

VIRGIN ISLANDS ARCHAEOLOGICAL SOCIETY



**THE CUBAN SCIENTIFIC EXPEDITION
TO THE VIRGIN ISLANDS
(1951)**

by
Oswaldo I. Morales Patiño
and
Fernando Royo Guardia

Translated and Annotated
by
Alfredo E. Figueredo

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Translator's Note

Cuban archaeologists had long been active in the rest of the Spanish Caribbean when, in 1951, they had their first opportunity to visit some of the English- and French-speaking areas. The project seems to have been envisioned since 1944, and was meticulously planned for.

The Cuban National Board for Archaeology and Ethnology (at that time presided by the senior author) cooperated with the Grupo Etnológico Guamá and several amateur entities in order to organize the expedition. Carlos Prío Socarrás, then president of Cuba, authorized the project, and Rear Admiral Pedro Pascual Borges, Chief of Staff of the Cuban Navy, offered logistical support (including the use of the cruiser *Cuba* during part of the itinerary).

The Cuban Scientific Expedition had a 10-point program:

1. To study and identify the possible routes through which prehistoric cultures may have reached Cuba;
2. To seek evidence for the presence of Cuban Complex I in Jamaica, Puerto Rico, and the Virgin Islands;
3. To seek evidence for the presence of Cuban Complex II in Jamaica, Puerto Rico, and the Virgin Islands;
4. To ascertain the spread of Carib influence and identify the culture found by Columbus on St. Croix;
5. To gather anthropometric data from skeletal remains;
6. To compile local place-names that may be useful in the study of aboriginal philology;
7. To examine museums and private collections;
8. To collect archaeological samples for the Guamá Ethnological Museum in Havana;
9. To publicize the accords of the First Round Table Meeting of Caribbean Archaeologists (1950);
10. To pursue scientific research related to the foregoing.

The Expedition was originally composed of 9 members constituted into a Commission; however, only 4 visited the Virgin Islands, and these were the authors and their wives. Since only that part of the Expedition's report relative to the Virgin Islands is translated here, the title of the original publication (cited at the end of this note) has been slightly altered, and the authors' number reduced accordingly.

Drs. Morales and Royo have been very kind in granting me permission to translate and publish this portion of their work. It is something that I have long wanted to do, in order to fill a gap in the list of available sources for Virgin Islands archaeology. As most readers will know, outside our western (Culebra and Vieques) and southernmost (St. Croix) islands, few Virgin Islanders read Spanish.

The Cuban Scientific Expedition to the Virgin Islands provides extremely valuable information on the condition and extent of 4 major sites in 1951. The earlier reports are vague on this matter and, for all practical purposes, there are no later ones. This is therefore a crucial paper for students of Virgin Islands prehistory.

The importance of this work is not due solely to its reports of archaeological remains, however; it is also a historical document, offering us interesting information on the state of affairs, beliefs, and personalities of its time. The Cubans came during one of our minor dark ages—when archaeological work had come to a near standstill, and the history and historiography of the islands (something common enough) were in abject abandon.

The golden age of our archaeology was the period from 1916 to 1925, when rare was the year that no excavations or publications took place. After a quiet 11 years, there was a minor burst of activity between 1937 and 1938. From 1939 to 1971, though, the picture is bleak indeed. The workers are less than half a dozen: Bullen, Flaherty, Rutsch, Sleight, and Vesceilius, and the publications are fewer still. It is almost half-way into this period that our article was first published: an important link for the modern reader.

It is rewarding also to have available the impressions of archaeologists *not* from the United States. In our golden age we had two Dutchmen (de Booy and de Jong) and one Dane (Hatt) to share their experiences with us; later, we had two Englishmen (Buxton and Trevor). From 1939 to the present, however, the Cubans are the only refreshing wind from the outside. May we have more!

I have added 67 footnotes to the text. Some help to explain it, and to provide the references that were missing; others were added in an attempt to up-date the article. Occasionally the Spanish was ambiguous or unclear, and that was another reason for footnotes.

It should be clear to all concerned that *any* work a quarter of a century old can be (at least) as heavily annotated as this one was. In all fairness, then, it must be said that of all the expeditions to the Virgin Islands up to 1951, only three others (Hatt's, Rouse's, and Vesceilius') had comparable organization and rigor; these too need extensive revision in the light of recent work, and contain analogous historical inaccuracies.

The modern Virgin Islander well-versed in local history will find many of my footnotes on the subject unnecessary; however, since the Cubans were largely faithful recorders of what they came across, it must be borne in mind that what they copied down 'wrong' was taken from the literature of the time, and that our contemporaries in the islands are as likely to be confused as they were.

It will come as no surprise to the reader (our other affairs being in quite a concordant disorder) that there is no historiography of the Virgin Islands.

Indeed, there is precious little published under the heading of local history (and these are mainly redundant and apish general treatments) and *nothing at all* when it comes to geography. Though I lay claim to no special gift for scholarship, few are those today who can provide information in equal depth to what is offered here. That the Cubans were unable to provide it is not to their discredit, since it requires a specialist to go beyond where they stopped.

If a translator may be permitted a privilege usually reserved for real authors, I would like to dedicate this English version as my personal tribute to the two great men who were responsible for the original, Spanish version.

Alfredo E. Figueredo

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1952 La Expedición Científica Cubana. Jamaica, Haití, Puerto Rico e Islas Vírgenes. *Revista de Arqueología y Etnología*, nos. 15-16, pp. 93-202.

THE CUBAN SCIENTIFIC EXPEDITION TO THE VIRGIN ISLANDS (1951)

Text and Notes

Christopher Columbus, in the course of his second voyage, came to an Archipelago that he named *The Eleven Thousand Virgins*, and in one of them (St. Croix¹), he encountered what he called 'Caribs'. The island of St. Thomas was occupied by Danes in the XVII Century;² they unsuccessfully attacked the English that were by then already established on St. Croix.³ These last were defeated by the French in the XVIII Century.⁴ The French set their island on fire in order to clear it for agricultural purposes. The Danes bought St. Croix in 1726⁵ and recently the United States have acquired the three former Danish islands of St. Thomas, St. John, and St. Croix.

St. Thomas is perhaps the most beautiful American possession, and its capital, Charlotte Amalie (where the government of all three islands is located), conserves the aspect and manners of the northern Europeans that lived there for more than two centuries. Its houses and its fort⁶ are of a style completely different from what predominates in the West Indies. The houses offer the peculiarity of being prepared for frequent hurricanes; their doors and windows (which open to the outside) are of iron and hardwoods reinforced with metal and set on strong hinges. In one section, a French colony⁷ persists: the descendants of Bretons⁸ still devoted to fishing.

What a lesson for Cubans is the way in which these people care for and preserve the relics of the past! They are proud of their old houses. In Cuba, that selfsame antiquity would be the best incentive possible for many a modern architect to exercise his generally intranscendental destructive ability; here the same reason affords these houses the best guarantee for their protection. We visited Government House, with old cannons; other ancient artillery pieces that were buried vertically in front of the old Danish fort,⁹ and the watchtowers built by celebrated pirates: Blackbeard and the legendary Bluebeard.¹⁰

Bluebeard's almost incredible story seems but one of Perrault's fairy tales; indeed, Perrault used for his version the account of one that escaped the power of this pirate. Bluebeard frequented the coasts of Algeria and Tunisia before settling in St. Thomas. In front of his tower are 9 of the 11 cannons that defended it, and 7 mysterious tombs are attributed to his butchered wives.¹¹ At present, next to those relics (surrounded by beautiful

gardens), there are comfortable hotels that make clever use of the past; typical is one that has for its name the date on which it was built: 1829. There are also other hotels, such as the *Caribbean*, with excellent food (also the best and most modern), and the *Virgin Islands*, situated on a height that commands some of the most beautiful views. On the slopes of the mountains are seen large trapezoidal spaces entirely lacking in vegetation and paved at a slant. When we inquired the reason for these structures, we were informed that the island is lacking in potable water. There are no rivers or wells,¹² for which reason rain water is used instead, collected from the inclined paved surfaces into great cisterns that store it for use in the city.

The governor's *Annual Report* shows the administration's effort in carrying out a program of public works to the tune of ten million dollars, increasing public education through a responsible pedagogical plan. There are 6 medical doctors in St. Thomas and 5 in St. Croix. Typhoid fever is unknown, there is Social Security, and tourism brought St. Thomas alone the sum of \$1,797,566 during 1950 (36,000 tourists). The islands have 26,654 inhabitants in 132 square miles of surface area.

Although one deals here with a free port, prices are not lower than those in Cuba; however, European and even Asiatic goods are found.

Amiably escorted by the governor (the Honorable Morris de Castro), we travelled through most of the island in his automobile.

The roads are excellent and of recent construction, though there are unpaved stretches. The terrain is predominantly hilly, with few flat areas and, all along the coast, numerous small horseshoe-shaped bays, whose waters change colors as those of Varadero;¹³ nearly always they have a beach at their end, and two mountainous points. Everywhere one sees numerous islands and cays in the distance, all covered with vegetation. On one side St. John may be seen, where petroglyphs have been reported.¹⁴ From a height that commands Magens Bay, the famous Drake drew a chart, and the place is now called Drake's Seat.

There are few reports that deal with this island from an archaeological point of view; those few almost entirely limit their scope to the site at Magens Bay (studied by Hatt¹⁵ and de Booy¹⁶ toward the end of last century¹⁷). Alegria¹⁸ visited the site in 1950, but did not excavate in it.

Magens Bay is roundish and has at its end a beautiful beach fringed by numerous coconut trees; the rest of its shoreline is formed by high hills with great stones that come right down to the sea. Far away, before its entrance, there is an island that has the exact form of a three-pointed stone.¹⁹ It is curious that there are other cays that also have the appearance of three-pointed stones.²⁰

Royo and Morales Patiño walked the entire edge of the beach up to the extreme northeastern part (looking for the site according to the location that had been given for the Indian settlement), yet nothing was found

though they reached the point where sand meets rock. They then turned round away from the beach, through a light wood. Near the coconut grove there were some potsherds, more commonly met with as one approaches the road.²¹ The soil was hard, dry, and difficult to excavate; notwithstanding, a rimsherd and several shells were collected. Leaving the road, information was asked of a colored man who could provide none, but he left and brought a tall white man (who turned out to be French): the latter stated to have heard of an 'Indian town' by the road. In effect, a few meters away, by the edge of a low hill (formed of soft sand), one could see a roadcut, and the cut was through a midden.

It was easy to excavate and at simple sight²² potsherds and shells showed up. This cut was studied: measured, photographed, and filmed. It extends along the road for about 150 meters, and yielded numerous and varied rimsherds, the base of a round jar or bottle (along with part of its walls), and a handle (found by Mrs. Royo). All the potsherds were plain, and some of them were reddish.

Beyond the road and southward, the midden extends through the coconut grove, and many mounds (that overlap and confound each other) may still be distinguished. In that direction, the Indian site extends some 200 meters. Its northern edge could not be defined as it rises up the hill through brush, though it was observed that its thickness lessens as elevation increases. All the material collected, as well as what was observed in this archaeological site of a large Indian village, corresponds to Arawakan Culture (Complex III); a few specimens are Igueri.

St. Croix.—Though the airplane flight from St. Thomas takes only 15 minutes, from the air one may confirm the observation that is suggested by a glance at the map: St. Croix is somewhat distant from and outside the chain formed by the Lesser Antilles.²³ It is also possible to appreciate how a series of medium-elevation hills divide it irregularly into two parts, to wit: a northern, generally narrow drainage area, and an extensive southern plain.

We were pleased to meet the governor at the airport, where he introduced us to his delegate, Harry E. Taylor, who is the Administrator and supreme authority on the island.²⁴ Taylor is a jovial and pleasant man, over six feet tall. He is 72 years old (though he does not look it), and 25 years ago he suffered an embolism in his right arm (which he can scarcely use). However, he drove marvelously well the automobile in which he took us through excellent, asphalted roads to the Buccaneer Hotel (about half an hour from the airport). Taylor, as is the case with Cotter²⁵ in Jamaica, has specialized in the history of Columbus' voyages, and he worked with Morison²⁶ toward determining the place where the great admiral dropped anchor upon reaching St. Croix.

On this island there are two towns: Christiansted (which is the capital) and Frederiksted. In the first town, a fort built in 1645²⁷ is noteworthy,

whose old cannons adorn the shore and some street corners. Government House (the former residence of Danish governors) is a sample of Old World architecture; there are old houses and, 50 meters from shore, there is a hotel upon an islet²⁸—Hotel-on-the-Cay—surrounded by gardens; it is reached by boat.

St. Croix is characterized by ancient windmill towers²⁹ and the ruins of the greathouses of former plantations. The towers were used by the danes to harness windpower and move the mills of their primitive sugar factories. With the passing of time, due to lack of water³⁰ sugar cane cultivation has been slowly given up and the towers are left without sails. The Buccaneer Hotel is in one of these old sugar factories and preserves its windmill tower, but the greathouse has been modernized: terraces and a row of rooms with modern baths have been added. The house was built by a French corsair named Martel in 1625.³¹

Fair Plain.—On the way to the hotel, Taylor showed us an archaeological site right by the road; he told us that many important artifacts had been found there, but, as the place has been cultivated for many years, plowing has broken the pottery, and it appears now in small pieces. It was then a recently-cut cane field, whose ratoons were 40 cm. high. The following day we explored it. It is an Arawak midden about 70 square meters in extent and some 40 cm. thick, but that archaeological depth has been much stirred up. It resembles the Cantabria site near Cienfuegos,³² but with slightly more elaborate material (both these sites belong to Complex III³³). We picked up many rimsherds (few of which were decorated), and some handles. As in Puerto Rico, handles do not seem to be very common. This site produced very abundant shell samples. There are many *Lucina* shell scrapers, whelks, and many broken fragments of *Arca*, *Ostraea*, *Cassis*, etc. Morales Patiño had the good fortune of finding, excitedly, a shell celt that is a magnificent specimen. It is a tool shaped out of the thick lip of a large whelk (Queen Conch or *Strombus*). The working edge of the celt is beveled on one side and on the other is evenly ground down and polished. The tip is rounded. All that saw this piece, considered it the best of its type yet found on this island. There is no similar one in the local collections.

Through a letter from Professor Rouse³⁴ (whose information was confirmed by Dr. Alegría³⁵ in Puerto Rico), we knew that some students from Yale were doing archaeological work on this island, and that at the University, Rouse was classifying the Andersen Collection (gathered in St. Croix and considered to be the largest and best from there).³⁷ This coincidence of scientific interest, confirmed the felicity of our plan of explorations throughout the Caribbean area.

One of the students (Vescelius) is Taylor's nephew, so he naturally rushed to get us together. They are the following young men: Gary S. Vescelius, Allen M. Croft, and Colin T. Eisler.³⁸ They have been here a month, and

propose to stay until mid-August. Besides Taylor's cooperation, they have had the aid of Mr. George Van Riper, Chairman of Christiansted,³⁹ who gave them a house to stay in and has even lent them a jeep. These young men are possessed of excellent charts and maps, and brought with them copies of the archaeological works written about the island. They have been able to determine the existence of 45 archaeological sites,⁴⁰ two of which they have excavated extensively. They lack assistants and themselves wield shovel and pick.

To this group we owe valuable observations, offered simply and generously and confirmed in many respects by the data which we gathered directly. There are no caves on the island,⁴¹ and many of the archaeological sites are but camp-sites. Until the present time those burials found have been few; human bones have been recovered, but no crania. Only in the two sites that were excavated extensively was it possible to determine a superposition within Arawak Culture. Shell heaps are unknown, and there is no information about Complexes I and II.⁴²

Shell gouges⁴³ were unknown in St. Croix. It was a pleasure for us to show our friends one, and a conch shell pick; these were part of a small Cuban collection presented to Taylor,⁴⁴ in order for it to join the exhibits at Government House. Taylor's own collection comes principally from the three sites that we were able to study, though there are in it some specimens collected elsewhere. There are axes represented (some of them large battle-axes), and beautiful whole vessels. To the students we presented a copy of the last issue of the *Revista de Arqueología y Etnología*, photographs of the assemblages of each Complex, and a copy of the work by Morales Patiño⁴⁵ translated into English. They in return took us around in their jeep and served us as guides.

Salt River.—It is a most important site from the point of view both of archaeology and the history of the discovery of America. Its identification is due to Morison and Taylor.⁴⁶ During Columbus' second voyage, here took place the historic encounter with some Indians in a canoe (that they defended tenaciously), and the capture of a woman that was given to Michele de Cuneo.⁴⁷ Columbus did not land but his men did, onto an Indian town that was on the western part of the entrance to the small bay. The Indians, infuriated by the capture of the canoe's crew, gathered in great number, but their weapons did not permit them to reach the ships anchored off-shore.

We spent a day at this site, having lunch under the bush that partially covers the mounds of the old Indian town. This settlement, mentioned by Hatt⁴⁸ and by de Booy,⁴⁹ is extensive, occupying the whole point at the northwestern portion of the river mouth; southward the estuary widens forming a bay. The young Yale archaeologists, using a transit, have rectified some of the details of Hatt's plan of the site,⁵⁰ of which they have an enlarged copy. The river, due to its proximity to sea water, is salty at its mouth

(hence its name, 'Salt River'), but, going upstream (as the Indians must have done), drinkable water is found.⁵¹

The midden area is about 200 square meters in extent, scattered through what we in Cuba call 'creole bush'.⁵² At the highest point and within the midden are left the foundations of a fort that the French⁵³ had here. The Yale students were working the site at the time and we were able to photograph various places that they were excavating stratigraphically. We also found some old excavations and other, more recent ones made by Mrs. Miller (who has a collection at her house near Christiansted). However, over 60% of the mounds are still untouched.⁵⁴ It has been impossible to relocate the place where engraved stones designated a ball-court (according to Hatt⁵⁵); these stones regrettably have gone to European museums.⁵⁶ The depth of the midden is variable, even if at places a maximum depth of over a meter may be reached.

Our own excavations produced numerous specimens of pottery, stone, and shell (*Strombus*, *Ostraea*, *Arca*, *Cassis*, *Lucina*). Morales Patiño found (while excavating by an old pit of Mrs. Miller's) various griddle fragments, hammerstones, and another shell celt (which was not as outstanding as the one from Fair Plain). While excavating a mound by the shore with his wife, Dr. Royo found several shell beads, quite perfect, round and flat as buttons. Next to where they were, one of the students picked up a peridotite celt.

The material collected for the Guamá Museum⁵⁷ filled one of the sacks that we carried for the purpose. Vescelius and his companions consider Salt River an Arawak (Complex III) site, and also that it is not Carib as has been thought; that is also our belief. From this, one may conclude that it was the Arawaks who fought Columbus, and that it was he who initiated the policy (so often later to be favored by Spaniards) of calling 'Carib' all the Indians that defended themselves and fought for their freedom, or just presented opposition.

Richmond.—It is the plantation owned by Mrs. Miller, which is two kilometers outside Christiansted. The midden is near the house (between it and the coast).⁵⁸ It is Ignéri (with an Arawak superposition) but less extensive than Salt River.

Mrs. Miller was out; her husband (an old Dane) very kindly showed us his ancient home and the collections obtained from Salt River as well as that from the Indian site on his plantation. He has some petaloid celts and a burin,⁵⁹ but in general the celts are of the type described from Haiti and Puerto Rico: somewhat wider at the base than Cuban specimens. The Ignéri pottery, comprised in great part of large sherds and whole vessels, is very interesting. Outstanding were half of a large, flat receptacle, beautifully painted in red; two jar fragments, and a large sherd from a libation vase, painted white and red (which are the predominant colors of all Ignérian pottery).

Conclusions About The Virgin Islands

St. Thomas and St. Croix

1.—In neither of these islands have been found sites (nor artifacts) attributable to Complexes I and II.⁶⁰

2.—At Magens Bay, St. Thomas, and at Salt River, St. Croix, as well as occasionally elsewhere on either island, the superposition of a later Arawakan culture over Ignierian has been determined. The settlement of both these islands seems to have been within Complex III times.

3.—In Ignierian pottery, decorative motifs based on white paint over red (and *vice versa*) predominate.

4.—The axes termed 'Carib' are very rare.⁶¹

5.—There is no evidence for Carib Culture,⁶² and those which Columbus considered such at Salt River were Tainos.

Review Of The Observations About the Virgin Islands

St. Thomas and St. Croix

The following were studied:

Aboriginal Archaeology:

Three sites

Magens Bay, St. Thomas—village site.

Fair Plain, St. Croix—village site.

Salt River, St. Croix—village site.

One Museum

Christiansted, St. Croix.

One Private Collection

Mrs. Miller's, St. Croix.

Colonial Archaeology:

Ten sites

St. Thomas:

Government House

Danish Fort

Bluebeard's Tower

Blackbeard's Tower

Streets and houses of Charlotte Amalie

St. Croix:

Danish Fort (1645)

Buccaneer Hotel

Windmill towers

Richmond House

Streets and houses of Christiansted

Places connected with Christopher Columbus:

Two sites

St. Thomas—north coast.

St. Croix—Salt River.

Historic sites:

One site

St. Thomas—Drake's Seat.

List of Archaeological Samples Obtained

From The Virgin Islands

St. Thomas—Magens Bay:

4 coral rasps;⁶³ 2 large shell hammers; 1 fragment of a *Strombus collumela*; 1 tip of a shell pick; 3 shark vertebrae; 1 everted rimsherd; 4 straight rimsherds; 1 large, flat rimsherd; 1 thick potsherd; 1 large fragment of a deep Taino vessel; 1 large fragment of a deep Taino vessel with an inverted rim; 1 large fragment of a shallow vessel; 1 large rounded rimsherd in two pieces; 1 sherd from a small, deep vessel; 1 jar base fragment; 37 plain bodysherds; 4 sherds from thin griddles; 1 sherd from a very thin griddle; 1 red-painted Ignieri sherd; 1 large Ignieri sherd; 1 large sherd from a red-painted Ignieri platter; 8 unpainted reddish sherds; 2 sherds of white clay. Total: 79.

St. Croix—Fair Plain:

1 fragment of a diorite stone collar; 1 coral rasp;⁶⁴ 5 *Codakia orbicularis* scrapers; 1 shell pick; 1 shell hammer; 1 shell celt; ⁶⁵ 2 *Strombus* lips; 1 thick rounded rimsherd; 1 rounded rimsherd from a shallow vessel; 1 thick sherd from a deep vessel; 1 tabular handle with incised lines; ⁶⁶ 1 large strap-handle; 1 large fragment of a deep vessel with an inverted flat rim; 1 sherd from a platter; 10 plain bodysherds; 5 griddle fragments. Total: 34.

St. Croix—Salt River:

1 hammerstone; 1 coral rasp;⁶⁷ 6 rounded shell beads; 1 *Strombus* fragment; 2 *Codakia* scrapers; 1 Ark shell; 1 shell spoon; 1 turtle bone; 1 straight rimsherd; 1 rounded rimsherd from a deep vessel with thin walls; 1 inverted rimsherd from a deep vessel with thin walls; 1 large fragment from a thick deep vessel; 1 large rounded rimsherd with thick walls; 1 large potsherd; 1 flat rimsherd; 18 plain bodysherds; 6 small sherds; 6 griddle fragments. Total: 51.

Total samples collected in St. Thomas 79

Total samples collected in St. Croix 85

Total from the Virgin Islands 164

In the pottery one may notice two types according to clay thickness: one thick and roughly made and another thin and better fired. Straight rims predominate in St. Thomas. The abundance of Ignieri platters is remarkable.

ANNOTATIONS

By Alfredo E. Figueredo

¹Columbus did *not* consider St. Croix one of the Virgins; until quite recently, the term *Virgin Islands* was applied exclusively to those islands rising out of the eastern portion of the Puerto Rican Insular Shelf. The inclusion of St. Croix in modern usage, as well as the occasional exclusion of Culebra and Vieques (sometimes known as the *Spanish Virgin Islands*), are due to passing political concern, and not to geographical considerations.

²Effective Danish occupation of St. Thomas dates from 1672.

³It is unclear as to which attack is meant; the English were off St. Croix by 1650.

⁴The French held St. Croix from 1650 to 1696.

⁵The actual date of purchase was 1733. As the preceding notes show, there are wide discrepancies in the literature regarding the dates and events of early colonization in the Virgin Islands. I am preparing a book that will (hopefully) set much controversy to rest.

⁶v. John Lightbourn, 'The Story of Fort Christian, 1672-' (Virgin Islands Museum: *Leaflet Series*, no. 1 [1973], 80 p.

⁷*Carénage* or Frenchtown.

⁸Not all *Frenchies* are of Breton stock; for a detailed study of St. Barths families, v. Jean Deveau, 'Le peuplement de Saint-Barthélemy' (Extrait du *Bulletin de la Société d'Histoire de la Guadeloupe*, nos. 17-18 [1972], 48 p.

⁹A barbarous arrangement that is still with us.

¹⁰These traditional attributions are controversial.

¹¹Probably a story told to tourists at the time that the authors visited the popular resort.

¹²There are more-or-less permanent streamlets and springs on St. Thomas, and dozens of productive wells. This is more popular information inadvertently collected.

¹³A beach resort in Cuba, famous for its attractive sands and water.

¹⁴v. Theodor de Booy, 'Archaeological Notes on the Danish West Indies: The Petroglyphs of the Island of St. John and on Congo Cay' (*Scientific American Supplement*, vol. LXXXIV [1917], no. 2189, pp. 376-377.

¹⁵'Archaeology of the Virgin Islands' (*Proceedings of the XXI International Congress of Americanists* [The Hague, 1924], Part I, pp. 29-42); also, v. Sven Lovén, *Origins of the Tainan Culture, West Indies* (Göteborg: Elanders Boktryckeri Aktiebolag, 1935), ix, 696 p.

¹⁶'Archeology of the Virgin Islands' (*Indian Notes and Monographs*, vol. I [1919], no. 1, pp. 13-100).

¹⁷Morales and Royo may have confused the dates for de Booy's and Hatt's excavations with that of Holger Utke Ramsing's in 1899; this seems likely as that date is a prominent note in Hatt, *op. cit.*, p. 30.

¹⁸Ricardo Enrique Alegría, foremost Puerto Rican archaeologist.

¹⁹Outer Brass Island.

²⁰v. Fred Olsen, *On the Trail of the Arawaks* (Norman: University of Oklahoma Press, 1974), pp. 96-102, for a similar view.

²¹*King's Road*, no longer used at that point.

²²*i.e.*, without the need to sift mechanically first.

²³v. note 1.

²⁴The position of Administrator is of limited executive power.

²⁵C.S. Cotter, author of 'The Aborigines of Jamaica' (*Jamaica Historical Review*, vol. I [1946], no. 2, pp. 137-141). Taylor wrote 'Pre-Columbian Inhabitants of the Islands', found in Stuart Murray's *The Complete Handbook of the Virgin Islands* (New York: Duell, Sloan and Pearce, 1951), pp. 105-108.

²⁶The late Samuel Eliot Morison, author of *Admiral of the Ocean Sea* (Boston: Little, Brown and Company, 1942), 2 vols.

²⁷If this refers to Fort Louisa Augusta, it may be correct.

²⁸Protestant Cay; also the site of Fort Sofia Frederika.

²⁹Frederik C. Gjessing (the foremost authority on these towers) wrote a fascinating study of them which remains unpublished.

³⁰Cruzan cane culture was suited to its climate.

³¹There is no evidence to confirm this; the date is an *erratum*.

³²v. Antonio González Muñoz and Ignacio Avello, 'Asiento Cantabria: descubrimiento del residuario de cultura alfarera más occidental de Cuba' (*Revista de Arqueología y Etnología*, no. 3 [1946], pp. 11-25).

³³Morales and Royo refer to the tripartite taxonomy adopted in 1950 by the Reunión en Mesa Redonda de Arqueólogos del Caribe (sponsored by the Cuban Junta Nacional de Arqueología y Etnología; v. *Actas y trabajos*, Habana, 1951). In this system, three *complexes* are identified and labelled with Roman numerals. Complexes I and II are preceramic; Complex III includes all the ceramic cultures. Internal divisions were recognized (*cf.* conclusion no. 2 in this article), but not elaborated upon. Perhaps a chronological position is suggested in the comparison between Cantabria and Fair Plain. The Cruzan site was disturbed rather grossly last year, by roadbuilding and the construction of a bridge.

³⁴Benjamin Irving Rouse, leading Caribbeanist at Yale University. Rouse informs me that he was working from slides only, as the collection itself was housed on Long Island at the time.

³⁵v. note 18.

³⁶Folmer Andersen, author of *Notes on St. Croix* (Christiansted: St. Croix Museum Commission, 1954), 36 p.

³⁷The Andersen Collection, much diminished, now forms the core of the prehistoric holdings at the Steeple Building (National Park Service), Christiansted, St. Croix; some of it is handsomely displayed.

³⁸Vescelius is currently Territorial Archaeologist of the Virgin Islands of the United States. Allen M. Croft was a student at Harvard University; Vescelius and Eisler were Yale students.

³⁹Van Riper was Chairman of the St. Croix Museum Commission.

⁴⁰At the end of field work, Vescelius reported 60 sites.

⁴¹Kai Lawaetz knows of one cave in northwestern St. Croix; there are doubtless others. Despite a high relative population density, most of the Virgin Islands countryside has yet to be explored.

⁴²These are preceramic complexes not found on St. Croix to date; v. note 33.

⁴³For a full description and typology of these artifacts, v. José Manuel Guarch Delmonte and Rodolfo Payarés García, *Excavaciones en El Caney del Castillo* (La Habana: Academia de Ciencias, 1964), pp. 15-21.

⁴⁴What became of this representative collection is not known to me; while inspecting the remnants of the Folmer Andersen Collection in 1973, I came across some uncatalogued Cuban material in the Steeple Building's storage area; it was packed in envelopes bearing the logo of the Grupo Etnológico Guamá.

⁴⁵Probably 'Los complejos o grupos culturales indocubanos' (*Revista de Arqueología y Etnología*, nos. 15-16 [1952], pp. 259-267). If an English edition exists, I have not seen it.

⁴⁶v. note 26.

⁴⁷The account that follows is at odds with our two best sources for the incident; *cf.* Michele de Cuneo, 'Let-

tera' (*Raccolta di Documenti e Studi Pubblicati dalla R. Commissione Colombiana pel Quarto Centenario dalla Scoperta dell'America*, Parte III, Volume II [Rome: Auspice il Ministero della Pubblica Istruzione, MDCCCXCIII], pp. 95-107), and Diego Álvarez Chanca's version (Martín Fernández de Navarrete, ed., *Colección de los viajes y descubrimientos que hicieron por mar los españoles desde fines del siglo XV* [Madrid: en la Imprenta Real, 1825], vol. 1, pp. 198-224).

⁴⁸ *op. cit.*, pp. 36-39.

⁴⁹ *op. cit.*, pp. 42-47.

⁵⁰ Gudmund Hatt lacked surveying equipment.

⁵¹ Salt River is mostly intermittent now; v. George A. Seaman, 'Bring Back Our "Lost Paradise"' (*Virgin Islands Forum*, vol. III [1975], no. 6, pp. 15-19).

⁵² *lo que conocemos en Cuba como un monte criollo.*

⁵³ A Spanish map predating 1650 (a copy of which is available for consultation at the West Indian Room, St. Thomas Public Library) shows a fort on the future site of Fort Salé; the original builders of the triangular earthworks, then, may have been Dutch or English.

⁵⁴ Wholesale disruption has occurred since, but most of the site (including the fascinating earthworks mentioned in note 53) is now an archaeological preserve; for more details, v. my manuscript *Report of an Inspection Tour to the Island of St. Croix* (1972), filed at the Department of Conservation and Cultural Affairs; most of my recommendations have yet to be implemented.

⁵⁵ *loc. cit.*; Lovén, *op. cit.*, pp. 89-92, and Hatt, 'Had West Indian Rock Carvings a Religious Significance?' (Copenhagen: *Nationalmuseets Skrifter*, Etnografisk Raekke 1, 1941), pp. 189-196. Morales and Royo use the original Taino term *batey* to refer to the ball-court.

⁵⁶ In the Ethnographic Department, Danish National Museum, Copenhagen.

⁵⁷ Now reportedly incorporated to the Academy of Sciences, Havana.

⁵⁸ According to Gary S. Vescelius, who visited it recently (1975), the site is still well-preserved.

⁵⁹ Cuban archaeologists use the term 'burin' (*buril*) to refer to an elongated celt (*cf.* René Herrera Fritot, *Estudios de las hachas antillanas* [La Habana: Academia de Ciencias, 1964], 146 p).

⁶⁰ Apparently, Morales and Royo chose to accept de Booy's and Hatt's conservative interpretations regarding the preceramic shell middens around Krum Bay, now dated to *ca.* 1700-1450 B.C.

⁶¹ For an illustration of what a Cruzan 'Carib axe' is, v. Carl Christian Rafn, 'Cabinettet for Americanke Oldsager' (*Antiquarisk Tidsskrift*, 1852-1854, pp. 398-449), p. 438; *cf.* Laudelino Trelles Duelo, '¿Estuvieron los caribes en Sancti-Spiritus?' (*Carteles*, vol. XVIII [1932], no. 32, pp. 46-47, 50, 55), pp. 46-47.

⁶² Hatt, 'Archaeology of the Virgin Islands' (*op. cit.*), Plate III, illustrates pottery heads found at Magens Bay and Salt River, some of whose traits are interestingly similar to those of late ceramic styles in the Lesser Antilles. Were the Virgin Islands ever inhabited by true *Callinago* or 'Island Caribs', it may be that their occupation was relatively brief (perhaps mostly circumscribed to the protohistoric period), and therefore material remains are difficult to find. The shifting nature of Carib settlement during early historic times, however (*if* valid for pre- and protohistory), favors widespread remains, and therefore easy detection; v. Simone Dreyfus-Gamelon, 'Remarques sur l'organisation socio-politique des caraïbes insulaires au XVII^{ème} siècle' (*Proceedings of the Sixth International Congress for the Study of Pre-Columbian Cultures of the Lesser Antilles* [Pointe-à-Pitre, 1975], pp. 87-97). For a review of the historical documents referring to the Virgin Islands, *cf.* my article 'The Virgin Islands as a Historical Frontier Between the Tainos and the Caribs' (in press, *Interamerican Review*).

⁶³ Richard A. Dewey suspects 'coral rasps' to be produced naturally.

⁶⁴ v. note 63.

⁶⁵ The three preceding items may be considered to be of conch.

⁶⁶ Quite possibly a Chicoid lug of a common type.

⁶⁷ v. note 63.