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A short history of archaeological research in the Lesser Antillean archipelago

Arie Boomert

Three major stages can be distinguished in the history of archaeological investigation in the Lesser Antilles. The Early Period of research stretches from the mid-seventeenth century until well into the 1910s. It is characterized by an emphasis on the occasional collecting and rudimentary description of individual prehistoric artefacts. The next stage or Formative Period, from the 1910s into the 1960s, sees the development of stratigraphic excavation and classificatory-historical studies stressing the establishment of local chronologies in the West Indies. Finally, the Interpretative Period, from the 1960s until the present, is typified by a continuation of chronological studies next to the development of research focusing on the reconstruction of past lifeways, environmental relationships, socio-political development, and patterns of interaction.

1 INTRODUCTION

The Lesser Antilles form a gradually bending, bifurcating arc of oceanic islands stretching from the Leeward Antilles and the Margarita archipelago off the coastal zone of Venezuela and Trinidad and Tobago to Puerto Rico. This island chain, which shows a high diversity in landforms and other environmental features, can be divided into three major archipelagic groupings, from south to north: (1) the Windward Islands from Grenada up to and including Dominica, as well as Barbados, (2) the Leeward Islands from Guadeloupe up to Sombbrero, and (3) the Virgin Islands, Culebra and Vieques, the latter two islands both politically belonging to Puerto Rico. These island groupings become increasingly smaller in size from south to north until Puerto Rico, the first island of the Greater Antilles, is reached. Biogeographically, islands constituting arcs such as that of the Lesser Antilles are known as stepping-stone islands as they form almost uninterrupted rows of mutually intervisible islands, strung out from a mainland. The configuration of such insular chains facilitates the movement of both humans and animals into the archipelagoes in question. Understandably, the multi-staged peopling of the Lesser Antilles during prehistoric times has been a major focus of archaeological research in these islands.

In coastal areas and archipelagoes such as the Caribbean, the sea is not just the main conduit of contact between the inhabited places, it is central to human lifeways. Because of

their focus on the sea, littoral and insular peoples throughout the world are closely related in terms of lifestyles and beliefs. It is the 'maritime cultural landscape' shared by these communities that should form the research interest of archaeologists and anthropologists, encompassing the material and immaterial aspects of human life on the continental seaboard and on islands. Local knowledge and lived experience are central to how people socialize seascapes. The sea achieved significance and became socially constructed in the minds of people throughout the world through their active and enduring engagement with it (Boomert and Bright 2007; Rainbird 2007, 49). The sea is universally recognized as a balance of opposites. Teeming with marine life, it provides a subsistence base to littoral people and islanders. However, the sea can be treacherous and unpredictable: it gives and it takes, it can destroy and create land, it sustains life and it may kill. The sea is both valued and feared, to be utilized as well as respected. It is the specific kind of maritime cultural landscape which developed and blossomed among the Amerindians of the Lesser Antillean archipelago that forms the focal point of archaeological and anthropological research in the region.

The historic experience of the Lesser Antilles is one of political, cultural and linguistic fragmentation, resulting in Spanish-, English-, French- and Dutch-speaking entities of varying political status, at present either part of an independent polity or linked to some metropolitan power in one way or another. This heterogeneous character of the Lesser Antilles is borne out by the development of scientific research in the region, including the history of archaeological investigation. Three major stages of archaeological research can be distinguished. The Early Period of investigation stretches from the mid-seventeenth century until well into the 1910s. It is characterized by an emphasis on the occasional collecting and only rudimentary description of individual prehistoric artefacts. The next stage or Formative Period, from the 1910s into the 1960s, sees the development of stratigraphic excavation and classificatory-historical studies stressing the establishment of local chronologies in the West Indies. Finally, the Interpretative Period, from the 1960s until the present, is typified by a continuation of chronological studies next to the development of research

focusing on the reconstruction of past lifeways, environmental relationships, socio-political development, and patterns of interaction.

2 THE EARLY PERIOD

It was typically in the most advanced island colonies of the Lesser Antilles, *i.e.* the French West Indies and Barbados, that the first references to the pre-Columbian antiquities of the Caribbean were made. As early as 1647 Father Raymond G. Breton, the famous Dominican missionary to the Island Caribs of Guadeloupe, Dominica and Martinique, described and illustrated three engraved rocks on Basse-Terre, Guadeloupe, which, however, he ascribed to the Spanish (fig. 1; see Breton 1978, I, 83-84; Dubelaar 1995, 329-333). In this same period French soldiers are recorded to have recovered a series of cotton idols from a cave in Martinique which the local Island Caribs ascribed to their presumed predecessors on this island, the 'Ygneris' (du Tertre 1773, II, 349). Early in the eighteenth century the French scholar Antoine de Jussieu compared chance finds of prehistoric stone axes from the French West Indies with European specimens (Trigger 2006, 94; Delpuech 2007), while in 1750 the Rev. Griffith Hughes described and depicted examples of pre-Columbian pottery and shell tools, including "broken Images, Pipes, Hatchets, and Chissels" from Barbados (Hughes 1750, 7), also recording various site locations (fig. 2; see Drewett 1991).

In 1804 the human skeletons (*anthropolithes*) which were discovered by Mathieu Guesde, one of the first antiquarians

of the Antilles, in the calcified beach rock deposits of La Moule (Morel), Grande-Terre, Guadeloupe, raised considerable interest. Sent to Paris and London, they were investigated by the great French palaeontologist Georges Cuvier who established their recent origin (Delpuech 2003). The accidental recovery of prehistoric artefacts accelerated in the second half of the nineteenth century, leading to occasional conjectures about their origins by the local antiquarians involved. Finds were generally attributed either to the ancestors of the Amerindians who inhabited the Windward Islands in historic times, the Island Caribs, or their supposed precursors. In Guadeloupe Mathieu Guesde and his son Louis accumulated a large collection of stone artefacts which was studied in detail by Otis T. Mason of the Smithsonian Institution, Washington, DC, in 1885 (H. Petitjean Roget 1993). Apart from Guadeloupe and Barbados, chance discoveries of pre-Columbian artefacts were now recorded from islands such as Dominica, Martinique, St. Vincent, and Battowia (Grenadines). They were often deposited in European museums.

The first true archaeological excavations of the region were undertaken by the Rev. William H. Brett, an Anglican missionary, in the shell mounds of the coastal zone of British Guiana (present Guyana) in 1865 (fig. 3). As on the coasts of North America, the Brazilian littoral and elsewhere in the

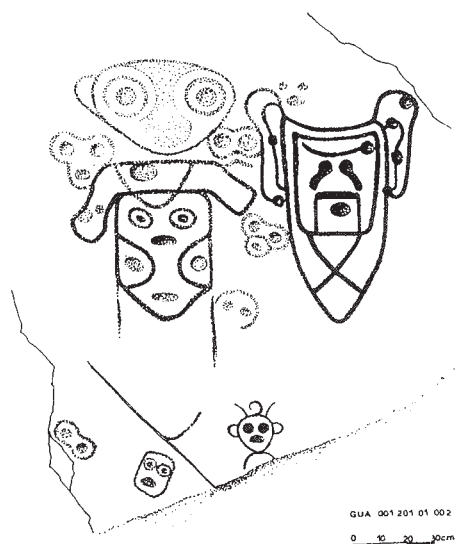


Figure 1 Petroglyphs at Capesterre-Belle-Eau, Pérou River, Basse-Terre, Guadeloupe, described by Father Raymond G. Breton in 1647. (After Delpuech 2001, Fig. 2).

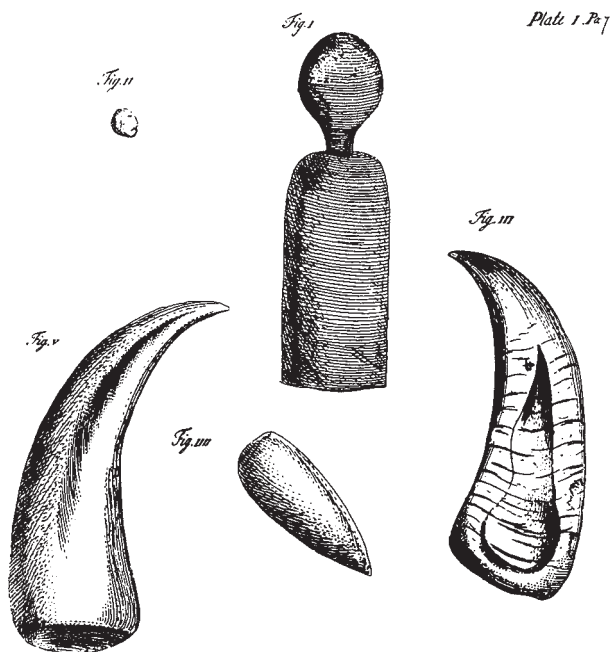


Figure 2 Pre-Columbian stone and shell artefacts from Barbados, illustrated by the Rev. Griffith Hughes in his *Natural History of Barbados* (1750).



Figure 3 Excavation of the Waramuri shell midden, British Guiana (present Guyana), by Warao Indians under the direction of the Rev. William H. Brett in 1865. (After Brett 1868, 430).

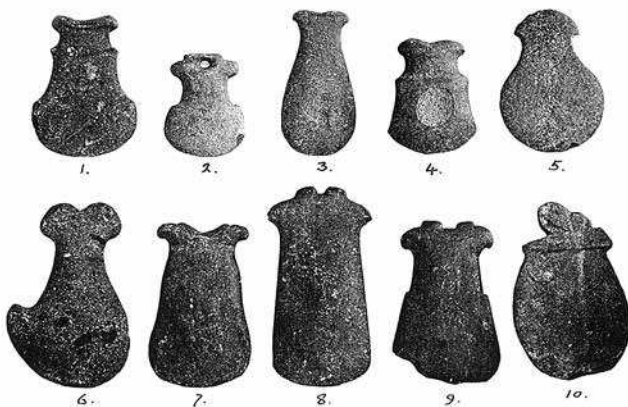


Figure 4 'Carib' stone axes of the Lesser Antilles. Legend: (1) Trinidad; (3-6) St. Vincent; (8) Grenada; (2, 7, 9-10) probably St. Vincent. (After Joyce 1916, Plate XXIV).

world, they were stimulated by the much publicized pioneering work of Danish scholars in the shell 'kitchen middens' (*kjøkkenmøddinger*) of Scandinavia which had started some twenty years previously (Brett, 1868, 420-43; Trigger 2006, 14, 163; Rostain 2007). Concurrently, comparable shell midden deposits in Trinidad, first interpreted as natural phenomena, were identified as Amerindian refuse heaps by the famous naturalist R.J. Lechmere Guppy. In 1888 the discovery of the Erin shell midden site on this island sparked much interest due to the attractively decorated pottery encountered there which ultimately found its way to the Royal Victoria Institute, Port-of-Spain, established in 1892 (Boomert 2000, 8). In these years petroglyph sites from St. Kitts, Guadeloupe, Marie-Galante, and Grenada were recorded for the first time (Dubelaar 1995, 9-10; Delpuech 2007).

At the turn of the century, numerous prehistoric artefacts were purchased from local collectors from the entire southern Lesser Antilles by the Rev. Thomas Huckerby of Trinidad on behalf of George G. Heye's private Museum of the American Indian, New York. In these years attempts at formulating classifications of artefacts, typically framed in terms of 'Indian environments or culture areas' were made by scholars such as Otis T. Mason and the traveller/ornithologist Frederick A. Ober (see Watters 1976, 8-9). Time depth is lacking in their work which remained largely descriptive. This applies also to the first region-wide archaeological and ethnohistorical outline of the Caribbean which was written by the British Museum curator Thomas A. Joyce (1916). Lacking a regional chronology, it is primarily concerned with interpretations of the region's art and iconography, attempting to understand the worldview of its prehistoric inhabitants (fig. 4).

3 THE FORMATIVE PERIOD

A new era of investigation was ushered in by Jesse Walter Fewkes who in the first decades of the twentieth century made various collecting expeditions to the West Indies, visiting *e.g.* Puerto Rico, Trinidad, Barbados, Baliceaux, St. Vincent, St. Kitts, and St. Croix, commissioned by the Bureau of American Ethnology and later by Heye's Museum of the American Indian and the Smithsonian Institution. Presenting a detailed synthesis of Caribbean archaeology and ethnohistory, Fewkes also developed the first rudimentary chronological outline of the region's prehistory and studied the environmental factors affecting the indigenous cultures of the West Indies. Influenced by the then current anthropological theory, Boasian historicism, he emphasized fieldwork and the spatial diffusion of cultural traits, distinguishing three culture areas in the Caribbean, *i.e.* the Greater Antilles, the Lesser Antilles and the Bahamas, which he subdivided into a series of geographically defined "cultural centers" (Fewkes 1907; 1922; Watters 1976, 28-9). Fewkes' work is

emblematic of the shift in archaeological research orientation from purely descriptive to classificatory-historical, which took place in the United States in this period (Willey and Sabloff 1980, 83). It is noteworthy that it was in Guadeloupe in 1916 that the first governmental attempts were made to protect an archaeological site in the Lesser Antilles, the petroglyphs of Trois-Rivières, Basse-Terre. This was a reaction to the sending of part of one of the site's most elaborately decorated rocks to an exhibition in the United States in 1901. The petroglyph slab was subsequently placed in the Museum of the American Indian (Dubelaar 1995, 170).

Theodoor de Booy, John A. Bullbrook and Gudmund Hatt were the first to use modern stratigraphic excavation techniques in the West Indies. Hired by Heye in order to expand the collection of the Museum of the American Indian, de Booy, educated as a Dutch naval officer, dug in Margarita and Trinidad in 1915, and in the British Virgin Islands and

Martinique the following year. Bullbrook, a British-born geologist interested in archaeology, was commissioned by the colonial administration to excavate the Palo Seco site of Trinidad in 1919 (fig. 5). Due to his efforts part of the site was officially protected by declaring it a Crown Reserve (Bullbrook 1953; see Boomert 2000, 9). Major stratigraphic work was undertaken by Gudmund Hatt of the University of Copenhagen, Denmark, during an expedition to the US Virgin Islands in 1922-3. It resulted in a three-phase local chrono-cultural sequence for these islands which has stood the test of time to the present day (Hatt 1924; cf. Wilson 2007, 18-19, 47).

Simultaneously and partly cooperating with Hatt, J.P.B. de Josselin de Jong of Leiden University, the Netherlands, surveyed the islands of St. Eustatius, Saba, and St. Martin. The site reports of especially de Booy, Bullbrook and Hatt, of which unfortunately the report by Bullbrook was not

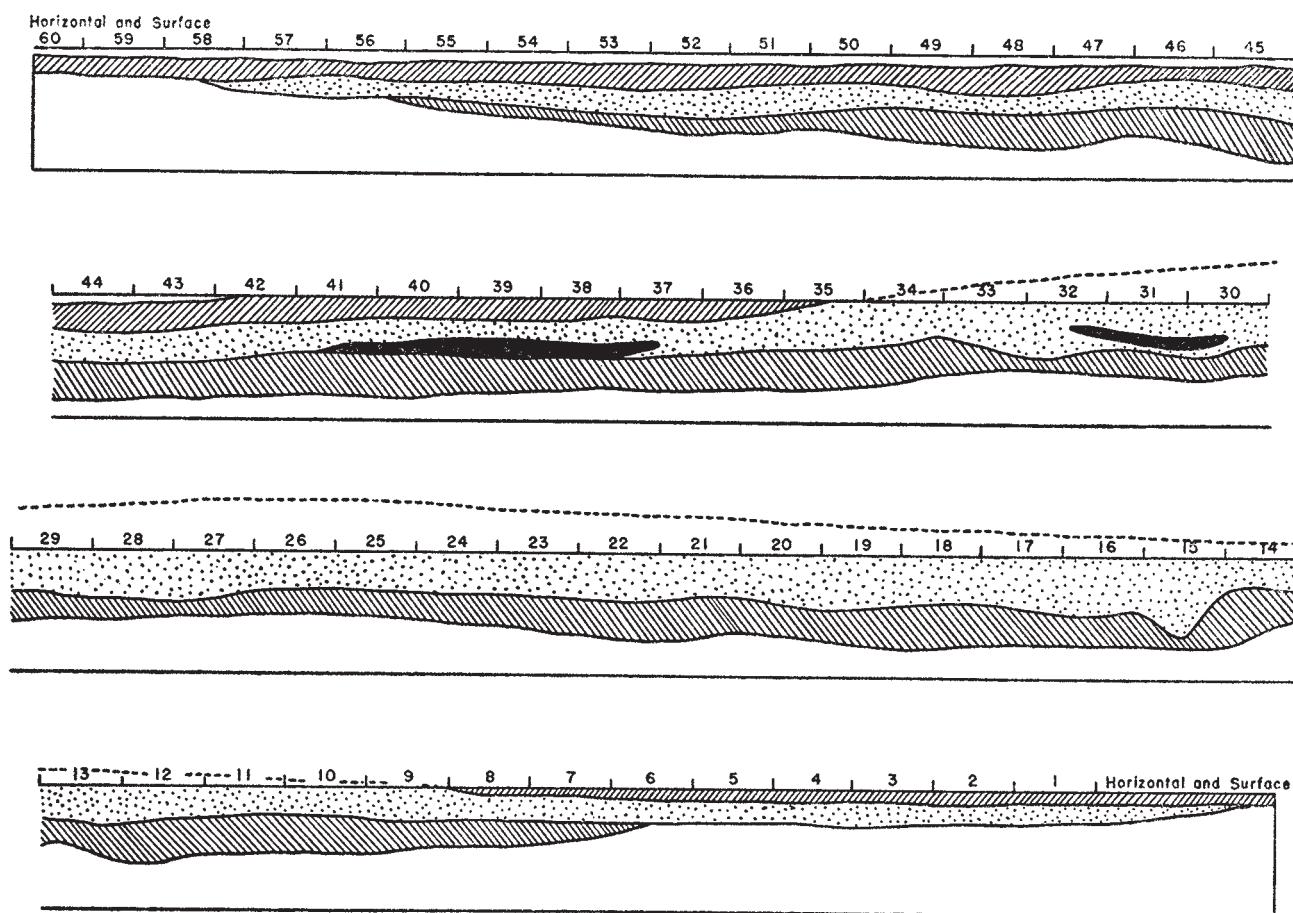


Figure 5 Section of the stratigraphy of the Palo Seco shell midden, Trinidad, recorded by John A. Bullbrook, 1919. (After Bullbrook 1953, Fig. 4).

published until the 1950s, are remarkable for their early emphasis on the reconstruction of prehistoric subsistence patterns. It was a Swede, Sven Lovén, who in the mid-thirties recapitulated the achievements of Fewkes, de Booy, Hatt and scholars from Puerto Rico, the Dominican Republic and Cuba of the first near-century of Caribbean archaeology on a region-wide scale, adding relative time depth to his synthesis, while deepening it with detailed ethnohistorical investigation. Organized in diffusionistic terms, it is primarily concerned with the origins of Caribbean (“Taíno”) culture on the South American mainland. Lovén’s pivotal work has remained a classic of interdisciplinary research (Lovén 1935).

In the 1930s the concern with establishing regional culture-historical syntheses, based on stratigraphic excavation techniques and processes of stylistic similarity seriation, now pervading archaeological research in North America (Willey and Sabloff 1980, 91-99), spilled over to the Caribbean. This was mainly due to the establishment in 1933 of the Caribbean Anthropological Program of Yale University, New Haven, CT, which originated as an offshoot of a US government-designed programme for improving relations with Latin America. Subsequent to the work of Cornelius Osgood and others in Venezuela, it led to surveys and excavations in Puerto Rico in cooperation with the US National Museum by Froelich G. Rainey in 1934-5, followed by a major archaeological research project by Benjamin Irving Rouse in 1936-8 as part of the Scientific Survey of Porto Rico and the Virgin Islands, sponsored by the New York Academy of Sciences. Rouse’s work included a systematic archaeological reconnaissance of Vieques (Rainey 1940; Rouse 1952). It was the first of his numerous research projects in the West Indies and adjoining areas which would earn Rouse the honorary title ‘father of modern Caribbean archeology’. While also initiating research in Cuba and Haiti, leading to Rouse’s classic *Prehistory in Haiti: A Study in Method* (1939) in which he developed his ‘analytical’ modal approach to handle ceramic attributes, unfortunately Yale’s Caribbean Program fully bypassed the Lesser Antilles where research was left to resident amateurs.

It was in Martinique that the first ongoing local programme of excavation was started when Father Jean-Baptiste Delawarde, a geographer, initiated digging and collecting at several pottery sites in 1932. Another geographer and local amateur, Eugène Revert, was commissioned in 1939 by the Musée de l’Homme, Paris, to continue excavating at these and other sites on the island, following the tricentennial exhibition in Paris of 1935 (J. Petitjean Roget 1970; Giraud 1997; Vidal 2007). On Barbados C.N.C. Roach was active in collecting archaeological finds throughout the 1930s. Here the Barbados Museum, which opened its doors in 1933, became the focus of research (Drewett 1991). Finally, in 1930 the British anthropologist Douglas M. Taylor visited the

Island Carib communities of Dominica for the first time in order to study the language and oral traditions of the last Amerindians of the West Indies. Settled permanently on the island from 1938 until his death in 1981, he would contribute to our knowledge of Island Carib culture, society and linguistics in a way unmatched since the seventeenth-century travellers and missionaries (fig. 6).

Meanwhile Bullbrook continued excavating at the Erin site under the auspices of the Archaeological Section of the Historical Society of Trinidad and Tobago. Subsequent to an extensive archaeological survey of Venezuela by Osgood and George D. Howard in 1941, which was followed by excavations on the Middle Orinoco conducted by the latter, Osgood paid a short visit to Trinidad, noting close resemblances between Bullbrook’s Erin material and the ceramics he had just excavated on the Lower Orinoco (Osgood 1942). Intrigued by these stylistic similarities, Osgood induced Rouse to extend Yale’s Caribbean Program to Trinidad while he himself conducted a field survey of coastal British Guiana in 1944 (Osgood 1946). It resulted in

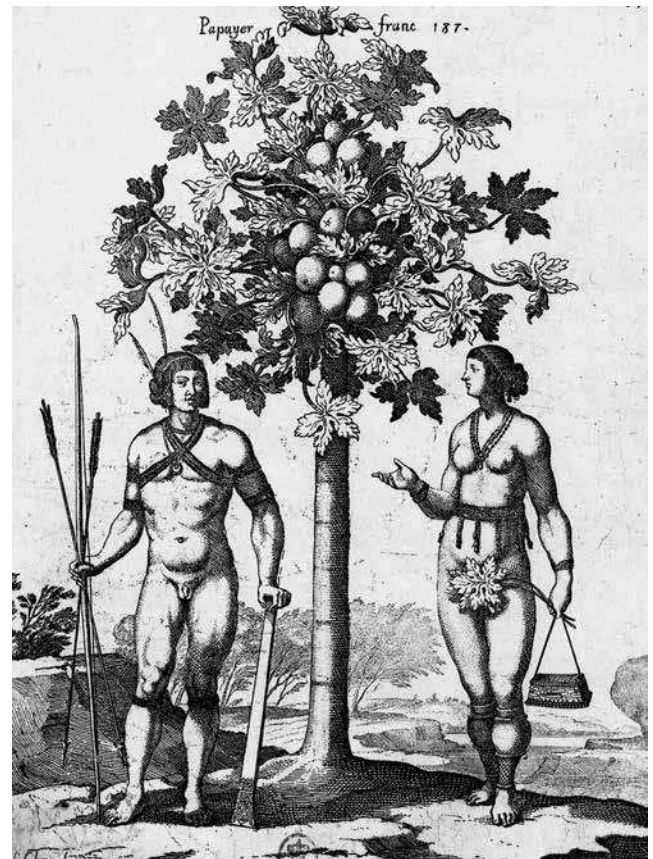


Figure 6 Papaw tree with Island Carib man and woman, 1667/1671. (After du Tertre 1973, II, opposite p. 336).

expeditions to Trinidad by Rouse in 1946 and 1953, leading to the island's first relative chronology and prehistoric cultural classification. Moreover, Rouse obtained the first radiocarbon dates for the region from samples collected in Trinidad (Rouse 1947; see Boomert 2000, 9-10).

Simultaneously Eugène Revert conducted the first archaeological reconnaissance of Guadeloupe while, continuing the latter's work in Martinique, Father Robert Pinchon, a naturalist and teacher, started systematic archaeological research in 1945. His work resulted in the first relative cultural chronology of the island, couched in ethnic terminology (J. Petitjean Roget 1970). Following his research in Trinidad, Rouse turned his attention to Venezuela where he excavated extensively in collaboration with José M. Cruxent throughout the 1950s (Rouse 1961). Their investigations culminated in Cruxent and Rouse's classic culture-historical synthesis of the country's prehistory (Cruxent and Rouse 1958/9). Besides, it induced Rouse to develop his phylogenetic system of cultural taxonomy of Caribbean assemblages. Rouse also stimulated research in the Lesser Antilles by his Yale students, including Gary S. Vescelius in St. Croix and Marshall McKusick in St. Lucia who established local chrono-cultural sequences for these islands (*e.g.* McKusick 1960). Finally, the first archaeological reconnaissance of Tobago was carried out by Geoffrey H.S. Bushnell of the University of Cambridge, England, in 1955 (see Boomert 1996, 19-20).

In these years Rouse's normative view of culture was seriously challenged by environmentalist perspectives such as the culture-ecological approach presented by Julian H. Steward (*e.g.* Steward 1949). It prompted important archaeological fieldwork by Betty J. Meggers and Clifford Evans in Brazilian Amazonia and British Guiana in the late 1940s and 1950s (*e.g.* Evans and Meggers 1960). Steward's 'Circum-Caribbean' hypothesis, suggesting an Andean derivation of the chiefdom societies of northwest South America and the Antilles and explaining Tropical Forest Culture as a degenerate version of the latter, elicited a firm rebuttal from Rouse (1953). The culture-ecological perspective stimulated interest in prehistoric lifeways and adaptive strategies. In the Caribbean the first detailed analysis of food remains other than shells recovered from archaeological sites was carried out by Elizabeth S. Wing of the University of Florida who studied the animal bone material excavated by Rouse in Trinidad (Wing 1962). It signalled the beginning of a shift in archaeological research orientation from exclusively culture-historical interpretation towards reconstruction of past subsistence patterns and modes of life in the region. Ironically, in North America a similar alteration in research objectives took place as early as about 1940, *i.e.* some twenty years earlier than in the West Indies (Willey and Sabloff 1980, 130-131). A true milestone was reached in

the Lesser Antilles in 1961 when Father Pinchon organized the first international meeting of regional archaeologists in Fort-de-France, Martinique. Starting in 1967, this conference would convene biennially, each time hosted by another country or territory in the region (fig. 7), from 1985 onwards formally enlarging its audience to the entire Antilles as the trilingual congress of the International Association for Caribbean Archaeology (IACA).

Conducting fieldwork in the entire Lesser Antilles and beyond, a truly region-wide perspective was developed by Ripley P. Bullen of the University of Florida and his wife Adelaide K. Bullen during the late 1950s through 1970s. Closely cooperating with local amateurs, they dug at various sites in Trinidad, Barbados, Grenada, St. Vincent and the Grenadines, St. Lucia, Martinique, Guadeloupe, St. Martin, St. John, St. Thomas, and Puerto Rico. Contrary to Rouse,

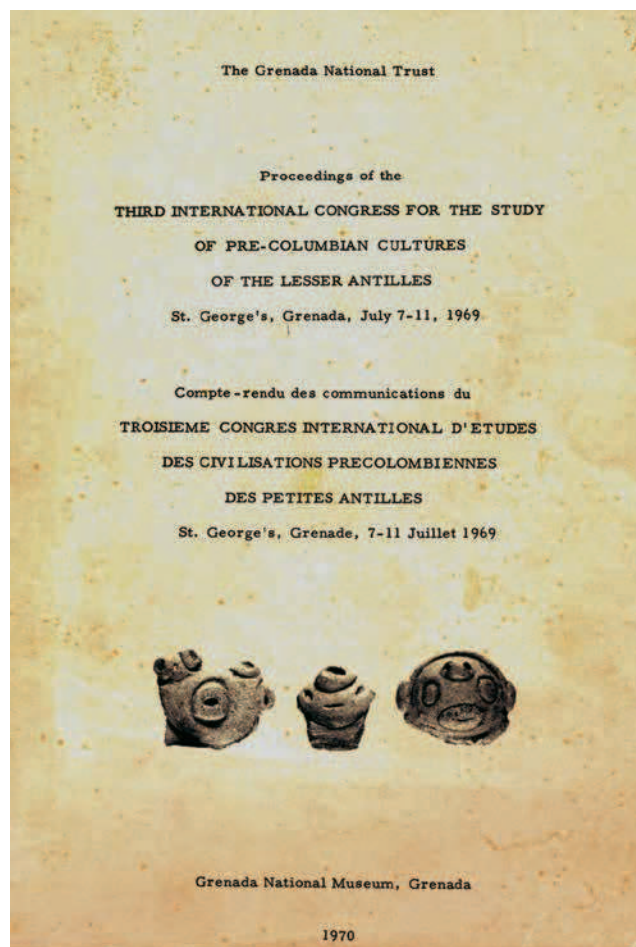


Figure 7 Cover of the *Proceedings of the Third International Congress for the Study of Pre-Columbian Cultures of the Lesser Antilles* (1970), held in Grenada, July 1969.

the Bullens used the ‘taxonomic’ type-variety model in order to classify their archaeological materials. The cultural chronology of the Windward Islands, framed in ethnic identifications, which they devised, would turn out to be highly influential (e.g. Bullen and Bullen 1976). Besides, it was Adelaide K. Bullen who initiated osteological archaeology in the region (Goodwin 1978).

In these years important research was carried out on St. Thomas by Frederick W. Sleight of the William L. Bryant Foundation, Orlando, FL, on St. Lucia and Martinique by William G. Haag of Louisiana State University, Baton Rouge, LA, and by local avocational archaeologists such as Ronald V. Taylor on Barbados, I.A. Earle Kirby on St. Vincent, the Rev. C. Jesse on St. Lucia, Jacques Petitjean Roget on Martinique, Father Maurice Barbotin on Marie-Galante, Edgar Clerc on Guadeloupe (Delpuech 2002), and Fred Olsen and Desmond V. Nicholson on Antigua. In 1973 the latter joined forces with Rouse, leading to a multi-year excavation project at various Ceramic Age sites on the island under the auspices of Yale University. In addition, one of Rouse’s students, Dave D. Davis, investigated the Archaic occupation of Antigua. In these years the foundation of various museums and archaeological societies in the Lesser Antilles further stimulated research. For instance, in 1970 the Musée Départemental d’Archéologie opened its doors in Martinique. Mario Mattioni, an art historian, was appointed its first director. French laws regarding archaeological research were now formally implemented in the French West Indies (Mézin 1991; Giraud 1995; 1997; 2002; Delpuech 2007; Vidal 2007).

4 THE INTERPRETATIVE PERIOD

The contextual-functional perspective which pervaded North American archaeology in the 1950s led to a major interest in environmentalist approaches and reconstructing prehistoric settlement patterns, especially following Willey’s Virú Valley project (Willey and Sabloff 1980, 130-131, 146-149). It was adopted by researchers in the West Indies at a time when in North America it had already evolved into the New Archaeology or ‘processual’ approach which saw cultural development as resulting primarily from long-term adaptive processes and swept throughout global academia during the 1970s and 1980s (Trigger 2006, 392-405). In the Caribbean detailed analysis of zooarchaeological remains now became customary in order to reconstruct past lifeways and subsistence strategies. It was Mattioni who in the 1970s initiated area excavations aiming at deducing local community structure and house plans at the Vivé and Fond-Brûlé sites in Martinique (Giraud 1997).

Simultaneously, Peter O’B. Harris carried out important fieldwork at various sites in Trinidad under the auspices of the Historical Society of Trinidad and Tobago (South Section),

which enabled him to develop the first detailed chrono-cultural sequence for the Archaic Age in the island. In addition, Harris continued Bushnell’s work in Tobago and initiated research into the preceramic cultural ecology of Trinidad which he was able to correlate with the Holocene sea-level rise in the Gulf of Paria (Harris 1976). In spite of the increased emphasis on analysing settlement and subsistence patterns, most of the research carried out in the Lesser Antilles in these years continued to be primarily culture-historical in character. Partly this was due to the still fragmentary chrono-cultural sequences available for many of the West Indian islands. Instead, it was French structuralism that influenced archaeological methodology in especially the French West Indies in these decades. A clearly structuralist ‘cognitive’ perspective, which in North America would break through during post-processual times more than a decade afterwards, was presented by Henry Petitjean Roget (1975) who analysed Early Ceramic pottery decoration of the West Indies in order to reconstruct the worldview of its manufacturers.

New research questions were now raised and old ones approached from different angles. In Martinique Louis Allaire, one of Rouse’s students, investigated the subject of archaeologically identifying Island Carib pottery, rejecting Bullen’s conclusions on this matter and excavating extensively on the island in the 1970s and 1980s under the auspices of Yale University, the Université de Montréal and Manitoba University, Canada (Allaire 1977). Simultaneously, in 1978-9 David R. Watters of Pittsburgh University, PA, introduced probability sampling to the West Indies by archaeologically surveying the islands of Barbuda and Montserrat using random selection of aligned transects, specifically arranged to reconnoitre on foot the various ecosystems of these islands. In these same years Luis A. Chanlatte Baik (University of Puerto Rico, Rio Piedras) initiated a major excavation project on Vieques which he would continue throughout the 1980s and 1990s, cooperating with Yvonne Narganes Storde (Chanlatte Baik and Narganes Storde 1983; 2005). Meanwhile Rouse continued working on his chrono-cultural chart of the West Indies, refining it from time to time (fig. 8; see Rouse 1964; 1986; 1992). He cooperated with Watters in analysing the environmental diversity of the Caribbean, while the latter compared the patterns of horticulturalist colonization of Oceania and the Antilles (e.g. Watters and Rouse 1989).

A truly ‘processual’ approach was presented by R. Christopher Goodwin (Smithsonian Institution, Washington, DC) who attempted to show that demographic factors underlaid subsistence change during the Ceramic Age in St. Kitts and beyond. From 1981 to 1992 the systematic registration of rock art sites in the Lesser Antilles was undertaken on a region-wide scale by the Dutch scholar Cornelis N. Dubelaar (1995), who previously had inventoried

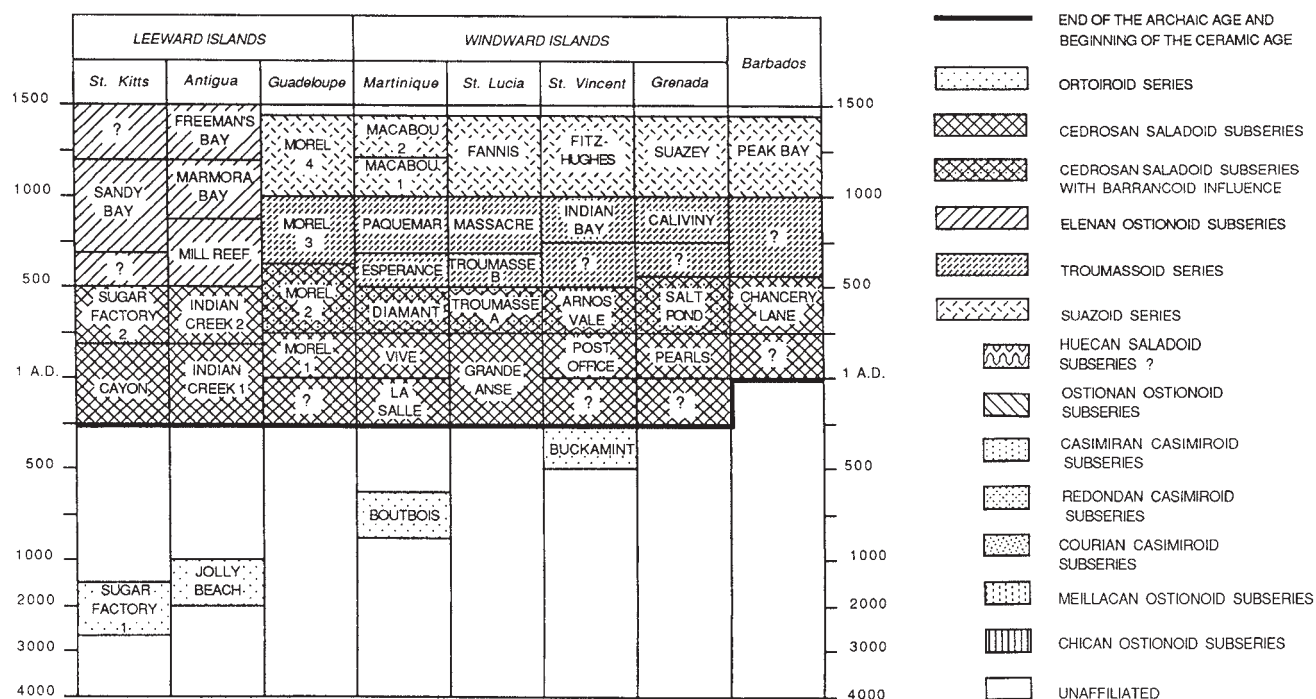


Figure 8 Chronological chart of the 'peoples and cultures in the Lesser Antilles', drafted by B. Irving Rouse. (After Rouse 1992, Fig. 15).

the petroglyphs and rock paintings of the Guianas. A series of major excavation programmes were now being initiated. Such fieldwork was carried out by a team of Vienna University, Austria, led by Herwig Friesinger at various sites on St. Lucia between 1983 and 1986. In 1984 the Barbados Museum and University College London established the Barbados Archaeological Survey which would entail systematic field surveys and excavations led by Peter L. Drewett throughout the 1980s and 1990s. In Trinidad the establishment of the Archaeological Centre at the St. Augustine campus of the University of the West Indies (UWI) would lead to a programme of site surveying and excavating in both Trinidad and Tobago, as well as to efforts at registration and official protection of known sites by the author in cooperation with Peter O'B. Harris of the Historical Society of Trinidad and Tobago (South Section) throughout the 1980s and afterwards. Besides, the author continued Allaire's archaeological and ethnohistorical research into the identification of Island Carib pottery (Boomert 1986).

Research accelerated tremendously in the Lesser Antilles during the final quarter of the twentieth century, being carried out by local museums or archaeological societies and institutions, often associated with North American or West European universities. Epoch-making area excavations were conducted by Aad H. Versteeg of Leiden University, the

Netherlands, at the Golden Rock site of St. Eustatius from 1984 to 1989. His excavation of part of a Ceramic Age village exposed numerous features including soil marks of postholes which enabled the reconstruction of a number of house plans (Versteeg and Schinkel (eds) 1992). Versteeg's work marked the start of a series of major projects emphasizing settlement archaeology in the Lesser Antilles conducted by archaeologists of Leiden University, notably Corinne L. Hofman and Menno L.P. Hoogland, on Saba, St. Martin, Guadeloupe, Désirade, St. Lucia, and St. Vincent (fig. 9). In fact, the Leiden methods of analysing site formation processes and spatial interpretation would become the model for Caribbean archaeological research in the years to come.

The establishment of regional archaeological services in Martinique (1986) and Guadeloupe (1992) by the French government would give research in the French West Indies a major impetus (Delpuech 2001). Much fieldwork was now realized here either independently or in cooperation with Leiden University, the Université de Paris I and the Université de Provence, Aix-en-Provence, both in France, under the responsibility of the Direction Régionale des Affaires Culturelles (DRAC) of Guadeloupe and that of Martinique (Giraud 1997; Bérard 2004; Delpuech 2007; Vidal 2007). In the 1990s and following years other

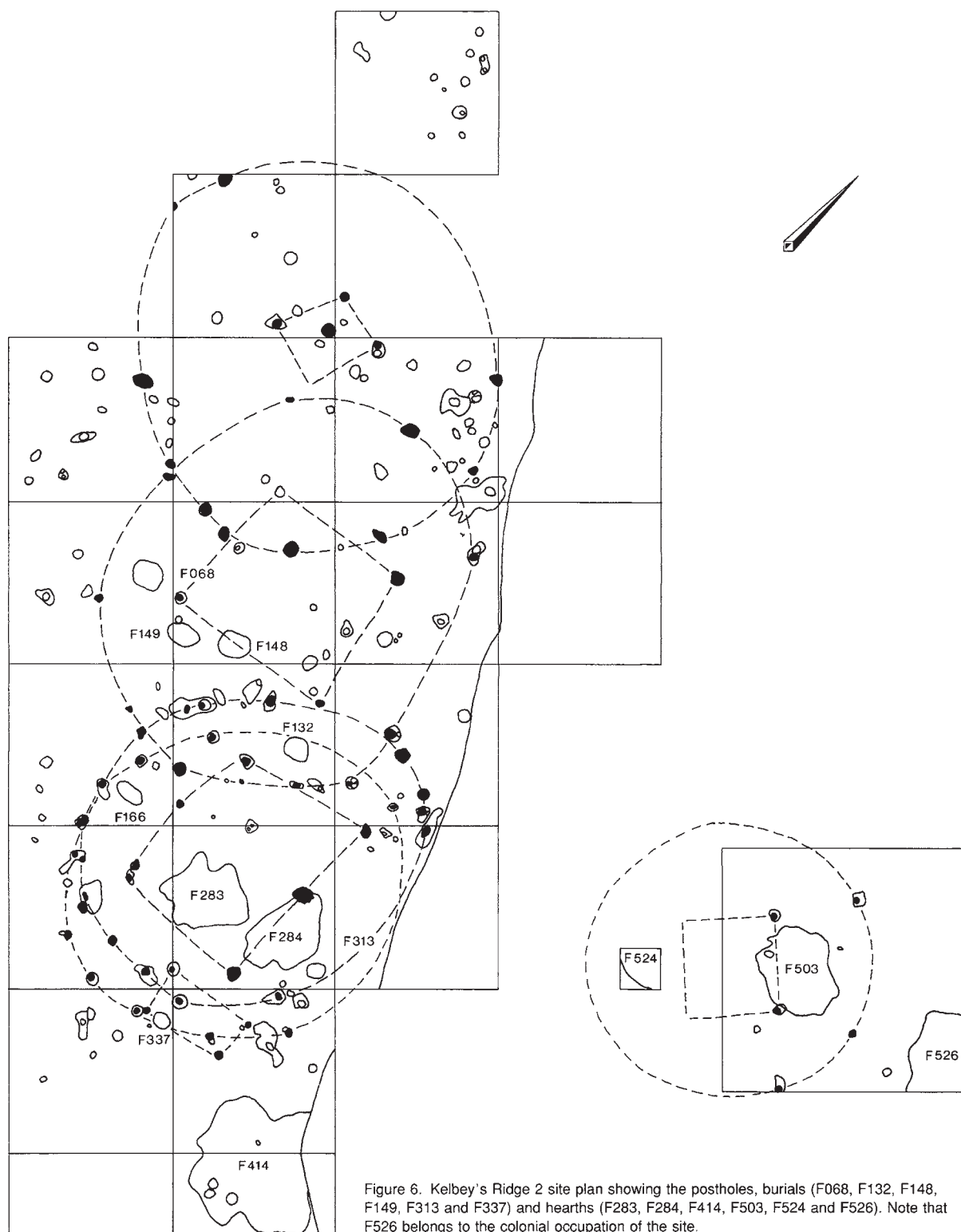


Figure 9 Site plan of Kelbey's Ridge 2 settlement, Saba, showing soil marks of postholes, burials and hearths. (After Hoogland and Hofman 1993, Fig. 6).

multi-year excavation projects were executed by Richard T. Callaghan and Iosif Moravetz (University of Calgary, Alta., Canada) on St. Vincent, by David R. Watters (Carnegie Museum, Pittsburgh, PA) and James B. Petersen (University of Maine at Farmington, ME) on Montserrat, by the latter and John G. Crock (University of Vermont at Burlington, VT) on Anguilla, by A. Reg Murphy (National Parks Antigua, St. John's) and Paul F. Healy (Trent University, Peterborough, Ont., Canada) on Antigua, by Elizabeth Righter (Division for Archaeology and Historic Preservation, US Virgin Islands) on St. Thomas, US Virgin Islands, by Michele H. Hayward and Michael A. Ciquino (Panamerican Consultants, Inc., Buffalo, NY) on St. Croix, US Virgin Islands, by Peter L. Drewett on Tortola, British Virgin Islands, and throughout the 1980s and 1990s by Samuel M. Wilson (University of Texas at Austin, TX) on Nevis. Especially Righter's work at the Tutu site stands out for its multidisciplinary approach (Righter (ed.) 2002).

The years around the turn of the century saw a noteworthy widening of research interests. Study of the two dominant themes in Caribbean archaeology, the multi-staged peopling of the archipelago as a whole and the rise of complex society in the Greater Antilles, intensified, while serious attempts were now made to understand the processes of cultural development and social interaction in the archipelago (Crock and Petersen 2004; Hofman and Hoogland 2004; Keegan 2004). This has led to heightened insight into the intercommunity exchange relationships throughout the prehistoric Lesser Antilles and beyond (e.g. Watters 1997; Hofman *et al.* 2007). Accordingly, investigation into innovative methods of identifying the source areas of objects of trade or exchange including ceramics and stone or shell artefacts deepened (e.g. Knippenberg 2006). The compositional and radiographical analysis of pottery, initiated by Jacques Petitjean Roget (1970) in Martinique and followed up by Donahue *et al.* (1990) in the Leeward Islands, is presently being pursued by Hofman and others at Leiden University where microscopic study of fabrics is combined with that of geochemical analysis and ethnoarchaeological research (Hofman and Bright 2004). This research dovetails with the compositional studies of Caribbean ceramics by Descantes and others at the University of Missouri, MO (Descantes *et al.* (eds) 2008). In addition, a programme of sourcing clays throughout the Lesser Antilles next to workability tests is currently being carried out at Leiden University to enable identification of the provenance areas of pottery. In a similar way trace element variability in cherts is being tested (Hofman *et al.* 2008). The study of use-wear traces on shell, stone, bone, antler and coral tools, artefact replication and experimental archaeology, pioneered by Jeffery B. Walker in Puerto Rico in the 1970s, is undertaken at Leiden University as well (Lammers-Keijsers 2007).

As to the analysis of past subsistence patterns, following the initial attempts at isotopic research of amino acids in fossil bone collagen in order to reconstruct prehistoric diet and the first systematic archaeobotanical research of Lesser Antillean sites in the 1990s (e.g. van Klinken 1991), important progress is now being made in starch and phytolith residue studies as well as that of human dental wear as evidence of dietary practices. All of this recently enabled synthesizing Caribbean palaeoethnobiology on a region-wide level (Newsom and Wing 2004; also Serrand 2007). In addition, stable isotope analyses of bone and tooth enamel are currently being used to reconstruct prehistoric life histories in the Lesser Antilles, notably the patterns of inter-island movement of individual Amerindians (Hoogland *et al.* 2010; Laffoon and de Vos 2011). Also, the investigation of the climatically induced environmental alterations in the Lesser Antilles and their impact on human life in the archipelago has recently been intensified (e.g. Bertran *et al.* 2004), while the accelerated development of information science during the past decade has led to an increased use of sophisticated geophysical surveys, GIS-generated mapping, aerial photography, photogrammetry and satellite imagery in West Indian archaeology, notably on Trinidad, Barbados, the Leeward and Virgin Islands (Reid 2008). Finally, no doubt the first complete excavation by teams of Leiden University of an Island Carib settlement site at Argyle, St. Vincent, in 2010, represents one of the most important archaeological investigations in the Lesser Antilles of the past few decades (see Hoogland *et al.* n.d.).

5 CONCLUSIONS

In retrospect, the political, cultural and linguistic fragmentation of the Lesser Antilles has modelled the development of scientific research in the area, including that of archaeological investigation. The lack of region-wide academic institutions and the late- to post-colonial political situation led to research being advanced initially mainly due to foreign initiative, either by North American or West-European scholars. It was in the French West Indies that in the 1930s the first continuous local programme of archaeological investigation was developed. Interestingly, while throughout most of its history archaeological research in the Caribbean followed the same line of development as that in North America (Willey and Sabloff 1980), typically 'processual' research strategies had relatively little impact in at least the Lesser Antilles during the time New Archaeology was reigning academia in the United States and Western Europe. In contrast, from these years onwards it was a clearly structuralist-derived 'cognitive' perspective that influenced archaeological investigation in especially the French West Indies, thus being initiated in the region more than a decade earlier than the breakthrough of post-processualism in

North America. At present local museums, universities, heritage foundations or historical societies are actively protecting and pursuing archaeological investigation in the Lesser Antilles, often in collaboration with European or North American universities. Clearly, research is most thriving in territories which form part of larger political units with established and firmly endorsed forms of protective heritage legislation and the financial means to enforce them.

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