



NEW ZEALAND JOURNAL OF ARCHAEOLOGY



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Three Thousand Years of Settlement in the South of New Caledonia: Some Recent Results from the Region of Païta

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ABSTRACT

This paper presents archaeological research carried out in the region of Païta (in the south of New Caledonia). The first part is a general historical review of excavations carried out since 1952. The second part describes some coastal sites recently studied as part of a salvage excavation programme. Most of the paper deals with variations in the archaeological material, mostly ceramics, between the different sites. The discovery of some sherds with characteristic Lapita decoration resolves the controversial question of the presence of sites with Lapita pottery in the region of Païta. Most of the ceramics found are typical of the last 2000–2500 years of the ceramic sequence of southern New Caledonia.

Keywords: NEW CALEDONIA, PREHISTORY, CERAMIC SEQUENCE, LAPITA, POTDANEAN, NAÏA, SEA LEVEL CHANGES, SETTLEMENT PATTERNS.

INTRODUCTION

The prehistory of New Caledonia, like that of most of southern Melanesia, is poorly known compared to the islands of Polynesia. Sporadic research began in the 1950s and 1960s, becoming more regular in the 1970s and continuous throughout the 1980s. It has always been carried out by small teams, or by one or two archaeologists alone (Sand and Ouétcho 1991b).

The effects of this research history can be seen in the available archaeological results: (1) many sites have been recorded, but very few have been excavated; (2) particular attention has been directed towards sites of the Lapita tradition; (3) excavations have usually been in the form of test pits, except on a few important sites; (4) very few reports and general syntheses are available despite the extent of the research, principally because there have never been multidisciplinary teams; (5) some regions are archaeologically unknown or have few recorded sites, for example, the Loyalty Islands; and finally (6) there is a striking absence of scientific results for the general public, which leaves the way open for a multiplicity of non-archaeological theories on the peopling of New Caledonia, which are still widely accepted by the general public.

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New Caledonia is far from being an archaeological no-man's land, however, and a large amount of data exist, mostly restricted to research reports or unpublished university theses. Other studies have been underway for years (Sand and Ouétcho 1991c). A general review of the existing material was published by Green and Mitchell (1983), who tried to synthesise the prehistoric chronology by looking at the ceramic assemblages. Galipaud reworked this chronology, concentrating on temper analysis, and proposed a cultural division of the main island into a northern and a southern geographical region during the last 1500 years before European contact (Galipaud 1988: 152).

The recent ceramic period of the south, called the Naïa period (Galipaud 1988; Sand 1990: 108–109), has been defined on the basis of archaeological material from different sites around the locality of Païta. This paper presents the most recent information about some sites in this region.

The first part will be an historical review of the different excavations since the first test pits by Gifford and Shutler in 1952. It will describe the successive refinements of the ceramic sequence. The second part will describe several sites recently destroyed or threatened with destruction and the associated archaeological material. The study concentrates on ceramic variation over more than 2500 years of prehistory.

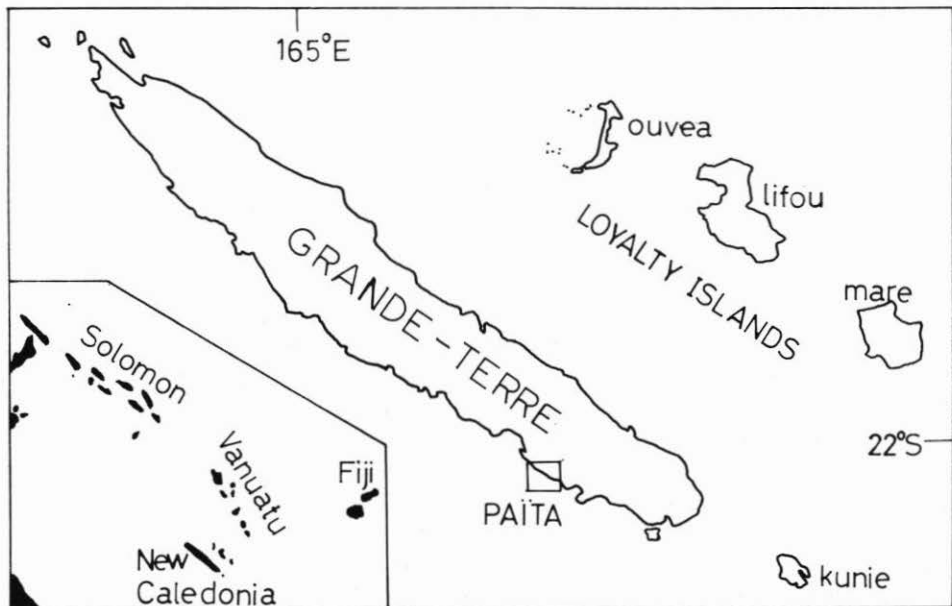


Figure 1: Map of New Caledonia, showing the position of Païta on the main island (Grande-Terre).

THE ARCHAEOLOGY OF PAÏTA

The locality of Païta (Fig. 1) is about 20 km north of Noumea. It is situated on the foothills of the Central New Caledonian chain and the coastal hills. Geologically (Faure and Paris 1982), the region can be divided into three major associations: (1) The mountainous foothills of the peridotite massif, which covers two thirds of the main island. It is in these foothills that large abandoned irrigated taro terraces occur, such as those of the "Col de la Pirogue" (Spriggs 1979; Sand and Ouétcho 1993; Sand n.d.). (2) A dissected plain to the west of the mountainous foothills composed largely of fine-grained carbonaceous sediments with horizons of basalt and arenite. (3) The littoral fringe, adjacent to the major bays in the area (Tiaré, Naïa, Ongoué, Anse Longue), of Quaternary sediments and Early Tertiary Flysch forming low hills covered with dry, savannah-type vegetation.

THE FIRST RESEARCH BY GIFFORD AND SHUTLER IN 1952

The archaeological sites on the coast between Tiaré and Anse Longue (Fig. 2), a distance of about 20 km, were first described during the 1950s by the American archaeologists E. W. Gifford and R. Shutler Jr (1956). They noted the presence of potsherds in association with shells near the edge of the sea in Tiaré Bay (site WPT025 in the standardised nomenclature adopted for New Caledonia (Frimigacci and Maitre 1980)), and excavated

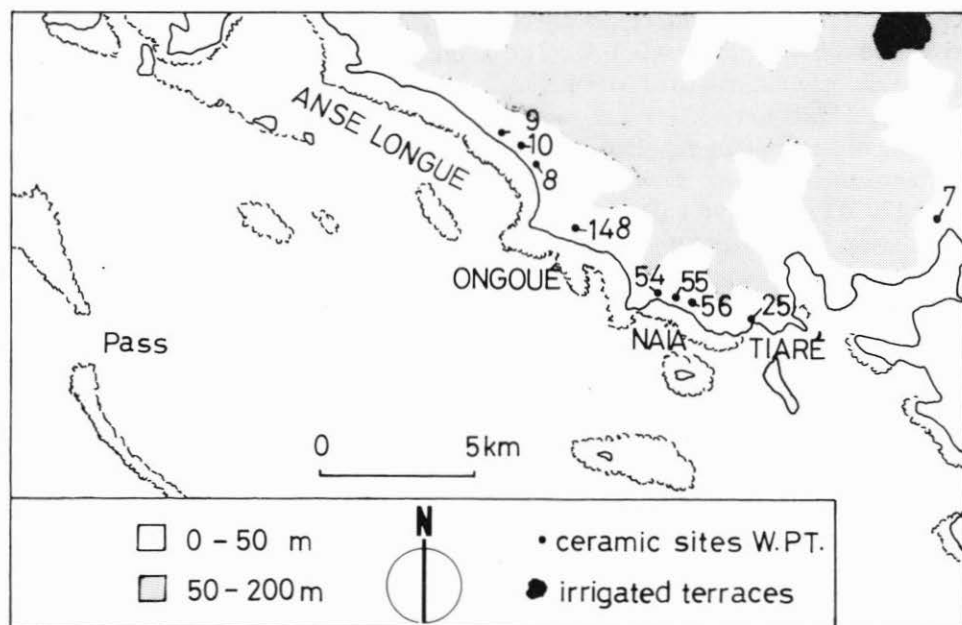


Figure 2: The coastal area of Païta, showing the locations of archaeological sites discussed in the text.

some test pits in the south of Anse Longue Bay at site WPT020 (Gifford and Shutler 1956: 6).

These excavations uncovered pottery decorated with nubbins and incisions, and pottery with handles (*ibid.*: 70–75). The presence of deer remains at the base of several test pits indicated that part of the site had been disturbed².

SMART'S EXCAVATIONS IN THE 1960s

In the 1960s, three new coastal sites were excavated by Colin Smart, a student of the Australian National University. These excavations took place in Naïa Bay on site TON6 (WPT054), site TON7 (WPT055) and site NOU1 (WPT056) (Smart n.d.; Green and Mitchell 1983; Galipaud 1988: 110), revealing a sequence of occupations and types of pottery with associated radiocarbon dates.

Site WPT054 is situated in the western part of the bay. The excavation exposed ten superimposed levels within a depth of one metre. Six dates were obtained for this site. The lower levels, dating from the first part of the first millennium A.D. (1745 ± 117 B.P. (ANU 98), 1635±110 B.P. (ANU 99), 1400±80 B.P. (ANU 286), 1090 B.P. (Smart (n.d.)) (dates cited by Green and Mitchell 1983: 27), were characterised by thick pottery, handles and sherds with incised decorations. The upper levels, dating to the second millennium A.D. (930±80 B.P. (ANU 284), 440±120 B.P. (ANU 285)), (*idem*), were characterised by pottery with incised decorations or nubbins. Material of European origin appeared near the surface.

In site WPT055 in the central part of the bay, only two levels in stratigraphic position were excavated at the edge of a sand quarry. The upper level had been disturbed by ploughing. It contained various types of pottery: sherds with paddle impressed decorations, sherds with chevron (V shaped) decoration, inverted rims with incised, impressed or applique decorations, and handled pottery.

The undisturbed lower level was composed of several pit structures, dating from the beginning of the Christian era (2065±110 B.P. (ANU 97)). Under this layer, two large ovens were uncovered. One of these was dated to the end of the second millennium B.C. (3165±120 B.P. (ANU 96)). The ceramic material from the lower level was characterised by the same types of pottery as the upper level, but with a noticeable increase in the proportion of sherds with paddle impressed decorations.

The last excavated site in Naïa Bay, WPT056, was situated just to the east of and very close to WPT055. Only one intact archaeological level could be saved after the work of the sand quarry machines. The predominant type of pottery carried paddle impressed decorations. The dating of a small earth oven placed the occupation of this level at the beginning of the first millennium B.C. (2855±95 B.P. (ANU 259)).

In addition to portable artefacts, Smart's excavations at Naïa revealed traces of structural remains (Green and Mitchell 1983: 63; Smart n.d.). Most of these were earth ovens of various sizes. At the base of site WPT055, the postholes of a small round hut were discovered. Another larger form of round hut was found in the middle levels of site WPT054, dated to the middle of the first millennium A.D. Finally, postholes belonging to

²Green and Mitchell have already shown the difficulty of using directly the archaeological material published by Gifford and Shutler, principally because of the method of excavation and the combining of material from different test pits.

rectangular-shaped palisaded structures were discovered in site WPT055 and dated to the end of the first millennium B.C.

On the basis of these investigations, Smart proposed a ceramic chronology based on forms, rim types and different types of decoration (Smart n.d.). The first third of the chronology is characterised by paddle impressed decorations on vessels of simple or complex forms. At the end of this sequence impressed and appliqué decorations appear. The second part of the chronology is characterised by handled vessels decorated with incisions and oval vessels with inverted rims. The last part of the chronology sees the predominance of nubbins and incised decorations on simple vessels with incurved rims.

Unfortunately, Smart never published his material in full. In 1990, this collection was returned to Noumea to be reanalysed, and should be published in the years to come.

GALIPAUD'S REVISION OF THE CERAMIC CHRONOLOGY

Excavations by J. C. Galipaud in Tiaré, Naïa and Ongoué in the early 1980s aimed to refine Smart's chronology through the study of pottery tempers (Galipaud 1984; 1988: 110–117).

Five test pits were dug in Naïa Bay (WPT140) in the hope of finding levels like those described by Smart. Only one test pit, at the edge of the swamp, revealed an undisturbed deposit. It contained thick pottery with little diversity and one handle.

The Tiaré Bay site (WPT025), at the southeast of Naïa, was used some decades ago as a sand quarry and is now the scene of construction of an international hotel. Numerous test pits on this site failed to discover an undisturbed archaeological deposit. Only one thin level containing archaeological remains could be distinguished and it was clearly disturbed. The pottery included thin sherds with inverted rims, usually bevelled, and thick pottery with handles. Some sherds had nubbins or incised decoration.

Ongoué Bay (WPT148) is situated between Naïa to the southeast and Anse Longue to the northwest. Three test pits were dug on this site.

Test pit no. 1, located near the sea, had three distinct archaeological levels. The upper level (I) contained thick plain undecorated pottery and objects of European origin. The middle level (II) was characterised by fine pottery with incised decorations in addition to the thick pottery. The lower level (III) contained thick sherds with handles.

In test pit no. 2, located about 100 m from the shore, only one archaeological level was discovered. It was characterised by pottery with paddle impressed decorations.

In test pit no. 3, situated between the other two, only the first two layers present in test pit no. 1 were found, with thick and thin sherds, one of them decorated with nubbins.

Finally, surface collections and one small test pit on Page Islet (WPT150) in St Vincent Bay produced a ceramic assemblage characterised by pottery decorated with incisions and chevrons.

After these excavations, Galipaud reworked Smart's local chronology, confirming its main outline (Galipaud 1988: 123–28). The chronology starts at the end of the second millennium B.C. It is part of the ceramic tradition of Potdanean of the Koné period (Galipaud 1990a: 37–42) and is characterised by pottery with paddle impressed decorations. At the end of the first millennium B.C., incised and chevron decorations appear.

Like Green and Mitchell (1983: 46) before him, Galipaud (1988: 124), on the basis of current archaeological knowledge and in the absence of solid proof, rejected the possibility of the presence of Lapita pottery in the region of Naïa. This had been suggested during the

1970s in Smart's very first reports, and then by Frimigacci (1975: 85) on the basis of Lapita material in the Museum at Noumea which was said to come from Naïa.

The ceramics of the last two millennia in the south of New Caledonia are grouped under the designation of Naïa period, in reference to Smart's sites (Galipaud 1990a: 44-46). The first millennium A.D., after A.D. 200, is characterised by simple rounded pots with handles, sometimes decorated with incisions under the rim. This has been called the ceramic tradition of Plum, or Naïa I. The second millennium, up to the beginning of the nineteenth century, is characterised by thin pottery with nubbins and incised decorations. This has been called the ceramic tradition of Néra, or Naïa II. Just before the arrival of European sailors, the ceramic traditions of the south were influenced by decorative techniques from the north of the main island (Oundjo period).

The numerous archaeological researches carried out in the Païta region thus allow us to set out a fairly detailed ceramic chronology for this part of New Caledonia (Fig. 3).

THE SURVEY

The new archaeological material presented in this paper comes from surveys, surface collection and excavations in 1990 and early 1991 (Sand and Ouétcho 1991a) on the

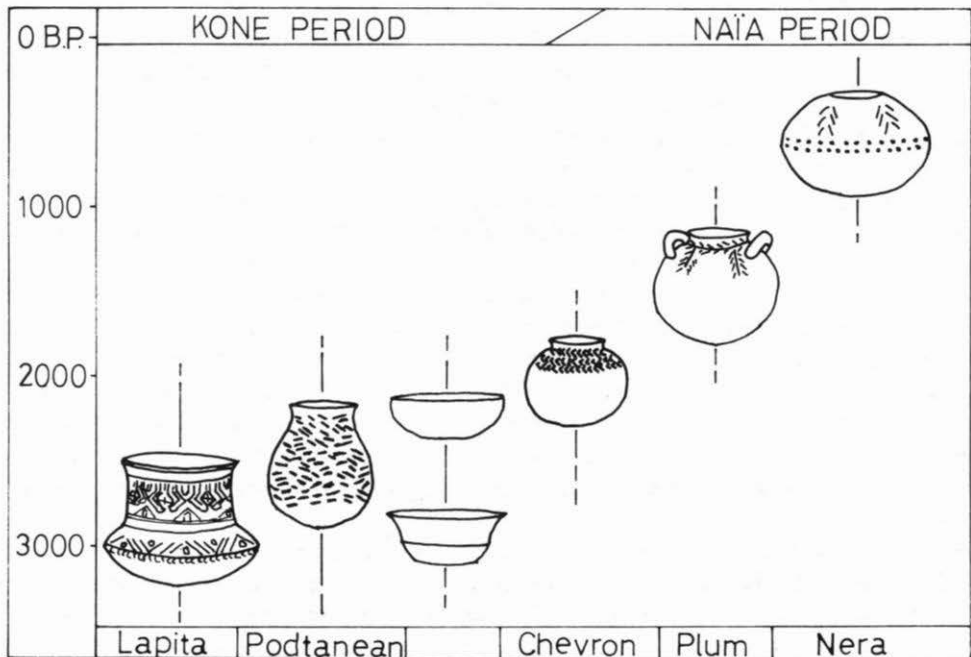


Figure 3: Schematic diagram of the ceramic sequence in southern New Caledonia. The Oundjo Period is not shown, as it is mainly characteristic of northern New Caledonia.

destroyed sites of Port-Laguerre (WPT007), Ongoué (WPT148) and Anse Longue (WPT008 and WPT009), and the excavated site of Tongouin (WPT010). These sites are all located on an area of coast about 20 km long.

SITE WPT007 OF PORT-LAGUERRE

This site is located on a promontory at the far end of Port-Laguerre Bay, near the road leading from Païta to the village of N'Dé. The construction of this road has made a cut through a flank of the hill down to the substratum. This site, which was part of a more extensive occupation, is an ideal spot for the surveillance of the entrance to the bay. The sea shore, situated about 100 m from the promontory, is today formed by mangroves. The sides of the promontory are covered in low secondary vegetation, regularly burned for horticultural purposes. The summit of the promontory is flat, with a terrace approximately 50 m in diameter, probably used as a habitation platform. Towards the entrance of the Bay, to the south, a gentle slope with abandoned horticultural terraces extends down from the summit. This promontory is connected to a series of small hills situated further east and overlooking the Bay.

Most of the archaeological material was collected from the sides of the hill, recently cleared for horticulture. There does not seem to be any actual stratigraphy, but simply an accumulation at the base of the hill of material derived from the upper platform, in association with shells, especially bivalves.

The study of the ceramic material shows great variation in sherd thickness, from 4 mm to more than 20 mm, probably resulting from the two principal types of pottery of the Naïa period. The presence of three round handles and one handle attachment suggests that the thick sherds probably come from handled pottery, of the ceramic tradition of Plum (Naïa I).

Two rims of group A³ were collected: one is inverted with a rounded lip and is decorated with punctiform incisions. The second is straight and tapers to a flat lip. Small worked and unworked phthanite flakes and a quartz flake were found with this pottery.

SITES WPT008 AND WPT009 OF ANSE LONGUE

Anse Longue Bay covers approximately 7 km of sea-shore, to the northwest of Naïa and Ongoué. In 1952, Gifford and Shutler dug some test pits there (site 20).

The beaches of Anse Longue have been used for a long time as sand quarries. Numerous grave sites, in particular, have been destroyed during this activity. Archaeological surveys and surface collections have been carried out regularly for several years as part of the study of this bay.

³The study of rim typology used the terminology proposed by Galipaud for New Caledonia (1988: 12, 23). There are three groups according to this terminology: In *group A* are classified simple incurved rims of convex form, with round, flat or bevelled lips. In *group B* are classified differentiated rims with straight or outcurved direction and of sinuous form. The lips are round, bevelled or flat. In *group C* are classified differentiated rims of outcurved direction ending with a horizontal projection, and differentiated rims of sinuous form. Lips are flat or rounded.

In 1990, surveys were carried out on two complexes of sand quarries located on the land of the Kotepeu clan, who live at a place called Tongouin. The first complex, called WPT008, covers approximately 2 km to the southeast of Tongouin. The second, called WPT009, is situated to the northwest of Tongouin.

The archaeological material from site WPT008 consists mainly of pottery. Altogether, about 200 sherds were collected, including two round handles and seven handle attachments. Seven rims have been classified. Five are of group A (three with rounded lips and two with interior bevelled lips), and two are of group B (one with a rounded lip, one with an exterior bevelled lip).

Only two decorated sherds were recognised. One rim of group A (Fig. 4a) has two superimposed lines of decoration consisting of small rounded impressed perforations. The neck of a differentiated rim, found in the part of the quarry furthest from the sea, has a paddle impressed decoration. Also worthy of note is a thick sherd with a suspension hole, a feature more characteristic of the pottery of northern New Caledonia.

Study of sherd thickness suggests two different types, a thin and a thick pottery. The thin pottery, ranging in thickness between 3 and 8 mm, is hard with few mineral inclusions. The colour varies between brown-ochre and black. It is characterised by incurved rims (group A). This type of pottery belongs to the ceramic tradition of Néra (Naïa II).

The thick pottery, ranging in thickness from 8 mm to more than 20 mm, has more numerous but poorly sorted mineral inclusions. It is generally brown-ochre on the exterior and dark brown or black on the interior surface, as the result of a partially oxidised firing. It is characterised by inverted rims (group A) or straight rims (group B). This type of pottery belongs to the ceramic tradition of Plum (Naïa I).

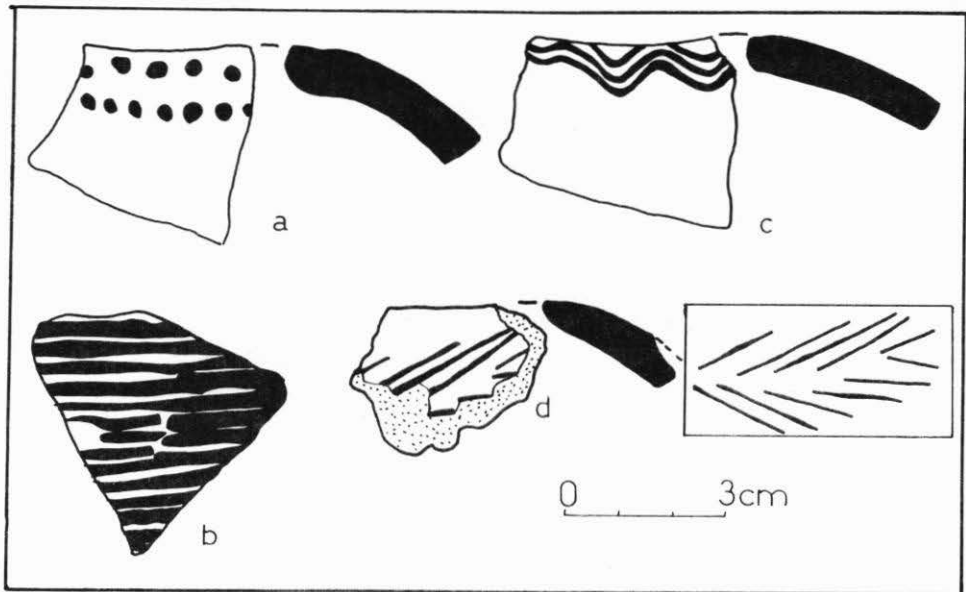


Figure 4: Decorated sherds from sites WPT008, 009, 010 of Tongouin-Anse Longue. a, impressed; b, paddle impressed; c-d, incised.

In addition to these two general types, study of the rims has distinguished another type of thin, ochre-coloured pottery, with everted rims and exterior bevelled lips. The classification of this pottery in one or the other of the recent traditions has not been determined.

Only two lithic flakes and two fragments of worked *Conus* shell were collected. The cutting marks on the two shell fragments are typical of arm band manufacture.

The survey on the beach also yielded two perforated slabs of slate. One complete slab of roughly rectangular form is 15 cm long and 1.5 cm thick, with a perforation of 2.5 cm in mean diameter. The second slab is broken, with a central perforation 1.2 cm in diameter. This kind of object is quite common in the south of the main island. They could be old net sinkers.

The other destroyed site, WPT009, is divided into two parts: the sand quarry and the modern depot. About 30 sherds and two handle attachments were collected in the sand quarry. Two decorated rims are present. One is an undifferentiated incurved rim with a rounded lip (group A) and has comb incised decoration (Fig. 4c). The other is a differentiated everted rim with a rounded lip (group B) and has a paddle impressed decoration. Two other sherds have paddle impressed decorations (Fig. 4b). Most of the sherds have a thickness between 4 and 8 mm.

Eight sherds come from the modern depot and are therefore possibly not directly from the site. They are thick sherds of clear ochre colour, with poorly sorted mineral inclusions. One sherd has the start of an oval handle on the exterior face and a carbonised deposit on the interior face. Their principal interest is that they are all embedded in beachrock. The presence of these sherds of the Plum tradition (handled pottery) in the beachrock, indicating that at some time they have been at the level of the watertable or below the high tide mark, is an indirect indication of the variation in sea level on this coast during the last 3000 years. This phenomenon will be discussed in more detail for the site of Ongoué.

SITE WPT010

Site WPT010 is situated between the destroyed sites WPT008 and WPT009, at Tongouin. It is located on a small sandy flat approximately 60 m wide, bounded on the inland side by colluvium up to several metres thick. These colluvial deposits have partly covered the sand.

This part of the coast has been used as a sand quarry by the local inhabitants since the archaeological survey. Pits had already been made by bulldozers before our arrival, in order to analyse the quality of the sand. This enabled us to study the general stratigraphy of the sand dune. Subsequently, two archaeological excavations (A and B) were carried out.

Eleven bulldozer pits were studied, extending approximately 300 m, from northwest to southeast, parallel to the beach. They can be divided into two groups. The pits close to the sea, between 10 and 20 m from the high tide mark, are archaeologically sterile. They are characterised by a thin layer of humus over white clear sand. The pits between 30 and 50 m inland all showed signs of human occupation, in the form of pot sherds, burned shells or oven stones.

From the results of these tests, it seems that there is a small sand dune without significant archaeological remains, between about 10 and 25 m wide. At the back of this zone are prehistoric occupations of unknown extent. It is possible that other old settlements, such as sites with paddle impressed pottery, exist under the colluvium that limits the sand plain of Tongouin. Their excavation would require the removal of a significant amount of sterile overburden before the archaeological levels could be reached.

In all, about a hundred sherds were collected from the pits made by the bulldozers. Most are between 3 mm and 8 mm thick. Six rims belong to group A, with flat, rounded or interior bevelled lip, and two belong to group B, straight or everted with a flat lip. Two sherds are carinated. Two other sherds, one a group A rim, have incised geometric decoration (Fig. 4d), and one has a line of nubbins. Finally, a thick rounded base of Naïa I pottery was exposed by gardening activities.

Only three small stone flakes, probably waste from stone working, were found during surface collection, along with one adze of ovoid section and oval form typical of the recent period of New Caledonian prehistoric adze typology (Sand n.d.).

Five test pits were dug at Area A, approximately 50 metres back from the seashore. They demonstrated the presence of an old mangrove swamp at the back of the sand dune (Sand and Ouétcho 1991a: 39–42).

In all, 458 sherds were recovered from the test pits, including 13 rims and 11 decorated sherds. Seven rims are of group A, with rounded or interior bevelled lip, and five are of group B, with flat or rounded lip. The incised decorations are composed principally of straight lines.

In addition to the ceramic material, a fragment of worked *Trochus* shell was found. In all the test pits there were fragments of burned shells. The most common species were *Anadara scapha*, *Periglypta puerpera*, *Strombus luhuanus*, *Lambis lambis*, *Turbo* spp. and *Trochus*, together with landsnails.

It is not possible to speak of archaeological layers to characterise the stratigraphy of the test pits at Area A. Nevertheless, a difference can be noted between the pottery collected in the upper black level, which is the remains of the mangrove swamp, and that from the level beneath, formed by a compact brown sand. In the upper level, the sherds are mostly thin (mean thickness 6 mm), with few mineral inclusions. In the compact brown sand, the number of sherds more than 9 mm thick increases dramatically. This difference suggests that the part of the former swamp which has been excavated was created after the beginning of the Naïa period and that remains of thick pottery had already been incorporated in the beach sand before the deposition of the black level. This indicates that the position of the sea shore has changed in the last 1500 years.

During the excavation of Area B, in another part of the site, a stone-lined oven of oval form, approximately 2 m long, was discovered, associated with food remains (Sand and Ouétcho 1991a: 43–57). It is dated to 1480±60 B.P. (Beta-55999, calibrated to A.D. 540 (601) 645). The potsherds associated with this structure are mostly of small size. Eighteen rims have been classified, all of group A. Some thick sherds, probably from Naïa I pottery, were found in secondary context in the marine sand under the main archaeological level. Their presence confirms that this part of the bay has been occupied since the beginning of the Naïa period.

Worked shell from this excavation consists of fragments of *Trochus* arm bands, and a series of waste fragments of *Trochus* with visible marks of percussion. Two pieces of cut *Conus* shell were also found. One small worked piece of pearl shell with serrations was excavated, similar to one found on the Naïa site by Galipaud (1988: fig. 88).

It appears that the ceramic material from sites WPT008, WPT009 and WPT010 in the southern part of Anse Longue Bay mostly belongs to the Naïa period, although there are some sherds with paddle impressed decorations from the tradition of Potdanean pottery.

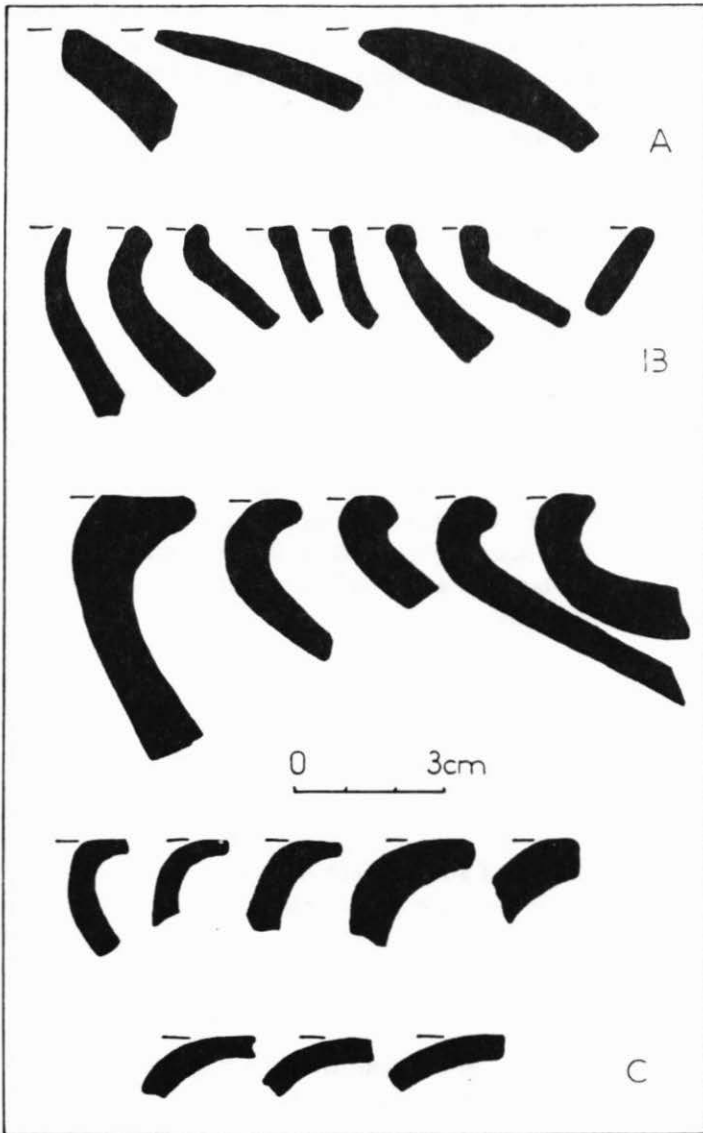


Figure 5: The three types of rim sherd from Ongoué (site WPT148).

SITE WPT148 OF ONGOUÉ

Ongoué Bay is located between Naïa Bay to the southeast and Anse Longue Bay to the northwest. This site was noted by Smart in the 1960s as site TON1 (Green and Mitchell

1983; Smart n.d.), and then by Frimigacci (1975, fig. 105). In 1983 Galipaud made three test excavations and renumbered the site WPT148 (see above).

In 1989, one part of the coastal plain, about 100 m from the sea, was used as a sand quarry. During the preliminary clearing of the quarry, numerous archaeological remains were brought to light by the bulldozers. Several surface collections and investigations were carried out during that period by Office Culturel Canaque staff.

In 1990–91, several other surface collections were carried out on the quarried area, the spoil from the quarry, the modern depot, and the shore. A lot of cultural material was found, including pottery of different types, lithic material and shell material. The material from the 1990–1991 investigations is described in the next sections.

THE CERAMIC MATERIAL

Approximately 600 sherds were collected. They can be divided, like other assemblages, according to thickness, provenance and temper. The great majority of the sherds are thin, with thickness ranging from 3 to 9 mm. The lithic temper is fine and well sorted. About 20 sherds have a coral sand temper, sometimes in significant proportions, which makes the pottery fragile. About 100 sherds, mostly from the seashore or trapped in the beachrock underlying the beach, have a thickness ranging from 10 to more than 20 mm. They are often very large (>100 cm²), and tempered with poorly sorted lithic sand. Fourteen other sherds are parts of handles or handle attachments.

Vessel forms

Fifty thin rims have been studied (Fig. 5). Five are of group A, with rounded or flat lips. Only two are characteristic of the pottery tradition of Néra (Naïa II). Fourteen are of group B, with rounded, flat or expanded lips. They sometimes have incised or paddle impressed decorations. Finally, 28 rims are of group C, with horizontal flattening and rounded or flat lips. They are characteristic of the Koné period. Also to be noted are collar sherds from differentiated rims, and three vertical rims from open bowls. The study of group B and C rims shows great diversity in the size of the pots, with diameters ranging from 12 cm to over 30 cm.

Twenty-five carinated sherds were found. They are marked, in most cases, by a small angle. One exception is a sharply carinated sherd from a vessel tempered with coral sand. Several of these carinations bear paddle impressed decorations. No flat bottoms have been identified.

The study of this material indicates the presence in this site predominantly of thin-walled pottery, of simple or complex forms with slight carinations, lacking flat bottoms, and with direct or everted rims. This description places this pottery in the Koné period.

Two round handle attachments and one oval handle were found in the quarried site, and 27 handles of various sizes on the seashore. They were mostly associated with thick sherds. They are characteristic of the pottery of Plum (Naïa I).

Decoration

Various types of decorations are present on the pottery from the destroyed site of Ongoué. They can be divided into five categories: tool stamped impressions, shell stamped impressions, paddle impressed decorations, chevron decorations and incised decorations.

Three sherds bear tool stamped decorations (Fig. 6). The first two were discovered in the area destroyed by the sand quarry. The most characteristic sherd has a complex Lapita design. It has been tempered with coral sand and has a black interior paste (reducing firing). The decoration is composed of a succession of scrolls inserted in a linear vertical theme, following the terminology proposed by Siorat (1990). The second sherd, also tempered with coral sand, has a simpler design formed by two concentric triangles. The poor preservation of the pottery does not permit a more precise description. Stamped tool decoration is present on a sherd tempered with lithic sand, discovered in the modern depot. The decoration is formed by about 30 tooth points, applied by the same square dentate tool (J. P. Siorat, pers. comm.). Unfortunately here also the poor preservation and small size of the sherd do not allow the organisation of the decoration to be specified.

One straight rim with a rounded lip, derived from a bowl, has a paddle impressed decoration enhanced with bivalve shell impressions (Fig. 8a). This forms stamped lines placed parallel to the rim at three levels. Double decoration of this kind is not common on the main island of New Caledonia, although it had previously been found in this same site (Galipaud 1988: 112, fig. 82). Another collar sherd has repeated shell impressions placed one under the other.

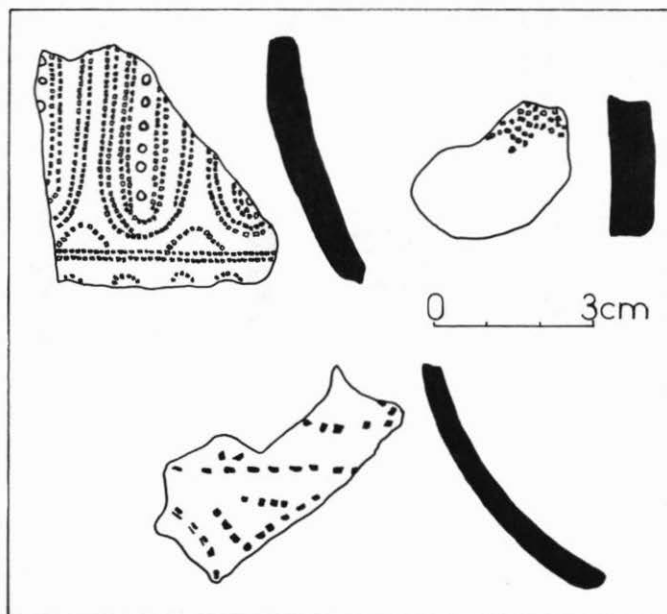


Figure 6: Sherds with dentate-stamped impressions of the Lapita tradition from Ongoué (site WPT148).

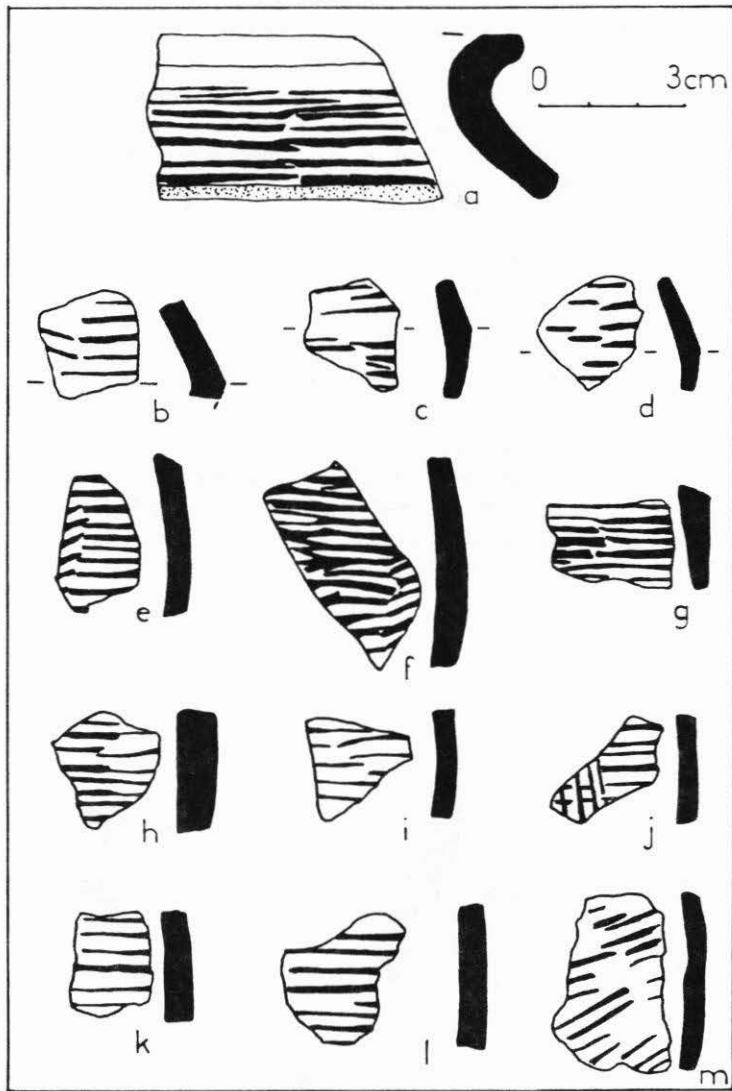


Figure 7: Paddle-impressed sherds from Ongoué (site WPT148).

About 100 sherds (about a quarter of the assemblage) have paddle impressed decorations (Fig. 7). On about 20 sherds, these seem to be simply faint fabrication marks. The other sherds carry actual decoration (Frimigacci 1981), made with a carved paddle which produced straight impressed relief. Most of the sherds have several directions of relief which partially overlap. Study of these decorations has shown two categories: those with fine, closely spaced grooves, and those with larger and/or more widely spaced grooves. These

differences reflect the carving of the paddle, but could possibly also be a chronological marker. Only excavations could confirm this hypothesis.

Two thick sherds and one fine sherd are decorated with chevrons (Fig. 8c, d). One rim and two necks are decorated with discontinuous incisions which form half chevrons (Fig. 8b, e). These can be linked to pottery from the islets of St Vincent Bay (Page Islet, Hugon Islet and Puen Islet) (Galipaud 1988: 114–117; figs 91, 94, 95), which on stylistic grounds probably dates from the beginning of the first millennium A.D.

Eighteen sherds have incised decorations. In four cases, the decoration represents concentric triangles, bounded on one sherd by vertical incisions (Fig. 10). Two sherds have parallel lines, bounded on one by diagonal lines, very like the incised (or geometric) Lapita decorations of New Caledonia (Fig. 9a). Two sherds have parallel incisions perpendicular to an incurved rim. On two other sherds and two rims, the decorations consist of small parallel incisions (Fig. 9c, d). Finally, on a thin sherd, small incisions placed parallel one above the other form strait bands, bounded by continuous incisions (Fig. 9e). All these decorations are comparable to the ceramics from St Vincent Bay already mentioned.

One thick sherd found in the modern depot has a roughly made multiple incised decoration (Fig. 9b). It is more like a decoration of the pottery tradition of Plum. Another thick sherd found on the seashore has parallel wavy linear incisions.

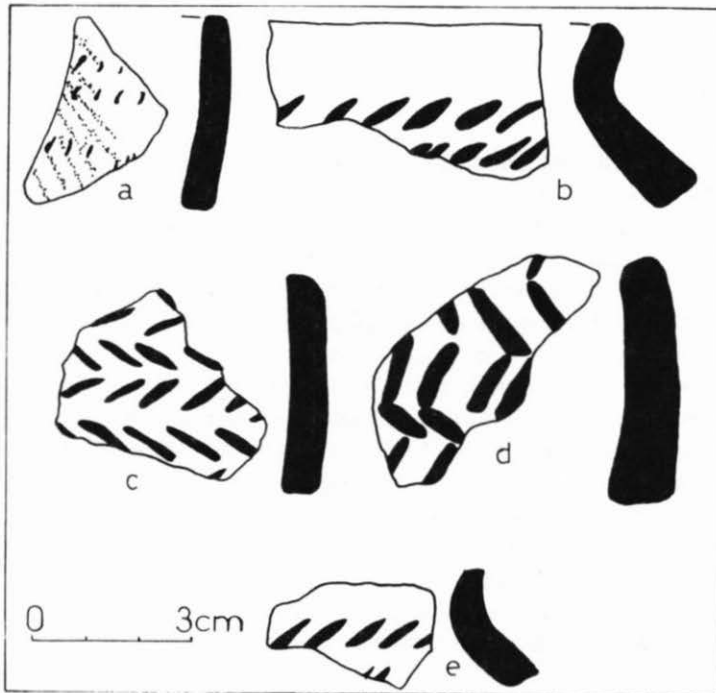


Figure 8: Sherds with shell impressions (a) and chevron decorations (b–e) from Ongoué (site WPT148).

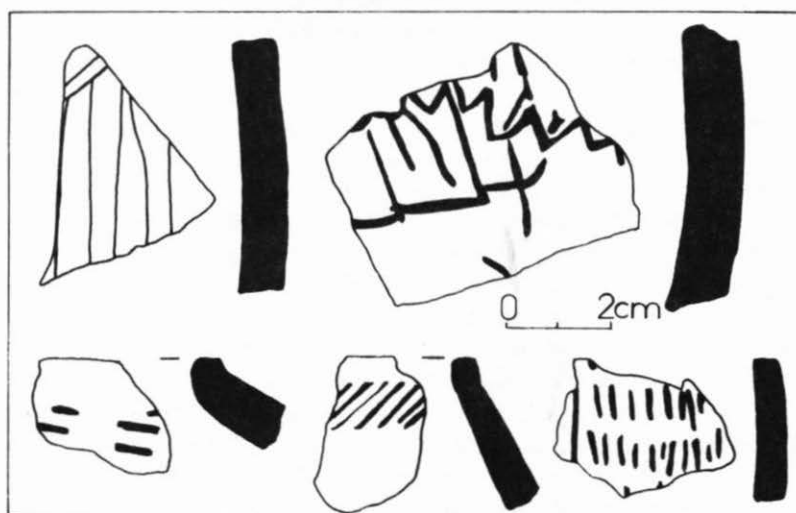


Figure 9: Sherds with incised decorations from Ongoué (site WPT148).

THE LITHIC MATERIAL

Stone flakes, mostly phthanite, are numerous on the site destroyed by the sand quarry. Most of them are flakes ranging in size from 2 to 7 cm. Approximately 250 pieces have been studied. Ninety percent are debitage flakes without precise forms. About 30 have been intentionally made or retouched with the probable intention of using them as tools (Fig. 11). Morphologically, they are composed of an unworked back, with sometimes on the proximal part a small percussion flake and on the distal part a conchoidal bulb of percussion. The percussion waves are clearly visible. The percussion cone is also occasionally visible. The front is more complex, characterised by one or two principal central ridges. These reflect the previous removals of flakes which are usually in multiple directions. The retouch, limited to the best cutting edges of the flakes, is marginal and unifacial. A more functional classification is not possible with this small sample.

Two small blade cores have been identified in the material. These are polyhedrons with unipolar percussion planes. On the first piece, four flake scars are visible. On the second piece, three bigger scars can be seen.

Six smooth oval pebbles with an average diameter of 5 cm were collected. These are unworked stones. They may have been used as anvils in pottery manufacture or as sling stones.

One pumice stone has clear signs of use in the form of shallow grooves on three sides. The exact function of this object is not clear.

A complete small adze was extracted from the beachrock on the sea front, in association with handled pottery fragments. This adze is of oval section with a double bevel and

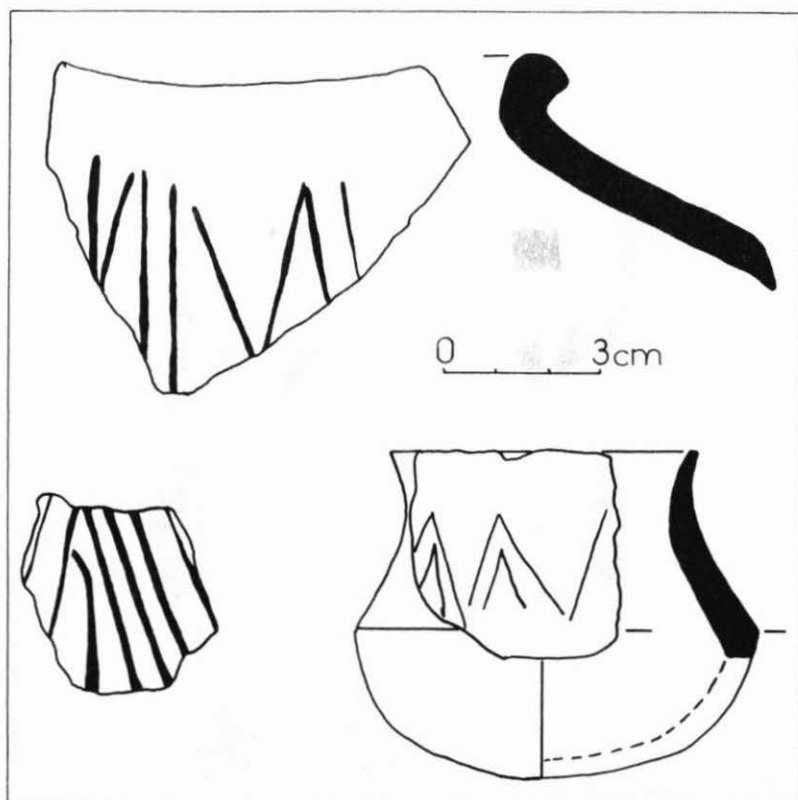


Figure 10: Sherds with triangular decorations from Ongoué (site WPT148).

polished sides. This is an important addition to our knowledge of the lithic traditions of the Naïa I period.

A flat stone with a pitted depression in the centre of both flat surfaces was found at Ongoué. The sides have marks of bruising. This stone is similar to examples found in other southwestern Pacific sites and described as nut cracking stones.

WORKED SHELL

Two worked shell fragments were found on the destroyed site. The first is a fragment of *Conus*, cut to make an arm band. The second is a fragment of an arm band made from *Tridacna* shell, polished on all surfaces. The diameter of the interior perforation is approximately 3 cm, and the total diameter is approximately 8 cm.

Arm band fragments made from *Tridacna* shells have been found in other New Caledonian sites, such as WKO013 of Lapita (Galipaud and Kasarherou 1987) and STY090 of Wamié-Pwekina in Yaté (Sand and Ouétcho 1992: 74). These items are traditionally used

in the Solomon Islands as trade objects. Two other fragments of cut *Conus* shell, worked to make arm bands, were found on the sea shore.

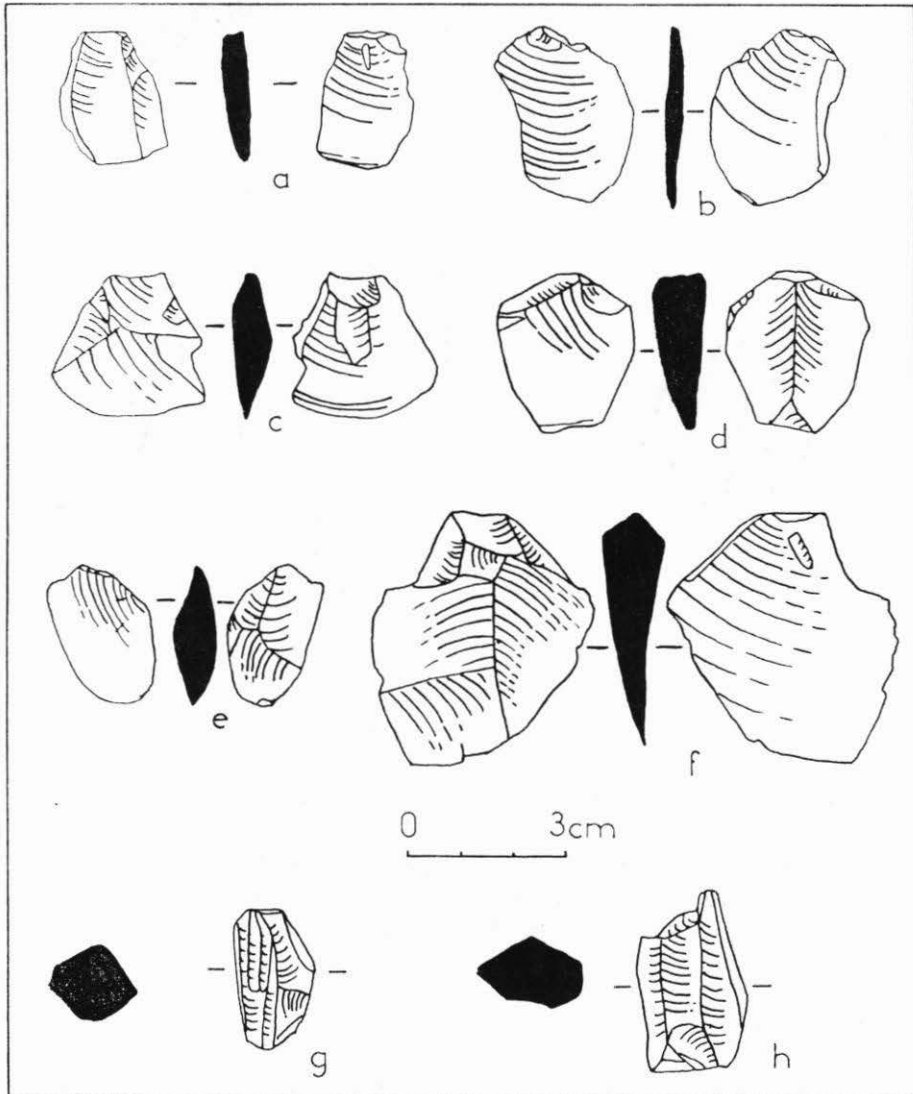


Figure 11: Selected flakes and cores of phthanite from Ongoué (site WPT148).

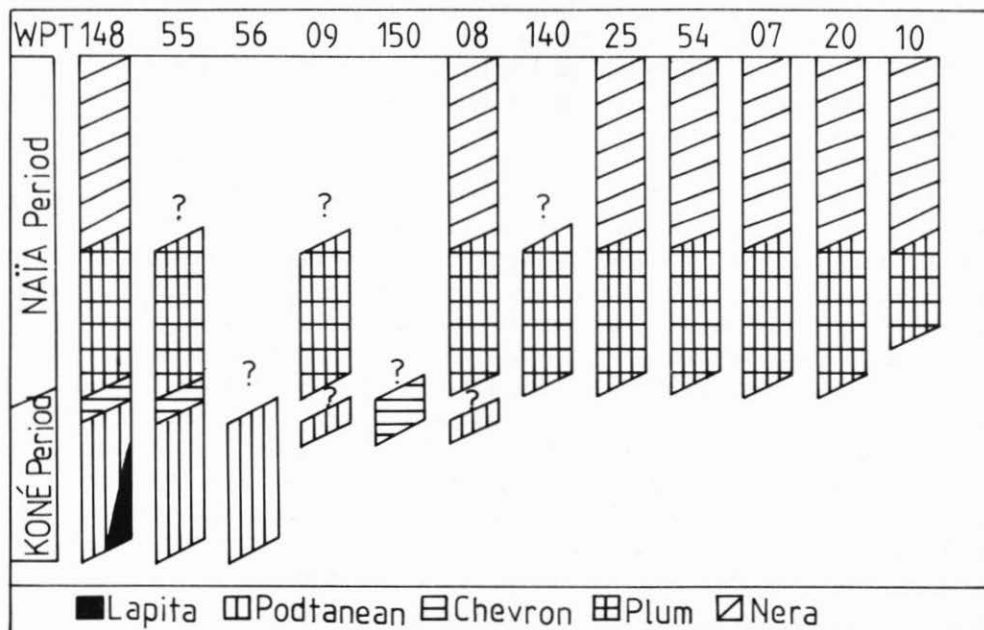


Figure 12: Diagram summarising the position, in the ceramic sequence, of the different sites discussed in the text.

BONES

Like other bays of the region, the beach front of Ongoué has been used as a burial place. No undisturbed skeleton has been excavated to date, but it is common to find human bones on the beach, most of the time in a good state of preservation. These are exposed during the highest tides, when the sea cuts into the dune.

DISCUSSION OF THE ONGOUÉ SITE

The part of the Ongoué plain destroyed by the sand quarry is principally characterised by thin pottery of simple or complex forms, with differentiated rims sometimes having a horizontal projection. This pottery sometimes has paddle impressed, incised or chevron decorations. These characteristics enable us to place the principal period of occupation of this part of the bay at a minimum between the first millennium B.C. and the beginning of the first millennium A.D., that is, in the Koné period and the beginning of the Naïa period. Some points can be made on the basis of this material.

(1) The presence of some sherds tempered with coral sand and of three sherds decorated with dentate tool impressions poses anew the problem of the existence of sites containing pottery of the Lapita tradition in the Païta region.

The question of the existence of Lapita sherds in the now destroyed sites of Naïa Bay is controversial. It seems that Smart did not find Lapita sherds in his excavation (Green and Mitchell 1983: 46), although early papers by Golson are not clear (e.g., Golson 1971: 76). On the other hand, as already mentioned, Frimigacci points to the existence of a collection of Lapita sherds deposited in the Museum of Noumea in the 1970s and said to come from Naïa (Frimigacci 1975: 85). Galipaud has rejected this material, on the basis of the imprecise information about its exact provenance (Galipaud 1988: 124–125), as he also rejects an association of the TON7 or WPT055 oven date of 3165 ± 120 B.P. with Lapita pottery (see also Green and Mitchell 1983: 46; Golson 1971:76, 1972: 555).

On the main island of New Caledonia, most of the sites of the Koné period with Lapita pottery are spatially divided into two partially overlapping locations. The Lapita pottery is largely restricted to one location, and the other contains mainly Podtanean pottery. This is the case at the site of Nessadiou, for example (WBR001 and WBR002) (Frimigacci 1979). This division led Green and Mitchell (1983: 42) to postulate the existence of two distinct societies of potters in New Caledonia, an idea rejected by Galipaud (1988: 148; 1990b).

In view of this spatial division, the discovery of one characteristic sherd with Lapita decoration in the destroyed part of the Ongoué plain, otherwise mostly characterised by Podtanean pottery, raises hope for the existence of a location characterised by Lapita pottery in another as yet undestroyed part of the bay.

(2) The presence of a high proportion of coral sand temper in three of the decorated sherds and about 20 other sherds allows us to draw an inference about the first occupation of the site. Galipaud (1988: 149; 1990b: 138) has shown that coral sand tempered sherds are particularly abundant in the early part of the occupation of Lapita sites of the Koné period, and that afterwards this sand was mostly replaced by mineral tempers. Once the potters found good mineral tempers, they seemed to abandon the use of coral sand. Taking this into consideration and knowing that the neighbouring site of Naïa was occupied from the end of the second millennium B.C., it seems reasonable to envisage an occupation of part of Ongoué Bay by the end of the second millennium B.C.—beginning of the first millennium B.C. Future excavations should confirm or refute this hypothesis.

(3) The presence of a type of pottery with everted rims of the tradition of the Koné period, carrying incised and chevron decorations, shows that part of the occupation can be dated to the transition between the Koné and Naïa I periods. There appears to be a stylistic continuity between the incised and chevron decorations and the decorations present on the later handled pottery, allowing us to relate these two periods.

(4) Identification of the different types of stones used for flakes and a more complete typology remain to be done. The lithic material discovered in this site is abundant, in comparison with the more recent sites of the region. Most of the sites of the Koné period excavated in New Caledonia have yielded lithic material (Frimigacci 1975, plates 49–50; Callaque *et al.* 1980; Cayrol 1982; Galipaud 1986: 17–18). There seems to be a tendency towards a decrease in flaking in sites of the Naïa period. This may be due to three principal reasons: it could be a cultural choice, a specialisation of the techniques to small groups, or simply a lack of archaeological data from the recent period. The answer to this question remains to be developed.

(5) Clearly, the part of the Ongoué site destroyed by the sand quarry contained little pottery related to Naïa I, and even less related to Naïa II, confirming the results of Galipaud's test pit 2 (see above). Equally, most of the Naïa I material comes from the sea shore and the beachrock. This phenomenon can be partially explained by sea level changes on the coasts of New Caledonia during the last 3500 years (Coudray and Delibrias 1972;

Galipaud 1991). In the Naïa I period, the sea level was probably 1 m lower than today. The rising of this level during the second millennium A.D. has led to the destruction of numerous sites belonging to the end of the Koné period and especially to the Naïa I period. This explains the numerous ceramic remains of this period that can be found on the beaches and in the beachrock of the west coast of the main island.

In conclusion, it appears that the Ongoué site has important archaeological potential for understanding the chronology of the first half of the prehistory of southern New Caledonia. The danger of destruction of most of the bay by sand quarrying leads us to hope that still intact portions of this site will be extensively excavated in the years to come.

CONCLUSIONS

The surveys and excavations carried out on the coast of Païta since the 1950s have demonstrated the existence of a succession of rich and diversified archaeological sites. They cover more than 3000 years of the prehistory of southern New Caledonia (Fig. 12).

The pottery is indisputably the source of most of the information. A comparison between the different types of ceramics identified in the preceding pages and the general ceramic chronology presented in the first section allows the sites described in this paper to be classified according to the three major periods.

The destroyed part of Ongoué Bay (site WPT148) belongs to the Koné period, with pottery principally of the Potdanean tradition. The pottery is thin, with simple or complex forms, strongly or weakly carinated. Rims are differentiated, with straight or everted direction. The decorations are mostly characterised by paddle impressions. The presence of sherds with incised or chevron decorations in this site allows the pottery of the Koné period to be related typologically to the pottery of the Naïa I tradition. Finally, the presence of an abundant lithic assemblage consisting of flakes permits a better definition of the cultural tradition of the Koné period and enables us to pose some questions about the material.

The discovery in this site of three Lapita sherds and of sherds tempered with coral sand leads to a conclusion about the controversial presence of sites with Lapita pottery in the region of Païta. This, and the presence of structural remains like earth ovens and postholes, indicate that important remains of the Koné period, similar to those discovered by Smart in Naïa, probably exist in the intact part of the Ongoué site.

On this site, as elsewhere on the main island, the phenomenon of rising sea level during the last millennium is reflected in the archaeological remains of the Naïa I tradition, which bear witness to the partial destruction of sites of this period. Most of the handled pottery found comes from the beach and is sometimes trapped in the beachrock with other archaeological remains and structures.

Sites WPT008, WPT009 and WPT010 on the shore of the south of Anse Longue Bay are mostly characterised by more recent occupations of the Naïa period, although the discovery of some sherds with paddle impressed decorations indicates the presence of earlier occupations. Most of the sherds come from thin pottery with undifferentiated forms and incurved rims, characteristic of the pottery tradition of Néra (Naïa II), which spans the last millennium. The excavation of site WPT010 B of Tongouin has expanded our knowledge of everyday life during this period, with the excavation of a stone-lined oven.

The presence at WPT007 of handles, characteristic of the tradition of Plum (Naïa I), and of pottery with incurved rims, allows us to place this site in the Naïa period. Unfortunately, it is unlikely that intact stratigraphic layers are still present on this site, because of gardening

activities. The first occupation can simply be dated before the end of the first millennium A.D.

This paper sought to confirm, if necessary, the richness and importance of the coastal archaeological sites of this region of New Caledonia. The irreparable destruction of the beaches by sand quarries, principally on the west coast of the main island, has already caused the disappearance of numerous remains of primary importance to the understanding of New Caledonian prehistory. It is to be hoped that in the years to come there will be a better understanding of the value of this heritage and an increase in resources for archaeological research in New Caledonia. This should at last make possible the extensive areal excavations that are so crucially lacking if we are to advance our knowledge of its prehistory.

ACKNOWLEDGEMENTS

The different surveys and excavations, authorised by the President of the Southern Province of New Caledonia, have been supported by the Association pour les fouilles archéologiques nationales (AFAN), through E. Kasarherou, Director of the Museum of Noumea; by a grant from the Direction des Affaires Culturelles (DAC) of New Caledonia; and by a grant from the Agence de Développement de la Culture Kanak (ADCK). We would like to thank J. C. Galipaud and J. P. Siorat for their help and comments, the ORSTOM centre of Noumea for lending the excavation material and helping in many ways, and the people of Tongouin who allowed us to work on their land. Thanks to Léon, Michel, Norbert and Marcelin. All my gratitude to Janet Davidson who had the task of correcting my English. Many thanks.

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Received 16 July 1992

Accepted 23 August 1992

Revised 25 March 1993