and boxes stuffed opportunistically in dispersed spaces throughout the museum (see Figure 22). While some are unprovenienced donations from private citizens, the vast majority are from well-documented contexts, painstakingly recovered by the various archaeological investigations since Bullen.

If the museum is to remain the repository and conservator of collections and archives—both public and private—we need to ensure these collections are properly maintained for future generations. All of Grenada’s sites are threatened by coastal erosion, land/resource development, sand-mining, or looting, and many of the areas investigated have since been destroyed. The museum’s collection, therefore, consists of priceless objects made by an extinct culture thousands of years ago, whose original contexts no longer exist.

In 2012, a number of missing boxes and buckets from FFR’s investigations were found when a sealed door to the south-eastern office downstairs was re-opened (on the corner of Mockton and Sendall tunnel). Apparently stashed here 20 years ago, the boxes had been eaten by insects but many of the bags were still intact and readable. Unfortunately, many of these objects have since lost their provenience when bags and boxes burst open during repeated relocations over the next few years. In 2016, I found many of these artifacts dumped into excavation buckets for temporary storage, their proveniences completely mixed. Thus, when another storage area was found in one of the basement rooms that year, I began an effort to salvage them and avoid the errors made in earlier experiences.

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9 A few dozen have been identified at the GNM, as well as in the Cynthia Hughes Collection on display at the Westerhall Estate rum distillery
Figure 22 Salvaging the GNM Collections
**Salvaging Procedure**

The first objects cataloged for this project had been stuffed in deteriorating bags and boxes in a basement storage area for decades—subjected to insects, rodents, fluctuating temperature/humidity, and overstacking. These original boxes were subsequently labelled “parcels” in order to differentiate them from the new “boxes” they would be relocated into. In removing the parcels, care was taken to first extract objects from the top of each parcel, eventually peeling the box away from those below it—otherwise it was impossible to tell where one box began and the other started. Artifacts from each parcel were kept together and placed in new boxes. Dust masks and disposable nitrile gloves were used to protect workers and artifacts.

Midway through the “excavation,” it was realized that objects likely fell from top boxes into bottom ones. An effort was then made to record the original placement of each box, so that intrusive (as well as unlabeled) objects might be better identified. These parcels are now associated with each object in the new catalog, so that their original locations within the amalgamated mass of boxes downstairs remains known.

**Cataloging Procedure**

Given the number of “parcels” (n=52) that came from storage, it could take years to properly analyze, catalog, photograph, and reshelve everything—especially when only 1-2 people were on hand to help each day. What we aimed to do, therefore, was establish a baseline that could be used to continue developing and improving the catalog over time. Thus, the photographs taken were for informational purposes and are generally not publication quality; no analyses were performed on the artifacts themselves; and cardboard boxes still make up the majority of containers. It is hoped that, eventually, new boxes will be acquired, artifacts will be thoroughly analyzed, and professional-quality photos taken. The current project made these future efforts possible by preserving what we have and making everything accessible—a library of artifacts.

The database was recorded in MS Access 2013. Two top-level forms were created for detailed information on each parcel (original boxes) and each new box. Secondary-level forms detail information on each individual bag. To preserve space, photographs were not included inside the database, but labels and metadata for every photograph were recorded and sorted into a photography folder in the GNM’s dropbox.

In 2016, about 90% of the artifacts retrieved in storage (as well as those from elsewhere in the museum) were re-bagged and labeled; ~50% of those were photographed; and ~10% have been checked over, given catalog numbers, and entered into the Access database. The remainder will be completed during my stay in 2017.

**Next Steps**

Plastic or metal storage cabinets would do wonders for the maintenance of the collection. Eventually, the boxes should be further sorted into small plastic bins that could be placed inside cabinets, allowing high capacity and well-organized storage. Risers should be built to raise the cabinets off the ground. Properly housing objects in this way minimizes the detrimental effects of storage by providing deterrent against rodents and insects (including wood ants, termites, and book worms), protection from floods, spills, and cleaning chemicals, and security from both theft and accidental breakage. Eventually, all the museum’s collections should be organized into a central archives area, curated by people trained in collections management.
As part of my initial grant proposals for work in Grenada, I took the stance that so little had been
done in the Lesser Antilles, particularly Grenada, that current theories on the colonization of the
Caribbean are premature. How can one argue that, for thousands of years, these islands were
skipped by travelers from lowlands South America when so little research has been done? It soon
became clear, however, that a lot of research has, in fact, been conducted over the years-- it was
simply buried in the "gray literature" or never written up. After much searching, I managed to find
some of the paperwork stashed away at the Grenada National Museum. As described above, I
also spent a considerable amount of time cleaning out the GNM's long-neglected storage,
salvaging the artifacts found in past investigations.

So, in an effort to bring this information out for others to use, I present here a summary of all
archaeological work in Grenada available to me at present,\(^{10}\) which has been input into
a standardized database called the Archaeological Site Inventory for Grenada (ASIG). Appendix I
contains print-outs from the Access 2013 version of ASIG, but the database itself contains maps,
images, and paperwork attached to each site record. The Access database is available upon
request, but it will not be further updated after this report. Instead, the ASIG is currently being put
online, making searches and downloads much more user-friendly, accessible, and updateable.

Online ASIG (continually updated; email author for special permissions):
http://www.GrenadaArchaeology.com

It goes without saying that this information is highly sensitive and only intended for
individuals who can demonstrate legitimate concern for local archaeological heritage. It is
now considered a misdemeanor to remove artifacts from an archaeological site in Grenada,
punishable by a fine of $10,000.

Below are some additional concerns, caveats, and comments regarding ASIG.

The Current Inventory System
The system used throughout this report and in ASIG builds off of the inventory system devised by
the Foundation for Field Research (FFR), led by Thomas Banks and Anne Cody (Cody and Banks
1986) and documented in the site records and seasonal reports housed at the Grenada National
Museum (GNM). To the author's knowledge, FFR never produced a comprehensive synthesis of
all their work, but at the 1999 IACA conference in St. Georges, Peter Harris usefully summarized
everything that had ever been done in Grenada up until that time (Harris 2001). Bradford
(2001:210) also categorized a handful of Grenada's sites (mostly from Bullen and Dubelaar) for
her study on settlement patterns. More recently, Alistair Bright (2011) put together a well-
researched inventory of each of the Windward Islands, including Grenada. While he did not have
FFR's paperwork, his summaries—limited to just 49 sites— are useful. However, his lack of
scrutiny over the ceramic associations for each site is misleading, and—and like Bradford-- he
created his own inventory system instead of using the one already established.

\(^{10}\) This only includes pre-Columbian research on the island of Grenada. While sister islands Carriacou and Petite
Martinique, as well as numerous islets, are part of the modern state of Grenada, only sites within and immediately
offshore of the island of Grenada were addressed here. Comprehensive reviews are available for Carriacou (Fitzpatrick
et al. 2013, 2009, 2007; Giovas 2013; Kaye 2003; Sutty 1985), but no known archaeological research has ever been
conducted in Petite Martinique. At some point, however, these sites should all be incorporated into the ASIG.
The problem that Bright and Bradford unintentionally presented is worth emphasizing. Researchers have an obligation to use the inventory system that has already been put in place, lest enormous confusion ensue. For example, Pateman (2011) discusses how in the Bahamas, the same sites were being called completely different names and site numbers by different projects, making it unduly difficult for Bahamians to keep track. Maintaining continuity across projects also ensures easy integration with the GNM’s catalog—where all artifacts eventually must go—without the need to re-bag and re-label everything.\textsuperscript{11}

FFR’s system for assigning site numbers began with the island (“GREN”) followed by the first letter of the parish in which the site was located (e.g., “D” for St. David or “A” for St. Andrew), and finally a sequential numbering system based on the order in which the sites were found (Cody and Banks 1986). Thus, GREN-G-1 (Dragon Bay) is the first site FFR studied in St. George’s (and actually, the first site they ever documented).

There are a few caveats to the system. Firstly, FFR did not assign numbers to Bullen’s (1964a) sites, which have now been given labels in this publication. Additionally, some sites were mistakenly placed in the wrong parish. For instance, GREN-D-7 (Grand Bacolet) is actually in St. Andrews! However, for the sake of consistency and reducing confusion with the data, I have avoided re-assigning site numbers. It matters not what parish D-7 is actually in, but rather that all the bags and paperwork from the ‘80s say D-7 (as do all the bags from the 2016 survey above), so Grand Bacolet should simply stay D-7. The problem appears to have occurred at every parish border (e.g., Artiste Point, St. Andrew’s was labeled P-9; Halifax Harbor-North Cove, St. John’s was labeled G-3; Westerhall Bay, St. David’s was given G-11, etc.). So it goes.

\textbf{New Site Numbers}

Several new site numbers were assigned in this report, including those sites investigated by Petitjean Roget and Bullen. Because it was unclear where FFR left off in their numbering, I skipped some numbers in each parish, just in case a bag was eventually found with a previously unknown site # (see entire list below). Thus, there may be some empty site numbers that do not have a site attached (labelled “none known” below).

That said, I did not give enough extra spaces for St. George’s Parish. A bag was recently found at the GNM that revealed FFR had a site G-22 (Petite Calivigny, now G-35), which means they also had a G-19, 20, and 21—none of which were ever written up! Because the Point Salines sites had already been thoroughly documented as G-20, 21, and 22, and because FFR probably only had one bag from each site--if any--it was decided that it was easier to just re-assign these sites as they turn up.

\textsuperscript{11} I, myself, am in the midst of adding “GREN-G-8” to all my bags from the St. John’s River because I was unaware of an existing system when those artifacts were cataloged. But now they can be joined with the G-8 bags collected by FFR previously and anything that comes to the GNM from that site in the future.
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<td>St. George's</td>
<td>Unknown</td>
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<td>General Post-Saladoid, Historic</td>
<td>Already Destroyed, Construction/Development</td>
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<td>Troumassan Troumassoid</td>
<td>Construction/Development, Erosion, Sand Mining</td>
</tr>
<tr>
<td>G-21</td>
<td>Salt Pond</td>
<td>St. George's</td>
<td>Troumassan Troumassoid, Suazan Troumassoid</td>
<td>Construction/Development, Erosion, Sand Mining</td>
</tr>
<tr>
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<td>St. George's</td>
<td>Troumassan Troumassoid</td>
<td>Erosion, Sand Mining</td>
</tr>
<tr>
<td>G-23</td>
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<td>Erosion</td>
</tr>
<tr>
<td>G-24</td>
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<td>Looting</td>
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<td>St. George's</td>
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<td>St. John's</td>
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<td>St. Patrick’s</td>
<td>General Post-Saladoid, Historic</td>
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<td>Suazan Troumassoid</td>
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<td>Fort Annunciation</td>
<td>St. George’s</td>
<td>Suazan Troumassoid, Historic</td>
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</table>
Historical Sites

Only pre-Columbian sites have so far been inventoried in ASIG. For sites where there was overlap, only the prehistoric component was summarized. As shown in the table above, a number of historical sites were investigated by FFR and other archaeologists. Here is a list of site #s already assigned to historical sites:

A-3 Marquis River
A-4 ["Skull Salvage"]
D-2 La Sagesse (partially written up)
D-10 Carbia Beach
D-11 Lower La Tante
G-1 Molinere/Dragon Bay (historic component not written up)
G-3 Halifax Harbor- North Cove
G-4 Halifax Harbor- South Cove
G-5 Halifax Harbor- North Cove (historic component not written up)
G-6 Point Beausejour
G-8 St. John's River
G-9 Egmont Harbor
G-18 Prickly Point
G-19 Petit Cabriots Point
G-23 True Blue Point
G-36 Lower Woburn
J-1 Black Bay Cave (historic component not written up)
M-3 Duquesne Bay
P-11 Calabasse River
P-20 Bedford Point
P-22 Mt. William
P-25 Irwin’s Bay
P-26 Leaper's Hill (historic component not written up)
R-1 Ronde Island
UW-4 Rifle Wreck
UW-5 Orinoco Wreck
UW-6 Grand Anse Pot Wreck
UW-7 Grand Roy Slave Ship Wreck
UW-8 Fort Annunciation (though Suazey also found)
[no #] Megrin (partially written up)

Because the current inventory system did not differentiate between prehistoric and historic sites, it is recommended that the same system be used when an inventory of historic sites is finally put together. This not only maintains continuity with past projects, but it reflects the fact that many (if not most) historic sites tend to also have a prehistoric component.
Faux-Sites Sometimes Reported as Real
Several additional “sites” are routinely mentioned and recycled in the literature without critical evaluation. The following is a list of sites that, at the very least, require empirical confirmation before given site #s.

Bagadi Bay
During his 1980 visit, Henry Petitjean Roget noted a conch midden on the east of end of Bagadi Bay, but suggested it was made by modern fisherman (PJR 1981:24). Apparently, because he used heading for that section of the report, this sometimes shows up as a site.

Boulogne
As described in the 2016 report above, material from Pearls was moved to Boulogne during the Cocoa Rehabilitation Project in the 1980s, creating a faux-site there.

Diamond Estate/Union “Petroglyph”
The map on the cover of Frederick’s pamphlet (1982) places a petroglyph here, but I have never seen it. Images online look dubious.12

Hardy Bay
The map on the cover of Frederick’s pamphlet (1982) has a point for Point Salines located at Hardy Bay. Even though the map is purportedly from Petitjean Roget, Petitjean Roget (1981) specifically states that nothing was found after Degra Bay except modern conch shells.

Marquis Point "Petroglyph"
The map on the cover of Frederick’s pamphlet (1982) places a workstone or petroglyph here. Cody (1998:50) says that she found nothing at Marquis Point.

Industry Estate, St. Marks
The map on the cover of Frederick’s pamphlet (1982) shows a site here—in St. Mark’s rather than St. Patrick’s parish. Petitjean Roget did find a site up the Duquesne River in Industry, which Cody subsequently excavated and renamed Duquesne Bay (GREN-M-3). It is all the same site.

Paradise
The map on the cover of Frederick’s pamphlet (1982) places a site here. None is currently known in Paradise, but he may have meant Simon Beach (?) or the historic Paradise Bridge.

Pomme Rose “Petroglyph”
Dubelaar (1995:88-89) describes a few boulders in Pomme Rose, St. David’s that have strange linear markings, haphazardly crisscrossing around the rocks. It looks as if someone (or something) recently made the markings. Dubelaar was rightly skeptical and concluded, “neither during our investigations in the Antilles and the Guianas, nor in literature on South American and Antillean petroglyphs, have we seen this type of engraving,” (ibid:88).

Simon Petroglyph
Petitjean Roget et al. (2000) labels “Amerindian Sculptures” on a map of the Pearls area. Nothing more is available, and this is the first I’ve heard of anything like that at Pearls.

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12 http://www.megalithic.co.uk/article.php?sid=26566
Springs
The map on the cover of Frederick’s pamphlet (1982) places a site in Springs, St. George’s. It is not known to what he was referring.

St. David’s Point
The map on the cover of Frederick’s pamphlet (1982) places a site here, possibly the historic town of Megrin?

Possible Sites Awaiting Further Clarification
A few new sites have recently been reported but were not given site #s in the ASIG. Eventually, as more information is made available, they should be properly inventoried as well.

Lake Antoine and South of Lake Antoine
These two sites were reported in Leiden’s 2016 report as “River Antoine” and “South of River Antoine,” though neither point is on the Antoine River nor near the current River Antoine site (GREN-P-8) (Faculty of Leiden 2016:70). If these are indeed pre-Columbian sites, they should be given Site #s and perhaps the names above— though certainly not names already taken.

Hauser Sites 1, 2, 4, 11, 12, 32
In Leiden’s 2016 and 2017 reports (Faculty of Leiden University 2016; Hauser and Hofman 2017), ceramic surface scatters of non-descript pottery are reported here (except site 4 which is said to be Saladoid). Some are quite close together and perhaps loci rather than separate sites. Once more information is available, they should be given Site #s and names.

RECOMMENDATIONS

Stronger Cultural Heritage Laws
As the table of site #s above shows, every pre-Columbian site in Grenada is threatened by something. A quick tally of general threats (Figure 23), shows that construction is the #1 biggest threat to the preservation of Grenada’s past.
Clearly, more proactive measures are needed to mitigate the destruction of archaeological sites during construction projects. As described earlier, a GIS database of known sites and predictive maps of high probability areas will soon be furnished to the Ministry of Planning. As has been shown elsewhere in the Caribbean (de Waal et al. 2015), predictive maps and inventories are invaluable for continued mitigation of development threats on cultural resources. However, such tools are only effective if they are actively used.

As of this writing, the “Grenada National Museum Bill 2017” has recently made its way through the House and will likely pass the Senate soon. The protections offered in this bill are a giant leap forward for Grenada’s cultural resources and those involved with its passing should be proud of such an accomplishment. However, there are still many issues that need to be addressed, including the impact of construction projects on archaeological sites. There is currently no requirement for development companies to conduct an assessment of the impact of their project on local cultural resources before implementation. This would be the next step for preventing sites from being discovered by construction crews rather than trained archaeologists (as in the case of GREN-G-34 above). Measures should be taken to fine companies who fail to conduct such an assessment, perhaps using a point-based disciplinary system with steadily increasing fines and penalties for continued infractions. Additionally, there should be a formal register of protected sites that are completely off-limits to development, with approval for loosening protections required from both chambers of the legislature. This would limit the contradictory effect of protected status simply raising the price for development.

And it is not just foreign development that is the issue here—it’s all construction projects, big and small. Grenada’s population will continue to grow in the 21st century, and development and infrastructure projects are needed to accommodate the next generation. Enacting these cultural resource laws now ensures that, as we continue to modernize and develop, the process is done with integrity and sensitivity to our past, maintaining the unique heritage of this beautiful country.

Strengthening Heritage Organizations
This report should have been written by the National Trust. As the organization charged by the government in 1967 to, “preserve chattels of prehistoric, historic or artistic interest,” they should be the ones leading the charge, raising public awareness, and submitting projects to work on with the government. Yet it is unclear what the GNT has done—if anything—in the past five years. In 2011, I participated in a heritage tour of the island with about 20-30 members of the Trust. There was energy, interest, and a sense of vibrancy that assured me the GNT was functioning. A year later, it appears to have been disbanded. The office was moved; the bank accounts were changed; and despite whatever their admittedly impressive website says, there are no actual meetings; there are no actual members; there are no actual elections. What has actually happened is that Grenada’s preeminent heritage institution has become a Potemkin façade that functions only to promote the status and prestige of a megalomaniac.

But this is why we have a government. When an organization as powerful as the National Trust falls into the wrong hands, government should be there to support it—to call elections, reform the board, and advocate on behalf of the people of the country. Heritage is at the core of our identity, so government must protect it when no one else will.

There are other local organizations that are doing better. The Grenada Tourism Board has stepped in where it can, and the Willie Redhead Foundation (tWRF) is at least meeting regularly and generating interest. The major problem with tWRF and other NGOs in Grenada, generally, is that they are overly-reliant on government support, leaving them perpetually waiting for
government to act. This misunderstanding over the roles of governmental and non-governmental institutions creates the stagnation evident today.

One way the government can rectify the situation is to demonstrate its role in fostering a system of independence within local organizations. A current opportunity lies with the Grenada National Museum. The GNM has been plagued with problems since its founding (Whiting 1983), but it is open and functioning. The recent Museum Bill mentioned above will hopefully resolve some of the major problems, but there are two major risks: 1) that overzealous reprisal will continue the cycle of resentment and revenge, and 2) political involvement will dictate the museum’s research and display agendas. Regarding the first risk, a “scorched earth” policy of firing everyone at the current museum not only requires the government to hire potentially clueless new people, but it creates immense interpersonal resentment by past employees. Let us not be sore winners and instead set the tone of being fair, objective, non-partisan, forward-thinking, and balanced. For the second risk, government intervention in the GNM has gone awry before. During the Revolution, Eddie Frederick was appointed head curator apparently due to his allegiance to the PRG rather than any training or expertise to hold such a position. To his credit, he set up an agreement with the French government in Martinique, which led to Henry Petitjean Roget’s work (Petitjean Roget, 1981), which is still ongoing (Petitjean Roget et al. 2000, Petitjean Roget 2009). However, Frederick also revised exhibits to fit the PRG’s agenda, alienated the original founders of the GNM (Merriman, Wilder, and Fisher), and wrote a pamphlet on Grenada’s prehistory that has become the source of incalculable misinformation ever since (see section on “faux sites” above) (Whiting 1983, Frederick 1982).

The 2017 Museum Bill is a case where government can show its guiding hand and set a precedent for putting aside past grievances for the betterment of Grenada’s heritage resources. It is also a chance for government to support and intervene without getting stuck in the quagmire of running an organization or making that organization vulnerable to inappropriate political influence in the future.

**Researcher Permits**

Grenada needs a standard procedure and set of policies for anyone doing research in the country. Whether it is a paleontologist collecting fossils, an ethnomusicologist recording Big Drum in Carriacou, or an archaeologist excavating prehistoric sites— they all should conform to a standard set of ethics and principles established by the Government of Grenada. Their affiliated institutions will likely have more stringent requirements (e.g., IRBs), but it is important for the Ministry (and the GNM) to know what is being researched and to have access to the results.

In terms of archaeology, principle investigators/project directors should be qualified to run a project. This should be checked the same way the Register of Professional Archaeologists does— either a Master’s thesis from a reputable, accredited institution in anthropology or archaeology OR substantial work experience and a record of thorough reporting. It serves no one when an enthusiast goes and digs up a bunch of pretty artifacts— and it is no different than the rich Antiquarians who pilfered sites before advances in modern archaeology.

Archaeologists should also be required to not only deposit artifacts at the National Museum, but also catalog them using the GNM’s system and ensure that proper storage equipment is available. The GNM is a struggling institution, so it is incumbent on research projects to include storage containers in their project budgets and time in their schedules to assist the museum in the curation of the artifacts they deposit.
Permits are also important for the protection of the researchers themselves. When a researcher acquires permission to investigate an area, they have invested hundreds, if not thousands, of hours of time into planning that specific project. Temporary restriction of other researchers is necessary to protect this investment in time and resources and avoid potential conflicts.

Priorities

While the intention of this report (and the associated database) is to empower various entities to form their own well-informed conclusions and priorities for Grenada’s pre-Columbian sites, I offer here a few considerations, largely based on the above discussion:

1. Stronger cultural resource laws, particularly regarding construction (see above section)
   a. This also entails expanding the support structure and personnel for monitoring and reporting, such as the cultural heritage office of the Ministry of Tourism
2. Force new elections for the National Trust and ensure it is resuscitated and functioning again (see above section)
3. Designate major sites as protected heritage landmarks, as recommended by numerous reports since at least 1988 (e.g., OAS et al. 1988, Jessamy 2009, Turner 2009).
4. Informational signs for major sites [Jessamy and I are working on this presently]
5. Enforcement of littering/dumping laws, with special attention to heritage sites
6. Pearls (GREN-A-1) should be made into a heritage tourism site. From the unprecedented Amerindian remains to the plantation-era windmill along the Simon River, to the Revolution-era airplanes, Pearls encapsulates the entire history of Grenada—its potential for tourism and public education could not be overstated.
7. The site under Camerhogne Park should be investigated before any more construction occurs there.
8. All the petroglyphs need help:
   a. The Duquesne petroglyphs (GREN-M-5) need gutters directing away gray-water from the houses above, as well as a mechanism for draining water out of the cement basin.
   b. The South Victoria petroglyph (GREN-M-1) has been so badly damaged by road construction, I’m not sure it could take any more! It needs to be repositioned away from the road.
   c. The Waltham petroglyphs (GREN-M-2) have been re-appropriated as a squatter’s personal property. How long will these people be allowed to live on top of these ancient artifacts?
   d. Mt. Rich (GREN-P-1) is actually doing ok, but some monitoring should be done of visitor behavior in order to discourage people from climbing or vandalizing the stone. (Eventually, it should be moved back in place, see ASIG entry.)
9. Black Bay Cave needs structural supports that will prevent further roof-fall and collapse. If done properly, this area could be a nice destination for heritage tourism.

And of course, there are also many historical priorities that should be considered as well, and it is hoped that this report will soon be followed up with a comparable one for Grenada’s historical resources—not to mention inventories for Carriacou and Petite Martinique.
CONCLUSION: HERITAGE TOURISM

One of the biggest revelations I had to grapple with in Grenada was that so much of what I set out to do had already been done decades ago. Every high probability area on my predictive maps had a known site that hadn’t been well documented; an inventory of all Grenada’s prehistoric sites had already been created; much of the GNM’s collection had been cataloged; teacher kits had been created for schools; an Amerindian exhibit had long existed at the GNM; legislation for protecting heritage sites has been drafted many times, national parks systems have been proposed, and lists of sites have been put forward for protection— these things were all neglected (or sometimes outright obstructed) and their potential benefits slowly diminished.

This is not to say that nothing has been done right in Grenada! There are signs demarking the locations of heritage sites throughout the country, there are a few plaques around St. George’s raising awareness about architectural heritage, the Duquesne petroglyphs have been kept from beach reburial, the Greenbridge workstone was safely moved during the bridge’s replacement, the GNM was swiftly rebuilt after Hurricane Ivan and has remained open, and the Tri-centennial Park was rehabilitated and restored. These are just a few of the successes that a small group of dedicated Grenadians have accomplished despite lack of institutional support or adequate funding. Sometimes these folks were at odds with eachother, but when their common goals have aligned, they were able to move mountains.

Let us continue to work together and support each other. Like natural resources, cultural resources are finite, vulnerable to exploitation, and need active protection. Sustainable solutions are available, but they take hard work, clear thinking, institutional support, and consistent updating and maintenance.

This report (and the ASIG included) present the cultural resources available in Grenada. Some sites have the potential for public visitation and enjoyment, while many others do not— but their collective value for science, tourism, and public education is enormous. Every day, the potential for these sites is lessened as the threats outlined above chip away at them. We have an ethical—and I would argue moral— responsibility to respect the past and the world of our ancestors and to preserve those things that have survived until today.

We have now taken stock again. Will we allow this all to disappear forever, or will we protect what we have for future generations?

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*The wire ben’, the story end, let’s get workin’!*

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**ACRONYMS AND GLOSSARY**

- **Ab Horizon** aka "a Buried A"; a buried surface horizon, usually indicative of minimal disturbance and a potentially well-preserved archaeological context

- **Adorno** An elaborate *adornment* on ceramic vessels, typically featuring animal-esque (zoomorphic) or human-esque (anthropomorphic) features. Because they stick out, and because they were usually modelled (added after the vessel had been formed) they are rarely found still attached to the vessel.

- **Assemblage** A group of artifacts from the same context, such as a site or excavation unit

- **Cayo** Style of pottery originally identified along the Cayo River in St. Vincent’s, now attributed to the Koriaba complex of pottery made by Carib (Kalina) groups in the Guianas

- **Ceramic Age** The period in the Caribbean after ceramics had been introduced on a wide scale (i.e., after the Archaic Age), beginning with the Cedrosan Saladoid typology. It is typically broken into Early Ceramic Age (500BC-AD500), and Late Ceramic Age (AD500-1492). Evidence for Archaic-Age (4000-500BC) pottery in the Dominican Republic has recently muddled the distinction

- **cm/m bd** Centimeters/meters below datum

- **cm/m bs** Centimeters/meters below surface

- **CRM** Cultural resource management; formal or grassroots efforts to mitigate the negative effects of development on cultural/heritage resources.
FFR  Foundation for Field Research, an American travel-research field-school that trained paying volunteers in archaeological methods while investigating sites in Grenada from 1986-1994; led by Thomas Banks and, at times, Anne Cody

GNM  Grenada National Museum

Looting  The taking of archaeological materials from a site without permission or proper documentation, usually for sale on the black market

Midden  Ancient garbage, usually indicative of nearby settlement but may also indicate processing areas, such as conch middens

PJR  Dr. Henry Petitjean Roget, a French archaeologist from Martinique that surveyed sites in Grenada during the Revolution

Polychrome  The use of three or more colors in ceramic painting (e.g., red, white, and black); particularly common in the Troumassan Troumassoid period

Saladoid  Ceramic series typically used to mark the start of the Ceramic Age, attributed to groups in the Orinoco Valley beginning ~2k BP. The mainland subtype is called Ronquian and the later, insular subtype is Cedrosan. Cedrosan types tend to be thinner and more well-fired than later ceramics. Diagnostic attributes include WOR, simple (though not “crude”) adornos, enlarged griddle rims, average-sized strap handles, and lugs

Saladoid-Barrancoid  Cedrosan Saladoid ceramics with heavy Barrancoid influence (another mainland ceramic type contemporaneous with Saladoid); Diagnostic attributes include prolific and ornate zoomorphic adornos (often hollow-backed), ZIC, WOR, an increase in triangular rim designs, and slightly thicker vessel walls

SGCAP  St. George’s Community Archaeology Project

Slip  A clay wash sometimes applied to ceramics after initial formation stages and surface treatments

Suazoid  Style of ceramic found only in the Windward Islands, as defined by Ripley Bullen during his work at Savanne Suazey, Grenada; Diagnostic attributes include “finger-indentated” rims, “scratched” (grated/striated) surface treatment, large temper, thick vessel walls, limited use of paint, and often very large vessels.

Temper  Inclusions in the clay paste of a ceramic; archaeologists usually define “temper” as purposively-added, whereas an “inclusion” is a natural element in the clay.

Troumassoid  A transitional ceramic period in the Windward Islands following Saladoid-Barrancoid types; in Grenada, this includes a fading of Saladoid-Barrancoid types and increase in Caliviny polychrome, Caliviny “unique adorned” (“crude” anthropomorphic adornos), and probably Bullen’s Saline Wide-Handle. There is a notably higher frequency of temper in the paste (no levigation) and thicker vessel walls. The transition to Suazan Troumassoid includes an increase in griddle feet, a decrease in painted designs (though not necessarily polychrome) in favor of surface treatments such as the characteristic Suazey “scratched”.

WOR  White-on-Red painting, a ceramic style characteristic of Cedrosan Saladoid pottery, one of the first styles to appear in the Caribbean, between 500BC-AD300.

ZIC  Zone- Incised-Crosshatching, a cross-hatched design incised within a defined geometric boundary; characteristic of Barrancoid-influenced Saladoid pottery
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The area around Pearls may have been known as an Amerindian site prior to 1941, but it wasn't until construction crews bulldozed the area for Grenada’s first airport did it become widely known. Some of these were collected and are currently viewable online at the British Museum’s website (URL below). Looting of the push-piles by the surrounding community was immediate and continues today. The amount and quality of artifacts that left the island inside the luggage of tourists is incalculable.

Indeed, the scale of the Pearls site cannot be underestimated. As summarized below, Pearls has been ripped up by airport construction, looted for decades by the surrounding community, mined of large tracks of its soil by the Cocoa Rehabilitation Project, excavated by numerous archaeological projects (thousands of artifacts are in the GNM’s storage—easily 90% of their Amerindian collection), and yet a tourist can still drive up to Pearls today and buy a bag of authentic adornos! Most Saladoid/Barrancoid-era sites yield just a few hundred adornos at most. So the fact that whole bags of these artifacts are still easily acquired after 70 years of devastation is mind-boggling. The size and extent of Pearls is rivalled only by a few big...
ceremonial sites in Puerto Rico.

Given its size, Pearls has received the bulk of archaeological attention in Grenada to date. Ripley Bullen’s survey of the island in 1962 excavated two large (2x3m) units near the “edge of the runway,” probably on the northern side. No map was provided in his report, so the precise location of his excavations is not known. Keegan has mentioned that he was able to locate Bullen’s units during the 1989 field season (personal communication 2015), but no map of his work is known either.

From 1988-1991, the Foundation for Field Research led by Thomas Banks and Ann Cody conducted extensive excavations at Pearls, teaming up with the Florida Museum of Natural History (led by Bill Keegan) for the 1989 and 1990 seasons. At least 18 excavation units were opened during this time, but only synthetic summaries are available today. Only a few random excavation forms are on file at the GNM, and no journals, maps, or reports other than those presented here are known. In fact, the only archaeological map of Pearls is that provided in Cody’s 1986 Inventory Sheet, written prior to any excavations. Thus, we do not have the precise locations of any excavations ever conducted at this site. However, based on contextual clues left in the reports (especially Cody and Keegan 1990), and site visits by Jon Hanna with locals who worked with FFR (esp. Oscar Andall), allowed an approximate map to be devised.

Putting aside the mapping oversights—and the fact that the only literature on the site are gray reports and conference papers— the synthetic work available reveals some rather spectacular observations. The site was clearly a major trading port in prehistory, where beads and pendants of exotic gemstones (e.g., amethyst, pyrite, nephrite, and turquoise), lithic tools, and non-native faunal remains were traded from across northern South America— as far south as eastern Brazil, and as far north as Vieques, Puerto Rico (Boomert 1987; Cody 1990, 1991; Fandrich 1990; Hofman et al. 2011; Laffoon et al. 2014; Newsom and Wing 2004). Other notable findings included discoidal shells, a shark’s tooth pendant, a jaguar pendant, and a highly decorated assemblage of pottery including many complete bowls and innumerable zoomorphic adornos. Given the quality of the ceramics recovered, noticeably absent from past studies is an adequate analysis of the ceramic assemblage.

The Pearls site is concentrated just north of the airstrip, bounded by a hill to the west and coastal marsh to the east. The FFR excavations revealed lithic debris of all manufacturing stages was concentrated towards the north of the site (Units A and B). It was also reported that Unit S164-100 may have revealed an earthen floor, possibly indicating the location of domestic living spaces. A large midden was scattered to the west, tapering off towards FFR’s western transect. Every excavation unit exhibited varying degrees of disturbance, but this area to the west was believed less disturbed. Aside from the airport disturbance, truckloads of soil were removed from the site during the Cacao Rehabilitation Project from 1987-1989, which effectively created faux archaeological sites across the island (e.g., at Boulogue). A playing field to the west of this area was expanded in the 1990s, into the area believed less disturbed. Studies of the flora (Newsom 1993) and fauna (Lippold 1991, Fandrich 1990a,1990b, Newsom and Wing 2004) were all based on samples from this western transect, particularly the trench excavation W195. Notably, diagnostic pottery from W195 were mostly late types, such as “scratched” and “finger-indent” styles, of the Suazan Troumassoid period, rather than the Saladoid-era pottery typically associated with the site. A piece of charcoal from this excavation (W195, level 103-113 cmbs) was recently radiocarbon dated between calAD 1160-1260.

Indeed, while the pottery styles at Pearls exhibit Saladoid-Barrancoid types, the radiocarbon dates have yet to reveal settlement before AD 385. This date (actually, calAD 385-645), has consistently been misreported as between 100BC-AD100 because when it was first analyzed in 1989, it was not calibrated (Cody 1991). Because the material dated was marine shell, it must be properly calibrated in order to combat the marine reservoir effect, sometimes referred to as “old water”. Failure to calibrate marine materials will result in dates that are hundreds of years older than the actual date. Thus, re-calibrating the Pearls samples using the global marine curve and a regional Delta-R curve of -19+/− 23, places the earliest settlement period for Pearls squarely in the 4th Century AD. Given the size of the midden, it is not surprising the occupation spans at least until the 12th Century.

A pollen core taken near Meadow Beach-- the swamp just to the east of Pearls-- by Siegel et al. (2015) indicate potential human disturbance (changes in taxa, decline in arboreal species, increase in charcoal) by around 2000BC. No introduced plants or pollen were detected in the core, however, leaving open the possibility that this proxy is more indicative of natural, rather than anthropogenic, changes to the vegetation and climate.

Background of the Airport

Point Salines was always considered the best place for an airport in Grenada, but political wrangling in the 1940s led to the
DeGale family’s sale of land at Pearls (a golf course at the time) to the British government (Martin 2007:187). The Pearls airport opened in 1943, providing a major stimulus to the country’s economy, but its insufficiencies were immediately apparent. Only small, regional planes could land, despite an eventual lengthening of the airstrip, and the surrounding mountains prevented not only further expansion but also the ability to land at night. Flights to Grenada were therefore constrained to daylight hours (no night landings) of local flights from Trinidad and Barbados. By at least 1954, the recently empowered Gairy government began acquiring lands at Point Salines from the Julien family (Steele 2003:388) to build a larger international airport that would expand Grenada’s tourism industry. Gairy’s main opposition, the New Jewel Movement, criticized Gairy’s plans as bourgeois excess. Yet after the NJM overthrew Gairy in the 1979 coup, these plans became one of their biggest projects and longest-lasting legacy (Martin 2007:194).

Since Pearls ceased its airport operations in 1986, the airstrip has functioned as cow pasture, construction dumping ground, and a drag-strip for auto racing. The dilapidated terminal buildings are known as Camp Reynold, which house the Special Forces arm of the Royal Grenada Police Force. The RGPF occasionally conducts weapons and explosives testing in the area. Since the airport’s closing, various foreign development groups have taken interest, but no plans have been brought to fruition. On May 22, 2015, the Dublin Institute of Technology, the Vaughn Aeronautical College, the University of the West Indies and the Government of Grenada, signed a letter of intent to create an aviation school at Pearls. To date (March 2017), nothing has happened.

Tourists are routinely brought to Pearls to see the two Revolution-era airplanes next to the RGPF buildings: a Cubana Airlines passenger jet and an Aeroflot crop-duster. In the book Operation Urgent Memory (Puri 2014), the decrepit state of these airplanes are used as case examples for Grenada’s neglect of its heritage. Amazingly, the author, Shalini Puri, managed to track down a picture of a US soldier standing next to the Aeroflot plane, which was in pristine condition at the time (photo attached).

Given the tourism traffic at Pearls, the site has enormous potential as an educational landmark for Grenadians and locals alike. From the unprecedented Amerindian site to the plantation-era windmill along the Simon River, to the Revolution-era airplanes, Pearls encapsulates the entire history of Grenada. Its potential for heritage tourism and public education should not be underestimated.
GREN-A-2: Grand Marquis

Parish: St. Andrew's

GREN-A-2: Grand Marquis

Ironically, Cody says the topographic map she used was wrong, but her map/description also contained some errors! She comments that the "Site of Grand Marquis" (the historic town) listed on the 1979 map is ambiguously placed and she assumes it to be an old church along the river. However, the 1985 map more clearly shows the historic site to be along the river just to the south. Meanwhile, the only way to rectify her description with her map is to assume the top of the page is south (rather than north). At any rate, GREN-A-2 is wholly pre-Columbian and the old historic town of Grand Marquis will need a different site #.

Summary

Site Surveyed by FFR/Cody in 1992 and 1994. Artifacts were recovered from the river cut, which exposed two black Ab lenses, with non-diagnostic "coil-made" pottery in the upper lens of the "west" [east?] profile cut, while ZIC and WOR sherds were found in the lower lens of the "north" [south] profile. Site apparently extends from 50-400cm bs. Coral and Conch were also collected.

The river was probably redirected here in Colonial times, cutting through site.

References

FFR Inventory (Cody 1992); Cody Holdren 1998:49-50
Marquis River was identified by Cody in 1992, where non-diagnostic, post-Saladoid pottery were found in a surface collection north of the river and east of the road. In 1994, more surface pottery were collected and a second, historic loci was identified on the small point just south of the river. The 2nd loci appears to consist of solely historic materials and foundations.

**References**

FFR Inventory (Cody 1992); Cody Holdren 1998:50 & 224
GREN-A-4 is an unknown site in St. Andrews, investigated by FFR in July 1992. Cody was here in February that year, so this may have been Thomas Banks by himself.

As of this writing (March 2017), bags in the GNM collection include human bone (Parcel C), faunal bone (Parcels R and Y), pre-Columbian ceramics (Parcel R), and an historic pipe-stem (Parcel Y), from surface collection and at least one excavation (Unit A). The bag picture here states it was a "skull salvage." No report or write-up has been found.
The Simon Beach site (locally pronounced, "Seamoon") was first identified by Bullen in 1962, where he collected 635 sherds from an eroded beach cut, just south of the Simon River. The large amount of degraded, Pearls-like pottery led him to use Simon as the type site for his Simon series pottery. He also noted four human burials eroding into the sea, which he apparently did not recover (Bullen 1964:23). Given its proximity to Pearls (~700m south), the site might well have been labeled a loci of Pearls, rather than its own site. Bullen even postulated that it may have been, 'the 'port' or 'canoe landing place' for Indians living at the Pearls site," (Bullen 1964:24).

Bullen's Simon series was described as a slightly "deteriorated" version of his Pearls type, with coarser and thicker vessels (6-10mm), abundant inclusions, and typically unslipped surfaces. The sherds were still well-fired and composed of the same clay as Pearls, meaning that, "differences between the Pearls and Simon Series are those of degree, not of kind. Admittedly, there is a subjective element in this division," (Bullen 1964:45). While Bullen's Simon series is certainly subjectively defined, his tripartite Pearls-Simon-Saline series would generally fit within the Saladoid-Barrancoid period (AD 300-600). Bullen's table of his surface collection here, as well as plates in the back of the report, indicate that diagnostic styles like adornos, griddle feet, and scratched pottery were found here.

Little else has been reported on the site. FFR supposedly surveyed it while working at Pearls, but no information exists (e.g.
Cody (1990:39) mentions that a local potter believed the clays along the Simon River were some of the finest in Grenada. Indeed, Neil Wilcox (personal communication, 2017) recounted a large outcropping of fine clay at the mouth of the river that has now completely eroded away. He says he may still have samples. (It's also possible that clay samples taken by Sylvia Scutter in 1990 may be in FIMNH collection.)

A visit in 2016 by JH found the site heavily disturbed by erosion and illegal dumping. Paradoxically, it's possible that the dumping of construction refuse here may have served to reduce the rate of erosion. While a few non-diagnostic sherds were observed in the beach cut, it's unclear if anything of the site still exists.

References

Bullen 1964
La Filette was first formally identified when Ripley Bullen made a small surface collection in 1962 where a house was being built. Because it is between Mt. Horne and La Filette, however, and because Bullen did not produce any maps of the site, its location has remained unknown ever since. In fact, Jessamy and I had both assumed the house construction Bullen mentioned had destroyed the site, until local enthusiast Dolton Charles brought me to his "Mt. Horne site." He admitted it was possible this was what Bullen called La Filette, and a quick review of Bullen's description confirmed his suspicion. In 2016, Charles also brought a team from Leiden to the site, who also correctly identified it as Bullen's La Filette.

As with most of Bullen's surface collections, he found Pearls and Simon pottery intermixed with Suazey series, leading him to postulate abandonment during the Caliviny period (Bullen 1964:23). The large midden deposit in the stream cut is substantial, and pottery is scattered over the surface, between cocoa trees and board houses. A number of large pieces of pottery can be found, indicating that disturbance may not be as destructive as other sites. That said, there are houses all over the site, and excavation here would require community participation.

La Filette is of utmost importance because it is fairly intact and one of the few non-coastal sites on the island (i.e., its location is completely anomalous). A sample of charcoal taken just above the vessel in the stream-cut pictured here (2m bs) was radiocarbon dated to calAD 720-885. It is likely that the extreme depth of the site is testament to the amount of
erosion caused by Colonial-era plantation agriculture.

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<tr>
<td>Bullen 1964; Faculty of Leiden University 2016; Hanna 2017</td>
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Local collectors report having found large ceramic bowls along the beach at Telescope, but no formal work has ever been conducted. The precise location of the site is unknown, and it is unclear if a loci exists on the point itself or just the bay-side beach.

GPS coordinates have been acquired for the large workstone that sits in the water to the south. Leon Wilder reports that, "there is an accompanying, realistic, arm-chair-like stone immediately to the side where the Indian chief is supposed to have sat," (Wilder 1980:14). PJR (1981:27) mentions that the stone is only accessible at low-tide, though JH has never witnessed this.

The Point itself is currently a quarry and the beach has suffered severe sand-mining in the past.

References

PJR 1981, Wilder 1980
Per Michael Jessamy, construction of this house unearthed highly-decorated Amerindian ceramics. No formal investigation has been conducted, though, and it is unknown if any artifacts are stored at the GNM. Walkover surveys in 2015 of a house construction site and cemetery just to the north were culturally sterile.
While the GNM does have some artifacts from La Sagesse, it does not have the beads and pendants mentioned. A drawer of beads and pendants in the Wilcox collection may very well be these artifacts. Neil thought they were all from Pearls, so it’s likely he was unaware of their provenience when he bought them.

Summary

Cody’s inventory states that finger-indented rims, horned rims, adornos, and polychrome sherds were found on the surface in 1992. In 1993 and early in 1994, Thomas Banks returned without Cody and excavated the site as a salvage mission ahead of resort construction. According to the 1993 FFR report (the only other record for the site), Banks excavated five 1x1m units, encountering agouti and fish vertebrae, “beads and pendants of stone, shell, and bone,” as well as three human burials. The precise location of Banks’ excavation is not known. However, one of these burials was recently found in a box at the GNM, complete with water-damaged photographs of the excavation.

Bags at the GNM from Bank’s excavations contained a few adornos, scratched, and linear zoned-incised designs. Red paint was present but no definitive WOR.

In 2016, Hanna RC dated a large fragment of charcoal found in GNM storage labeled as D1, Unit 28S, 60-70 cmbs (Parcel Y). The 14C date was nearly modern, at calAD 1665-1950, though the highest probability (56.9%) fell within AD 1665-1785. In hindsight, the other artifacts collected from this unit were not diagnostic (shell, PH pottery, and possibly a pipestem).

References

FFR Inventory (Cody 1992), Banks 1993
In December 1979, Petitjean Roget surveyed Galby Beach but did not find any cultural material (PJR 1981:22). He does, however, mention a dune and suggests testing there in the future.

PJR also notes that Leon Wilder found workstones buried in the beach here (PJR 1981:27). Cody (1998:217) also reports partially-submerged workstones in the water, just beyond the road. [see 2017 update below]

In 1992, Cody surveyed the beach and found ceramic scatters of non-diagnostic pottery on the two points on either ends of the bay, one on the beach and the other on the road. She reports that sand-mining had occurred on the beach and labels what PJR had probably called a sand dune, a "wave cut". Thus, sand-mining after PJR's visit may have exposed the remains.

In 1994, Cody returned and conducted nine shovel tests and two 25x100cm units, which showed the beach (West Locus) was the main concentration, though the results were underwhelming. Most tests recovered shell and fauna but minimal pottery-- mostly plainware lacking surface treatment or diagnostic styles. There was also metal in most units that recovered artifacts.

Apparently, Thomas Banks had previously dug a 1x1m unit ("Unit A") nearby (West locus) and loaned Cody the material (it's
possible he actually excavated after her initial visit). Unit A was near datum "A" on Cody's West Locus map, just east of the southern river, above a wave cut, to the south of the workstones and access road (where main site point is now placed). Banks recovered fauna, pottery, shell, and metal in the lower depths. A drawing of two vessels from Unit A is shown in Cody's dissertation (1998:87, Figure 5-20). On the same page, she notes that Unit A had more finely-made pottery than the other units. Though Cody seems to think most of the pottery was non-descript, one vessel she draws (pictured in this entry) looks very similar to descriptions of mainland Galibi pottery, such as the "samaku" jars described by Cornette as used for cassava/maize/potato beer (and sometimes pepper-pots) (Cornette 1991:520, fig 7.13). Additionally, in 2013, a rim sherd originally collected by Banks in Unit A (says "surface" on it) and featured in Cody's Figure 5-20 was identified as Cayo during a visit to the GNM by Corinne Hofman (currently on display at the GNM).

All pottery from Galby Bay were incorporated into Cody's multivariate analysis of ceramic attributes, where she found distinct Galibi vs. Caraibe types, but also that Suazey pottery tended to group with the "Galibi" sites (despite few diagnostic Suazey types recovered). This was one line of evidence for Cody's "reticulate model," describing the overlaying layers of interconnectedness between the so-called "Galibis" and previous groups on Grenada.

One unit Cody placed in the "East Locus" (Trench 50N/20W) was sterile, as were apparently the auger, core, and shovel tests (Cody Holdren 1998:181). However, the other 25x100cm "trench" (30N/127E) in the East Locus found a possible post-mold in the NE corner and the rim of a boat-shaped vessel. In her dissertation, she includes a drawing of a vessel foot from this unit (p.86, Figure 5-18).

The maps Cody includes in her dissertation of Galby Bay are not easy to georectify. The East Locus one is particularly confusing, and, though she seems to mark the position of a trench, it cannot be in the right location relative to her datum. The most important unit (30N/127E) does not appear to be indicated at all-- perhaps because the scale is set to 10m while the unit was apparently 127m east of her datum.

Additionally, Cody reports that she did not have enough charcoal to gain radiocarbon dates for D-3, though there was plenty of shell and bone....

[2017 update-- site was auger-tested (more to come in 2017 report); workstone confirmed-- se pic]

References

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<td>PJR 1981, FFR Inventory (Cody 1992), Cody Holdren 1998</td>
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During his 1979-80 visit, Henry Petitjean Roget conducted a surface collection “beyond the broken bridge, at the river mouth, at the bottom of the cliff,” (22)—his map on the previous page indicates this was likely where Cody conducted her Surface Collection ‘B’ twelve years later. He provides little detail about the characteristics of the pottery.

In her dissertation, Ann Cody (1998) reports on her work at La Tante in 1992. Using the La Tante River as divisor, she separated the site into two loci, A and B.

Two surface collections were placed in Area A (SC B likely where Petitjean’s was) and one excavation unit between them. The unit (20N/6E—size unknown) was placed north of the river and recovered “abundant pottery” (Cody Holdren 1998:222), including a scratched sherd, fauna, beads, and modern iron. Cody apparently dated the lower part of the unit and received a modern date, indicating considerable disturbance.

Unit 118.5/36W was placed in Cody’s Area B, on the south end of the beach, ~15m from the sea. Given the slope, and the fact that a nearby wave-cut indicated Amerindian remains were 1m bs, Cody did not screen the first 80cm bs. At 85cm bs, she found European pottery mixed with Amerindian “material” that thinned to 110cm bs.
Four radiocarbon dates were acquired from charcoal in the midden at 85-110cmbs, which Cody used as a test to see whether her packaging the samples with mothballs had affected the dates (Cody 1998:247), as well as to see difference between radiometric and AMS radiocarbon dates. Two dates (Beta-86828 and 86829) were actually from the same piece of charcoal. The latter two dates could be successfully combined in OxCal 4.3 to produce a refined range of calAD 1290-1405. The other two dates also overlapped significantly with each other, though are ~100 years older, with Beta-85939 dating to calAD 1150-1310 (CI:90.5%) and Beta-86830 dating to calAD 1160-1300 (CI:95.4%). It’s assumed the latter two samples were from deeper in the midden, but no information is given on the stratigraphic locations of each sample.

No descriptions are given for the pottery, though most were apparently non-descript. In her multivariate statistical analysis, Cody found that the pottery from La Tante and Galby Bay tended to cluster with Suazan-Troumassoid sites, though little diagnostic Suazey pottery was found at them. This was one line of evidence for Cody's "reticulate model," describing the overlaying layers of interconnectedness between the so-called "Galibis" and previous groups on Grenada. Indeed, the radiocarbon dates indicate overlap with other sites like Savanne Suazey, Sauteurs Locus 1, and possibly Grand Anse.

References

PJR 1981, Cody Holdren 1998
D-5 is a site investigated by FFR but never written up, so probably one of the sites Banks surveyed without Cody (not in 1993 report).

It is known only by one bag from the GNM (Parcel AY) with six pre-Columbian but non-descript sherds.
FFR's 1993 report says a small surface collection was made on the windy, eroding area of Little Bacolet Point, finding a few ceramics and a "puffed pupil adorno"
In 1979, during one of Henry Petitjean-Roget’s surveys, he found a few non-descript sherds, “along the river in a banana plantation,” in Grand Bacolet (PJR 1981:27). No other description was given, nor which river in Grand Bacolet.

In FFR’s 1993 report, Thomas Banks makes an equally terse mention of finding a few waterworn sherds at the mouth of both the Little River and St. Francis Rivers on either side of bay. Again, no further description was given.

In 2016, Jon Hanna surveyed the area, beginning on the beach, and then along the northern river, to no avail. He then walked east along the southernmost river, beginning at the road bridge, and found a number of pre-Columbian sherds under the bridge itself, clearly displaced from road construction. Almost immediately after the bridge, going east, a continuous scatter of ceramic sherds occurred along the southern bank of the river (some with characteristic “scratched” designs, though at least one had a finely made, red-painted rim). It was evident that all the sherds had probably slid down the embankment above, probably after having been undercut by the river. One of the scatters contained a concentration of large sherds, which were mapped in situ before collection. This collection was labelled “Unit 1”, and the groups of sherds were collected in separate bags labelled A-G. Though they were likely in a natural secondary context, the soil around the sherds appeared to be the bottom of an Ab horizon later documented above the river. No artifacts were found below the surface in the river concentration.
12 auger tests were placed in the area above the section where the river sherds had been found. A few sherds were recovered on the surface, but nothing like was seen in the river. At 30 cmbs in STP-8, the dark, organic clay of an Ab horizon emerged with ceramic sherds and charcoal. At 50 cmbs, a red-mottled clay increased and ceramics were no longer visible, though lab analysis of soil samples taken eventually revealed that this horizon still contained ceramics and charcoal. The same Ab was found in STPs-11 thru 17, going as deep as 80 cmbs in STP-13. Charcoal was found throughout, but only STP-8 had artifacts in the Ab (STP-17 had three sherds at 0-7 cmbs).

Organic phosphates— an indicator of human presence— were measured from the soil samples and a map of the midden at Grand Bacolet was produced. Some disturbance is evident in the middle of the site, but it’s fairly clear where the concentration lies. Tests on the north side of the river were sterile, but may be a result of modern agricultural disturbance.

References  
PJR 1981, Banks 1993, Hanna 2017
Petitjean Roget (1981:25) said the site had completely eroded into the sea, but reported on finding a few Suazey ceramics, adornos, and a grooved axe. He also remarks that because Caribs had to build boats (and no one else apparently?) this must be a Suazoid site.

FFR’s 1993 report mentioned an unnamed site on a small bay between Little Bacolet Pt. and Petit Bacaye Bay. The site was apparently eroding into the sea and mostly in the water, but sherds recovered on land were reportedly Suazoid. It’s prob the same as PJR’s Petite Bacaye Bay.

Since the descriptions are so close and the exact locations not given, I'm assuming they are the same sites, but there could very well be other sites in the area.

References

PJR 1981, Banks 1993
Petitjean Roget (1981: 23) conducted a surface collection of non-descript ceramics near the mouth of the Crochu River and upslope, north of the river near an old house foundation. Thomas Banks also made a collection at the mouth of the river, mentioned in FFR’s 1993 report.
Carbia Beach

Parish St. Andrew’s

In the FFR 1993 report, Thomas Banks says he collected both pre-Columbian groundstone and pottery (plain and black-slipped), as well as European ceramics and glass.

The report says it was a beach/bay between Crochu Point and La Tante Point, of which there are actually three bays. No map is available with the name “Carbia Beach”, but a local name for one is “Cabiere Beach” (the first bay south of Crochu Point, north of the Crochu River site (D-9)). A hotel on the point to the south is called Cabiere Ocean Lodge, and the beach was recently made a public recreation area.

Location estimated

References Banks 1993
In the FFR 1993 report, Thomas Banks says he collected pre-Columbian brown-slipped sherds along with a European pipe-stem, in an unnamed bay, “between La Tante Point and Crochu Harbor.” Name assigned in this report.

Location Estimated

References

Banks 1993
Petitjean Roget (1981:25) found four (4) "Suazey" sherds on the beach at Little Bacolet Bay and mentioned the remains of a lime kiln in the area.

FFR's 1993 report says a small surface collection was made on the windy, eroding point at the east end of the bay ("an unnamed point between Little Bacolet Bay and St. David Harbour"). A bag at the GNM has a few non-descript sherds and a European red tile fragment.

Because there is no name for the point, and because it's so close to Petitjean's site that they're probably loci of the same thing, the two were merged here. FFR's point is now labeled Locus 2.

References

PJR 1981, Banks 1993
In the FFR 1993 report, Thomas Banks says he collected “wind-blasted pottery” in an eroding section of La Tante Point.

**Notes**

Had been labelled "D" but actually in St. Andrew's

**Summary**

In the FFR 1993 report, Thomas Banks says he collected “wind-blasted pottery” in an eroding section of La Tante Point.

**References**

Banks 1993
**GREN-D-14**  [Unknown FFR Site]

<table>
<thead>
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<th>Coordinates (WGS84)</th>
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**Previous Work**
- Thomas Banks
- Bill Keegan
- Jon Hanna
- Henry Petitjean Roget
- Ripley Bullen
- Corinne Hofman
- Lesley Sutty

**Diagnostic Ceramics**
- WOR
- ZIC
- Adornos
- Scratched
- Finger-Indented
- Polychrome
- GriddleFeet
- Saline Wide-Handle
- Caliviny Unique Adorne

**Ceramic Period**
- Unknown
- Historic
- General Post-Saladoid
- Cayoid
- Suazan Troumassoid
- Troumassan Troumassoid
- Saladoid-Barrancoid
- Early Saladoid

**Notes**

**Threats**
- Erosion
- Sand Mining
- Construction/Develop
- Illegal Dumping
- Looting
- Vandalism
- Tourism Impacts
- Unknown
- Already Destroyed

**Recommendations**

**Summary**

Unknown site found by FFR, probably one that Thomas Banks investigated alone and never reported. It's likely on the east coast, near the St. David's/St. Andrew's border.

D-14 is only known because FFR had a D-13 (La Tante Point) and a D-15 (Mahot Bay). La Tante Point is mentioned in the 1993 report, while Mahot Bay is only known by bags found at the GNM. Like those, even though it's labelled "D", it's possible D-14 is actually in St. Andrews. Indeed, it is likely somewhere in the Menere Bay/Menere Point area.

It's also possible D-14 is now a known site with a different site #

[Parcel AY has bags-- says "wave cut"-- no other description]

**References**
A bag at the GNM (Parcel AX) contained four pre-Columbian ceramic sherds, two scratched and one with remnant black on red paint. It's not in FFR's 1993 report, so probably one of the sites Thomas Banks surveyed without Cody and never wrote up (e.g. Galby Bay, Le Petite Trou)

-Tentatively assigned to Suazan-Troumassoid
In 1978, Petitjean Roget identified the Petite Anse site and conducted a surface collection (PJR 1981:23). In 1979, he returned and decided to place an excavation unit 40m inland from the beach (exact location unknown), where a large number of sherds were evident on the surface (PJR 1981:26-27). Only the first ~10cm contained any cultural material and the remainder was culturally sterile. He guessed that the sherds had been transported there by water, perhaps sliding down the hill to the north.

In 1992, Cody's survey of Galby Bay (D-3) noted a ceramic scatter (#1) up the hill on the south end of Galby Bay. Both sources suggest there is a site up the hill, at the base of the point. Because Petitjean's site was given a separate name, we'll stick with it here.

**References**
PJR 1981, FFR Inventory for D3 (Cody 1992)
On his 1978 trip, Petitjean Roget surveyed the area going south, where he mentions Galby Beach, Petite Anse and Bongi Bay. In 1979, Petitjean Roget reports a survey trip going north, where he found sites at Marlmont Bay, Petite Anse, and Galby Bay. He mentions having visited Bonne Gaye on this trip but did not find anything (PJR 1981:26). On the next page, however, he appears to describe the whole area as "Bonne Gaye" and mentions a locus of sherds on the "plateau" between Petite Anse and Bonne Gaye and on the point south of Bonne Gaye, where he found a shell bead (PJR 1981:27). Even more confusingly, this may be the area he had called "Bongi Bay", on an earlier trip (presumably 1978), saying they didn't survey it but that it was worth checking out (PJR 1981:23). Bongi Bay does not appear on any map (!), and the only bay close enough to the name Bongi Bay is "Benjy Bay" (on the Woburn Bay side of Petit Calivigny). However, PJR is clearly not talking about Benjy Bay—he is talking about an area just south of his Petite Anse site!

Because some artifacts were found, but it’s unclear where exactly the site is, two loci are assigned here.

References
PJR 1981
During his 1980 visit, Henry Petitjean Roget reported finding a broken axe-head on the south side of a small river ending in a marsh (PJR 1981:26)-- presumably the Little Requin River. They found a pottery scatter on the north side of river, and the side-cut showed a buried horizon 0.9mbs. He said the area was slated for development.
GREN-G-1

Dragon Bay

In 1986, FFR surveyed Dragon Bay and recorded the historic Sugar Mill and a cannon that laid buried in the sand. They mentioned that some pre-Columbian sherds were found in the ditch at the north end of the beach, but no description was given.

In 1999, a major sea surge pummeled the west coast of Grenada. In the aftermath, Michael Jessamy was called to Molinere Point to investigate piles of human bones that had eroded out from the bluff on the southeast end of the beach. The bones were collected and deposited in the Grenada National Museum, but it was not known how many were still left in situ. In 2016, Hanna surveyed the area and mapped the locations of historic and prehistoric components.

The impact of the surge on beach erosion was severe, pushing the waterline 15-20m further inland. A local fisherman reported that before the surge many of the large boulders now half-submerged in the water had been on the back side of the beach. The hillside in this area continues to be undercut by the sea, with soil slumping down onto the beach (the area hereafter called the “bluff”). There was also no sign of the cannon that had been reported on the beach by FFR, perhaps because it now lay underwater.

It was in the bluff along the SE section of the beach that Hanna uncovered at least three, partially exposed human burials.
After clearing around one set (Waypoint 3), it was confirmed that these were intact skeletons, despite having likely slumped down from above (see figure). In the process, two heavily rusted, rectangular, hand-wrought nails associated with the bones were collected—likely coffin nails, indicating the burials may date to the late 18th century.

Given the time period and the large number of bones from the area, this appears to have been a cemetery, likely for the sugar plantation just to the north. They could be British/French settlers or even soldiers from the small battery on the knoll above, but given the proximity to the sugar mill, the lack of many artifacts or grave goods, and their placement on a hill (rather, than a churchyard or town), it seems quite possible that these are slave burials. Only proper excavation could confirm this, and there was unfortunately no time to devote in 2016.

In an effort to identify potential deposits above the bluff, pedestrian survey and five auger tests were performed on the steep hillside above the beach, including three tests ~15m above the three exposed burials. No artifacts were found in the auger tests, but a few historic earthenware sherds were collected from the surface near STP-3 and STP-5. Further up the hill, part of an old brick and a deep kick-up base of a glass bottle were found. Based on its form, the heavily oxidized (patina) glass base probably dates to the early to mid-19th century. It should be noted that African slave burials are known to have more coffin nails than usual (to keep the soul from escaping) and broken bottles (to end the cycle of death in the household) (Saunders 2015). While purely conjecture at this point, these artifacts could therefore be associated with the burials now on the beach below.

A few pre-Columbian surface ceramics (including one large “scratched” sherd) were found north of the burials—near the modern restaurant, built in 2014— as well as along the stream to the far north end of the beach, where FFR had reported them. Because of the heavy disturbance (a modern house and restaurant and an historic sugar mill), no further investigation was made. At this time, no geochemical tests for available organic phosphates have been conducted with these soils.

References

FFR Inventory (Cody 1986), Hanna 2017
In 1986, FFR investigated Grand Mal Bay and found a large Amerindian site on the beach and playing field just south of the oil holding tanks. The reported that the site was mostly concentrated at the north end of the beach and playing field, eroding out of the bluff onto the beach. It was probably truncated by the oil structures.

Only surface collection was made, but a number of human bones were found and deemed to have been burials. FFR reports that locals told them human bones and Amerindian pottery regularly fall out of the beach bluff. A number of shells, shell tools, fish vertebrae, and “crude” but also higher-quality pottery was recovered, as was a groundstone fragment. A possible griddle foot is drawn in FFR’s paperwork (labelled as an adorno), as is a frog adorno with ZIC, and a possible stone bowl (?). A “scratched” sherd is known from GNM Parcel AY.

FFR also recorded a large basalt workstone to the south of the site (see photo).

Overall, the assemblage sounds very similar to the St. John’s River just down the coast, though a more thorough comparison is desired. SGCAP actually visited the site in 2012 and collected a few water-worn sherds in the northern creek area, now in storage at the GNM. FFR’s paperwork was not available at the time, so we were not able to check the site’s integrity. It is therefore not known how the site faired during the 1999 sea surge.
References

FFR Inventory (Cody 1986)
In 1986, FFR surveyed the northern cove of Halifax Harbor and identified the ruins of an historic sugar mill and some Amerindian pottery mixed with historic artifacts.

Two loci of pre-Columbian ceramics were noted—one behind some “slave pen” foundations at the north end of the beach, and the other closer to the center of the beach, just north of the overgrown road that lies north of the creek. The pottery recovered was mostly non-descript but large and thick.

In 2016, Hanna and Jessamy visited and collected a few European earthenware sherds and a glass bottle from a dry canal near the “slave pen” locus. A few possible sherds were observed on the beach, not far from the other locus FFR had mentioned. No Amerindian pottery was collected in this trip, as rain had cut the survey short.

Whatever prehistoric component was here has likely been heavily disturbed by the historic sugar-works. However, it is worth noting that there is a "house" in this location on the Blondel 1667 map, and it’s unclear if French settlers would have been living here that early...

References  FFR Inventory (Cody 1986)
In 1986, FFR recorded a series of nine boulders at the base of Beausejour Point with reportedly 34 cupules between them. Towards the beach, a few crude ceramic sherds were found, but no concentration. Above the workstones are some natural overhangs and rockshelters, but no indication of Amerindian remains. Included in FFR's inventory is an enigmatic drawing of an artifact that is not discussed (pg. 6)– presumably a small historic artifact.

2017 Update
On April 27, 2017 Hanna and Jessamy re-located the workstones-- one of them was quite large (see photo attached)-- one cupule was very rectangular (reminiscent of Mesoamerican metates). Only four stones were found, but it was heavily overgrown and the goal was just to confirm they existed.

In the mangrove estuary between the river and the beach, numerous scratched sherds were found, indicating a settlement was likely here during Suazan Troumassoid times. A more thorough survey is planned in 2017.

Also, the USAID 1991 report says that sand-mining had heavily affected the beach here...
In 1986, FFR investigated an Amerindian site at Grand Anse beach found during construction of the Carinex Resources Hotel (now the Flamboyant). The site covers some 600’ on Grand Anse and 600’ on Morne Rouge—intersected by Quarantine Point and extending as far back as the Convention Center. Another large locus was identified further up Grand Anse, in what is now Camerhogne Park and the lot next to Radisson Grenada Resort. Both loci contained WOR, ZIC, zoomorphic adornos, polychrome, shells (mostly conch), and some European/historic artifacts.
The following year, Thomas Banks excavated six 1x1m units. Only a short write-up was provided in the 1988 FFR report (Banks 1988)—no map or detailed results of the excavations are known. Based on his identification of the Camerhogne Park locus as the “main site” on the 1986 map (despite the paperwork’s description), it is assumed that this is the area Banks excavated—but it could have been spread out around the two loci. Banks reports finding abundant potsherds (all fitting the descriptions above), stone and bone adzes and beads, stone pestles, and a number of amethyst fragments. Fauna included agouti, opossum iguana, water fowl, dog, shellfish ("thousands" of shells), and various reef and pelagic species of fish. Fragments of human bone were also found, but no burials.

Cody (1990) mentions that Grand Anse was smaller and later than Pearls, and that much of the pottery was presumed to be from Pearls clay. She also reported two flakes of obsidian were found there, and that there was more amethyst by weight at Grand Anse than Pearls—none of it finished. At Pearls, she found the opposite—mostly worked/finished amethyst beads but no raw materials and no obsidian. In Cody’s thesis, she believed Grand Anse was a small village within the chiefdom of Pearls—a stance she later pulled back on. (Whether or not a chiefdom-level of political economy was present at Pearls at all, it’s unlikely it had much control over another site, so far away, with so many other sites in between that have since been discovered.)

Two radiocarbon dates obtained from conch shells in one of Banks excavations. As was the case with all of FFR’s dates, no calibration was applied to aid in interpretation. Because the dates were shell, too, there is a steep marine curve with a ~400 year offset that is applied in calibration—meaning his assignation of AD350-700 were not correct. Instead, a shell found at 71cmbs dates to calAD 960-1290 (CI: 95.4%), and another at 38cmbs at calAD 705-1055 (CI: 95.4%). Because the dates were in the opposite order than expected, Banks believed the site had been disturbed, perhaps by a failed hotel attempt in the 1960s. However, like the Pearls samples, these dates still indicate that someone ate that shell within the given timeframe, so it is still a useful gauge for the site’s antiquity.

That said, improvements in statistical analyses for radiocarbon dates allow for modelling estimations to be applied here. As can be seen by the wide ranges of these two dates, there is significant overlap between AD 960-1055. When adjusted to force the 38cmbs sample to the later ends of its distribution (ie. above the other date), there is 50.7% agreement in the model, which is just below the typical threshold of 60% (OxCal 4.3). So Banks is probably right that the site was disturbed. Nevertheless, if it weren’t, the top date (38cmbs) would be calAD 875-1180 (CI:95.4%), while the bottom date (71cmbs) would be calAD 835-1150 (CI:95.4%). Most likely, these shells were eaten much later than the timing associated with the ceramics (which would otherwise push Saladoid-Barrancoid to almost AD 1300!). More investigations are needed to confirm these estimations of the site’s chronology.

In addition to Pearls, it’s worth noting that the assemblage and time period align with two other sites on the southwestern side: St. John’s River and Grand Mal. SJR, in particular, also has early ceramic styles with surprisingly late radiocarbon date, as is also the case with Pearls.

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The St. John’s River site is a Late Ceramic Age settlement across the St. John’s River from the National Stadium in Queenspark. The site has been largely destroyed by the expansion of the St. George’s Cemetery, Queen’s Park Stadiums, a tyre shop, and road bridges. During construction of the cricket stadium, a new bridge was installed (replacing the Green Bridge) and a large workstone associated with the site was relocated to another part of Queen’s Park (Jessamy 2002). Upon inspection of the site in 2011, only a small strip appeared to be intact along the river, though that section suffered from land-crab disturbance.

Ripley Bullen first discovered SJR in 1962 (Bullen 1964) and conducted a brief surface collection of 26 sherds that fit within his Pearls-Simon-Saline and Suazey ceramic types. He specifically noted the lack of any Calivigny (Troumassoid) types present, which later researchers actually reported finding in the majority. In 1986, Thomas Banks and Ann Cody returned and collected artifacts on two coastal sections of the site (FFR Inventory 1986).

Beginning in 1999, construction of the stadiums produced massive disturbance to the area, and workers claimed to have found burials—presumably in Queen’s Park, though the location or cultural affiliation (Amerindians, African slaves, colonists) are not known. The tyre shop once stood across the road from the stadiums and was moved several times during construction of subsequent stadiums (Hurricane Ivan destroyed the first two stadiums in 2004). Newspaper reports from
the time indicate that burials were found underneath the former tyre shop’s location— likely Amerindian.

During the summers of 2011 and 2012, the St. George’s Community Archaeology Project (SGCAP) conducted surface collection, shovel testing, and four excavation pits a small, relatively undisturbed section along the river. SGCAP was a summer program developed by Jonathan Hanna and Michael Jessamy that aimed to get young people in the Queen’s Park vicinity interested in archaeology and draw connections to secondary school subjects like geometry, chemistry, technical drawing, surveying, and general science (Hanna and Jessamy 2012). Lab analysis by community college students occurred during 2012-2013 at the Grenada National Museum (GNM), where the artifacts are now stored. The artifacts recovered fit mostly within Troumassoid period typology (AD 600-1200), and were eventually confirmed by a radiocarbon date from charcoal found 64-82cmbs in Unit 3, dating to calAD 970-1150.

Two other dates were run from 30-43cmbs in Unit 4 (a strombus shell and a piece of charcoal). The charcoal came back modern while the shell had a date of calBC 1645-1315. As intriguing as the shell date is, Unit 4 was clearly so heavily mixed (possibly from the adjacent dog burial) that no human activity can be associated with the shell's antiquity.

Though proper faunal analysis has not yet been conducted, only a few bone fragments were found. The large abundance of marine shells indicates that shellfish was a major dietary staple at the site, as was likely root-crop horticulture (given the presence of griddles). The area is well suited for this kind of economy, with inshore pelagic fishing, adjacent coral reefs, a freshwater river, flat land, and fertile soils. The soil here is Plains Clay Loam—considered by Vernon (1959) to be the most suitable for agriculture— an ash and agglomerate mixed with alluvial silts from the flooding river.

SGCAP also attempted to identify historical structures in Queenspark, to no avail. Pierre Ozanne’s 1779 map of the French capture of the island from the British depicts structures on or near the St. John’s River site (see figure attached). An indigo facility is also depicted near where Wesley College and the Methodist School now sit. Shovel testing in 2012 was unable to recover any remains, but most of these STPs were terminated at a layer of gravel around 30cm below surface, so it is possible that remains of the facility still exist beneath heavy overburden. A small section of an historic wall remains near where SGCAP excavated, which are rumored to be an 18th-century lime klin. Broken sections of an historic floodwall that once lined the river are visible in the river here as well.

The major exception to the fauna was a dog burial in the west wall of Unit 4 and fully exposed in Unit 5. Analysis by Martin Welker, a zooarchaeologist at Penn State, concluded it was a small dog, possibly of New World stock. A radiocarbon date from the dog’s femur revealed the date to be calAD 1640-1800— most likely a burial made during French control of the island.

Lab Analysis
A robust analysis was conducted on over 2500 ceramic sherds recovered during SGCAP. The majority of sherds exhibited use-wear and weathering, suggesting the excavated area was a midden, downslope from the main site (now devoured by the adjacent St. George’s Cemetery). No complete vessels were found, but reconstructed forms represented flaring and direct, unrestricted bowls, cazuelas, and a variety of griddle types ranging from direct to thickened rims. Upslope, larger ceramic sherds have been found, suggesting the main settlement was above the excavated area, where the cemetery, tyre shop, and bridge now stand. In July 2015, a small cache of ceramics was uncovered by the owners of the tyre shop and brought to the GNM. Had the vessels been excavated properly, they would likely have formed two complete pots.

In the lab, vestiges of Saladoid types were seen intermixed with characteristic “scratched” and “finger-indentd” styles of later periods, including footed and triangular rim griddles. As a proxy for vessel thickness, sherd thickness shows a clear preference for middle-range vessels of 5-10mm— a characteristic of Bullen’s Caliviny series (Bullen 1964:48). Additionally, the vast majority of sherds exhibited medium to coarse temper sizes, and while the majority were well-fired, a large number were either partially or wholly “unoxidized”/underfired.

Advanced statistical analysis on the ceramic attributes recorded in the lab produced some interesting insights. These analyses included Correlation, Clustering, Principle Components (PCA), Factor Analysis, Correspondence (CA), and Detrended Correspondence Analysis (DCA). Principle Components (PCA) proved to be the most useful, showing that the lab analysis was not biased and had systematically differentiated real, objective differences between sherds (see figure). The largest contributing variables for PC1 were mostly rim types (direct, flattened, rounded, incised), while the largest contributing variables for PC2 were decorations (incised, adorno, BOR, red paint, polychrome). A table of correlation coefficients showed these same variables to be closely related, with the highest correlations between rim types. The first
five PCs represent 33% of the variance within the data, with PC1 representing 14%—essentially meaning the data cannot be reduced any further without losing large sections of data. Slipped and decorated attributes emerged as the main drivers of variation. Because early Saladoid types used fine temper for most decorated pots and the majority of decorations at SJR were on thick, coarse vessels, the period assignment of Troumassan- and Suazan-Troumassoid was confirmed.

Following completion of the lab analysis, the data were entered into an MS Access database, and all photographs were tagged with the appropriate metadata. These are now available at the Grenada National Museum’s disposal.

References

Bullen 1964
FFR Inventory (Cody 1986)
Jessamy 2002
Hanna and Jessamy 2012, 2015, 2016
Egmont Harbor is a multi-component historic and prehistoric site recorded by FFR in 1986. A small surface collection was made, comprising mostly non-descript pre-Columbian and European pottery. Features include a conch midden and a "crude" circular structure and retaining wall made of stone blocks (with pre-Columbian pottery in the mortar). One sherd reportedly had basketry impressions and a perforation. One of the glass bottles contained a pontil mark (hand-blown).

Location estimated

Jamie, from Conservation Kayak, also says there is a conch midden here

References

FFR Inventory (Cody 1986)
During his 1962 survey of the island, Ripley Bullen identified three loci at Westerhall Point and excavated at the main concentration (locus #2, G-25). FFR later added two more loci, meaning that a total of five loci have been identified on Westerhall Point:

G-10- Westerhall Point “Old Harbor” (FFR)— Scatter
G-11- Westerhall Bay (FFR)— Scatter
G-24- Westerhall Point #1 (Bullen)— Scatter
G-25- Westerhall Point #2 (Bullen)— Main Site
G-31- Westerhall Point #3 (Bullen)— Scatter

G-10 was a small surface collection made by FFR in 1986 of a few “crudely made” sherds, in a possibly disturbed location. Their inventory form says it was on the north part of the sand spit, but their map showed it at the base of the spit.

See G-25 for main discussion on Westerhall Point

References FFR Inventory (Cody 1986)
During his 1962 survey of the island, Ripley Bullen identified three loci at Westerhall Point and excavated at the main concentration (locus #2, G-25). FFR later added two more loci, meaning that a total of five loci have been identified on Westerhall Point:

- **G-10**: Westerhall Point “Old Harbor” (FFR)— Scatter
- **G-11**: Westerhall Bay (FFR)— Scatter
- **G-24**: Westerhall Point #1 (Bullen)— Scatter
- **G-25**: Westerhall Point #2 (Bullen)— Main Site
- **G-31**: Westerhall Point #3 (Bullen)— Scatter

G-11 was a small surface collection made by FFR in 1986 of a few non-descript potsherds in a possibly disturbed location.

See G-25 for main discussion on Westerhall Point.
During his 1962 island survey, Ripley Bullen identified a major site on Calivigny Island with five loci. In what he called the “low saddle”, on the north end of the island, four shell middens (Areas 1-3,5) were situated around the northeast and northwest beaches, and the small pond between them. Area 1 was thought small and had been severely disturbed by leveling for a building foundation (1968:31), and Area 5 had been severely damaged during Hurricane Janet and mostly eroded away, though it had been thoroughly surveyed prior to Janet by the MacLeod family (former owners of the island).

The main site was deemed to be Area 3, just 90 meters south of Area 5, and where the largest of the shell middens was located. It would seem the two areas were on the same beach, but Bullen says they were separated by a lagoon. He also systematically treats the two areas (3 & 5) as not only separate sites but two completely different occupations by different groups in time. This is due to the fact that ceramics collected by the MacLeod family at Area 5 exhibit Bullen’s “Pearls” style ceramics, while everywhere else on Calivigny clearly fit his Caliviny/Suazey series. He only mentions in passing that one of the most exquisite examples of his Caliviny polychrome style is a complete bowl from the MacLeod Collection (ie., presumably from Area 5), now on display at the GNM (1968:Fig 4,o), as are a number of artifacts from their collection (1968:Fig 2).
Bullen excavated at Area 3 and found shells continued to the bottom, roughly 45cm bs. Pottery recovered was predominantly the “scratched” type of his Suayze series, but also a number of what he would call Caliviny Series, including polychrome and pedestal bowls. Only one adorno was found, of a more “unique”, cruder style than usually seen (Plate XXI:3). Two elongated adornos were labeled as loom weights (Plate XXI:6-7) [these are undoubtedly the ones on display in the Westerhall Collection]. Fauna recovered included parrot fish, opossum, agouti, iguana, and green turtle. A cut shell and shell adze were also found. Because the distribution of ceramic types seemed homogenous throughout, Bullen suggested the site was one occupation.

Surface collections were reported for the other four areas— all mostly fit within his Caliviny and Suayze series. However, only Suayze-scratched sherds were found in quantity— just two-finger-indent ed rims were found on Calivigny, and only after substantial excavation on his trip in 1967.

Caliviny Pottery Series
The pottery type Bullen defined as “Caliviny” exhibited thick walls (5-10mm), abundant, medium temper, burnished but uneven surfaces, red slips, and some evidence of coiling (ie., coils were not obliterated). Rims were not so much adorned as “modified” with horns and lugs, but he later added the unique, “backward-bent human head” adornos as features as well (1968:fig 5,m-t). The dominant vessel forms were cazuelas, pedestal/annular vessels, and excurvate bowls. The globular, cazuela bowls often exhibited swirling geometric patterns in black and red paint, which he dubbed “Caliviny Polychrome.” He later expanded the type to include similar designs on the interiors of vessels (1968:35). [Peter Harris also noted that interior designs often appeared “finger-painted” (Harris 2001)]. Bullen’s Caliviny type was equated with “Terminal Saladoid” by Harris (2001) but is now more readily accepted as part of the regional Troumassan-Troumassoid type (Petersen et al. 2004). In re-reading his reports here, it is clear that the artifacts fit more closely with Suazan-Troumassoid.

Bullen and Bullen 1967
In 1967, the Bullens returned to Calivigny Island to conduct a salvage archaeology project before a massive resort was built.

Again, Bullen focused on Area 3 extensively by excavating a 60’ (18m) trench and a 10’ (3m) unit next to it, separated by a 3m balk. Much of the midden appeared to be buried by slope wash and disturbed by land crabs, which he reported reaching as deep as 92cm bs. However, one section of the main trench (A-1, figure 8-h) was believed to have the least-disturbed stratigraphy, showing “charcoal lines and shell lenses typical of undisturbed middens,” (1968:33).

Just west of the A-1 section, a relatively complete (though crushed) turtle carapace was found, overlaying a human skull between 74-92cm bs (fig 8-f), with Suayze-scratched pottery below it. The skull had been crushed during excavation, and Adelaide Bullen was unable to fully reconstruct it, but she was able to determine that it was probably a young adult male (A. Bullen, 1968, 45). She noted the same pattern of caries seen in the Savanne Suayze burials in 1962, again hypothesizing this was a Carib who had somehow gained access to European sugar-cane. [Note that two mortars—mentioned below—may be evidence the caries were the result of increased maize.]

No work was conducted in Areas 1 or 4 (G-13), but a test unit was also placed in Area 2, where they also made a collection in a drainage ditch. Bullen somehow hypothesized that Area 2 was round in shape, with a diameter of 20m. A number of ceramics were recovered, with Suayze Scratched occurring most abundantly on the bottom of the unit, 60cm bs.

Over 18k sherds were recovered and analyzed, fitting well within the proportions of Bullen’s earlier excavations, though see below for discussion. More samples of the different, cruder adorno style was present (fig 5, m-y), as were two more “loom weights” (fig 5,z). Also present were appliqued anthropomorphic vessel designs (fig 5, a-b), and a tiny fragment of a “nostril” (snuffing) bowl with polychrome design (fig 3, j). Two metate/mortar fragments were also found, along with three black and white stone beads, and two possible vomit spatulas— one with an anthropomorphic design in manatee bone (fig 5, c) and the other a plain, worked shell (fig 5, d).

Six Saladoid adornos were also found, to which Bullen suggested must have come from Area 5, 90m north. He admitted that this was unsatisfactory and that the adornos presented him with an “enigma” (33), but he failed to rectify the problem. [In fact, this was a problem that was present in just about every site Bullen had surveyed. The reason for his failure was the inability to break from the typological lines he had drawn so deeply— clearly adornos are not just Saladoid.]

Bullen was much more interested in differentiating his Caliviny and Suayze styles, since they co-occurred but in different frequencies. He settled on believing they were made by the same group, with Suayze pottery being utilitarian and Caliviny
styles “ceremonial,” (1968:36). He notes that Caliviny polychrome can even sometimes appear on vessels whose interior is scratched (ibid, 37), which has since also been noted in Barbados (Drewitt 1991:39). Again, however, Bullen sticks firm to his belief that Suazey represented Carib’s invading Grenada, killing the men and keeping the women, who would have continued making Caliviny pottery. The fact that no evidence of warfare has ever been found to support this, and the improbability that so many sites would remain occupied did not seem to phase Bullen. His assertion that Suazey types represented utilitarian wares, however, is not far from Donop’s (2005) conclusion that they represented technological improvements for specific functions, such as salt-making (see summary of Donop’s re-analysis under the P-3 section).

As mentioned, many of the artifacts Bullen recovered went into different collections: some are undoubtedly in the Hughes Collection at the Westerhall Museum, others appear to be at the GNM, and yet still more were brought back to the FIMNH in Gainesville.

Following Bullen’s visit, all four areas were slated to be destroyed by bulldozing the NE hill and using it to fill the pond, atop which an airstrip was to be built. Today (2017), satellite maps indicate that pond was indeed filled in, but a report by Foundations for Field Research shows that development planned in the 1960s never happened. The pond was still there in 1986.

FFR Inventory (Cody 1986)
The Foundation for Field Research, led by Thomas Banks and Ann Cody, conducted a survey of Calivigny Island in 1986. They reported that the middens described by Bullen (Areas 1,2,3 and 5) were connected and actually one giant shell midden across the entire north side of the island, surrounding the salt pond. Area 3 was confirmed as the highest concentration of pottery, and they were able to identify Bullen’s former excavations on the west side of Area 3, at the base of the hill. Pottery and a groundstone mono were found.

Sometime after FFR’s visit, the NE hill was finally bulldozed and used to fill in the pond (now a tennis court). Historical imagery from GoogleEarth suggest this happened before 2003, the first images available. The island is now the most expensive and exclusive luxury resort in Grenada. It is assumed that whatever artifacts remain have been irreparably disturbed.

Two other site #s are given to Calivigny Island: G-13 (Bullen’s Area 4), and G-14 (a questionable workstone reported by FFR).

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<td>A. Bullen, 1968</td>
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</table>
Bullen had reported a small ceramic scatter in 1962 (labelled Area 4), but he said most of it had eroded into the sea. In 1986, FFR returned and reported a basalt “rock alignment” here with some conch shell and non-descript pottery. None the stones were reported as worked—just in a peculiar alignment. It seems likely that the rocks had been moved during intermittent development of the island, perhaps moved by the heavy machinery depicted on their map of G-12.

It should also be noted that FFR’s description of their location is quite confusing and the map provided is just a small section of a bay— and not drawn to scale. Supposedly it was on the “south point”, on exposed bedrock, but they also state that it is the same location as Bullen’s Area 4, which was not on the southernmost point! That said, because this appears to be nothing, their description is only notable if it is indeed at Bullen’s Area 4.

see G-12 for main entry on Calivigny Island
In 1986, FFR reported two basalt boulders with linear grooves, which they labelled as “petroglyphs”. Without cupules, lines like these are highly questionable, as they can occur naturally. Because they gave it a Site #, however, it remains here.

It's assumed these were either nothing and/or were destroyed during development of the island.

References
- FFR Inventory (Cody 1986)
- Bullen 1964
- Bullen and Bullen 1968
FFR reported two loci of pre-Columbian artifacts here in 1986. The first loci (A) is the main beach people tend to visit on Hog Island, which has a small bar that yachties frequent on the weekends. A salt pond is reportedly behind that. Locus A consists of a few “crude” potsherds and a conch shell midden. Locus B is just a scatter of potsherds. Most pottery was non-descript yet “crudely made”, but a red-banded sherd, a strap handle, and two pedestal bases suggest Bullen’s “Caliviny” series.

FFR hypothesized that Hog Island was just a processing camp (e.g. for conch) rather than a habitation site.

Hanna also remembers seeing a possible workstone on Hog Island, not far from the bridge, but it may have just been an unworked basalt boulder.

References FFR Inventory (Cody 1986)
This site is a small scatter of “crude” pre-Columbian sherds, all heavily broken and non-descript, reported by FFR in 1986. (It’s unclear why they made this a separate site rather than a loci of G-15)

References
- FFR Inventory (Cody 1986)
FFR reported a "sparse shell midden" here and a "crude" ceramic in 1986. Nothing else is known of the site, but it was likely destroyed when the Hog Island bridge was constructed.
In 1986, FFR conducted a small surface collection on a beach in Lance Aux Pines that appears to be where Prickly Bay Marina is today. The site was a small scatter of nondescript pre-Columbian pottery and historic artifacts. It is notable that Prickly Point was previously labelled "Pointe des Pirogues" on Jeffrey's 1775 map (though Bellin's 1758 map seems to label the rocky promontories off Prickly Point's southeast as "les pirogues"). This site is also directly across the bay from True Blue (G-23).

It is also worth noting that-- like Point Salines-- Prickly Point was formed by lahar events ~2-3my (OAS 1988). In the 1980s, teeth of an extinct sloth species (Megalonychidae sp.) were found on the beach at the 12 Deg. North Hotel, dating to ~3mya (MacPhee et al. 2000). It was the first evidence that sloths had once lived in the Lesser Antilles.

References

FFR Inventory (Cody 1986)
Black Point is the first rocky promontory jutting out from the Point Salines peninsula as one moves south-east from the tip of Point Salines. The mudstone that forms much of Point Salines is easily viewable along the exposed sides and base of the point.

On some historic maps, it is sometimes labelled Laissé Point (possibly a surname), while the Bay between Black Point and the tip of Point Salines is called Black Bay. I refrain from using “Black Bay” here, since confusion would result with the site in St. John’s (J-1). W

Ripley Bullen’s survey of the area in 1962 produced an important observation that was never further investigated. At Black Point, Bullen’s surface collection fit squarely within his Saline ceramic series, typed from the Salt Pond sites and what he considered the end of the Saladoid-era ceramics in Grenada (his Pearls-Simon-Saline series). But a shovel test he dug, “below the highwater mark in the sandy beach at the southeastern edge of the point,” (Bullen 1964:35), produced the earliest phase of his Pearls series, similar to types identified at Cedros, and possibly pre-dating the lowest levels at Pearls itself (Bullen 1964:36, 46). It was not until he was back in Florida that he realized the potential, so he asked Alister Hughes to conduct a third collection at Black Point and send it to Florida. Unfortunately, the sample Hughe’s returned to him was solidly Saline-type pottery and the matter was left open-ended.
During airport construction, Petitjean Roget investigated nearby Salt Pond and other sites, but he does not mention Black Point (Petitjean Roget 1980). The excavations he conducted on the beach to the east of Black Point are filed under Cato Beach.

In 2016, the area Bullen described for his shovel test (“the southeastern edge of the point”) was clearly now below the low-tide line and perennially inundated. Large sherds of Saline-type pottery were recovered from an eroded cut on the eastern base of the point, just above the beach limits (STP-1), but sherds were confined to the upper 10 cmbs. An auger test (STP-10) was later placed just 7m NW of STP-1, but was sterile and hit bedrock at 33 cmbs. During low-tide, we then placed an auger test (STP-2) on the beach, just off the saddle of the Point— which was as close as we could get to the area Bullen described. No artifacts were found here either. The auger showed 24 cm of coarse beach sand on top of a dark (10yr 3/2), pyroclastic clay extending to bedrock at 49 cmbs. However, just beyond STP-2, in the water itself, were ceramics, large conch shells, and shell tools dispersed around large mudstone boulders. Many artifacts were lodged under the rocks themselves, indicating the rockfall had happened post-abandonment. It also hints that local sea level was lower during Amerindian occupation and the shoreline extended further out (contra PJR's prediction that it was further up, closer to the ponds). Bullen reports being right at the low-tide line and suggested future investigations to bring, “a small bulkhead and a gasoline-driven water pump,” (Bullen 1964:36). I, too, would now suggest similar preparations for future investigations, though coring may be easier than underwater excavation. A “surface” collection from the water, however, produced only "scratched" (Suazey) sherds and the shoulder of a black-on-red Calivigny vessel.

Despite the difficulty retrieving artifacts from the same deposit as Bullen, we did identify another “locus” of the site, situated in a ~140 sqkm area off the southeastern saddle of the Point, 25m NE of the eroded bluff at STP-1. I am hesitant to call this a locus, however, because the area could very well be the leftovers of sifted sand for construction. Our initial auger tests and surface collection efforts here were impeded by the thorny shrubs and cacti, but retrieval of a simple, button-eyed “manatee” adorno (tentatively typed as Cedrosan Saladoid) on the surface near STP-9 prompted further inquiry. It became clear that the area around the vegetation was sterile, both on the surface and in auger tests at STP-2,4,9, and 10. Inside the vegetation, however, piles of large brain coral and surface artifacts delineated the boundaries of a potential loci (Fig. coral rubble pic). Auger test STP-8 in the middle of this area showed that, despite evidence disturbance in the uppermost soils, a buried-A horizon was identified at 30 cmbs— a dark (10yr 3/2) clay-loam with plain earthenware, increasing in abundance through 45cmbs and tapering off at the interface with a C horizon (sandy eroded bedrock and clay) at 70 cmbs. This is a similar depth and artifact assemblage described by Bullen. It therefore appears that the upper layers consist of mixed modern and pre-Columbian artifacts in secondary/tertiary contexts, but that some remnants of the Black Point site may remain below that. That said, a piece of charcoal from 30-40cmbs in STP-8 was radiocarbon dated to calAD 1979-1982, using the CaliBomb curve, indicating modern disturbance at least to this level.

While the antiquity of Bullen’s artifacts remain in question, it is unlikely that he so egregiously mis-stated the placement of his shovel test. The abundant artifacts on the seafloor, exactly where he describes digging, are most likely from the deposit he identified. It appears, then, that the beach was further out during Amerindian occupation, assuming these artifacts are concentrated near their original discard location. It is also likely that the beach was further out when Ripley Bullen investigated the area in 1962 and that a recent event (e.g. earthquake, American bombing, airport construction) effected local sea level. Pulling together evidence presented for Cato Beach, it seems likely that sand-mine during airport construction drastically reduced the shoreline, causing local water level to rise. Sand-mining is still evident in the area (see figure) and an old US-AID environmental assessment mentions the devastation caused by airport construction, though it does not specify which areas were known to be affected (USAID 1991:133). This scenario is corroborated by the fact that Bullen did not record one of the most interesting features of the area— a partially-inundated midden, lithified into sandstone and stretching across much of Cato Beach.
In 1962, Ripley Bullen identified three loci around the Salt Pond for which Point Salines is named. The sherds he analyzed became diagnostic for his "Saline" ceramic type, which was the final category of his tripartite "Pearls-Simon-Saline" series. Saline pottery is less fine than Pearls and somewhat thicker, though griddles appear to be similar at both sites. Noting that the handles here were quite large and often extended above the vessel's rim, Bullen calls these "Saline Wide-Handled." Like finger-Indented rims at Savanne Suazey, Saline Wide Handle appears to be a unique characteristic of sites at Point Salines.

Salt Pond 1 was a shell midden and ceramic scatter on the north edge of the pond, west of a salt warehouse and spanning across the road. He placed a 1.5m x 1.5m excavation on the north side of the road, where disturbance was minimal. Ceramics were abundant throughout, but at 28 cmbs, "the deposit looked like a solid mass of sherds" (ibid: 33), and he downsized the excavation area in half, to 0.75m x 0.75m. Artifacts stopped at 61 cmbs and the subsoil was a gleyed “blue-gray clay” characteristic of water-logged soils.

Sherds were more mixed and damaged than those he had seen at Pearls, but he noted a clear differentiation of his Pearls types on the bottom, Simon types in the middle, and the "rim-modified sherds" and wide handles characteristic of his Saline series at the top. Bullen believed the last remnants of the "Pearls culture" was at Point Salines, before they were either overtaken by "new people" making Calivigny ceramics or changed their own culture substantially by adapting to marine
foods: "such a shift in the economy— away from farming to shell fish collecting— might be reflected in ceramic deterioration, especially if old decoration had agricultural import," (54). Rouse (1952, 1964) believed these changes were in situ developments, whereas Bullen thought they marked the immigration of Arawak-speaking peoples (as was common at the time, Bullen preferred to call the Saladoid-Barrancoid period "pre-Arawak") (Bullen 1965:240).

Bullen was apparently unaware (see Bullen 1970:149) of Froelich Rainey’s (1935, 1940) “crab/shell dichotomy”: that early Ceramic Age middens tend to exhibit a high proportion of land-based fauna in the lowest strata (e.g., Gecarcinidae spp. land crabs), followed by an abrupt change to marine fauna in the upper strata (e.g., shellfish). Due to the associated difference in ceramics, Rainey interpreted the change as the arrival of a new culture from South America. Later studies have since shown the faunal pattern to be more variable throughout the islands, though subsistence patterns do generally show an increase in marine diets over time, beginning around AD 600 (Carder et al. 2007; Keegan 2000; Petersen 1997; Wing 2001). During this time, some marine resources were exploited intensively-enough to cause localized depressions and depletions (Carlson and Keegan 2004; Keegan et al. 2008; Schapira et al. 2009; Steadman and Stokes 2002; Torres 2003; Wing and Wing 2001), though a few studies have reported potentially sustainable harvesting practices evolving during this time as well (Carder et al. 2007; Giovas et al. 2013; Poteate et al. 2014). At any rate, the sequence Bullen saw at Salt Pond 1 was the best evidence against a new migration: the changes occur at the same sites, demonstrating some level of continuity.

Bullen only conducts surface collections at the two other loci. Salt Pond 2 was described as a “sandy area near the ocean,” southwest of the pond (Bullen 1964:35) where a few sherds were collected. Salt Pond 3 was a “large midden which borders the eastern side of the pond,” (ibid).

PJR, 1977-1980
From 1977-1980, Henry Petitjean Roget conducted salvage excavations during construction of the airport. PJR states that the site had been, "excavated numerous times," since Bullen's visit. It's unclear who he is referring to since no other reports are no. He later says that local students had made substantial collections around Salt Pond on behalf of the museum (PJR 1981:24). He also notes that Earle Kirby was scheduled to visit Salt Pond in January 1980, possibly to conduct excavations. No report is known of this visit.

The excavation results of PJR's Point Saline survey are split amongst the appropriate sites (Black Bay, Grand Bay, Cato Beach, and Degra Bay). His "S4" excavation was the first placed near the pond-- to the north, close to Bullen's "Salt Pond 1" locus. He doesn't report finding anything in "S4", but he does state that surface pottery had "probably been brought to the surface when trenches were dug for channels to pump sea water," (PJR 1981:9). The channel apparently went north, under the old road that is now overlayd by the airstrip. Excavation "S5" was to the east of S4, where pottery and conch shells were found down to ~72cm bs.

PJR hypothesized that a pre-Columbian village must have been situated along the north-east of the pond (Bullen’s Salt Pond 1) or inside the present pond, where sherds and conch remains are visible in the dry season. He hypothesized the pond was then just a "small tidal swamp." He lamented not being able to investigate further north-east of the pond to gauge the extent of settlement.

EFFECTS OF AIRPORT CONSTRUCTION
During airport construction the northern section of Salt Pond was filled in, and Bullen’s Salt Pond 1 loci was either destroyed or buried under the airstrip. It’s unclear how much of the pond was infilled, since no accurate maps are available of its previous dimensions. None of the maps in Petitjean (1981) are drawn to scale and cannot be overlaid onto eachother-- let alone a real map. But estimations of excavation and collection sites, as well as markers such as the “ruins” on PJR's map (likely Bullen’s “warehouse”), indicate only 1/3 of the pond was probably affected. PJR also identified two "causeways" going across the pond, which may have been used to delineate the northern section cut off and the spit of land that now separates the pond into two evident lakes today. (Both historic maps and PJR's hand-drawn maps indicate the modern ponds were once one large one. A number of swampy marshes line the shoreline here, and at least one may have been another salt pond (see Jeffrey's 1775 map), which may the reason for the plural toponym "pointe de salinas").

Photos of the area from October 25, 1983 show the extent of disturbance was substantial, and Petitjean lamented in his report that the entire area was devastatingly transformed between his January 1980 visit and his return in May of the same year. He describes soil having been taken from along the lake and redeposited near either Grand Bay or Black Point (the text says the "southwest bank near...Grand Bay" which is nonsensical because Grand Bay is to the southEAST). It's also unclear why soil had been taken from the banks of the lake while its northern shore was also being filled in?
Point Salines was also the main area of engagement during the 1983 Intervention, where 45 Grenadians, 29 Cubans and 18 Americans lost their lives in battle (WSJ 1998 article). While bombs were dropped elsewhere, it’s not clear how much bombing occurred at the airport itself, since the Americans wanted to preserve the runway to facilitate their campaign. However, photos in Raines (2013:13; also 148,440) show bomb blasts off the north side of the peninsula. Thus, archaeological disturbance occurred not just during the airport’s construction but also from the military invasion that the construction had sparked!

2016 RESULTS
Disturbance on the northern edge of the current ponds was obvious in the 2016 survey, though a few artifacts were found on the surface—obviously in a transposed tertiary context. Bullen identified a loci on the southwest edge of the pond (Salt Pond 2) and a large midden on the eastern edge (Salt Pond 3), which were identified and sampled in Hanna’s 2016 survey (Hanna 2017). Two charcoal samples from STP-6 at Salt Pond 3 (one at 45-60cmbs and one at 110-119cmbs) both came back with modern dates: respectively, calAD 1969-1971 and calAD 1974-1976 (using the CaliBomb curve), which indicates extreme disturbance in the area. Salt Pond 2 was much more promising, with a charcoal sample from STP-7 at 14-25cmbs dating to calAD 770-945.

References
Bullen 1964, PJR 1981, Hanna 2017
GREN-G-22  Grand Bay

During his survey of Point Salines in 1962, Ripley Bullen conducted a quick surface collection at a site he called Grand Bay, in an eroded gulley roughly ½ mile east of Salt Pond 3. Artifacts all fit within his Pearl-Simon-Saline series. In the same area today, there is a modern retaining pond, which could be the location of Bullen’s collection. Petitjean Roget’s salvage project during airport construction conducted excavations here, but his maps suggest it was just ¼ mile from Salt Pond 3. That said, there are pockets of artifacts (shell middens and ceramics) all over the beach, and the area has been so disturbed by sand mining that the exact location of past excavations is perhaps moot.

PJR’s "S7" was here, a little SE of the center of the bay, in a swampy area 75m from the beach. Ceramics were found throughout and an "ancient beach" surface was found ~30cm bs, which indicated that the shoreline was once much higher than it is today. Excavation "S8" was south of S7, just 25m from the beach. Few sherds were recovered. PJR lamented not being able to clear the area north of Grand Bay for testing.

In 2016, Hanna found sherds and conch in situ along the wall of the western point of the bay. Just beyond that, to the east, massive sand-mining had taken place, apparently for an extended period given the old fences around the area and the recent piles of sand (see photos attached). It’s possible these fences indicate how much local sea level has changed here as a result of sand mining. In the center of the bay, in the exact place estimated for Bullen and PJR’s excavations, a large trash
pit had been dug and was currently burning (see pic). The eastern half of the bay has a marshy yet open mangrove forest with numerous crab traps set throughout.

References

Bullen 1964, PJR 1981, Hanna 2017
During his 1980 visit, Henry Petitjean Roget says he found nothing along the bays to the east of Point Salines, saying whatever was there was probably destroyed (PJR 1981:24).

Some time later, Michael Jessamy was alerted to artifacts falling into the sea on a small beach on the eastern (Prickly Bay) side of True Blue Point. In 2015, Hanna surveyed the beach with Michael Jessamy and recovered non-descript pottery and noted bones (some possibly human) falling out of an eroded bluff on the beach.

In 2016, Hanna returned to the site and collected some shell, pottery and a metal axe-head that had recently fallen onto the beach with a scratched piece of pottery on top. In the wave-cut, it’s clear that a dark, buried horizon lay just below the modern surface, indicating an area of past occupation.

The bones are most likely a human burial, and the artifacts indicate the possibility of a Contact period site, perhaps even one described in the 1655 Anonymous History as “Galibi.” Prickly Point, just to the east, was labelled "Pointe des Pirogues" on Jeffrey's 1775 map (though Bellin's 1758 map seems to label the rocky promontories off Prickly Point's southeast as “les pirogues”).
[2017 update-- an interesting letter from Ronald Singer (paleontologist at Chicago) to Liz Wing in 1992 says he found human bone in what appears to be this site, dating to, "800 BP". Unfortunately, Singer died in 2006, so the full date and context was likely lost. However, if it was this site, and that was the raw (corrected) date from charcoal or bone using a conventional technique, then the error is probably around +/-115. A calibrated version of that date is calAD 1015-1400, with a split at 1015-1320 (CI:90.7%). That is a starting point for the site, and falls within the early Cayo period.

References

Hanna 2017
During his 1962 survey of the island, Ripley Bullen identified three loci at Westerhall Point and excavated at the main concentration (locus #2, G-25). FFR later added two more loci, meaning that a total of five loci have been identified on Westerhall Point:

G-10- Westerhall Point “Old Harbor” (FFR)— Scatter
G-11- Westerhall Bay (FFR)— Scatter
G-24- Westerhall Point #1 (Bullen)— Scatter
G-25- Westerhall Point #2 (Bullen)— Main Site
G-31- Westerhall Point #3 (Bullen)— Scatter

G-24 is Ripley Bullen’s (1964) site #1— a thin surface collection in a road cut (disturbed).
See G-25 for main discussion on Westerhall Point.
During his 1962 survey of the island, Ripley Bullen identified three loci at Westerhall Point and excavated at the main concentration (locus #2, G-25). FFR later added two more loci, meaning that a total of five loci have been identified on Westerhall Point:

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- G-11- Westerhall Bay (FFR) — Scatter
- G-24- Westerhall Point #1 (Bullen) — Scatter
- G-25- Westerhall Point #2 (Bullen) — Main Site
- G-31- Westerhall Point #3 (Bullen) — Scatter

Westerhall #2 (G-25) is the Main site in Westerhall Point

In 1962, Ripley Bullen surveyed Westerhall Point while it was being developed as a housing scheme (Bullen 1964). His site #2 was in the middle and northern part of a wide “saddle” sloping on both sides where he found the highest concentration of ceramics (His map of the island (p4) also places the site in the middle of the peninsula). Bullen placed a 6’x8’ (1.8mx2.4m) excavation unit here, in an area judged to have little to no disturbance. A large amount of pottery was discovered, with some increase 25-38cm bs and terminating in sterile clay at 51cm bs.
Aside from pottery, he was able to recover “oyster” shells [clams?], possum (3 mni), agouti (9 mni), iguana, green turtle, hammerhead shark, sea bass, grunts, and parrot fish (mni 7). He also recovered a celt, hammerstone, shell bead, and a few other small lithics.

The pottery reflected mostly his Simon-Saline series on the bottom, and Caliviny-Suazey on top, with certain diagnostic traits (Suazey Scratched and Caliviny Plain) transitioning exactly as if being replaced over time (Bullen 1964:29). Amidst the transition, he saw an intermediary type between Caliviny and Suazey styles that he defined as its own type. Westerhall series pottery is low fired, 3-8mm thick, with smooth even surfaces (not burnished) and occurs as either plain or red-painted. It’s worth noting that he also recovered one of the Caliviny “unique” adornos (Plate XXI, 3- image is really dark) that seems to follow Suazey pottery.

References

Bullen 1964
Michael Jessamy reports finding a large, polished eared (?) axe in the garden by his house. It is assumed an isolated find, as no other Amerindian remains are known.
Degra Bay is a black sand beach with numerous conch middens, mostly exhibiting the round punch-hole typical of pre-Columbian extraction (note that the "white" beach in photo is conch). During Petitjean Roget's monitoring of airport construction at Point Salines (1981), he surveyed the Degra Bay peninsula, just west of Hardy Bay. Noting the prevalence of conch middens, he placed excavation unit "S9" here, 25m inland. Surprisingly, it was completely sterile.

Up on the eastern point, above Degra Bay, two loci of pre-Columbian ceramics were found, and test pit "S10" was excavated. Ceramics and conch fragments were found down to bedrock, which is not specified but appears to be ~30cm bs. Perhaps thinking of Rouse's "crab-shell dichotomy", Petitjean thought the conch here were, "the beginning of the consumption of shellfish," for his Insular Saladoid people. He notes that conch middens to the east of Degra Bay (Hardy Bay?) appear to be modern.

In 2016, Hanna surveyed the area and took GPS points where shell middens occurred. Some were falling out of the bluff onto the beach (see attached photo). A few sea-battered sherds were found amidst the middens, but no diagnostic ceramics are known from the site.

References  
PJR 1981; Hanna 2017
The Cato Beach "Rocks" are a series of at least five sandstone eolianites stretching across much of Cato Beach at the low-tide mark, filled with Amerindian ceramics, shell, and shell tools. The artifacts are embedded in the stone and difficult or impossible to pry out.

Petitjean Roget (1981) noted the presence of two of the five rocks during his airport salvage project and described one as, "a beach rock incrusted [sic] with pottery fragments," (1981:8). PJR rightly hypothesized that CaCO3 from shell could have acted as a glue while these rocks were forming, solidifying the sand and permanently indurating the artifacts in sandstone.

Natural features like these (known as 'eolianites' to geologists) are common in the Caribbean and can form in just a few hundred years (Abegg et al. 2001). Indeed, the same features are found at Bathway and Pandi beach (bw Grand Anse and Port Luis) in Grenada. At Bathway, the stones are said to have emerged during a heavy storm surge in the 1930s (Jessamy, personal communication). At Cato Beach, although Ripley Bullen had extensively surveyed there area—including the two points (Black Point and Grand Bay point) that cap Cato Beach—he does not seem to have noticed them. Thus, it seems likely that these stones were exposed after Bullen’s visit, likely during airport construction. Sand mining during airport construction likely had a massive effect on the area (witness the reclaimed land stretching across Hardy Bay), reducing the shoreline and exposing these rocks. This also explains how Bullen’s subsurface test at Black Point (see G-20 entry) could
now be underwater. The effects of sand-mining were also noticeable at Grand Bay (G-22).

The material in the rock is clearly a midden, likely left on the beach or in a natural secondary context having washed down from Salt Pond above. However, Petitjean’s investigations to the north were more promising as he moved closer to the beach rocks themselves. In 1977, PJR’s first excavation "S1" was just to the north of the rocks, where he only recovered a handful of pottery and some charcoal 46cm bs (note that PJR defines his stratigraphy using "meters above sea level" but gives his starting height) (PJR 1981:6). He then moved north for unit "S2", which appears to have been culturally sterile (ibid:8). Unit “S3” was placed further to the east, again close to the rocks, but it, too, was culturally sterile (ibid). In 1979, PJR returned and placed excavation "S6" just south of his former "S3", closer to the water and the beach rocks. He did not find many artifacts there either, but he does mention a possible hearth at 1.35mbs (PJR 1981:11).

Though the artifacts may be in a secondary context, it might be useful to plan-map and properly draw them to scale. This may provide clues as to the direction of their original location. A few shell fragments were also sampled for radiocarbon dating during the 2016 survey.

References

PJR 1981, Hanna 2017
During his 1962 survey of the island, Ripley Bullen reports an “extensive but thin” shell midden on a narrow peninsula, across Chemin Bay from Westerhall Point (Bullen 1964:32). Here he conducted a small surface collection comprised of scratched and red-painted sherds that fit within his Simon, Caliviny, and Suazey pottery series. He estimated it dated to the same time as Calivigny Island and the Westerhall Point sites.

No further investigations are known. Site location is estimated.

References
Bullen 1964
During his 1980 visit, Henry Petitjean Roget reported a ceramic scatter 0.8km up on the right side of the Chemin River (PJR 1981:24).

Location Estimated
No other investigations are known

References
PJR 1981
During his 1962 survey of the island, Ripley Bullen identified three loci at Westerhall Point and excavated at the main concentration (locus #2, G-25). FFR later added two more loci, meaning that a total of five loci have been identified on Westerhall Point:

- G-10- Westerhall Point “Old Harbor” (FFR)— Scatter
- G-11- Westerhall Bay (FFR)— Scatter
- G-24- Westerhall Point #1 (Bullen)— Scatter
- G-25- Westerhall Point #2 (Bullen)— Main Site
- G-31- Westerhall Point #3 (Bullen)— Scatter

G-31 was Ripley Bullen’s (1964) site #3, which he describes as “farther out, on the north side of the point...fairly near the shore,” (1964:29). This was a scattered midden, buried under slope wash. Shovel tests (labelled as “surface collection”) revealed a higher percentage of Bullen’s Pearls and Simon series than other loci on the point, indicating (to him) possible earlier occupation.

-- See G-25 for main discussion on Westerhall Point --

References

Bullen 1964
Towards the center of the beach at Flamingo Bay, Michael Jessamy reports a workstone here, found many years ago and now mostly or completely buried in the sand (in 2017, our attempt to re-locate it was unsuccessful). However, it may be close enough to the surface that a storm might re-expose it.

No other reports are known, nor are any sites known nearby (the beach is bordered by a steep hill, so presumably any settlement would have been higher up on the ridge).
Magazin Beach is a site possibly investigated by FFR but never written up. It is known by one bag at the GNM (Parcel AY) with a possible shell tool. Michael Jessamy believes FFR investigated this site and found other artifacts at the south end (including some in the water). Other bags may not yet have been cataloged at the GNM.

It is not known how construction of Moca Bana and Aquarium affected the integrity of the site, but a walk on the beach there by Hanna in 2014 did not indicate anything on the surface or in the water. Only subsurface investigation can confirm this.

References
In September 2016, workmen uncovered Amerindian pottery and human bones during construction of a new road on the northeast part of Beausejour Bay. To his credit, the foreman called Michael Jessamy at the Ministry, though not before taking the skull of a burial for himself (other crew members mentioned having taken artifacts home as well). Jessamy brought in Jon Hanna, who was finishing up his 2016 survey. The site was heavily disturbed by the construction work (see photos), but concentrations of red-painted sherds and zoomorphic adornos were observed on both sides of the road. Hanna took column samples of soil from the wall of a freshly-cut drainage ditch, where pottery was noted. The area where bones had been found was also sampled. Given the adornos, red-painted rims, and ZIC pottery, it was clear this was an early Saladoid-Barrancoid site, likely dating before AD500.

Back in the lab, pottery from the burial area was found to have burnt bone encrusted on the interior of the vessel’s rim (see picture). This was apparently a cremation, in what was probably a large bowl with a deep-red painted and flaring rim. Radiocarbon dates from the charcoal inside the bowl came back calAD 530-635 (CI:90.9%). Meanwhile, charcoal from the bottom of the column sample came to calAD 325-410 (CI:90.8%). Interestingly, the column sample only went to the bottom of the drainage ditch—ceramics continued beyond that. This suggest the site may be even earlier.

And with that, the Beausejour site became the oldest known pre-Columbian site in Grenada and the only Saladoid-era site.
on the western side of the island— which had very few sites to begin with.

Further testing of the site is planned for 2017.

References

Hanna 2017
A bag from FFR at the GNM was labeled G-22 "Richardson la Touch Cove, Petite Calivigny". Exact location of "Richardson La Touche Cove" is not known-- current map point is in a bay also called Benjy Bay, where historic conch middens are known (perhaps there are prehistoric shells underneath?).

Six poorly-preserved, non-descript pre-Columbian sherds were found here. Undoubtedly, this was a site investigated by Thomas Banks and never written up.

**SITE # CHANGE**
Because Grand Bay has already been thoroughly documented as G-22, and because FFR probably only had one bag from this site, it was decided that it was easier to just re-index it as G-35.

Its proximity to the shell midden at Lower Woburn (G-36) is of interest
Groome (1970) reports possible Amerindian conch cuts on the lower levels of this massive conch midden stretching along the south-east coast of (upper) Woburn Bay/Lower Woburn. PJR (1980:24) also makes a passing reference to it, presumably from the Groome book.

A brief walkover on 3/15/2017 did not produce any pre-Columbian remains of any kind-- the top level is entirely historic/modern. Given the size and extent of the shells (atop which shacks and bars are located) it's certainly possible that colonial and modern fisherman simply deposited shells where they saw (pre-Columbian) ones piled up. More thorough testing is warranted.
GREN-G-37

Fort George

Coordinates (WGS84) [redacted]

Parish St. George’s

Inject carbon Dates (Preview)

Diagnostic Ceramics

- □ WOR
- □ ZIC
- □ Adornos
- □ Scratched
- □ Finger-Indented
- □ Polychrome
- □ GriddleFeet
- □ Saline Wide-Handle
- □ Caliviny Unique Adorne

Ceramic Period

- □ Unknown
- ✔ Historic
- □ General Post-Saladoïd
- □ Cayoid
- □ Suazan Troumassoid
- □ Troumassan Troumassoid
- □ Saladoid-Barrancoid
- □ Early Saladoid

Previous Work

- □ Ann Cody
- □ Thomas Banks
- □ Bill Keegan
- □ Jon Hanna
- □ Henry Petitjean Roget
- □ Ripley Bullen
- □ Corinne Hofman
- □ Lesley Sutty

Notes

Summary

(Awaiting entry for historic inventory)

Musketballs and other artifacts recovered from Ft. George in the GNM Collection have been given this site #

References
Black Bay Cave is Grenada’s sole example of a basalt lava tube, formed by volcanic flows from Mt. Granby/Fedon’s camp explosions dating ~1.8 million years ago (Arculus 1973). The cave once consisted of at least two rooms, but the second room collapsed sometime in the mid-20th century. Much of the floor is littered with roof-fall, suggesting the cave has been deteriorating in recent times. Unmitigated tree growth on top of the cave has severely damaged the rock formation and may soon cause it to collapse. It is probably unsafe for persons to explore the cave, and emergency funding should be sought to install structural reinforcements.

The area was described as “Admiral’s Point” on Blondel’s 1667 map of Grenada, and surface remains attest to an early French battery. Local lore is that the cave was once called “trou maïs”—French for “corn hole”—suggesting that the cave may have been used as a receptacle for storing corn. In the valley to the north, a 19th Century sugar mill stood where the Black Bay River (sometimes called Concord River) drains into the bay.

In 1986, FFR surveyed the Black Bay Cave area, investigating the cave itself and identifying pre-Columbian workstones on
the beach and the historic structures both on the point and the later, sugar mill in the valley below.

They measured the cave to be ~100' long, 25' at its widest, and 8' tall at its highest. A number of renovations had occurred in historic times (probably the French period), including a circular hole that once led to a cistern (see photo), and walls in back (NE) that had been cut to make the room rectangular. Modern graffiti is present at the entrance, as is a “bird claw” petroglyph of possible Pre-Columbian origin on the cave ceiling ~10' from the entrance (see photo). They warn that other petroglyphs may have since fallen from the ceiling and should be investigated.

Down at the base of the point, on the southwest corner of the beach, FFR found a series of cupules (workstones) amongst three boulders. A few nondescript sherds were found on the beach here, as well as further north, at the mouth of the Black Bay River.

Along the River, they also described the historic sugar-mill remains, including a wooden water wheel with a brass plate dating to 1862, an aqueduct, canals, and a series of historic buildings—all of which are being consumed by vegetation.

Pregill 1990
In 1990, FFR returned with Gregory Pregill, a paleontologist from the San Diego Museum who studies fossil vertebrates in the Lesser Antilles. Pregill was funded by FFR, but it appears Cody was not with him (because very little is written about the visit!). Pregill was most interested in recovering preserved owl pellets, which are one of the best sources of fossil vertebrates, and he excavated Black Bay Cave in an effort to identify any fauna remains there.

In Pregill’s short report (attached, in the FFR Inventory), he mentions at least two species of bats present at Black Bay and summarizes the results of six excavation units placed inside the cave. The excavations appear to have been standard 1x1m units, separated by a 1x1m balk. The soil on the floor of the cave was reportedly only 5-20cm thick, though the rocks reached at 20cm could well be ceiling rubble, and the soil thickened deeper inside the cave. For instance, he mentions that Unit #5 (~12m from the cave entrance) consisted of gray, consolidated gravel and fine sediment down to 1m bs. No Amerindian remains were found in the excavations.

2016 Survey
In 2016, Jon Hanna returned to Black Bay and conducted pedestrian survey and 17 bucket-auger tests around the cave and down in the estate below. No tests recovered subsurface pre-Columbian remains, but surface collection atop the ridge to the east of the cave (now soursop fields) did produce small sherds of ZIC mixed with European pearlware and a kaolin pipestem. Just west of the cave, two historic structures of dry-laid stone rubble were identified (see photo), probably dating to the battery that can be seen in the area on French-period maps (FFR also has a third structure on their map, further to the NE). A surface collection near STP #2 produced larger pieces of European earthenware (possibly some Amerindian mixed in, but nothing definitive). A test 10m from the mouth of the cave (STP-5) was culturally sterile. Charcoal from one of the French structures was collected in STP-10, and thick, plain earthenware of historic origin was found in the topsoil of STP-12.

Down on the beach to the north of the cliff, a series of at least ten workstones exhibiting cupules and "polisors" were confirmed. No Amerindian remains were found in the old estate along the Black Bay River.

Soil samples analyzed from the auger tests show phosphate levels pulling towards historic disturbance rather than whatever prehistoric component was here, except STP-7, which may indicate a deeper legacy. Unfortunately, it does not appear that any intact Amerindian remains exist in the area, and it is therefore unclear how the cave was used in pre-Columbian times. At the moment, only fleeting glimpses can be found, mostly southeast of the cave. It is possible that whatever was here has since been destroyed, but it could not have been a substantial settlement. Disturbance on the ridge has not been nearly as extensive as other sites. In the newly-planted soursop fields atop the ridge, east of the cave, large tree stumps attest to climax forest just a few years ago (modern disturbance here occurred only within the last 2-3 years). A pig farm on the ridge north of the soursop fields is also only a few years old. Atop the cave is a large tree completely consumed by strangler vines (Ficus sp.), and the flora around the cave is mostly secondary forest, with some primary shrubbery and sticker bushes present. Historic disturbance is indicated by surface artifacts and rubble remains west of the cave.

It is also worth noting that FFR had recorded the cave ceiling in 1986 to be roughly 8' high (they mention that it was possibly as high as 10’ in the 1960s). Today it is just 4-5’. The entrance is barricaded with roof-fall, and there are fissures evident in
the upper left of the cave entrance. Undoubtedly, the large tree atop the cave is causing irreparable damage to the cave’s integrity. Eventually, Black Bay Cave will collapse entirely if nothing is done to stabilize it.

References

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<tr>
<td>FFR Inventory (Cody 1986)</td>
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<td>Pregill 1990 report</td>
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<td>Hanna 2017</td>
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GREN-M-1  

South of Victoria Petroglyphs

South Victoria is often just called the "Victoria Petroglyph", even though there was at least one other petroglyph in Victoria, now destroyed (M-4). People also tend to think of the Waltham petroglyphs (M-2) as Victoria, but that's just a mistake of course.

The current rock on the beach just south of Victoria features two petroglyphs: an ornate ("fancy") anthropomorphic face and a more simple pecked face. While it has fared better than the other petroglyph that used to be in Victoria (GREN-M-4, destroyed during roadwork), it too has suffered miserably from negligence during road construction. Indeed, major fissures and cracks are evident across the rock, testament to mistreatment, perhaps every time the road is fixed.

It is not clear who first reported petroglyphs on the southern outskirts of Victoria. In Thomas Huckerby’s 1921 book, he discusses two simple glyphs here and includes a photo (Plate VII) (attached). He mentions that, “it was found difficult to determine whether the depression indicated on the top of the bowlder [sic] was of natural or of artificial formation,” (Huckerby 1921:162). What is immediately apparent is that he did not see the much more ornate and interesting glyph around the other side of the boulder! This may be because the rock was in a different position at the time. Huckerby’s photo also indicates a possible mortar in the foreground that has since gone missing. It is also possible that he was looking at a totally different rock, but comparison of the shoreline in his picture to that of today indicates it is probably the same location.

[Dubelaar (1995) cites a 1903 booklet by Karl Sapper on St. Vincent that supposedly showed the same rock as Huckerby, but the volume could not be accessed while writing the present report.]
In 1962, Ripley Bullen photographed the present rock (with the elaborate face) and cited Huckerby, though he did not seem to realize that the image was not mentioned by Huckerby.

In 1986, FFR documented the petroglyph and noticed Huckerby’s omission. They report that he indicated the rock had been further up the hillside to the east, but he actually only mentions the stone briefly (p.162) and his photograph clearly shows the rock on the beach. FFR guessed that Huckerby might have photographed a different rock entirely, believing disturbance during road construction either destroyed or covered up the rock in his photo.

The most likely explanation is that this rock has always been in the way of the road. When the road was widened in colonial times, it may have been pushed over, covering the more ornate glyph. Then when the seawall was built (after 1921...), it was rolled again, re-exposing the fancy glyph just in time for Ripley Bullen’s visit in 1962. The way to test this is to photograph all sides of the rock and compare it to Huckerby’s. It should also be checked whether his “difficult to determine” glyph is on one of the sides— that would indicate how the rock has been repositioned [a visit in May 2017 suggested it may not have been moved since Huckerby, but rather, the elaborate glyph may have been covered by algae].

It is also clear that the rock has been severely damaged within the last 20 years (see "plight of a petroglyph" image). The main glyph itself may have lost a line or two during roadwork. Another photograph from 1998 may indicate the damage occurred before then, but it is difficult to tell from that image (attached separately). An image from 2015 shows that the shoreline may have been reconfigured again (sand-mining?)

For interpretation on the petroglyph’s meaning, see section in P-1 (Mt. Rich)

About 50m further south, there is said to be another petroglyph in a small cove high above the road, accessible only by ladder. No confirmation or images of this glyph are available at the present time.

References

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<tr>
<td>Huckerby 1921</td>
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<td>FFR Inventory (Cody 1986)</td>
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<td>Dubelaar 1995</td>
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Because the Waltham petroglyphs are so belligerently guarded by squatters on the land, very little has been written about them. The number of glyphs, the number of rocks, and even their exact location has been a point of confusion, as is documented below.

FFR surveyed the site in 1986 and recorded two rocks with glyphs, along what they called the Great Ravine River in Waltham. At the time, the first rock was behind a house (today it is in front) and the second was behind a hog pen, 20m down river. The second rock consisted of just a few cupules and two simple pecked faces. Some non-descript sherds were found around the houses and dirt road, but no sign of a concentration or midden.

FFR apparently did not see the much larger rock with six glyphs further back along the river. It also appears that the glyphs are located along the Silver River—not the Great River Ravine [needs to be confirmed]. They also report that the glyphs are discussed in Huckerby’s 1921 report, but it is not (nor are they mentioned by Bullen).

Casey Allen and Kaelin Groom—geographers researching the condition of Grenada’s rock art—have reported what appears to be a third stone at Waltham that contains at least six glyphs (images attached). A map has not yet been drawn of where each glyph is located.

The Waltham petroglyphs are unique in that they contain both cupules and glyphs on the same rocks.
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<td>Dubelaar 1995</td>
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<td>Kennedy (2017)</td>
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During his 1980 visit, Henry Petitjean Roget mentions finding sherds up the Duquesne river, going through a cocoa plantation and around some old building foundations (PJR 1981:36).

Duquesne Bay
During her 1992 survey, Ann Cody also went up the Duquesne River and found a site in the cocoa trees, near some old building foundations. Undoubtedly this was PJR's "Industry Estate", but she gave it a site # and called it Duquesne Bay.

Cody conducted a surface collection, auger tests, and one excavation at the site.

Surface collection recovered some striated sherds, stone mortar fragments, a pipe-stem, and an enigmatic ceramic “phallic snake mouth” reported on the bag inventory.

Excavation Unit 5N/5W
40m south of the river, and just west of a small water channel, Cody excavated a 1x2 excavation. The burial of a child (aged 3-11 years) was found 20cm bs, along with historic pottery, a pipe-stem, and a coin dated 1965. The bones were heavily
decomposed.

Amerindian pottery was found from 20-60cmbs, along with fish bone and charcoal throughout. Four diorite beads and the point of a groundstone axe were also found.

Two radiocarbon dates were obtained from charcoal found in this excavation. Beta- 85938 (probably from 20-40cmbs) dates to calAD 1045-1265, though there is an 80% chance date is bw 1145-1265. Beta- 98365 was reported below that piece (probably 40-60cmbs), and dates to calAD 775-1035, with a 91% chance the date is actually bw 860-1035.

The fauna were analyzed by Arlene Fradkin at the Florida Museum of Natural History, overseen by Elizabeth Wing (Fradkin 1996). The sample from M-3 was reportedly much too small for comparative analyses, containing only 8 vertebrate species and 4 invertebrates, suggesting the midden contained more ceramics than fauna in this area. Further testing would be needed before concluding a drastically different diet than other sites.

References

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<td>PJR 1981</td>
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<td>FFR Inventory (Cody 1992)</td>
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<td>Cody Holdren 1998</td>
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This was a small petroglyph depicted in Huckerby (Plate VI), reportedly, "between two huts in Victoria" (Huckerby 1921:162). Bullen says that it was destroyed (or covered) by road work (Bullen 1964:24), and Petitjean Roget suggests that more public awareness of sites like this would avoid such loss of history in the future (Petitjean Roget 1981:31).

Bright (2011) also refers to Jönsson Marquet 2002

References  Huckerby 1921
The Duquesne Petroglyphs are a set of three glyphs and six cupules situated at the southern end of the beach at Duquesne Bay. One of the GNM’s founders, Leon Wilder, reportedly discovered the glyphs buried in the beach and dug them out (PJR 1981). While it is not known when this occurred, badly damaged photographs acquired from the GNM show Wilder and friends digging out the glyphs and discovering the large workstone in front (see pictures attached).

The name Duquesne was given by the French to the "Caraibe chief" in the area, though no nearby sites have been identified from the Contact period. Jonsson Marquet (2009) believed this artistic style of the glyphs dates to the Suazan-Troumassoid period (900-1200 AD). In 1994, Cody (1998) identified an Amerindian site not far from here (M-3) that also dates to this period, suggesting the residents there were responsible for creating these glyphs.

**INTERPRETATION**

The first, most obvious point of interest on Duquesne Beach are the twin faces side-by-side. Some have said they represent “night” and “day”, others "male" and "female." (Any binary pairing would probably fit.) Petitjean Roget (2009) believes that they are the radiant heads of the rainbow serpent from Amazonian mythology. They appear here as twins, a common element in New World mythology, but the combined meaning of twin rainbow serpents is unknown. The beach location is
also hypothesized to represent the boundary between the world of the Land and world of Sea/underworld. This is somewhat in line with Wild's (2003) interpretation of petroglyphs as places where ancestors gather-- perhaps as envisioned by a shaman (and hence, shamans being the ones drawing them). As mentioned in the section on Mt. Rich, these interpretations are all highly speculative.

For more on the interpretation of petroglyph's, see section in P-1 (Mt. Rich)

PROTECTION
Perhaps because of their proximity to the sea and location below the beach surface, the Duquesne petroglyphs were bound to present management challenges. In the early 2000s, the government sought aid from the US-Embassy to build a retaining wall that would keep the sand back from re-covering the stones. While this has opened the glyphs to public viewing, rain and gray-water from the houses above now collect in the basin. Local fishermen also pull their boats up against them during storms.

Using the Rock Art Stability Index (RASI), Allen and Groom (2013) recently conducted systematic assessments of the Duquesne petroglyphs and found the two main panels (see their map) to be in "great danger" due to the chemical waste-water runoff, as well as rain and seawater that pool in the concrete basin-- all of which contribute to lithobionts (organisms like algae that live on the minerals in the rock), fissures, and scaling. The more precariously positioned Panel 3, down the shoreline, was considered in better condition.

Given these observations, it would be beneficial to open a water channel that would drain the retaining pool, while also installing piping or gutters to mitigate the runoff from houses above. Additionally, it would be beneficial to institute visitor monitoring and regulation to prevent people from climbing, chalking, scraping, or vandalizing these stones.

References
PJR 1981, 2009
Wild 2003
Allen and Groom 2013
Michael Jessamy reports that a fragmented, elaborate petroglyph had been present on the beach at Waltham (across from M-2), but has exfoliated away. The exact location is not known.
Perhaps the most famous of all Grenada’s Amerindian sites, the Mt. Rich petroglyphs are a unique set of rock engravings located in a unique location in the center of the island, deep in a ravine along the St. Patrick River. The site consists of three boulders with petroglyphs (one with over 50 images) and two workstones with a total of six cupules.

The earliest known reference to the Mt. Rich stones is a brief note dated 1845 in Simmond’s Colonial Magazine, which describes "several hieroglyphical characters" carved on a stone below the Mount Rich sugar-works (pdf attached-- thanks to Angus Martin for its discovery). The author believed they were carved by the last remaining "Charibs" to tell their story before they were "ultimately driven into the sea," at Sauteurs. It is certainly striking that the idea of Mt. Rich being a final holdout for Caribs (something local guides still repeat) goes back this far, and certainly the faces on Panel 10 (see figure) evoke the story of Leapers’ Hill. As discussed below, however, while some glyphs may date to the Contact period, most are much earlier. (Also, regarding the 1845 article-- only a few people likely jumped at Sauteurs, and certainly not the entire Amerindian population!) (Martin 2013:71).

Huckerby 1921
In 1921, Thomas Huckerby, a Methodist minister that travelled around the Caribbean, published a small booklet about
Grenada’s petroglyphs through the Museum of the American Indian in New York (now part of the Smithsonian). He had previously put out a similar booklet on St. Vincent’s petroglyphs (1914), and he had regularly purchased Amerindian artifacts on behalf of the museum (Fewkes’ 1922 analysis of the Heye Collection recorded some 864 artifacts from Grenada, mostly collected by Huckerby in Carriacou) (Fewkes 1922:49,88). The 1921 report contains invaluable photographs and discussion of the glyphs at Mt. Rich, South Victoria (GREN-M-1), and one in Victoria that has since been destroyed (GREN-M-4). His main focus was Mt. Rich, however, and he systematically recorded each image and produced drawings, with comparisons to others he had seen elsewhere.

Since Huckerby, a number of researchers have made comments (mostly descriptive) about the petroglyphs and their meanings, including Bullen (1964) and Petitjean Roget (1981). For the sake of brevity, and the fact that their interpretive discussions are highly speculative, they will be omitted here (see below on Interpretation).

PHYSICAL INTEGRITY

In 1986, Ann Cody and Thomas Banks recorded Mt. Rich as GREN-P-1, drew a plan map of the area, and wrote an inventory sheet. Of particular interest is that they note that the photographs in Huckerby did not match the current position of the main rock. They hypothesized that it had, “rolled down the steep hill, closer to the river [sometime after Huckerby’s visit].”

Other researchers have noticed that the “bats” or “big cat” images are pressed against the lower stone (under the main rock), which was an impossible angle for the artists. This has led many to believe the stone had been at the top of the hill and slid down to the river sometime after colonization. Cody’s Inventory sheet, however, made it clear that the stone had actually moved sometime between 1921-1986!

Indeed, the “big cat” (bat) images depicted in Huckerby (1921, plate III) are clearly visible (no boulder in the way) and lack the fissure that currently runs above them (see figure). Huckerby’s only wide-view photograph of the rock (1921, Plate V) also appears to be in a slightly different spot, with the western end raised higher than today. Moreover, he also says that two simple faces are “on the part of the rock overhanging the river,” (162) and so they couldn’t be captured in the photograph on Plate V. In the same section, he mentions “large bowlders [sic] beneath the shadow of the rock,” (161). Huckerby also describes trying to expose more glyphs that were buried by soil, complaining that there were too many tree roots (Huckerby 1921:159). Lastly, Huckerby’s Plate III appears to depict a set of petroglyphs that are no longer visible (Huckerby 1921, Plate III-- attached). [confirm...] Clearly, when Huckerby photographed Mt. Rich, the stone was a few feet above its present position and buried in the hillside.

A few scenarios to explain the cause of the stone moving sometime in the past 50 years:

1.) Surging water during a tropical storm or hurricane (e.g. Janet) undercut the river walls causing the ledge where the stone had been sitting to give way

2.) Mudflow (or another rock) crashed down the steep hillside to the east and knocked it down, either during heavy rains or perhaps even road construction above

3.) Weight was applied to the rock (e.g. a group of people climbing on top) and it became dislodged, perhaps causing the soil below to give way

However it happened, the large amount of eroded soil in the river today (see overhead picture), indicate that the ledge the rock had been resting on in 1921 has given way and displaced the stone. That said, the new fissures evident in the rock above the “cat” panel indicate it was either a very quick event or something hit it with extreme force. As Grenadians are well-aware, large boulders fall all the time, and it is entirely possible one of the rocks in the river today is a recent addition. Road building in the cocoa fields above could certainly have caused this, though it’s not known if any new roads have been built there in the past 50 years.

Another question is whether this was the first time it had moved. Huckerby’s description of it hanging precariously above the river and partially buried in soil suggests the stone had moved before his visit as well. It is unlikely the large stone was originally carved at the top of the hill, but it may have originally been a few feet higher than when Huckerby saw it. Not only is it unlikely the stone would have landed upright if it had rolled down the steep hill, but petroglyphs are almost always associated with water. Plus, there are other petroglyphs and workstones in the river-- this was a place where petroglyphs were drawn (see Interpretation).

That said, in 2016, Hanna surveyed the hill above the stones (to the east) and found no evidence of Amerindian remains above, nor any obvious place where the main stone could have originated. The hill here is incredibly steep and difficult to
maneuver, culminating at a narrow ridge on top-- this is the area known as the "Punchbowl Crater," which has angles at over 60-degrees as it rises 50m in elevation over the course of just ~130m. There is little possibility that the main rock was carved atop the narrow ridge, nor that it simply slid down the hill to its current position— it would rolled and devastated everything in its path. About 500m up the river (southwest), is the large Amerindian site known as Montreuil (P-2) that is undoubtedly responsible for the creation of the petroglyphs. Additionally, just above the stone, the hill is quite disturbed-- perhaps because a large boulder has recently fallen out (see overhead photograph).

Thus, it seems clear that those stones have always been near the river, but the main one was a few feet above where it is today, turned ~90 degrees horizontal (longways), and sitting more on the current north face (the part that doesn't have any drawings), allowing the southern glyphs on the bottom to have been drawn.

A further mystery is that the workstone just to the north (a strangely white basalt (?) stone) is on its side— a difficult angle to create cupules. The shape of the stone and its position in the river suggest it hasn't moved, but further investigation is needed.

INTERPRETATION
The meaning of petroglyphs have always been debated. Sometimes dismissed as witchcraft or simple “Carib Stones”, and more recently speculated to depict spiritual beliefs, the short answer is that we don’t know exactly what they meant and probably never will. But researchers have made a number of observations that can guide our interpretation:

1. They always occur near water
2. There are often workstones nearby
3. Variations imply that they were drawn at different times, by different groups
4. Many are animals with anthropomorphic (human) traits
5. Some images occur on ceramics and other artifacts, but many do not

A recent paper by Jonsson Marquet (2009), compares the locations and site associations of petroglyphs throughout the Lesser Antilles and then breaks down the design elements of each petroglyph image into generalized categories in order to build a chronology for each. For Mt. Rich, she notes that the same cultural group continued to make engravings, likely over many years, and that complex images like zoomorphic and geometric designs are mostly on one panel, while the top panel (10) are mostly simple faces (see figure). The upshot was that Mt. Rich appeared to have been carved by successive traditions, as a palimpsest, likely beginning c.AD 400-500— which is later than where she places Duquesne, Waltham, and “River Sally” (Victoria?). Invariably, once Montreuil has some firm radiocarbon dates, those will carry more weight than artistic analyses. But it’s an interesting perspective, and the more refined such studies become, the more accurate they will eventually be.

Finally, it’s worth noting that petroglyphs probably held local meanings that fit within a shared cultural system of the Antilles and parts of the mainland. Amerindians were animists (everything has a soul -- rocks, trees, oceans), and many petroglyphs appear spiritually-oriented, perhaps representing places where ancestors would gather (Wild 2003). The nearby cupules, therefore, may be the mortars upon which shamans would mix narcotic concoctions to connect with those ancestors. Perhaps it is shamans, too, who drew the glyphs?

PROTECTION
Using the Rock Art Stability Index (RASI), Allen and Groom (2013) recently conducted systematic assessments of the Mt. Rich petroglyphs and found it to be in better condition the Duquesne, though there were some issues. On the 2nd rock in the river (Panels 2 and 3), the panel closest to the ravine wall exhibits a number of destabilizing fracturing and "textural anomalies" that pose a risk to its preservation. On the main rock, RASI scores varied from "urgent" (east-facing) to "good" (south and west-facing), with the rest more middle-range. The one that has received the brunt of the recent movement described above (Panel 8) received a middle-range score, though it was probably been damaged in that event.

Allen and Groom recommend more monitoring and regulation of visitor conduct to ensure the stones are not mistreated.

[2017 update--- the original viewing building was built in the 1980s and has now been renovated by a local group called MYCEDO; more to follow in 2017 report]

References

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FFR Inventory (Cody 1986)
Jonsson Marquet 2009
Allen and Groom 2013
Montreuil is a rare inland site, associated with a rare set of petroglyphs. Squatters should be removed and the site protected—possibly developed as a tourist stop. Otherwise, it should be thoroughly excavated before it's completely destroyed.

During his 1980 visit, Henry Petitjean Roget visited the Mont Reuil Estate and reported on a large settlement, just up river from the Mt. Rich petroglyphs, in a nutmeg plantation, “not far from Miss Monica’s house” (PJR 1981:39). He also mentions finding a “portable petroglyph” (previously on display at the museum) in Miss Monica’s garden, which he describes in excited detail. He also describes the remains of the old plantation estate, including an old bridge and an arch over a path with a cornerstone marked “1816,” (PJR 1981:41). [Cody later says Montreuil estate was “built” in 1844, but it’s possible there was something earlier(?).] Though PJR also says Montreuil, “was probably an historic Kalina Village,” (ibid:39) there is no evidence to this assertion.

During her 1992 survey, Ann Cody visited Montreuil and conducted three surface collections (SCs) behind Monica Mark’s and Sylvia Kettle’s houses. SC ‘A’ had some pre-Columbian pottery, historic lead, and a small human bone. SC ‘B’ had a large number of broken sherds, a groundstone fragment, and a shell or bone. SC ‘C’ had a large number of sherds—much larger and more complete than the other SCs— as well as some historic materials. Much of the pottery Cody collected appeared to be Suazan Troumassoid (e.g. scratched, griddle feet), though she also notes the presence of a few zoomorphic adorns. Additionally, Cody mentions two additional “portable petroglyphs (stones with cupules [probably mortars] in the Mark’s back yard,” which she was told visitors had tried to buy (FFR Inventory (Cody 1992) sheet).
In 2016, Hanna performed a pedestrian walkover of the area and noted pre-Columbia pottery along the road where Cody had indicated. Glannelg had recently excavated a large hole (to place a tank?), and some historic blue pearlware and non-descript pre-Columbian sherds were collected there. Behind Devon Mark's house (formerly Monica Mark's, his mother), we found a number of sherds scattered in the gardens. At least 4-5 board houses are on top of the site, all with gardens (the entire area is planted or fallow). As Cody described, the site appears to go from the road/houses all the way (southeast) down to the river. Michael Jessamy also mentioned a workstone in the river near the site, but it was too overgrown and we were unable to locate it in 2016.

Two auger tests were performed in Devon's yard, each going ~2m deep and repeatedly finding ceramics and charcoal. Most sherds appeared to be Suazey series, but some were higher-quality than is typical for that series. Devon also showed us some zoomorphic adornos, red-rimmed plate fragments, and a polished green celt— all appearing more Barrancoid in style. Unfortunately, two charcoal samples from AT-1 (one at 40-50cmbs, another at 70-76cmbs) both associated with ceramics, came back as modern radiocarbon dates (!), indicating substantial disturbance in this area. Samples from AT-2 are currently awaiting testing.

Firm dates on this site would be desirable, as the occupants are likely responsible for the Mt. Rich petroglyph just a few hundred meters down the river. Montreuil is also one of just two confirmed inland Amerindian sites (the other being La Filette), so knowing its chronology— and everything we can about it!— is of utmost importance.

[2017 update-- the workstone was indeed located (see photo), and in July, we excavated a 2x1 unit in Devon's garden. More to follow in the 2017 report.]

References  
PJR 1981, FFR Inventory (Cody 1992), Hanna 2017
Savanne Suazey may not be well-known among Grenadians, but it is probably Grenada's best known site amongst Caribbean Archaeologists. That is because Savanne Suazey holds the honor of being a "type site" for the "Suazoid" or "Suazan Troumassoid" ceramic series—a specific type of pre-Columbian pottery defined by Ripley Bullen in his 1964 booklet. While Bullen's "Caliviny" pottery type is sometimes referenced with Troumassan Troumassoid styles, none of his other pottery types from Grenada became widely used.

GREN-P-3 was excavated by both Ripley Bullen and Ann Cody. Bullen recovered five burials while Cody successfully provided a strong radiocarbon sequence. Careful analysis of the RC dates available reveals that Savanne Suazey was occupied from as early as calAD 860 and probably up until the Contact period.

Bullen 1962
The purpose of Bullen's visit in 1962 was to investigate a site found by Grenadian journalist Alistair Hughes and mitigate the impact of a planned resort. Bullen identified three main loci of the site: a promontory to the north (where the current hotel is located), a small rocky outcrop to the south, and a scrubby beach area in between. Bullen reports that only a few sherds were found in the beach area (Bullen 1964b), and his efforts were duly focused on the northern and southern promontories. Hughes had found burials eroding into the sea on the southern, lower promontory, and so Bullen first placed
three, 5x10’ (~1.5x3m) trenches (A-C) on the western side of the footpath, and a fourth trench (D) on the eastern side, between the path and cliff.

Trench A recovered the burial of an adult female in the eastern wall (Burial 1). Trench B contained a 3-year old child burial (Burial 2) and two stone beads in the child’s neck region. Trench C had more pottery and faunal material and an adult—possibly elderly—male burial (Burial 3), which may have been placed underneath a hearth (given the reddened area around it). There was also an adornment of what he identified to be an agouti (Plate XXII,3), along with actual agouti, turtle, and fish bones. Trench D had the most pottery, some fauna, and two burials (Burials 4 and 5). Hughes had partially excavated Burial 4, a young-adult female. Burial 5 was reportedly an adult male. None of the burials were well-preserved and the midden was clearly concentrated closer to the cliff, where much of it had probably already eroded away.

It should be noted that Bullen’s excavation techniques were not described, but photographs of his excavations (for instance at Pearls) showed he did not screen the excavated material. Instead, Bullen hired local workers to dig large trenches, from which he picked out the biggest pieces and prettiest pottery. He does seem to have loosely split the vertical differences (“top” and “bottom” of the pit), but the lack of small artifacts and fauna from his excavations does not mean those things were not present—rather, the excavation methods failed to recover them.

On the northern locus, Bullen placed two “tests” running N-S, about 15’ from the cliff’s edge, where sherds could be seen actively falling down the 40’ cliff into the ocean. Test A was 5’x 16’ (~1.5x5m) and Test B, to the north, was 5’x 8’ (~1.5x2.5m). He found the midden was again concentrated on the eastern side, hugging the cliff, and appeared more abundant in the southern trench, where he expanded the unit.

As with the southern section, much of the northern part of the site had eroded away, with cultural material tapering off to the west. The vast majority (Bullen calculates 83%) of pottery fit within his Suazey ceramic series, including a complete snuff vessel (Plate XXII,2). At the deepest levels, he also identified his Calivigny polychrome and occasional Simon series. Aside from abundant pottery, Test A contained “cut bone” and a groundstone “loom weight”.

Bullen also noted a “narrow ridge” at the base of the northern promontory which he identified as an historic roadway (this is visible on Jeffrey’s 1775 map).

The presence of the earlier pottery styles led Bullen to hypothesize the southern section was a later expansion of an older, northern section of the site (Bullen 1968:11). [Note that the radiocarbon dates available actually show the opposite pattern—see discussion below]. The southern section also contained a few sherds of Spanish olive jars and a number of Bullen’s "Savanne Plain" sherds, which Kirby later argued were Cayo ceramics made by Island Caribs (Kirby 1976?). He also observed that only the southern section of Savanne Suazey produced any notable amount of finger-indented sherds amongst his entire island survey (Bullen 1964:13).

Adelaide Bullen’s skeletal analysis of the burials hypothesized that dental caries evident in the burials suggested access to sugar cane. This further corroborated the Bullens’ conclusion that Savanne Suazey was a Contact-era, Island-Carib site. [In re-reading this argument, it seems clear that this could be also the result of increased maize in the diet as well—or probably increased reliance on any dense carbohydrate.]

As mentioned, the ceramic type Bullen associated with the site consisted mostly of incised plainware, with diagnostic “finger-indented” rims and “scratched” decorations. Though archaeologists still use these terms, it is understood that Bullen’s descriptions were based more on the belief that Caribs were warlike and therefore "artistically destitute" (Bullen 1964:56) rather than the actual ceramic techniques. For instance, “scratched” pottery was most assuredly achieved with a comb or grading tool and is reminiscent of the texture of coral. A crescent-shaped groundstone artifact (ibid:Plate XXII:5) was also seen as corroboration of occupation by historic Caribs, which Bullen ascribed to be the "caracoli" adornments mentioned in historical accounts (ibid:58). Leon Wilder thought they were canoe prows (Wilder 1980:34). (This one is almost certainly on display in the Hughes Collection at the Westerhall Museum, and it was apparently from Trench "D"—see photo.)

Bullen was not first to describe a pottery style like Suazey. In the 1950s, one of Irving Rouse’s students, Marshall McKusick (1960), described finger-indented rims and legged vessels of his Fannis and Choc styles, as part of the Troumassee series in Dominica and St. Lucia. Bullen knew McKusick’s work and confirms the association of these styles with Island-Caribs (Bullen 1964:56). Both archaeologists asserted an association with South American immigrating groups that became known as "Caribs".
In their 1972 publication on St. Vincent, the Bullens reported a number of sites that contained Suazey and Calivigny pottery, and they published a radiocarbon date obtained from a conch shell in the southern locus of Savanne Suazey. At the time, correction via δ13C (i.e., normalizing to –25‰VPBD) was not well understood until Stuiver and Polack (1977), nor was calibration for the marine reservoir effect. Thus, Bullen's dates were therefore neither corrected, nor calibrated! (Interestingly, for shell, these adjustments sort-of negate each other, so Bullen's reported dates of AD 1290–1510 were not very far off). After correcting and calibrating, the date is calAD 1230–1640. (Correction obtained using Stuiver and Polach's table (1977: 358) to estimate the δ13C value and then input into a fractionation spreadsheet provided on the CALIB website (Stuiver and Reimer 2015)).

Cody 1994
Because Cody's dissertation focused on identifying Contact-period sites, she conducted a surface collection and augering program at Savanne Suazey and excavated five units (four in the southern section), trying not to place units atop Bullen's former excavations.

Unit 8.5N/21W was on the NW edge of the southern point, east of Bullen's Trench A. Cultural material found only extended to 20cmbs and included a mixture of prehistoric and historic materials, including abundant fauna, diorite beads, a shallow bowl with annular base, and a hand-wrought nail. Charcoal from this unit dates to calAD 1050–1285.

Unit 5N/17W was to the east of the first unit (on the map anyway--Cody's text says "west"). A number of Suazey-style ceramics were found, including a shallow bowl with annular base, footed-griddles (which Cody--in line with Drewitt 1991--rightly assigns to the entire Troumassoid period, contra Allaire 1997:26), finger-indentated rims, and also fingerNAIL-indentated rims (Cody Holdren 1998:Figure 5-11). Fauna and three worked conch shells were recovered. In the NW corner was a posthole and an adjacent, small support "buttress" posthole. One wonders if this was related to the "hearth" feature identified in Bullen's Trench C, just to the south, and under which was found the adult male in Burial 3. Charcoal from the posthole dates to calAD 775–1020, though the probability of the true date lying between 775–860 is just 5.9%, meaning there is an 89.5% chance the date actually lies between calAD 860–1020.

Unit 3.5S/19.5W to the south was essentially sterile of cultural material. Cody postulates that this unit was atop one of Bullen's trench--a possibility, of course, but her adjacent unit should have hit it as well, unless it was Bullen's Trench C on the edge of the footpath. (And as mentioned above, Bullen didn't use screens, so there should be plenty of artifacts left in his backfill!).

Unit 1.5S/17W just to the east, contained a burial dug into the sandstone bedrock. The burial consisted of an adult male and the tooth of an adolescent child. Charcoal from this burial dates to calAD 1020–1250.

Cody (1998) provides a radiocarbon date for the "NE Locus" of P-3, but no report is available of where exactly it was. On a bag inventory form at the GNM, a hand-written note says it was a trench for a fence at "Ms. Prince's House," and references a sketch map that has since been lost. A small amount of pottery (11 pieces), fauna, and a groundstone artifact were recovered, but no descriptions are available. Certainly we could track down where Ms. Prince's house was, but at the moment, it could be assumed to be in the vicinity of the Suazey hotel, perhaps the living quarters attached to the hotel or the house across the street. The radiocarbon date for this locus is calAD 1675–1945, almost certainly from an historic/colonial-European context.

In her multivariate analysis of ceramic assemblages across the island, Cody notes that her "Galibi" sites (Galby Bay and La Tante), pulled towards sites with Suazey ceramics, despite those sites not having diagnostic Suazey pottery themselves. It is notable, however, that there is considerable overlap between the dates from La Tante and those of Savanne Suazey, though the posthole from 5N/17W dates much earlier. There is also overlap with the dates from Sauteurs Locus 1, and possibly Grand Anse.

DONOP 2005
Using the assemblage from Savanne Suazey that Bullen brought back to Florida, Mark Donop conducted a thorough reanalysis of the ceramics from the site, principally from a techno-functional perspective, and wrote it up as his Master's thesis (Donop 2005). Donop notes that finger-indentated rims and "scratched" exteriors were only found on wide, excursive bowls, which were the majority of vessel type found. Such vessels allow faster evaporation than recessed vessels, but the
thick walls and flat bottoms would have been more susceptible to thermal stress in direct heat. Scratching may have been a way of thinning vessel walls to a uniform thickness while increasing thermal conductivity and facilitating gripping and drying. The lack of vessel legs and handles at Suazey (Cody only found one leg) suggests these vessels were not very mobile. Some sooting on exterior surfaces suggests they used in direct-firing, but Donop hypothesizes it to have been short-period heating or prolonged simmering at low temperatures, though evaporation would still have been a problem. It's possible that some were serving or storage vessels.

Following Allaire's (1977) suggestion, Donop hypothesizes that Suazey vessels would have been perfect for salt production (and by extension-- as Allaire suggests-- the barren, coastal locations of many Troumassoid-era sites were geared towards marine resources and salt-production). He mentions that combed ceramics in the Maya Late Classic are associated with salt trade for the same technological reasons. He provides a useful comparison of other Suazey-series assemblages in Martinique, St. Lucia, St. Vincent's, and Barbados (Table 5-3), and points out the variability in frequency of what are supposed to be diagnostic traits of Suazey. He concludes that the Suazey series ceramics are not an ethnic identify defined by a decorative style, but rather a style representing intentional patterns for specific vessel functions.

Given the aforementioned problems of recovery associated with Bullen's excavations, it's not clear if Donop's conclusions would hold true if the same analyses were conducted on, for instance, Cody's assemblage from Suazey (which was wet-screen in 1/8" mesh). Nonetheless, the thesis provides an in-depth discussion of this important ceramic type.

Hanna 2016
A quick walkover of the Suazey site in 2016 revealed sherds falling into the sea from the northern cliff. Walking further north, towards Bathway, numerous sherds were found in side-cuts along the cliff. Clearly occupation continued further north than Bullen suggested. There are also a series of sites to the south that are probably contemporary with Suazey (High Bluff, Calabasse, High Cliff Point, etc.).

There was also an enormous amount of illegal dumping in the area, particularly construction refuse all over the northern edge of the site. The current Suazey owner (Donald ____), said that it started after Hurricane Ivan in 2004, as a temporary way to quickly remove rubble. A few trucks never stopped coming. An article in NowGrenada attempted to raise awareness and stop the transgressors (see reference below). However, a visit to the site in March 2017 showed fresh rubble piles.

References
Bullen 1964a,b
Cody Holdren 1998
Donop 2005
Article on Dumping at Suazey in NowGrenada: http://nowgrenada.com/2016/07/would-you-want-this-in-your-back-yard/
In his 1981 report, Henry Petitjean Roget reported a site his father (Jacques) had found at Levera. (During the 1969 IACA conference in Grand Anse, Levera was actually one of the sites attendees visited.) PJR didn’t visit it during his 1978-80 trips, but noted that the site was a ceramic scatter with WOR sherds and adornos, situated, “to the left of the inland road in a wood of sea grapes, just beyond the end of the cement road leading to the beach,” (PJR 1981:28). Those directions—like so many of his location descriptions—are incredibly confusing and make finding the site miserably difficult. Is it on the beach? Is it near the pond?

A bag at the GNM revealed that FFR had made a collection here, likely Thomas Banks without Cody (since there is no paperwork), and probably in 1992 or 1993 (since P-5 is in his 1993 report). [Parcel AY at GNM had SCs from locus C and B--no description of location or date, but a ZIC sherd is present, along with poorly-preserved red-painted wares]

In 2016, Jon Hanna attempted to re-locate the site, to no avail. Pedestrian survey along the beach did not produce any artifacts, nor did a survey along the easternmost road near Bedford Point. Real estate developer (and former British diplomatic representative) John Albany has largely restored an old British (?) battery at Bedford Point, but the project has apparently stalled. He still appears to be selling house plots around the point. An auger test was conducted at the bottom of the hill, north of the battery, but was culturally sterile.
*[Note that the test was recorded as P-20, before it was known FFR had assigned it P-4] More tests were planned along the “inland road” but were discouraged by the pedestrian survey described below.

PJR’s directions most likely place his father’s site somewhere in the vicinity of the point on the attached map. A pedestrian survey down this road (headed north) revealed massive construction disturbance, apparently part of a controversial foreign development scheme greenwashed as “ecotourism.” It’s unclear what kind of “ecotourist” would be interested in a completely bulldozed, artificially-created environment that had been a protected natural reserve? This is a case example of what happens with legally protected natural and cultural sites throughout the Caribbean: they’re not actually protected, developers just have to pay more to have it.

Undoubtedly, whatever sites were there have been destroyed. Leiden mentions a site near the beach (FL 2016), but it’s unclear if artifacts were actually found, or if this description is based on PJR’s report.

References

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Sauteurs Bay consists of at least three loci that together represent a large settlement that persisted for at least 1000 years. It ranks with Pearls as being extremely unique and important not just for Grenada but for Caribbean archaeology overall. Yet, because of the way the site was published, it has not received adequate attention.

PJR 1981
Petitjean Roget first reported finding Suazey pottery, "on the left side of the causeway leading from Sauteurs to Laurant Point just before the bridge over Little St. Patrick River. Further on, on the right side of the causeway, a cricket pavilion has been built. In the surrounding fields and along an old canal parallel to the shore, many sherds are to be found," (PJR 1981:28). As with many of PJR's descriptions, however, the directions don't really make sense (e.g., "right" side would be the beach, going towards Laurant Point, while the cricket field is to the left). He probably meant the area that would become Cody's Locus 2.

FFR (Banks) 1993
Thomas Banks reported finding a site west of the Little St. Patrick River, south of the old canal (Banks 1993)-- probably the same place PJR investigated, in what would become Cody's Locus 2. No thorough report is provided, but he mentions that both Saladoid and Suazoid pottery were found, and that this may be part of the village that was attacked by the French in
1650 (now known to be 1649) (Martin 2013). Interestingly, PJR only noted Suazey pottery here, while Banks found Saladoid. This may bolster Cody’s belief that some of the soil (and artifacts) in this area may have come from Pearls during the Cocoa Rehabilitation Project in the late 1980s.

CODY 1994
In 1994, Ann Cody extensively surveyed and excavated six units in the area, identifying three loci, of which Locus 1 contained the most findings (at least 18 burials and the floor of a house structure). Cody describes the site as concentrated in the eastern section of the bay, intersected by the Little St. Patrick River-- the southeastern-most river in the bay. Loci 1 and 2 are west of the river, Locus 3 is east (though she labels Locus 3 as the “SW” locus).

LOCUS 1
Locus 1 includes Surface Collection A and B and four excavation units on the edge of the beach. Locals had reported skeletons washing out to the sea here after a storm surge from Hurricane Hugo in 1989.

Unit 120N/127.5W contained the disarticulated remains of at least nine people, capped by large coral and overlying a layer of white clay. Most were young adults, but one individual was a small child between the ages of 3-11. The unit was expanded several times to the SW in order to fully expose the burials, and the first 50cmbs was not screened (and apparently the first 85cmbs of the extensions). Artifacts included both prehistoric and historic pottery, a glass bead, and three kaolin pipe fragments between 80-90cmbs, associated with the burial feature. Charcoal from this level dated to calAD 765-1185, while at least one of the pipes contained a rouletted bowl likely of English origin, dating to 16th-Century (Cody 1998:106, and see figs 6-2 and A-4).

Unit 111N/117.NW was opened ~20m to the SE of 120N, in order to gauge the extent of the burial feature. Very little bone was found (MNI=1) and no “coral-capped burial feature”, but the white-clay layer was more intact and believed to be a house floor, complete with a post-hole (unfortunately, she did not try to expose the entire surface). Above the floor were a mixture of prehistoric, historic, and modern refuse, including a “drilled coin” and another 16th-Century English pipe fragment (Cody 1998:106 and fig 6-3). Teeth and/or cranial fragments of cat (Felis catus), pig (Sus scrofa), and goat/sheep (Capra hircus/Ovis aries) are also mentioned for this unit, likely with the other historic artifacts above ~70cmbs, but no depth was provided (Fradkin 1996:49, Cody 1998:107). Lastly, Cody’s sole diagnostic “Cayo” sherd (though see D-3, Galby Bay) was recovered from this unit at 32cm bs. Charcoal from the posthole going through the white clay at 80-90cmbs was radiocarbon dated to cal AD 1045-1380.

Unit 127.5N/137.5-138.5W was a 1x2m excavation ~20m to the NW of the first unit, placed to find the western extent of the burial feature. Some historic materials were found in the first few layers. At 50cmbs (so see note on measurements below), large coral again appeared, and between 100-110cmbs, the disarticulated remains of at least six individuals were found-- possibly 7-- also penetrating a white clay floor surface, as in 120N. Faunal remains such as turtle bones were also found in this level, as was a single “concretion of iron”. Just below, at 130cmbs, a semi-intact burial (missing both feet and one leg) was exposed, associated with a dog skull, a shell bead, and teeth and bone fragments from another individual. It appears that a “scratched” and interior-thickened rim sherd were also found at this level (Cody 1998:Fig 5-2). In all, the remains of roughly eight individuals were found, and some of the upper bones showed evidence of rodent “gnawing” (Cody Holdren 1998:197). A radiocarbon date from charcoal associated with this unit (no depth) dates to calAD 900-1210. A pipe-bowl recovered above the coral blocks (exact depth unknown) is likely of 17th Century Dutch origin (Cody 1998:106,197).

Note on Profile/Measurement Errors
The measurements for Cody’s profile drawings for Locus 1 do not match the measurements in the text. For example, for 127N, the text says the coral cap starts at 50cm, whereas the profile puts it at ~1m. For 120N, the text says coral starts just above the kaolin pipe stems at 90cmbs, while the profile has the coral chunks at ~180cmbs. 127.5N is the only profile with a definitive surface level marked, while 111N seems to have a datum symbol denoting the top line. Yet 111N is the only profile that matches the text, suggesting the top line is the surface, not the datum.

As such, the only way to move forward with understanding this is to wiggle-match the profiles and the text as best one can (see working image).

Discussion of the Radiocarbon dates, Floor Surface, and Burials
A layer of white clay that may have been an ancient floor surface was found in varying states in each unit, ~90cmbs. In the middle unit, it was found ~100cmbs, penetrated by a mass burial below. In the SE unit, it was found intact, as an ancient
The floor surface, complete with a posthole, between 80-90cmbs. In the NW unit, it was found at somewhere between 50-100cmbs (see measurement error note above), also penetrated by burials. It therefore appears that these burials were placed near or underneath a structure. The posthole dated to cal AD 1045-1380, while the charcoal associated with the burials was somewhat earlier (765-1185 and 900-1210). This seems odd, given that the floor surface that they penetrated should be earlier. To muddle the chronology more, historic artifacts dating to the 16th Century were also associated with the burials, while a 17th Century one (and a Cayo sherd) were found above.

Generally, the radiocarbon probabilities show the burials in 120N to be earliest (calAD 770-1184, CI:95.4%), followed by the charcoal from the 127.5N burials (calAD 966-1207, CI:94.2%), and finally by the charcoal from the posthole in the floor (calAD 1148-1299, CI:89%). An attempt to combine the two burial dates in OxCal 4.3 produced significant agreement between calAD 954-1160 (CI: 92.9%). The window for placement after the posthole, however, is AD 1148-1184, and modelling the dates with the posthole as a terminus post quem did not produce adequate agreement. It is possible that the charcoal from the burials was inner, older wood, while the posthole sample was outer wood that dated closer to the event. It’s also possible the context is completely disturbed. The charcoal within the burials could also have come from anywhere, so the posthole and the pipe-stems are the most reliable indicators. That said, given my own (JH) struggles with modern charcoal from deep deposits and associated with ceramics (see Hanna 2017), we shouldn’t dismiss prehistoric charcoal dates. But until the bones themselves are dated, the evidence suggests the burials post-date the floor and were deposited after calAD 1150-1300, most likely in the mid to late 16th Century.

Cody lists several possibilities for interpreting the mass burials, including victims of the Leaper’s Hill incident, Amerindian ritual reburying, ritual sacrifice/cannibalism, European disease victims, and a secondary burial during historic times. She concludes that, given the historic artifacts found, the Amerindian bones were probably from elsewhere and reburied during historic times. However, an admittedly cursory look at a few historic maps do not indicate the presence of structures west of the Little St. Patrick River. I’m also not aware of Europeans taking such care to rebury the remains of people they believed to be cannibalistic savages and then cap the burial with coral blocks! Moreover, these Europeans also happen to have randomly placed the burials atop at least one other actual burial (the bottom of 127N) and near, if not under, a pre-Columbian structure, much as Amerindian burial practices would have done. Moreover, the historic artifacts below the coral blocks were all likely from the 16th Century— long before historic disturbance in the area.

Additionally, the articulation of some long bones indicates that there was still flesh holding some bones together when they were deposited, which goes against typical defleshing and re-burial practices that would have waited for the entire flesh to have been decomposed (REF). The evidence for post-mortem gnawing, however, suggests they were not immediately buried. The lack of evidence for violence rules out warfare, and the presence of a small child seems to counter the story of Leapers Hill, as do all the other chronological indicators.

Perhaps these were victims of an early wave of European disease? Martin (2013:11) recounts several mentions of Europeans, particularly Dutch, trading with Grenada's Island Caribs for tobacco, along with several tales of Europeans and Africans held captive on the island. In 1614, one Spaniard trader, Nicolas de Cardona, claimed to have freed two African women, two mixed European-Carib children, and a Christianized "Indian" from Paria (Martin 2013:29). Cardona’s description and accompanying painting leave little doubt that the site was Sauteurs Bay (Martin 2013: Illustration 2.1). Cody notes the lack of any pathological indicators on the bones (Cody 1998:201), but many diseases do not effect skeletal (or dental) structures (Boldsen and Milner 2012).

Another possibility, admittedly more remote, is that of natural disaster— perhaps a hurricane or earthquake-induced tsunami. The latter is a strong possibility, given the site's proximity to the most active underwater volcano in the region, Kick'em Jenny. Seismic mapping of the volcano has suggested massive collapse events in the past that would have produced devastating tsunamis in northern Grenada (Lindsay et al. 2005:20).

Locus 2

Locus 2 runs from the west side of the river along the canal and include Surface Collection C, one excavation, and six small trenches. No artifacts were found in the playing field, and Cody was skeptical of the "Saladoid" material found in the cocoa trees-- which, as mentioned above-- was suspected to be from the Cocoa Rehabilitation Project's removal of soil from the Pearls site.

Unit 18.5S/7.5W was just 54m west of Little St. Patrick River and 70m from the coast, east of the playing field. Pre-Columbian pottery was found throughout, including scratched types, a vessel foot, and one curious rim made of volcanic
tuff (Figure A-15). The teeth and/or skull of a rat (Rattus sp.) is also mentioned (no depth given) (Fradkin 1996:49, Cody 1998:107) Charcoal from this unit (no depth) dated between calAD 1450-1645.

Unit 45N/114.5W was a "trench" excavation (probably 25x100cm), that seems to have been just beyond the NW corner of the playing field, in an area that would arguably be a separate loci (it’s almost equidistant from loci 1 and 2). Between 25-40cmbs, a burned-earthen feature was encountered that Cody interprets to be a "clean hearth." While the soil was friable and brightly colored, very few artifacts were encountered. A piece of charcoal from the bottom of the hearth dates to calAD 1295-1485. Very little other artifacts appear to have been recovered here.

LOCUS 3
Locus 3 (aka "SW Locus") is east of the Little St. Patrick's River, comprising only Surface Collection 'D'. Construction of the Sauteurs fish market reportedly dug up part of the locus. No excavations were conducted here and collection was mostly in the backdirt of a house construction. Cody's Figure 5-10 depicts a finger-indented rim from here, while a piece of charcoal from this area holds a radiocarbon date of calAD 660-880 — the earliest available for Sauteurs. Cody notes the early date for Suazey pottery supports the hypothesis of Suazey as an in-situ ceramic development (Cody 1998:102). Additionally, the presence of “Island-Carib” Cayo pottery to the west supports Cody’s rejection of Rouse’s multiple-migrations model based on ceramic styles, in favor of more fluid ethnic identities. Her “reticulate model” accommodates the interactions and influences evident in the archaeological record without the need for whole-sale, monolithic conquest and migration. To Cody, the colonial ethnic category of “Caribs” was a heterogeneous mix of peoples with both mainland and insular influences. The continuity of settlement evident at sites like Sauteurs Bay is testament to the fact that these particular “Caribs” had ties to the landscape going back a millennium.

References

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<thead>
<tr>
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<tbody>
<tr>
<td>PJR 1981</td>
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<tr>
<td>Banks 1993</td>
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<td>Cody Holdren 1998</td>
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</table>
**[Unknown FFR Site]**

**Parish:** St. Patrick's

**Coordinates** (WGS84) [redacted]

**Previous Work**
- Thomas Banks
- Bill Keegan
- Jon Hanna
- Henry Petitjean Roget
- Ripley Bullen
- Corinne Hofman
- Lesley Sutty

**Diagnostic Ceramics**
- WOR
- ZIC
- Adornos
- Scratched
- Finger-Indented
- Polychrome
- GriddleFeet
- Saline Wide-Handle
- Caliviny Unique Adorne

**Ceramic Period**
- Unknown
- Historic
- General Post-Saladoid
- Cayoid
- Suazan Troumassoid
- Troumassan Troumassoid
- Saladoid-Barrancoid
- Early Saladoid

**Threats**
- Erosion
- Sand Mining
- Construction/Develop
- Illegal Dumping
- Looting
- Vandalism
- Tourism Impacts
- Unknown
- Already Destroyed

**Recommendations**

**Notes**
P-6 is only known because FFR reported other sites in St. Patrick’s with later site #s.

**Summary**
Unknown site found by FFR, probably one that Thomas Banks investigated alone and never reported. It's likely one the sites between High Cliff Point (P-7) and Savanne Suazey (P-3).

It is possible P-6 is a known site with a different site #

**References**
In 1962, Ripley Bullen had surveyed as far south as Calabasse, at the base of High Cliff, but he either did not go up the hill or didn’t find anything up there.

In the FFR 1993 report, Thomas Banks says he collected a number of “brown slip” Amerindian pottery in a wind-blown, eroded section of the point.

In 2016, Hanna surveyed the area and collected soil samples for phosphorus testing. Four auger tests were placed near the point itself and three more behind (to the west), as control samples. Soils were thin, and while surface finds were found all along eastern cliff exposures, only STP-12 and STP-13 contained ceramics (as well as faunal remains through ~30 cmbs). Ceramics were mostly non-diagnostic, but a few scratched, red-painted, and black-painted/slipped were found that seem to give a tentative assignation of Suazan-Troumassoid.

Phosphorus levels confirmed the Cliff’s edge to be the densest midden area, where STP-12 measured higher than any other sample taken during this project (see attached map).
Leiden also reports having surveyed High Cliff recently, but little has yet been released (Faculty of Leiden University 2016).

References

| Banks 1993 |
| Hanna 2017 |
| Faculty of Leiden University 2016 |
In the FFR 1993 report, Thomas Banks collected a number of Suazan-Troumassoid sherds (scratched, red/black paint, flanged rims, incised bodies and rims) on the north side of the mouth of River Antoine. Bags at the GNM also include a diorite bead, worked shell, spindle whorl, and chert flakes.

In 2015, Jon Hanna surveyed along the road near River Antoine Distillery and found some sherds on the east side of the road, labelled “loci 2” here. During the 2016 survey, he conducted an auger test south of the river, where some pottery sherds were found on the surface. Aside from the surface scatter and some questionable charcoal, the test was sterile.

Recently, Leiden University has extensively surveyed the area and identified a number of pre-Columbia loci, many of which are lumped with P-8 here (e.g. pts. 8 and 10 on their 2016 map). Undoubtedly this is all the same site, though Leiden reports their loci #10 contained “Saladoid” material. As no diagnostic descriptions are given, it is left as Suazan-Troumassoid here, but there appears to be potential for a much earlier assignation.

References
Banks 1993, Faculty of Leiden University 2016, Hanna 2017
In the FFR 1993 report, Thomas Banks says he collected Suazan Troumassoid pottery (scratched designs, black paint, and an anthropomorphic figurine) scattered across most of Artiste Point. He believed the site was quite large, but examination of the wave cuts on the beach suggested it was deeply buried.

According to a recent report from Leiden University (FL 2016), local enthusiast Dolton Charles recovered a number of artifacts here after heavy rains eroded a large section of the site in 2010. Mr. Charles apparently did not contact the GNM or Ministry.

In 2016, Leiden excavated six 2x2m units, and three “larger” units, as well as eight shovel tests in order to determine the size and extent of the site. Just the top 20-30 cm were removed via shovel-skimming, though artifacts were only screened by hand (not sieved). A series of postholes in the larger Units 7 and 9 allowed mapping of two pre-Columbian house structures as well as an adjacent burned patch believed to be a kitchen area.

Leiden confirmed most of the point was occupied, with the site stretching 200m along the coast and 50m inland and artifact concentrations highest on the south-west base of the point. Large potsherds have been recovered in the bluff eroding onto the beach. A locus to the south has reportedly contained “Saladoid” material, though no descriptions have been given.
Cayo ceramics, fauna, carved lithics and shell, as well as European pottery and coins were found in the excavations. Only a small amount of shell was apparently recovered, and reportedly all of the pre-Columbian ceramics were of the Cayo series—typically unrestricted bowls with white-painted interiors, or large, restricted jars with small rim incisions or modelling.

Of the fauna, isotopic analysis has tentatively found that perforated teeth from a tapir and peccary recovered in excavation were probably traded from the Guiana Highlands and appeared to be from the same source as bone pendants analyzed from the La Hueca-Sorce site in Vieques, PR. Bones of a cottontail rabbit, dog, opossum, and a possible anteater all may have been raised in Grenada.

Obviously more is to come from La Poterie, and this entry should be updated accordingly.

References
Banks 1993, Faculty of Leiden University 2016, Hauser and Hofman 2017
During his 1980 visit, Henry Petitjean Roget noted a site at the mouth of the river (PJR 1981:28)—no description of the pottery was given.

In the FFR 1993 report, Thomas Banks says he collected a number of incised, scratched, and griddle sherds, as well as ground stone and a bead, at a site he reports as in “good condition...due to remoteness.”

The site has not yet been systematically investigated.

Location estimated

References: PJR 1981
During his 1962 survey of the island, Ripley Bullen conducted a quick surface collection along the Calabasse River, just south of his Savanne Suazey excavations, and he labelled on his map (Bullen 1964:4). The sherds he found fit mostly in his Suazey series (including finger-indented and scratched), though there were a few Simon sherds as well.

In the FFR 1993 report, Thomas Banks says he collected scratched, red-painted, flanged, and griddle sherds, as well as a European pipe-stem. He says the area was “slated for development,” which never apparently happened. Banks also called the site “Calabash Bay” and does not mention the river, but he most likely meant Calabasse, as no other possibility is known in St. Patrick’s.

In 2016, Hanna surveyed the area and found a few scratched sherds along the river. Auger tests STP-4, STP-5, STP-6, and STP-7 all had occasional micro-sherds, but nothing diagnostic. STP-5 had scratched ceramics in the upper levels, while STP-4 and STP-7 contained charcoal and micro-sherds through ~85 cmbs, at the bottom of a plowzone. Some historic rubble and earthenware were evident on the surface (see map), indicating colonial-era disturbance.

Generally, the scattered sherds did not concentrate in any clear area, making the site’s boundaries enigmatic. However, the phosphorus readings (see figure) indicated peak levels near the center of the main artifactual finds. This provides a nice
example of how phosphorus readings can offer an alternative, independent lens of a midden’s boundaries.

References

Bullen 1964, Banks 1993, Hanna 2017
GREN-P-21  High Bluff

Parish  St. Patrick's

Radiocarbon Dates (Preview)

Diagnostic Ceramics
- WOR
- ZIC
- Adornos
- Scratched
- Finger-Indented
- Polychrome
- GriddleFeet
- Saline Wide-Handle
- Caliviny Unique Adorne

Ceramic Period
- Unknown
- Historic
- General Post-Saladoid
- Cayoid
- Suazan Troumassoid
- Troumassan Troumassoid
- Saladoid-Barrancoid
- Early Saladoid

Previous Work
- Ann Cody
- Thomas Banks
- Bill Keegan
- Jon Hanna
- Henry Petjean Roget
- Ripley Bullen
- Corinne Hofman
- Lesley Sutty

Threats
- Erosion
- Sand Mining
- Construction/Develop
- Illegal Dumping
- Looting
- Vandalism
- Tourism Impacts
- Unknown
- Already Destroyed

Notes
Site # assigned in this report

Summary
Just south of Savanne Suazey, rising out of the Sallee River, is the hilltop site of High Bluff. Like the other hilltop areas along this coast, High Bluff is a crumbling cliff that rises ~25m above the sea below. The geologic stratigraphy here was identified by Arculus as scoria and ash beds from several pulses of explosions in the Antoine Lake crater, composed of alkali basalts (earliest) and consolidated andesites (older), which appear to have been deposited in the last ~10,000 years (Arculus 1973:31,76; Arculus 1976).

In his 1962 survey of the island, Ripley Bullen mentions finding “a sherd of Suazey Plain... on the top of the next bluff,” (1964:17). He doesn’t devote any more time to it, but the site is featured as site #4 on his map of the island (1964:4).

In 2016, Hanna surveyed the site and collected artifact and soil samples. Soil has eroded a few meters back from the cliff face, where the exposed profile reveals dispersed pre-Columbian pottery (see figure). On the trail going down the south side, a large fissure was opening up, indicating more of the cliff will eventually crumble—perhaps soon.

Three auger tests in the area had varying results. STP-1 to the NW of the open section of the cliff hit bedrock at 21cmts, but there was a possible Ab horizon just above bedrock. STP-2 was placed directly west, just above the exposed section, and went 68 cmts before hitting bedrock. An Ab horizon was confirmed here from 20-60 cmbs, where soil was slightly darker.
(10yr 3/1) and contained numerous ceramics and charcoal remains. STP-3 was placed just south of the exposed cliff and did not contain ceramics or an Ab horizon. Phosphorus results were not as enlightening as Calabasse and High Cliff, showing higher levels in STP-1 than in the concentration of artifacts on the exposed section and just west in STP-2.

Most of the ceramics were heavily broken and non-descript, though most appeared to be late. One "scratched" sherd was found.

References

Bullen 1964, Banks 1993; Hanna 2017
In March 2017, Angus Martin and Jon Hanna found a site along the banks of the Duquesne River, southeast of the Duquesne Bay site (M-3). Artifacts were a mix of European earthenware and late pre-Columbian types (thick, high-temper, coils evident), with one possible “scratched” sherd. Two higher-quality, red-painted rims were also present (one flaring, the other symmetrically-thickened), and the top of a possible Spanish Olive Jar (SF-5). In some places, slate and construction materials were also mixed in (see photo). Thus, most of the artifacts had probably been pushed towards the river's edge (or dumped), so it’s unclear where the original site was. Sub-surface testing is recommended in the fields above the river.

Given that the Duquesne River separates St. Mark’s and St. Patrick’s parishes, the site is indexed under St. Patrick’s.

References

Blondel 1667
During his survey of Grenada in 1962, Ripley Bullen made a short visit to the isolated beach of Big David Bay in the northwest corner of the island. He dug a few shovel tests and made surface collections in the drainage ditches crisscrossing the beach. No major concentrations were found, but he noted that the recent agricultural activity may have had a substantial impact. Bullen reports only finding ceramics—no shells or other fauna, and the majority were in his Suazey series (including a number of scratched sherds). Some red-painted sherds fit his Pearls and Simon series, but nothing definitively earlier by today’s standards. No other researchers have apparently investigated the site since Bullen.

[2017 update-- Jessamy conducted a surface collection in 2017, recovering scratched-ware, BOR/Caliviny polychrome, and vestigial adornos (one 'hawk face' and another "bee" face). The assemblage so far seems very similar to St. John's River (g-8). The area was opened as a public recreation and fishing area, with facilities, in 2017-- probably destroying some of the site. A quick visit in June with MYCEDO confirmed the location. Crab disturbance was also substantial. Further testing is planned later in 2017]

References
Bullen 1964
In 2015, Hanna and Jessamy surveyed along the beach at the problematically-named "Petite Anse" Hotel west of Sauteurs. In the ditches along the hotels' walkways are numerous pre-Columbian ceramics, mostly "scratched" plainware, though some remnant red and black paint was observed. It's not clear if the material came from somewhere else, but a few were found on the beach as well.

At the western end of the beach is Laurant Point, which contains exposures of the Tufton Hall formation-- and therefore, potential chert. We found some brown cherts but nothing definitively worked. A trip is planned for 2017 to investigate further west, where Arculus (1973) reports a larger outcrop.

References
Cody (1998:65) mentions a surface collection conducted along the mouth of the St. Patrick's River at Irwin's Bay that produced ZIC pottery. Nothing else is known about the site, nor the exact location where sherds were found.

Irwin's Bay (sometimes "Irvin") was also a port of entry for many of the East Indian Indentured Servants that arrived in the late 19th Century. My notes says that there were about 10 shipments of ~300 people each between 1857-1885, and that virtually all Indo-Grenadians can trace their heritage to these boats from Calcutta (needs verification) [should be done for historic inventory]
Despite the famous story of Carib's leaping to their death here as the French advanced, very little Amerindian remains have been recovered from Leaper’s Hill itself. Cody (1998:65) reports that surveys on and around the hill in 1992 proved negative (no paperwork is known from the survey).

In 2017, Jon Hanna happened to find a few sherds and a handle (see image) along the fence outside the cemetery, on the western side of the hill, where some benches have been placed overlooking Sauteur’s Bay. It’s unclear where the sherds originated, but they may have been unearthed when cement slabs were placed for the benches (?). More investigations are warranted.

The cemetery here is also home to the final resting place of Walter Clement Noel, the first ever diagnosed case of sickle-cell anemia [this should be added to the Inventory of Historic Places]

The story of Leapers’ Hill can be found in a number of accounts, but the earliest known— and probably most accurate— is that of the "Historie de l’isle de Grenade en Amérique, 1649-59" believed to be written by Father Benigne Bresson, who was a missionary in Grenada between 1656 and 1659. An excerpt of this version is copied below. It is worth noting that a number of writers have said this bloody attack against the Island Caribs represented the total destruction of their
population in Grenada. It wasn’t, and the Island Carib’s survived into the mid-1700s, living on the fringes of colonial, plantation society. Symbolically, however, the Leapers’ Hill incident was a turning point in their losing struggle against the French.

The Story of Leapers’ Hill [copied from the GNM Teacher Kits]
The account in the “anonymous history” begins with the Island Carib called “Thomas,” who wanted to marry the daughter of “Captain Duquesne” (the "chief"). The chief’s son, however, rejected the offer, and after attempting to convince him otherwise, Thomas killed him. Realizing what would happen to him when the Chief found out, Thomas ran away to Martinique. While in Martinique, he approached Governor Duparquet (governor of all the French colonies) and told him that if he wanted to rid Grenada of the Island Caribs, Thomas could “deliver” them. He said he knew of a place in the north of the island where many of them get together to drink. Believing God had sent him this favor, Du Parquet takes the Amerindian’s advice and travels to Grenada. In the afternoon of Monday, 30 May 1650 a force of 60 men, including Thomas, sailed from Port Louis, along the west coast of the island, and on to the northern tip.

“They dropped anchor that evening near a hill called "aux Sauteurs" for the reason that I will tell, across from the bay Duquesne, where everybody landed under cover of night. But before going any further they sent the Savage [Thomas] with two Frenchmen to check if the Savages were there, what they were doing; in other words: the situation. They came back quickly, as if carried by the wings of the wind, and reported that it could never be better, but that they had to hurry to surround them all so no one could escape. They were drinking their wine and feasting, not thinking what might happen to them. This was done, and since they were all in their greatest gaiety, they [the French] discharged their muskets on them. This troubled their party, and suddenly changed their joy into sadness. Who moved was lying on the ground, who stayed received no better treatment; any way they turned there was nothing but fire and slashing sword. Only one way was open to flee, but it ended on a high cliff that stopped them. What will they do? There is no quarter, they must die, and rather than by sword or by firing weapon, they jumped from the top to the bottom of this very steep hill, into the sea where they died by water while avoiding steel and fire. This is why it was given the name of "Morne aux Sauteurs" [Hill of the Jumpers]. Only eight or nine were killed on the spot; all the others jumped [probably about 40], and none escaped. None of ours were hurt, because when they were surprised their confusion was so great that they did not think at all about running to their weapons; they thought only about saving their lives by fleeing, since everything was lost. Then everything was destroyed and set on fire, although we preserved what could be of use to us.”

References
In his 1962 survey of the island, Ripley Bullen notes that, “on the bank of the first stream south of Savanne Suazey, a sherd of Suazey Plain was found,” (1964 17). He found another sherd on the “bluff” above and named it “High Bluff,” but he did not name the site along the river.

In 2016, Hanna surveyed south of Savanne Suazey and also found several ceramics here, near the mouth of the Salle River, including one large “scratched” sherd of Bullen’s Suazey series. Later soil analysis showed that phosphorus levels (an indicator of past human occupation) pulled high in this area, though only one auger test was performed nearby (see figure).

Thus, if High Bluff and Calabasse are separate sites, then River Sallee is undoubtedly one as well. However, it is clear they are all from the same time period and connected in some way.

References
Bullen 1964, Hanna 2017
Isle de Ronde ["Round Island"] is the largest of the Grenadine islets between Grenada and Carriacou. There appear to be two separate sites (R-1 and R-2).

In FFR's 1993 report, Thomas Banks mentions a surface collection on Isle de Ronde, 100 ft. behind the "most southern beach" (Banks 1993). The bag at the GNM from this collection appears to be entirely historic, but Banks reports some non-descript pre-Columbian sherds.

**References**

Banks 1993
In 1993, FFR conducted an underwater survey of the former location Port Louis/Fort Annunciation (the original site of the 1649 French settlement), which had once been on a sandbar that cut off the Lagoon from the rest of the St. George's Harbour. Martin (2007:198-199) places the fort between the Spout (now near the Grenada Yacht Club) and the Ballast Ground (now Port Louis Marina), and says the area was abandoned by 1710 due to flooding. Later maps from the British period show a road going across the sandbar, though at some point (?) it sank below sea level. Martin states that, beginning in 1909, the smaller harbor was drained and slowly filled in (now Tanteen), and in the 1960s, a channel was opened up and the Lagoon became an anchorage (Martin 2007:199,244).

FFR recovered early colonial artifacts AND suazoid pottery (finger-indent ed and scratched, see figure in report), but had to end the investigation early due to the disgusting quality of the Lagoon’s water. It remains unknown if the Suazan Troumassoid pottery found represents a previous Amerindian settlement or simply trade after the French had settled the area. Unfortunately, it is assumed that more dredging of this area (c.1998) destroyed the site during construction of Camper & Nicholson's Port Louis Marina.

References

Banks 1993
Ile de Caille ["Quail Island"] is just south of Ile de Ronde and was surveyed by Leslie Sutty (1978). The site is on a beach, below 150 ft. high plateau, on the eroding windward side of the island, guarded by impenetrable reef (you have to enter from the leeward side). She reports mostly Caliviny and some Suazey types— the only diagnostic piece she mentions is a finger-indented rim, though all were apparently quite large pieces. Shell tools and cowrie tinklers were also found. Presumably, all the artifacts are now stored at the Musée Régional d'Histoire et d'Ethnographie de la Martinique, where Bright (2011, Appendix I:34) says most of Sutty's artifacts were deposited.

Historically, there was also a whaling station on Ile de Caille. I don't know exactly where it was, but the southeastern bay (on the windward shore) is called Whale Bay, so Sutty's site may also have an historic component nearby— though she describes the reef as treacherous. The whaling station is mentioned in Frederic Fenger's (1916) article "Black Mardi Gras" about carnival celebrations in Sauteurs.

Add to Previous Work: Lesley Sutty

Ile de Caille

References

Sutty 1978
Isle de Ronde ["Round Island"] is the largest of the Grenadine islets between Grenada and Carriacou. There appear to be two separate sites (R-1 and R-2).

In 1977, Lesley Sutty presented a study of shells at the 7th IACA congress that included artifacts from a plateau, "on the leeward side of the island," (Sutty 1978:199), continued pounded by the sea and suffering erosion. She mentions finding Suazey/Caliviny sherds on the surface (Bullen's "Caliviny unique adorned", burnished polychrome, body stamps, zoomorphic loom weights), along with a large, beautifully-carved milk conch shell, ~10cm long, which she rightly says, "is in many ways reminiscent of Fred Olson's remarkable specimen from Antigua," (ibid:199). It is also reminiscent of a piece in Neil Wilcox's Collection (photo attached, provenience unknown). The piece is now stored at the Musée Régional d'Histoire et d'Ethnographie de la Martinique, where most of Sutty's artifacts were deposited (Petitjean Roget 2005).

These kinds of carved shells are called "guaizas" and are strongly associated with Taino iconography (see Mol 2014:219-141 for a review).

In a later IACA paper, Sutty (1983) includes some photographs of the other ceramics found, including Caliviny anthropomorphic and frog adornos.
In 2005, Petitjean Roget published a review of artifacts from the Musée Régional d’Histoire et d’Ethnographie de la Martinique that featured the carved conch shell (PJR 2005). He also identified some of the ceramics as belonging to the Cayo series.

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### Bagadi Bay

**Parish:** St. George's

**Previous Work**
- Ann Cody
- Thomas Banks
- Bill Keegan
- Jon Hanna
- Henry Petitjean Roget
- Ripley Bullen
- Corinne Hofman
- Lesley Sutty

**Diagnostic Ceramics**
- WOR
- ZIC
- Adornos
- Scratched
- Finger-Indented
- Polychrome
- GriddleFeet
- Saline Wide-Handle
- Caliviny Unique Adorne

**Ceramic Period**
- Unknown
- Historic
- General Post-Saladoid
- Cayoid
- Suazan Troumassoid
- Troumassan Troumassoid
- Saladoid-Barrancoid
- Early Saladoid

**Notes**
No site # should be assigned; entered only for reference purposes

**Threats**
- Erosion
- Sand Mining
- Construction/Develop
- Illegal Dumping
- Looting
- Vandalism
- Tourism Impacts
- Unknown
- Already Destroyed

**Summary**
During his 1980 visit, Henry Petitjean Roget noted a conch midden on the east of end of Bagadi Bay, but suggested it was made by modern fisherman (PJR 1981:24). Apparently, because he used heading for that section of the report, this sometimes shows up as a site.

No pre-Columbian remains are known from this area.

**References**
Hanna 2017
As described in the Hanna's (2017) report, material from Pearls was moved to Boulogne during the Cocoa Rehabilitation Project in the 1980s, creating a faux-site there.

The pre-Columbian remains at Boulogne are from Pearls

References

Hanna 2017
The map on the cover of Frederick’s pamphlet (1982) places a petroglyph here, but its authenticity is questionable. A visit in 2017 found the glyph much more worn than a photo from the Megalithic Portal taken in 2010 (http://www.megalithic.co.uk/article.php?sid=26566). It is located on the main road, just west of the parking lot for the Union Police Station and marked by a wooden sign. The 2010 photo shows it to be a bearded man in neo-Amerindian style. No other glyphs like it are known, and its antiquity is considered dubious.
Hardy Bay

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Radioarbon Dates (Preview)

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<tr>
<td>Saline Wide-Handle</td>
<td>Early Saladoid</td>
<td>Lesley Sutty</td>
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</table>

Notes

No site # should be assigned; entered only for reference purposes

Threats

- Erosion
- Sand Mining
- Construction/Develop
- Illegal Dumping
- Looting
- Vandalism
- Tourism Impacts
- Unknown
- Already Destroyed

Summary

The map on the cover of Frederick’s pamphlet (1982) has a point for Point Salines located at Hardy Bay. Even though the map is purportedly from Petitjean Roget, PJR (1981) specifically states that nothing was found after Degra Bay except modern conch shells.

No pre-Columbian remains are known from this area.

References

- Hanna 2017
- PJR 1981
The map on the cover of Frederick’s pamphlet (1982) places a workstone or petroglyph here. Cody (1998:50) says that she found nothing at Marquis Point.
The map on the cover of Frederick’s pamphlet (1982) shows a site here—erroneously in St. Mark’s rather than St. Patrick’s parish. Petitjean Roget did find a site up the Duquesne River in Industry, which Cody subsequently excavated and renamed Duquesne Bay (GREN-M-3). It is all the same site.

See GREN-M-3

References Hanna 2017
Paradise

Parish: St. Andrew's

No site # should be assigned; entered only for reference purposes

No pre-Columbian remains are known from this area.

References: Hanna 2017

The map on the cover of Frederick’s pamphlet (1982) places a site here. None is currently known in Paradise, but he may have meant Simon Beach (?) or the historic Paradise bridge.

No pre-Columbian remains are known from this area.
Dubelaar (1995:88-89) describes a few boulders in Pomme Rose, St. David’s that have strange linear markings, haphazardly crisscrossing around the rocks. It looks as if someone (or something) recently made the markings. Dubelaar was rightly skeptical and concluded, “neither during our investigations in the Antilles and the Guianas, nor in literature on South American and Antillean petroglyphs, have we seen this type of engraving,” (ibid:88).

Unlikely pre‐Columbian, and no other remains have been reported from the area.

References
Dubelaar 1995
Hanna 2017
Simon Petroglyph

Parish: St. Andrew’s

Coordinates (WGS84) [redacted]

Diagnostic Ceramics
- WOR
- ZIC
- Adornos
- Scratched
- Finger-Indented
- Polychrome
- GriddleFeet
- Saline Wide-Handle
- Calivingy Unique Adorne

Ceramic Period
- Unknown
- Historic
- General Post-Saladoid
- Cayoid
- Suazan Troumassoid
- Troumassan Troumassoid
- Saladoid-Barrancoid
- Early Saladoid

Previous Work
- Ann Cody
- Thomas Banks
- Bill Keegan
- Jon Hanna
- Henry Petitjean Roget
- Ripley Bullen
- Corinne Hofman
- Lesley Sutty

Notes
No site # should be assigned; entered only for reference purposes

Threats
- Erosion
- Sand Mining
- Construction/Develop
- Illegal Dumping
- Looting
- Vandalism
- Tourism Impacts
- Unknown
- Already Destroyed

Recommendations
Investigate if a petroglyph or workstone is in the area

Summary
Petitjean Roget et al. (2000) labels “Amerindian Sculptures” on a map of the Pearls area. Nothing more is available, and this is the first I’ve heard of anything like that at Pearls.

References
The map on the cover of Frederick’s pamphlet (1982) places a site in Springs, St. George’s. It is not known to what he was referring, as no pre-Columbian remains are known from this area.

However, Springs was where Alistair Hughes’ first museum/collection was (he gave it to the GNM, then took it back during the Revolution and much if it is now at the Westerhall Estate Museum). There may also be the ruins of a windmill (?)

No site # should be assigned; entered only for reference purposes

Erosion
Sand Mining
Construction/Develop
Illegal Dumping
Looting
Vandalism
Tourism Impacts
Unknown
Already Destroyed
St. David's Point

Parish: St. David's

The map on the cover of Frederick’s pamphlet (1982) places a site here, possibly the historic town of Megrin?

No pre-Columbian remains are known from this area.

No site # should be assigned; entered only for reference purposes.

The map on the cover of Frederick’s pamphlet (1982) places a site here, possibly the historic town of Megrin?

No pre-Columbian remains are known from this area.

References