4. CULTURAL CHRONOLOGICAL FRAMEWORK

4.1 INTRODUCTION

The present chapter provides a short, general overview of the cultural chronological framework for the research area and its surroundings. The description largely follows the cultural chronological framework presented by Rouse in 1992, and it has been adapted to incorporate the refinements that were recently made to this framework (section 1.4.4); (Petersen *et al.* 2004). This is needed to understand what features have been used in this study to assign archaeological assemblages to specific pre-Columbian periods. Colonial and recent information is provided in order to be able to estimate the impact of cover or destruction of archaeological sites by later use of parts of the research area.

4.2 PRE-COLUMBIAN CULTURAL SETTING

4.2.1 Introduction

The ensuing overview covers the pre-ceramic, Early Ceramic and Late Ceramic Ages (fig. 4.1). The description of the pre-ceramic period is mainly based on Rouse (1992). The largest part of the overview deals with the Ceramic Age in the Caribbean.

The overview has been based on the chronological framework for cultural developments in the Caribbean that was initiated by Professor Irving Rouse of Yale University in the early 1930s. Rouse, working from a cultural-historical point of view, considered groups of pottery to delimit material cultures and people behind cultures and the study of their cultural development was based on the study of the development of style. A pottery style, complex or phase is defined as the entire repertoire of a people built into its pottery during one single cultural period. A style may be characterised by a specific material, shape, decoration or ware and technology. These characteristics have been widely used to define areas, periods, peoples and cultures (Hofman 1993:26; Rouse 1964). A series of styles, named after the type-site with the suffix -oid, is a resemblance of styles within one line of development. Local variations are called subseries, named after the type-site with the suffix -an (Hofman 1993:26; Rouse 1964, 1986, 1989, 1992; Vescelius 1980). Rouse explains the pottery developments and their dispersions through the region by migrations of Ceramic people from the South-American Orinoco region, through the Lesser Antilles to the Greater Antilles (Rouse 1986, 1992).

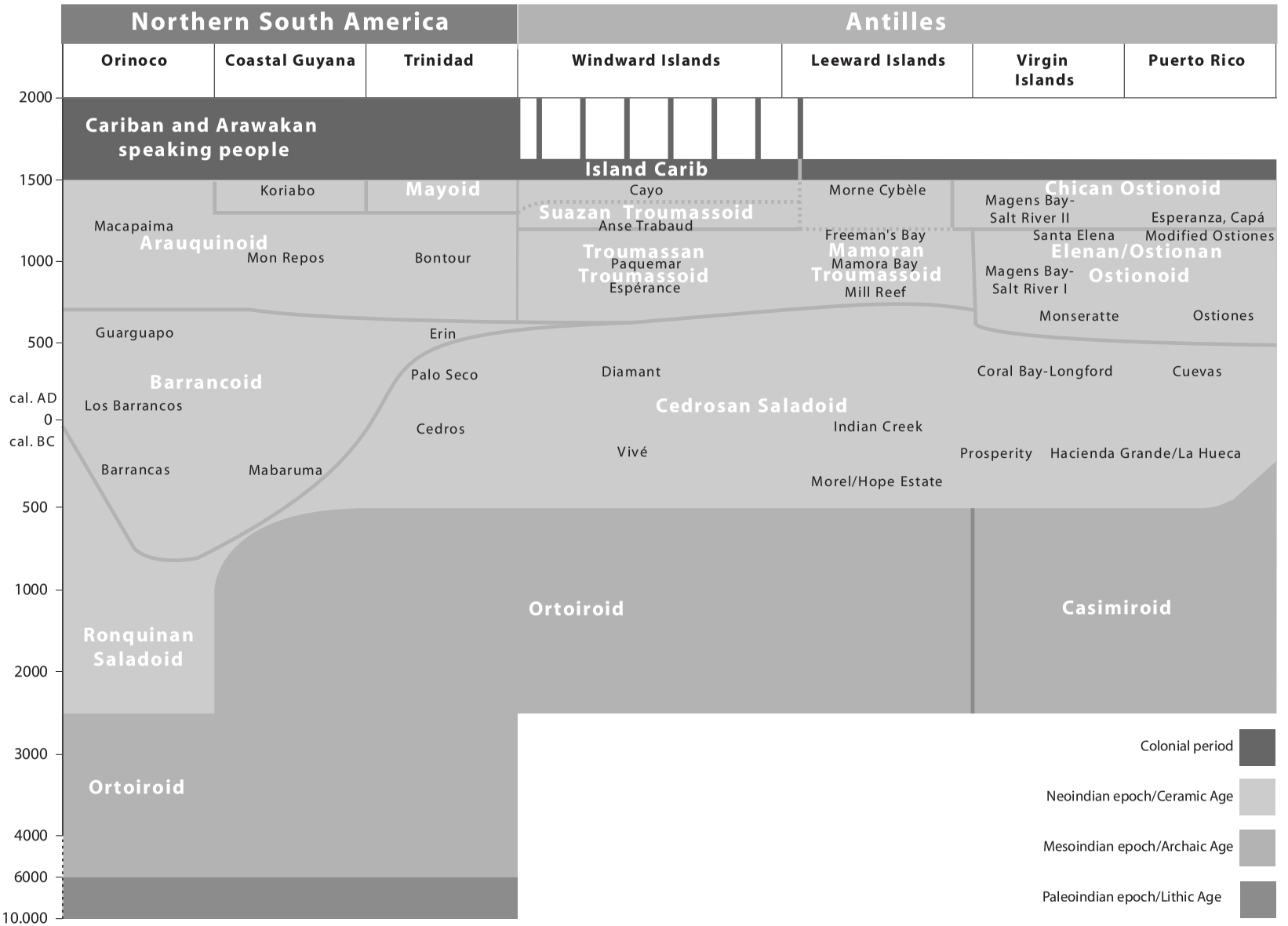
Rouse's framework has been widely adopted regionally and as it has been used and refined ever since it was first introduced it did and still does provide a valuable and very detailed regional reference for ceramic assemblages. It is therefore expected that reference to Rouse's chronological framework will ensure that the presentation of East-Guadeloupe complexes, roughly assigned to the pre-ceramic period, or to Early and Late Ceramic Ages with early and late phases, is accessible to all Caribbean archaeologists familiar with this framework.

4.2.2 Pre-ceramic period

Rouse (1992:49) divides the pre-ceramic period into two ages: the Lithic, or Paleo-Indian, age starting around 4000 BC and the Archaic, or Meso-Indian, beginning around 2000 BC. The pre-ceramic period largely coincides with Rouse's Period I. Flaked stone assemblages characterise the first and grinded artefacts of stone, bone, and shell characterise the latter. Two series are identified: Casimiroid and Ortoiroid. The Casimiroid series, approximately dated between 4000-400 BC, also known as Barreroid or Mordanoid, originated in Middle America. Three subseries can be distinguished: Lithic age Casimiran, Courian, which succeeded it in Hispaniola during the Archaic age, and Redondan, which replaced it in Cuba (Rouse 1992:51). Since Casimiroid has only been found on Cuba and Hispaniola, it is not considered relevant for further description within this study.

The Ortoiroid series, approximately dated between 2000-400 BC, also called Banwaroid, is named after the Ortoire culture in Trinidad.[1] Several variations can be distinguished: Ortoire on Trinidad, Boutbois on Martinique and Jolly Beach on Antigua, as well as the Corosan subseries, on Puerto Rico and the Virgin Islands. However, Rouse (1992:62) remarks that it is difficult to delineate subseries as site assemblages are generally small and consist mainly of non-diagnostic artefacts. It is thought that the Ortoiroid migrated from South America into the Lesser Antilles and Puerto Rico around 2000 BC (Rouse 1992:51). Boomert (2000:78) suggests, however, that this may have started as early as 5000 to 4000 cal. BC as well. The overall characteristic is provided by the presence of edge grinders, and partially ground celts of stone and shell, although the latter do not occur in Coroso assemblages. Evidence for flint flaking has only been found in Antigua and Puerto Rico (Rouse 1992:67).

On the Windward Islands, only few pre-ceramic sites have been reported. One pre-ceramic site was excavated


Northern South America
Antilles
Orinoco
Coastal Guyana
Trinidad
Windward Islands
Leeward Islands
Virgin Islands
Puerto Rico
2000
1500
1000
500
cal. AD
0
cal. BC
500
1000
2000
3000
4000
6000
10.000
Cariban and Arawakan speaking people
Island Carib
Koriabo
Mayoid
Cayo
Morne Cybèle
Chican Ostionoid
Magens Bay-Salt River II
Esperanza, Capá
Macapaima
Arauquinoid
Anse Trabaud
Suazan Troumassoid
Freeman's Bay
Santa Elena
Modified Ostiones
Mon Repos
Bontour
Troumassan Troumassoid
Paquemar
Espérance
Mamoran Troumassoid
Mamora Bay
Mill Reef
Elenan/Ostionan Ostionoid
Magens Bay-Salt River I
Monseratte
Ostiones
Guarguapo
Erin
Barrancoid
Palo Seco
Diamant
Coral Bay-Longford
Cuevas
Los Barrancos
Cedrosan Saladoid
Cedros
Indian Creek
Vivé
Prosperity
Hacienda Grande/La Hueca
Barrancas
Mabaruma
Morel/Hope Estate
Ronquinan Saladoid
Ortoiroid
Casimiroid
Ortoiroid
Colonial period
Neoindian epoch/Ceramic Age
Mesoindian epoch/Archaic Age
Paleoindian epoch/Lithic Age

at St. Vincent (Hackenberger 1991), at Barbados, a pre-ceramic component was identified in the Suazoid Heywoods site (Drewett 1995[a]; Drewett *et al.* 1993) and two pre-ceramic sites have been found in the interior of Martinique, Boutbois and Le Godinot (Allaire and Mattioni 1983). The sites on Martinique have been attributed to the Boutbois complex. Edge grinders, pebbles with grinding facets in their edges, are characteristic. Hammer stones, *metates* and irregularly shaped flakes also occur (Rouse 1992:63-64). According to Boomert (2000:78), the inland locations and the absence of food remains may suggest that the sites were used as special activity sites. On Trinidad, Ortoire sites are found along beaches and inland swamps (Rouse 1992:63). They are characterised by bone barbs and bipointed projectile points. Simple *manos*, metates, choppers, hammer stones, net sinker pebbles and mortars also occur (Rouse 1992:63). There is little pre-ceramic evidence from Guadeloupe and La Désirade. Clerc (1976) reported several isolated finds on Guadeloupe of probably pre-ceramic ground stone artefacts. In addition, a small concentration of local lithic material and typical Long Island blades has been reported for an inland area west of Capesterre-Belle-Eau (Basse-Terre). Although this site has not been investigated yet, it is probably pre-ceramic as well (Delpuech personal communication 1999). Richard (1995) mentions a possibly pre-ceramic component at the coastal site of Pointe des Pies at Pointe des Châteaux (Guadeloupe). This site is situated near the marina in St. François, a location that used to be a mangrove area. The bottom layer of this Saladoid site is characterised by an abundant lithic industry. No associated ceramics were found. On the basis of one single ^{14}C date on shell, producing a date of 2830 ± 50 BP, the hypothesis was launched that this occupation layer was pre-ceramic. Unfortunately, the site is almost completely destroyed nowadays, hindering the collection of more ^{14}C dates. At La Désirade, two pre-Columbian sites have been interpreted as being workshops where local lithics were obtained and worked. Both sites, the site of Pointe Doublé and Morne Baie Mahault, are on a rocky slope very close to the sea. They have been interpreted as being pre-ceramic since no ceramics were found and they have been presented in the permanent exhibition of the Edgar Clerc Museum as such. However, since no ^{14}C dates have been collected this is still open to discussion (*cf.* site catalogues in appendices 2-4; section 5.5.2).

More pre-ceramic sites have been reported from the Leeward Islands, and from Antigua in particular, where more than 50 a-ceramic sites have been identified. Most a-ceramic sites from Antigua can be attributed to the Jolly Beach culture (Nodine 1990). The Antiguan a-ceramic sites provide a wealth of information on the organisation of pre-ceramic occupation on this island. Most pre-ceramic sites on Antigua are located along the northern coast and in a low-lying limestone plain setting, close to flint sources and shallow offshore waters, offering rich and easily obtainable marine resources (Davis 2000:82). Although exceptions do exist, such as inland Norman Estate on St. Martin (Knippenberg 1999) and Plum Piece on Saba (Hofman and Hoogland 2003), most Lesser Antillean pre-ceramic sites have coastal locations, close to shallow waters and reefs, and most of them are rather small. Antigua site areas, predominantly habitation sites, measure between 150 m^2 and 4000 m^2 (Davis 2000:92). It has been suggested that the sites were used by small and mobile groups of hunter-gatherers (Keegan 1985; Petersen *et al.* 2004; Rouse 1992:66; Watters 1980). Pre-ceramic inhabitants of Antigua relied on a wide variety of terrestrial plants, shellfish, fish, and smaller numbers of reptiles and birds. For the Antigua sites, the complete absence of crabs in the diet is striking, as is the absence of the locally available but apparently not collected *Cittarium pica* (Davis 2000:89-91). Archaeological assemblages are further characterised by narrow blades and celts made out of *Strombus gigas* lips, and a wide repertoire of stone tools. Casimiroid-like flakes of pebbles are characteristic, while simple ground-stone artefacts are found as well (Rouse 1992:65). Casimiroid-like flakes of pebbles are characteristic, while simple ground-stone artefacts are found as well (Rouse 1992:65). Antigua flint artefacts have been reported as north as Anguilla (Crock *et al.* 1995). It is likely that flint was directly procured instead of exchanged. Blade production is a rare but typical feature, in particular on islands where flint is easily available, although flake industry is important as well (Knippenberg 1995).

There is a little a-ceramic evidence from Barbuda (Watters *et al.* 1992), Nevis (Wilson 1989, 1991), St. Kitts (Armstrong 1980), St. Eustatius (Delvoye 1994), Saba (Hofman and Hoogland 2003; Roobol and Smith 1980:169), St. Martin (Bonnissent 2001; Bonnissent *et al.* 2001; Knippenberg 1999) and Anguilla (Crock *et al.* 1995; Haviser 1991).

Several Archaic sites have also been reported from the Virgin Islands and eastern Puerto Rico. These have been assigned to the Corosan subseries, which is further divided into two (Rouse 1992) or three complexes (Lundberg 1991). According to Rouse (1992:65-66), edge grinders are diagnostic while simple beads and stone, bone and shell pendants also occur. Simple used but non-worked choppers,

Fig. 4.1. Chronological chart of the pre-ceramic and Ceramic ages (Petersen *et al*. 2004: fig. 1).

hammer stones, grinding stones, igneous rock flakes, shell picks and scrapers have also been found.

4.2.3 Early Ceramic Age

4.2.3.1 Saladoid series

The first ceramic people to arrive in the Antilles made pottery belonging to the Saladoid series. The Saladoid series is named after the Saladero site on the lower Orinoco in Venezuela (Rouse 1992). The Saladero style evolved from the Ronquinan Saladoid, which had developed in the middle Orinoco near the town of Parmana in the second millennium BC (Roosevelt 1980:193-196). Ronquinan pottery is characterised by bell-shaped bowls with red or white-on-red painted geometric designs, curvilinear incised lines, wedge-shaped lugs, modelled-incised *adornos* on lugs, strap handles and vessel walls, and painted crosshatching (Rouse 1992:75). During the first millennium BC, the people producing Ronquinan Saladoid pottery are thought to have moved into the Guyanas, where a Cedrosan Saladoid subseries developed (Rouse 1986, 1992). The Cedrosan Saladoid and Huecan Saladoid subseries, local variations on the Saladoid series, are the earliest pottery traditions on the islands. They are typical for the Early Ceramic Age, which may be equated with Rouse's Period II.

4.2.3.2 Huecan Saladoid subseries

The Huecan Saladoid subseries has been named after the La Hueca site on Vieques. Huecan Saladoid ceramics have been documented for Grenada, Union Island (Grenadines), St. Vincent, Martinique (Petitjean Roget 1981), St. Martin (Hofman 1999), Puerto Rico (Rodríguez 1991; Rouse and Alegría 1990) and Montserrat (Watters and Petersen 1999). Dates range from 400 BC-AD 400, roughly coinciding with Early Ceramic A.

On Guadeloupe, Huecan Saladoid ceramics have been discovered on the coasts of Grande-Terre, located close to reefs and shallow water areas. These include Morel (Arts 1999; Clerc 1964, 1968, 1970; Hamburg 2000[a]; Hofman *et al.* 1999[b], 2000); (fig. 4.2), Anse Patate and Anse Ste. Marguerite (Hofman *et al.* 1999[b]). Quite recently, however, the inland site of Place du Christ/Cathédrale was discovered in Basse-Terre (Romon and Gabriel 2001; Romon *et al.* 2002). The Folle Anse and Talisseronde sites on Marie-Galante also provided Huecan Saladoid material (Arts 1999; Barbotin 1991; Hofman *et al.* 1999[b]). Curvilinear incision, whether or not filled in by zoned-punctation or zoned incised crosshatching or zic, as well as incised nubbins and small zoomorphic *adornos* characteristically decorate Huecan Saladoid ceramics. Rounded griddles are predominant. White-on-red painting, one of the diagnostic traits of Cedrosan Saladoid pottery, is absent (Chanlatte Baik 1981, 1983; Rouse 1992; Hofman 1993:29-31, 1999). Apart from ceramics, Huecan Saladoid sites usually yield shell, coral or stone three-pointers and worked ornaments and stone or shell tools. At the Morel site, burials of humans and dogs have been found as well (Hamburg 2000[a]; Hofman *et al.* 2000).

Untill halfway through the 1990s, Huecan Saladoid ceramics were seen as belonging to people who migrated from the South-American mainland towards the Lesser Antilles around 400 BC. Recently, some scholars started to question if Huecan Saladoid should still be considered to represent a separate subseries, resulting from such separate and earlier Saladoid migration or whether it reflects a variant of early Cedrosan Saladoid (Oliver 1999). Based on geographic distribution and stratigraphic contexts, they argued that Huecan Saladoid represents a special, for example ceremonial, component of the Cedrosan Saladoid series (e.g. Hofman and Jacobs 2000/2001). According to Reed and Petersen (1999:257-258), Huecan Saladoid and Cedrosan Saladoid ceramics of the Trants site on Montserrat differ only in the details of decoration and vessel form and significant overlaps occur. They conclude that one single cultural group manufactured the Trants ceramics. However, for some other sites, technologically the ceramics are seen as two well-defined wares, as has been reported for Morel (Hofman and Jacobs 2000/2001).

Early Ceramic A settlement patterns are dispersed and typically consist of large, permanent and independent habitation sites, with rather large site territories, that were continuously occupied for centuries, resulting in thick accumulations of archaeological material. Trants on Montserrat, for example, represents a ring-shaped village consisting of large houses, occupied by extended families, around an 'empty' area that has been interpreted as a central *plaza*. It was occupied by 200 to 300 people for 800 years (Watters 1994). Huecan Saladoid ceramics and beads and pendants of non-local semi-precious stone are characteristic for Early Ceramic A site assemblages. The latter demonstrate the existence of long-distance contact networks and, if manufacture and possession of these lithic valuables was restricted as Cody (1991:210) suggested, indicating a certain level of group organisation with a certain, at least temporary, centralisation of power. Although organisation is further described as egalitarian, the procurement of wood and subsequent construction of large residential structures and canoes require co-operative efforts as well and reinforce this idea (Keegan 2000:144). No evidence for personal status differentiation was encountered, differences in grave goods are suggested to be related to differences in gender, age or

Fig. 4.2. Huecan Saladoid pottery from the Morel site on Grande Terre, Guadeloupe (drawings by Erick van Driel, courtesy of Corinne Hofman).

achieved social positions (Hofman and Hoogland 2004).

Subsistence was focused on a mixed economy of root crop horticulture, hunting of land animals, fishing, and mollusc collecting (Keegan 2000:142). Birds, fruits, and wild tubers and seeds probably supplemented this diet. Stable-isotope analyses indicated that the diet was focused on terrestrial sources of protein, such as hutia, iguana, land crabs and freshwater fish (Stokes 1995).

Although Early Ceramic A technology has been described as "simple and available to everyone" (Keegan 2000:143), Huecan Saladoid ceramics are renowned for their high level of craftsmanship and technology and the elaborate decorations. The manufacture of amulets and beads of exotic lithics was very sophisticated as well, notably of stone pendants representing large predator birds (Watters 1997). The depiction of these animals endemic to the South American mainland indicates strong ties between the islands and the mainland. Evidence for the manufacture of artefacts from wood, stone, bone, and shell, and for weaving has been found as well (Righter 1997). This latter technology was probably largely related to household production, although Keegan (2000:143) pointed out that it is likely that the skills of some individuals were renowned.

Evidence for ritual is limited, although it is reckoned that central *plazas* in villages may have been used for community rituals. The small size and wide distribution of ritual objects, for example of three-pointed *zemis*, suggests that ceremonial activities were of an individual character instead of collective (Keegan 2000:144-145). Pottery used for narcotics and incense, usually applied for non-profane purposes, were found as well.

A large style-zone can be established on the basis of the rather uniform style of the pottery, running all the way north to Puerto Rico (Hofman and Hoogland 2004). Keegan (2000:154) suggested on the basis of the swift and large-scale distribution over the Antilles that a number of distinct local groups were involved. Local groups are relatively small and egalitarian societies, living in semi-independent villages, connected to each other by socio-political alliances and economic and ceremonial contacts, with small personal status differentiation and occasional and context dependent leadership (Earle 1987 cited in Hofman and Hoogland 2004).[2] The strong stylistic similarities that existed for such a long time between Early Ceramic A complexes all over the Antilles are suggestive of a common ancestry and of intensive and frequent interaction between local groups, both with each other and with the mainland. It is possible that the uniformity of style helped to support alliances all over the Antillean islands, as Keegan (2000:139) for example suggested, but it might also be true that regional uniformity was maintained by the existence of these alliances. It is generally accepted that this uniformity points to the existence of long-distance contact networks. It has been suggested that the high percentage and uniformity of decorations in Saladoid pottery complexes might have served purposes of ceremonial communication or stressing group identity and ethnic affiliation (Hofman 1993:207). Keegan (2000:139) even speaks of a "sort of pottery *lingua franca* [that] would have acted to reinforce social ties between islands and over long distances" (Keegan 2000:139). The maintenance of social ties may have been an important factor in the successful and relatively fast colonisation of the Antilles by small local groups that took place in the Early Ceramic Age. Anyway, the homogeneity in style is to be explained as the direct outcome of close interaction between local groups inhabiting the different islands during this period.

Although the pottery from this period represents a highly uniform ceramic tradition all over the Antilles, regional variation and local styles can still be identified in the finish of the ceramics (Hofman and Hoogland 2004). Within the larger framework of a homogeneous Saladoid tradition, more personal styles of individual potters resulted in a distinctiveness of vessels, while a general uniformity in vessel shapes and designs was maintained (Keegan 2000:143). These differences could well be related to varying expressions of group identity or different settlement functions (Hofman 1993:205).

4.2.3.3 Cedrosan Saladoid subseries

Cedrosan Saladoid pottery has been named after the Cedros site on Trinidad.[3] It has been found from Trinidad to the Virgin Islands, on Puerto Rico and the eastern part of Hispaniola (Hofman 1993; Rouse 1989, 1992). Dates in the Antilles range between AD 400-600/850, which is generally considered Early Ceramic B. Cedrosan Saladoid pottery is typically decorated by white-on-red and polychrome painting and zic. Characteristic vessels are bell-shaped bowls with plain or flanged rims, often with D-shaped handles. Most of the pottery is painted (Rouse 1992:80). Some authors (e.g. Keegan 2000:139) suggested that the highly uniform Cedrosan Saladoid pottery acted to support social alliances all over the Antilles. Cedrosan artefacts also include clay griddles and large hollow figurines, and worked shell, bone and stone tools and ornaments.

Cedrosan Saladoid may be divided in three phases, including Early Cedrosan Saladoid, largely coinciding with Rouse's Period IIa, Cedrosan Saladoid with Barrancoid influences and Late Cedrosan Saladoid, which may be equated with Rouse's Period IIb (Hofman 1993; Petersen *et al.* 2004; Rouse 1992). Mattioni and Bullen (1970) distinguished an Insular, Modified and Terminal Saladoid instead.

Characteristic for Early Cedrosan Saladoid, roughly dated between 400 BC-AD 300/400, is the combination of plain pottery, painted white-on-red and, less common, zic ware. Zic decoration only occurs on hemispherical bowls. Other decorations include curvilinear and linear incisions, modelled animal or human heads on tabular lugs and nubbins. Vessels are bell-shaped, boat-shaped or kidney-shaped, often with D-shaped handles, while bottles and jars and hemispherical bowls also occur (Petersen *et al.* 2004; Rouse 1952, 1986:141, 1992:81; Rouse and Alegría 1990). Early Cedrosan Saladoid pottery is ubiquitous on the Lesser Antilles and Puerto Rico. On Guadeloupe it has been found at the Morel site (Clerc 1964).

In the period AD 300-500, the Cedrosan Saladoid on the Windward Islands undergoes influences from the Barrancoid series, which developed on the lower part of the Orinoco from 1500 BC onwards (Hofman 1993:33). McKusick (1960) has labelled this phase Troumassée A and Boomert (2000) suggested that pottery with Barrancoid influences should be grouped into the Palo Secan subseries, which was first identified at the Palo Seco site on Trinidad. Cedrosan Saladoid with Barrancoid influences is generally heavier, thicker and softer and it is decorated by zoned painting, curvilinear incisions and various hollow-backed modelled-incised anthropomorphic and zoomorphic *adornos* (Rouse 1989). Rouse (1992:85) attributes this influence to Barrancoid trade, spreading designs to the Windward Islands from Trinidad and Tobago, which may have served as trade ports, although interaction may have taken place at the mouth of the Orinoco as well (Rouse 1989:387). Hofman (1993:33), however, remarks that other mechanisms, such as reciprocal exchange and marriage ties, may account for this dispersal. It is remarkable that this type of pottery is not commonly found north of Guadeloupe and it appears to be absent on the Greater Antilles (Petersen *et al.* 2004). Cedrosan Saladoid with Barrancoid influences has been found on Barbados (Drewett 1991), the Grenadines, Grenada, St. Vincent, Dominica and at the Morel site on Guadeloupe (Rouse 1992). It has been reported for St. Lucia (McKusick 1960), Martinique (Allaire 1977) and for the site of Les Sables on La Désirade (Bodu 1985[b]) as well.

Late Cedrosan Saladoid, which is approximately placed around AD 300/400-600/800, is characterised on the Greater Antilles by an overall decline in pottery technology and complexity of decoration. This is evidenced by changes from white-on-red painting in elaborated curvilinear designs to straight parallel lines and to completely red slipped surfaces (Hofman 1993:34). On the Leeward Islands, Late Cedrosan Saladoid pottery occurs around AD 400-600/850. For the Anse des Pères site on St. Martin radiocarbon dates extend even to cal. AD 959 (Hamburg 1999:83) and for Golden Rock on St. Eustatius similarly late dates have been suggested (Versteeg and Schinkel 1992). The pottery displays an increase in complexity of white-on-red painting and polychrome painting (Hofman 1993:32-34) and new forms such as flanged rim bowls and incense burners appeared (Rouse 1992). Late Cedrosan Saladoid has been found on Antigua (Murphy 1999), St. Kitts (Goodwin 1979), St. Eustatius (Versteeg and Schinkel 1992), Saba (Hofman 1993), St. Martin (Hamburg 1999; Hofman 1999) and Anguilla (Crock 2000). Late Cedrosan Saladoid sites reported for Guadeloupe include the coastal sites of Morel (Clerc 1964, 1968, 1970), Anse à la Gourde (Hofman *et al.* 2001[a]); (fig. 4.3), Pointe des Pies (Richard 1995), l'Embouchure de la Rivière de Baillif (Gassies 1996[d]) and Anse Ste. Marguerite (Rousseau *et al.* 1995). Other coastal sites with Cedrosan Saladoid assemblages have been found at Grand-Bourg (D'Anna 1999), Anse à l'Eau (Boomsma and Isendoorn 2001), Cocoyer St. Charles (Boomsma and Isendoorn 2001), Folle Anse (Chenorkian *et al.* 1998), Morne Rita (Slozinski and Slozinski 1983), Pavillon and Taliseronde (DRAC archives) on Marie-Galante and Anse Petite Rivière (De Waal 1996[b]) on La Désirade.

Similarly to the preceding phase, the Early Ceramic B is characterised by a mixed economy based on cultivating root crops, catching molluscs and terrestrial and marine fauna, and collecting fruits, wild tubers and seeds. Stable-isotope analysis indicates that marine sources of protein became more important, when compared to the Early Ceramic A when diet was typically focused on terrestrial sources of protein (Stokes 1995). This may be the result of increasing scarcity of terrestrial fauna (Keegan 2000:142). If no habitation preceded the Early Ceramic B occupation of the research area, it may be expected that the inhabitants arrived in a pristine area that possibly had not been exploited before. If pre-ceramic occupation had taken place, the environment had already been given some time to regenerate. Steadman (1995) reported that pre-ceramic groups inhabiting other islands had a significant impact on the local ecology.

4.2.4 Late Ceramic Age on the Lesser Antilles

4.2.4.1 Post-Saladoid series

Around AD 600/850 the Cedrosan Saladoid subseries comes to an end and divergent local developments start to take place on the Antilles. This period may be generally referred to as the Late Ceramic Age, which includes Rouse's Periods III and IV. The Late Ceramic Age can be divided in an early phase around AD 600/850-1200/1300, and a late phase that is generally placed at approximately AD 1200/1300-1493. The early phase equates to Rouse's Periods IIIa (AD 600-900)

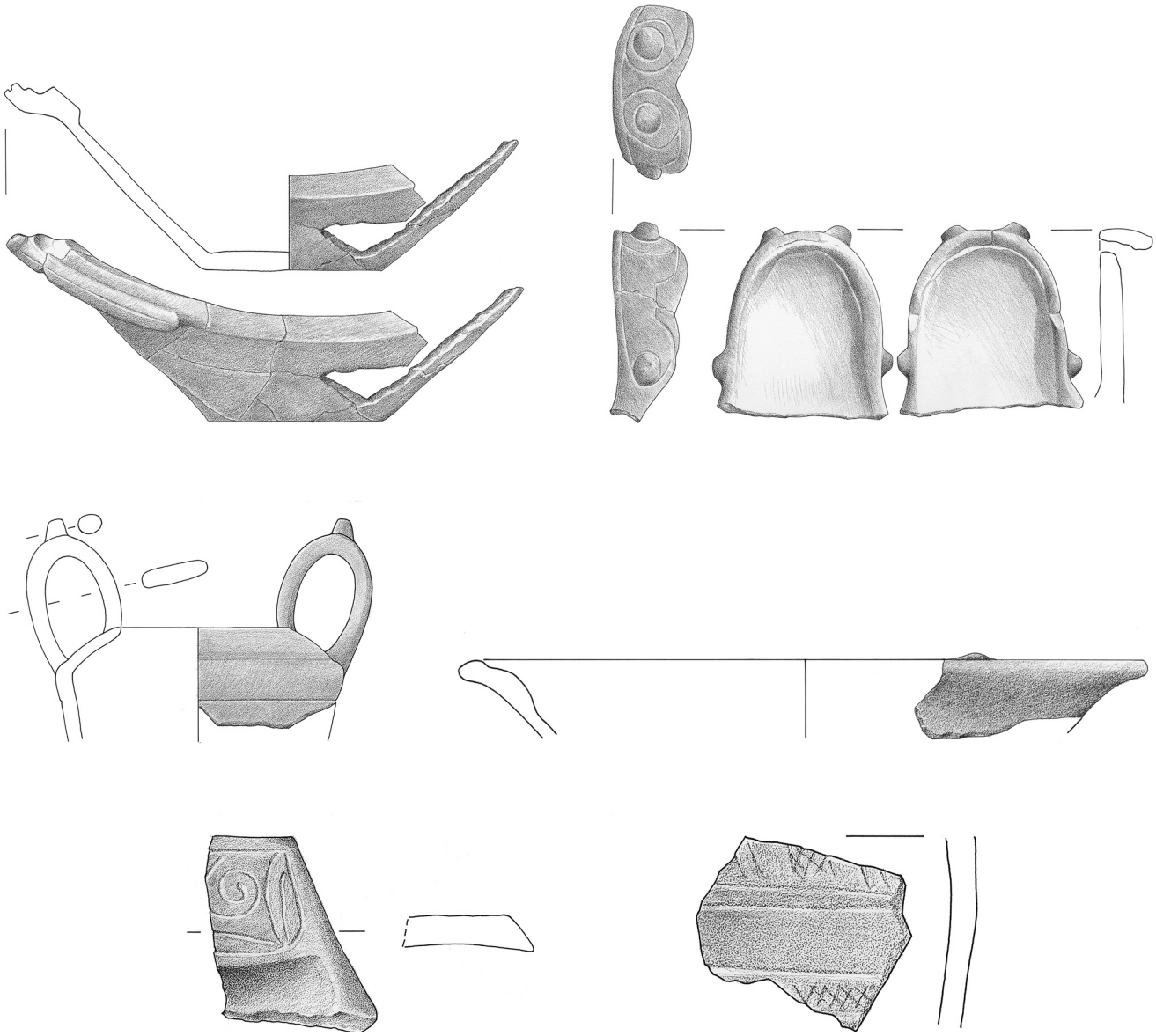


Fig. 4.3. Cedrosan Saladoid pottery from the Anse à la Gourde site on Grande Terre, Guadeloupe (drawings by Erick van Driel, courtesy of Corinne Hofman).

and IIIb (AD 900-1200). Contact networks had apparently changed through time and had become more localised, which is evidenced by the development of different micro-regions and micro-style areas (Hofman and Hoogland 2004). Rouse (1992:71) suggests that at this time the Cedrosan Saladoid subseries had possibly spread too widely which hindered interaction and encouraged the rise of different local variations. The Late Ceramic Age on the Greater Antilles is dominated by the Ostionoid series. This series is divided in space and time into four subseries, namely Ostionan, Elenan, Meillacan and Chican Ostionoid. Post-Saladoid series on the Lesser Antilles are described below.

4.2.4.2 Late Ceramic developments on the Leeward Islands

Late Ceramic developments on the Leeward Islands have long been attributed to Elenoid or Elenan Ostionoid subseries. The Elenan Ostionoid subseries (AD 600-1200) is named after the Santa Elena site on Puerto Rico. It developed in the Vieques Sound area on eastern Puerto Rico and the Virgin Islands. Its Montserrate style (AD 600-900) is characterised by painted polychrome zones in negative geometric designs. The Santa Elena style (AD 900-1200) consists of painted plates and griddles and thick, coarse pottery decorated by zoomorphic and anthropomorphic modelling and parallel-incised lines (Rouse 1952:344-346). Elenan Ostionoid influences extended from central Puerto Rico through the Virgin and Leeward Islands to Guadeloupe (Rouse 1986, 1992). Hofman (1993) demonstrated the existence of strong Chican Ostionoid influences on Leeward Island complexes from AD 1300 onwards. The Chican Ostionoid subseries (AD 1000-1500) is named after the Boca Chica site on the Dominican Republic. Its three main styles include elaborate, carefully finished and highly polished Boca Chica pottery, the simpler Capá pottery and Esperanza pottery. Boca Chica pottery has unique vessel necks and it is complexly decorated with modelled-incised designs including zoomorphic and anthropomorphic heads and linear incisions combined with dots. Capá decoration includes lugs, knobbed ridges and modelled and incised designs. Esperanza pottery is decorated with incised parallel lines forming angles and semi-circles ending in dots or arches. Modelling is less common and consists of simple heads and geometric figures (Hofman 1993:40-41). Chican Ostionoid pottery has been found on the Dominican Republic, Hispaniola, Puerto Rico, the Virgin Islands, Haiti and eastern Cuba (Hofman 1993:40) and Chican influences reach all the way south to Antigua (Rouse 1992:72, 135).

Rouse *et al.* (1995) proposed to include the Leeward Island complexes within an enlarged Troumassoid series divided into a Mamoran subseries in the Leeward Islands and Troumassan and Suazan subseries in the Windward Islands. It should be noted that archaeologically Guadeloupe appears to take an intermediary position between the Windward Islands and the Leeward Islands (Rouse 1992:71).

Mamoran Troumassoid, approximately dated between AD 500/600-1500 and named after the Mamora Bay site on Antigua, is abundant all over the Leeward Islands as far south as Guadeloupe (Rouse 1992). The subseries comprises the Mill Reef, Mamora Bay and Freeman Bay styles. The Mill Reef style, between AD 500/600-800/1000, consists of pottery with straight parallel painted white-on-red designs, two parallel incised lines on the inside of inward thickened rims, with vestigial handles and the first appearance of scratched surfaces (Rouse 1992). Although legged griddles were found in the Mill Reef complex on Antigua, these were not encountered further north (Hofman 1993).

The Mamora Bay style, occurring between AD 800-1200, is characterised by pottery with red slipped surfaces replacing bicolour and polychrome painting, broad lined curvilinear or parallel linear designs on the outside wall of shallow vessels, scratched surfaces, folded or thickened rims, and rare lugs and no handles (Rouse 1992). The pottery is less well finished and less frequently decorated (Hofman 1993). Troumassoid influences have been reported up to Saba (Hofman 1993) and Baie aux Prunes on St. Martin (Bonnissent 2003).

The Freeman's Bay style, between AD 1200-1500, consists of pottery with deeper and narrower, more irregular and U-shaped lines, scratched surfaces and dimpled bases (Rouse *et al.* 1995).

4.2.4.3 Late Ceramic developments on the Windward Islands

On the Windward Islands, the Troumassoid series makes its first appearance around AD 500/600. Some scholars consider this to be a local development from the former Cedrosan Saladoid subseries, based on similarities in red, black and white painted decorations and wedge-shaped lugs (Rouse 1986:149, 1992). Troumassoid pottery is thick, coarse and soft. It has inward thickened rims, legged, pedestal or annular bases, legged griddles and triangular griddle rims, scratched surfaces, polychrome painting with white, red and black or red and black combined with curvilinear incisions and modelled-incised designs on lugs. Troumassoid vessel shapes comprise boat-shaped, kidney-shaped, bottomless, double, hemispherical, inverted bell shaped bowls, cylindrical pot-stands, jars and effigy-bowls (Hofman 1993:39). Clay spindle whorls make their first appearance, explained by an increasing production of cotton (Allaire 1991; Rouse 1992:129). The Troumassoid series, approximately dated between AD 500/600-1000, is named after the Troumassée site on St. Lucia. The first to define the series was McKusick (1960). Rouse (1992) identified McKusick's Troumassée B phase, with a median date of AD 730, as the Troumassoid series on the Windward Islands. McKusick's dates were based on samples from the Grande Anse, Troumassée and Giraudy sites on St. Lucia (Rouse and Allaire 1978:462). Bullen and Bullen (1972) identified similar ceramics on the Caliviny site on Grenada and they therefore called this phase 'Calivinoid'. Troumassoid pottery has a wide distribution all over the southern Lesser Antilles up to Guadeloupe. Bullen and Bullen (1966) identified 'Caliviny' traits as far north as St. Martin, in the Cupecoy Bay complex (Haviser 1987[b]),

and St. Croix (Bullen and Bullen 1974).

The Suazan Troumassoid subseries, formerly known as the Suazoid series, can be roughly placed between AD 1000-1500. It is named after the Savanne Suazey site on Grenada (Bullen 1964). The early part of the Suazan Troumassoid subseries (AD 1000-1200) is characterised by thick, coarse and soft pottery, predominantly consisting of simple unrestricted or restricted bowls and necked jars, often with red slipped surfaces. Decoration is rare, although broad, shallow incisions on red slip do occur as well as, albeit less frequently modelled-incised zoomorphic *adornos*. Scratched surfaces, inward thickened rims, legged, pedestal or annular bases and legged griddles and triangular griddle rims are typical (Petersen *et al.* 2004).

Late Suazan Troumassoid on St. Lucia had previously been named Micoid by McKusick (1960), who distinguished two styles, Choc and Fannis. Information on Suazan Troumassoid is limited, although debates considering its origins do take place. According to Bullen and Bullen (1976:7-8) and McKusick (1960), a Suazoid series resulted from a population movement from South-America, marking an abrupt break with the preceding Saladoid series (Bullen 1970). Several other investigators (Allaire 1977, 1984; Davis and Goodwin 1990; Haag 1965:244; Rouse 1986:151, 1992:131) are convinced that Suazan Troumassoid developed as a Suazoid series locally from its Saladoid predecessor. Their ideas are based on similarities in iconography. According to Rouse (1992:130-131) it can be considered as the climax of a continuous period of local development. Great similarities with Troumassoid pottery led Boomert (1987[b]:24-26) to conclude that so-called Suazoid ceramics are a development within the Troumassoid series.

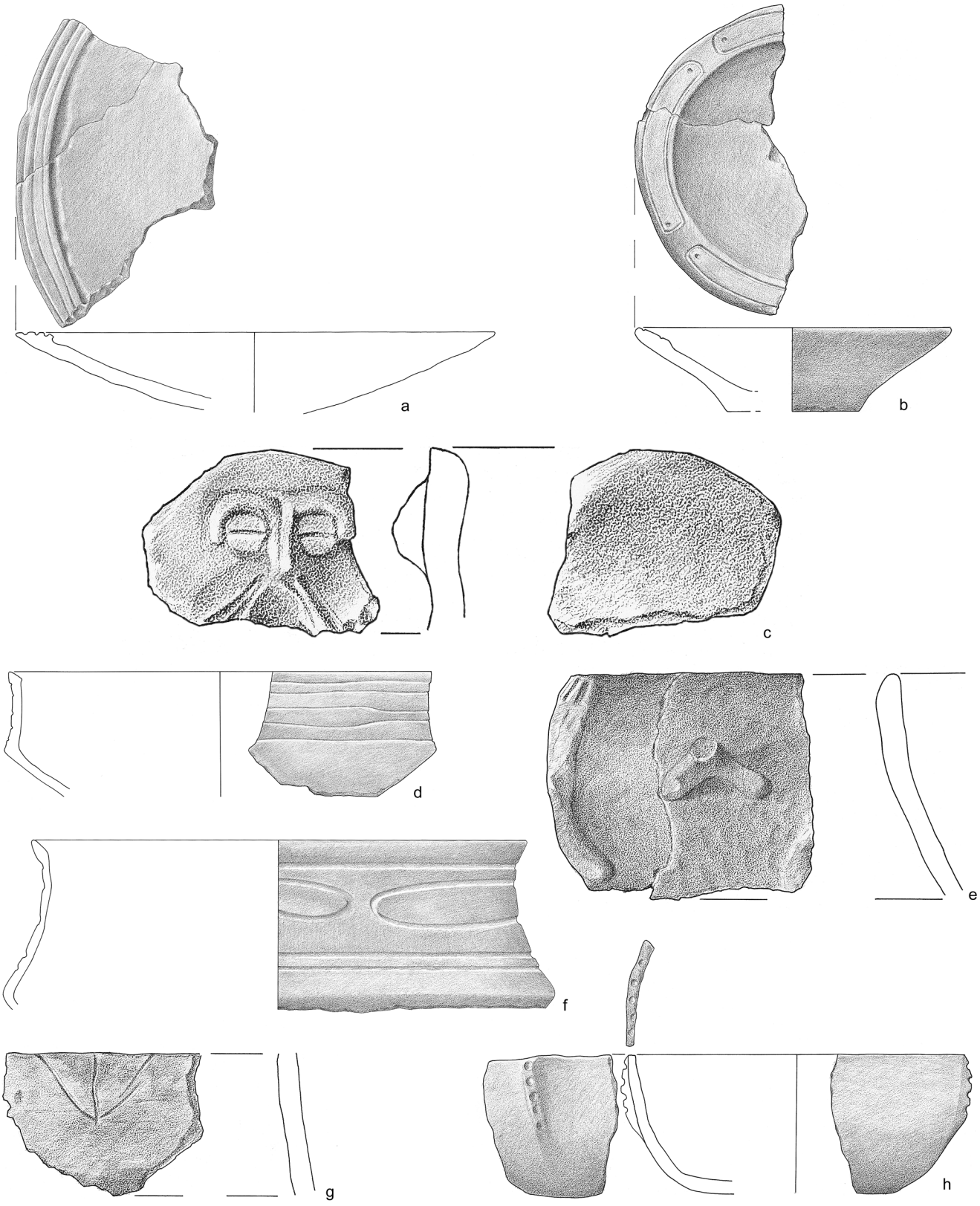
Suazan Troumassoid pottery is among the least finished and crudest pottery of the Antilles (Hofman 1993:42). It is characterised by scratched surfaces or finger-indented rims, linear or areal painting, simple parallel incisions, circles, scrolls, anthropomorphic *adornos* and figurines, clay pestles and legged vessels and griddles (Allaire 1977; Hofman 1993; McKusick 1960). There are local forms of lugs, including pegs and heads with flat faces, *appliqué* noses and eyebrows, punctated or slashed mouths, nostrils and eyes and pierced ears. Other types of ceramic artefacts include pot-stands, spindle whorls, stamps, figurines and pierced cylinders known as loom weights (Allaire 1977).

Late Suazan Troumassoid ceramics are most abundant from Tobago to Guadeloupe. Several coastal sites with Troumassan or Suazan Troumassoid assemblages have been reported for Guadeloupe, such as the sites of Anse à l'Eau (Boomsma and Isendoorn 2001), Pointe de la Couronne Conchou, Morel IV and Gros Cap (Allaire 1992; Bullen and Bullen 1973), Pointe Helleux and Pointe Canot (Hofman *et al.* 2004) and Anse à la Gourde (Hofman *et al.* 2001[a]); (fig. 4.4). In addition, the sites of Folle Anse (Allaire 1992) and Cocoyer St. Charles (Boomsma and Isendoorn 2001) on Marie-Galante, Grande Anse on Terre de Bas (Les Saintes) and Morne Cybèle-2 (Hofman 1995) and Anse Petite Rivière (De Waal 1996[b]) at La Désirade display similar archaeological materials as well.

The latest part of the pre-Columbian period is characterised by ceramic complexes that show similarities to Guyana-styles. The Cayo complex, roughly dated between AD 1250-1500, developed in the southern Windward Islands of Tobago, St. Vincent (Kirby 1974), the Grenadines and Dominica (Allaire and Duval 1995; Boomert 1986). Recently, Richard (2002; 2003) reported Cayo style pottery from the Plage de Roseau site (Capesterre Belle-Eau, Guadeloupe), but the ceramics await further analysis. The Cayo complex is named after the Cayo River on the northeast coast of St. Vincent. Cayo pottery is characterised by incisions on a flat rim, cone shaped collar and body, perforated small *adornos*, multi-convex vessels with anthropomorphic faces and caraipe temper (Hofman 1993:42).[4] According to Allaire and Duval (1995:255), Cayo should be considered to be independent from Troumassan or Suazan associations. Boomert (1986:56; 1995; 2004), associating Cayo with the Island Carib population, representing an offshoot of the Koriabo complex of coastal Guyana brought to the islands through migration, war and intermarriage, is convinced that it gradually replaced Suazoid series on the Windward Islands.

The Morne Cybèle complex was identified at the site of Morne Cybèle-1 at La Désirade. This site had been discovered and excavated in 1984 on the island of La Désirade by Pierre Bodu (1985[a]). It was restudied (Hofman *et al.* 2004) and dated to cal. AD 1440-1460. Morne Cybèle pottery is very different from Cayo pottery, although some stylistic similarities should not be overlooked (Hofman 1993:42). The pottery implies a later and local Antillean development (Hofman 1995:7-10), although influences from the South American mainland have been suggested as well (Hofman *et al.* 2004). It is decorated in most cases by geometric, anthropomorphic and zoomorphic *adornos* embellished by punctation. Morne Cybèle-like ceramics

Fig. 4.4. Post-Saladoid pottery from the Anse à la Gourde site on Grande Terre, Guadeloupe (Hofman *et al*. 2004: fig. 7).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have also been excavated at Anse à la Gourde on Pointe des Châteaux (Hofman 2001).

During this latest pre-Columbian period, ritual objects in Chican Ostionoid/Classic Taíno style occur as far as the Windward Islands. They probably date between AD 1200-1450. Included are large three-pointers, snuff tubes, *duhos*, and human face masks or *guaízas* (Allaire 1990). According to Allaire (1990), most of these objects are locally made imitations. Such objects have been reported from Guadeloupe as well. At the site of Anse à la Gourde, large three-pointers have been found and shell *guaízas* have been discovered at the sites of Anse du Coq on Marie-Galante (Hoogland and Hofman 1999) and Morne Cybèle-1 on La Désirade (Hofman 1995). Although these might represent human faces, deities or dead ancestors may have been depicted as well (García Arévalo 1997:114). As decorated headbands embellish most shell masks found in the Antilles, it might be suggested that they represent high-status individuals at least. Richard (2002:53; 2003) has reported a worked manatee-bone for the Plage de Roseau site (Capesterre Belle-Eau, Guadeloupe). He tentatively interpreted this frog-shaped small bowl as a Taíno ritual object.

As mentioned in section 1.4.7, the use of the term Taíno does not appear to be very suitable for ethnic or cultural labelling as a result of cultural confusion and biases in interpretation that are inflicted by ethnohistoric reports. Petersen *et al.* (2004) stress, however, that "Taíno is sometimes used as an archaeological category that refers to a supra-cultural entity at a level well above an individual culture. From this perspective, therefore, Taíno is beyond a single culture and it includes several distinctive but related socio-cultural polities and even traditions". If possible, it is more preferable to identify smaller cultural units or traditions by assigning artefacts to more strictly defined styles.

4.3 COLONIAL OCCUPATION OF GUADELOUPE

The colonial history of the research area has been influenced by the fact that this area was not considered of any economic importance. It was only in the seventeenth and eighteenth centuries that the small annexes of Guadeloupe were reported as just 'arid rocks'.[5] Still, sugar industry, plantations of indigo and cotton and slavery have largely dominated the colonial history of Grande-Terre and of Pointe des Châteaux. The greatest part of Pointe des Châteaux was used for the cultivation of cotton. The Amerindian population was rapidly decimated within the first twenty years of colonisation and many Amerindians left Basse-Terre for Grande-Terre, les Saintes, Marie-Galante and Dominica in particular (Lasserre 1961:270). According to Abenon (1992:59), in 1664 only 15 Caribs were counted among the 11,437 inhabitants of Guadeloupe.[6] Carib territories, registered on a 1732 map of Grande-Terre (Lafleur 1992:234), were created in the Le Moule area, near Anse des Corps, in the Anse Bertrand area, near La Pointe de la Grande-Vigie, and at Pointe des Châteaux in an area that is called Fond Caraïbe today.[7] A small Carib habitation was located south of Anse à la Gourde.[8] In the *Fond Caraïbe* area, the native inhabitants of Guadeloupe lived until the end of the nineteenth century or the beginning of the twentieth century, when the last of them dissolved into the rest of the islands population (Lafleur 1992:234). The Carib territory that was founded on Dominica at the same time still exists.

As for La Désirade some authors (e.g. Lasserre 1961:884) claim that Christopher Columbus discovered the island on his second journey in November 1493 and named the island 'Désirada', 'the desired one'. In the journals of Columbus, however, the discovery of La Désirade is never mentioned (Jane 1930), and among historians the name giving of La Désirade remains disputed (Yacou 1993:78).[9] It is only in the seventeenth century historic account by Father Breton that Petite Terre and La Désirade occur in the description of the islands surrounding Guadeloupe.[10] Other references, although very basic, can be found in the French-Carib and Carib-French dictionaries of Father Breton (1892[1665], 1900[1666]). In these dictionaries, the islands of Les Saintes (*Caároucaéra*) and Marie-Galante (*Aïchi*) are described for the economic importance to the Amerindian inhabitants of Guadeloupe (*Caloucaéra*); (Breton 1892:211, 280, 409-410; 1900:116, 352). Petite Terre (*Cayóhori*) and La Désirade (*Oualíri*) are only mentioned once.[11] The attention of the European newcomers was mainly focused on the island of Guadeloupe (Jane 1930:319). Therefore, the *Les Archives Nationales de La Guadeloupe* (Basse-Terre) do not contain a lot of documentation on Amerindian and colonial occupation of more marginal areas such as Pointe des Châteaux, La Désirade and Petite Terre.

Colonial documentation does not take place prior to 1648, when La Désirade was annexed by the *Compagnie des Isles de l'Amérique* and subjected to the government of Guadeloupe. At that moment, no Amerindian or European inhabitants were reported for La Désirade.[12] In 1649, La Guadeloupe, La Désirade, Marie-Galante and Les Saintes became property of M. Boisseret, brother-in-law of governor Houël. The islands were bought by the *Compagnie Française des Indes Occidentales* in 1664, and in 1674 they were united in the royal territories. From this moment on,

La Désirade played only a modest role as a Guadeloupe annex. The only importance of the island in colonial times was its use as exile for lepers between 1728 and 1958, and for *mauvais sujets* of France between 1763 and 1767 (Lasserre 1961:891-894). According to Abenon (1992:62), however, the latter was an enormous failure and only a very limited number of people was actually sent to La Désirade, the island being too small.[13] The important restriction factor in colonial occupation was set in the difficulties incurred for agriculture and the unsuitability for sugar plantations because of the poor soils. The soils, however, suit the demands for cotton cultivation and cotton plantations have been in use from the end of the sixteenth century until very recently. The production of cotton has never been a success, however. The 1790 census mentioned 47 *cotonneries* and the absence of sugar and indigo plantations were reported to be evident (Lasserre 1961:note 266). At the start of the fieldwork, only one rather recent *cotonnerie* was registered as an archaeological site in the DRAC inventory.

The islands of Petite Terre are uninhabited nowadays, but in the eighteenth century they were used intensively for growing cotton (Lassere 1961[b]:916). From 1826 onwards, the islands were property of the Thionville family from La Désirade. In 1858, 28 persons lived on the islands (Conservatoire du Littoral 1997:13) and by the 1940s seven families. Despite the apparent lack of fresh water, the Petite Terre gardens produced sufficient cotton, peas, pumpkins, melons, manioc, sweet potatoes, ignames and maize to sell part of these products on La Désirade. In addition, the Petite Terre inhabitants preserved their fish with salt from the local salinas, they kept sheep, goats and pigs and they caught lots of turtles that came to land to lay their eggs. Sufficient amounts of fresh water were collected in the cistern near the lighthouse. The last inhabitants of the islands were the lighthouse-keeper and his wife. They left the islands in 1972 or 1974, as soon as the lighthouse was equipped with an automatic light (Barré *et al.* 1997:8; Conservatoire du Littoral 1997:13; DIREN 1994:8).

4.4 RECENT SETTING

Pointe des Châteaux is part of the community of St. François. Tourists frequently visit its beaches and in the weekends of Easter and other short holidays, inhabitants of other areas in Guadeloupe tend to camp on the Pointe des Châteaux beaches. They cause considerable distortions to the archaeological deposits in the dunes. More serious threats to the archaeological record, in the Anse à la Gourde area in particular, are caused by illegal habitation of the area and by illegal excavation. Two other habitation areas are located in the Kahouanne area, and in the Village des Pêcheurs at the southern coast.

Pointe des Châteaux is hardly cultivated at all. The only part where substantial water melon cultivation takes place is west of Anse à la Gourde, in the valley south of the Fond Caraïbe area. Most inhabitants of the Village des Pêcheurs work in other parts of Grande-Terre, as do the house owners at Anse à la Gourde. The latter also live in other parts of Guadeloupe. They only come over for weekends and holidays. The Kahouanne residence has hardly any inhabitants at the moment, as a result of rising criminality in the area.

Today, La Désirade's 1600 inhabitants live in six small villages situated in the southern part of the island, along the *Route Départementale* 207. These are from west to east, Les Galets, Les Sables, the capital Le Bourg or Grande Anse, Le Désert, Le Souffleur and Baie Mahault. Except for one person, the central plateau is uninhabited, as are the western hills and the eastern plateaus. Many *Désiradiens* work on Guadeloupe. Tourism does not play an important role in the local economy, since the island is one of the least developed and the least visited of the Guadeloupe archipelago. On La Désirade, fishing, small-scale horticulture and breeding are important sources for household use. On the sandy soils of the west end, the southern coastal plain and on the more clayey soils at the hills and the plateau, millet, maize, beans, manioc, cucumbers, and sweet potatoes are cultivated. Hardly any cultivation takes place on the eastern plateaus.[14] The soil is fertilised with seaweed, manure or ashes (Bouchet 1992:14). Although several parts of La Désirade, the central plateau in particular, assure good yields, the general opinion is that the local soils are too poor to be cultivated at all. Crops are mainly imported from Guadeloupe.

The environmental conditions of the islands of Petite Terre are importantly and negatively affected as a result of booming tourism. Apart from families from St. François and La Désirade, coming over for the weekend in order to fish, an estimated number of 12,000 tourists a year were brought to the islands by commercial boat companies (Lancelot 1995; cited in Barré *et al.* 1997:9). The commercial boat companies are tolerated as long as they keep an eye on the islands. Since the islands were declared to be a nature reserve in 1994 only little has changed. It is now officially forbidden to camp on the islands, to light fires and to leave garbage behind, but as efficient supervision appears to be too complicated, people still do.

4.5 CONCLUSIONS AND EXPECTATIONS FOR THE EAST-GUADELOUPE PROJECT

It is thought that the pre-Columbian chronological framework presented helps to increase the accessibility of the presentation of pottery assemblages and chronological assignments of sites in this study. In addition, on the basis of the aforementioned some expectations can be raised on the pre-Columbian archaeology of the research area. As for the pre-ceramic period, Ortoiroid sites could be expected, considering the situation on surrounding islands, such as Antigua. The Ortoiroid have been reported to be oriented towards the sea, both in their exploitation of marine resources and their choice of site locations (Rouse 1992:66). Inland Ortoiroid sites on Martinique have been interpreted in this respect as special activity areas of not yet discovered coastal sites (Rouse 1992:63). Ortoiroid sites to be expected within the study area are probably small, transient coastal campsites, where edge grinders, partially ground stone and shell celts can be found and where flaked flint will be rare or even absent. Subsistence remains will reflect a marine orientation. Dates of such sites could range approximately between 2000-400 BC. Unfortunately, such sites are difficult to recognise archaeologically on the basis of surface material. This is partly a result of their limited dimensions and the absence of pottery, which usually increases the visibility of the site at the surface. Partly this may simply be the result of the fact that the sites are located in coastal areas that will have undergone important changes during the last 4000 years. For later sites, this period is simply much shorter. It is thought that this accounts for the modest number of pre-ceramic sites that is presently known on Guadeloupe. However, this can also be a reflection of the absence of flint resources that probably made the island of Antigua so attractive to pre-ceramic exploitation and occupation. If present at all, pre-ceramic sites in the research area will not be numerous.

This is also true for sites with Huecan Saladoid components. Except for the Morel site, only two other sites with incidental finds of Huecan Saladoid material are known on Guadeloupe and only one on Marie-Galante. Region wide they are rather rare as well. Many Huecan Saladoid sites, which can be roughly dated between 400 BC-AD 400, are coastal sites, although sites located some distance inland, such as the Hope Estate site on St. Martin, do occur as well.

Sites with Cedrosan Saladoid components, with rough dates between 200 BC-AD 600/850, are more numerous on the Antilles. Based on suggestions on population growth brought forward by Boomert (2000:278), it is therefore expected that more Late Cedrosan sites will be found within the study area than Early Cedrosan sites. Cedrosan Saladoid sites are characteristically located directly on the shore as well as some distance inland (Boomert 2000:273, 278) on locations that are protected by coral reefs and where marine resources could easily be exploited. These locations can be situated both along Leeward as well as Windward coasts. Most Cedrosan Saladoid habitation sites represent relatively large villages that appear to have been used for centuries, resulting in deep occupation layers. Such sites have been reported for the study area as well, including the site of Anse à la Gourde at Pointe des Châteaux and the sites of Les Sables and Anse Petite Rivière on La Désirade. Saladoid subsistence is characterised as a mixed economy of root crop horticulture, hunting of land animals, fishing and mollusc collecting. Stable-isotope analyses suggest that during the first part of the Early Ceramic Age subsistence focused on terrestrial sources of protein, such as land crabs, hutia, and fresh water fish. Later, marine protein sources became more important (Stokes 1995).

In Late Ceramic times, settlements still reflected both coastal as well as inland locations and settlement patterns became more complex (Haviser 1997; Hofman and Hoogland 2004). On Puerto Rico, for example, a site-hierarchy developed involving a pattern of nuclear villages with dispersed settlements (Curet 1992). In the Late Ceramic Age, site numbers and sizes dramatically increase (e.g. Wilson 1989) and subsistence focused on marine protein, including fish and molluscs (Rouse 1992:94). For the research area, several sites yielding mostly Troumassan and Suazan Troumassoid material are thus expected, although Mamoran Troumassoid and Ostionoid features probably also occur. Of special importance are the objects in Morne Cybèle style, roughly dated between AD 1440-1460, and in Chican Ostionoid/ Classic Taíno style, approximately dated between AD 1200-1450.

Regarding the colonial history of the research area, it can be concluded that large sections will be superficially disturbed as a result of intensive cotton cultivation. Disturbance as a result of habitation occurs in more limited areas, but causes a more radical destruction of the archaeological record. At Pointe des Châteaux little colonial habitation occurred, as on Petite Terre, where habitation was concentrated near the lighthouse. The Petite Terre case demonstrates that it is very well possible for some small families to permanently inhabit the islands. On La Désirade habitation was mainly concentrated in the Les Galets, Grande Anse and Baie Mahault areas. Remains of the old *Léproserie* can be found west of Baie Mahault and, more surprisingly, in the northeastern part of the central plateau, near the archaeological site of

Cocoyer. Although ethnohistorical sources are vague about the presence of Amerindian people on the islands in the early colonial period, and although they do not provide exact descriptions of Amerindian settlement locations, Amerindian sites dating from the European contact period are expected as well within the study area.

The recent setting brings to light several factors that influence the study of the archaeological record. In general, the effects of constructions are dramatic, at La Désirade's southern coastal plain in particular. At Pointe des Châteaux, habitation is mainly limited to the western part of the research area, and on Petite Terre habitation no longer occurs. Agricultural activity in the area is very limited, small-scaled, except for the western part of the Pointe des Châteaux study area, and it causes only very superficial damage. Illegal excavations cause considerable damage. These occur in Pointe des Châteaux at the sites of Anse à la Gourde and Grande Saline, and on La Désirade at the sites of Voûte à Pin and Anse Petite Rivière among others. Tourists in the area have not influenced the archaeological record to a great extent until now. The area is not the most touristically attractive part of Guadeloupe and no hotels or other special facilities have been constructed here. Although Petite Terre suffers weekly from boatloads of tourists, the damage appears to be limited to the natural environs and not immediately to the archaeological sites themselves. Last but not least, the cadastral situation on La Désirade makes archaeological studies on the island considerably difficult. Ownership conflicts exist on significant stretches of the island, namely the entire central plateau. Officially, the municipality owns the plateau but many families are allowed to use land if they need it. The families, who have worked certain land plots for generations, actually claim this land but the municipality does not register this. Therefore, it is very complicated to find out whom to ask permission to survey land plots and who to register as the owner of the sites' terrain.

NOTES

1 See Boomert (2000) for a detailed overview of Archaic cultural patterns and subsistence strategies on Trinidad and Tobago.

2 Earle, T., 1987, Chiefdoms in Archaeological and Ethnohistorical Perspective. In: *Annual Review of Anthropology 16*:279-308.

3 See Boomert (2000) for detailed descriptions of the Cedros complex of Trinidad.

4 Caraipe temper is dried, charcoaled and crushed bark of the *Licania apetala* or Kwepi tree (Boomert 1986).

5 "Je crois que cette île [La Désirade] est la plus miserable des Antilles, et celle où la terre est la moins capable de production" (Chevallier de Bourlamaque, 1763, *Mémoire abrégé ou réflexions sur l'état actuel de la Guadeloupe et des changements que l'on estime devoir faire dans ce gouvernement pour le bien de l'Etat et la Colonie*. Archives Nationales, Basse-Terre).

6 Lafleur (1992:233) suspects such figures to have been largely manipulated, related to political wishes and trends.

7 The Anse des Corps territory probably rapidly lost its function as it is hardly mentioned in historical documents.

8 *Carte Générale de la Guadeloupe par les ingénieurs du Roy*, 1764-1768. Copy of the 'Archives Départementales de la Guadeloupe'.

9 The discovery is neither mentioned by Hernando Colombus or by Chanca (Yacou 1993:78). They claim that Dominica was the first island to be encountered arriving at the Antilles during the second voyage. One of the other passengers, Juan de Rojas, claimed that in the early morning of the 3rth of Novembre, an island was encountered that was baptised Désirada (Pleitos Colombinos t. VIII; Rollo del proceso sobre la Apelación de la Sentencia de Duenas, 1534-1536; Escuela de Estudios Hispanoamericanos, Sevilla, 1964, p.402; cited in Yacou 1993:78).

10 "Il y a autour de la Guadeloupe nombre de petites îles fort agréables. Les Saintes sont les plus belles, où les sauvages mesme ont encore quelques jardins à cotton. Les habitants de la Guadeloupe y vont varer et tourner la tortue. Marie-Galande et La Désirade n'en sont pas loin ny la Petite Terre esquelles nous allons aussy dans la saison pour tourner les tortues" (Breton 1978[1647]:32).

11 "*Oualíriche-éntina*, i'ay passé par la Désirade" (Breton 1900[1666]:274). *Oualíri* was translated as "Les nieves, les Anglais y sont' (Breton 1892[1665]:416). Nevis was translated as *hueléme* (Breton 1900:259). Dr. B.J. Hoff (personal communication 1996) assumes that Breton made a mistake and that *Oualíri* actually refers to La Désirade. Petite Terre is referred to as "Islet entre la pointe de la grande terre & la desirade" (Breton 1900[1666]:379).

12 A century later, however, the island was mentioned to be "peuplée seulement de quelques Caraïbes" (Archives Nationales, Colonies, Guadeloupe, F3 223, no. 493, 28 March 1748: "sur la maladie de la lèpre").

13 In July 1765 only 55 *mauvais sujets* were on La Désirade

(Lasserre 1961:279).

14 On La Désirade, the central plateau serves as collective property. Those in need of land are allowed to create and to use small slash-and-burn fields.