

Part II

Lake Sentani: Geographical and pre-historical context

6

Introduction**6.1 Geographical context**

Lake Sentani is situated near the north-east coast of Irian Jaya, Indonesia (south-west of Jayapura, the capital town of the Province Irian Jaya, see map 3.1). The Lake extends from west to east for about 30 km and is 10 km wide. It is surrounded by hilly and mountainous country. North of the lake the Cyclops Mountains (locally named *Dafonsero*) separate the lake from the Pacific Ocean. The distance between the Lake and the sea is only 8 km as the crow flies. At this spot a natural harbour (Yos Sudarso Bay, the former Humboldt Bay) is located.

From a geological point of view the Cyclops Mountains are part of an ancient platform which is not an original part of New Guinea. The mountains are a relic of a North Melanesian borderland, which in the Tertiary was located at the present Carolinen-basin (Van Bemmelen 1953: 269). This borderland subsided in the Middle-Tertiary to about 4,000-5,000 metres below sea-level. In more recent times the mountainous platform along the north coast has risen (Van Bemmelen 1953: 270). West of these Cyclops Mountains, young coral reefs are found, which have been lifted about 400 meters. Due to these recent land-raising, a sea-arm south of the Cyclops Mountains got cut off from the Ocean (Van Bemmelen 1953: 270). This sea-arm turned into a fresh-water lake which is called *Bu Jakala* (water clear) or *Endani* (till here)²⁴ by the inhabitants of the Lake. The first European explorers used the name Lake Sentani.

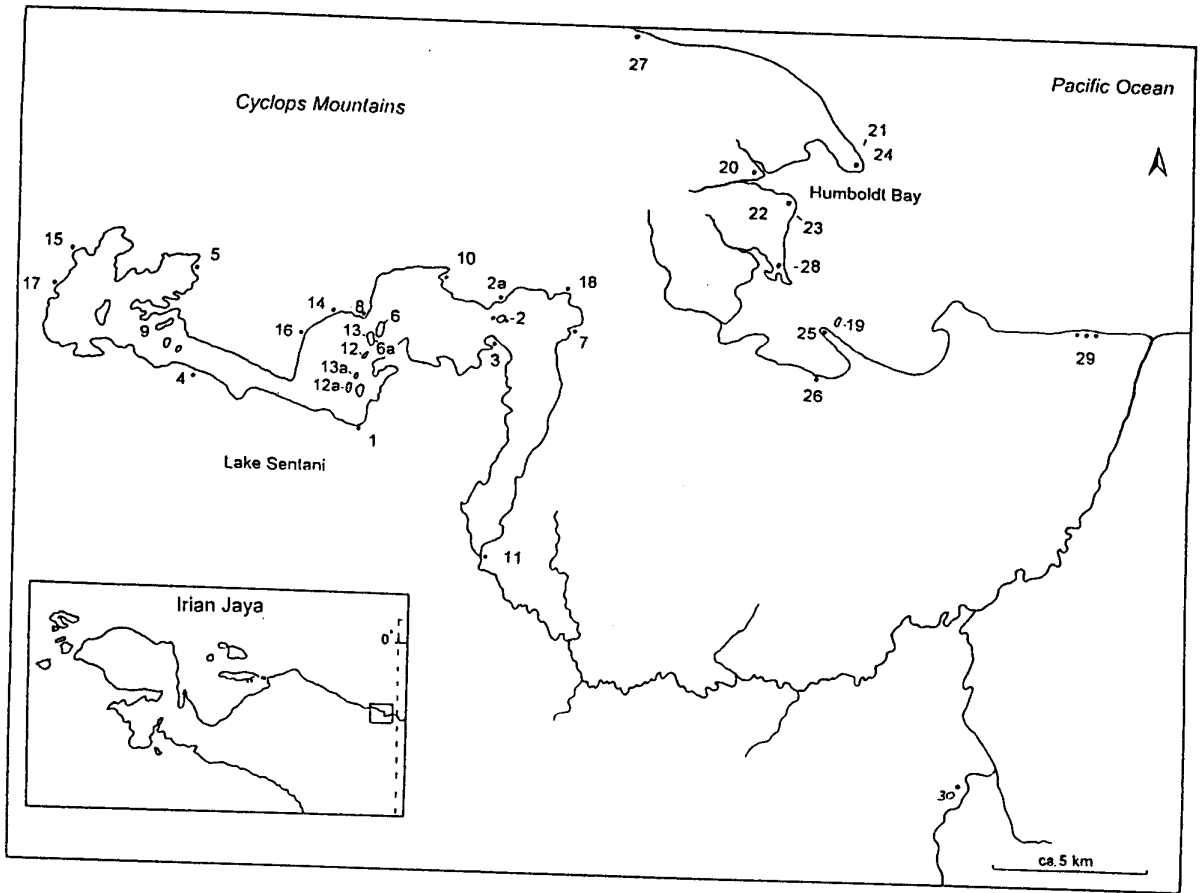
Because of its connection with the Ocean in earlier geological times, the Lake contains turtle, crocodile, saw-fish and shell-fish. Today the water-level is about 67 meters above sea-level (Galis 1968: 60). Sentani people, however, claim that in the old days the Lake was much bigger and deeper (Galis 1968: 60). There is some drainage to the sea -from the southward extension of the wider eastern part, and through two little rivers, the Djafuri and the Tami- but the amount of water carried off is too slight to have any influence on the waterlevel (Kooijman 1959: 13). At the eastern Lake shore, near Kojabu, water is carried off below the surface in the direction of the Jotefa-bay.

In Lake Sentani several islands are located, which were the first spots for people to settle down. These islands are Asei (where my fieldwork was mainly conducted), which lies in the eastern part of the Lake together with the islands Adjau, Putali and Atamali. In the middle part lie the islands Kensio and Bubai, in the west the island Yonokom (Mansoben 1994: 153; map II.6.1). The islands in Lake Sentani are

²⁴ The word *Endani* means 'till here' and is supposed to be said by the first ancestors of the contemporary Lake dwellers, who came from the East (Galis 1968: 60). According to an informant of Mansoben (19???: 156) the word *endani* does not exist in the Sentani language. Probably this word derived from *ndane*, which means 'here' (Mansoben 19???: 156). Wirz however claims the the word Sentani is deducted from the word *Setam*. *Setam* could be deducted from *Heram* which the people from the coast used to refer to the Lake (Hoogerbrugge 1967: 5).

built of diabase and melafier; east and west of the Lake coral chalk and Miocene clay are found (Galis 1968: 61).

On New Guinea and especially along the north coast, the rainy season starts in November and lasts till April. In May it starts to heathen up. Along the north coast however, it can still rain a lot. The average temperature lies between 27 and 35 degrees Celsius. Generally spoken the soil in New Guinea is not very fertile (Van Bemmelen 1953: 281). At Lake Sentani people lived and live from shifting cultivation, fishing, hunting and pig-keeping. Especially the north shores of the Lake are suitable for sago cultivation. These shores are flat and marshy and contain many sago palms which supply the people with their principal food (Kooijman 1959: 13). Sago swamps are located near Asei Kecil and Jakondé (Galis 1968: 61). Higher up against the sides of the hills and mountains, are gardens with banana trees and coconut palms, and plantations of tropical tubers and sugar cane (Kooijmann 1959: 13). In contrast to the swampy character of the north shores, on the south shore at many points the mountainside rises steeply from the water. At these spots it is difficult or even impossible to cultivate sago. Due to the (increasing) population density and shifting cultivation, the forests on the surrounding hills and mountains have been cut down and replaced by a grassy vegetation. In the summer people burn these grasses to destroy weeds and fertilise the soil. This activity of deforestation was already practised in the late 19th century, when the first Europeans entered the Lake Sentani area.



NAMES OF LAKE SENTANI AND HUMBOLDT BAY VILLAGES

- | | | | | |
|----------------|----------------|---------------------|-----------------|------------------|
| 1. Abar | 6. Ifar besar | 12. Puyo besar | 17. Yaconde | 24. Kayu Ycmbe |
| 2. Asei besar | 6a. Ifar kecil | 12a. Puyo kecil | 18. Waena | 25. Metu |
| 2a. Asei kecil | 7. Joka | 13. Siboiboi besar | 19. Engros | 26. Nafri |
| 3. Ayafo | 8. Kabiterau | 13a. Siboiboi kecil | 20. Hollandia | 27. Sageisera |
| 4. Baberongko | 9. Kwadeware | 14. Serch | 21. Kayu Batu | 28. Tobati |
| 5. Doyo | 10. Netar | 15. Sosirih | 22. Kayu Entjau | 29. Sko villages |
| 6. Ifar besar | 11. Poë | 16. Yabuai | 23. Kayu Pulu | 30. Arso |

NAMES OF LAKE SENTANI ISLANDS

(from east to west)

- Asei with the village: Asei besar (2)
- Bubai with the village: Ifar besar (6)
- Adjaue with the villages: Ifar kecil (6a) and Hobong or Siboiboi besar (13)
- Putali with the village: Puyo besar (12)
- Kensio with the village: Siboiboi kecil (13a)
- Atamali with the village: Puyo kecil (12 a)
- Jonokom with the village: Kwadeware (9)

Map 11.6.1 The Indonesian province Irian Jaya with the area of Lake Sentani and the Humboldt Bay.

7

Archaeological context

7.1 The earliest settlers of New Guinea

During parts of the Pleistocene period the large islands west of Melanesia (Sumatra, Java, Borneo and Palawan), collectively known as Indonesia, were connected to one another and to mainland Asia. This large land mass, Sundaland, consisting of the Sunda shelf and the continent, was separated from the land mass called Sahul. At several periods in the past New Guinea, Australia and Tasmania, along with some smaller islands, were all linked as this single land mass (see map 3.2). During the glacial stages the Sahul shelf was exposed. The first immigrants into New Guinea and Australia had to cross the narrow expanses of open water between these two land masses.

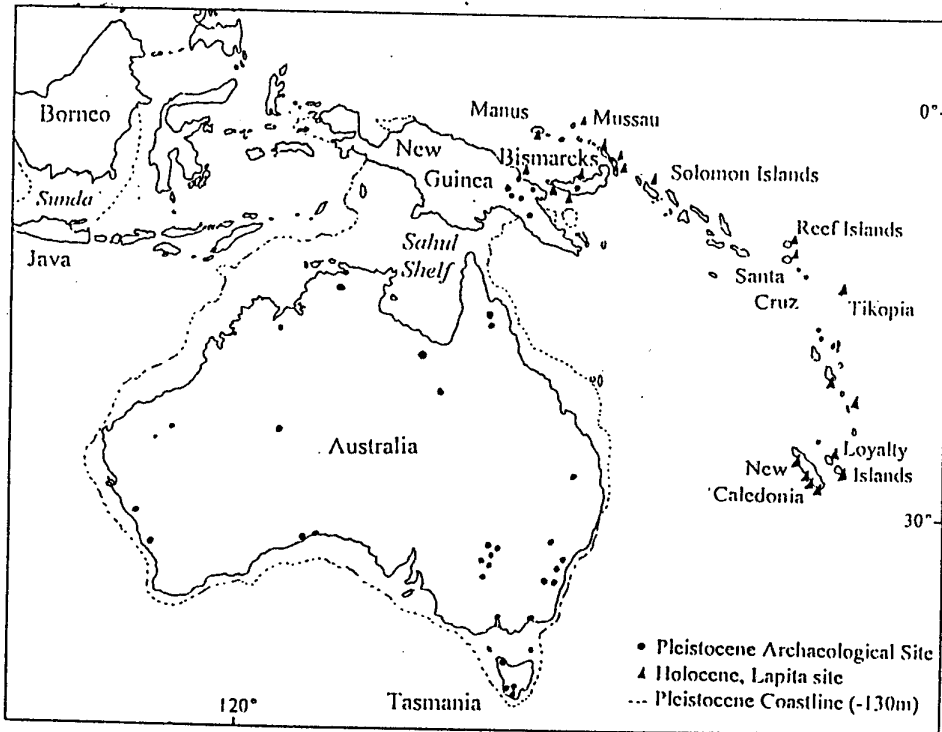
Earliest evidence of human settlement in New Guinea ²⁵ dates back at least 40,000 years. During this period the open-water distances between Sunda and Sahul ranged between 80-100 km. (Gamble 1993: 216). Archaeologists have reconstructed two possible routes which the first immigrants possibly have used, each with open-water crossings which range from 10 to 100 km. The first route goes via Sulawesi, Peleng and Sula, and subsequently Halmahera or Buru and Seram, using these islands as stepping-stones to move on to the Bird's head of New Guinea (Kirch 1997: 28,29). The second major route would have followed the chain of inter-visible islands east of Java. At Timor one could have crossed directly onto Sahul by crossing water of approximately 90 km. or follow a chain of small islands from Leti to Tanimbar, coming ashore just south of the present Aru islands (Kirch 1997: 29). Besides the long-distance travelling, people had to adjust to a completely different flora and fauna life. Contrary to the lush flora and fauna in Sundaland, the plant and animal life of New Guinea is less diversified. It also demonstrates extensive isolation; marsupials such as bandicoots and cuscus (*Phalanger*), and huge flightless cassowaries and numerous varieties of birds of paradise, have evolved independently.

The earliest settlers, the Australoids, were the ancestors of the contemporary Aborigines of Australia and the Papuan Highlanders of New Guinea. Presumably additional migrations occurred in waves by different people in different periods. The settlers lived from fishing, shellfish collecting, small-game hunting, and plants and were able to cross relatively large distances over land and water. The adjacent islands of Melanesia -New Britain, New Ireland etc.- were colonized approximately 35,000-30,000 years ago, involving not only open-water crossings but also adaptations to a dramatically smaller biotic diversity (Spriggs and Chippendale 1989; Kirch 1997: 31). The colonization of Manus Island - which required an open-water crossing of 200 km.- succeeded 12,000 years ago or earlier (Kirch 1997: 32). Approximately 20,000-18,000 years ago several changes occurred in the area. In various sites

²⁵ Unfortunately -mostly Australian- archaeological research has focused on Papua New Guinea and adjacent islands. Irian Jaya, in archaeological terms, remains *terra incognita*.

obsidian from different sources is found that indicates the development of exchange networks. Next to this long-distance trade in obsidian from Talasea to New Ireland, the deliberate introduction of animals (Grey Cuscus and two rat-species) from New Guinea into the Bismarck Archipelago occurred (Irwin et al. 1990: 34; Gosden 1992: 58; Kirch 1997: 35). Indications for long distance trade in New Guinea arise at least 10,000 years ago and concern shells which were found at an inland site 90 km from the coast²⁶. At that time the inhabitants of New Guinea and Near Oceania were developing horticulture. At the New Guinea Highland Kuk site, sophisticated drainage and agronomic modifications have been revealed, dating to 9,000 BP (Kirch 1997: 37). Fragments of polished adze heads, usually associated with cutting trees, appeared some 10,000 years ago in the highlands (Howe 1984: 7).

From about 7-8,000 years ago until 5,000 BP the archaeological data are scarce. During this period rockshelter sites were not used, a phenomenon which may possibly be associated with the developing horticultural and arboricultural subsistence adaptations at lower altitudes (Kirch 1997: 39). However, in New Ireland rockshelters and caves are used till 5,000 BP (White et al. 1982: 189). In this same period obsidian is found in the low- and highlands of Papua New Guinea that originates from obsidian sites in Talasea and New Britain (White et al. 1982: 189). Besides the domestication of betel nut (*Areca catechu*), sago (*Metroxylon* sp.) and other tree crops, marsupials, fruit bats, lizards, rats and birds



Map II.7.1 Pleistocene and Holocene (Lapita) sites. The Pleistocene continent of Sahul, defined by the submarine 130 m. contour, in the Glacial Ages connecting New Guinea, Australia and Tasmania, while the islands of the Bismarck and Solomon were always separated by deep submarine trenches (After Kirch 1997: 27 and 54).

²⁶ Kafiavana site, located in Papua New Guinea.

were hunted as in the preceding millennia. The limited data also reveal an increase in the use and manufacture of tools made from shell. Edge-ground adzes, fishhooks, armrings and beads made from shell were found in different sites (Kirch 1997: 40-41). Despite the marine innovations which led to a kind of mixed-strategy subsistence and inter-island contacts, the overall orientation of Australoids appears to have been more to the land (Kirch 1997: 40-42).

7.2 The establishment of a Lapita Cultural Complex

Other Melanesians, Austronesian speaking and genetically different colonists, had a more outward orientation and migrated more recently into the area²⁷. Approximately 5,000 to 7,000 years ago a number of related events all point to Austronesian settlement in coastal and riverine New Guinea and subsequent influences on existing New Guinea societies (Howe 1984: 7; Swadling 1997: 9). Especially along the coasts a cultural and linguistic mix between Papua's and Austronesian people was established. The new events which are associated with Austronesian settlement are pigs, pottery, post holes and polished adzes. Pig bones definitely appear in the Highland's archaeological record some 5,000 years ago, but were probably present much earlier (Howe 1984: 9; Kirch 1997: 43). Since pigs were not indigenous to New Guinea they must have been introduced. As the area was not sealed off from island Southeast Asia, transfer of knowledge, new techniques, crops and animals will have occurred prior to the accomplishment of the Lapita Cultural Complex in the Bismarck Archipelago, which is dated 1,550-1,400 BC (Kirch 1997: 58).²⁸ This is confirmed by Swadling (1997), who excavated pre-Lapita pottery in the Sepik-Ramu area. Other pre-Lapita ceramic assemblages were already found in a western, Irian Jaya site on the Onin coast (Swadling 1997: 9). Other signs of pre- or contemporary non-Lapita cultures were found east of the Solomon Islands (no pottery) and in Anuta and Santa Ana (Green 1979: 47). So, colonisations of other (Austronesian) horticulturists with and without pottery, occurred prior and contemporaneous to the establishment and movement of the Lapita Cultural Complex.

During the Mid-Holocene period the settlers of Papua New Guinea and the Bismarck Archipelago regularly crossed great distances of open water, and trade in amongst others obsidian flourished. Probably

²⁷ There are two scenarios concerning the Austronesian colonisation of Melanesia and the remote Pacific, the "Express Train to Polynesia" (ETP) theory and the "Indigenous Melanesian Origins" theory. The first proponents consider the Lapita cultural complex as representatives of a cultural unity with a communal origin in continental Southeast Asia (Kirch and Hunt 1988: 157). Linguistic reconstructions show that the knowledge and technological skills necessary for a successful colonisation of island Melanesia, developed in Taiwan approximately 6,000 years ago. Archaeological sites (dated 8,000 Bp) on this island contain pottery, stone dissel and other tools, and can be seen as the basis for the Southeast Asian Neolithic technocomplex (5,000-4,000 Bp). This neolithic complex is ancestral to the Lapita cultural complex and other Oceanic cultures (Kirch 1984: 44). The second view (amongst others, Gosden, Allan and White) consider North Sahul and the larger islands of Melanesia (specifically the Bismarck Archipelago) as the areas where the cultures who settled the Pacific, developed. The basic ingredients for the settlement of the Pacific were founded in the Pleistocene period. A synthesis between the two views has been put forward by Roger Green, postulating an "Intrusion, Innovation, Integration" model (Kirch 1997: 44-46).

²⁸ These earliest known dates concern Lapita sites in the Bismarck Archipelago, including the Talepakemalai site in Mussau, and probably also sites in the Arawe and Nissan Islands (Kirch 1997: 58).

a main, but not necessarily only impetus for this trade and the contemporary change in land use from extensive to intensive, came with the Austronesians. They also probably introduced the dog and the chicken along with the pig, as well as intensive exploitation of root crops like yam and taro (Howe 1984: 17). Root-cropping and pig domestication seem to have been speedily adopted and adapted right through the country, including the Highland regions where Austronesians seem not to have settled. Pollen analysis and related studies suggest that by 5,000 years ago large areas of the Highlands had been cleared of forest, indicative of a slash and burn horticulture that still exists in areas of Melanesia (Howe 1984: 17). In the Sepik-Ramu area a betel-nut husk, dating to 5,800 BP, is considered by Swadling (1997: 9) as the oldest known Asian import in the New Guinea region. By 2,000 years ago the presence of sophisticated agriculture throughout both the highlands and lowlands regions of New Guinea is evidenced by wooden implements, widespread drainage of swamps, irrigation ditches for intensive taro planting, and permanent village settlements typical of an agricultural existence. Finally, linguistic analysis provides strong evidence of the advance of people out of Southeast Asia and eastward into Oceania from about 5000 years ago (Howe 1984: 9; Kirch and Hunt 1988: 157). All the languages of New Guinea are Papuan, i.e. Non-Austronesian, except for pockets of Austronesian languages in the Bird's Head in the west and in narrow enclaves along the northcoast and the 'tail' in the eastern end. Linguistically, the Sentani people belong to the Papuan-speakers. This in contrast to their Humboldt Bay neighbours, who belong to Austronesian speakers (Galis 1968: 61-62; Greub 1992: 13).

Recently, some stone sculptures have been found in the Jayapura area. These humanlike figures of about 30 cm to 40 cm high might be an indication of Austronesian cultural influences in this area. The earthenware tradition in both the Humboldt Bay and Lake Sentani area could also be seen in this light. The Austronesian people brought this technique together with pigs, chickens, breadfruit, and yams on their journeys²⁹. Another influence in the Jayapura area could be the petroglyphs in Doyo Lama, Lake Sentani (Figure 7.1). The Lapita people had a tradition in rock-engravings which can be found all over the Pacific, reaching its climax on Easter Island. The petroglyphs near Doyo Lama are located on rocks which are scattered on a hill. The exact dates of these incised drawings are not clear. However, the first Europeans who entered this area in the early 20th century took notice of these white coloured petroglyphs.³⁰

Another cultural trait of the Lapita complex is their engagement in systems of external exchange, a heritage which still characterizes the present Oceanic-speaking communities. The complex inter-community and inter-island exchange networks, such as the *kula* (Massim-territory), the *hiri* (Papuan Southcoast) and the network in the Siassi region or Huon Gulf (between East New Guinea and New

²⁹ Gosden (1994) refers to this human transfer of both animals and plants, as "transported landscapes".

³⁰ The animals represented are: different kinds of fish, varans, lizards, turtles and geometrical motifs like circles. The site and the petroglyphs are maintained by the *ondoafi* of Doyo Lama. The petroglyphs are elucidated by chalk and are sometimes accompanied with -modern- graffiti. The animals depicted on the rocks show a striking similarity with the animals depicted on 20th century three-dimensional sculptures and paintings on bark cloth.

Britain) are examples of historical and contemporary (Oceanic) exchange systems (Kooijman 1955: 52-73; Kirch 1997: 225).³¹ The archaeological evidence for Lapita exchange in the region is abundant. Obsidian sources, already used some 18-20,000 years ago, were intensively exploited by the Lapita people (Kirch 1997: 230). Besides obsidian, chert, oven stones, and shell artifacts, pottery or the raw materials necessary for ceramic production were exchanged as well. Since many coral islets lack natural clay deposits, some communities may have specialized in the manufacture of pottery, trading or exchanging of ceramic vessels to nearby or more distant communities (Kirch 1997: 234), like today the *hiri* communities. During their millennium-long existence, Lapita external exchange networks or systems were highly dynamic, fluid structures (Kirch 1997: 241). It is therefore unlikely that there was a matter of "[...] a single, integrated 'Lapita exchange network' that spanned the entire geographic region in which Lapita sites are found" (Kirch 1997: 241). Approximately 500 BC the features associated with the Lapita cultural complex disappear. Soon afterwards pottery is no longer produced or traded in Polynesia. In Melanesia, however, after an interval, a pottery tradition developed which by several intermediaries, led to the present Melanesian pottery styles (Tiesler 1981: 210; see section 'recent exchange systems').

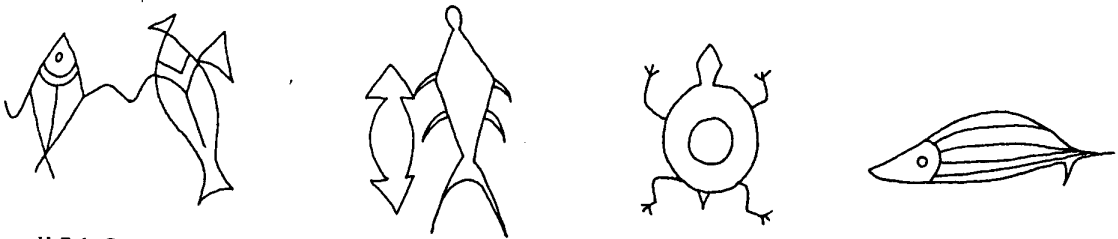


Figure 11.7.1 Some examples of animals depicted on the rocks of Doyo Lama.

7.3 Dongson influences

The end of the Lapita period coincides with the early Dongson phase of the Southeast Asian Bronze period. Big bronze gongs associated with that culture are the most concrete evidence for contacts between the mainland of Asia and New Guinea. The gongs and other artifacts were made between 400 BC and 100 AD in Dongson, located in presentday Vietnam (Kooijman 1959: 14). A large fragment of such a gong has been found in West Irian Jaya. Other bronze artifacts such as an axe blade (RMV: 4134-1), two axes (RMV: 1528-445 and 1528-446) and a copper artefact (RMV: 1528-447) also associated with the Dongson culture, were found in the area of Asei in Lake Sentani (Van der Sande 1907: pl. XXIV; Kooijman 1959: 14; Galis 1968: 63). The artifacts are probably trade goods which were shipped from Southeast Asia. They could have been imported through the adjacent Humboldt Bay from Geelvink Bay to the west. In this part of New Guinea the Numfor and Biak people maintained relations with the Indonesian

³¹ According to Gosden (1994: 30-31), the similarities in Lapita pottery have nothing to do with exchange systems like the Kula, but with traditional aspects within a dynamic existence. The material culture has to be regarded as a collective manner to solve a (collective) problem; the reduction of change and dynamics by providing a "thread of continuity" (Gosden 1994: 31). Gosden (1994: 31) refers to this nature of Lapita material culture as 'dynamic traditionalism'.

islands of Ternate and Tidore in historical times (Newton 1988: 12). According to Galis (1968: 63) an immigration of a megalith Bronze culture like the Dongson, could be plausible as well. Considering the absence on New Guinea of most of the cultural 'traits' -metal-, weave- and pottery-technology- of these major Asiatic cultures, the first hypothesis is more plausible. Probably the techniques of metalworking³² were less intriguing than the decorations and forms of the objects. On Sumatra, Borneo and Celebes a decoration style can be found which has resemblances with the Late Bronze, early Iron-Age Dongson culture (Heine-Geldern 1966: 177, 178). This decorative style expresses itself in drawings and carvings on wood, bamboo and paintings on wood or barkcloth, tattoos and textile (Heine-Geldern 1966: 177). The main motif of the Dongson culture is the spiral, a motif which can also be found along the entire Northcoast of New Guinea, amongst others in Lake Sentani. Besides the similar use of spirals on bamboo, barkcloth and tattoos, Bleckman (1973: 2) argues for a dispersal of specific Dongson motifs (amphibians, tadpoles) on axes and accompanying myth from Asia into the Pacific (further analyses in Part 3).

It is clear that around the turn of the era and afterwards, trade contacts between Non-Austronesian and Austronesian speakers flourished. These contacts led on the one hand to a new cultural synthesis between Austronesians and non-Austronesians, and on the other hand to limited isolationism. An example of contacts between Non-Austronesian and Austronesian speakers is made up by the area of Aitape, on the northcoast of New Guinea, which was engaged in an exchange network with Bogia, Mailu and the Torresstreet (Tiesler 1981: 213). Via trade connections with the hinterland, goods and commodities could be traded with the interior parts of New Guinea.

7.4 Recent exchange systems

The island of New Guinea can be divided into several style-regions, which coincide with trade or exchange systems (Kooijman 1955; 1982). Kooijman (1982) discerns 13 style-areas, based on similarities in social and material culture. The northcoast of New Guinea encompasses approximately 8 style-regions of which three are found in Irian Jaya, (a). the Geelvink Bay and the northwestern area, (b). the northcoast with the Humboldt Bay, and (c). the Lake Sentani area. Especially in the northeastern part of New Guinea, ranging from the Sepik area to The Massim territory, people were engaged in extensive networks which stretched over several hundreds of kilometres.

At the time of European contact, Siassi traders moved between the northeastern coast of New Guinea and the Bismarck Archipelago carrying a large range of food and craft items. Together with the exchange of goods and products, transfer and diffusion of religious ideas, ceremonies, songs and dances took place (Kooijman c.1982: 33). The ceramics which moved through this system were made at Sio on the north New Guinea coast. Production of these pots appears to have started around 550 BP (Lilley 1988: 515; Gosden 1994: 32). Despite the intensification of production and other developments at Sio on the

³² Only the Biak and Numfor people practiced iron-working, which they probably learned from the Indonesian dwellers of Tidore and Ternate about the 16th century (Newton 1988: 12).

mainland, the Siassi traders seem to have started their trade- and exchange operations not before 350 years ago (Lilley 1988: 516). This is evidenced by the distribution of obsidian from west New Britain and pottery from the northeastern coast (Gosden 1994: 32). Ian Lilley (1988: 514) signalled the emergence of a protosystem which would be ancestral to this historic Siassi trade network. According to his analysis this system emerged some 1,600 years ago and is evidenced by the appearance of ceramic wares and cross-Vitiaz Strait transfer of mainland pottery, New Britain obsidian and chert (Lilley 1988: 514). It differs from the evolved historic network on several aspects, like the absence of high-volume semi-specialist production for trade that characterizes recent ceramics (Lilley 1988: 514). Prior to the emergence of this protosystem, the Lapita cultural complex seems to have been involved in long-distance exchange across the Vitiaz Strait as well. There is, however no evidence for two-way communication between Sio and Siassi, or other characteristics of the historic trade-system during this period. Also the proposed Lapita-exchange system disappeared about 1,000 years before the emergence of the protosystem (Lilley 1988: 513-4), which invalidates suggestions for continuity. A little bit further to the southeast in the Massim area, the exchange system known as the kula encompasses the whole Massim culture area. Due to the kula the material culture in this area is almost homogeneous, despite the geographical discontinuity and a certain cultural differentiation (Kooijman c.1955: 68). As in the Siassi area, archaeological data suggests that the kula was part of a network of systems which came into existence during the last 500 years (Gosden 1994: 32).

In the southern parts of New Guinea, a number of groups specialized in trade as well. The Mailu and other Motu-speaking people produce large quantities of ceramics for trade with the peoples of the Papuan Gulf (Kirch 1997: 234,305). Archaeological data suggest that the predecessors of these wares appeared in the area approximately 800 years ago. Subsequently the same scenario is discernable as with the Sio production. Specialists producing ceramics and trading centres emerged about 500 years ago, many of which continue to be active in the present (Gosden 1994: 32). This emergence is "paralleled by a shift from low volumes of pottery production, produced in a non-specialized fashion and exchanged locally, to centralized high-volume production of specialized wares" (Gosden 1994: 32).

According to Gosden (1994: 32-33), "the complexity of connections between trading systems and their joint genesis indicates that their rise and subsequent operations were linked". Remarkable is the contemporaneity of the rise of these trade systems with a general move to defended hilltop settlements (Gosden 1994: 32-33). Moreover, the period in which these material and social intensifications occur, correlates with the explorations of the first Europeans in the area (Gosden 1994: 32). In the western part of New Guinea the occurrence of defence-walls and fortified villages (Galís 1953: 16), seems to be the result of the growing trading, fishing and slaving expeditions executed by Seramese traders in the 16th and 17th century. In exchange for clothing, beads and metal tools, the traders acquired, amongst others, massooi turtles, pearls, birds of paradise and highly prized slaves (Galís 1953: 16). Some less reliable sources even mention that javanese gongs were exchanged to acquire slaves (Muller 1991: 40).

8

Colonial and post-colonial context

The first European contacts were accidental Spanish and Portuguese landings. The first European to set foot on New Guinea was a Portuguese who landed in 1511 or 1512 on the Bird's Head (Galis 1953: 8). Thirty years later, New Guinea got her name from the Spaniard Inigo Ortiz de Retes. He claimed 'Nueva Guinea' for the Spanish crown on 02-06-1545 (Galis 1953: 10). The Spanish and Portuguese sailed mostly along the northcoast (Galis 1953: 10); visits to Lake Sentani and the Humboldt Bay are not recorded, however. During the 16th century, when Ternate and Tidore (respective Portuguese and Spanish) had many conflicts, contacts between New Guinea and the near West were already established (Galis 1953: 9). The sultans of Batjan had many influence in the eastern Moluccas and, amongst others, the western part of the Bird's Head (Galis 1953: 9). From this region slaves were abducted and exchanged for clothing, beads etc. (Galis 1953: 16). This was mostly executed by Seramese traders who seemed to have a monopoly on coastal areas (Galis 1953: 16).

In the 17th century the Dutch East India Company settled the Moluccas and as a consequence tried to establish trade contacts with New Guinea. Inspections were made in order to get information about resources, products and people. However, due to the abduction of slaves, Papuans were hostile and especially the western coastal areas were difficult to enter because of the Seramese monopoly (Galis 1953: 16). The Portuguese and Spanish were forced out of the Moluccas in 1660, which enabled the Dutch East India Company to make a deal with Tidore and Ternate. Since the Sulan of Tidore governed the coastal areas of New Guinea, the Dutch gained influence in these areas (Bijlmer 1955: 11). The sultan did, however, not have any power over the different communities. In the 18th century the Dutch East India Company lost its power and more expeditions by different nations were organised. In 1768 the French explorer De Bougainville visited the northcoast and gave the Cyclops mountains their name.

During a conference in 1814, Great Britain and The Netherlands decided that western New Guinea would come under the control of Dutch administration (Bijlmer 1945: 11). It took, however, eleven years before the first Dutchmen settled in the area. Eastern New Guinea was not yet under European control. This changed in 1883 when Great Britain occupied Southeast New Guinea under pressure of Queensland. Queensland had been afraid of the colonial expansion of Germany which incorporated the Bismarck archipelago and Northeast New Guinea in 1883. Three years later the border between 'Kaiser Wilhelmsland' (Germany) and 'Papua Land' (Great Britain) was established. Meanwhile, the Dutch founded permanent settlements amongst others in Fakfak in 1898. In 1902 a settlement was founded in Merauke, in anticipation to British complaints concerning headhunting practices conducted by Dutch subjects who killed British Papuans.

As a result of World War I, Germany was banished from New Guinea and in 1920 Australia obtained the former German territory as a mandate area. Dutch New Guinea became an independent residence in the Dutch administrative policy during the years 1921-1923 (Galis 1953: 29). During the following years, medical facilities and missionary posts were founded and airstrips were constructed. Institutions and associations like 'Stichting Immigratie en Kolonisatie Nieuw-Guinea' were established, who took care of the immigration of Dutch people to the area (Galis 1953). This flow of colonists ceased by World War II. The Japanese occupied of Hollandia, which was subsequently relieved by Allied bombing and invasions in 1944. After the war, the Dutch returned to Indonesia, where, however, an independency movement was gaining momentum. Under command of Soekarno Indonesia received its independence. Dutch New Guinea became a place of refuge for all who decided to flee from Indonesia. However, Indonesia claimed Dutch New Guinea as its territory and was determined to incorporate this area. Finally the United Nations agreed and Indonesia was allowed to claim Dutch New Guinea. In 1969 the population received self-determination in order to choose for themselves. However, no referendum was held, the Indonesian government selected voting-men (kiesmannen) who voted unanimous for incorporation with Indonesia. Dutch New Guinea was renamed into Irian Jaya and added as a province to the Republic of Indonesia. Different measurements of the Indonesian government led to unrest amongst the Papuans. The transmigration program for example, which funds Javanese people to move to Irian Jaya, leads to social unrest and tensions. The 'immigrants' are better acquainted with the Indonesian social and political structures and control the local trade and commerce. The wish for an independent West-Papua and self-determination leads to forced resistance movements like the OPM. The Indonesian government responds by sealing off different parts of Irian Jaya and ignoring the civil rights of Papua people.

8.1 Contacts with the Humboldt Bay and Lake Sentani

Documented Western contacts with people from the Humboldt Bay and Lake Sentani occurred in the mid- and late 19th century. The Humboldt Bay people made their first (documented) European acquaintance with members of the "Etna" expedition who visited the area in 1858 from 23 June to 4 July. After 1880 more and more visits were paid. This was possible because the Dutch government had set up an administration on New Guinea which made the area safer for Europeans. The controller D.W. Horst visited the Humboldt Bay in 1886 from 10 to 13 September. A year later ethnographer and resident F.S.A. de Clercq sailed with the 'Java' into the Humboldt Bay.

The Sentani people had their initiation in 1892 when physicist W. Doherty visited the village Ayafo in the eastern part of the Lake. The Protestant missionary G.L. Bink visited the Humboldt Bay in 1893. During his three months stay, he spent three days in Lake Sentani, where he visited the villages Ayafo and Poë. In 1894 an inspection journey of resident J. van Oldenborgh took place, followed in 1897 by resident D.W. Horst accompanied by missionary F.J.F. Hasselt. The latter would visit the area several times and dismantle a temple in Tobati in cooperation with a representative of the Dutch government,

commander J.A. Wasterval. Lake Sentani was charted in 1901 by the Controlor L.A. van Oosterzee with help of the crew of the ship "Ceram" (Schumacher 1954: 33).

After these visits more and more Europeans visited the Humboldt Bay and Lake Sentani. During the first half of the 20th century scientists got more interested and expeditions were organised by the Dutch, English and Americans. Under command of A. Wichmann, one of these expeditions collected a substantial amount of objects and information in 1903.

The western influence resulted in the establishment of the military camp Hollandia (present Jayapura) on 7 March 1910 (Galis 1955: 15). After the military left, the civil servant (bestuurs ambtenaar) J.A. Wasterval moved from Metu Dobi to Hollandia. He was followed by many traders who had settled in Metu Dobi since 1900 (Galis 1955: 14-15). These traders had settled in this village due to the bird of paradise hunt and trade, which was a main source of income for foreign adventurers. They bought massooi, sea-cucumber and mother-of-pearl shell from the local population, who collected these for the traders. Besides the Humboldt Bay, the traders collected their products in Sko, Jako, and Noembu, places east of the Humboldt Bay (Bink 1893: 7-8). In these places the traders also put their bird-hunters to shoot the birds of paradise. In 1916 a Dutch government post was opened in the area of Lake Sentani. This post in Koyabu, which is the present Waena beach, was moved to Doyo Baru in 1921. It was, however, soon returned to its first location in Koyabu about 1926 (Mansoben 1994: 157).

Along with the traders came Protestant missionaries. As a result the influence of administration and the Protestant church increased and more and more Europeans visited and settled in the Lake Sentani and Humboldt Bay area. This new flow of western ideas and goods had impact on the local population. Customs and material culture changed or disappeared. Between 1921 and 1926 religious temples and initiation houses were burnt down (Mansoben 19???: 157). This implied that after 1926 the initiation of children was no longer practiced. For the missionaries, Papua souls were the most wanted items, which caused religion and cultural structures to change. For the Europeans, social control and profit were the most wanted items. This meant dismantling of opposing political, religious and social structures. In 1928 the local government opened in cooperation with the 'Zending der Nederlandsche Hervormde Kerk (ZNHK), the first schools in the area (Mansoben 19???: 158). Iron tools, cotton, sugar and salt were the most wanted goods which caused production, clothing, and diet to change.

In the 19th century tools were still made from stone, bone, wood and shells (Van der Goes 1862; Bink 1896; Galis 1955: 90; Kooijman 1992: 11). Although the people of Sentani did not produce metal objects themselves, iron was obtained in small quantities by trade with the coast (Kooijman 1959: 16). The art of ironworking had been introduced in amongst others the Geelvink Bay area and Biak (Kooijman 1992: 11), arriving from Indonesia where the art of ironworking was already practised about 1,500 BC. On Biak, which was an important centre for ironworking, groups of travelling blacksmiths had developed (Kooijman 1992: 11). Due to the many trade relations that existed along the northcoast, people from the Humboldt Bay and Sentani already had metal tools before the arrival of European explorers. There was,

however, an insatiable demand for iron in the region. The missionary Bink, one of the first Europeans to travel in the region of Lake Sentani (1893), reported that the people used stone axes and shells for making their woodcarvings. He 'paid' the Sentani and Humboldt Bay people with metal axes and knives which were eagerly accepted and at one time even stolen (Bink 1896). By 1900, when contacts with Europeans intensified, all the traditional tools were replaced by metal ones. In Lake Sentani, however, people still clinged to their stone axes. Because of the dual function of stone axes as both tools and ceremonial objects the production of stone axes was continued into the seventies (Galis 1968).

The axes (*hè*) were extremely valuable and had their own names. They were part of the dowry and were attributed with magical powers (Galis 1968: 71). The production of these axes was carried out by men. The greenish stone (chloormelaniet) was retrieved from the upper part of the river 'Torara'. By using a hammerstone, a rough shape was obtained which was sharpened and polished with little stones called *weri* (Galis 1955: 118). The best known production centres were located north of Lake Sentani, amongst others in the Cyclops Mountains but also in Asei (Hoogerbrugge 1967: 52; Galis 1968: 71).

In the twenties, art-dealers and adventurers saw their profit in local made sculptures and barkcloth paintings which caused a 'primitive art' flow to Europe and America.

Japanese influence on local politics occurred during World War II, when Japan occupied Hollandia. Allied bombing caused some Humboldt Bay people to abandon their villages. The invasion and liberation by allied forces again implied a flow of commodities. This time from the West to the East. Indonesian influences were brought by the many Dutch sympathizers who were forced to flee from Indonesia after the independence war and who settled in Hollandia. More and more strangers settled in Hollandia and its surroundings. This inflow of foreign people, goods and ideas continued and due to, amongst others, the Indonesian immigration program, Hollandia (present Jayapura) expanded to a town with more than 100,000 inhabitants. Besides the inflow of foreign people, immigration of Papua people from the interior and southern parts of Irian Jaya caused Jayapura to grow to a melting pot of different races, cultures, religions, ambitions and dreams. At the shores of Lake Sentani a village is built that harbours Indonesian and Papuan prostitutes. Together with the alcohol problem amongst youngsters, these aspects give some indication of the social poverty and imbalance that flows over the Lake district. As a response to these negative features, people innovate and use their traditional material culture to earn an income and establish their place in a changing and often hostile environment.

9

Conclusions

The history of Lake Sentani shows, like so many cultures, interaction between Sentani people and their neighbours, both indigenous, Europeans and Indonesians. Relationships changed and varied and were not unidimensional and uniform in their consequences. Sentanians, like other people, were not passive in their encounters with the different intruders. They negotiated with neighbouring groups, immigrants, settlers, traders, Europeans and Indonesians in various ways at various times.

The prehistoric and pre-colonial interactions and negotiations with immigrants, neighbouring and more remote villages already had their impact on the Lake Sentani villages and peoples. Besides social aspects, stylistic devices and traits have frequently spread from one region to another. Direct comparisons can be made not only between designs of Lake Sentani and neighbouring societies like the Tanah Merah Bay and the Humboldt Bay, but also with designs of more remote areas like the upper Sepik, the Border Mountains and the south-east Massim area. Besides this regional spread of motifs and their subsequential meaning-giving process of transposition and translation³¹, prehistorical and more recent Asiatic influences can be seen as well (Part III).

Trade with the neighbouring Humboldt Bay and Tanah Merah Bay are characteristic of the more recent periods. Lime- and tobacco-containers, food, barkcloth and fashion styles were exchanged. For example a lime-gourd which has an indisputable Lake Sentani decoration, was collected in the Tanah Merah Bay area around the turn of the century. The Tanah Merah people gave, amongst others, earrings made from sea turtle shell in return (Kooijman and Hoogerbrugge 1992: 80-81). Next to trade or exchange, intermarriages took place between Humboldt Bay men and Sentani women (and not the other way around). Highlight of the relationships between the two areas was the acquisition of the temple secrets and rituals by Sentani villages from the Humboldt Bay, in turn for high-valued coloured beads.

Contemporary with the first colonial encounters, relationships between the Humboldt Bay and Sentani people varied. People from certain villages were scared and unwilling to communicate due to the murdering of people on both sides. The case was more or less settled by the payment of goods. Apart from these hostile interactions, friendship between people and villages occurred as well. The missionary Bink was guided from the Humboldt Bay to Ayafo by a woman from this Sentani village who had married a Humboldt Bay man. Among the Sentani villages relationships varied too. The people of Ayafo refused to

³¹ According to Thomas (1995), in many cases the adaptation of new material (but also cultural) traits, takes place without the original meaning or reference. Design elements are used for their aesthetic effect, or for a new meaning that was not previously apparent (Thomas 1995: 43). Thomas (1995: 43) refers to this process as transposition or (free) translation.

visit Asei, Netar and Puyo with which they lived in discord. The relationship between Ayafo and Poë was more friendly.

Significant encounters with Europeans occurred relatively recent in the late 19th century. The European presence precipitated changes that were sometimes dramatic. The abolishment and destruction of religious temples and goods constitute a few of these changes. However, dramatic changes may have occurred in the past as well. The poor archaeological interest in this area has prevented any insight in this matter. Besides that, many of these changes were speedily accepted and integrated in the local communities by local people themselves.