LAPITA

Ancêtres océaniens
Oceanic Ancestors

Ouvrage collectif coordonné par Christophe Sand et Stuart Bedford

SOMOGY ÉDITIONS D'ART

musée du quai Branly

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Sommaire

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Lapita, Archaeological Signature of the First Austronesian Settlement of the Southwest Pacific

The historical events surrounding first settlements throughout the world have all ended up being diluted in ageless myths. And so, despite the extraordinary richness of the multi-faceted stories of the ancient sagas recited from generation to generation in the villages of the Pacific, there are, in the Oceanic oral traditions, no direct accounts dating back several thousand years. And yet it was during these distant times that groups of Austronesian-speaking populations from Island Southeast Asia, arrived in the Bismarck Archipelago, situated east of New Guinea. These groups are now identified as being the first human settlers in the archipelagos of southern Melanesia and of the first archipelagos in Polynesia, as far as the centre of the Pacific. This sea-borne human migration over a distance of nearly 4500 km is one of the most extraordinary adventures of human exploration of the planet. With the help of linguistics, genetics, chemistry and geology, archaeological research has been the primary tool used in the definition of the period of these voyages and of the cultural characteristics of the populations who first navigated beyond the Solomon Islands more than 3000 years ago (Kirch 1997).

The primary objective of archaeology is to work on the material remains left by past generations. While ethnographic information and Oceanic oral traditions are rich and diverse and complement the study of recent periods of the historic chronology of the Pacific, the analysis of material traces remains the essential means of gaining knowledge of these ancient cultures. The first Austronesian settlement of the Southwest Pacific left a unique archaeological marker, a type of pottery, decorated with complex dentate-stamped motifs, which, for a century now, has been a major focus for archaeologists. This ceramic tradition has the same name as the archaeological excavation site in New Caledonia, Lapita, where 50 years ago this migration was dated for the first time.

The increasingly detailed knowledge provided by archaeological studies has permitted the progression from an interest in the beautiful pottery to the definition of a real 'Lapita Cultural Complex', with its many and diverse characteristics and its mix of Asian and north Melanesian influences. In a recent overview, Professor R. C. Green detailed the main components of the Lapita cultural complex (Green 2003). First, the pottery produced during this period, defined as a 'ceramic tradition'. Then, the exchange of raw materials, such as obsidian, over long distances. Third, various types of stone adze, as well as new forms of objects for fishing and shell ornaments. The tradition of tattooing is demonstrated by the discovery of various tools. The existence of dwellings both at ground level and as stilt houses has been shown by remains found at various excavation sites. All this was complementary to the already existing traditions in northern Melanesia and Southeast Asia: the adzes and certain forms of shell ornaments, fishing, hunting, the planting of tubers and tree-cultivation, stone ovens and navigation with outrigger canoes with a simple sail.

The Lapita Cultural Complex is now seen as a major historic episode that provides some understanding of how Oceanic societies established themselves. One of the most significant contributions in the last decade has been the definition of a chronology of Lapita expansion across the southwest Pacific; it shows a progression on the scale of a few centuries from west to east, between about 1300 BC and 850 BC. This result has revolutionised the study of the Lapita phenomenon, providing a structure for the analytical framework. This rapid progression supports the hypothesis of dynamic cultural development while the Austronesian groups were settling in new regions.

The recent redefinition of the Lapita chronology has led to a shortening of the Lapita period in all archipelagos, putting this cultural tradition in quite a new perspective. Archaeological excavations have revealed the existence in the region of a certain number of settlements that lasted over several generations during the phase of the first Austronesian settlement. Study of the archaeological material allows us to highlight dynamic changes in each site and between sites, of ceramic and lithic productions over the few centuries of the Lapita period. The data indicates a phenomenon

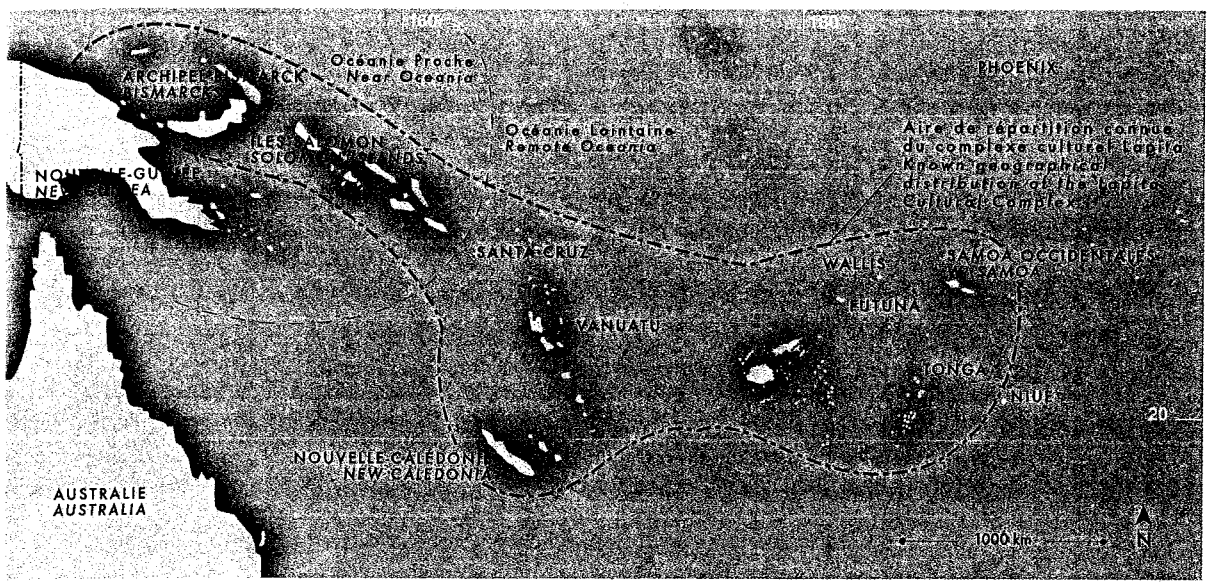

Fig. 1. Carte générale du Pacifique Sud-Ouest localisant les différents archipels de la Mélanésie et de la Polynésie occidentale, Océanie proche et lointaine et répartition des Lapita (carte Thierry Renard).

Fig. 1. Map of the Southwest Pacific showing the archipelagos making up Melanesia and western Polynesia, Near and Remote Oceania and Lapita distribution (map Thierry Renard).

of rapid adaptation to the constraints and specificities of the ecological-geographical zones of the Pacific during the Austronesian settlement. Structured networks of relations between families were established as soon as the sites were founded, permitting the circulation of raw materials and of finished products. This led to the rapid development of the Lapita characteristics into differentiated regional assemblages. After several generations, marked differences gradually developed between these groups spread over the Melanesian arc and in the Fiji-Western Polynesian zone; a phenomenon of local diversification arose in each archipelago. This complex and composite picture of the Lapita phenomenon, which can be explained by the diversity of the departures from the Bismarck Archipelago, shows just how rapid the mechanisms of cultural transformation were during the several hundred years of the first Austronesian expansion across the Southwest Pacific.

The research focusing on the process of migration of people to islands has emphasised the importance of environmental factors, such as island size, the range of natural resources and proximity to other islands (Kirch 2000). The progression through Oceania, with archipelagos separated by greater and greater distances, must have been the result of a structured strategy of exploration. The old theories of an accidental settling of the Pacific islands have long been replaced by models indicating a definite intention of discovery (Irwin 1992). So it was not a question of setting off adventurously in a canoe with women and children and supplies with no precise destination in mind. On the contrary, all permanent settlements on recently discovered islands, whether inhabited or not, were likely to have been prepared by prior exploration. During the Lapita period, this exploration involved, beyond Island Southeast Asia, a sea area stretching over nearly 4500 km.

THE GEOGRAPHICAL CONTEXT OF THE LAPITA EXPANSION

Since the 19th century, the Southwest Pacific has been divided into two cultural zones: Melanesia to the west and Western Polynesia to the east. The Melanesian arc begins in the northwest, with the large island of New Guinea, an obligatory passage for any arrivals from the islands of Southeast Asia. The Melanesian arc consists, from north to south, of the Bismarck Archipelago, the Solomons, Vanuatu and New Caledonia, covering a total of nearly 3000 km. To the east of Vanuatu are the Fiji Islands, bordered on their eastern face by the small archipelagos of Samoa, Tonga and Wallis and Futuna, which together form Western Polynesia (Fig. 1). Archaeological research has long shown that this division between Melanesia and Polynesia, developed from racial theories 200 years ago, masked a much earlier major historical division. The northern part of the Melanesian arc, including the large Solomon Islands, was actually colonised by hunter-gatherers more than 30 000 years ago, during the Pleistocene, and it formed what has been defined as 'Near Oceania'. All the islands to the south and the east, right up to the American continent, form 'Remote Oceania', inhabited only in the last three millennia (Green 1991a).

From New Guinea to the Solomons: large archipelagos of Near Oceania

The southern islands of the Philippines (the most easterly archipelago in Southeast Asia) are separated from the Bismarck Archipelago, at the northern limit of the Melanesian islands, by the great land mass of New Guinea, with its area of around 830 000 km². Between these two island groups, the north coast of New Guinea forms a natural barrier, with a succession of often rocky stretches of coast, with no lagoons and no lengthy fringing reefs. The beaches are open to the ocean swell, in a region of high seismic risk and regular tsunamis, so this has always been a dangerous coastline. Only after the delta of the Sepik River does one encounter protective islands close to the continental mass, before reaching the Bismarck Archipelago. At the north of this archipelago are the Admiralty Islands which stretch over a total of nearly 600 km, whose centre make up the large island of Manus (2100 km²), located 250 km from the coast of New Guinea. The south of the archipelago is defined by the large island of New Britain, with an area of 36 520 km²; its western extremity is only about 100 km from its immense neighbour. Finally, at the eastern edge is the elongated form of New Ireland, which stretches over 320 km from northwest to southeast. Between these three great geographical units, is scattered a whole series of smaller islands, such as the Mussau archipelago between Manus and the north of New Ireland, and a string of islands to the east of New Ireland.

The first real sea barrier is situated to the southeast of the Bismarck Archipelago: a distance of nearly 180 km of open sea before Buka, the most northerly of the Solomon Islands. An uninterrupted succession of islands of all sizes, visible one from the next, starts at Buka in a generally southeasterly direction for nearly 1000 km. The first and largest is the island of Bougainville, with an area of 10 000 km². Then there are the Choiseul islands and the islands of New Georgia, some of which have active volcanoes. In the centre of the Solomons are the large islands of Santa Isabel, Guadalcanal and Malaita; they are separated from each other by distances of 50 km. The southern part of the chain is made up of small islands around the large island of Makira (San Cristobal) which has an area of 3200 km² and is at the limit of Near Oceania.

Remote Oceania: the islands and archipelagos of the southwest Pacific beyond the Solomons

The archaeological northwest frontier of Remote Oceania is situated off the chain of large islands in the Solomon group. Beyond Makira and its two satellite islands, Santa Ana and Santa Catalina, the archipelagos become progressively smaller and more distant from one another, aligned in a southeast direction. The first island group directly to the east is that of Reef/Santa Cruz, consisting of old volcanic islands and raised coral terraces. Nendö is the largest of the group, at 660 km², located 330 km from Santa Ana. Up until Vanikoro in the southeast, the islands are separated by distances of less than 60 km. Further southeast from this group, and at about 200 km from Vanikoro, are the isolated islands of Tikopia, Anuta and Fataka.

To the southeast of Makira is the north of the Vanuatu group (Siméoni, 2009). This group is on the Pacific ring of fire and consists mainly of volcanic islands of various size, some of which are regularly active. At the northern extremity, the small Torres Islands are located 500 km from Makira. About 650 km away is the large island of Santo, 3900 km² in area. For any exploratory voyage through the Reef/Santa Cruz towards the south, the distance between Vanikoro and the Torres Islands is 170 km, and Vanikoro is about 200 km from the Banks Islands to the south. The north and centre of Vanuatu (Fig. 2) consist of islands of various sizes (Santo, Malekula, Ambae, Maewo, Pentecost, Ambrym, Epi and Efate), each of which is in sight of the next. The southern part is more distant, with 100 km between Efate and Erromango. It is likely that New Caledonia, at the extreme southern end of the Melanesian arc, was discovered from the south of Vanuatu in a southwesterly direction. Aneityum, at the southern extremity of the archipelago, is 200 km from Maré (640 km²), the most southern and the highest of the Loyalty Islands, which, along with Lifou (1200 km²) and Ouvéa (132 km²), form the eastern part of the New Caledonian archipelago. The western part consists of Grande Terre, a long island (400 km) with an area of more than 16 000 km². It is surrounded by a lagoon and by a series of smaller islands such as the Isle of Pines at its southern end.

The eastern side of central and southern Melanesia face open sea, which is interrupted only by the Fiji Islands, 850 km distant. This region is composed of two distinct geological formations: the continental plateau in the west, consisting of Fiji itself and the island groups of Tonga and Futuna, and the oceanic plateau to the east, comprising Wallis ('Uvea) and the islands of Samoa. The two formations are separated by the 'andesitic arc' (Nunn 1994). The environmental features of this eastern region are varied, with two large, continental islands, Viti Levu (10 400 km²) and Vanua Levu (5534 km²), high islands, some of which exceed 50 km in diameter, lower, as well as slightly

smaller islands and finally small islands, some of which are protected by coral reefs. The Fiji Islands stretch over about 500 km, and they are each within sight of a neighbouring island. At the eastern edge of the group, the islands of western Polynesia spread over an arc of more than 90° between the northeast and the southeast. To the northeast lie the volcanic islands of Futuna, Wallis ('Uvea), Niuafo'ou and Niuatoputapu in front of Samoa. Further south, the eastern Fijian islands are on average 300–350 km from the Tonga group.

ENVIRONMENTAL DIVERSITY IN THE ISLANDS OF THE SOUTHWEST PACIFIC

For the Austronesian groups who first explored the region, the islands and archipelagos that they discovered in Near Oceania and then in Remote Oceania were much more than just new landfalls. In the north of Melanesia there is a whole series of large, continental islands, but beyond the Solomons, islands are generally much smaller and the groups are further apart. The diverse geological origins of the islands in each chain have resulted in large old islands of jagged appearance as well as more recent volcanic islands, raised coral terraces (Fig. 3) and atolls just above sea level. Such differences result in quite diverse coastal areas. Some islands have lagoons with a barrier reef and occasionally mangroves in estuaries, other coasts are open to the sea, occasionally with some protection from a fringing reef. On islands which had already been occupied for tens of thousands of years as well as on archipelagos with no previous human settlement, these environmental factors necessarily influenced the choice of first settlement at the time of the exploration of Near Oceania and later during the discovery of Remote Oceania.

Tropical islands may seem to be all the same, but their environments, particularly in the coastal areas, have quite marked ecological differences depending on the geographical regions. For example, the coral reefs of the northern Melanesian islands have a much greater variety of fish, molluscs, echinoderms, crustaceans and seaweeds than those in Remote Oceania (Stoddart 1992) and this had a direct bearing on the economic resources available to the Lapita seafarers. Nearly 800 species of coastal fish are found in the first region, reduced by half in the Fiji group. The gradual reduction in the variety of biotopes is also seen on land. Plant studies have long shown the large differences between the main island of New Guinea and the northern Melanesian islands: the first region has more than twice as many plant species as the second (Mayr and Diamond 2001). The differences in the number of land-bird species is even greater, going from more than 500 in New Guinea to 127 in the Solomon Islands, about 50 in Fiji, 30 or so in Samoa and 20 in Tonga (Flannery 1995a). The reduction is of more than 95 percent at the eastern limit of the Lapita expansion (Fig. 4). This difference is particularly marked at the frontier of Remote Oceania: "All terrestrial mammals other than rats and mice or those which accompanied people reach their eastward limit in the Solomons. The same applies to all fresh-water mussels, and most of the Palaeo-Oriental land-snail fauna. Thirty Papuan and Malayan genera of birds find their eastern limits there, as do 162 genera of seed-plants, about 24 % of the total." (Green 1991: 495). This data suggests that while in the short period of discovery and of initial exploration of the islands beyond the Solomon group, Lapita voyagers could easily survive as hunter-gatherers, it was not possible to permanently settle in this region without cultivating crops.

THE SOCIAL DYNAMICS OF ISLAND SETTLEMENT

The Lapita colonisation of the Southwest Pacific was by cultural groups speaking Austronesian languages. The Asian origins of this linguistic family is not disputed, emerging probably in southwest China and Taiwan some 5000 years ago (Pawley 2002). Most of the Austronesian languages are limited to coastal enclaves and to islands off the coast of mainland New Guinea which have been occupied for tens of thousands of years by groups speaking other languages. Austronesian groups established themselves more successfully in the Bismarck Archipelago, where most of the languages are in this linguistic family, having replaced older languages. Three thousand two hundred years ago, the descendants of these groups, speaking proto-Oceanic languages, first settled in Remote Oceania, where only Austronesian languages are spoken.

While the data seems to indicate a relatively homogenous linguistic model for the characteristics of the first Austronesian groups to leave the Bismarck Archipelago, the few studies on the anthropological and genetic characteristics paint a more complex picture. The groups arriving for the first time in the Reef/Santa Cruz from the Bismarck Archipelago were of a diverse genetic stock which had developed over the two preceding centuries. In view of the diversity of the genetic inputs over the millennia and centuries preceding the Austronesian expansion across the southwest Pacific, in a process over long distances involving small family groups, it seems unlikely that the first groups to settle in the Bismarck Archipelago and, a few centuries later, in the Solomon Islands, would have had a single and entirely

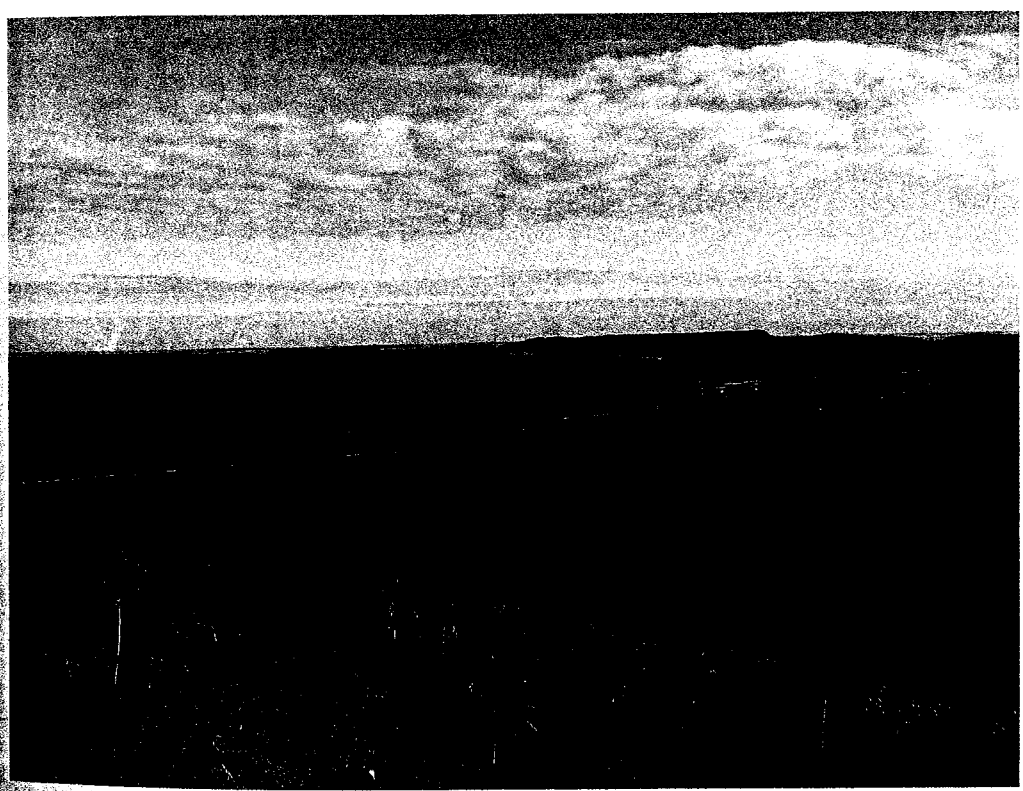

Fig. 3. Vue de la grande plage de Pénélo sur la côte orientale de l'île de Maré (îles Loyauté), où ont été découverts les sites Lapita LPO020 de Patho et LPO023 de Kurin (photo C. Sand).

Fig. 3. The large beach of Penelo on the east coast of Maré (Loyalty Islands), where Lapita sites LPO020 of Patho and LPO023 of Kurin have been discovered (photo C. Sand).

Fig. 4. Vue d'une grande baie de l'île de Vava'u (archipel de Tonga), dont certains îlots portent un site Lapita oriental (photo C. Sand).

Fig. 4. A large bay on the Island of Vava'u (Tonga), where some of the islets contain eastern Lapita sites (photo C. Sand).

homogenous physical character. On the contrary, it is likely that different phenotypes were present in the canoes, combining, to different degrees, ancient Asian and Papuan characteristics. From the start this diversity would have had an influence on the morphological development of the founding groups of each island in Remote Oceania.

Ethnographical analogies made from contemporary observations of traditional Austronesian societies, along with linguistic reconstructions, have led some authors to define Lapita society as matriarchal. The hierarchical system in the Lapita political structures, defined as being based on a relatively primitive concept of 'house societies' would have established a mechanism which encouraged the junior branches of a family group to leave and found their own political entity, leading to the relatively rapid settlement of Remote Oceania (Green 2003). The primary driver behind this tradition of voyages of discovery and settlement is still debated. On the one hand are the supporters of a process of 'dispersion' whose analysis favours a phylogenetic approach to the development of Lapita island societies (Kirch and Green 2001), and on the other, those who describe the Lapita progression as a 'migration' in a reticulated process (migration in networks) (Bellwood 2001). In any case, the influence of social structures on the dynamics of the Lapita progression across the southwest Pacific seems to be quite evident. The diversity of the cultural settings and of the ecological-geographical environments between Near and Remote Oceania, as well as the lack of homogenous archaeological data available for the Lapita period, indicating complex social and cultural dynamics, all bring out a multiplicity of social frameworks following the first settlement. Each region in the Lapita zone is likely to have had specific social traditions. In particular, the circumstances which gave rise to the initial movement of Asian Austronesian-speakers towards the Bismarck Archipelago are most unlikely to have been the same as the motivations which inspired their descendants, several generations later, to venture over the 850 km of open sea which separated the Vanuatu archipelago from Fiji.

Research undertaken in recent years in Southeast Asia has resulted in a fairly precise definition of the material traditions and knowledge carried by the Austronesian populations at the time of their first settlements in the Bismarck Archipelago and during the generations preceding the first settlement of Remote Oceania. Pottery with dentate-stamped, geometrical motifs is the most recognisable element of the Lapita culture developed in the Bismarck Archipelago, probably from decorative traditions of simple dentate-stamped ware previously developed further west. Various elements of botanic research are starting to confirm the existence in Lapita culture of traditions of growing taro, yam, banana and varieties of edible nuts, as well as the presence of pigs, chickens, dogs and rats, all of which originated in Southeast Asia. This summary does not take into account a large part of the everyday craft production involving plant material, which does not leave archaeological traces but actually represents an average of 80 percent of the cultural content, according to linguistic reconstructions (Kirch and Green 2001). This is particularly the case for the production of mats, tapa, wooden sculpture and even tattooing.

Archaeological studies have demonstrated the existence in the Lapita tradition of exchanges of raw materials such as obsidian and of finished products such as pottery (Summerhayes 2003a). According to some authors, the origins of this tradition of exchange over long distances should be sought further west than the Bismarck Archipelago, although archaeological data also demonstrates the existence of complex pre-Lapita networks in the northern islands of Melanesia (Torrence and Swadling 2008). It is likely that, in the Bismarck Archipelago, the initial system of Lapita exchanges inserted itself into an existing, nearly 20 000-year-old network, and greatly extended its limits. Studies have shown a great diversity in the intensity of long-distance exchanges in Remote Oceania, where relations must have been based mainly on short distance contacts rather than on distances of several hundred kilometres at a time. Essential constraints imposed on the first discoverers beyond the Solomon Islands would indeed have necessitated the maintenance of regular links with the 'homeland colony', at least for the first few generations. One of the constraints for departing groups, which were small in number and spatially spread out, was the supply of marriage partners. Owing to the small number of groups involved in the first settlement of Remote Oceania, this process of partner exchange, which would have been essential to the viability of a new settlement, was probably structured, at least in part, between cross cousins, thus requiring particular attention to the genealogical links between families. Such exchanges must have been regulated by codes and customs, as well as rituals linked to the ancestors and formalised exchanges; but of all of this there remains few traces.

THE LAPITA HERITAGE

The long-term inheritance left to contemporary Oceanic societies by the families of the first settlement period more than 120 generations ago is mani-

fold. All the native languages spoken in Remote Oceania derive from Proto-Oceanic, spoken by Lapita groups during their voyages along the Melanesian sea routes 3000 years ago, before their dispersion towards Fiji and Western Polynesia. Social structures have developed greater complexity over the subsequent millennia, but the basis of an organisation which has at its centre the 'house' is identifiable in many forms in Southeast Asia and in Oceania in historical cultural traditions (Fox 1993). The Lapita inheritance can also be seen in the graphical and technical structures developed in the Oceanic arts. Despite the extraordinary diversification of artistic traditions in Melanesia over the past 3000 years, basic elements of the Lapita structure, such as the succession of motifs in bands and in friezes, and the focus on curved motifs are identifiable in many traditional indigenous productions. Ethnographic work has shown the profound difference between the complex ceramic traditions of Austronesian-speaking groups in New Guinea and the standardised, simpler pots produced by non-Austronesian-speaking groups (May and Tuckson 1982). These differences, as defined in terms of difficulty of manufacture and of length of apprenticeship, largely arose in the Lapita period. R. C. Green (1979a) has shown to what extent all or part of the basic graphic rules of the Lapita tradition can still be identified in the production, in Fiji and Western Polynesia, of tapas, tattoo motifs and mat decorations. If it is necessary to again emphasise the complexity of the processes of genetic diversification which probably occurred during the Lapita period – processes which continued over the following millennia – we would note that all the anthropological studies point to an Austronesian signature, clearly differentiated from an ancient pre-Austronesian signature in Near Oceania (Friedlaender 2007a). To summarize, there is, therefore, little doubt that the Austronesian expansion across the southwest Pacific 3000 years ago contributed to structuring in depth a genetic, cultural and linguistic framework which is ancestral to traditional Oceanic societies. The Lapita Cultural Complex cannot be reduced to a mere ceramic tradition.

CONCLUSION

The archaeological data accumulated on the Lapita progression across the Southwest Pacific shows that any attempt at a simple explanation of the phenomenon of the first Austronesian settlement in Near and Remote Oceania is bound to fail. Research on this theme must, today, take into account a whole series of points which emerge from the latest synthesis. Among them, the hypothesis of a multiplicity of departure-points from Near Oceania, differing both in space and time, over about ten generations, would seem to be of major importance. Across the world, human migrations towards new territories generally tend to be spread in several waves and the Lapita case certainly seems to be no exception. This premise underlines that the Lapita advance was neither a one-way movement, from the Bismarck Archipelago towards Remote Oceania nor limited to a single chronological episode of departures. On the contrary, everything leads us to believe that there was a whole series of departures from different Austronesian communities, which did not all have exactly the same cultural foundation nor the same genetic and phenotypic specificities. These departures could have been spread over a period of at least 200 years. Above all, the various groups leaving the Bismarck Archipelago did not all follow the same route and did not stop on the same islands during their voyages towards the southeast. They favoured places where they knew they would find allied family groups, and this would imply the return voyages towards the northwest, made to maintain these alliances. There was, thus, not one but many sea routes between Near Oceania and Remote Oceania, each of them punctuated with intermediate staging posts. The Austronesian progression, in the form of a 'string of pearls' (Moore 2001) in time and space, forces us to be less linear in our study of the Lapita dynamics between the Bismarck Archipelago, central Melanesia and Western Polynesia 3000 years ago. This complicating factor in the analysis of the Lapita phenomenon, in addition to the many persistent unknowns in our knowledge of the origins of the Lapita Cultural Complex in the Bismarck Archipelago and beyond, must be taken into account when reading any synthesis about this period of human history of the Pacific. The Austronesian expansion across the southwest Pacific was a unique phenomenon. The chapters of this catalogue outline a summary presentation of the current state of knowledge on this insufficiently known episode of human history.