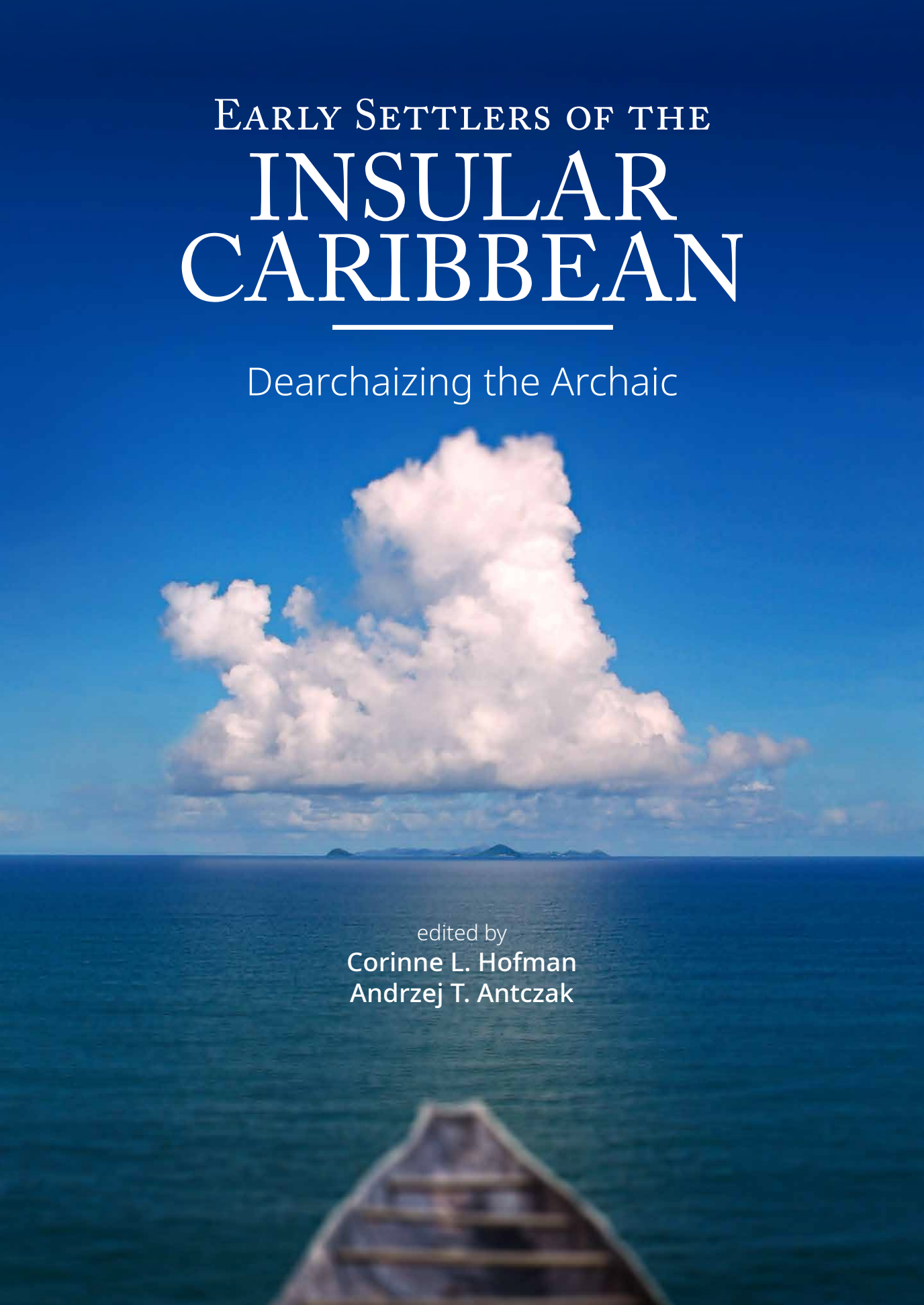
# Early Settlers of the Insular Caribbean

## Dearchaizing the Archaic



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# Early indigenous occupations of Margarita Island and the Venezuelan Caribbean

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## Introduction

Post-Pleistocene environmental commonalities have been amply documented on the coasts and islands of the Southeastern Caribbean (Álvarez Espejo 1987; Landau *et al.* 2008; Macsotay and Cacéres Hernández 2005; Peter 1972; Rull *et al.* 1999). This region also shows remarkable uniformity as part of the Colombian – Venezuelan – Trinidadian biogeographic subprovince (Woodring 1974). However, the perception of the area as a historically contingent socionatural unit within a larger Caribbean macroregion is much more recent (Antczak and Antczak 2006; Antczak *et al.* 2017; Newsom and Wing 2004). Historically and culturally, these coasts and islands have been portrayed as a crossroads of people, goods and ideas moving to and from among Amazonia, the Andes, and the insular Caribbean (Kidder 1944, 1948; Osgood and Howard 1943; Rouse and Cruxent 1963; Spinden 1916; Steward 1948; Willey 1960). Changes observed in the archaeologically recovered material culture have mainly been attributed to sequential waves of migration, not long-term local continuity. This approach categorizes archaeological assemblages by means of time and space. It does not inquire how indigenous peoples might have enacted change and transition in the course of their own daily lives.

This chapter first discusses the archaeologically recovered early human signatures on four northeastern islands in the Venezuelan Caribbean: La Blanquilla, Margarita, Cubagua, and Coche. Next, we consider the whole of the coast and islands of present-day Venezuela. Finally, we identify some commonalities while also pointing out certain gaps persisting in our knowledge of the Archaic Age in the Southeastern Caribbean region (Figure 10.1). The region in question includes Curaçao, Aruba, and Bonaire (formerly parts of the Netherlands Antilles) in the west, and Trinidad in

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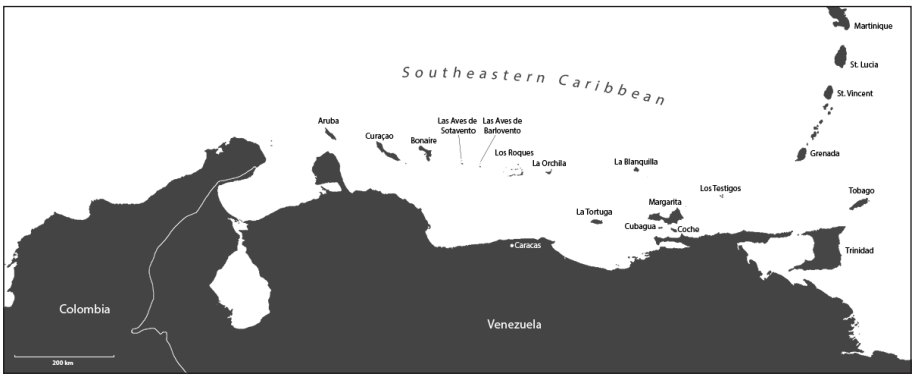


*Figure 10.1. Map of the Southeastern Caribbean region with the indication of main archaeological sites discussed in this chapter (Drawing by Oliver Antczak).*

the east. The Las Aves, Los Roques, and Los Hermanos island groups, as well as La Orchila, La Tortuga, and La Blanquilla Islands, are all Venezuelan calcareous formations separated from the South American mainland by channels several hundred meters deep. The most important non-calcareous groups are Los Monjes, Los Testigos, Los Frailes, and Margarita, although the latter island is partly calcareous (Alexander 1958; Jam and Méndez Arocha 1962; Schubert and Moticska 1972, 1973). During the Last Glacial Maximum (ca. 21,000 BP), the sea level of the Cariaco Basin, off the northeastern coast of Venezuela, was estimated to be ca. 120 m below the present datum. The Cariaco Trench was likely a deep lake isolated from the sea (Lin *et al.* 1997). Margarita (Coche and Cubagua), Aruba, and Trinidad, all of which lie on the South American shelf, became continental islands only due to sea-level rise after the Pleistocene (Álvarez Espejo 1987). Estimates suggest that at 8000 cal BP, eustatic sea level in coastal Venezuela was 15 m below the present datum. The sea then rose rapidly (0.5 cm/yr) until 6000 BP, when the tempo slowed; by 4000 cal BP, it had stabilized to only 0.025 cm/yr, where it remained until nearly the end of the twentieth century (Rull 1999, 2000; Rull *et al.* 2010). Similar figures were found for the Caribbean as a whole and the Atlantic coast of South America (see Rivera-Collazo, this volume). Milne *et al.* (2005) documented a rapid rise of 0.7–0.8 cm/yr during the Early Holocene, a rate that slowed significantly after 7000 cal BP (Peltier and Fairbanks 2006; Siegel *et al.* 2015). Ongoing tectonic activity originating from the colliding Caribbean and South American plates influenced not only the paleogeography of the region, but also determined the distribution and accessibility of lithic resources (Escalona and Mann 2011). A consequence of this geological context has been occasional earthquakes, often resulting in tsunamis (Engel *et al.* 2010; Scheffers *et al.* 2009; see also Haviser, this volume). Although the Southeastern Caribbean islands lie outside the hurricane corridor (Malaizé *et al.* 2011), they are not immune to damage from occasional strong tropical storms (Meyer *et al.* 2003). Nevertheless, with the exception of Trinidad, the Southeastern Caribbean coasts and islands feature low precipitation and high evaporation rates, leading to the predomination of xerophytic thorn-scrub, cacti and mangroves (Lahey 1973). Dry conditions became prevalent around 3200 cal BP, although the beginning of the Holocene featured

a wetter paleoenvironment (Haug *et al.* 2001; Hodell *et al.* 1991; Macsotay and Caceres 2005; Tedesco and Thunell 2003). Marine- and coastal-related temperature and moisture estimates fluctuate on seasonal and multi-year time scales, but such estimates are more stable for inland areas (Iriondo 1999). Although the current topography of this region is to a certain extent a product of more recent tectonic uplift, subsidence, and volcanic eruptions (Peter 1972), the abovementioned sea-level rise starting at the end of the Pleistocene (Murray-Wallace and Woodroffe 2014) brought major changes to the area's marine and coastal environments. During the first half of the Holocene, when the rising was substantial, the region underwent ongoing land loss and constant change of paleoshorelines and associated littoral biotopes. The seafloor and intertidal topographies, each associated with floral and faunal communities, were considerably affected (Alongi 2015). During this time, several coastal sites occupied by early human groups must have disappeared underwater (Siegel *et al.* 2015). By the Mid-Holocene, lagoon systems, sand beaches, mangrove swamps and river outlets were stabilizing to the east and west of the mountainous central coast of Venezuela (Maloney 1965; Rull *et al.* 1999). Signatures of these environmental as well as sociocultural permutations (e.g., the use of fire) appear in the Caribbean archaeological record (Cooper and Peros 2010; Fitzpatrick and Keegan 2007; Hofman and Hoogland 2015; Rodríguez Ramos *et al.* 2013; Siegel *et al.* 2005), even in the absence of direct artifactual evidence (Siegel *et al.* 2015; Scherjon *et al.* 2015). In this chapter, we argue that hundreds of generations of flesh-and-blood people embodied these large-scale and long-term environmental changes. They acted according to their continuously renewed understanding and experience of the cultural places they inhabited, places that ought not be viewed in the abstract as merely ecologically functional spaces (Harris and Robb 2015; Ingold 2000a; Sassaman 2016). Our aim is to explore some of these places in the Venezuelan Caribbean.

## The earliest human signatures

Deposits, including Pleistocene megafauna remains, abound along the Venezuelan coast (Carrillo *et al.* 2008; Gruhn and Bryan 1984; McDonald *et al.* 2013; Rincón *et al.* 2009; Sánchez-Villagra *et al.* 2010). To the west, in present-day Falcón State, the earliest signatures of human presence, dating to between ca. 14,000 and 12,500 BP, have been found at the Muaco and Taima Taima sites (Cruxent and Rouse 1956; Ochsenius 1980; Ochsenius and Gruhn 1979). These remains include butchered animal bones, other large bones that were used as anvils or chopping blocks and one that shows traces of intentional breaking, grooving, cutting and burning. Some bones were associated with lithic projectile points of the so-called El Jobo tradition (Cruxent 1961, 1962). The recovery of combined paleontological and archaeological evidence yielded the first insights into the lives of these Late Pleistocene hunter-gatherers (Bryan *et al.* 1978; Oliver and Alexander 1990; Rouse and Cruxent 1963; Veloz Maggiolo and Martín 1983).

The transition from hunting the large mammals of the Pleistocene in El Jobo times to that of modern fauna was associated with the presence of stemmed projectile points and their derivatives, encountered in the so-called Canaima complex (Boomert 2000, 51; Rouse and Cruxent 1963). Such bifacially chipped and stemmed spearheads have

been reported on two continental islands: Margarita (de Booy 1916, Figure 10; mentioned as "chipped quartzite arrowpoint" by Osgood and Howard 1943, 113; see also Cesari 1995) and Trinidad (Boomert 2000, Figure 6; Boomert, this volume). Similar artifacts were also found in northern continental Venezuela (Cruxent 1962; Cruxent and Zucchi 1964; Dupouy 1945; Sanoja 1982, Figure 76), in Venezuelan Guayana (Cruxent and Rouse 1956, 1958; Cruxent 1971; Rouse and Cruxent 1963), on the Upper Orinoco (Barse 1989, 1990, 1995) and in the Gran Sabana (Dupouy 1957, 1960). The absence of material signatures of the Late Pleistocene and Early Holocene peoples on the non-continental islands of the Southeastern Caribbean suggests that these populations might have been lacking either the necessary technological capacity or an interest in utilizing it. For the rest, flexible technology would have allowed the South American continent's first indigenous colonizers to occupy diverse environments without clearly preferring any (Borrero 2015; Bryan 1973; Pearson and Bostrom 1998). Technological homogeneity coupled with increasing subsistence strategy heterogeneity suggests, according to Jaimes (1999), that the technoeconomy common to the Joboid and Canaiman peoples escapes the narrow definition of an early "archaic style of life" (Dillehay *et al.*1992). It defies the "black-boxing" of these peoples as rapidly migrating specialized megafauna hunters and as bearers of an ancestral tradition that had evolved on the North American Plains (Haynes 1969; Martin 1973). The environmental changes of the Holocene fostered increasing dependence on the sea as a resource provider and highway linking the peoples of the Southeastern Caribbean coast to faraway contacts. Slowly emerging coastal uniformity in topography, climate and biota helped develop a generalized Archaic Age life of marine-oriented fisher-hunters, gatherers and plant managers. These three modes materialized in a series of shell middens that identify habitation-burial areas in the otherwise boundless paleolandscape (Antczak and Antczak 2008; Antczak *et al.* 2007).

## The Holocene in the Venezuelan Caribbean

Coastal shell middens are deposits of up to several meters deep composed mainly of bivalves, fish bones and echinoderms, suggesting a certain degree of sedentarism. However, systematic off-midden sampling is virtually null. Bone projectile points used for fishing replaced the stone points employed in hunting Pleistocene game. Lithic assemblages regularly include tools used for plant processing, such as anvils for cracking palm nuts as well as grinding stones (manos) possibly for processing vegetable resources, coarse salt or pigments (Cruxent and Rouse 1958, I, 95).

### *The mainland coast*

Dates associated with Mid-Holocene populations range between ca. 6625–6120 cal BP and 6175–5755 cal BP at the shell middens of Cerro Iguanas in the Tucacas area to 3965–3380 cal BP at El Heneal on the west-central coast (Rouse and Cruxent 1963, 47, 155). A date of 2740–2345 cal BP is associated with a series of shell middens at the Pedro García site to the east (Rouse and Cruxent 1963, 38). A series of shell middens along the northeastern coast was encountered at Ño Carlos, Guayana and Remigio; the last of these sites was dated to ca. 8310–7835 cal BP and 7565–7305 cal BP (Sanoja and Vargas 1999a, 148) in its median and upper layers. This sequence also includes the

shell middens of the Manicuaroid series discussed in the section dedicated to Cubagua Island (see below). According to Sanoja and Vargas (1982, 1995, 1999a, 1999b; Sanoja 1982), the Archaic Age societies of northeastern Venezuela formed part of an arc extending from the Gulf of Paria to Trinidad, then onwards along the coast of the Guianas as far as Brazil.

### *The islands*

The western Venezuelan archipelagos of Las Aves and Los Roques, as well as solitary La Orchila, lying at 135 km (Los Roques) to 155 km (Las Aves) over deep open sea from the coast, have revealed only late precolonial materials to date (Antczak and Antczak 2006, 2015). Thus far a similar archaeological scenario prevails on La Tortuga Island and the Los Testigos archipelago (at 76 km and 63 km from the mainland, respectively; Guzmán Quevedo 1988). However, the absence of material signatures does not mean that some of these islands, visible on the horizon from the highest tops of the mainland mountains, were not incorporated into the perceptual landscape of the mainland indigenous peoples for many centuries before they landed on their beaches (Antczak and Antczak 2006).

Three Archaic Age complexes have been defined on the northeastern coast and islands: Cubagua, Manicuare and Punta Gorda (Cruxent and Rouse 1958; Ginés *et al.* 1946; Rouse and Cruxent 1963). Shell middens at Manicuare on the mainland Peninsula of Araya and at Punta Gorda on Cubagua Island constitute typical remains of the sea-oriented bearers of the Manicuaroid series. The chronology begins on Cubagua Island with the Cubagua complex, dated to ca. 4850–4445 cal BP, and follows with the mainland Manicuare complex, dated to ca. 4240–3560 cal BP and ca. 3000–3400 cal BP. The record finishes, back on Cubagua Island, with the Punta Gorda complex, where pottery of the Saladoid El Mayal style, dated between 1890–1545 and 1710–1305 cal BP, appears (Rouse and Cruxent 1963, 155–156). The most distinctive artifacts of the Manicuaroid series are bone projectile points. However, lithic tools abound, including flat milling stones which might have been used with grinders to process the maguey plant (*Asparagaceae*) (Hoyos 1985, 195–198). The main difference among the three complexes consists in an increasing use of shells as a raw material for artifact production (Rouse and Cruxent 1963, 44–45).

La Blanquilla. This island, situated 160 km east of the island of La Orchila and nearly 100 km northwest of Margarita, yielded a total of 15 precolonial sites (Antczak and Antczak 1991). All but three yielded ceramic materials. At the three non-ceramic sites, cultural deposits are shallow and contain scatters of turtle, fish and mollusk remains. Lithics include quartz flakes of various sizes. More flakes were found superficially dispersed along the southwestern coast of the island, in addition to three multifacial percussors obtained from quartz pebbles, rounded by frequent use. These artifacts, forming part of the Garantón complex, were tentatively related to the abovementioned Manicuaroid series (Antczak and Antczak 1991). At the southeastern tip of the island, a series of cave-like shelters in the limestone cliff, carved by seawater, was found. Excavations were performed in the southernmost of these shelters, known as Las Cuevas de La Cabecera (max. interior height 1.3 m) (Figure 10.2., upper row). There was no visible separation between the cultural strata inside and outside the shelter. Signs of bioturbation resulting from iguana and goat activity were found all around.


*Figure 10.2. Partial views of Cuevas de la Cabecera site on La Blanquilla Island (upper row) and a selection of bone unipoints and lithic microperforators from this same site (lower rows).*

Therefore, it can be reasonably argued that all the materials from this site should be assigned to a single Ceramic Age component dated to ca. 960–555 cal BP (Antczak and Antczak 1991). However, deep inside the cave and in the basal layer of the cultural strata (ca. 30 cm), 22 bone projectile points, several quartz flakes and three micro-perforators were recovered. Potsherds, quartz flakes and animal remains were ubiquitous in the remainder of the site. Given the depositional circumscription of these artifacts and based on the defining character of bone points for the Manicuaroid series, these objects were provisionally included in the Garantón complex (Figure 10.2., lower rows; see also Boomert 2016, Figure 12).

Margarita and Coche. Margarita, the largest Venezuelan island at 1071 km$^2$, is located 22 km from the mainland. It has yielded a large collection of largely lithic, Archaic Age finds. The relative abundance of these materials masks the fact that after some early finds in the first half of the twentieth century (Cruxent and Rouse 1958; de Booy 1916; Rouse and Cruxent 1963), all later collected materials have been isolated casual finds resulting from amateur or student explorations (Castañeda Malavé 2006; Cesari 1995; Naranjo 2007; see also Ayala Lafée 1994). For example, the Paraguachoa complex has been proposed as a unitary label comprising various quartz artifacts such as unifacial choppers (some of them up to 2 kg in weight), as well as a large variety of finely elaborated projectile points, including pedunculated arrowheads and dart and spear points (Cesari 1995). However, this category lumps together materials collected from short-lived and superficial sites of largely unknown contexts. As such, they are of little use for Archaic Age dating or for in-depth reconstructions of these populations' settlement patterns, sociopolitical lives, gendered activities, subsistence, ethnicity and beliefs, unless the information discussed in this chapter of newly collected data is considered.

Archaeological data pertaining to the Archaic Age human presence on the islands of Margarita and Coche has been methodically collected since 2008, and especially since 2014. The later phase comprises part of the systematic surveys directed by the first author in the context of the ERC-Synergy project NEXUS1492 based at Leiden University. It is noteworthy that the prospection of Cubagua Island had barely begun and did not continue because the results of the Carballo's survey (2014) were released in 2014. Although the space allocated to this chapter does not permit any deeper elaboration on the results of these ongoing investigations, some interesting results may be mentioned. Figure 10.3. shows some of the possible Archaic Age locations on the islands of Margarita and Coche and others that have already been confirmed as such. Some of these sites are inland-located superficial scatters of lithic materials. Many were previously interpreted as lithic workshops and provided large collections of decontextualized tools and debitage described by amateurs (Cesari 1995). However, some other sites present stratified accumulations of marine shells associated with a wide range of faunal remains, lithic artifacts and manufacture debris, human burials and hearths. Though they await systematic excavation and reliable dating, some remarkable findings may be mentioned here. For example, the Quebrada de Guacuco site (NE24), located on the Península de Macanao (western part of Margarita Island), is a large shell midden composed mainly of *Tivela mactroides* (guacuco) valves accompanied by shells of *Donax denticulatus, Anadara* sp., *Arca zebra, Crassostrea rhizophorae, Lobatus gigas, Cassis* sp., *Charonia variegata, Murex pomum, Cypraecassis* sp., *Melongena melongena,*

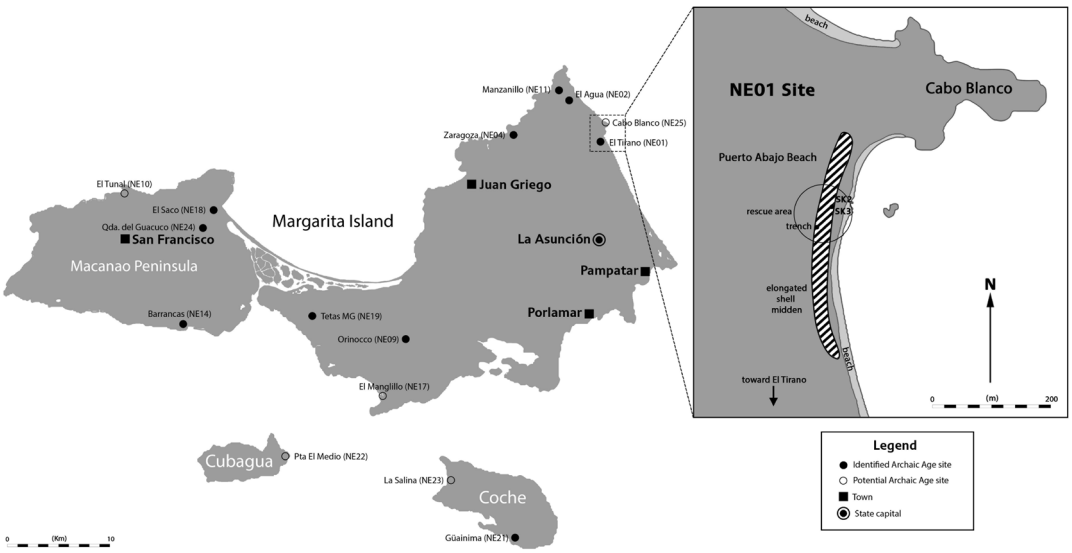


*Figure 10.3. Selection of Archaic Age sites on Margarita, Coche and Cubagua islands surveyed thus far by the ERC-Synergy project NEXUS1492.*

*Purpura patula*, and *Cittarium pica*. This variety indicates that gathering was carried out in diverse marine environs: in shallow sea beds covered by marine phanerogams, on rocky intertidal beaches and in inner lagoons bordered by mangroves. In the test pits that reached a depth of 80 cm and with strata continuing deeper below, fish vertebrae and fragments of land mammal bones were also found. Although the absence of collagen in these bones precluded their use for $^{14}$C dating, a date of 7065–6895 cal BP was obtained from one *Melongena melongena* shell extracted from the same depth of 80 cm. The richness of these well-preserved deposits and their early date pose new and fascinating challenges for matching this site with its Archaic Age counterparts in the insular Caribbean and on the adjacent mainland. Furthermore, the very first archaeological survey carried out on the island of Coche revealed at least one site of Archaic Age category. The Güainima site (NE21) is a scatter of shells (largely *Melongena melongena*) nearly one square kilometer in size, accompanied by dozens of small scatters of quartzite nuclei, cores and flakes and hearths, reaching a depth of at least 30 cm. One *Melongena melongena* shell yielded a date of 3355–3200 cal BP. Yet another site on Coche Island, La Salina (NE23), situated on the border of the salt pan, yielded abundant flakes removed from quartzite cores, *Melongena melongena* shells and semi-charred turtle bones in the absence of pottery. Although one shell from this site gave a date of 895–735 cal BP, future research may indicate that the sample is not representative of this site, which presents probable Archaic Age characteristics. Leaving the abovementioned data for future elaboration, the following sections will focus on the Archaic Age findings at the site of El Tirano, on Margarita Island.

In 2008, earth-moving machinery accidentally unearthed archaeological materials on the northeastern coast of Margarita Island. Unfortunately, the works continued. Rescue archaeology performed by the authors was the only way to recover three human burials and associated cultural materials (Lemoine Buffet *et al.* 2015). The site (NE01)

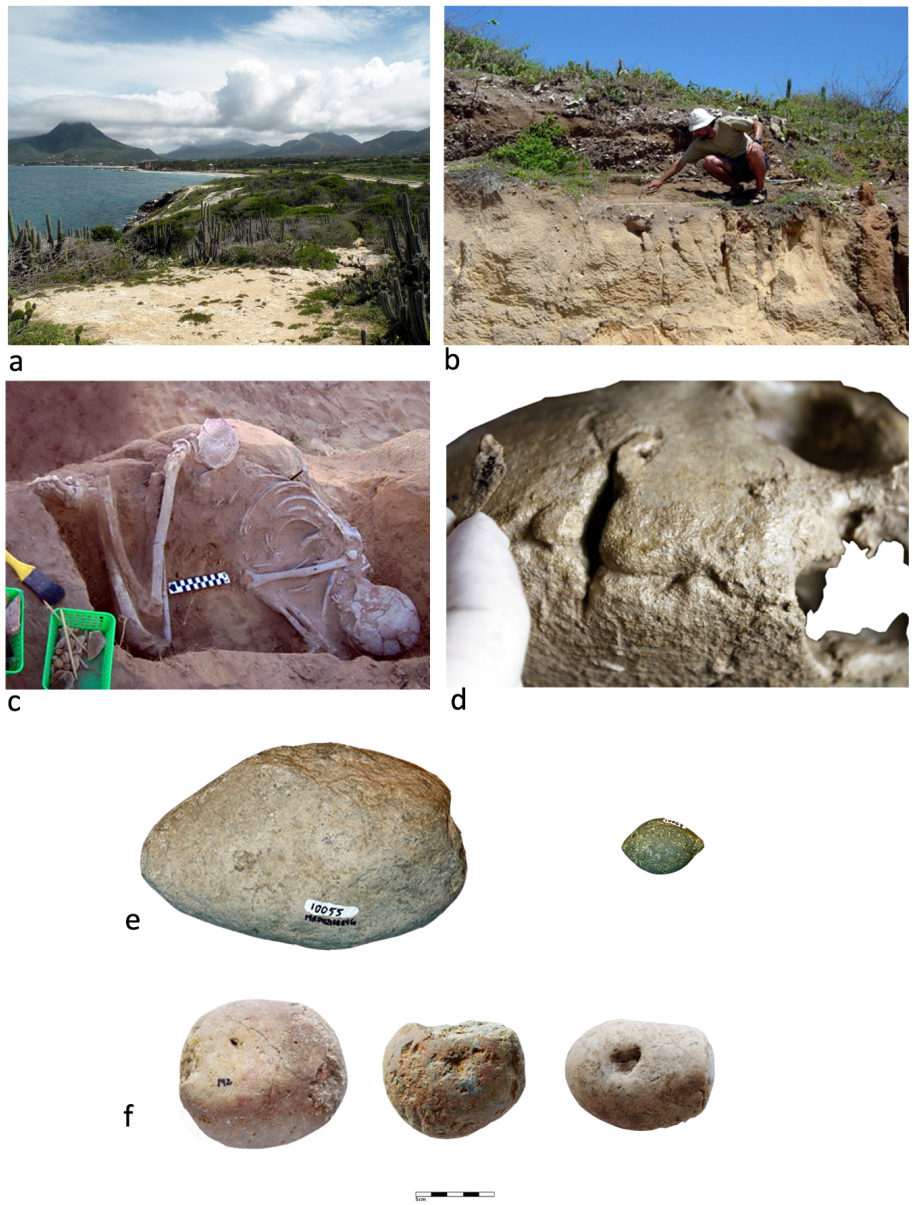


*Figure 10.4. Views and materials of El Tirano (NE01) site: (a) Puerto Abajo bay, El Tirano village and Cerro Guayamurí in the back; (b) the NE01 site at the very beginning of the rescue archaeology project; (c) human remains (SK2) during rescue excavation; (d) possible wound on the frontal bone and parallel to the coronal suture of the SK2 skull; (e) lithics recovered at Trench A, NE01 site; (f) selection of superficial lithic findings from NE01 site.*

is situated in the bay adjacent to Puerto Abajo, about 1 km north of the village of El Tirano (Puerto Fermín) (Figures 10.2 [right] and 10.4a). It extends 700 m along the coast in a 350 m-wide strip covering a total of some 24.5 hectares. Before the mechanical disturbance of the site had begun, part of the strip was covered by a 600x25 m-wide

shell midden with a height between 0.3 and 3.5 masl. Scatters of potsherds, shells and animal bones were visible on the surface (Figure 9.4b).

The site, flat along the seashore, gradually rises as it moves inland, reaching a maximum elevation of 18 masl. The bay of Puerto Abajo is one of the best natural ports on the island, providing easy access to both shallow and deep open waters as well as coral reefs, rocky shores, inner saline lagoons and mangrove swamps. Moreover, NE01 is situated in the area characterized by the highest precipitation on the entire island and shows a relative potential for agriculture (Hoyos 1985, see maps pp. 26, 34). It also offers optimal access to varied terrestrial and marine ecosystems as well as associated resources including a series of endemic subspecies (Sanz 2007). The adjacent Cerro Guayamurí (470 masl), featuring rainforest and freshwater sources on top, has unquestionably figured as a landmark in the cultural landscape from earliest precolonial times to the present (Hoyos 1985, 49–51). The earth-moving machinery, going from south to north, cut one third of the shell midden lengthwise, unearthing human bones. Some appeared scattered on the surface. We examined the edge of the cut where, at an approximate depth of 3 m from the top of the shell midden, abundant lenses of red ocher and human bones appeared. This led to the excavation of two test pits in the slightly disturbed area as well as the recovery of the remains of two human skeletons, SK2 and SK3. These remains were lifted together with the surrounding soil, carefully wrapped up and transported to the laboratory. Such measures succeeded in preserving the bones and made possible the further recovery of micro-remains. Trench A, measuring 1x6 m, and two additional test pits of 1x1 m were hastily excavated and led to the recovery of Ceramic Age human remains (SK1), mentioned here only with reference to the SK2 and SK3 burials. Soon afterwards, the entire area was leveled by machinery and the site destroyed.

The most complete and anatomically articulated bone remains (SK2) pertain to a 25- to 35-year-old female that was between 152 and 160 cm tall (Figure 10.4c). The body was placed on the left side in a crouched position, and oriented east – west with the head facing inland and the feet directed toward the sea, respectively. The left arm was under and supporting the left side of the head, and the right arm was over the right side of the head with the hand over the right shoulder. Cranial indexes show an elongated skull (dolichocran), high with respect to length (hypsicran) and to the breadth (acrocran). Upper incisors are shovel-shaped and of the Sinodont type (Buikstra and Ubelaker 1994, 64). On the frontal bone and parallel to the coronal suture, a 38 mm-long by 6.6 mm-wide wound was found (Figure 10.4d). Anthropophysical observations by X-ray analysis could not reliably determine whether the injury was caused antemortem or postmortem. However, other observations suggest that it might have been antemortem and possibly caused by a lithic weapon. The corroboration comes from friable evidence of the active remodeling of the bone, suggesting that the wound might have been inflicted some days before death. Moreover, a small fragment of schist was found inside the skull. This elongated piece perfectly fits the fracture in the skull. Therefore, the wound might have been caused by a club-like weapon consisting of a pole with shafted schistose "blades assembly" at its distal end. In fact, a few lithic artifacts found associated with SK2 were elaborated with laminar metamorphic flakes of schist-quartz of laminar exfoliation. These artifacts could have been used as weapons rather than as domestic tools. Without use-wear analyses, the flakes can easily go un-

noticed in archaeological excavations and be confused with natural rock fragments. If some of these flakes were de facto used as weapons, then the death of the SK2 woman could have been caused by septicemia due to the fragment of the lithic weapon that was left encrusted in the wound.

SK2 also shows a series of other pathologies. There is a labial abscess on the right side of the mandible under tooth 30 (M1). Tooth 27 (C) is chipped on the labial side. A tuber (Torus) 5.6 mm long, 4 mm wide and 2 mm high was found on the first intermediate foot phalange, and an exostosis shaped in form of a "cauliflower" on the distal phalanx of the first finger (toe) of the left foot. The pathology present on the left foot could have caused difficulty in walking on firm ground, and it is possible that the female walked with a limp.

The head and legs of SK2 were covered with small flakes of local stone. The burial contained powder and fragments of red ocher scattered around the pelvis and right femur, while some other pieces were placed on the abdomen. Five shells (*Tivela mactroides*) were found joined to the right-hand bones, humerus head and scapula of the skeleton. The adherence of the shells to the hand bones suggest that they might have been contained in the hand of the dead woman. The remains of SK2 are semi-fossilized and despite several attempts, no collagen could be extracted to be dated by $^{14}C$. However, one of the *Tivela* shells from the "in-hand group" gave a date of 2530–2340 cal BP. Shells of *Perna perna*, *Melongena melongena* and *Tivela mactroides*, fragments of barnacle (*Balanus* sp.) and sea urchins (*Diadematidae*) and a few unidentified remains of fish and crustaceans may be interpreted as funerary offering or signatures of mortuary rites.

Some 20 cm south and 20 cm above the pelvis level of SK2, an incomplete skeleton (SK3) was found. Both legs, including femora, tibiae, left patella and fibulae, were found. Notwithstanding, it was possible to establish that SK3 was most probably a 20-year-old man between 165 and 168 cm tall. Flat and robust tibias and femurs suggest significant strain on his legs during his life. The collagen extracted from these bones yielded the date of 2350–2290 and 2270–2160 cal BP.

Trench A was excavated forty meters west and 50 cm below the depth of SK2. The remains of a hearth were found in the lowest strata of the layer, as was a series of lithic materials. A sample of charcoal from the hearth furnished a date of 4090–3900 cal BP. The lithic artifacts include one possible adze, bi-point, pitted stone (anvil?), grinding stone (mano?), unifacial quartz chopper, unifacial limestone chopper with possible signs of shafting (club?), six metamorphic artifacts of quartz-schist with laminar exfoliation (sharp and brittle) and one adze with percussion-use wear and a chipped fracture (Figure 10.4e). Two gouges made of *Lobatus gigas* shell were also found. Judging by the color and texture of the soil matrix that surrounded SK2, SK3, the hearth and the associated artifacts, all these materials seem to pertain to similar non-ceramic strata.

Further data indicate that NE01 continued to be relatively steadily inhabited for more than a millennium. Some 200 cm above SK2, the soil turns from yellowish to a dark brown sandy matrix typical of some other shell middens located on Margarita Island. A complete skeleton (SK1) of a 12-year-old (probably female), dated to 790–670 cal BP, was recovered from this layer, buried supine over a turtle carapace fragment. The skull shape looks similar to SK2; however, the incisors lack the shovel-shape feature. In addition, a sample of charred material from an associated hearth

above the level of SK1 produced the date of 500–310 cal BP (both dates are 2 σ estimations). This dating shows that the indigenous presence at this site extended into colonial times. Some quantities of plain and well-fired potsherds were found in the SK1 context, as well as in the upper strata, accompanied by thick pockets of marine shells. While *Tivela mactroides* was predominant in the lower strata, *Perna perna* was most common in the higher strata. This suggests shifts in environmental conditions, in gathering strategy or both. Lithic tools change in size from larger to smaller as the strata ascend, and quartz becomes the predominant raw material. Shell gouges and grinding stones (manos) are present in both upper and lower strata.

It is notable that burials in shell middens (SK2 and SK3) have been observed for the same period in other Caribbean islands (Aruba, Cuba and Trinidad), and even on the continent, as far south as Patagonia (Alfonso-Durrurty *et al.* 2011). If the shell middens indicate habitation sites with domestic use areas, then these human burials show the necessity to keep the dead close to the living (Robb and Harris 2015, 38). It is also notable that all three burials from NE01 might have been easily located in reference to a rock outcrop emerging from the sea some 30 m from the shore – the only outcrop in the bay that could readily be used as a reference point for the site and its burials. A quick survey of the area containing the entire site did not reveal the existence of other possible funerary or habitation contexts. However, given the generally heavy anthropic alteration of said area, the hastiness of the survey and the rapid destruction of the site, these conclusions cannot confirm a local burial-habitation pattern, although one might in fact have existed there.

## Concluding remarks and future research

Patchy archaeological signatures from the islands of Venezuela show a series of material and contextual commonalities when compared to other Early, Middle and even Late Holocene sites across the insular Caribbean and the northern rim of the South American continent. The largely unoccupied spaces enabled the rapid spread of Archaic Age lifeways along the coasts and through the islands. Apparently, early indigenous communities lived well apart from one another but existed within historically and culturally interconnected networks of traditions in terms of subsistence, ritual and mortuary practice. To illustrate this statement, let us compare the Archaic Age insular burial grounds at the NE01 site on Margarita to the Malmok site on Aruba (see Kelly and Hofman, this volume, while other parallels would emerge by comparing the data presented by Boomert, Valcárcel Rojas *et al.* and Ulloa and Valcárcel Rojas, this volume). Moving among the spatial and temporal scales of this analysis leads to the realization that even within the same region of the Southeastern Caribbean – i.e., present-day Venezuela – the Archaic Age was a layered palimpsest of processes unfolding at different tempos and exhibiting a variety of local flavors (Harris and Robb 2015, 27).

In Malmok, anywhere from 60 to 70 deceased individuals were buried between ca. 1650–1300 cal BP (see also Kelly and Hofman, this volume, Versteeg *et al.* 1990, 50). These interments chronologically succeed the SK2 and SK3 burials on Margarita. Nevertheless, Aruba also yielded older dates, suggesting a wider, all-embracing temporal range (for the most recent data on the Aruban Archaic Age, see Kelly and Hofman, this volume). The crouched posture and the placement of the SK2 body on its side

closely resemble the Malmok burials, as the bodies of the latter site might have been wrapped and tied into this posture. The hands facing the front of the head, or perhaps grasping it – visible in the SK2 burial – have also been associated with the burials of adult individuals in Malmok. The use of red ocher, which characterized the SK2 burial, was also noted in about half of the individual interments in Malmok. Moreover, half of the grave pits in Malmok featured marine shells used as burial offerings, a detail also discovered in the SK2 burial. Last, the SK2 remains were covered with small stones, while at Malmok, all the male bodies were covered by stones, but not every female.

Data obtained at NE01 suggest that subsistence was oriented toward marine resources throughout the entire stratigraphic sequence of this site. However, its privileged location in one of the island's most fertile areas, with advantageous rainfall rates besides (Vila 1958, 65), would not only have favored a sedentary lifestyle but facilitated plant management. Only in this place, among all the Venezuelan Caribbean islands, could plants have been easily intertwined with marine resources to form Archaic Age mixed foodways. In fact, NE01 seems to relate to the last phase of occupation at the Las Varas site on the nearby continental Araya Peninsula, where Sanoja and Vargas (1999a, 155; Sanoja 1989, 529) observed purported signatures of transition toward sedentarization and tribalization ca. 4600 BP. Marine-terrestrial and animal-plant mixed economies could well have been underway at both sites by that time (see Greaves and Kramer 2014; Rodríguez Ramos *et al.* 2013).

It has been suggested that Aruba, Curaçao and Bonaire might have functioned as refugia for early indigenous populations far into the Ceramic Age (Versteeg *et al.* 1990, 33). Pottery was intermingled with Archaic Age shell deposits and tool kits on these islands from 3000 to 1480 BP (Du Ry 1960, 94; Haviser 1987; Haviser 1991, 40–41, 60; Haviser *et al.* 2011; Hoogland and Hofman 2011, 2015; Hoogland *et al.* 2015; Kelly and Hofman this volume; Oliver 1997; Rouse and Cruxent 1963, 110; van Heekeren 1960, 115). Interestingly, a similar hypothesis has been proposed with respect to northeastern Venezuela. According to Rouse and Cruxent (1963, 58–59), mountains and steep coasts cut this region off from the rest of the country, halting the advance of the Ceramic Age riverine-oriented Saladoid peoples from the south. This pause could have permitted the Archaic Age peoples to live in relative isolation from the somewhat distant rest of the country, where horticulture and pottery-making technologies were already widespread. Arguably, horticulturists could have found the natural separateness of Margarita Island with its arid environment highly unattractive (see Chaves 1964). Therefore, Margarita and its associated islands of Coche and Cubagua could have served as refugia of Archaic Age peoples until the first centuries AD, when the increasing influx of new peoples and technologies markedly changed strategies for making a living.

Intriguingly, bioanthropological analyses showed that the shovel-shaped incisors and strong masticatory apparatus of SK2 also characterized early skeletons found on Aruba (Kelly and Hofman, this volume; Versteeg *et al.* 1990, 37). Differences between SK2 from NE01 and the later northern Venezuelan population tend to support the claim of marked anthropophysical differences between the Archaic Age and the succeeding Ceramic Age peoples. Examples include the narrow, long and high skulls (dolichocran, hypsicran, acrocran) of the earlier and the wide (brachycran) skulls of the later arrivals (Kelly and Hofman, this volume; Lemoine Buffet *et al.* 2015; Tacoma 1991; Versteeg

*et al.* 1990, 12). Beyond Margarita, these differences were repeatedly encountered in Aruba, Cuba, Trinidad, Suriname and Colombia (Boomert 2000; Correal Urrego and van der Hammen 1977; Herrera Fritot 1965; Tacoma 1989, 1991; Versteeg 1991; see also, Valcárcel Rojas *et al.* Ulloa Hung and Valcárcel Rojas, this volume).

However, recent investigations aimed at characterizing the differences between Archaic and Ceramic Age populations make a rather puzzling impression. The isotopic composition of human bone collagen from Malmok (an Archaic Age site), as well as from Santa Cruz and Tanki Flip (both Ceramic Age) on Aruba, did not change despite the expected marked contrast between the results of the earlier marine versus the later terrestrial plant diet (Versteeg *et al.* 1991). Furthermore, Mickleburgh and Pagán-Jiménez (2012, 2472; Kelly and Hofman, this volume; Pagán-Jiménez *et al.* 2015) reported that an individual from the Archaic Age site of Canashito on Aruba (ca. 2300–1800 BP) exhibited maize starch grains with evidence of grinding and baking. Recent archaeogenetic investigations on Aruba support historical continuity rather than a replacement of the invaded by the invading (Carrero-González *et al.* 2010; Toro-Labrador *et al.* 2003; see also Moreno-Estrada *et al.* 2013 and Castro de Guerra *et al.* 2009).

Though fragmentary, the data from NE01 can shed some light on the conundrum of continuity versus discontinuity with respect to Archaic and Ceramic Age populations. One test pit excavated close to the burials, crossing through all cultural layers of the shell midden, showed a tiny – less than 10 cm thick – lens of sand dividing a lower non-ceramic layer (associated with the SK2 and SK3 burials) from an upper ceramic layer (the SK1 burial). Remarkably, from the very beginning, the upper layer produced well-fired and plain potsherds, showing no observable differences in vessel morphology or manufacture moving upwards, that is, forward through time. It should be noted that a thin layer of sterile sand also separated shell-bearing strata without pottery (below) from those containing pottery (above), found during ongoing research at the El Manglillo site (NE17) on Margarita's southern coast (Figure 10.3. left). These lenses could indicate the "interruption" of occupational sequences. But such a fragmentary indication should not be over-interpreted. On the other hand, while the upper-layer SK1 individual features a craniometrical index similar to its SK2 counterpart from the lower layer, it did not share the shovel-shaped incisors.

Drawing from these fragile threads of data, we may hypothesize that Archaic Age peoples brought ceramics to Margarita from their mainland ceramic-bearing neighbors, probably the early Saladoid Arawakan-speakers. Initially, the former neither manufactured pottery themselves nor shared Margarita Island with the newcomers. With the passing of time, Archaic Age peoples did not become extinct but slowly mixed with incoming pottery makers. If these predictions are correct, comparing the genetic and isotopic signatures of SK1 and SK2 will confirm them. SK1 should turn out to demonstrate the genetic merging of Archaic and non-Archaic Age peoples, a process resulting from intermarriage accompanied by mobility and exchange. Similarly, the Late Archaic and Early Ceramic Age peoples who lived at NE01 would have blended their food supplies. They would have made use of plant resources resulting from the site's optimal soil and rainfall conditions. But at the same time, because they were also situated so fortuitously with respect to bountiful sea resources, their staple diet would have continued to be based on marine food. In fact, both SK1 and SK2 show a very

low incidence of dental caries. In our view, to reiterate, the ceramic strata do not signify the replacement of Archaic Age peoples by pottery-making newcomers. Instead, they may suggest adoption of ceramics by the early dwellers and their intermarriage with the newcomers while maintaining a diet more or less like that of their past.

These results pose some challenges to the archaeological reconstructions currently in vogue. For example, insular refugia might not have been 'sanctuaries' where a static and homogeneous Archaic Age way of life was perpetuated until drastic submersion by newcomers. It is true that the early peoples survived longer on the islands than on the continent, but the significance of this is that they might have been exposed to gradual rather than sudden catastrophic relations with their mainland (and insular) neighbors. These manageable relations reshaped them and their daily routines. Paraphrasing Siri Hustvedt (2012, 70), the Late Archaic Age peoples (and, for that matter, the Early Ceramic Age peoples) became themselves through interactions with their neighbors. We argue in this chapter that the Archaic Age worlds were not palimpsests disconnected from before and after their temporal durations. Instead, they were historically sinuous processes of sociomaterial flows operationalized in complex and "thick" realms of everyday life.

The accelerating sophistication of archaeological methods, techniques and theoretical approaches applied to the investigation of the early human presence in the Caribbean – palpable in this volume – is encouraging. Cutting-edge analyses of already existing materials are revealing astonishing new information. However, none of these efforts can replace fieldwork, which is still our primary conveyance to the realms of past lives. We urge swiftness. No laboratory, however brilliantly equipped and operated, can resuscitate archaeological sites such as NE01 at El Tirano. These locations succumb daily to "modern" development.

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EARLY SETTLERS OF THE

# INSULAR CARIBBEAN

*Early Settlers of the Insular Caribbean: Dearchaizing the Archaic* offers a comprehensive coverage of the most recent advances in interdisciplinary research on the early human settling of the Caribbean islands. It covers the time span of the so-called Archaic Age and focuses on the Middle to Late Holocene period which – depending on specific case studies discussed in this volume – could range between 6000 BC and AD 1000. A similar approach to the early settlers of the Caribbean islands has never been published in one volume, impeding the realization of a holistic view on indigenous peoples' settling, subsistence, movements, and interactions in this vast and naturally diversified macroregion.

Delivered by a panel of international experts, this book provides recent and new data in the fields of archaeology, collection studies, palaeobotany, geomorphology, paleoclimate and bioarchaeology that challenge currently existing perspectives on early human settlement patterns, subsistence strategies, migration routes and mobility and exchange. This publication compiles new approaches to 'old' data and museum collections, presents the results of starch grain analysis, paleocoring, seascape modelling, and network analysis. Moreover, it features newer published data from the islands such as Margarita and Aruba. All the above-mentioned data compiled in one volume fills the gap in scholarly literature, transforms some of the interpretations in vogue and enables the integration of the first settlers of the insular Caribbean into the larger Pan-American perspective.

This book not only provides scholars and students with compelling new and interdisciplinary perspectives on the Early Settlers of the Insular Caribbean. It is also of interest to unspecialized readers as it discusses subjects related to archaeology, anthropology, and – broadly speaking – to the intersections between humanities and social and environmental sciences, which are of great interest to the present-day general public.

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