Pre-Columbian Site Patterns In The Eastern Guadeloupe Area. An Archaeological Survey Of La Désirade, Petite Terre, And Pointe Des Châteaux (1998-2000)
Abstract
A PhD study (1997-2003) focusing on socio-political, economic and ritual organisation and interaction on La Désirade, Petite Terre, and Pointe des Châteaux (Guadeloupe, F.W.I.) is currently being carried out at Leiden University (The Netherlands). It aims to obtain information on pre-Columbian organisation and interaction through the analysis of archaeological sites and their assemblages, as well as diachronic site patterns. At the start of this study no reliable site inventories, prerequisites for the investigation of pre-Columbian site patterns, were available for the research area. Therefore, a survey method, consisting of systematic and intensive field-walking procedures and small-scale sub-surface tests, was designed in order to provide fast, detailed, and systematically made micro-regional site inventories. The required fieldwork was carried out from 1998 to 2000. This paper focuses on the aims, methodology, accuracy and results of the fieldwork campaigns and the diachronic pre-Columbian site patterns that were identified.

Résumé
Une étude de maîtrise (1997-2003), s'occupant des organisations socio-politique, économique et rituelle et de l'interaction sur La Désirade, Petite Terre et Pointe des Châteaux (Guadeloupe, F.W.I.) est en cours de réalisation à l'Université de Leiden (Pays-Bas). Elle cherche à obtenir des renseignements concernant l'organisation et l'interaction précolombiennes en analysant des sites archéologiques et leurs assemblages, ainsi que les modèles diachroniques des sites. Au début de cette étude, des inventaires fiables des sites, conditions préalables pour la recherche des modèles des sites précolombiens, n'étaient pas disponibles pour la région de recherche. C'est pourquoi une méthode de prospections en surface, consistant en des observations en surface systématiques et intensives et des petits tests sous-surface, fut designé afin de fournir rapidement et systématiquement, des inventaires détaillés de sites micro-régionaux. Les recherches de terrain nécessaires furent réalisées entre 1998 et 2000. Cet article se concentre sur les buts, la méthodologie, l'exactitude et les résultats des opérations des recherches de terrain et les modèles diachroniques des sites précolombiens qui furent identifiés.

Resumen
Un estudio de doctorado (1997-2003), enfocándose en la organización e interacción socio-política, económica y ritual de La Désirade, Petite Terre y Pointe des Châteaux (Guadeloupe, F.W.I.), está realizándose en la Universidad de Leiden (Holanda). Tiene por objetivo de obtener la información sobre la organización e interacción precolombina por medio de análisis de sitios arqueológicos y sus ensamblajes. Así mismo de los patrones de sitios diacrónicos. Al inicio de este estudio, no habían disponibles inventarios fiables de sitios de la región de investigación, los cuales son imprescindible para la investigación de patrones de sitios precolombinos. Por esta razón, se creó un método de sondeo, consistiendo en procedimientos de survey sistemáticos e intensivos. Además se realizaron pruebas sub-superficie a escala reducida, con el objetivo de proveer de inventarios rápidos, detallados y sistemáticos para sitios micro-regionales. El trabajo de campo fue efectuado entre 1998 y 2000. Este papél enfoca en los objetivos, la metodología, la exactitud y los resultados de las investigaciones en el campo y los patrones de sitios precolombinos diacrónicos que fueron identificados.

Introduction
This paper presents the results of three survey campaigns, carried out on La Désirade, Petite Terre and Pointe des Châteaux (Guadeloupe, F.W.I.) between 1998 and 2000. The paper focuses on the natural setting of the study area, the aims of the study, the fieldwork methods and results, and the pre-Columbian site patterns.

Pointe des Châteaux, La Désirade and Petite Terre, which are at a distance of 12 kilometres...
from each other, are the easternmost areas of Guadeloupe (figure 1). They are rather similar in their calcareous plateaux bordered by uplifted reefs, salinas, dynamic dunes and sandy beaches protected by reef barriers, their extremely dry climates, poor soils, and dense acacia forests.

Fieldwork methodology

The main research question of the study, related to the diachronic analysis of socio-political, economic and ritual organisation and interaction, asks for an insight into diachronic site patterns in the research area. This should be based on an accurate and representative site inventory, including different types, functions, locations and chronological assignments of sites. Secondly, detailed site descriptions should be obtained, and it should be possible to estimate the efficiency and accuracy of the inventory. Three systematic and intensive survey campaigns were designed to swiftly provide a reliable site inventory for the research area.

The first part of the fieldwork included systematic and intensive field-walking, aimed at surface observations of 1 m wide parallel transects, separated by 10 or 20 m intervals. Transects were compass-oriented north-south covering coastal as well as inland areas, and different geological and vegetation zones. Steep slopes were not surveyed. The limited local sedimentation is favourable for surface observations, which were optimised by cleaning transect surfaces with machetes. Isolated finds and surface concentrations of pre-Columbian material were mapped on 1:5000 aerial photographs and surface collections of diagnostic material were made. The study area at the Pointe des Châteaux peninsula, reaching from the easternmost tip of Grande Terre over a distance of 7 km, up to 1.5 km west of the site of Anse à la Gourde, was surveyed completely using 10-m intervals. The beaches on the northern coast were auger tested. The discovery of almost no small sites on Pointe des Châteaux invoked the enlargement of interval distances on La Désirade to 20 m. La Désirade is an 11 km long and 2 km wide calcareous table mountain with a volcanic substratum, dominated by its uninhabited limestone plateau that reaches 275 m in height. The east plateaux, the western hills and the southern coastal plain of the island could be surveyed completely. The survey of the central plateau, being complicated by environmental and administrative factors, was limited to a 1 km wide block and a 60 m wide band running along the whole southern border of the plateau. The survey of the uninhabited islands of Petite Terre was greatly hindered by dense acacia and mancenilla forests. Terre de Haut (1.1 km by 200-300 m) was surveyed completely using 10-m intervals but on Terre de Bas (2.5 km by 600 m) investigations were limited to sites reported before. Nevertheless, as surroundings and access routes of these sites were intensively surveyed, a selective but important part of the island was studied.

The second phase involved the description of sites and the excavation of test units. Unfortunately, the small-scale of the project and the large area covered did not allow the excavation of large units or testing a large number of sites. A sample representing different site types and locations was tested, in particular those sites that might be multi-component. One-m² test units, or series of those, were excavated down to the bedrock in 10-cm arbitrary levels, while taking geological and archaeological layers in account. Archaeological material was hand-sorted from 2/5" dry sieve residues and archaeological and geological information was documented on test-unit records. Test unit locations were measured using GPS and infrared theodolite (de Waal 1999, 2002a-c, in prep.).

Fieldwork results

Although coastal erosion of low-lying beach areas is rather dramatic in certain parts of the study area, the site inventory might be considered representative. It is thought at least that Early or Late Ceramic habitation sites are not likely to be missed as a result of their relatively large dimensions. Unfortunately, the situation for the pre-ceramic period might have been less favourable for site conservation. Cultural post-depositional processes probably mainly resulted in partial destruction of sites, and not in complete disappearance. Grande Anse on La Désirade, where the construction
of the islands marina in the island’s capital completely destroyed an area that may have been very attractive for pre-Columbian habitation, may be considered an exception. Biasing factors related to the technique of surface surveying in general, characteristics of the archaeological material, personal observation, and to most environmental factors could be overcome by adjusting the fieldwork design. Large samples of different geological and ecological zones have been investigated, and many archaeological sites with various functions, locations and chronological assignments have been discovered.

The surveys resulted in the discovery of 49 new archaeological sites. The 21 sites on Pointe des Châteaux consist of 11 habitation sites, a strategic outpost, and nine indistinct sites. The La Désirade site inventory contains 43 sites, including 11 habitation sites, four lithic workshops, two sites that might have served ceremonial purposes, and 26 indistinct sites. The seven Petite Terre sites consist of five habitation sites and two indistinct sites. Almost all sites could be roughly assigned to one of the following periods: Early Ceramic early phase (500/350 BC-AD 400), Early Ceramic late phase (AD 400-600/850), Late Ceramic early phase (AD 600/850-1200/1300) and Late Ceramic late phase (AD 1200/1300-1493/early colonial times). Six sites on La Désirade, however, could only be dated to the Ceramic Age.

It turned out to be more difficult to provide unambiguous site functions for all sites. Some categories could be clearly identified, such as habitation sites and lithic workshops, and for some other sites a function as strategic outpost or ceremonial site has been suggested. At several other sites, characterised by relatively small and shallow distributions of archaeological material predominantly on inland locations, no evidence for permanent habitation or for distinct special activities could be collected. These sites have been labelled ‘indistinct’. Some indistinct sites are characterised by small quantities of griddle fragments and shell food remains, which might be indicative for the local preparation of food (de Waal 1999, 2002a-c, in prep.).

**Pre-columbian site patterns**

**Pre-ceramic period**

No single pre-ceramic site was found, although quite close to the Pointe des Châteaux survey area the presence of a very small pre-ceramic component has been suggested at the Pointe des Pies site in St. François (Richard 1995:25). Pre-ceramic sites may have been completely destroyed by marine erosion.

**Early Ceramic early phase (500/350 BC-AD 400)**

No Early Ceramic early phase sites were found either, and it is not thought likely that these would have completely eroded. The Early Ceramic early phase component of the Morel site on Guadeloupe, however, provided two red chert pieces from La Désirade (Knippenberg in prep.). This might suggest that the undated lithic workshops on La Désirade, where chert was exploited and worked, were already used during this period.

**Early Ceramic late phase (AD 400-600/850)**

Seven Early Ceramic late phase sites have been discovered in the research area, most of them on Pointe des Châteaux, while only two are on La Désirade (figure 2). These include six large habitation sites and one indistinct site. No evidence for use or occupation of Petite Terre was found. The habitation sites have very attractive, mainly coastal, site locations. One indistinct inland site has been discovered on Pointe des Châteaux. It has a much smaller site area and a slightly less attractive site location than the habitation sites in this period.

**Late Ceramic early phase (AD 600/850-1200/1300)**

During the Late Ceramic early phase, the number of sites increases to 59, and other site functions
come into the picture, not only including 22 habitation sites and 34 indistinct sites, but two ceremonial sites, and one strategic outpost as well (figure 3). La Désirade begins to become densely occupied now and five large, probably permanent, habitation sites have been found on Petite Terre. Although habitation sites continue to have attractive, predominantly coastal, locations, inland locations begin to occur as well and one site is even located on the north-coast of the La Désirade plateau. Habitation sites continue to be large, although in average they are smaller than the Early Ceramic late phase habitation sites.

The ceremonial sites are situated in areas where very little other archaeological material was found. They have impressive locations related to the La Désirade central plateau, which is the most eye-catching feature of the island. They are far from the known habitation sites, and they may have been related to special activities that are remote from profane daily life activities. The Chemin de M. de l'Ome site was discovered in a dirt track on the central plateau in 1999.

The site is a small isolated depot, consisting of an almost complete vessel, embellished all over with an elaborate but rather imprecisely made pelican motif. The vessel was deliberately deposited in a small hole that had been dug in the bedrock to support it. It contained a small stone axe and an adze of non-local material (figure 4). These had not been used prior to deposition (deWaal 2002a-c). The indistinct sites are numerous and most of them are located inland, although site locations on the plateau and coasts occur as well. The mean site area is smaller than the one of the habitation sites in this period.

**Late Ceramic late phase (AD 1200/1300-1493)**

The Late Ceramic late phase is characterised by a dramatic decline in site number. Only three sites could be dated to this phase (figure 5). These include the small single component sites of Morne Cybèle-1 (Bodu 1985; Hofman 1995), dated around cal. AD 1440-1480, and Morne Souffleur on La Désirade. A very small component, providing earlier dates, with a median date of approximately AD 1350, was identified at Anse à la Gourde on Pointe des Châteaux (Hofman 2001:172).

The site of Morne Souffleur was discovered during the 1999 surveys of La Désirade. Site location and archaeological material collected are very similar to Morne Cybèle-1. Morne Souffleur has an impressive location on the central plateau, which is suitable for observation and defence, but also for habitation. Ceramics collected from the site are thin and finely made. Decoration consists of incision, geometric modelling decorated by punctation, anthropomorphic modelled incised appliqué, and punctation (figure 6). Jars and bowls with unrestricted simple contours appear to be dominant, as are rounded rim shapes. Surface colours are predominantly reddish brown or dark gray-black. Firing techniques include incomplete or relatively good oxidation or complete reduction in most cases, and most of the surfaces were burnished and polished. Shell artefacts include a carved and polished Strombus costatus shell mask. Similar shell masks, referred to as Taino style, have been found in the region, for example on the Sandy Hill site on Anguilla (Crock 2000:114). The Morne Cybèle-1 shell mask has a slightly different style. Allaire (1990) referred to these kinds of objects as ritual objects in Chicano Ostionoid/Classic Taino style. Other archaeological materials collected include lithic and coral artefacts (including a small St. Martin chert axe) and some shell and faunal food remains.

The spectacular site locations and the remarkable archaeological assemblages might suggest that the Morne Cybèle-1 and Morne Souffleur had a special, and possibly regional, significance (deWaal in prep.).

**Synthesis and conclusions**

Some concluding remarks can be made when regarding the diachronic pre-Columbian site patterns presented above. It is striking that pre-ceramic sites and Early Ceramic early phase sites are absent
from the site record. The first archaeologically visible occupation of the research area starts in the Early Ceramic late phase when a small number of large villages was distributed at regular distances over Pointe des Châteaux and La Désirade, leaving Petite Terre uninhabited. Secondly, site numbers increase considerably during the Late Ceramic early phase when compared to the preceding period even when correcting for the longer duration of this later phase. This increase in site numbers has been reported before, for example for the islands of Montserrat and Barbuda (Watters 1980), Nevis (Wilson 1989) and Anguilla (Crock 1999), and is usually attributed to an increase in population density. The diversity in site types and site locations increases as well. Site areas, on the other hand, slightly decrease. Habitation is not only focused on Pointe des Châteaux, but La Désirade and Petite Terre appear to be almost equally important for pre-Columbian settlement. The larger diversity in site types and locations, the large number of indistinct sites and the presence of two ceremonial sites, suggest an increase in special activities or at least a different use of the landscape, radiating over larger areas from the central settlements. Thirdly, site numbers, site areas and diversity in site types and locations decrease dramatically during the Late Ceramic late phase. Petite Terre and almost all of Pointe des Châteaux are deserted now and occupation is centred in two sites on La Désirade, that are special in their eye-catching archaeological assemblages and locations. As no later or contact-period sites were encountered, these sites provide the latest evidence for Amerindian occupation of the research area.

The present paper has described diachronic pre-Columbian site patterns in the easternmost part of Guadeloupe. The next step involves obtaining an insight into underlying organising processes. Studying individual sites and site patterns per period may provide information on social, economic and ritual or ceremonial organisation, and interaction. This will be presented on a future occasion (de Waal, in prep).

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Figure 1. The research area, consisting of Pointe des Châteaux, La Désirade, and Petite Terre (Guadeloupe, F.W.I.).
Figure 2. Early Ceramic late phase (AD 400 – 600/850) site distribution map, with habitation sites (_) and an indistinct site.

Figure 3. Late Ceramic early phase (AD 600/850 – 1200/1300) site distribution map, with habitation sites (_), indistinct sites, a strategic outpost and ceremonial sites (_).
Figure 4. Vessel and lithic artefacts from the Chemin de M. de l’Orme site (1:3).

Figure 5. Late Ceramic late phase (AD 1200/1300 – 1493) site distribution map, with habitation sites (•).
Figure 6. Morne Souffleur shell mask and ceramics (1:2).