

AT THE BORDER OF POLYNESIA: ARCHAEOLOGICAL RESEARCH IN THE EAST-FIJIAN ISLANDS OF CIKOBIA AND NAQELELEVU

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ABSTRACT

This paper presents the first results of a joint archaeological and anthropological program conducted by a team of New Caledonian, French and Fijian archaeologists on the two small Fijian islands of Cikobia and Naelelevu, the most northeasterly islands of the archipelago located within the maritime passage from Fiji to Western Polynesia. Located near the poorly-surveyed Vanua Levu, the prehistoric record of these islands will help to fill in a gap in studies of cultural evolution in the Fijian archipelago. The project also wishes to identify, through archaeological data, the cultural relationships between Fiji and Western Polynesia already witnessed in oral history. The paper presents the major results obtained through surveys focusing on fortifications, abandoned villages, burial areas and caves. Excavations have allowed the construction of a preliminary prehistoric sequence that begins about 2850 BP and displays a ceramic chronology similar to that which has been reconstructed elsewhere in Fiji. These data help to identify the pattern of cultural evolution of this part of the archipelago and reinforce the marked differences between Fiji and Western Polynesia.

Cikobia and Naelelevu are two small islands located in the north-eastern part of Fiji (Figure 1). They are two of the most easterly islands of the Melanesian geographical area, located on the likely maritime access route to Western Polynesia, particularly towards Futuna, Uvea and Samoa. The islands were chosen for their known cultural connections with Futuna, where Sand had undertaken previous research. A joint program between New Caledonian, French and Fijian archaeologists started in 1997, developed

within the framework of the French/Fijian cooperation program. It involves the Muséum National d'Histoire Naturelle in Paris, the Archaeology Department of the New Caledonia Museum in Nouméa, and the Archaeology Department at the Fiji Museum.

The Cikobia and Naelelevu project is explicitly part of the cooperation programme conducted by the Archaeology Department of the Fiji Museum in Suva. The vision of the Fiji Museum is to become a dynamic institution for the preservation of the national heritage, including exhibition of artefacts of historical value and development of arts and crafts, and culture. After the Museum's establishment in 1955, it took 20 years for local Fijians to participate in the collection of oral history and scientific research into their origins. In the late 1970s, the government provided a grant to the National Archives for the aim of collecting oral history. This project was not completed due to financial problems. However, in 1983, the Fiji Museum employed a full-time Field Research Officer to collect oral history and to assist overseas researchers in archaeological and anthropological research in Fiji. In 1994, the Archaeology Department was established and has been in operation ever since.

With the increase in staffing levels at the beginning of 1995, and an increase in the department's budget, much has been achieved. At the moment, three staff work in the Department. It is an initiative of the Museum to provide training opportunities to the staff to ensure that they will be competent to undertake local archaeological research. As opportunities for attending overseas training are not easily available, the Department aims to work together with overseas researchers in Fiji. This provides experience for the local staff to work in the field and to become fully up-to-date with current field methods and theories of archaeology. The overseas researchers in return provide archaeological data and information to the Fiji Museum, this information

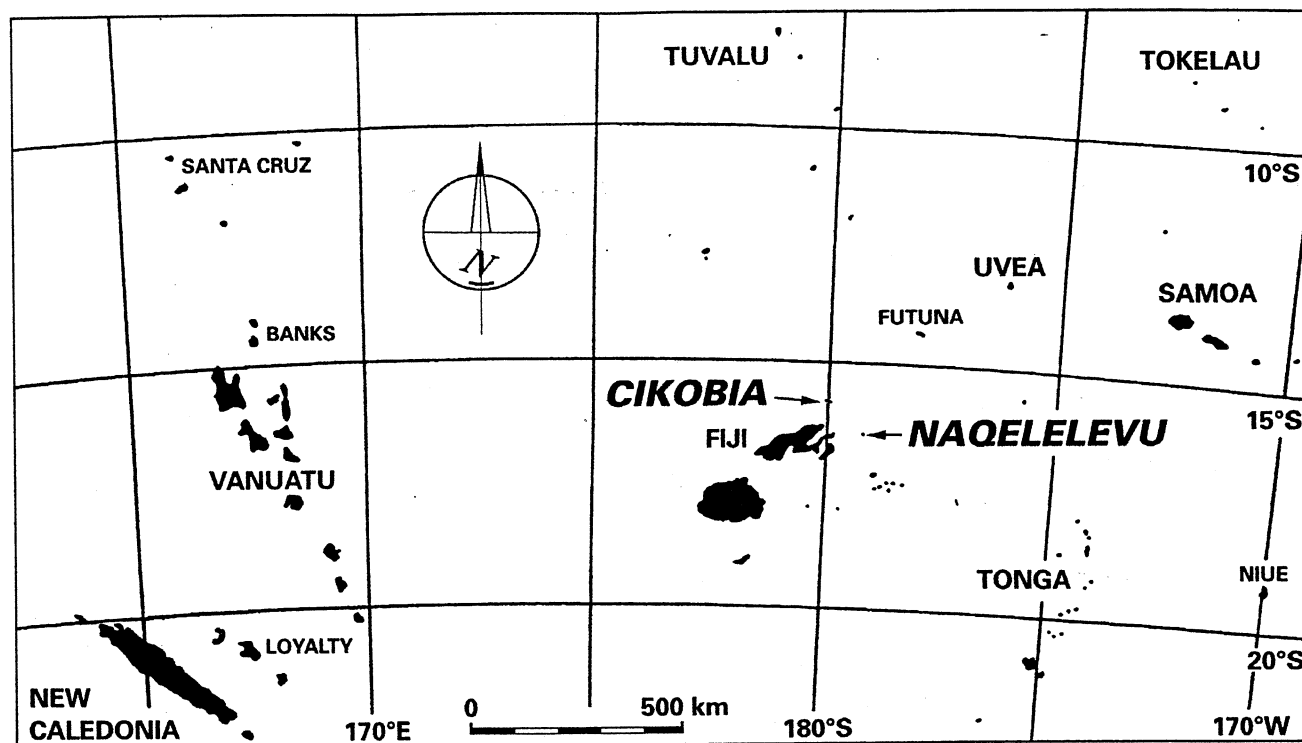


Figure 1: The locations of Cikobia and Naelelevu in the south-western Pacific.

being disseminated by the Museum to the community, particularly to schools.¹

The general objective of the present project is to reconstruct the prehistory of Cikobia and Naelelevu, and to place their chronologies in the context of inter-insular prehistoric relationships in the southwest Pacific (Sand and Valentin 1998). Links between Cikobia, Naelelevu and Futuna as recorded by linguistic data and oral traditions (Burrows 1936; Biggs and Veremalumu-Biggs 1975), as well as the proximity of the two islands to Vanua Levu and Taveuni, suggest a possible original pattern of settlement, combining characteristics from Fiji and Western Polynesia.

One of the major questions is to specify the status of Cikobia and Naelelevu in the regional chronological framework. Ceramic evolution is one of the main methods used to identify cultural groups in the region, and archaeological research carried out during recent decades has shown an important distinction between Fiji and Western Polynesia in this field (Green 1974; Kirch 1984). Arising from a common origin in the Eastern Lapita Cultural Complex, the cultural trajectories of the two regions separated after one millennium (Green 1981). In Western Polynesia, the making of pots stopped during the first millennium AD (Sand 1992), while in Fiji, the Lapita pottery tradition developed into a paddle impressed tradition (Navatu) followed by incised traditions (Vunda, then Ra)

(Frost 1979; Best 1984). At the core of this debate, the question of the regional homogeneity of the Fijian chronology is still widely discussed (Hunt 1987; Clark 2000). The ceramic chronology of Vanua Levu being little known, the results obtained in Cikobia and Naelelevu could be of major interest. Non-local material sourcing, be it ceramic or lithic, is a major part of the study. The results should show regional contacts and links during the different phases of the chronology and inform about possible long distance relations, especially with Western Polynesia.

The second set of questions arising from previous research in Fiji concerns the chronological evolution of settlement patterns. Starting mainly from a coastal occupation, some Austronesian settlers of Remote Oceania rapidly moved into new and diverse geographical settings, leading to the foundation of inland habitation sites and horticultural systems. The chronology of inland settlements in the large islands of Viti Levu and Vanua Levu being little known, most of the information comes from smaller islands in the Lau group (Best 1984) and from Taveuni (Frost 1974). Cikobia and Naelelevu are poor in natural resources and have low environmental diversity. They are therefore locations that can be used to evaluate the rate and extent of human adaptation experienced during the settlement of small Pacific islands constraints (Kirch 1984). By analysing the different types of settlement remains identifiable on the

surfaces of the islands and by recording the oral traditions related to these sites, it was hoped to gain a better idea of the chosen adaptation strategies in settlement location and economy, and the resulting transformations of the natural environment.

GEOGRAPHICAL SETTING

Cikobia (pronounced Thikombia), located at 180° east and 15° 45' south, is about 10 km long and 2 km wide (Figure 2). Centred on a basaltic outcrop located in its south-eastern part, the island is mostly covered by uplifted limestone formations. The present-day population, numbering around 150-200, lives in four villages. The eastern end of the island is partly protected by a reef, forming a small lagoon. The rest of the coast is directly open to the ocean and the well-known rough passage of Tilagica, in front of Udu Point. Naqelevelu (pronounced Nangegelevelu), located at 180° east and 16°50' south, is an uplifted limestone platform about 2 km wide, placed at the eastern end of an oval lagoon. The western side, towards the lagoon, has a small dune formation, all the interior being formed by coral.

MAJOR ARCHAEOLOGICAL RESULTS OF THE CIKOBIA-NAQELELEVU PROGRAM

This paper addresses the following topics: major trends in ceramic chronology; evolution of settlement patterns;

evolution of economic traditions; and burial practices. About 120 archaeological sites have been recorded on the islands so far. They allow a first overview of the different categories of observed remains. These will be analysed in a chronological order, starting with the first settlement and ending in the late prehistoric period. The Cikobia results will occupy most of the presentation, as only a short period of fieldwork was undertaken at Naqelevelu.

EARLY SETTLEMENT PHASE

The oldest known settlement of the Fijian archipelago is related to the spread of Austronesian seafaring populations into Remote Oceania around 2950 years ago (Anderson and Clark 1999). The excavations of Lapita sites in the region have shown general similarities between the sites of first occupation. They are typically located on sheltered seashores, near rich fishing areas and possible cultivations. The geomorphology of Cikobia led us to hypothesise that the first occupation was focused in the southeastern part of the island, in areas protected by the lagoon and coral reef where sand dunes were present. Convincingly, the oldest signs of settlement have been identified in this region in several test-pit excavations. The first conclusions that can be drawn from these test-pits are necessarily preliminary. However, the results obtained in the Nakasaga and Naselala sites allow an overview.

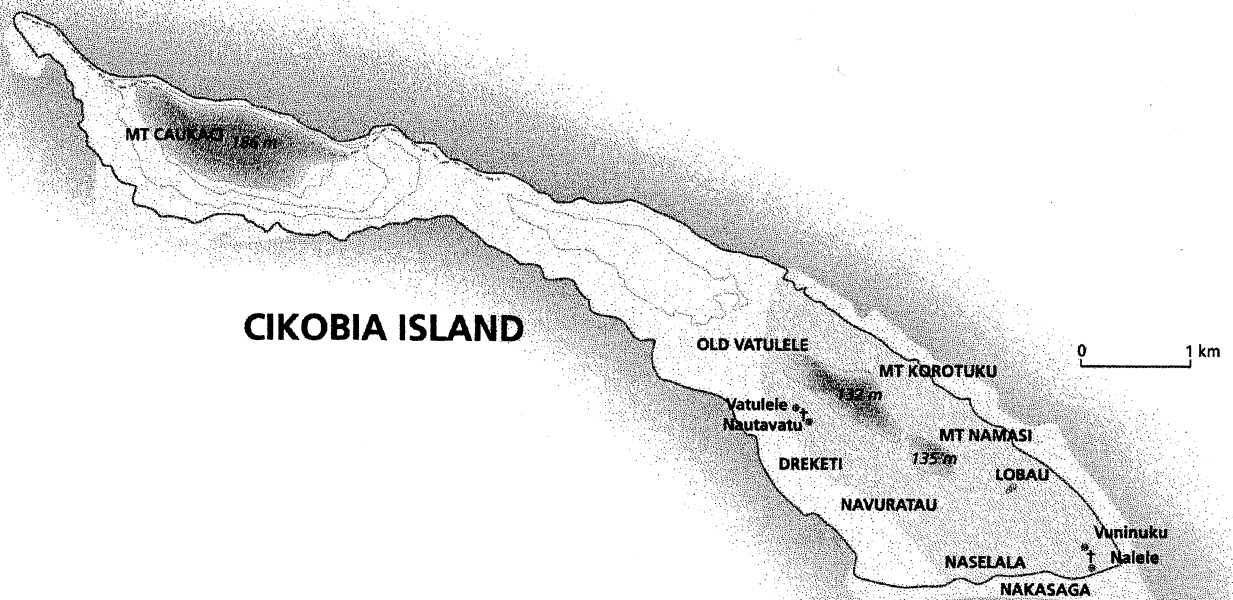


Figure 2: Map of Cikobia.

The chronology starts at the beginning of the first millennium BC, with ceramics stemming from the Lapita tradition. The earliest levels have been dated between 850 and 800 cal BC, with archaeological material related to the Eastern Lapita Complex. A few sherds have dentate stamped decoration and others have incised rims. The ceramic typology seems mainly to include undecorated wiped or lightly paddle impressed pottery, with a proportion of straight rims from bowls (Figure 3). On the less diversified Naqelelevu, a single test-pit showed the presence of an archaeological level corresponding to the first phase of the human occupation of the island. This layer was dated to 785 cal BC.

MIDDLE PHASE: GENERAL SETTLEMENT

Today, Cikobia is characterized by restricted natural diversity which may reflect, at least partially, a human impact. This impact can be identified by means of different data. The excavations have clearly shown that some shellfish species such as *Anadara* sp., not living in the Cikobia lagoon today, were probably still present 2000 years ago. A similar situation seems to apply to birds, probably due to forest destruction for cultivation and/or over-hunting. Although fishing has probably always represented an important source of subsistence, as shown by the amount of fishbone in the excavations, the existence of second-growth vegetation over a large part of the island indicates that cultivation was the central economic activity. Clearly, Pacific horticulturalists had a major impact on the natural environment. The major

transformation on Cikobia probably occurred during this middle phase of the prehistoric sequence. The effects of soil erosion can be observed on the volcanic soils of the southeastern part of Cikobia, where there has been development of a *talasiga*-like dry vegetation, characteristic of impoverished soils. Soil from Namasi Hill has eroded into the nearby Lobau swampy area, filling the site with over 2 m of earth and giving it its present shape.

It was during this middle phase that the first Lapita-related ceramic traditions were progressively replaced by paddle-impressed pottery. C14 dates place the beginnings of paddle-impressed pottery between 300 and 100 cal BC. The identified decorations are parallel or crossed paddle impression. It appears that the major development of the paddle-impressed tradition took place chronologically during the first millennium AD, at a time when permanent settlements were being established in some interior sites.

The settlement of Naqelelevu during this phase must have been mainly restricted to the coastal area. However, an extensive array of cultivation walls and other horticultural arrangements have been surveyed in the limestone area. The discovery of such extensive horticultural structures on this uplifted coral platform formation, characterized by a poor natural environment, was unexpected at the beginning of the survey. Nearly every cultivable area has been freed of its coral blocks, leading to the construction of continuous walls on the *in situ* coral surface. These wall enclosures seem to have been built for plantation needs. This extensive landscape transformation, for which we have no other examples in the region, shows long-term labour investment and a radical transformation of the environment for economic needs. In addition, the use of two salt water swamps as fish and turtle reserves shows a special attention to the lagoon natural environment. These data suggest an increase in population size during Naqelelevu prehistory, leading to a rather high density of settlement and a need to use every cultivable zone.

LATE PREHISTORIC PHASE

The precise duration of the paddle impressed tradition in Cikobia is not yet defined. Other kinds of pottery apart from the paddle-impressed ware had started to be produced before the end of the first millennium AD, as shown by results from the Nalele excavations. The paddle-impressed pottery disappeared progressively, to be replaced by thicker and better fired pots, showing various incised, impressed and relief types of decoration. A date of AD 1180 is related to an incised pottery type. Vessel shapes include a large bowl with a decorated rim and a jar with a neck and an out curved rim (Figure 4).

The first defensive stone arrangements appeared probably at the end of the middle phase. Forts were

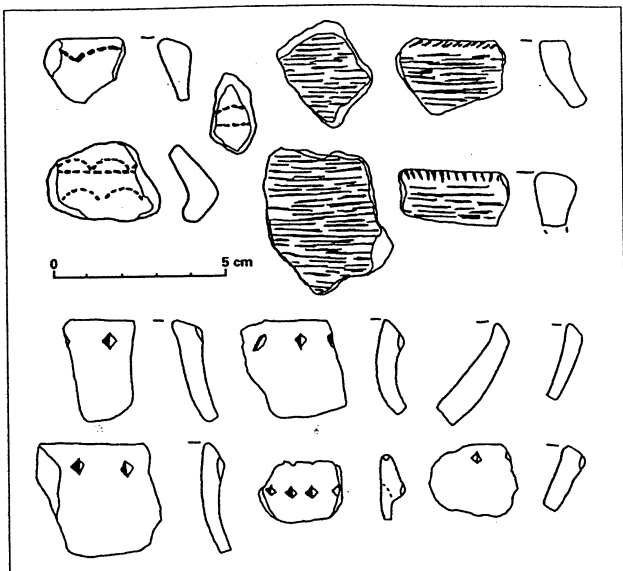


Figure 3: Ceramic types during the Early Settlement Phase of Cikobia.

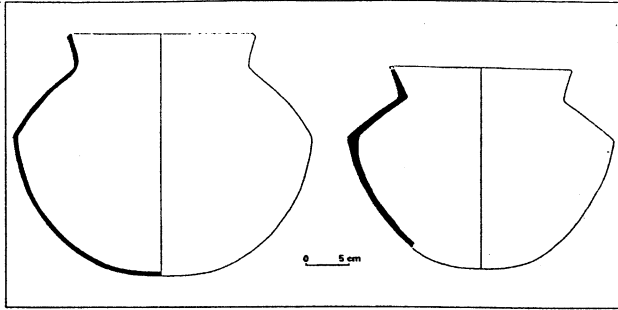


Figure 4: Two types of kuro present in Cikobia during the Late Prehistoric Phase.

constructed on the major hilltops of Cikobia. Present data merely suggest that most of the residences were located in fortified areas in late prehistoric times. Two major sites have to be cited here, the forts of Namasi and Korotuku. The Namasi ridge-fort is located on top of the easternmost hill of Cikobia. It is 150 m long and completely surrounded by a defensive wall. It was used as the last defensive position of Namasi village, located on the lower plateau below the fort

and about 350 m long, mostly defended by a natural cliff up to 20 m high. Interestingly, two large broken adzes probably of Samoan origin (Tatagamatau? Best *et al.* 1992) have been found in Namasi village, along with one complete adze in the seashore Vuninuku village.

The huge Korotuku site covers a surface of over 15 ha (650 m by 250 m). The fort is surrounded by several sets of walls (Figure 5), some over 3 m high. In its south-eastern part, over 80 structures have been mapped, comprising house mounds, burial mounds and ceremonial platforms. The extent of the defensive arrangements and other structures suggests a large population during the last millennium of prehistory, probably resulting in conflicts over land. Such conflict can also be identified in the remote and less fertile area of Caukaci, on the northwestern point of Cikobia, with the presence of a large ridge fort and surrounding walls on the flat plain.

The presence over large parts of Cikobia of walls known as "pig walls" is a sign of the development of new occupation strategies on the island, focusing on the economic importance of horticultural areas and the need to protect them. First observations indicate that most of the areas not



Figure 5: The well-preserved entrance of the wall encircling the Korotuku fortification.

suitable for horticulture were reserved for pigs. On the whole, the total length of walling on Cikobia is probably more than 10 km. The amount of work involved in building these walls suggests the presence of large numbers of pigs on the island and a need to protect horticultural areas.

The large number of walls surrounding the swampy area of Lobau, in the eastern part of Cikobia, is probably a sign of the strategic importance of water control on this island without streams, especially after the infilling by landslides of the former large swamp. Population increase certainly led to stress on water resources, especially in drought periods. The possession of fresh water must have been a reason for competition between groups. It is thus not surprising to find, near Lobau, the Rukunikoro fortification. Located on top of an uplifted coral platform 9 m high, this structure is more than 40 m long, with some walls up to 4 m high (Figure 6). Another fort, named Dreketi, overlooks the Waicinavi pool, located in the bottom of a cave. This fort, nearly 20 m long, has a surrounding wall up to 2.8 m high, with a well-preserved fortified entrance.

The majority of the burial sites surveyed are probably linked to the late prehistoric phase (Figure 7). Available data do not allow us at present to define changes in mortuary practices through time in Cikobia. Oral traditions indicate that rockshelters were used as burial places during late prehistory (Hocart 1952). The cemeteries linked with the oral traditions show graves surrounded by oval settings of coral and/or beachrock slabs. This type of construction started probably long ago as it is present in the Korotabu site, an isolated limestone outcrop of the north coastal reef, which is not linked with any recorded traditions. It appears that collective burial grounds once existed, associated with large mounds with slab walls, as in Korotuku fort and Nalele village.

The presence on Naqelevu of the fortified area of Nukusewe (Figure 8), in the central part of this small island which is only two km long, probably indicates the existence of past conflicts. The ceramic remains collected during the survey show the existence of the recent incised pottery on the island, although the origins of this pottery have not yet



Figure 6: The defensive wall of Rukunikoro.

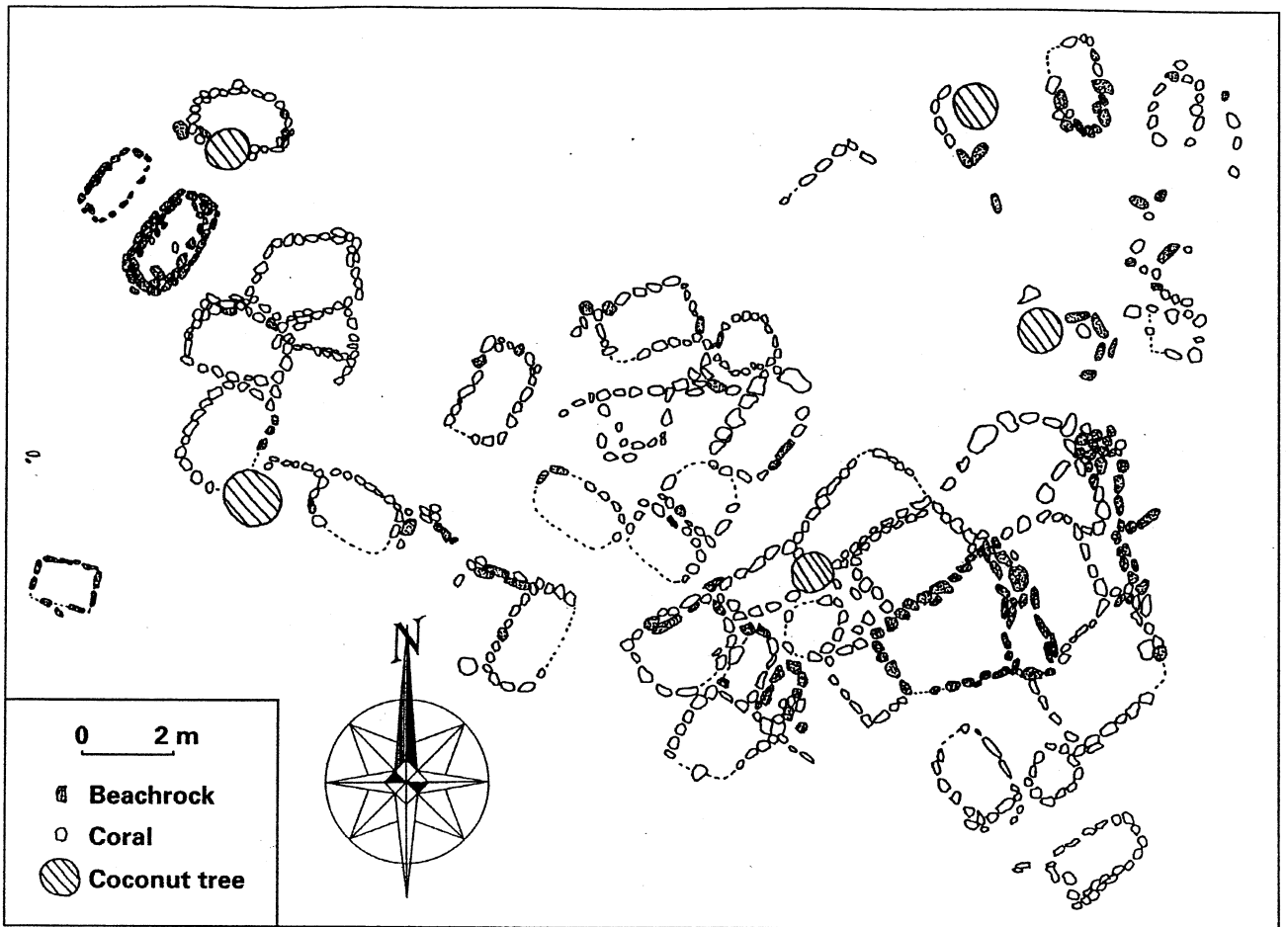


Figure 7: Map of the Nakasaga burial area.

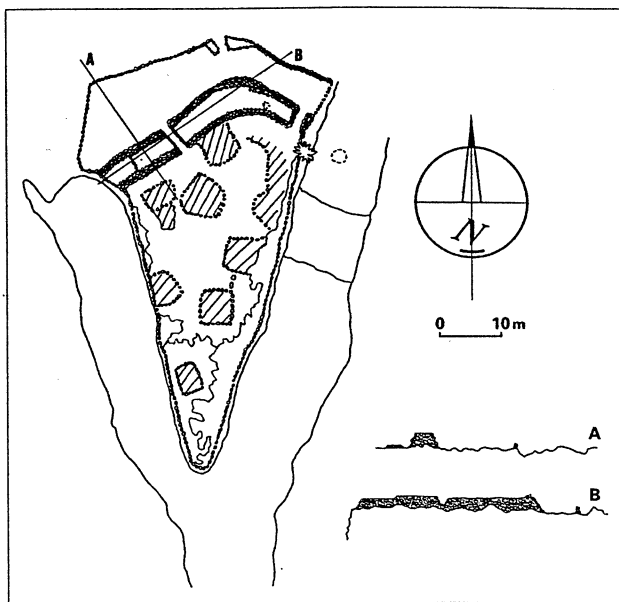


Figure 8: General map of the fortification of Nukusewe.

been established. Some burial areas have been recorded on the island, but without knowledge of chronology. It is probable that a large part of the dune area contains skeletons, sometimes disturbed by gardening. The most interesting data collected so far come from the old cemetery of Nasavuti, where two types of stone arrangements have been observed. In the eastern part of the site, the burials are marked by coral block surrounds, whereas in the western part they have upright beachrock slab surrounds (Figure 9).

This construction typology is very similar to Futunan burials but, to our knowledge, has not been observed to date in other areas of eastern Fiji. This may be an indication of contact with and influence from Futuna, already known through oral traditions. Beyond the oral traditions, Biggs (1975) recorded that the inhabitants of the island spoke Fijian as well as Futunan at the beginning of twentieth century. The presence of burials of Futunan tradition in Naqelelevu is the first clear archaeological indication of a West Polynesian influence on this island. Finally, the presence of a large collective burial in the Sautabu site, related to the



Figure 9: Graves outlined by upright beachrock slabs at Nasavuti, very similar to Futunan burials.

Tui Naqelelevu title, has to be noted. This burial site is probably linked to the last prehistoric phase of the island and was not used after Christianization.

CONCLUSIONS

The research program carried out on Cikobia and Naqelelevu has allowed identification of the prehistoric sequence of these two islands, located on the western border of Polynesia. This sequence started around 850-800 BC, or before, with a settlement related to the Eastern Lapita Cultural Complex. Progressive human occupation led to transformations in the natural environment, with the eventual use of all cultivable areas. The late end of the sequence is characterised by use of fortified hilltops as major habitation sites in response to local and foreign tensions.

One of the major results of the program has been to reconstruct a general ceramic chronology, divided into three traditions, which shows clear links with the rest of Fiji and is different from the West Polynesian trajectory after AD 1. These data are of major interest in the study of the cultural

evolution of the Fijian archipelago and in the debate over regional variability (Best 1984; Hunt 1986; Clark 1998, 2000). Clear signs of environment transformation have been observed. The earliest transformations can be termed destructive, with the replacement of primary forest by second-growth forest. Erosional processes can be observed in the development of *talasiga*-like dry vegetation and the deposition of soils in small valley bottoms and swampy areas.

More recent transformations were mainly constructive, with the development of dry field systems, of pig-walls and of settlement areas. The extent of fortified constructions on Cikobia is an archaeological confirmation of the first descriptions of the European sailors, who feared this island as being populated by fierce warriors (Biggs and Veremalumu-Biggs 1975). The Korotuku fort, over 650 m long, is one of the largest Fijian forts mapped to date and certainly the most densely settled in regard to habitation structures. The large number of fortifications on Cikobia is a sign of regular tensions on this small island, a conclusion paralleled in most of Fiji, whether on the smaller or the larger islands of the archipelago.

The identification of patterns of regional relations must await the completion of the sourcing programme for the archaeological materials. Relations with islands to the east existed during prehistoric times, as shown by oral traditions and linguistic data. Some archaeological discoveries, like the Samoan adzes found in Cikobia and the Futunan-like burials mapped in Naqelevu, are probably direct indications of contact. Fijian pots, perhaps from Cikobia, were imported in recent centuries to Futuna. These two-way exchanges, when confirmed by archaeology, should throw new light on prehistoric human interactions in the region.

NOTE

1. The Fiji Government has set out certain requirements to researchers coming to conduct their research in Fiji. There has to be submission of a research proposal to the Ministry of Fijian Affairs, Education, the Department of Immigration and the Fiji Museum. The issuing of research permits by the Department of Immigration is subject to approval by the Ministry of Fijian Affairs, Education in consultation with the Fiji Museum. The proposal submitted to the Fiji Museum will be discussed between the Fiji Museum Director and the Archaeology Head of Department. Results of this meeting will be tabled and submitted to the Fiji Museum Board of Trustees. Approval from the Board of Trustees will then allow the HOD Archaeology to contact the researcher, landowners, Provincial Offices, and other relevant Government Department. Fees are levied to cover administrative and permit costs. Permits issued by the Fiji Museum are classified as Permit A (Excavate), B (Survey) and C (Export). The department has to organize logistics for the project. These would include: contacting and meeting with officers at the respective Provincial Office; preliminary survey; meeting with the landowners; organisation of transport, accommodation, travel and meals for the project.

ACKNOWLEDGEMENTS

The 1997 Fieldwork crew consisted of Frédérique Valentin (Muséum National d'Histoire Naturelle, Paris); Christophe Sand, Jacques Bole and André Ouetcho (Département Archéologie, Service des Musées et du Patrimoine, Nouméa); Tarisi Sorovi and Sepeti Matararaba (Archaeological Department, Fiji Museum, Suva) and David Baret. The bulk of the funding was provided by the Ministère des Affaires Étrangères, Direction de la Coopération Scientifique et Technique, Sous-Direction des Sciences Sociales, Humaines et de l'Archéologie (Paris); the Département Archéologie, Service des Musées et du Patrimoine (Nouméa); the Société des Amis du Musée de l'Homme (Paris); the French Embassy in Suva and the GDR 1170, CNRS (Paris). This expedition could not have taken place without the agreement and the logistic support of the Fijian Government and the Cikobia and Naqelevu people. We are particularly grateful to the directors and officers of the Ministry of Immigration;

Ministry of Fijian Affairs and Ministry of Education; to the Macuata and Cakaudrove Provincial Offices, in Fiji Northern Division; to the landowners and the Cikobia and Naqelevu people who assisted us on the field. A special acknowledgement to Qantas Airways (Suva Office) and IPPA for their financial support to allow Tarisi Sorovi Vunidilo to attend the 16th IPPA congress.

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