



Kube announcing his arrival at a village

Mariners of Madang describes the role of the mariners in the trade network which once extended from Astrolabe Bay to Karkar Island off the North Coast of Papua New Guinea. The Bilibil/Yabob mariners lived in the centre of this trade network and traded their earthenware pots for food. Carrying loads of large pots, the mariners sailed in large triple deck canoes up to over thirteen metres long. Included in this volume is a construction manual of one of these canoes. This is the first time that a detailed manual has documented this process, based on an actual canoe built in 1978. The author hopes that this manual might serve as the basis for a revival of these graceful craft which once graced Astrolabe Bay. This was only possible with the assistance of the Mariners of Madang.

Mariners of Madang

Mary R Mennis



**Mariners of Madang
and
Austronesian Canoes of
Astrolabe Bay
Mary R Mennis**



Women scrap the dim while men apply it to the canoe.

The basis of the pot trade, all pots being made by the women.



The lalong outside Madang Harbout on its maiden voyage in 1979.



Front cover: The five Mariners: From left, Derr Mul, Damun Nomu Maklai, Gab Kumei and Pall Tagari. Maia Awak below, just before he died.

Mariners of Madang
and
Austronesian Canoes of Astrolabe Bay,
Papua New Guinea.

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Abstract

Mariners of Madang recalls a time when the local people constructed large canoes and traversed the Madang and Astrolabe Bay Coasts with cargoes of pots which were the basis of their trading system. This was first recorded by Baron Miklouho-Maclay in 1871. The captains of these canoes were respected mariners and were welcomed at each village where they had trade friends. Detailing the construction of a *lalong* canoe in 1978, nearly forty years after the last trading canoe was destroyed during World War II, the measurements, materials and tools were noted. The technical skills of the mariners who used bush materials of timber, vines and bark from the forest and tools made of wood, shell, stone, bone was obvious. The form of these canoes was determined by their function, as the large pot cage which straddled the outrigger could hold a hundred earthenware pots. The canoe began as a tree in the forest protected by bush spirits which must be placated at every stage of its construction. It was transformed and launched into the sea where further ceremonies protected it from angry sea spirits. The mariners relied on magic so that the trading voyage would be successful: the weather magician controlled the winds; and a secret language confused the spirits. This volume traces the roles these canoes played in the trading system of the past centuries and the trade items, against which the pots were traded and details the many reasons why they ceased to be built.

This work is based on a thesis *Austronesian Canoes of Astrolabe Bay* presented in 1982 as a Masters Thesis for the University of Papua New Guinea. I have prepared this material for publication with the guidance of Professor Ian Lilley and Dr Sean Ulm of the Aboriginal and Torres Strait Islander Studies Unit, Queensland University.

Key words — trading canoes; Madang; Papua New Guinea culture; oral traditions; trade trading system; trade items; stone tools; bone tools; customs; magic; secret language.

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The Author

Mary Mennis, nee Eccles, first went to Papua New Guinea in 1962 as a primary school teacher with the then Administration of the Territory of Papua and New Guinea having a BA with a major in history from the University of Melbourne. She was posted to a bush materials school on Matupi Island, just outside Rabaul. Here she met many of the village elders and became interested in their cultural history, including myths and oral traditions. Using the knowledge gained, she wrote her first historical novel, *Time of the Tauber*, about the interaction of two groups of Tolai people on opposite sides of Rabaul Harbour in pre-contact times. Resulting from her more general interest in the myths and legends, she co-operated with Hermann Janssen and Brenda Skinner in editing *Tolai Myths of Origin*.

In 1971, the family moved to Madang, with six months in Mt Hagen en route. Not wasting the opportunity in Mt Hagen she wrote *Hagen Saga*, a life of Father William Ross, who, with Danny and Mick Leahy, was one of the early pioneers into the highlands of Papua New Guinea. While this was essentially a history of the mission, she included a lot of material of much interest to future researchers into the local people.

Arriving in Madang in 1971, the centenary of the arrival of Baron Miklouho Maclay in the Rai Coast area was being celebrated. Reading his diaries and his description of the large trading canoes led to Mary's lifelong interest in the canoes and trading systems of Astrolabe Bay. Studying for her first Master's degree, Mary talked to many of the old village men in many and varied villages around Madang collecting oral histories, genealogies, and information of the pre-contact trading systems. This led to the publication of *Potted History of Madang*, which is essentially a history of the Madang area from the perspective of the local people.

In the mid 1970s, along with a group of five old men from Bilbil village, she was instrumental in arranging the construction of a trading canoe of a type that had not been seen for over 40 years. Returning to Brisbane in 1982, she became interested in local Aboriginal history. This led to another historical novel, *The Red Cliffs*, dealing with the interaction of the first white settlers in the Redcliffe area from the Aboriginal perspective.

Furthering her studies, she was part of team from the James Cook University in Townsville which documented the construction of two *lagatoi* (canoes) on Magnetic Island. This enabled her to compare these canoes and the *Hiri* trading system of the South Coast of Papua with the canoes and trading system in the Madang area.

In recognition of her work among the Madang people, she was awarded an MBE in 2009 following a recommendation of the Papua New Guinea Government.

This Volume

In writing this volume, Mary Mennis utilized many sources including existing publications, interviews, and old documents, acknowledgement of which is given in the text.

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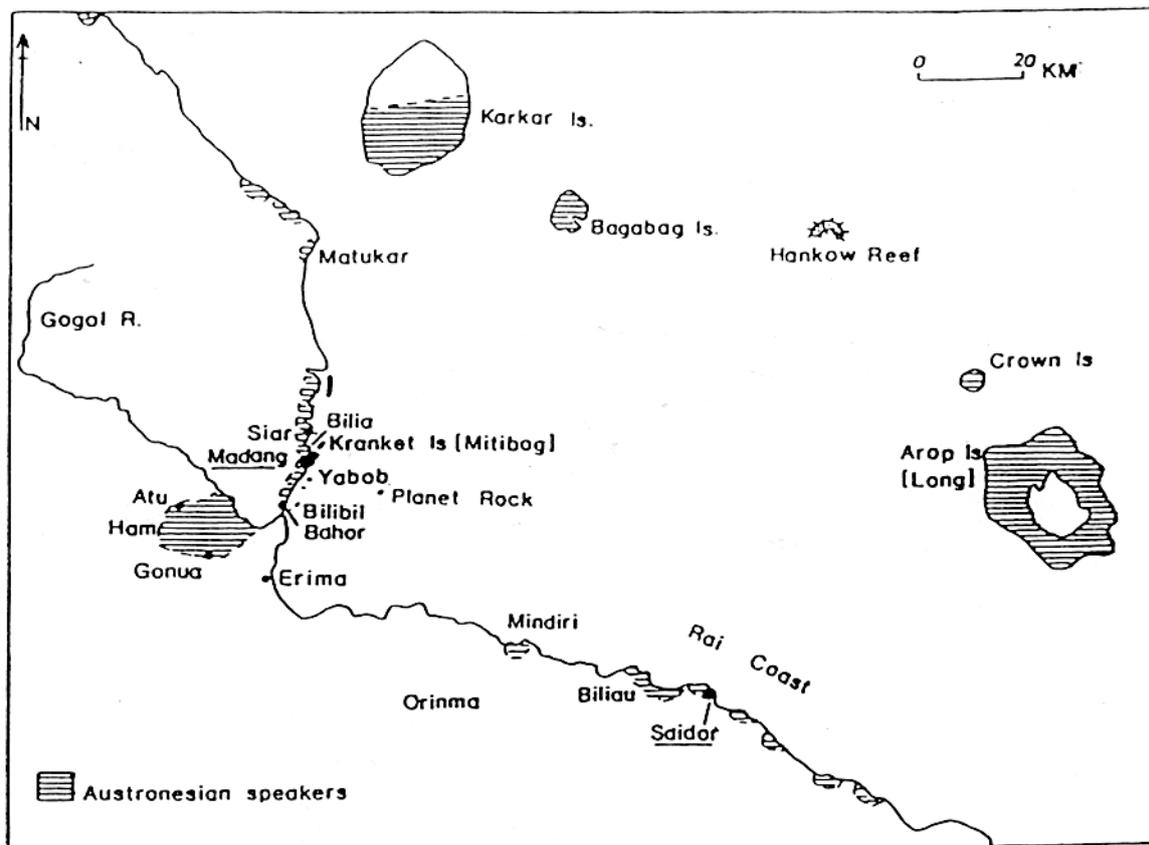


Figure 1. Map showing Austronesian speakers in the Madang and Astrolabe Bay areas, where they are found only in small pockets of villages. Members of the Belan sub-family are near Madang, on Karkar Island, on the North Coast near Matukar, and in the Gogol at Atu, Ham and Gonua. Members of the Astrolaban sub-family on the Rai Coast are located at Mindiri, Biliau and near Saiidor. Finally, the people of Arop belong to the Vitiaz Strait sub-family (after Z'graggen, 1975).

Note: There are several variations of the spelling of Bilbil in various publications. It seems, from speaking to the people themselves, that the island is Bilibil Island, whereas the village, now on the mainland, is Bilbil. I have also referred to the people as the Bilbil people except in quotes.

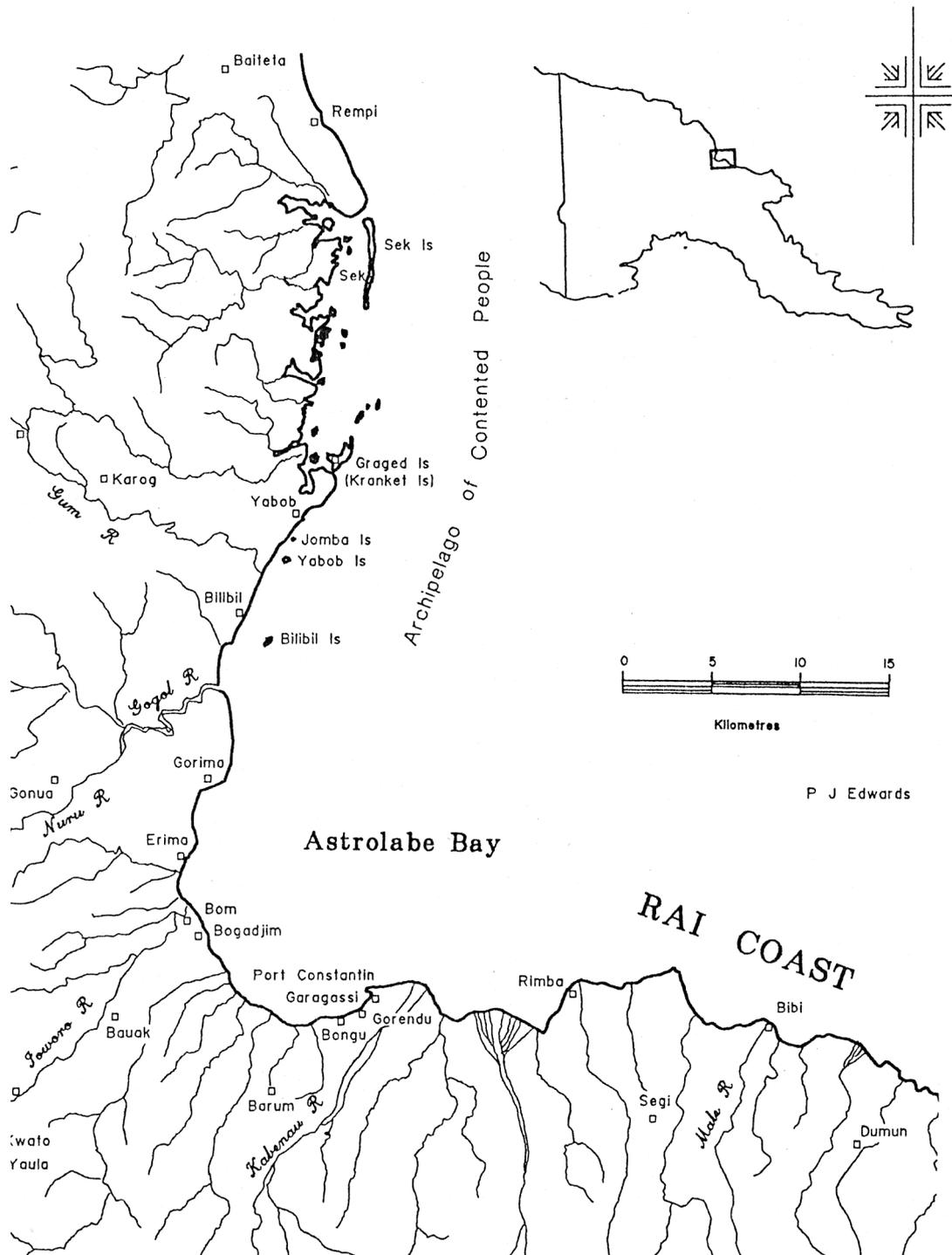


Figure 2. Archipelago of Contented People, Madang Province. (Courtesy Peter Edwards).

Author's Note

Madang, where our family lived for eight and a half years between 1971 and 1979, is surrounded by water. Its lovely harbour feeds into quiet lagoons with coconut palms hanging over the mirror-still water. Everywhere is the colour of the hibiscus, the bougainvillea, and the frangipani. My husband was with the Department of Lands, Surveys and Mines and I was able to visit villages from our house in town, regularly studying various aspects of their customs, mythology, magic and material culture including pots and canoes. I was also interested in the origins of the Austronesian speaking people, scattered in pockets along the north coast of Madang Province and living amongst a predominately non-Austronesian speaking population. During this time, I was associated with the University of Papua New Guinea but never applied for, or received, grants for my work. I was privileged to be accepted by the local villagers and spent many days speaking *Tok Pisin* in their homes or beside the village beaches. It was a time when the oldest men could still remember the German era when they had attended the local school for a rudimentary education.

People may ask why an Australian woman had the temerity to take on such a work. What would she know about these things? It is only because I was taught so well by the old canoe builders who wanted the process recorded for future generations. Whenever an elder of the village died it was as if a book of knowledge died with him. I was determined to collect their oral traditions while I had a chance. Over months and years, they explained their culture and their origins both in reality and in myth. I was a ready listener and recorder and, in the process, had wonderful experiences. I spent many days in Bilbil Village, which is about 6 kilometres from Madang. The villagers had not always lived there. Before 1904, they lived on Bilibil Island off the coast. But after a general revolt against the German Colonial Government, they had been forced to re-locate to the mainland.

My preliminary thesis was named *The Existence of Yomba Island near Madang: Fact or Fiction* and studied the oral traditions of an Austronesian language group, generally known as the Bel, who trace their ancestry back to a time when their people lived on Yomba Island. When Yomba Island apparently disappeared under the sea during a tsunami, leaving what is now Hankow Reef, they escaped to the mainland and were dispersed along the coast, settling in poor unoccupied areas of land and on adjacent islands. The timing of this tsunami has now been dated to about 500 years ago (Dr. Simon Day, earth scientist, Benfield Hazard Research Centre, London University. Pers. Comm.).

My first Masters Degree was in History and named *Austronesian Canoes of Astrolabe Bay. Traditional Trading Canoes and Customs of the Madang Area, Papua New Guinea*. This work was based on the study of the construction of a *lalong*, a one-masted canoe, in Bilbil Village in 1978. When I first heard of these canoes and studied old photographs, (Otto Finsch 1888a and Sentinella 1975), I encouraged the last of the canoe builders to build a full-scale canoe. It took eight months to build and I was able to accompany them on forays into the bush to collect the materials at each stage of the canoe construction. My second Masters thesis extended this work, comparing the trading canoes (*lalong*) and trade on the north coast with that on the south coast (*lagatoi*). This study will be the subject of a future publication.

Acknowledgements

In publishing this paper, there are many people I need to thank: first is my husband, Brian, who helped with the editing and presentation of the material; Professor Ian Lilley and Dr Sean Ulm of the Aboriginal and Torres Strait Island Unit at Queensland University; Dr Pamela Swadling; Dr Brian Egloff for refereeing this manuscript; many of my former colleagues who helped produce the original thesis; Anton Gideon and Lee Christensen who provided numerous illustrations; and we cannot forget the elders from Bilbil: Pall Tagari, Maia Awak, Damun Nomu Maklai, Gab Kumei and Derr Mul, and their clansmen who assisted in building the 1978 canoe. With the assistance of many people and organizations in Madang, we were able to construct this traditional canoe, using almost all the techniques and materials that would have been used in the past.

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Introduction

Although *Mariners of Madang* covers some of the same material as my original thesis of 1982, the diary of building the canoe is omitted here except for a short summary. This present work contains a manual of the process of building the *lalong* in 1978: the materials and tools used; the stages of production and the measurements; and the customs associated with sailing them. At this time, the canoe builders of Bilbil Village reminisced about the part the canoes once played in their lives when canoes were not just objects to be admired but were part and parcel of the culture; a means to traverse the seas and visit trade friends. The canoes also enlivened an otherwise mundane existence as the arrival of the mariners at each port-of-call with their cargoes of earthenware pots brought a time of festivity and pig feasts. In 1978, the old canoe builders recounted the magic that was used in every stage from felling the tree to sailing the craft on the open sea. People who came and watched the construction were sometimes quite emotional, saying it brought back memories of their childhood when they had seen these canoes sailing. Even now the people still retain some of their old ways: they fish in small canoes; go hunting in the nearby forest; build thatched houses; and make and use large earthenware pots to cook food for feasts or to use as trade items for food.

Around Madang harbour are small non-volcanic islands such as Kranket, Riwo, Sek, Siar, and Bilia and further around the coast, are the islands of Yabob and Bilibil. The people living here refer to themselves as the Bel Group and see themselves as having a common origin, backed by their genealogies and oral history. They believed that their people once lived on Yomba Island which sank into the sea over 12 generations ago. The island was once situated at Hankow Reef, an extensive sunken volcanic reef. The reason for Yomba's disappearance has been a matter of conjecture for over thirty years. Some earth scientists argued that it was only a mythical island even though all informants were adamant that it had once existed. Some oral traditions said it erupted before sinking but investigations showed that Hankow, although volcanic, had not erupted for 100,000 years. Other informants said that Yomba just sank into sea after a large earthquake and tsunami.

According to Patrick Nunn in his book, *Vanished Islands and Hidden Continents of the Pacific*, many islands have vanished in the Pacific for various reasons. Some were volcanic atolls which sank after earthquakes or tsunamis; others sank as a result of volcanic eruptions (2006: 160); some sank or are predicted to sink because of changes in the sea level (2006:17). Nunn studied the evidence of Yomba Island in some detail quoting at length from the Kranket Island informants. The fact that Yomba sank and the population moved is not unique at all. He cited a similar story of a group of islands that once existed in the Solomon Islands. Here 200 — 400 people living on the Ta'aluapuala islands managed to escape to the mainland when the islands began to sink perhaps because of a tsunami and/or earthquake and they were given land on the coast (2006: 156).

In recent years the cause of Yomba's disappearance has been studied by earth scientist, Dr Simon Day, who has dated it to 1550 A.D. Rocks thrown up by a large tsunami from Yomba have been found on the coast at Bilbil Village. The story of Yomba Island is one of the oldest to have been recorded in oral traditions in Papua New Guinea backed up now by scientific evidence.

In studying the common features of Austronesian groups near Madang, one can postulate the culture of those who once lived on Yomba Island: they would have spoken an Austronesian language; made pots of the anvil and paddle method; built large sea-going canoes; and been involved in long distance trade. They probably would have travelled as far east as the Siassi islands, using the stars to guide them and bartered their pots for food, wooden dishes and spears. The people from Yomba who settled on Bilibil Island had difficulty cultivating the stony ground since the small island was just a raised coral reef. As a result, they became mariners, using their canoes to trade pots for food hundreds of kilometres up and down the coast: they were sailing for survival.

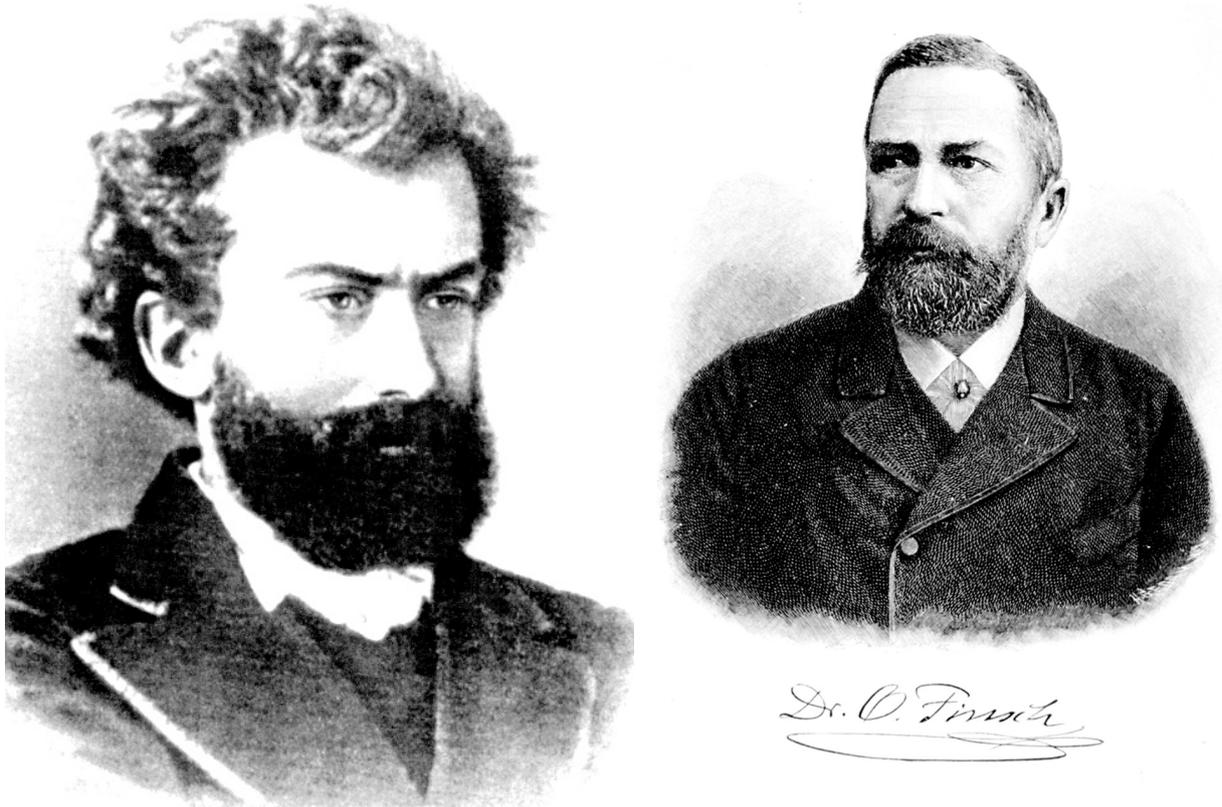


Figure 4, left, Baron Miklouho-Maclay (Tumarkin, 1982: Frontispiece).
Figure 5, right, Otto Finsch (Finsch, 1888: Frontispiece).

Their canoes were decorated with fluttering *tanget* and colourful designs on their sides. Large canoes, the *palangut*, were two-masted; the smaller ones with one-mast were called *lalong* and were more common. Fleets of *palangut* and *lalong* would set off from Kranket, Yabob and Bilbil on trading voyages, the *dadeng*, to the Rai Coast and beyond. Their trading friends along the coast recognised the canoes by the totems on the top of the masts. Although women usually did not accompany the men on their voyages, they provided the pottery - the basis of the pot trade. With these pots, the mariners ruled supreme in most of the trading transactions.

Descriptions of trading trips depended on various sources of information. At the top of the list are the taped interviews of the traders themselves. The Bilbil men in the 1970s could still remember going on trading trips before the war. Other evidence can also be gleaned from diaries, such as those of Baron Nikolai Miklouho-Maclay, the Russian scientist who lived among the people on the Rai Coast. He saw many of these canoes and was amazed at their size. His diary for October 1871 states:

At 4 o'clock a sail appeared from Cape Observation. It proved to be a large pirogue, of a peculiar construction with covered accommodation on top in which several people were sitting while only one person stood at the helm and managed the sail. I had not seen such a large pirogue in the neighbourhood. The pirogue went in the direction of Gorendu, but in about five minutes another one appeared, still larger than the first. On it there stood a whole little house or, perhaps, more exactly a large 'cage', in which there were six or seven natives, protected by a roof from the hot rays of the sun. On both pirogues were two masts, one of which was inclined forward and the other backwards (Sentinella, 1975: 40).

Trading as they did over the years, the Bilbil men grew comparatively wealthy. Otto Finsch noted the large canoes drawn up on the beach when he visited the island in 1884 on board the *Samoa* and described their rich culture:

Everything here pointed to affluence and wealth. The houses were larger and more substantial than the ones seen before, as were the richly adorned natives themselves. Bilibil is an affluent island and the inhabitants, who are the aristocrats of Astrolabe Bay, constantly have to maintain their position. The ugly spear and arrow wounds, which I saw on the bodies of several warriors, bore witness to this. Although their war-like appearance gave them superiority over the coastal tribes, they were also protected by the position of their island. Their prosperity was due to their being diligent and industrious. Not only were the Bilbil people great agriculturists, they were excellent canoe builders and traders. The island is famous for its pottery trade (Mennis, 1996: 27).

This rich island life was soon to be challenged by the German Colonial Government when they supplanted the traditional trading system based on earthenware pots with their own system of currency. The Bel people led a revolt against the Germans in 1904. As a punishment for their part, the Bilbil were exiled for three years and then forced to shift to the mainland where they continued to build their large canoes until World War II. The last of the canoes were bombed by the Japanese in 1941 and the men never bothered to build them again.

The National Cultural Council's booklet on the cultures of Papua New Guinea had a two-page spread of this trading canoe in 1905 viewing it as an important symbol of Madang's culture. It had two sails, one leaning backwards and one upright (Crawford 1977; 34-35). Until this present study, little was known about the construction of these canoes apart from a description by Miklouho-Maclay:

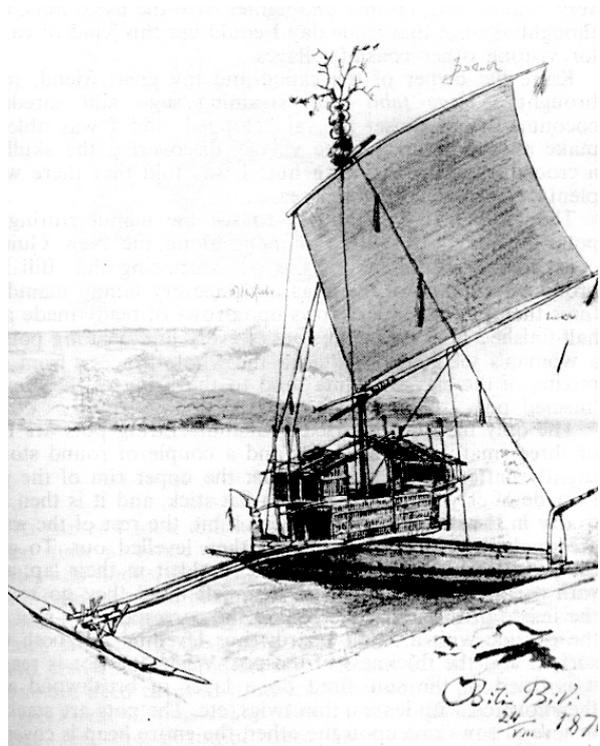


Figure 6, left. Bilbil man dressed for a singing (Finsch, 1888: 87).

Figure 7, right. Lalong illustrated by Miklouho-Maclay (Tumarkin, 1982: 181)

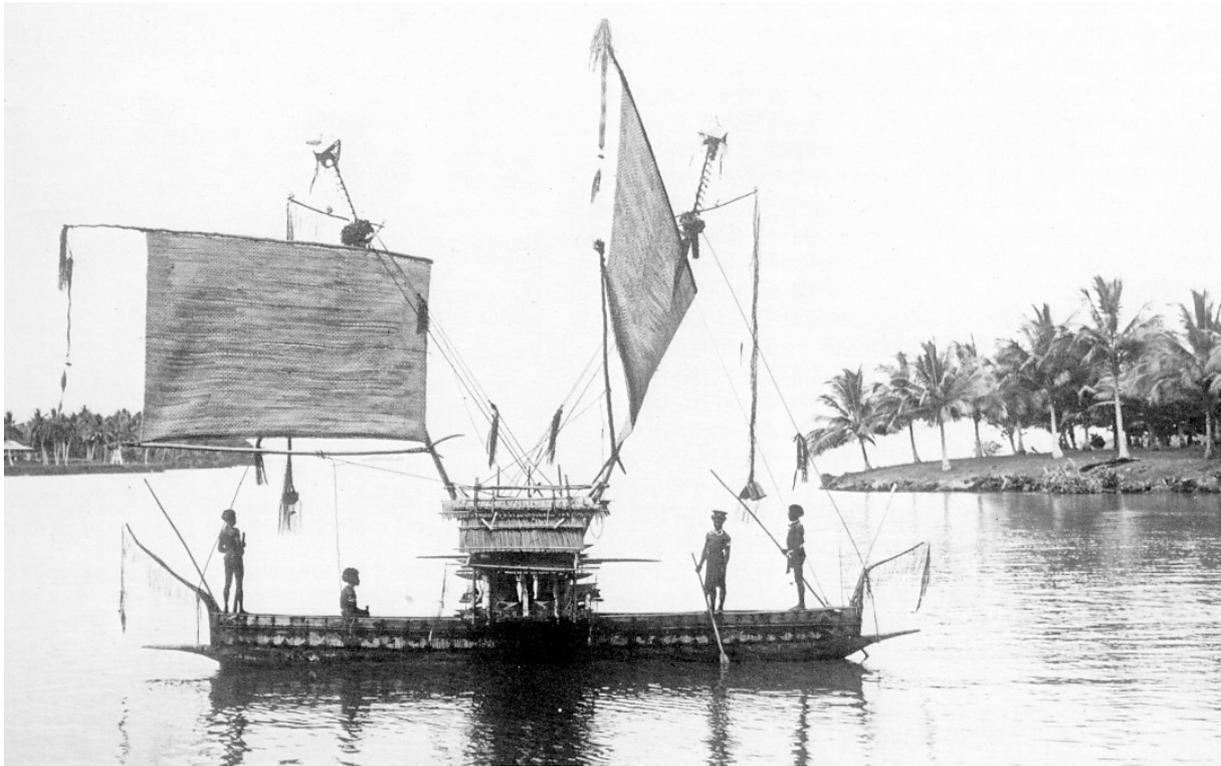


Figure 8. Palangut in Astrolabe Bay, 1905 (Crawford, 1977: 34-35)

These canoes deserved attention because of their construction. The canoe itself is distinguished from the small ones solely by its measurements. The length of some of them is approximately 10 or 12 metres, and they (like the small ones) are hollowed out of a single stout trunk. In order that the canoe will not swamp too easily, a long plank is 'sewn' to both sides of the hollowed out trunk, or there may be two, one above the other. In the sides of the pirogue and also in the planks, holes are made through which is passed a flexible cane, tying the planks to the canoe itself. The chinks and gaps left by the holes are caulked with wood from some kind of tree pulverised and soaked in water. The prow and the stern are finished off with a high, sometimes curved board, which is also carved. On one side of the canoe is an outrigger, attached to the boat by two crossbars.

On the crossbars of the outrigger is a platform, on which in the large canoes of Bili Bili, a whole hut is constructed, about two metres long and four or five metres wide. The walls are made from split bamboo, the roof from the plaited leaves of the sago palm. The mast divides the hut into two parts, on both sides of which are two long seats, which can accommodate two people lying down. Thus, counting the others who can sleep on the floor, the hut has accommodation for the night time, or in the case of bad weather, for not less than eight men. The upper half of the hut has walls, which can be taken down; even the roof can be dismantled in a very short time. In general, everything in the canoe is fitted out very conveniently and nowhere in the hut was any space wasted. Beside the mast itself, at the height of the seat, a flat box filled with earth was attached in which, in case of necessity, one could safely make a fire (Sentinella 1975: 130).

This description, while quite vivid, does not give enough detail for anyone wishing to build one of these canoes. It cannot be seen as a manual with step-by-step instructions with type of wood, vines, decorations,

dimensions etc. My aim is fill this gap by writing this manual, illustrated by diagrams and photographs. It is hoped that this will be detailed enough for boat builders of the future to use as a guide if they ever want to re-create one of these canoes or even a fleet of them! The last of these canoes had been built in the 1940s but memories of those trading canoes was still strong in nearly forty yeas later.

The Mariners of Madang

By the 1970s, there were only five men left who knew how to build these canoes - Gab, Maia, Derr, Pall and Damun. The following are short biographical notes on each of them.

Gab Kumei remembered quite a lot about canoe building, but not as much as the others. Gab was the first person I met when I visited Bilbil Village in about 1974. He had once been the *luluai* (headman), a government representative in the village. When I asked him about the canoes, he took me to an old man whom he assured me knew all about the canoes and had sailed in the canoes himself. This turned out to be Maia Awak.

Maia Awak was born in 1904, the year of the German Revolt, so he witnessed many changes in his long life. As a youth he had helped his uncle, Nomu, build the *palanguts* and went on trading trips, but he began to crave adventure and, between 1928 and 1933, he travelled around New Guinea. In 1935 he was back in the village and that year took part in the last of the big trading trips. Maia married Kobor and settled into village life. However, when World War II came to the Pacific, his people had to flee their

Figure 9. Maia Awak with a model of a palangut, now in the Australian Museum, Sydney.



village. After the war, Maia became headman of the Gapan Clan and took a hand in fixing bride prices, feasts and burials and liked to regale his grandchildren with stories of brave warriors of the past. He was always interested in the culture of his people and their belief in life after. He told me about *Tiningai* who inspected the souls of dead people entering the underworld village at Degasub on the Rai Coast. Only those with pierced septums of the nose would be allowed in. He worried about my prospects since I did not have a pierced nose but I declined all his offers to rectify the situation. After discussing the traditional canoes his people made, Maia was very happy to make models, which are now in Museums in Sydney, Townsville and Port Moresby. As he whittled away at his models, he would tell me stories of his sailing experiences of long ago. On and off, Maia and I dreamed of building a full-scale canoe but, for a few years, it remained just an idle dream. Then I met other men who knew how to build these canoes and the dream grew into a reality.

Derr Mul was Maia's cousin and headman of the Luan Clan. He could remember watching his father, Mul, build the large canoes and had helped with the smaller jobs, smoothing the planks and using iron tools bought at the German store. He was a quiet old fellow who lived with his relatives not far from Maia's house. Although he was crippled with arthritis, he was usually cheerful. Derr's son, Nalon, a government official, continued his father's interest in preserving the culture of the people.

Pall Tagari was the headman of the Dugus Lat Clan. His father, Tagari, had been a *tultul* (deputy headman) in the German times and had travelled to Africa and other countries. Pall was the Lutheran pastor at Bilbil and travelled to many other places giving instruction. Because of this, he was familiar with most of the languages in the Madang area and was fluent in at least six of them. This was most helpful when trying to contact villagers from other areas. He was a good organiser and a great walker. At his age, then 66, he thought nothing of walking into Madang and back again from Bilbil — a distance of ten kilometres.

Damun Nomu Maklai was headman of the Dugus Tan Clan. He had helped his father, Nomu, build these canoes, and was the one who spoke with the most authority. His grandfather was being born on Bilbil Island when Miklouho-Maclay was visiting the island in 1871. Maclay asked whether the baby was a boy or girl. When the answer was a boy, he said, "Well you must name him Maclay after me". So that was how his grandfather came to be called Maklai and. Damun's full name was Damun Nomu Maklai. He was very proud of his association with Maclay, who was so enthralled by their canoes.

So I knew there were five men in the village who knew something about the old trading canoes, but not one of them could remember all the details from start to finish. They had to pool their knowledge in endless discussions and arguments before work could begin on construction. I knew it would be a big challenge, but time was running out and, if the old mariners were going to do it, it would have to be soon. Apart from helping to initiate the project, it was my job to buy the rations, keep account of the money, liaise with the government, do the correspondence, arrange the transport and keep records of progress and sort out any personal differences between the men as they arose. The organisation of the labour and the building of the canoe itself were left to the five men, Gab, Maia, Damun, Derr, and Pall - they were the overseers of the project. They were also the headmen of their clans, Luan, Dugus, Gapan and Murpatt, which meant that every clan in the village was represented in the project. Without the knowledge and interest of these men, this canoe would never have been built in 1978 and the detailed knowledge of its construction would have been lost.

The following men took part from each clan:

Dugus Clan - Damun, Pall, Kumei, Rai, Siali, Pasagai, Yangier, Adeb, Hon, Masbud and Dumbel;

Luan Clan - Derr, Gab, Nail and Sikera;

Murpatt Clan - Naleg, Kore, Bagarin, Molimol and Lapiu;

Gapan Clan - Biu, Masil, Gain, Maia and Kubei.



Figure 10. The four canoe builders, Derr Mul, Damun Nomu Maklai, Gab Kumei and Pall Tagari

Very little was previously known about the trading canoes of Astrolabe Bay. When Haddon and Hornell, the authors of *Canoes of Oceania* tried to describe them in 1936, they concluded that, “no one has described the rig of these canoes in sufficient detail. Hagen alludes to, but does not describe the canoes of Astrolabe Bay and gives a good photograph of one at Bilibil with a single mast” (1991: 296). In the illustration by Neuhauss based on this photo, the masts are shown as projecting from the shelter with no other support (1991: 207). When the *lalong* was constructed in 1978, the mast was firmly embedded in the *puarang*, the mast step, which lay on the inside of the hull.

In 1978, the present researcher was there during the whole process of the construction, encouraging the men, providing financial support where necessary and solving problems that arose including personal differences between the men or being patient over delays caused by the weather or lack of materials. These materials needed to be supplied from the bush area or from the town workshops. One interesting thing about the 1978 canoe was that everything had to be made anew, including the hulls, prows and planks. Previously, when a canoe was built, there would have been old *damdam* (prows) and even hulls, stored away under a house to be used later. The only thing that could be resurrected was a large old oar.

The technical knowledge that was applied in these canoes was the highest technology reached in these traditional societies. The achievement of the people in the traditional society lay not only in the knowledge of constructing the canoe, but in designing it so it could be seaworthy in most weather conditions.

The canoe

In September 1977, the Madang Area Authority (later the Madang Provincial government) donated K700 towards building the canoe and the Project Manager of Japan and New Guinea Timbers (JANT) agreed to donate a log for the hull. Tomasin Do, of the Sausau Clan on Kranket Island, who had agreed to carve the hull, chose a log from a *mara* tree (*Rhamnaceae altopia*). The log was subsequently transported from the mill to Kranket Island where it was left to soak in the seawater for three weeks before being pulled ashore. It took many further weeks for Tomasin to carve the hull, which was then towed to Bilbil Village.

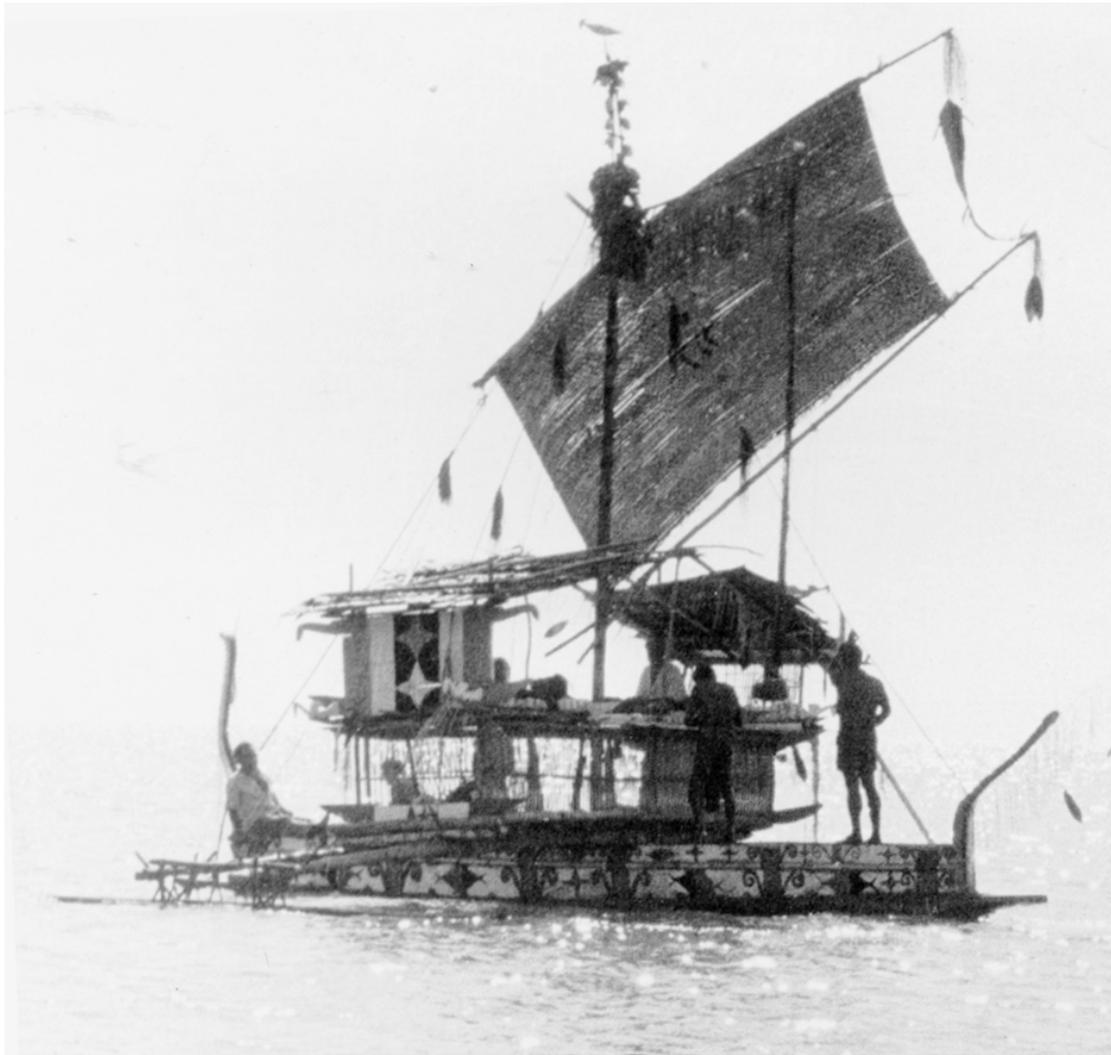


Figure 11. Lalong canoe sailing in Astrolabe Bay in 1978.

Over the following months, I went with the Bilbil men to get materials in a three-ton truck provided by the Area Authority. On one occasion the men clambered on board the flat tray while I sat up with the driver. When our truck pulled up at Ato Village, the headman came out to greet us and gave permission to get material from the bush there. We showed our gratitude with a gift of cigarettes and betelnut and drove on to a thick forest where the ground was low and swampy from recent rain. The mosquitoes, ants and bush mites were vicious. After splashing our way through the trees, the men cut wood for the *tilau* frames which supported the weight of the superstructure of the canoe. They then cut down a *gau* tree to be made into planks or strakes. The *gau* tree (*Terminalia combaefaceae*) was the preferred timber for the strakes. Not a heavy timber, it was strong enough to support the superstructure. There were five men working on this tree. When it fell it crashed against other trees they had to be cut them to let the large tree fall to the ground.

On another occasion, on the beach at Dogia Village, we searched for *wap* trees which had one sub-trunk at right angles to the main trunk and, from this, another branch extended upwards. Masil shouted that he had found the right tree and he began to cut a T shaped joint for the *atat* after marking off equidistant points on each side of the branch. He used a steel axe as opposed to the stone-axe his ancestors would have used.

Work on the canoe had hardly started when Maia Awak began to fail and soon died. We had lost a good friend. We were now down to four men who knew the art of building these canoes, Derr, Damun, Gab and Pall. Their characters were similar to their English equivalents: Gab was very talkative, he had “the gift of the gab” as the saying goes; Pall was a good pal or friend and had a great organising ability; Damun was a real diamond in his knowledge of canoe building and as a teacher of the younger men; Derr was the dear of the lot of them in the way he would cheerfully hobble down to the canoe site in spite of his afflictions. It gave him a new lease in life, for, instead of sitting at home with nothing to do; he instructed the other men who treated his knowledge with respect.

The construction continued up to its three levels with the shelter on top and the one mat sail towering over everything else. The canoe was finished in time for the opening of the Madang Provincial Government on 16 October 1978 and was part of the agenda for the festivities. Nalon Derr, the new Provincial Secretary and Derr’s son, proudly acknowledged the work of his father and the Bilbil people who had been working on the canoe over the last eight months. Visiting politicians gave speeches and congratulated the men on their wonderful achievement; Pall, Derr, Damun and Gab lined up at the canoe in the traditional finery and feathers; Mangin flogged the canoe with *tanget* leaves (*Taetsia fructicosa*) to rid it of the bad spirits; the women brought pots to load into the canoe; Derr played a traditional flute. There was a feeling of expectation with everyone was waiting to see the canoe launched, but it was decided that the sea was too rough. Guests were then entertained at a *mumu* feast and received gifts of small pots from the Bilbil people.

When the canoe finally made its first voyage, the men rose early to the beat of *garamut* drums, to use the southwest wind before it dropped. The early morning sun picked out the red designs along the strakes. From the top of the mast, the wooden cockatoo peered down as the men raised the sail and pulled the rope vines to anchor it. The canoe was dragged to the water over rollers to facilitate the process. The *teteb* shells (nautilus) and totem were clearly visible as intended to signal to trading friends of the arrival of

Figure 12. Singing at the launching of the canoe.



the canoe. As the canoe continued on its way, Pall, Derr and Damun checked on the sails and then settled down to regale the others with tales of past trading trips. They were all very proud and pleased with the way the *lalong* sailed along the coast, the first one to sail for forty years. Kube, wearing traditional *mal* (bark loincloth) had a dogtooth headband and a *bulra* decoration of pig's teeth on his chest which had been oiled a shiny red. Standing on the front of the canoe, he blew the Gapan call on his conch shell and the sound reverberated across Astrolabe Bay as the calls of his ancestors had once done.

Our family left Madang at the end of 1978 but I retained interest in the local culture. The years passed until 1994, when I returned to spend a further three months studying the culture and the changes that had occurred since I was last there. During this time, I visited Bilbil Village and sat talking with the men about old times, but many faces were missing.

“Where are Gab, Derr and Damun?” I asked.

“They’ve all died. All buried in the cemetery”, was the answer.

“And Pall?” I inquired. Pall Tagari had been my friend and guide, translator and mentor during the 1970s.

“He’s still alive but his memory has gone,” they said, shaking their heads.

Later, I caught up with Pall and it was good to see him again. I knew from his smile that he remembered me.

“Ah, Missus Brian”, he said. He had always called me that and now was no exception.

He was sitting outside at his daughter, Mina’s, house and had no communication apart from his greeting and his smile. While we sat there ten fat geese waddled past us along the village track, one behind the other, until they disappeared among the village houses. It reminded me of what had happened to Pall’s memories. They too were lost amongst the village houses. I was just so thankful that I had recorded his wonderful stories in the 1970s. Now he had no memories of the old trading days or the *lalong* canoe, and his friends, Maia, Derr, Gab and Damun were long dead. It was sixteen years since he and his friends had built the large trading canoe: too late now to resurrect this art as there were none of the old mariners left. Fortunately, I had recorded the whole process in photographs, tapes and notes.



Figure 13. The author with Pall Tagari in 1994 when he had forgotten everything regarding the construction of the lalong and the trading systems which he had remembered so clearly in the 1970s.

In presenting this manual of constructing the trading canoe in 1978 and the memories of the mariners who made it possible I would like to pass this knowledge on to future generations, not just the knowledge of building the canoe but the recognition of the part it played in the cultural scene of the Madang area. Who knows what the future holds? With the price of petrol increasing and the reserves of oil lessening there may be a return to building these craft, which sail the seas with wind power alone.

The Material Culture of Bilbil Village

Bronislaw Malinowski studied the Trobriand Island culture, on the eastern side of Papua New Guinea, during three expeditions between 1914 and 1920. He was able to watch the men make and sail canoes in the traditional way and made the following observation:

A canoe is an item of material culture, and as such it can be described, photographed and even bodily transported into a museum. But - and this is a truth too often overlooked - the ethnographic reality of the canoe would not be brought much nearer to a student at home, even by placing a perfect specimen right before him. The canoe is made for a certain use, and with a definite purpose; it is a means to an end, and we, who study native life, must not reverse this relation, and make a fetish of the object itself (1960: 105).

Malinowski urged researchers to study the economic purpose of the canoe: its uses; sociological data; customs of building and sailing the canoe; and the ownership, so we can understand what it meant to the people. "A craft is surrounded by an atmosphere of romance, built up of tradition and of personal experience: it is an object of cult and admiration, a living thing, possessing its own individuality" (1960: 105).

I followed Malinowski's advice of not seeing the canoe just as an object but as part of the whole material system of the village. Fortunately many stories have survived in the Madang area about the past trading system when many customs and ceremonies were regarded as essential if the canoe were to function properly. Discard certain magic ceremonies and the canoe would no longer have the power to operate or have the protection against evil spirits. Another consideration was that the form of the canoe was dictated by its function. The *lalong* was primarily a trading canoe built to carry over a hundred of the large red cooking pots of the area: the large pot cage with its bamboo slats was light enough to be built into the canoe and yet strong enough to protect the pots on the long sea voyage; the shelter on the canoe gave the men protection from the hot sun during their voyage across the water; the sails enabled the canoe to be manoeuvred using the trade winds and the totem on top of the mast told their friends on the Rai Coast of their arrival.

In his book, *Made In Niugini*, Sillitoe described the culture of the Wola people of the highlands of Papua New Guinea, concentrating on the manufacture of artefacts found in their material culture system in their natural setting. Sillitoe carried out detailed observations and kept a photographic record of different processes. He warned that anthropologists needed to study artefacts in context because "as traditional artefacts disappear, little evidence of the primitive lifestyle will survive and this study will predictably take on considerable importance" (1988:5). Sillitoe had three main steps in studying an artefact: 1. An introduction to the object; 2. A catalogue of the raw materials used to make it; and 3. A description of the process of manufacture (1988:15).

Barrie Reynolds studied the historical aspects of material anthropology and noted that, in the first half of the twentieth century, the emphasis of material culture research was on "the taxonomic and technological studies" and lacked interest in the "social and other contextual data" and was too narrow" (1987:156).

A study of the micro-environment of the Madang area shows that while the whole area may have the same temperature and rainfall, locations of just a few kilometres distance may have quite different resources, depending on the soil content. For example, some places may have clay deposits for pottery

making; others the red ochre for colouring the skin bright red for singing; some areas may be rocky and infertile, whereas others may have rich volcanic soil which produces the hardwood trees necessary for wooden plates, mortars and pestles and canoe hulls as well as being good for food crops. In Bilbil village, the technical knowledge of potmaking was jealously guarded by the villagers. If a Bilbil woman potter marries outside the village she is forbidden to make pots in another village even if clay were available. Any women marrying into the village is trained in the techniques. Even today this system still operates continuing a monopoly on the pots which are a prized export of Bilbil Village.

As noted earlier, the Bel group of villages in Madang including Bilbil, Yabob and Kranket trace their ancestry back to Yomba Island where their ancestors all made pottery with the clay they found in their environment. However when they left the island those who fled to Kranket island lost the art of making pots as there was no clay in their new environment; the Yabob and Bilbil people however were able to continue this skill when they found clay deposits on the coast near their islands..

R. Spier differentiates between the natural environment of the bush, mountains, rivers and sea and the cultural environment, which is man's way of adapting to the natural environment. He said that no man can live in a wholly natural environment because he will change it in some way. Furthermore he differentiates three major elements of the technological input as being knowledge, resources and labour (1970: 13). Each of these elements was important in the construction of the *lalong* in 1978.

The knowledge came from the five clan leaders but even they had to pool their knowledge and their memories because it had been so long since they had helped to build canoes in the late 1930s.

The resources needed to make this canoe had to be transported from bush and coastal areas to Bilbil Village, where the poor environment lacked these necessities. In addition, much of the forest had been cut back because of the expanding population.

The labour was found in the village itself, but this too had its limitations because many of the capable young men had other jobs or were busy in the village making gardens or building houses. However, there was a small group of men eager to learn the process of construction. They did much of the work instructed by the old mariners and were paid by rations of food.

In their article, Barlow and Lipset (1997: 4-36) described four sociological theories about the production of objects: beginning with Malinowski who emphasised the role of the object — in this case the canoe - in the social network of the village; the second theory put a heavy emphasis on the production of objects as found in Karl Marx (1976) and Sillitoe could be included here in this category; the third emphasised “the transformation through the course of use”; the fourth approach, which Barlow and Lipset followed, is “a meaning centred or semiotic framework”. They investigated the male and female views in each of five stages of the canoe construction in the Murik Lakes and concluded that men viewed the construction “in terms of initiation and war cult, while women viewed it in physiological images of pregnancy, birth and nurture” (1997: 4 to 36).

A parallel to this can be found in the *lalong* in Madang. The canoe itself is a metaphor of a married couple. The men said the hull of the *lalong* represented a man and the outrigger was a woman, who followed the man wherever he went. Furthermore, mother/child metaphors were used in the construction of the canoe. The small *tilau* (supports) were the child *tilau* and the large ones were the mother *tilau* which supported the main structure of the canoe. The same metaphor was applied to the strakes, with the large ones being the mother and the smaller ones the children. In this *lalong*, it was pointed out as being significant that the child and mother planks were taken from the same tree. As in nature, the large part of the trunk provided the bottom planks so the upper part (i.e. the small part of the trunk) was supported by the mother plank in both nature and in the canoe. In this present study, it is important to keep in mind the metaphorical or semiotic nature of the construction.

Furthermore the trading voyage, the *dadeng*, had a spiritual significance. The Bilbil people believed that when they died their spirits would go to Degasub on the Rai Coast where *Tiningai* guided the entrance to the spirit world. When the men sailed to the Rai Coast on a *dadeng*, they were following the spirits of their ancestors who had died and travelled to the underworld ahead of them. According to the Mager Dictionary, Degasub is a cave on the Rai Coast between Sel and Nom. "Two big rocks lying in front of the cave in the sea are called *Tiningai* concerning which there is a myth. The village of souls who have died is in that cave. It is widespread belief that the *nitun* (souls) of the dead go to this village. Only those with the nasal septum pierced are allowed to enter" (1952: 61).

In studying the outrigger canoes in the Cook Islands, Te Rangi Hiroa provided a detailed commentary on the manufacturing process, including their measurements and materials used from start to finish. He had simple but excellent illustrations to accompany the instructions and emphasised the need for canoe builders to stretch the vines taut before doing the next loop (1927: 1-28). Te Rangi referred to the ancient way of building canoes in the Cook Islands as if it were different from the one he was describing, whereas the Bilbil men were actually building the *lalong* following the ancient way of their forefathers who had taught them the process.

Different canoes built in Bilbil Village

The *kaut* is a small canoe used in a safe harbour. Up to four metres long, *kaut* are used for fishing and are still made today in Astrolabe Bay. It is common to see many of these small canoes drawn up on the beach in front of any coastal village.

The *mirorog* was an unhulled canoe, once found in the Madang area. On Kranket Island, it was called *pizigizag* and in Takia, on Karkar Island, it was known as a *ragarag* (Mager: 1952). The hull was a log about 6 metres long, but not hollowed out. The men would shape the log like a canoe and nail the *domo*, connectives, on top of the hull and then tie the outrigger on. They only made one platform and a small barricade of bamboo to protect the cargo from falling down and, after putting the mast up and tying the sail in place, they were ready for use. Because the log was not hollowed out at all, it is questionable whether this craft would actually qualify as a canoe. It is part outrigger canoe, part raft and of a most unusual design.

Because the *mirorog* were not made for very rough seas, the Bilbil sailed them only as far as Bongu and Bogati and not on the long trading trips. These canoes had the advantage that they did not swamp easily as the sea lapped over the hull. Sometimes, when the steersman stood on the end of the canoe, he was standing in the sea, as the water washed over the end of the canoe. If they broke up in the sea, they were easily replaced as they did not have built up sides. Damun Nomu Maklai did not see any *mirorog* and his father mentioned there had only ever been one or two at Bilbil. More evidence of their existence comes from Baio of Ohoru village near the Gogol Bridge. "We Mabor people used to build a certain type of canoe which was not hulled. It just had a log underneath". They called the canoe, *ragragwag*. "The sea washed over the hull, but could not go inside. They had a small house on these canoes on one side" (Mennis, 1981b: 74 - 77). Baio said that the coastal villages used these canoes to sail to Siassi. The Bilbil made their beautiful two-mast canoes, which took so much time and effort but, if hard-pressed, they would build a *mirorog*, an easily made vessel, to sail to Bongu. The Bilbil and Yabob may have copied this style from the coastal people.

The Large Trading Canoes

The trading canoes that are discussed in this book are the one and two-mast canoes of Bilbil. The length of the hull determined whether the canoe would have one or two masts. The hull had to be about ten metres long before it could support two masts. It needed to be this long so that the force of the wind in the sails did not push the front of the hull too far into the water. Damun said that if you put two masts on a short canoe, the sails would hang too far over the water and the canoe would sink. There were not as many two-

mast canoes, *palangut*, as one-mast canoes, *lalong*. Bashan said that previously Bilia Village had only one *palangut* and the same at Kranket, whereas there were many *lalong* at both places (Mennis, 1980b: 76).

The *palangut* were often a speciality of one clan. According to Ber of Yabob, the Kakon Clan was the main clan to build the *palangut* on Yabob Island and they held this right by tradition. In Bilbil Village, the Luan Clan members were the master builders of the *palangut* and even controlled the canoe building of the other clans and whether they built *lalong* or *palangut*. The canoe villages had a “patent” over their style and if other villages tried to imitate them, there could be trouble. Baio of Ohoru told how his ancestors, the Mabor, were involved in a big fight with the Bilbil when they copied their style of canoe without permission. The Bilbil beat their *garamut* to declare war and the Umuin people, who sided with the Mabor, did likewise. The fight was on the beach at Umuin and two men were killed on each side. The Bilbil then said to the Mabor, “now the fight is over. Two on your side have died, Mupet of Umuin and Kaku from Mabor. Now you can make canoes like ours if you want to but not other places”. They shook hands and made peace (Mennis, 1981b: 75).

Pall said that the Bilbil and Yabob men made larger canoes than the Kranket and Siar men who used their canoes mainly inside the Madang Harbour. He added that the Saidor men on the Rai Coast copied the Bilbil styles of canoes when one of their men married into Bilbil and learnt the technique (Mennis, 1981b: 42). In describing a *palangut*, Derr said that, “the sails on a *palangut* are near the middle of the canoe. One inclines in one direction and the other in the other direction and they can make the canoe cut through the waves quickly” (Mennis, 1980a: 98). There are many stories of the famous canoe builders of Bilbil. Kasare spoke of his father, Sui, who owned a *palangut* in which he sailed to the Rai Coast to procure bark clothes (*mal*), wooden plates and other things in exchange for the pots. When Sui was making his *palangut*, he received help from his clan (Mennis, 1981a: 55).

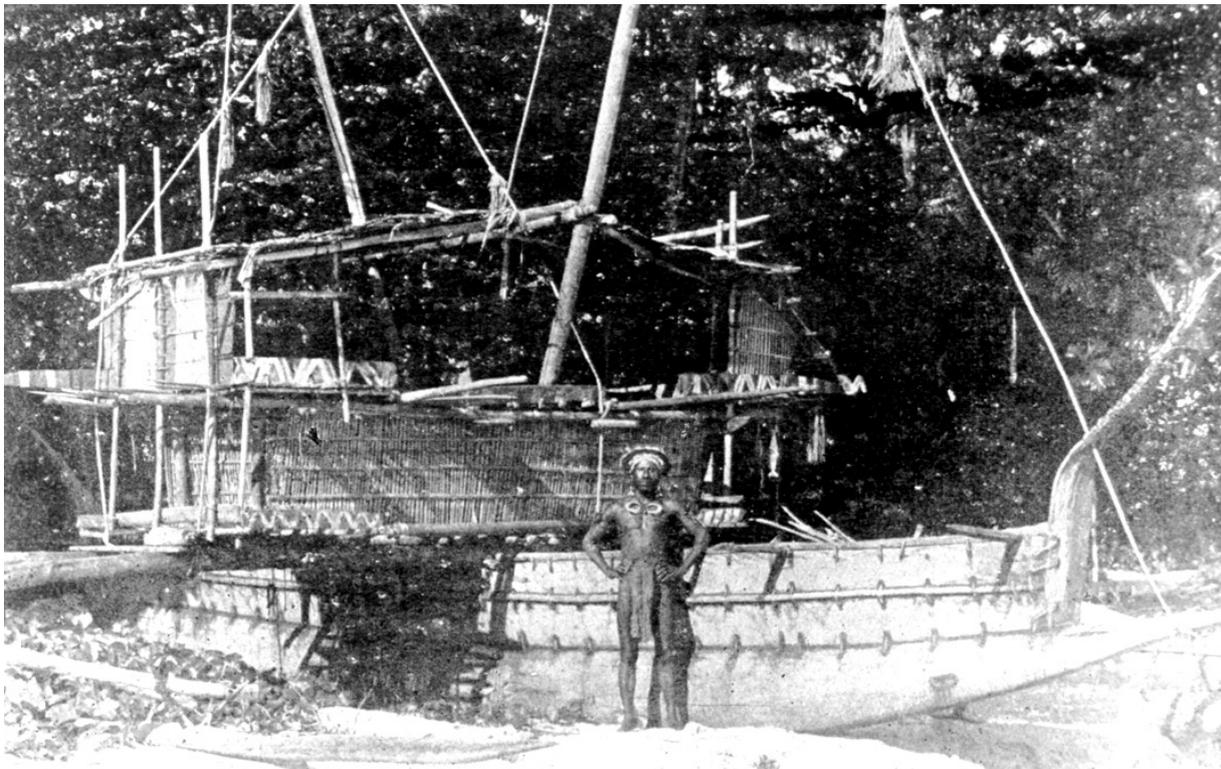


Figure 14. Beg, of Yabob, standing in front of a palangut built by his father, Keni, in the 1930s. (Anonymous)

When Damun's father, Nomu, built a *palangut* on the Margui Lat section of the Bilbil Island beach, he collected the material from the bush on the mainland opposite. It only took him a month to make the canoe as he had 20 to 30 men helping him from all the clans. When he sailed to the Rai Coast in 1935, he had six crewmen with him. Pall had a story about his grandfather, Bais, who bought the hull of a Siassi canoe with breakwaters which were carved with crocodiles and men. Onto this base, he built the usual Bilbil superstructure for a *palangut*. He was very proud of this smart looking canoe, which carried a lot of cargo (1981a: 55).

According to Mager, the *palangut* were used widely in the Madang area from Karkar, Riwo, Siar, Kranket, Bilbil and Suit, and down on the Rai Coast to Singor and Bongu. There were widely differing names for the canoes of Astrolabe Bay. In Siassi, they were called *wang* and, in outward appearance, their two mast canoes were very similar to the Bel craft. The main difference between the two canoes is the crocodile-shaped prow of the Siassi canoe compared to the curved high breakwater of the Astrolabe Bay canoes. Linguistically and culturally the Bilbil are very close to the Siassi people, both being Austronesian speakers. Trading in overlapping areas on the Rai Coast, the mariners would have observed each other's canoes. Both the *palangut* and the *lalong*, according to Haddon and Hornell (1975), would be five-part canoes with the hull, the wash-strakes on each side and the breakwaters at each end. They also have outriggers and are built up canoes. So a comprehensive description of them would be built-up, five part, outrigger canoes.

Maclay described a *lalong* but did not sit and watch the whole process of building the canoe. He described the finished object and was a bit vague about certain features, such as the caulking. When he sailed along the coast in these canoes he found them very comfortable. Little did he realise that the Bilbil and other island people would cease to build them within 70 years: land was alienated along the coast; canoe trees were cleared to make way for plantations; able-bodied men began to leave their villages to work on the plantations and goldfields; and other young men went to school at mission centres. Because of these and other reasons, the art of canoe making began to fade.



Figure 15. Finished lalong at Bilbil village.

Part 1, Construction of the *Lalong*

In former times, magic rituals were used at every stage of the construction of the *lalong* from before the trees were cut down until the canoes set sail on the sea. Here we have an object, a log, taken from the bush where the bush spirits protected it, it was converted into a canoe and dragged into the sea where the sea spirits were bound to be angry and attack it. The mariners used a secret language to protect it from the sea spirits.

When a suitable tree had been found, the men would talk to the *masalai* (spirits) in the tree before cutting it down. “*Masalai* go and find another tree. This tree is no good”, they would plead. They used special magic to keep their axes sharp. In the old days, once the hull had been shaped, it took a month or so to add the superstructure using stone axes, wooden hammers, and pigbone tools (Mennis 1980). Canoe owners co-opted members of their clan to help put the canoe together once all the parts had been collected.

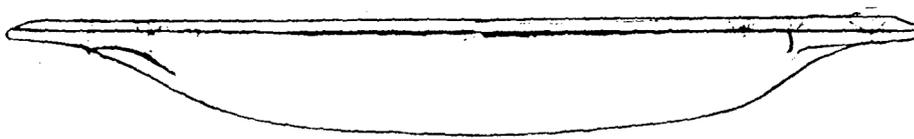


Figure 16.
Diagram by
Anton Gideon of
the shape of the
hull, 8.5 metres
long

1.1 *Wag Hun*, hull

In 1978, the hull was made from a *mara* tree (*Rhamnaceae altopia*). The log was 9.5 metres long when transported from the Jant Mill to Kranket Island where Tomasin Do, the carver, lived. He soaked the log in seawater for about three weeks and noted its natural topside. All logs have a natural topside and it is important to note this before any hollowing is done. Even a hollowed log will naturally swing back to this side in the upright position. Tomasin stored the log near his house as to dry it out before being hulled. Later, it was said the log had not been dried out enough and this contributed to the demise of the canoe sooner than necessary. Perhaps it was our fault, as we were anxious to get on with building the canoe. It was just as well we did as the canoe was then finished for the opening of the Madang Provincial Government in October that same year.



Figure 17. Tomasin hulling the canoe on Kranket Island.



Above, Figure 18. The outside of the hull was shaped with modern planes and rasps.

Below, Figure 19. A temporary outrigger was tied to the hull so it could be towed to Bilbil Village. To attach this temporary outrigger, the hull was not cut at all, but the lip of the hull held a thick stick lashed to the temporary booms which were attached to a float.



In traditional times, hulls were acquired from Kranket or Karkar Islands in exchange for pots, which were lined up for the length of the hull, so the longer the hull, the more the number of pots were exchanged. In 1977-78, Tomasin began to hollow the log with the help of two other men using axes and adzes until the hull was only a few centimeters thick. Each end of the hull was tapered into flat prows about 0.5 metre in length. It took several months to finish the hull with many interruptions by the weather. It was then towed to Bilbil Village using a temporary outrigger. Here the people splashed the hull with seawater and hit it with palm leaves and *gorgor* (ginger leaves) in the old way. After the arrival ceremonies, the canoe builders decided that the hull was too short for *palangut* so it could only be a *lalong*, a one-mast canoe. They did not measure it, but just went by the look of it.

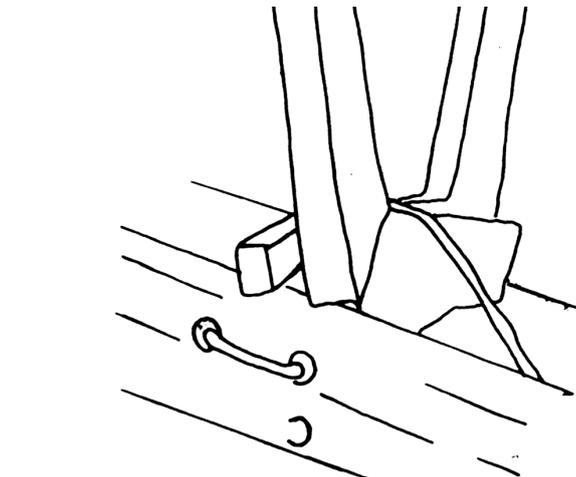
The next step was to obtain material from the bush.



Figure 20. Tomasin arrived at Bilbil with the hull which the people splashed with ginger leaves and coconut fronds. Traditionally they would have also thrown rotten fruit at the crew.

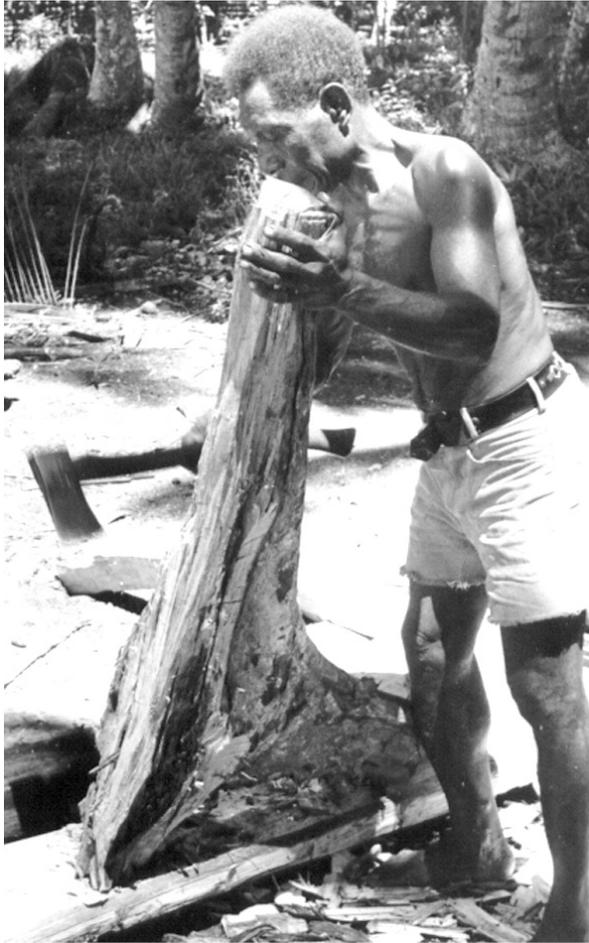
1.2 *Tilau*, frames for the side planks

The *tilau* (frames or elbows) in the *lalong* were L-shaped bends of timber or elbows lashed onto the hull in pairs, thus forming U-shaped frames to which the strakes were lashed. Haddon and Hornell described the frames as “bends of timber forming the skeleton of the hulls in built-up vessels” (1975: II, 7).



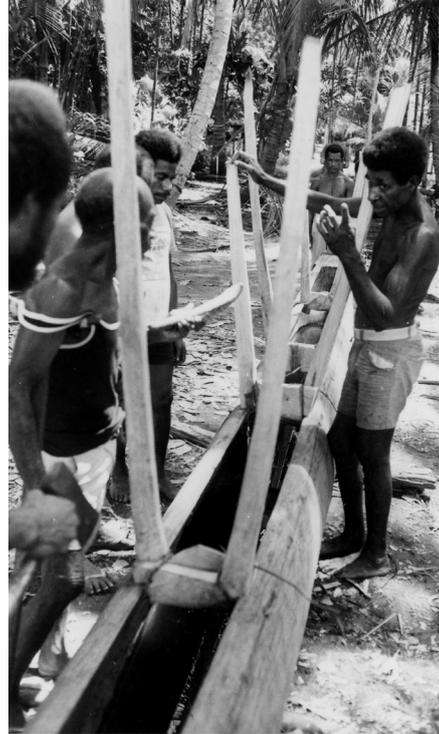
Left, Figure 21. Side view of the *tilau*, showing the holes that have been drilled in the hull about 5 cms from the top. Note the notch that was cut in the bottom of the *tilau* so that it fitted snugly into the top of the hull. These *tilau* were now ready to be lashed permanently in place.

Above, Figure 22. Illustration by Anton Gideon.



Left, Figure 23. The *tilau* frames of the canoe took most of the weight of the superstructure

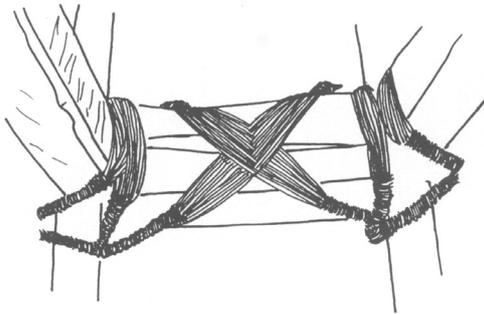
Below, Figure 24. Eight *tilau* lined along the hull.



The logs for the *tilau* frames were cut from *gau* trees (*Terminalia combaefaceae*) in the Ato bush which is in the Gogol Valley. The men hacked these L-shapes from the buttresses of several trees. Only one was taken from each tree so it was not necessary to cut a whole tree down to obtain the right joint. The knotty wood of the buttress made for a strong piece of timber. In nature, the buttress supports the weight of the tree; in the canoe, the *tilau* supports the weight of the superstructure of the canoe, together with the *atat*, the stanchion, which was added later.

Once cut, the *tilau* had to be shaped and trimmed with much effort to fit the hull of the canoe. The longest part of the L-shape, placed on the outside of the hull, was shaped so that it did not follow the 'tumble home' curve of the hull but extended it in a vertical line. A small niche was cut in the base of each *tilau* so that it fitted neatly onto the hull. Furthermore, so that the strakes could be flush with the hull, when added later, a space, a few centimetres wide, was left between top of the hull and the outside of the *tilau*. Four pairs of *tilau*, each 1.18 metres long, were attached to the hull. The two larger pairs *tilau tinan*, or mother *tilau*, were placed in the middle of the hull on each side of the centre. The two smaller ones, the *tilau nanun*, or child *tilau*, were placed on either side of the large *tilau*. All the *tilau* were stood along the top of the hull and held temporarily in position so they could be easily adjusted in line. Once the planks were tied to them, the tops of the outside *tilau*, that is the *tilau nanun*, were cut flush with the top of the planks. The two large central *tilau* were left to provide supports for the lower deck, the basis of the pot cage.

Once all the *tilau* were matched up, the next stage was drilling the holes. The relative positions of the holes were marked on the hull, two for each *tilau*. These holes, *wag hun bab* or *wag hun gogon*, were bored with a modern hand drill. In former days they were bored by sharpened pig bones, hammered with a wooden mallet. Once the canoe builders were satisfied that the *tilau* were in the right position, they were tied permanently in place. First the pairs of *tilau* were tied together in the middle above the hull



Above, Figure 25. The lashing, milil, which bound the pair of tilau together. When this photograph was taken, the strakes had already been lashed to the tilau.

Right, Figure 26. The milil lashing. Illustration by Anton Gideon.

with a *milil* lashing. This lashing was made from a bushvine, *wara mer* in the local language. The men cut rolls of it in the bush and soaked it in the sea for a week. If it was not soaked for this length of time it would get brittle.

Milil is the name of the crossover lashing which was used to tie the pairs of *tilau* together. This lashing was later bound around and around like a spring named *hunan*. (This same *milil* was used later when tying both sides of the canoe together). Extension posts were added later to the *tilau* to support the upper structure of the canoe.

1.3 Bai, strakes or side planks

According to Haddon and Hornell “a strake is a breadth of side planking running longitudinally the whole or part of the length of the hull” (1975 III: 6).

The men took *gau* trees from the Gogol bush for the strakes. When they needed to shift the logs to a more open space, they used smaller logs as rollers under the main log and continually shifted the last roller to the front. Steel wedges were used to split the logs in two. Previously, wedges were stone tools made specifically for this purpose. The end of the stone was flat and was hammered into the middle of the log at various intervals to begin the split. The next stage was to make the split bigger and prise it open using a long lever.



Left, Figure 27. In the Ato bush, the men split a gau tree to make planks for the canoe. Wedges were inserted into the split and crowbars pulled the two sides apart. Gab on the left gave instructions to the men. Care was taken to split the log evenly in two.

Below, Figure 28. Back at Bilibi1 Village, the two sides of the log were planed down. First, the rounded side was placed uppermost and was incised at right-angles every 10 cms or so. The axe was then inserted in each of these incisions and the log was chipped sideways as shown in the photograph. Note the almost completed plank on the left.

Right, Figure 29. Sikera marking the place for a hole to be drilled in the plank. This holes must be directly above the ones drilled in the hull. 27 of these holes were drilled along the length of the hull. In the old days the planks (strakes) were marked with charcoal from the fire. Here Sikera used a pencil and stick to mark the correct place.





Richard Parkinson, a noted early ethnographer, said of the Aitape canoe:

The washstrakes were made of soft wood. The tree was split down the middle by means of an axe and then placed with the flat side on the ground, the iron blade was shifted round so as to form an adze and the round part was shaved off leaving a rough and uneven board 25 to 35 mm thick. They were lashed to the upper edge of the hull and to each other by long liana, which was very strong, and about ½ inch thick (1900: 31).

In making the *lalong* in 1978, the planks were planed down, with small steel axes and modern planes, to match the length needed for the hull. The overall length of the finished canoe was 8.5 metres whereas the strakes were shorter at 7.16 metres. This was because the ends of the canoe protruded about 0.5 to 0.6 metres past the strakes. The garboard, the lower strake, *bai tinan*, was higher and a little wider than the top strake, *bai nanun*. It was called the mother strake and the smaller upper strake was the child strake. Both upper and lower strakes were the same length and were cut from the same tree. The strakes were between 35 and 37cms thick and 7.16 metres long.

The strakes gave height to the canoe structure and provided the basis for the superstructure which included the potcage and the shelters. They were lashed firmly in place in three ways: firstly to the hull; secondly to the *tilau*; and thirdly to each other. The strakes were joined to the hull by means of the *tilau* frames, which had been already tied in pairs along the top of the hull. The men bored 27 holes along the top of the hull on each side through which vines were strung to attach the hull to the *tilau* and also to the strakes using the *milil*. To attach the strakes to the canoe, *bab* (holes), were drilled on the top and bottom of the lower strake and the bottom or the upper strake and along the top of the hull, approximately 4cms in from their edges. To mark the holes, charcoal or red paint was used. Traditionally, these holes were made about 2cms in diameter by hammering a pig bone into the strake. The strakes, *bai*, were placed temporarily along the top of the hull and any further trimming was marked and done. Once all the holes were drilled, it was time to lash the strakes to the *tilau* and to each other.

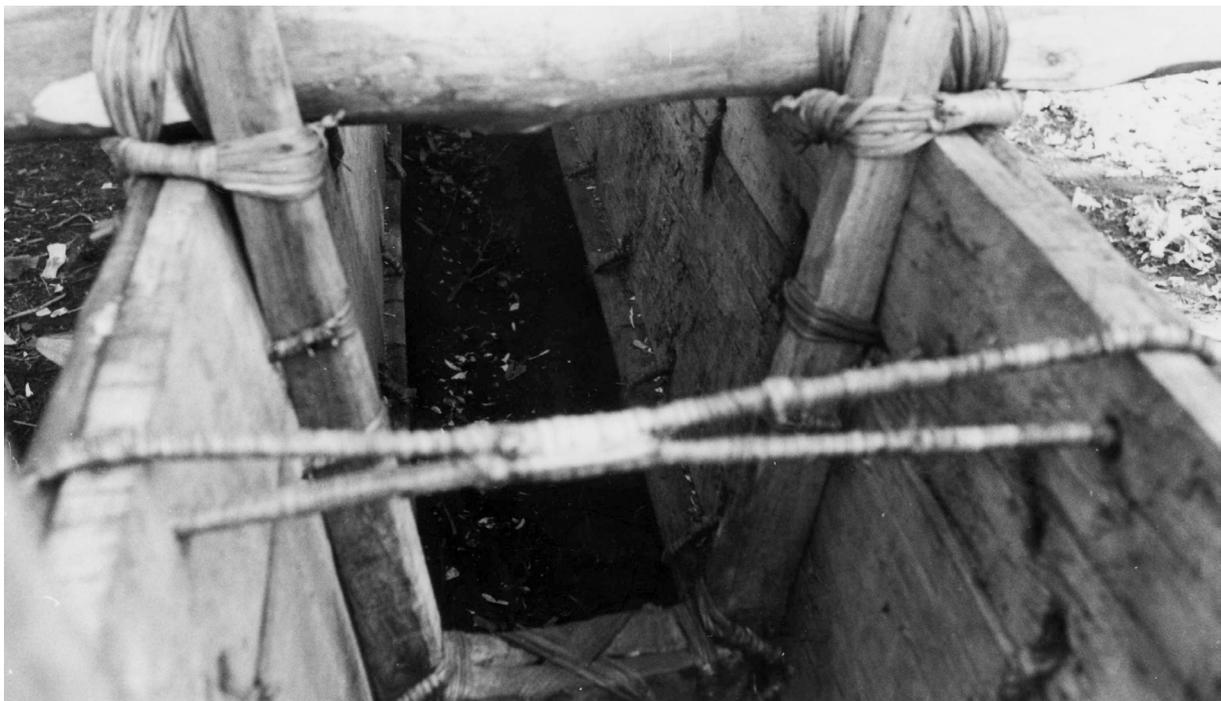
Before the *bai* were lashed permanently into place, there was much discussion about their correct angle with the hull, particularly on the outrigger side. Later both sides of the canoe were lashed closer together with vine tied through holes 5 cm from the top of the top-strake. The vine was bound across and back



Left, Figure 30. The planks were lashed firmly in place in three ways: to the hull, to the tilau (frames) and to each other.

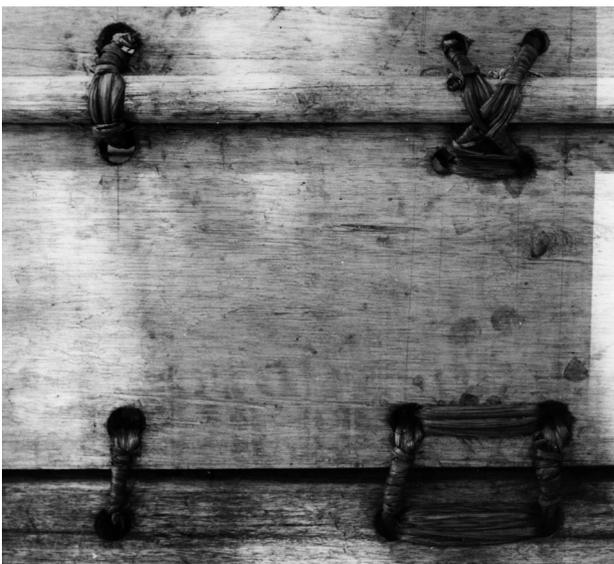
This photograph shows all of these lashings. One side of the canoe was more rounded to take the strain of the outrigger.

Below, Figure 31. The brace which lashed both sides of the canoe together gave it more strength. This lashing was done 6 times across the top and down through a hole about 5 cms from the top of the top of strake and back. The vine was then lashed around on itself in a binding, hunan.





Above, Figure 32. View of the lashings which bound the strakes to the tilau. The pair of tilau on each side will be cut level with the top of the top-strake

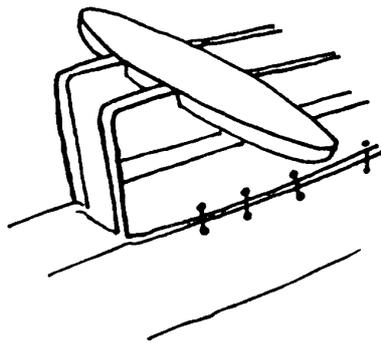


Left, Figure 33. The holes drilled for the top lashing were directly above the lower lashing. Different types of lashing were used. A batten covered the space between the two strakes, however, the space between the hull and the lower strake was not covered but later filled with dim putty.

six times, and then the binding was lashed around on itself. This lashing, *hunan* drew both sides of the canoe together like a brace.

1.4 Siger, batten or lath

The battens, *siger*, were thin laths which covered the seam between the two strakes. The lower space between the garboard strake and the hull had no batten to cover it but this open seam was slathered in *dim* (see 1.8) to make it waterproof. The batten was tied on through the same holes that tied the top and bottom strakes together.



Above, Figure 34. Gimagim was the name of the thwarts or seats for the crew. The gimagim on the left in the photograph was not supported by the tilau frames, but the ones on either side of the centre were supported by the tilau tinan.

Left, Figure 35. Illustration of the thwart by Anton Gideon.

1.5 Gimagim, thwarts or seats

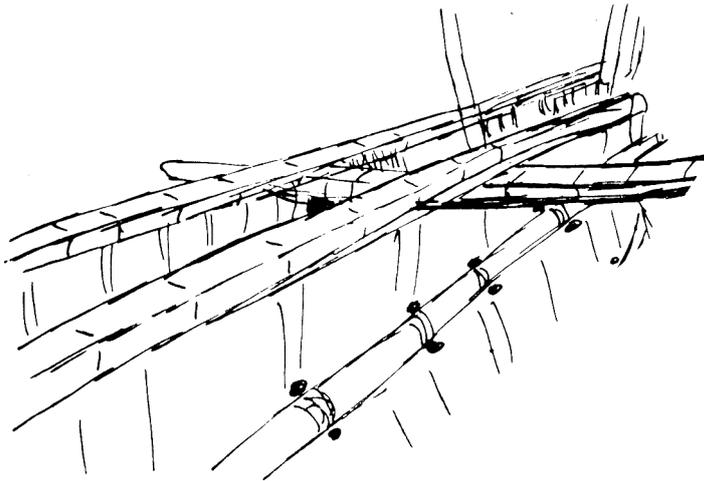
Thwarts are the planks or flat pieces of wood fitted between or upon the side of a canoe on which the paddlers sat (Haddon and Hornell 1975 III: 7). Six thwarts were inserted into the top of the top strake in the Bilbil canoe. A piece of the top strake was cut out the size of each thwart so that they could be inserted flush with the top of the strake. The two thwarts on each side of the centre were cut short and acted as braces rather than thwarts although the men still called them *gimagim*.

1.6 Ro, gunwale

Once the thwarts were tied in place, flush with the top of the topstrake, a long wooden rail, the *ro*, was laid along the top for the sailors to walk along when they were steering the boat, managing the sails, paddles and the like. The first lot of *ro* the men cut were discarded as being too narrow as they would hurt the men's feet when they walked on them, so new ones were fashioned. There was a continual trial and error.



Above, Figure 36. The ro (rail) ran along the top of the strakes covering the gimagim seats.



Left, Figure 37. Illustration of the ro by Anton Gideon.

1.7 Damdam, breakwaters

The breakwater is the “transverse vertical board closing the space between the ends of the opposite washstrakes or washboards” (Haddon & Hornell 1975 III: 6).

The *damdam* may be cut from the surface or aerial roots of one of a number of trees: the *gau* (*Terminalia combaefaceae*); the *tau* (*Pometsia pinnata*), a fruit tree; or the *katul* tree. As in the case of the *tilau* it was not necessary to cut the whole tree down. To cut the roots out, the men made a cut at the base of a tree where the surface root projected from the trunk and levered the root up from under the soil. Then they made another cut further along for the necessary length of the root. The width of the root had to be wider than the space between the side planks at the canoe so it could be trimmed to fit the space perfectly. The men cut several *damdam* and loaded them on to a truck. Seeing them leaning against a tree at this stage, they looked very ordinary. However they were of a very strong wood and difficult to carve. After several trips to the bush, a number of suitably-sized surface roots were found.



Above, Figure 38. The men cut the damdam (breakwater) from a surface root of a tree which lay in the mud.

Below, Figure 39. The men carried the damdam through the Ato bush. The damdam on the left was the one eventually carved for the front of the canoe

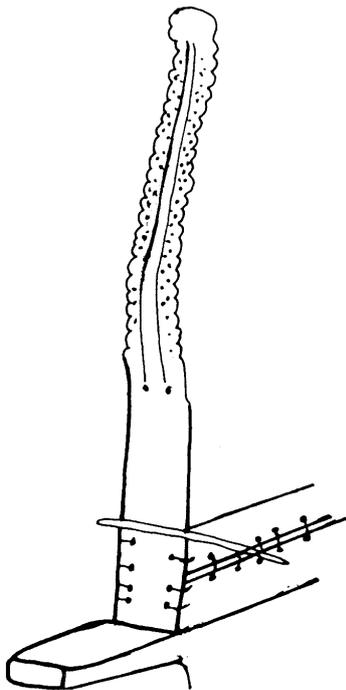




Left, Figure 40. Sikera carved the damdam from the root shown. The strong texture gave the damdam the strength needed as a breakwater. The art of carving these breakwaters was almost forgotten. Sikera smoothed the sual holes which had been drilled through the wood. A circular shape was then carved around each hole.

Below, Figure 41. Two men saw off the end of the strakes (bai) and the batten (siger) to make way for the damdam to be lashed on to the end of the canoe.





Above left, Figure 42. The damdam was set in position and the bottom lashing tied in place. The holes have already been drilled for the second, third and fourth lashings. Some of them were deliberately set at an angle to give greater strength to the lashing. Note the clamp which holds the damdam in position.

Above right, Figure 43. The damdam curved gracefully upwards. The clamp had now been removed from the base and set further up to give support while the men lashed the top binding into place. The canoe was now ready to be caulked before the outrigger was attached.

Left, Figure 44. The damdam tied to the strake. Illustration by Anton Gideon.

Opposite page, Figure 45. The dim bark had been soaked in the bottom of the canoe for many days and was now ready for the caulking. On the left are Pall and Damun, two of the old men who remembered how to build these canoes. Here they inspected the dim bark to see if it had soaked for long enough.

One consideration was to find two matching *damdam*, although this was not a major concern. Of the two *damdam* that were finally chosen, one curved gracefully upwards and the other turned outwards. Another consideration was the size of the *damdam* — ones that were too high would look more appropriate on a larger canoe. The two roots chosen were smoothed and shaped. Previously, this would have been done with stone axes and then smoothed with thorny leaves. The men remembered where the carvings should go on the breakwater and using a modern drill cut the holes and carved the design around them.

Before the *damdam* was set in the canoe, the ends of the strakes, battens and gunwale were planed down level on each side with a modern plane and then the breakwater was trimmed to fit this space. Holes were drilled into the strakes and the breakwater for the latter to be tied in place. Once carved, the breakwater was added to the end of the canoe, supported by the ends of the strakes. Furthermore, a groove was carved into the canoe hull for the *damdam* to be slotted into. To secure the *damdam* breakwater to the hull, lashings were purposely done at an angle to give strength when the canoe faced rough seas. The vine was looped around eight to ten times through each hole. Initially the *damdam* were held in place with a large metal clamp while the vines were lashed around. In former times some men just held them in place while others did the lashing. The hole in the breakwater for the rigging to be connected was called *sual*.

Otto Finsch, a German explorer and scientist in the German Colony, described the breakwaters:

In Astrolabe Bay the trunk of a tree 30 feet long is used to make the hull of a canoe. Above the hull are two planks to heighten the side of the canoe. To fill the gap between the planks is a large S-shaped breakwater (Mennis 1996: 30).

The S-shaped breakwater, devised by the Bilbils, probably depended on the available material but it also demonstrated their artistic abilities. The gracefully curved shape gave the canoe the appearance of a Viking ship to a European observer. At each end of the canoe, a stick called *dol*, was tied to the *damdam* to keep them straight. Also a strong rope, called *urir* was hung from the mast and small basket, *sareg dob*, tied to it for their tobacco and betelnut.

1.8 *Dim*, putty to make the canoe watertight

After the *damdam* was placed in position and before the outrigger was added, the holes where the lashings had been made were rendered watertight by caulking. This was done by filling the holes with putty made by scraping the bark of the *dim* tree (*Euphothiaceae glochition*), which had soaked for several weeks in bilge water at the bottom of the hull. This water was partly rainwater but more water was added by the men when needed. Over many days, the men kept testing the *dim* to see if it had soaked enough.





Above, Figure 46. Scraping the dim bark was a communal affair.

Below, Figure 47. While the women scraped the bark the men were busy applying the dim to the canoe. It had to be kept as moist as possible before being inserted. Every crack and crevasse was plugged with the dim which oozed red juice. Everyone wore old clothes for this job because the dim permanently stains clothes. Derr on the left wore a mal of old materials.





Above, Figure 48. Busy hands plug the holes through which the batten and two strakes were lashed together. The sinewy nature of dim putty is apparent.



Right, Figure 49. The dim sol tool.

Caulking of the canoe was a communal effort and was the one procedure where the women were given an active role. They sat and scraped the putty from the *dim* bark with large oyster shells [*kina* in Tok Pisin; *kairat* in the Bilbil language] (Mennis 1980a: 114). After scraping the *dim*, the women put the scrapings on large leaves and hurried it over to the men who inserted it into the holes. Once dried, it was a very effective way of caulking the canoe. Sungai described it as tough as teeth (Mennis 1980a: 32). During caulking, the canoe was tipped at an angle and supported with logs to give easy access to the holes that needed caulking. When one side was done, the canoe was flipped over to give access to the other side.

The tools used for this operation were made from pigs' bones named *dim sol*. The joint end of the bone was used as a handle and the other end was sharpened to prod the putty into the holes. It was an excellent tool for applying putty and nothing quite like it existed in hardware stores. Because the *dim* fibre was messy, dripped red juice and stained indelibly, the men and women wore their oldest clothes. Derr wore a traditionally style *mal* made of material.

Haddon and Hornell said Astrolabe Bay canoes were caulked with "shavings dipped in resin" (1975 II: 295). They were quoting from Semayer, an ethnographer who based his work on Lajos Biro's observations. Biro was a Hungarian collector who resided in the German colony in the 1890s. Because Haddon and Hornell relied on information culled from others they were not always accurate. This was mentioned in the introduction to their 1975 edition where the Director of the Bishop Museum in Honolulu commented. "Most of their conclusions must be considered inferential, owing to the admittedly imperfect historical and traditional material with which they worked" (1975 vi).

A detailed picture of the caulking process emerged when the canoe was being built in 1978. According to the informants, large trading canoes along the north coast of New Guinea were all caulked with scrapings of the *dim* tree bark and it was even known by the same name in many places (Mennis 1980a: 99). Perhaps the scrapings of this bark could be described as shavings but they were not dipped in resin. The *dim* had an adhesive quality in itself and the 'resin' was the juice which oozed out when the *dim* was scrapped. Mikloucho-Maclay noted, "The chinks and gaps left by the holes are caulked with wood from some kind of tree pulverised and soaked in water" (Sentinella, 1975: 130).

In 1900 Richard Parkinson observed a canoe being caulked in Aitape and although the village is hundreds of kilometres from Bilbil, the process was very similar.

All joints and holes are caulked with *tjeim*. The bark of the *tjeim* is steeped in water in the hull of the canoe, then the sticky juice is scrapped off from the inner side of the bark with a shell and mixed with charcoal obtained by burning the spongy inside of the stalk of the sago leaf. Thin slates of areca-palm wood are inserted under the lashings and over the seams inside and *tjeim* is rammed with a chisel made of hardwood or bone, a stone is used as a hammer. Holes or flaws are repaired in the same way and the *tjeim* hardens in a few days (1900: 31).

1.9 *Yand*, booms or cross beams for the outrigger

Booms were the next items added to the canoe. In this account I have followed the Haddon and Hornell definition, as follows:

Outrigger booms: spars laid athwart a canoe and projecting outboard on one or both sides. The distant extremities are attached directly or indirectly to the float. For the sake of brevity these are frequently referred to as “booms” (Haddon & Hornell 1975 III: 7).

The trees used for the outrigger booms in the *lalong* were called *yand* in the local language (*Rhamnaceae, macrocarpa*). *Yand* is also the name of the booms themselves. Before the booms could be added to the hull, the inside of it had to be emptied of the water which had turned putrid from soaking the *dim* bark. The hull needed to be cleaned and dried out. Next the hull was shifted to a more open space to allow room for the booms to be added. As they lifted the canoe, the men called out ‘*ario, o, salo*’ in unison, which was ‘onward we go’ in their language.

Once the canoe was settled in its new position, the men went looking for suitable logs for the booms. It took several trips to the bush to find the right *yand* trees. Damun explained that the booms had to have the same curve on them to look balanced. Once two suitable booms were found, the skin was peeled off them and they became shiny white and slippery to the touch. These were then carried back to the village on the men’s shoulders as they were not very heavy, being about 18 cms thick and 7 to 8 metres long.

The men leaned the *yand* logs against one side of the canoe ready to be put in place on the *sam* side. However, Gab arrived and pointed out that they were about to attach the booms to the wrong side of the hull. He said quite rightly that it was better to attach them to the side where the *tilau* frames were at more of an angle because on that side the hull and strakes were convex and more able to take the strain of the outrigger when at sea. This side was likened by Gab to the belly of a fat snake (Mennis 1980a: 34). The men then turned the canoe under Gab’s instructions. The booms were attached to the outer side of each pair of *tilau tinan*, the mother *tilau* that had not been shortened. A triangular shaped hole was cut through the topstrake underneath each of the *tilau* on each side of the canoe.

A thin pole was laid parallel to the hull between the holes and the boom to help hold the lashing in place. Only one of these poles was needed on each side of the canoe, as they were long enough to support the lashings of both booms. Thick vines were passed through the triangular shaped hole, around the boom and back again four times. Five men strained on the vine and then hammered it in place with a stone. The lashing was threaded around again and again and then lashed around the *tilau* on each side of the hull. The booms overlapped the hull on the other side the *tai* side, that is, the side without the outrigger, by at least a metre and these ends were tapered. Later the booms formed the support for the lower platform. The float was not added qat this time because it would dry out and crack. Meanwhile the outrigger booms were supported by temporary poles so the rest of the superstructure could be added on a level plane without the support of the float. When finished the total length of each boom was 6.9 metres.



Above, Figure 50. The men tied the booms to the canoe. Note the stick used to make the lashing firmer.

Below, Figure 51. The booms extended over the tai side of the hull away from the outrigger. This then formed the basis for the pot cage which was extended to give balance.





Above, Figure 52. The booms were laid on each side of the pair of tilau tinan which rest on the hull. As the booms were of a considerable size they weighed heavily on the canoe and in particular on the tilau which formed the base of the superstructure. The vine lashing was looped around the booms and through a triangular shaped hole and the top-strake many times for strength.

Below, Figure 53. The booms were temporarily tied to posts so that the atat supports could be tied in place before the float was joined on.





Figure 54. Derr gave directions as another man sharpened the end of the float which was 735 cms long, 115 cms shorter than the canoe itself. On the left of the photo is the stick used to centralise the float with the canoe.

1.10 Sam, outrigger or float

A float is “a log of wood or length of bamboo used as a counter poise, boomed out on one or both sides of a canoe” (Haddon and Hornell 1975 III: 8). The Bilbil *lalong* had only one float, which was connected to the hull by the two outrigger booms. The log for the float was called *sam* after the name of the tree (*Annonaceae cananga odorata*) from which it was made (Mennis 1980a: 34).

Derr showed the men how to taper the ends of the float, which was 7.35 metres long. The problem was to place the float exactly in the middle opposite the hull at a distance of about five metres. Lines were drawn in the sand at right angles both at the front and rear of the canoe and outwards to about five metres and the float was placed temporarily at this distance. The men then used a stick of suitable length and measured the right distance from the first lashing on the front of the canoe across to the float and the float was adjusted if necessary. This process was repeated from the lashing on the rear of the canoe. To gauge whether the float was at mid-distance lengthwise more measurements were required. When the distance was longer on one side than the other, the float was pushed along to half the distance it overlapped and then everything was measured again. Through this method the float was placed centrally to everyone’s satisfaction without the use of setsquares and measuring tapes (Mennis, 1980a: 37).

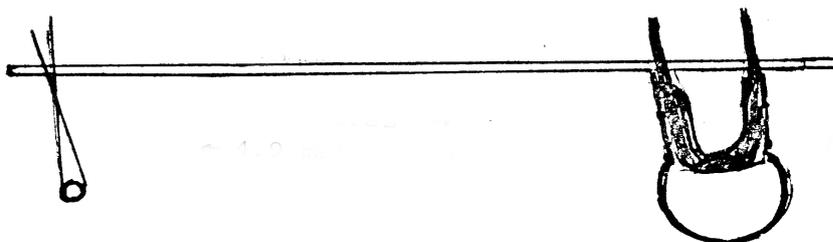


Figure 55. Outrigger on the left is 4.9 metres from the hull connected by the booms, the yand.

Damun discussed why the float must be shorter than the canoe: “If the hull and the float were the same length, the cargo on the canoe will be jolted when the canoe goes ashore. The float must be a bit shorter so that the hull of the canoe goes first onto the sand” (Mennis 1980a: 105). Gab said that the float is like a woman alongside the big canoe, which is like a man. “The float must go with the canoe just like a woman follows her husband”. Furthermore in the secret language, used to confuse the spirits, the word for the canoe hull is *tamol* (man), and the word for the float is *pain* (woman) thus reinforcing this imagery. Pall organised the men to raise the crossbeams to the right height so that the float could be attached with wooden connectives, (*dom*).

Richard Parkinson described the canoes found at Aitape:

In the large canoes there are for each boom four supports. These are shaped branches of hard wood on which a piece of the rain branch or stem is left; the base being securely fastened to the boom; they form the supports for the lateral crates (Parkinson 1900: 31).

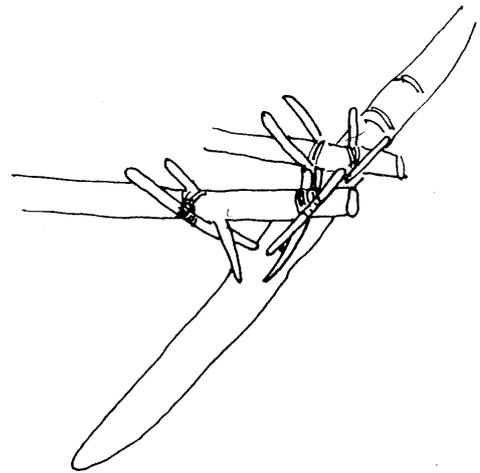
1.11 *Dom*, connectives

The *dom* must be strong to hold the float in place in relation to the rest of the canoe. They were short sticks sharpened at one end for easy insertion into the float at an angle crossing over one another. The boom was rested on a support in the correct position and the *dom* were then hammered in. If there were a strong sea and the *dom* connectives came loose the sailors needed to take the canoe ashore and hammer them back into place. If the *dom* became adrift altogether then the float would fall off and the canoe would tip over without the counter-balance of the outrigger. The position of the outrigger denoted the sides of the canoe: the outrigger side is the *sam* side and the non-outrigger side, the *tai* side. [Similar to the terms port and starboard].

Haddon and Hornell (1975: 295-6) were unsure of the shape of the connectives in the Astrolabe Bay canoes. At first, based on an illustration by E.W.P. Chinnery, they described the canoes as having Y shaped connectives and concluded that this was a cultural drift as no other canoes in the area had them. However

Figure 56. Four men hammered the dom connectives into the float in unison. The dom were under-crossed sticks which supported the booms.





Left, Figure 57. The finished lashing which connected the dom to the booms and to the float. This was a milil lashing. Note the stones used to hammer the dom in.

Right, Figure 58. Dom connectives illustrated by Anton Gideon.

they also quoted from Otto Finsch's description of the Bilbil canoes, "The two booms are curved and each is connected to the rather weak float by two pairs or undercrossed sticks."

In 1978, I watched the men hammer in the connectives which were under-crossed sticks and not Y connectives thus verifying Finsch's description. During the process, the men hammered in the *dom* sticks four at a time into the float in unison. The noise was quite deafening and carried far into the bush. It must have a particular sound of its own because, in traditional times, Damun said that the people in the gardens would hear the noise and say, "Oh the men are hammering in the *dom* now". It was part of the ritual of the canoe building that the four *dom* on one boom be hammered in together and then the four *dom* on the other boom. The men used both ordinary stones, held in the palm of their hands, or wooden mallets to hammer in the *dom* counting to ten as they hammered. The *dom* connectives were under tremendous strain and were put in sideways so they wouldn't slip out. Once hammered in, they were bound in place with an intricate binding. It was not the strength of each strand of vine that counted, by themselves, they break easily; rather it was the combined strength of many vines and the lashing over and over of the binding itself that gave it strength.

1.12 *Atat*, stanchions

Haddon and Hornell describe a stanchion as a "straight rod usually vertical in position, used as a support" (1991: 7).

The *atat* was a T-shaped piece of wood, used in addition to the *tilau* to support the two platforms in the canoe on the outrigger side. In collecting the right junction for the *atat*, the men searched along the coast near Dogia Village for the *wap* tree (*Calophyllum inophyllum*). While walking along the Dogia Beach which was swampy, the men were worried about crocodiles, one of the many dangers faced by canoe builders both past and present. The *wap* trees were found not far from the beach at the point where the light from the sea penetrates the edge of the thick jungle. Here large branches of the *wap* tree veered almost at right angles from the trunk towards the beach. From these branches subsidiary branches grow at right angles upwards to the sky. This provides a neat T-junction to be used for the support of the upper structure. Two *atat* were used to support the two platforms on the outrigger side of the canoe.

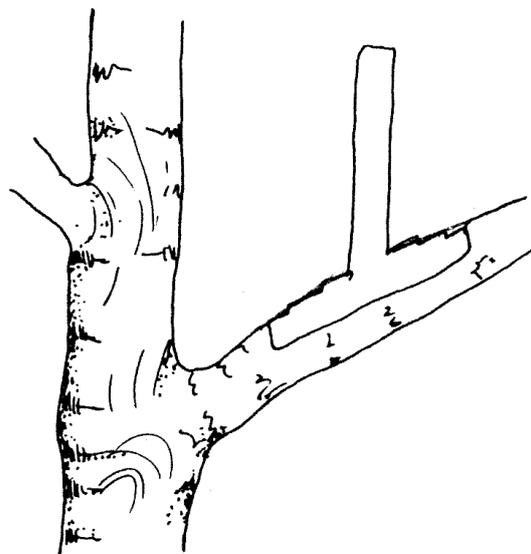


Above, Figure 59. View of the atat being tied to the canoe. The steps were cut into the timber to ensure a tight-fitting lashing.



Left, Figure 60. There were two atat on the canoe, one on each boom to take the weight of the superstructure along with the tilau frames. The atat was made from the wap trees which is a very stout timber.

Below, Figure 61. The branch of the wap tree from which the atat was cut. Illustration by Anton Gideon.



In the old days it would have been quite difficult to chop this section of the tree out. Although only two *atat* were needed, the men cut and trimmed six of them so that two suitable ones would be found. A smaller one, *nanau*, was also cut at this stage to be used on the mast to hold the sail. The *atat* were trimmed on the Dogia beach and then carried back to the waiting truck to be taken back to Bilbil where stepped shapes were cut into them. Each step was tied securely to the boom, and the lower platform ready to take the weight of the superstructure.

It is interesting that the use of the T-shaped joint is quite widespread in the built-up canoes in Papua New Guinea. Richard Parkinson described the canoes found at Aitape:

In the large canoes there were for each boom four supports. These were shaped branches of hard wood on which a piece of the main branch or stem is left; the base being securely fastened to the boom; they form the supports for the lateral crate (Parkinson 1900: 31).

1.13 *Bidil*, lower platform

Haddon and Hornell described these platforms:

A platform built upon the booms of a single outrigger canoe to accommodate crew, passengers or cargo. The outrigger is normally placed on the weather side to counteract the pressure of the wind upon the sail (1991 vol III: 7).

In the *lalong*, the base of the platform was formed by laying poles laterally over the booms. On top of these poles, other poles were laid parallel to the boom to form the frame of the platform. The bamboo flooring was then laid between them and carefully fastened in place with a cross-stitch done with a strong vine. A hole was left in the bamboo flooring of the lower platform for the mast to be stepped into the hull of the canoe. Once this platform was laid, the supporting posts were tied to the *tilau* extending their

Figure 62. This photograph shows the many levels of poles, posts and supports. The booms in the lower part of the photograph are seen with the supports for the lower platform (bidil) tied crosswise over them. On top of this and running parallel to the booms were two poles which formed the frame for the platform.





Above, Figure 63. View of the lower platform (bidil) showing the split bamboo flooring. Note the poles bordering the platform and the hole left for the mast.

Below left, Figure 64. Close-up of the vine which held the bamboo slats in place. Gab threaded this vine across the bamboo in a cross-stitch pattern.

Below right, Figure 65. Masil tied the frames to the supports as a basis for the super-structure.



height to the level of the second platform. This lower platform formed the base of the potcage or cargo hold for the canoe. It extended over the outrigger side of the canoe acting as a brace against the wind when on the high seas.

1.14 Piriar, mast

Before the final mast was cut, a temporary one was cut to estimate the correct height needed. Gab stated that it was too short. He pointed at the temporary mast as it lay on the ground. “The hull comes to here”, he pointed, “the platform and shelter come to here so that only leaves this much for the sail. It is not long enough, so they must cut a longer mast”. Derr said the height of the mast depended on the look of the canoe. His educated relative pointed out. “This is where the trigonometry comes in. They try the mast and look at the ropes which come from the top. They must be of a certain angle, not too narrow. This determines the swing of the sail. The mast won’t be as long as the canoe but nearly as long.”

A suitable tall tree for the mast was found not far from the village in the regrowth of a once cleared area. The men chose a *mara* tree (*Rhamnaceae altopia*) and cut a log much taller than was needed to be on the safe side. This species of tree was the type used for the hull though much thinner. According to Pall, different types of mast were used depending on where the canoe would be sailed to. If the canoe was only to be sailed locally to Yabob, a nearby island, they might only use a bamboo mast. If the canoe was going on a long trip, the mast needed to be made strong, but not too heavy, as it would unbalance the canoe. Furthermore the mast might break if the wind got too strong and caused the canoe to face the wrong way.

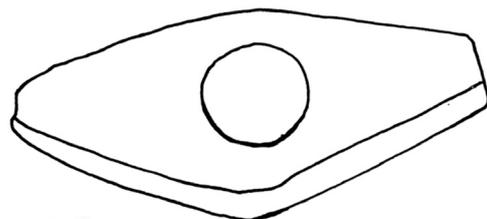


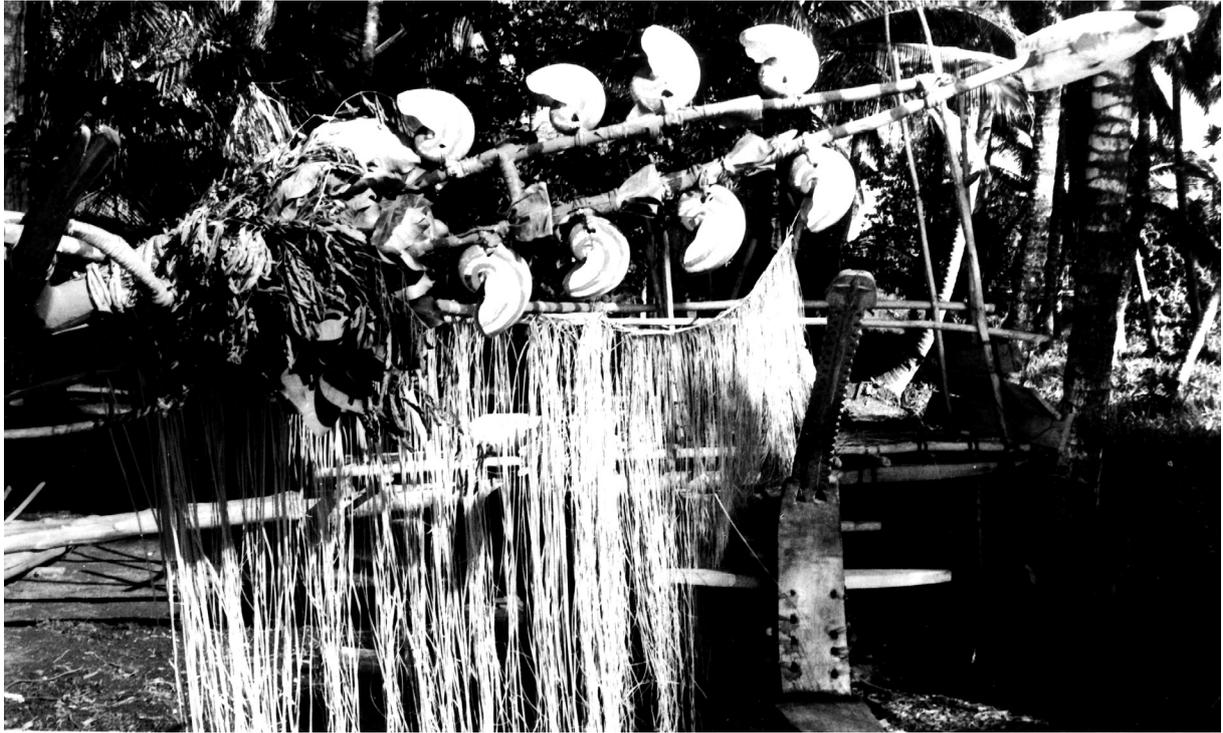
Left, Figure 66. Lifting the mast into position took the strength of four young men.



Above, Figure 67. The puarang or mast step sat on the bottom of the hull and supported the mast.

Below, Figure 68. Illustration of puarang by Anton Gideon.





Above, Figure 69. The gungun extended the mast by about 1.5 metres. Four nautilus shells called tetebs were attached to each side and were painted with red stripes.

Below, Figure 70. Leaves were attached to the gungun at the point where it joined the mast and also where the totem sat astride the top of it.



1.15 *Gungun*, mast extension

Before the mast was finally installed, it was laid almost horizontally on the beach while the mast extension (*gungun*), the mast prong, the totem rigging and the decorations were all added to it. The *gungun* consisted of two sticks, lashed together to the top of the mast. They then diverged and ran parallel to each other a few inches apart, for a distance of 1.25 metres before being lashed together again. One of these sticks extended to provide a perch for the white cockatoo, the totem of the Gapan Clan. Carved from wood the cockatoo was the highest point of the canoe. It was said that it looked out for fish for the mariners. On each side of the *gungun* sticks, four nautilus shells were tied and painted in red stripes longitudinally. Underneath the *gungun* was the *nanau*, the master prong which supported the sail. Carved in the shape of a long bird's bill, it resembled a clothes peg.

A vine *kanda* (*Tok Pisin*), (*Barringtonia analcarnaceae*), was collected in large coils from near the Gogol River where it hung down from high trees. The stays made from this vine were attached to the mast as it lay horizontally on the beach. Along the stays, yellow *morata* (*Metroxylon Sagus*) sago leaves were hung and spliced like the tassels of a grass skirt. The *saksak* leaves were painted red at intervals. The painter slathered red paint on his hands and then bunched the *saksak* hangings, applying the paint at about 30cm intervals. In this way all the *saksak* hangings were colourfully painted and placed on the mast before it was installed. It took several men to lift the mast into position, as it had to be lifted over the lower platform and into the hull where it rested on the *puarang* or the mast step. Once in place, the four stays hung from the top of the mast: one each were attached to the front and rear of the canoe hull; and another two to the sides of the canoe.

One part of the rigging was named *sareg dob* and on the end of this hung a basket, *urel mangas*. This swung out in the wind, but was drawn back by a small vine attached to it. The *sareg dob* was not very strong in itself so it was wrapped around the *bu* vine to give it strength. The *tanget* leaves on the rigging

Figure 71. Wap leaves covered the connection of the gungun mast extension to the mast. The mast prong, nanau, was also tied on here.





Left, Figure 72. The mast prong, nanau, was shaped like a long bill of a bird and had an eye carved into it at one end. The nanau held the rigging and acted as a hoist for the sail.

Below, Figure 73. Kube painted the lashings on the mast with red paint. These lashings connected the mast extension, gungun, and mast prong, nanau, together.

Opposite page top, Figure 74. Collecting the kunda vine in the bush for the rigging. It was used for the stays from the top of the mast to the fore and aft of the canoe. Passing through a hole in the break-water they were tied to the prow.

Opposite page bottom, Figure 75. The framework of the pot cage showing how posts were tied to the four tilau tinan. The large post in the centre was the mast which was stepped in the floor of the canoe.





acted as tell-tales to show the direction of the wind. Other tell-tales were long bark hangings in the shape of a fish. Pall described them as the compass for the canoe and warned that if the mariners did not watch them closely, they would not sail well (Mennis, 1980a: 107).

1.16 *Puarang*, mast step

The mast was stepped into a diamond-shaped piece of wood, which had a round hole in the middle and was laid on the floor of the hull. The mast was fitted into the circular hole and held in place by the two





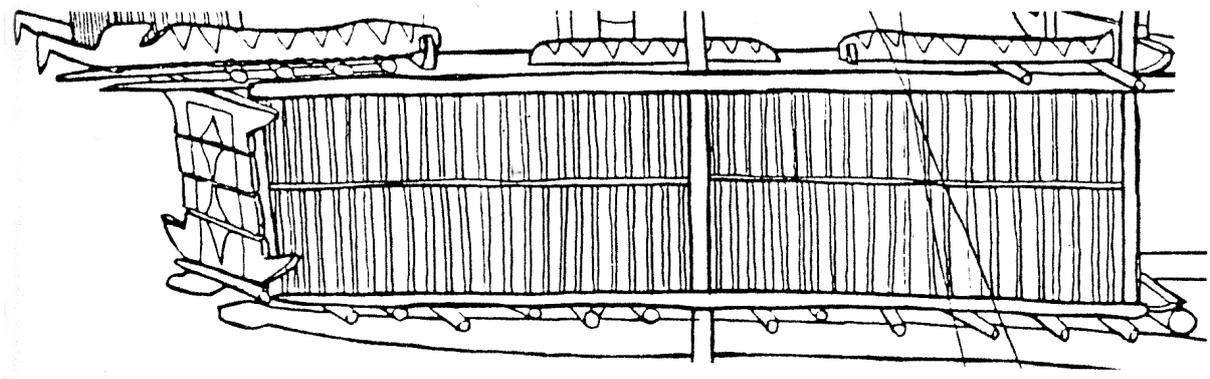
Above, Figure 76. Finished pot-cage. The mawarden compartment is seen on the left of the pot compartment.

Below, Figure 77. Illustration of the pot cage by Lee Christensen.

platforms and the shelter. The rigging came down from the mast to the breakwaters on each end and was tied through a hole, *damdam gogon*, in the *damdam* at each end of the canoe.

1.17 Gagarin, potcage

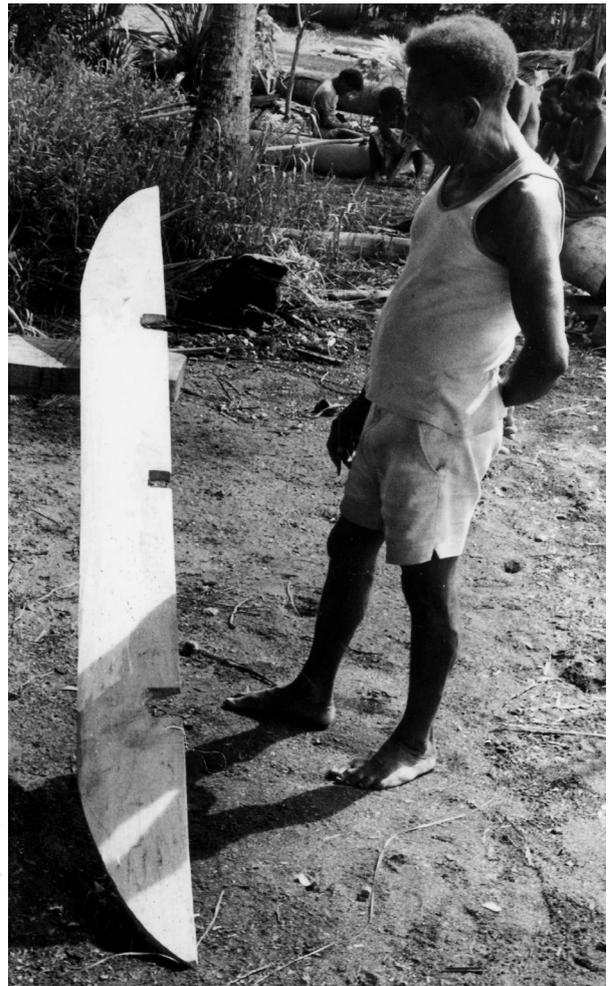
This was the cage-like pot compartment on the large trading canoes used for storing the cargo, particularly pots, for trading. Many pots could have been stored in the potcage, which measured 1.2 metres wide, 67 cms high and 3.8 metres long. The frame of this compartment was gradually formed as the construction of the canoe progressed. The base of the compartment was the floor of the lower platform. The frame was formed by posts which had been tied to the *tilau tinan*, and also by the *atat*. A rectangular box-like frame was attached to these supports and slats of bamboo were tied on. Each slat was 4 cms wide and the space between each was 10 cms. This allowed the wind to blow through and served to balance the



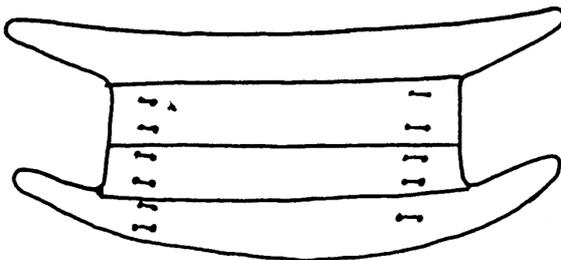


Above, Figure 78. Full view of the mawarden compartment in which firewood, food and coconuts were stored. This photo also gives a good inside view of the pot compartment and the ends of the pei boards and posts which jugged out from the upper platform.

Right, Figure 79. The flat pei board before it was attached to the canoe. Notches were made so that it fitted neatly into the finished canoe.



Below, Figure 80. Illustration of the pei sideboards of the outside of the shelter, illustrated by Anton Gideon.





Above, Figure 81. Outer view of the *pei* or side-board which protected the cargo from sea spray. From three long poles protruding through these *pei* boards hung three wooden fish carved from the poles so they fell at right angles. A very ingenious carving.

Below, Figure 82. Close up of the carved fish in the photograph above.



canoe. It also served as an effective restraint to prevent the cargo falling overboard. The rope used to bind the bamboo in place was named *sikandu*. It must be dried overnight before it can be used. On the outrigger side of the pot cage was a small compartment, the *mawarden*. The only access to this, when at sea, was by standing on the outrigger. The *marwarden* was used for storing food, coconuts and firewood - a little bulk-store.

Miklouho-Maclay's first impression of these large canoes was that there was a "whole little house" on the canoe but qualified this "perhaps more exactly a large cage". Richard Parkinson described the ones in Aitape as being like crates. He wrote, "a prominent feature of the large canoes is the raised central platform with a crate at each transverse end". One of the supports for the pot cage was the *atat*, which must be fitted to take the tremendous force of heavy seas when sailing.

1.18 *Pei*, sideboards

The sides of the upper shelters were the wide flat boards called *pei* which protected the sides of the potcage and the small compartments. The wood for the *pei* was named *sob* and similar to kapok in texture. A group of men planed the boards and then drilled holes in preparation to attach them to the canoe. These holes were drilled on the exterior and the boards were stitched with vines onto the supports and tied

in place from the inside. The *pei* was painted with a star design with white, red and black stripes on each side. Later designs were painted across the boards. Mager in his dictionary described the *pei* as, “the superior support opposite the *kakau* cabin on a big canoe” (1952: 243).

Haddon and Hornell based their description of these canoes in the letters and photos of Wegener (1903) Weule (1912) and Semayer (1901). They described the *pei* as “the lower half of the railing on the offside which is boarded and the outer surface of the boards is decorated”. This was true also of the *lalong* built in 1978.

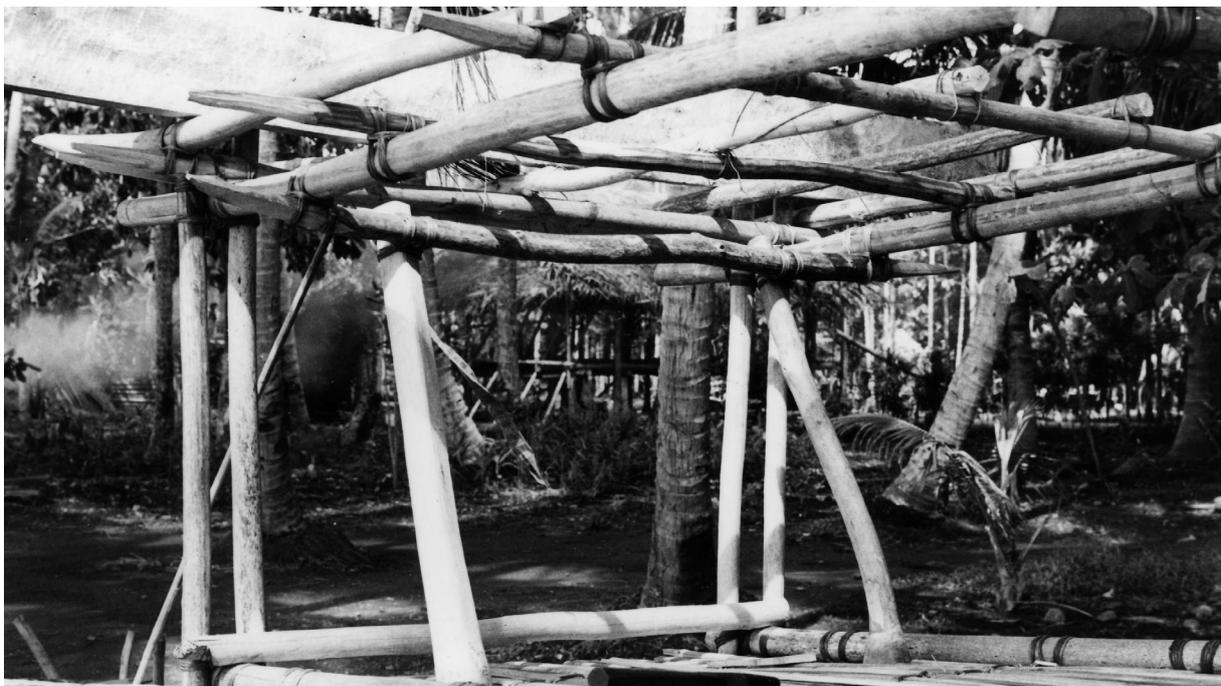
1.19 *Bidil nanun*, upper platform

The upper platform was for the crew to sit on, protected by the *morata* roof. The material for the upper platform was collected during the frequent trips to the bush. The outline of the shelter was made of posts, called *senenserer*. Other sticks were crossed at an angle above this second platform to form the roof at the next stage.

This second platform was made in sections. On each side of it, a cabin was made above the pot compartment. One of these smaller compartments was named *bamp*. Loose planks were then laid across the middle of the platform so that access can be made to the pot compartment. These loose planks provided a continuous second level to the canoe unlike the Aitape canoe that Richard Parkinson photographed at Ali (Parkinson, 1900: 3). The *lalong* had two separate cabins standing on the cargo compartment. Each cabin had its own small roof, which did not cover the centre of the canoe.

The top platform on which the shelters were built was named *susu*. The roof was strongly supported by the *tilau* and the *atat*. The side of this shelter was named *pei*, which was painted with a star design in white red and black stripes. From the side of the *pei*, carvings hung from poles which projected from the top of the lower platform.

Figure 83. The supports for the upper platform. The two main ones were the atat which were attached to the boom and extended upwards at an angle.





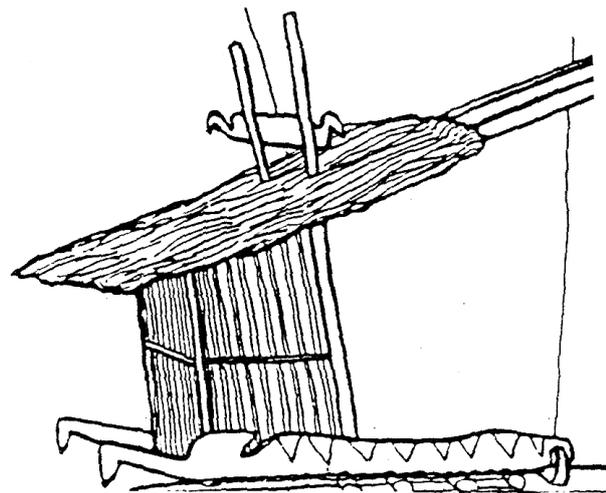
Above, Figure 84. Damun working on the bamp compartment.

Below, Figure 85. This small compartment called bamp was alongside the captain's platform on the bidil nanun or upper platform. This small compartment was used for storing blankets, bilums and small trade items away from the sea spray.





Above, Figure 86. A side view of the captain's cabin with the bamp compartment behind. Pall sat in this cabin when the canoe was at sea.



Right, Figure 87. Illustration of the bamp compartment by Lee Christensen.

1.20 *Ia tuan*, roof

To make the thatching for the roof, the men removed the stem from *morata* leaves, which were then bent over a piece of bamboo about 2 metres in length. The leaves were overlapped two at a time to the middle of the previous leaves. To 'sew' the leaves together, the skin of a vine, *mogou*, was peeled off and the vine sharpened at one end. This vine was strong enough not to need a needle and was simply pierced through the leaves in straight stitches. Once the leaves were sewn over this bamboo stick, each small section of roofing was named *pit*. When these sections were attached, the finished roof was then known as *ia tuan*. The name for the whole shelter was *yoyou*.

The roof on these canoes was one of the most remarkable features. As already mentioned, Miklouho-Maclay described it as looking like a house (Sentinella 1975: 40). However it more resembled a shelter than a house, because it was open on both sides. If the sides were blocked as in a house there would be too much wind resistance and the canoe would overbalance very easily in heavy seas. The supports for the roof, *senen serer*, were tied to the *tilau* and the *atat* to give them further support.

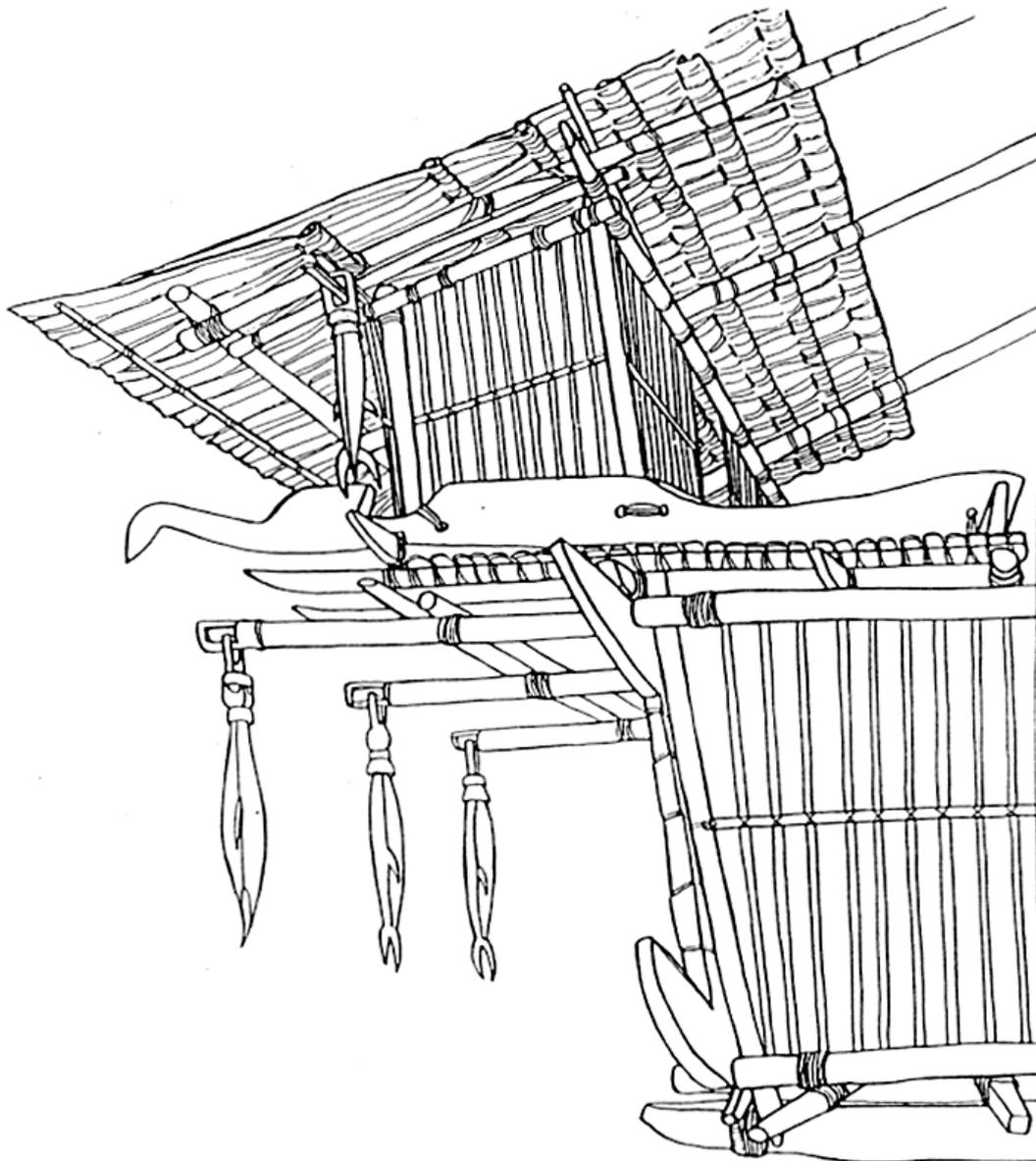


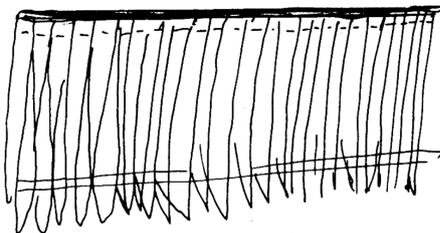
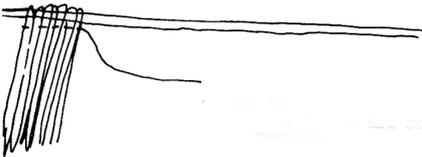
Figure 88. Illustration of the upper compartment, bamp and roof by Lee Christensen.



Figure 89. To make the pit mats for the roof, the men first removed the centre from many morata leaves, which were then doubled over a piece of bamboo and sewn in place.



Above, Figure 90. Masil adds another pit mat to the roof of the canoe shelter.



Left, Figure 91. Leaves sewn together to make the roof. Illustration by Anton Gideon.

Miklouho-Maclay really appreciated the shelter on these canoes when he travelled in them. He noted the shelter was two metres deep and 4 or 5 metres wide. This was larger than the shelter on the 1978 *lalong*, which was under 1.4 metres deep and 4 metres long. The roof Maclay described was made of sago palm and the walls of split bamboo. He estimated that there was sleeping room for eight men in the hut of the canoe. “Beside the mast itself at the height of the seat, a flat box filled with earth was attached in which, in case of necessity, one could safely make a fire” (Sentinella, 1975: 130).

1.21 *Banid*, sail

The outline of the sail was marked on the sand near the canoe in a rectangular shape five metres by three metres. Two poles (*silail*), five metres long were laid on the ground three metres apart and held in place with six short stakes driven into the ground. The men then proceeded to lay the warp of the matting, using the *mara* vine. At first the ropes were 6 to 10 cms apart but after much discussion more were added so the sail was better able to catch the wind. Next strips of *garabud* leaves were woven through the warp of ropes to form the matting for the sail. It took two days to prepare the sail, which then had a large red fish painted on it. The poles, used to make the sail on the ground were removed, and new ones added. Then the sail was then rolled up and stored in a house



Above, Figure 92. The men marked the size of the sail by placing the two poles at the correct distance on the sand. Here they were tying the warp to the poles. They decided that these warp vines were too far apart and more were added.

Opposite page, Figure 93. Men putting the finishing touches on the sail. The two poles were later removed and forked booms were added which enabled the sail to be attached to the canoe.

Below, Figure 94. A close-up of the woven sail showing the warp called mara made from the vine of the same name. The weave was made from pandanus leaves.





To hoist the sail, a halyard was looped over the mast prong and ropes were attached to the sail so it could be pulled up. The lower sail boom was forked to attach it to the mast. When the sail was being rolled up this boom was detached from the mast and rolled with the sail. When sailing, ropes were pulled to turn the sail around to face the wind. Pall said: “You can turn the canoe to give wind to the sail, but if a very strong wind comes you must turn the canoe back the other way. If you don’t do this, the canoe will sink. If the wind is too strong, the men would roll the sail up to save the canoe. If this is not done, the mast might break or the outrigger might lift up high in the air and the canoe will overturn” (Mennis, 1981a: 105).

1.22 Painted designs and decorations

Totem on the mast

The Dictionary of Anthropology describes a totem as a natural object, especially animal, assumed among North American Indians as emblem of clan membership (1986: 278). This practice was not limited to the North American Indians, but was used throughout the Pacific. In Papua New Guinea, some clans chose natural objects such as the tree branches chosen by the Murpatt clan in Bilbil Village (Mennis, 1981a: 41).

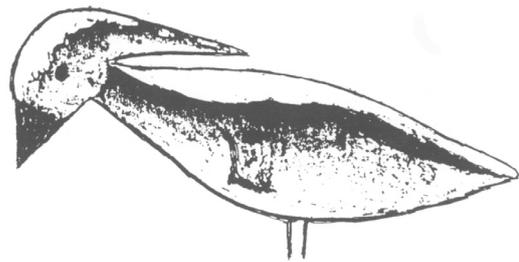
There were differing opinions of what the *sinasin* totem of the Dugus clan represented. Damun described it as a sign of the sun (Mennis 1981b: 10) whereas Pall said it was the half moon sign (Mennis, 1981a: 42). As Pall was the leader of the Dugus Clan, I have preferred his statement.

In Bilbil village, the Luan Clan had an egret whereas the Gapan had a cockatoo. A Bilia Island clan had a black bird. Most of the birds were water birds, which was understandable on a canoe where they were fitting totems. It was significant to mention here that the legend of how the pots came to Yabob features this nest of leaves at the top of the mast and a little bird that lived in it (Mennis, 1981: 69). It was against the *lo* (custom) to use the totem of another clan. If the Bushmen stole the totem of the canoe and used it on their houses, there would be big trouble. The totem was a sort of flag which identified the canoe for villagers along the coast. They would see a canoe arriving and say, “That is the totem of the Dugus Clan from Bilbil”. If they had particular trade friends in that village they would know to hurry down to the beach with their trade items.

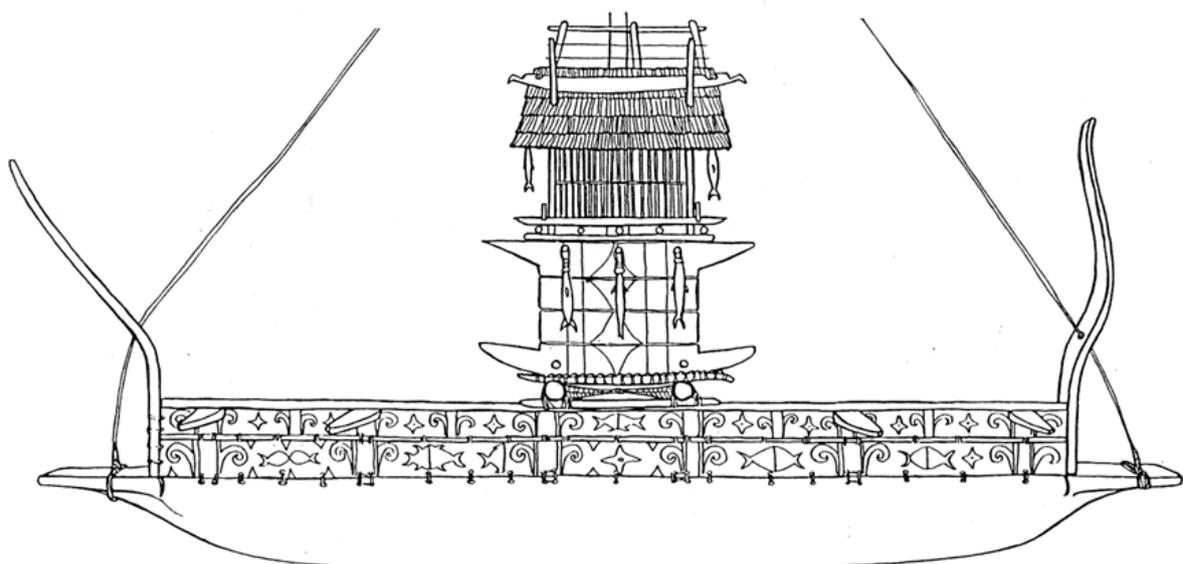


Above Figure 95. The star patterns on the pei boards were painted white and red on a black background. Star designs were also used along the plank sides. The large designs with the curls on each side were called maru in the Bilbil language. Fish tails and pots were also used.

Right, Figure 96. Wooden cockatoo, the totem of the Gapan clan, was put on top of the mast. Illustration by Anton Gideon.



Below, Figure 97. Star fish and leaf designs on the side of the lalong. Illustration by Lee Christensen.





Above, Figure 98. Gab mixing paint for the designs. He used half coconut shells to mix the red ochre in. The seeds called tamol bem are under Gab's right arm. One coconut shell contains the red clay tan bem which was combined with the crushed seeds, dim juice and sea water.

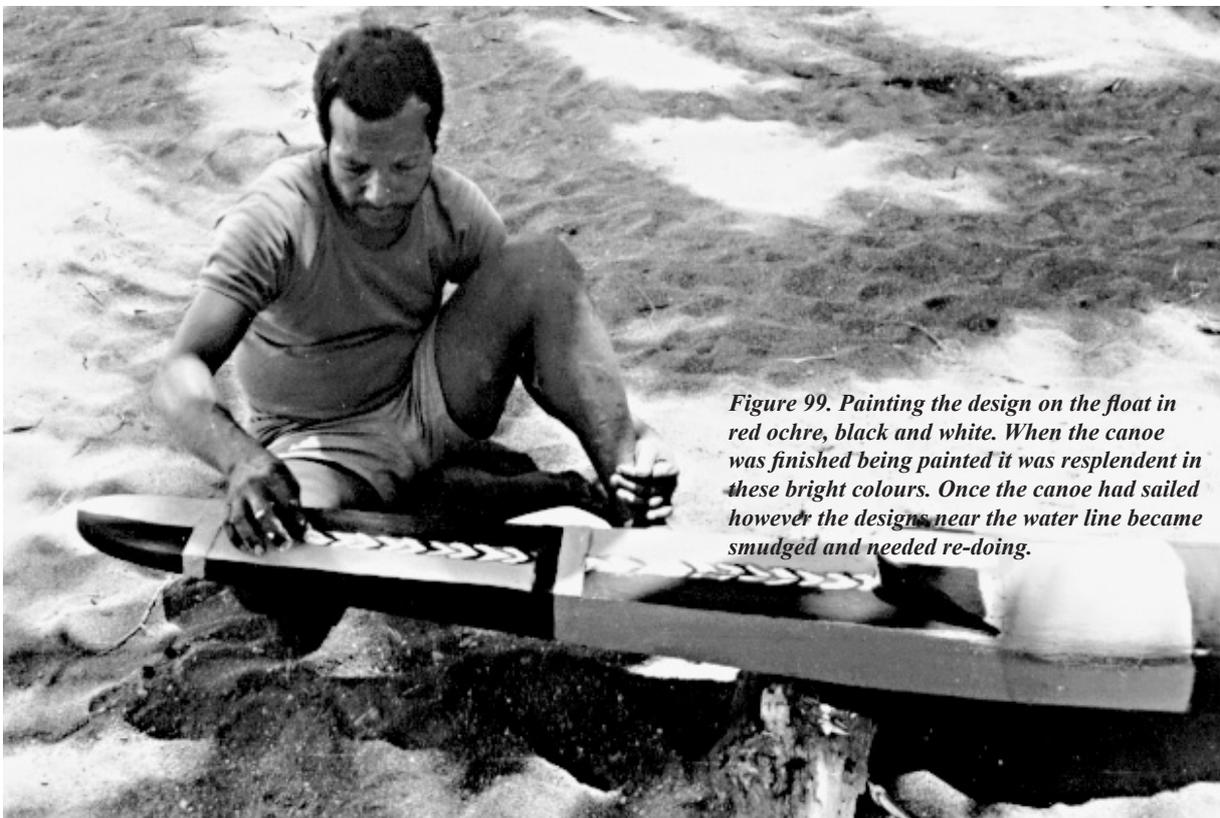


Figure 99. Painting the design on the float in red ochre, black and white. When the canoe was finished being painted it was resplendent in these bright colours. Once the canoe had sailed however the designs near the water line became smudged and needed re-doing.



Above left, Figure 100. Kube on the left and Gab tie the spliced tanget leaves on the rigging.



Above right, Figure 101. The tanget leaves tied to the stays acted as tell-tales for the wind direction.

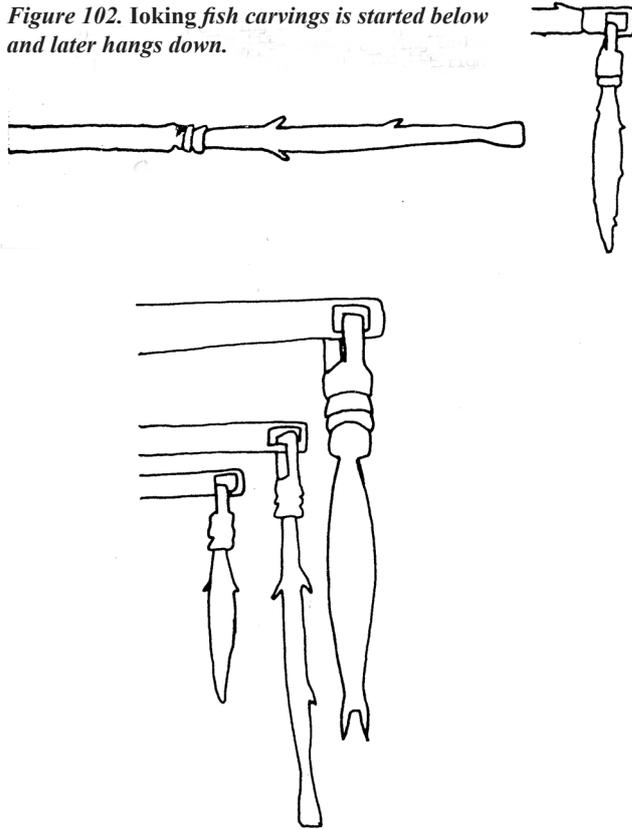
When building the canoe in 1978, it was decided to use the Gapan cockatoo totem. This was done as a mark of respect for Maia, headman of Gapan, who was instrumental in starting the canoe project and died while it was still in progress.

The Decorations included the nautilus shells, tied onto the mast extension. Each shell had a red stripe painted on it and the overall effect was very colourful. *Tanget* leaves, attached to the mast stays fluttered in the breeze, and showed wind direction. The *lalong* had a nest of leaves at the top of the mast in which the cockatoo totem nestled.

Carvings were hung from poles, which projected out from the top of the lower platforms. These carvings were very cleverly executed. At first they were part of a long pole, which was carved in such a way that the fish carving dropped to a vertical position. There were three different styles of fish hanging in this way on each side of the canoe. The smaller fish at the sides were named *ia nanun*, child fish. The long-mouthed ones in the middle were *sou*, or, in *Tok Pisin*, *long maus*. The Bilbil name for these carvings is *ioking*.

Paints The designs were painted in three colours, popular throughout Papua New Guinea, red, black and white. The designs on the strakes included fish outlines, star designs and leaves. Dim juice was added to each of the paints from which they received their adhesive properties and means that they do not wash off the canoe easily. This was prepared somewhat differently from the *dim* putty used in caulking. To get

Figure 102. Ioking fish carvings is started below and later hangs down.

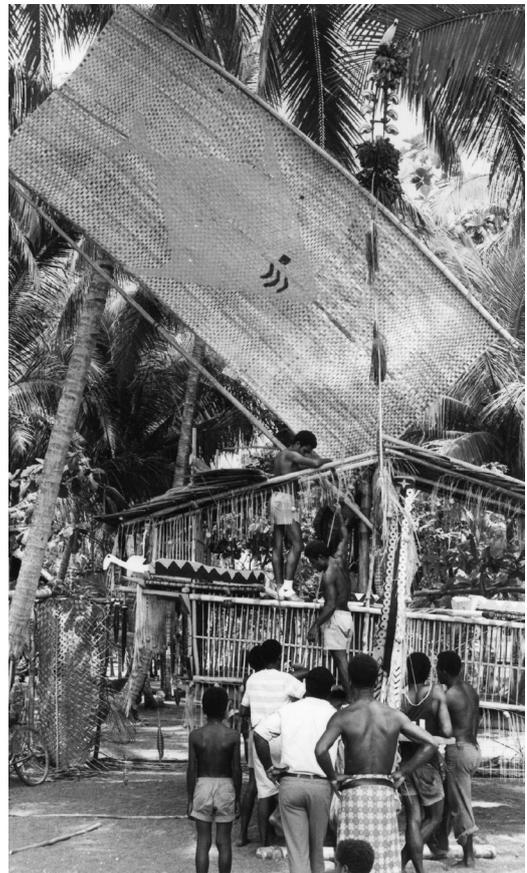


Left, Figure 103. Small fish on each side, ia nanun. Long one in the middle is sou.

Above, Figure 104. Morogobu fish painted on sail.

Illustrations by Lee Christensen.

Below, Figures 105 and 106. These two photographs show how the sail is hoisted into position and then turned at an angle so that the forked boom is held in place by the mast. The red fish, morogobu has been painted on the sail





Left, Figure 107. The men found this old paddle, known as ulum, which dated back to the 1940's. It was the only relic of the old trading days to be resurrected.



*Right, Figure 108. Among the tools used were mussel shells (*Geloma coaxana*) which were used to scrape the fibre from the dim bark.*

the *dim* juice, the *dim* bark was scraped and water was added to the fibrous mixture. The juice was then squeezed out. It did not add its red colour to any of the colours used. However, the designs did smudge a little when the canoe was plunged into water but then it may not have dried off sufficiently after being painted.

Red paint for the designs on the sail and the plank sides was made from the inside of a seed, *tamol bem*, from the *bemai* tree and which was pounded with a *pati* stone and mixed with water. A red powder or type of clay, *tan ben*, which was found at Ou on the Rai Coast, was added to the mixture. The juice from the *dim* bark was also added.

White paint was made from *kambung* or lime. *Kambung* can come from limestone (*Lailand kambang*), or from shells which have been heated over a fire. This latter lime was known as *kairgat waia* and was the kind that was used for the canoe. This white powder was mixed with saltwater and the *dim* juice (*Euphothiaceae glochition*).

Black paint. Some of the black paint used on the canoe was a modern variety found in car batteries but there was also traditional black paint made from a black powdery stone, *mumu*, from Orinma on the Rai Coast. *Mumu* was traditionally a trade item according to Derr. The *dim* juice was added to the black

paint as well. Bashan of Bilia mentioned a type of black paint made from charred bamboo which they mixed with *dim*.

1.23 *Ulum*, paddles and steering devices

Two sawn hardwood timbers of kwila wood measuring 4 metres x 20 cms x 5 cms were collected from the local timber mill to make the paddles. Originally, the paddles were made either from the *piari* tree or the *bon* tree, which was the local term for *kwila* (*Intsia bijuga*). As well, the men managed to find an old paddle from previous trading expeditions with an interesting carving on the handle. A Siassi man carved the two new large paddles, *ulum*. When the canoe was sailing, one of these large paddles was used as a rudder. Bek said, "The big paddle was not for paddling, but for steering. There was a place to put this big paddle and it was like a boat's rudder". The paddles were made either from the *piari* tree or the *bon* tree, which was the local term for *kwila* (*Intsia bijuga*).

1.24 Tools used

In traditional times, the people had tools made of stone, wood, shell or bone. The stone tools were protected by special magic to keep them sharp (Mennis 1980). With these tools, it took several months to build a canoe. However, there was plenty of labour available with the canoe owners co-opting members of their clan to collect the necessary components and help put the canoe together.

Wedges: Wedges were made by chipping stones to the shape required. They were specifically created for this very purpose so that the end was flat and could be hammered into the log at intervals to split it.

Stone axes: The stones, which were used in the stone axes, were known as *ia kalog*. These axes had wooden handles to which the stones were attached with vine in a cross-over pattern. The stones were found in many places according to Tomasin (Mennis, 1980a: 79) although Pall said that the "*bigmen* used to get them from Karkar or Siassi." Each stone was sharpened by another stone while the men called out to the *masalai* or *tambarans* to help sharpen them. Bashan of Bilia said they would beseech the *masalai* of the particular area to look after the axe and not blunt it so they could cut the canoe well. "Don't let it break. Look after the adze until the canoe is finished".

Shells: Shells were used as tools in the canoe building to scrape the *dim*. These shells, *kina* in Tok Pisin and *kairgat* in the local language, were large shells. Damun said that various shells including the oyster shells were also used to cut the pandanus leaves to make the sail. (Mennis, 1980a: 115).

Pig Bones: Pig bones, *dim sol*, made from the back leg of a pig, were used as awls. The bones were sharpened and hammered with wooden hammers. The thick end of the bone was used as a handle and the other end was sharpened to prod the putty into the holes. It was an excellent tool for applying the putty. Later in the time of Maclay, they used steel nails as awls hammering them into the canoe and removing them to make the next hole.

Charcoal: In marking the *lalong* in 1978 the men used a biro, but previously a piece of charcoal was used.

Wooden tools: Heavy wooden hammers or mallets were used traditionally and, in 1978, paddle shaped mallets made out of one piece of wood were used to hammer the connectives into the float.

Leaves: Certain leaves were used as a sandpaper to smooth down the surface of the hull including ones from the *plangamis* tree. The leaves have thorns like sandpaper and were very rough. Damun said that the side of the canoe polished up well when these leaves were used. Leaves were also used to mark the equidistant points between the holes on the strakes although measuring with a stick was more usual (Mennis, 1980a: 19).

Bek said: "Stone axes and stone planes were made by tying a stone to a stick but when whitemen came they brought iron tools which were better".

In making the canoe in 1978, the men used traditional materials where possible but they also used modern tools like chisels, planes, steel hammers, drills and a vice. When I asked the men in 1978 if they could manage with stone axes instead of the steel ones, they said quite seriously, “If we had the *masalai* to help us, we could do it easily”.

Bilbil name	English name	Scientific name
<i>Dim, Dim tree</i>	Putty	<i>Euphothiaceae glochition sp</i>
<i>Tilau, Gau tree</i>	Strakes	<i>Terminalia ombaefaceae catappa</i>
<i>Damdarn, Gau tree</i>	Prow	<i>Terminalia ombaefaceae catappa</i>
<i>Yand, Yand tree</i>	Booms	<i>Rhamnaceae macrocarpa</i>
<i>Wag hun, Mara tree</i>	Hull	<i>Rhamnaceae altopia</i>
<i>Sam, Cananga tree</i>	Outtrigger	<i>Annonaceae cananga odorata</i>
<i>Kanda (Tok Pisin)</i>	Vines for lashing	<i>Barringtonia analcarnaceae</i>
<i>Wap tree</i>	Support	<i>Callophylum inophylum</i>
<i>Tor tree (Kwila)</i>	Paddles	<i>Intsia bijuga</i>
<i>Tau tree</i>	Hull	<i>Pometsia pinnata</i>
<i>Kapok tree</i>	<i>Pei</i> boards	<i>Ceiba pentandra</i>
<i>Morata leaves</i>	Roof	<i>Metroxylon sagus</i>
<i>Piriar, Mara tree</i>	Mast	<i>Rhamnaceae altopia</i>

Table 1. Local, English and scientific names for the material used.

1.25 Wood, trees, vines and other material used in the canoe

The Papua New Guinea Forestry Department in both Madang and Port Moresby provided the scientific names for most of the forest products used in the construction of the *lalong*.

1.26 The finished canoe

The beach area near the canoe was the gathering place of the clansmen who admired progress and talked of their hopes for the finished canoe. When it was finished, it was an object of great beauty with intricate designs along the wash strakes of pots and ferns. The mast was topped by a white bird, below which was the mast extension decorated by nautilus shells. A liberal pasting with red paint on the bunting and telltales matched the red fish on the sail. There were special ceremonies to celebrate the new canoe (Mennis 1980a).

As mentioned, the function of the canoe dictated its shape. It was primarily a trading canoe built to carry many big, red cooking pots. The large pot cage with its bamboo slats was light enough to be built into the canoe and yet strong enough to protect the pots on the long sea voyage. The shelter on the canoe gave the men protection from the hot sun during their voyage across the water. The sails enabled the canoe to be manoeuvred and to use the trade winds. The totem on top of the mast identified the canoe and notified their friends on the Rai Coast of their arrival. The canoes were themselves important trade items. The Kranket and Karkar Islanders made the hulls and transported them to Bilbil Village using a temporary outrigger. The Bilbil people paid for them with pots, which were often lined up the length of the hull to determine payment. Once the canoes had been completed, they could be bought by other villages as trade items and so played an important part in the material system of the village.



Above, Figure 109. Derr standing in front of the lalong in November 1978. A similar photograph was taken in the 1930s of a Yabob man standing in front of a large two mast canoe. See Figure 14, page 14.

Below, Figure 110. Opening day for the canoe which coincided with the establishment of the Madang Provincial Government in October 1978. The men were all dressed in their traditional finery. Note the two paddles side by side. One was for paddling and the longer one for steering the canoe.





Above, Figure 111. Early morning on the beach at Bilbil Village.

Below, Figure 112. The lalong being launched at Bilbil Village.



Final Measurements

Measurements are in metres.		Length of lower platform	3.9
Length of canoe	8.5	Width of pot cage	1.2
Depth of the canoe inside	0.46	Height of pot cage	0.67
Circumference of canoe	1.76	Width of upper platform on outside	1.16
Total height of canoe	7.95	Length of upper platform	1.63
Height of canoe to top of the strakes	1.00	Length of strakes	7.16
Length of the <i>tilau</i>	1.18	Length of the <i>ro</i> from <i>damdam</i> to platform	3.00
Length of outrigger	7.35	Length of <i>pei</i> with wings	2.27
Distance boom to outrigger	4.9	Length of <i>pei</i> without wings	1.34
Total length of each boom	6.9	Size of sail	5.45 x 3.00

Table 2. Final measurements of the different parts of the canoe.

1.27 Comparative Terminology

English	Bilbil	Kranket	Siar	Siassi	Madang Canoe H & H	Trobriand
Canoe	<i>Wag</i>	<i>Wag</i>	<i>Wagoz</i>	<i>De wang</i>	<i>Ghobun</i>	
Small canoe		<i>Wakoz</i>				
Hull	<i>Wag hun</i>		<i>Wagoz damun</i>	<i>Wang</i>		
Booms	<i>Yand</i>	<i>Aiad</i>	<i>Patot</i>	<i>Tiawng</i>	<i>Kindja</i>	<i>Liu</i>
Mast	<i>Pirair</i>	<i>Pazaz</i>	<i>Pazaz</i>		<i>Parra</i>	
Sail	<i>Baind</i>	<i>Lai</i>	<i>Lai</i>	<i>Lai-i</i>	<i>Rer</i>	
Sail boom	<i>Silasil</i>	<i>Selasilti</i>	<i>Dilati</i>			
Strakes	<i>Bai</i>	<i>Abau</i>	<i>Abau</i>	<i>Diu</i>	<i>Ghabau</i>	
Breakwater	<i>Damdam</i>	<i>Saforz</i>	<i>Saforz</i>	<i>Dumdam</i>	<i>Dedema</i>	
Outrigger	<i>Sam</i>	<i>Sam</i>	<i>Sam</i>	<i>San milib</i>		<i>Lamila</i>
Connectives	<i>Dom</i>	<i>Patot</i>	<i>Milamel</i>	<i>Patwat dom</i>	<i>Ssamanghameli</i>	
Platform	<i>Bidal</i>	<i>Bidal</i>	<i>Baidal nanun</i>	<i>Atun sina Atun sanga</i>	<i>Dja</i>	

Table 3a. Comparative terminology of canoes and their components.

The Hull		
Bilbil	<i>Wag hun</i>	Mennis
Siar	<i>Wagoz damun</i>	Mager
Siassi	<i>Wangka</i>	
Strakes		
Bilbil	<i>Bai</i>	Mennis
Kranket	<i>Abau</i>	Mager
Siar	<i>Abau</i>	Sungai
Singor	<i>Kambau</i>	Mager
Riwo	<i>Abaw</i>	Mager
Takia	<i>Abaw</i>	Mager
Nobonob	<i>Aba</i>	Mager
Bongu	<i>Gabau</i>	Mager
Bongu	<i>Khabau</i>	Biro
Tuam, Siassi	<i>Diu</i>	Haddon & Hornell
Kilingi	<i>Nariu</i>	Haddon & Hornell
<i>Abau or bai means a board for a house or a canoe</i>		
Thwarts		
Bilbil	<i>Mandanden</i>	Mager
Bilbil	<i>Gimagim</i>	Mennis
Siar	<i>Madadau</i>	Mager
Kranket	<i>Madadau</i>	Mager
Bogadjim	<i>Aubanjer</i>	Biro
Bongu	<i>Baul or nau bawaloga</i>	
Tuam, Siassi	<i>Kaipawl</i>	Haddon & Hornell
Kalingi	<i>Napun vava</i>	Haddon & Hornell
Gunwale		
Bilbil	<i>Ro</i>	Mennis
Siar	<i>Malalau</i>	Sungai
Siassi	<i>Rrawb</i>	Haddon & Hornell
Trobriand	<i>Vatotuwa</i>	G. Mosuwadoga
Putty		
Bilbil	<i>Dim</i>	Mennis
Kranket	<i>Dim</i>	Mager
Nobonob	<i>Dim</i>	Mager
Riwo	<i>Dim</i>	Mager
Takia, Karkar	<i>Dim</i>	Mager
Suit, Rai Coast	<i>Dim</i>	Mager
Singor, Rai Coast	<i>Gim</i>	Mager
Ganglau	<i>Ndim</i>	Mager
Aitape	<i>Yeim</i>	Parkinson
Kowai, Siassi	<i>Zimil</i>	Haddon & Hornell
Tuam, Siassi	<i>Zimirr</i>	Haddon & Hornell
Trobriands	<i>Dimila</i>	G. Mosuwadoga
Gulf Province	<i>Dum</i>	Gulf man

Table 3b. Comparative terminology hull, strakes, thwarts, gunwales and putty.

Outrigger booms		
Bilbil	<i>Yand</i>	Mennis
Kranket	<i>Aiad</i>	Mager
Ganglau	<i>Jand</i>	Mager
Riwo	<i>Jand</i>	Mager
Nobonob	<i>Jand</i>	Mager
Takia, Karkar	<i>Jand</i>	Mager
Swit, Rai Coast	<i>Niad</i>	Mager
Bongu, Rai Coast	<i>Kindja</i>	Biro
Siassi	<i>Tiawing</i>	Haddon & Hornell
Trobriands	<i>Liu</i>	G. Mosuwadoga
Float		
Bilbil	<i>Sam</i>	
Siar	<i>Sam</i>	Sungai
Riwo	<i>Sam</i>	Mager
Takia	<i>Sam</i>	Mager
Swit	<i>Sam</i>	Mager
Singor	<i>Sam</i>	Mager
Amele	<i>Sam</i>	Mager
Ham	<i>Sam</i>	Mager
Bongu	<i>Saman</i>	Mager
Nobonob	<i>Ham</i>	Mager
Tuam, Siassi	<i>Malib</i>	Haddon & Hornell
Kalingi	<i>Na sama</i>	Haddon & Hornell
Simbang	<i>Schap</i>	Biro
Bogadjim	<i>Ssamang</i>	Biro
Trobriands	<i>Lamila</i>	G. Mosuwadoga
Connectives		
Bilbil	<i>Dom</i>	Mennis
Kranket	<i>Patot</i>	Mager
Riwo	<i>Patot</i>	Mager
Siar	<i>Milamel</i>	Sungai
Siassi	<i>Patawt</i>	Haddon & Hornell
Bogadjim	<i>Ssamangha-meli</i>	Biro
Bongu	<i>Batulo</i>	Biro
Simbang	<i>Matu</i>	Biro
Pot cage		
Bilbil	<i>Gagarin</i>	Mennis
Kranket	<i>Kakau</i>	Mager
Riwo	<i>Kakau</i>	Mager
Takia	<i>Kakau</i>	Mager
Side boards		
Bilbil	<i>Pei</i>	Mennis
Kranket	<i>Pei</i>	Mager
Siar	<i>Pei</i>	Mager
Tuam, Siassi	<i>Sawngan</i>	Haddon & Hornell

Table 3c. Comparative terminology outrigger booms, floats, connectives, pot cage and side boards.

Lower Platform		
Bilbil	<i>Bidal or bedil</i>	Mennisr
Kranket	<i>Bidal</i>	Mager
Riwo	<i>Bidal</i>	Mager
Siar	<i>Baidal uyan</i>	Sungai
Ganglau, RaiCoast	<i>Bar</i>	Mager
Bogadjim, Rai Coast	<i>Djar</i>	Biro
Bongu, Rai Coast	<i>Balage</i>	Biro
Tuan, Siassi	<i>Atun sina</i>	Haddon & Hornell
Kalingi	<i>Ro unsiu</i>	Haddon & Hornell
Upper Platform		
Bilbil	<i>Bidil nanum</i>	Mennis
Kranket	<i>Bidal</i>	Mager
Riwo	<i>Bidal</i>	Mager
Siar	<i>Baidil nanum</i>	Sungai
Ganglau, Rai Coast	<i>Bar</i>	Mager
Nobonob	<i>Bidal</i>	Mager
Ham, Gogol	<i>Bedu</i>	Mager
Siassi	<i>Atun Sina</i>	Haddon & Hornell
Kilingi	<i>Ro unsiu</i>	Haddon & Hornell
Proto-Malaysian	<i>Batang</i>	Mager
Sails		
Bilbil	<i>Baind</i>	Mennis
Kranket	<i>Lai</i>	Mager
Riwo	<i>La</i>	Mager
Siar	<i>Lai</i>	Sungai
Takia	<i>Lai</i>	Mager
Ham	<i>Lai</i>	Mager
Bongu	<i>Rar</i>	Mager and Biro
Bogadjim	<i>Rer</i>	Biro
Simbang	<i>Rer</i>	Biro
Tuam, Siassi	<i>Lai-i</i>	Haddon & Hornell
Kalingi	<i>Nale</i>	Haddon & Hornell
Malaya	<i>Lajar</i>	Mager
Sail Booms		
Bilbil	<i>Silasil</i>	Mennis
Kranket	<i>Selasilti</i>	Mager
Riwo	<i>Dilati</i>	Mager
Takia	<i>Selasilsil</i>	Mager
Bongu (Upper)	<i>Budgera</i>	Biro
Bogadjim (Upper)	<i>Rer-ghameli</i>	Biro
Simbang	<i>Ah</i>	Biro
Singor	<i>Didilpe</i>	Mager
Siassi	<i>Sirrarr</i>	Haddon & Hornell
Kilingi	<i>Nasila</i>	Haddon & Hornell

Table 3d Comparative terminology lower platform, upper platform, sails and sail booms.

Tilau		
Bilbil	<i>Tilau</i>	Mennis
Kranket	<i>Tilau</i>	Mager
Riwo	<i>Tilau</i>	Mager
Siar	<i>Tilau</i>	Mager
Suit, Rai Coast	<i>Tilau</i>	Mager
Tuam, Siassi	<i>Aitu</i>	Haddon & Hornell
Trobriands	<i>Gelu</i>	G. Mosuwadoga
Breakwaters		
Bilbil	<i>Damdum</i>	Mennis
Bilbil	<i>Sohor</i>	Mager
Kranket	<i>Safoz</i>	Mager
Siar	<i>Saforz</i>	Mager
Swit	<i>Sapor</i>	Mager
Bongu	<i>Ssauna</i>	Mager
Bongu	<i>Ghobun ssaura</i>	Biro
Bogadjim	<i>Dedema</i>	Biro
Takia	<i>Sikor</i>	Mager
Tuam, Siassi	<i>Dumdum</i>	Haddon & Hornell
Kowai, Siassi	<i>Sapor</i>	Sgt. Karang
Tami Is	<i>Dam-un-dam</i>	B. Coates
Trobriands	<i>Tubwekaya</i>	G. Mosuwadoga
Steering paddles or Rudder		
Bilbil	<i>Ulum</i>	Mennis
Riwo	<i>Ulum</i>	Mager
Ham, Gogol	<i>Ulum</i>	Mager
Nobonob	<i>Ulum</i>	Mager
Amele	<i>Ulum</i>	Mager
Takia	<i>Un</i>	Mager
Suit, Rai Coast	<i>Wulum</i>	Haddon & Hornell
Tuam, Siassi	<i>Paws</i>	Haddon & Hornell
Bogadjim	<i>Oi joh</i>	Biro
Bongu	<i>Kulumna</i>	Biro
Simbang	<i>Ih</i>	Biro
Paddles		
Bilbil	<i>Heu</i>	Mager
Kranket	<i>Fei</i>	Mager
Riwo	<i>Fe</i>	Mager
Swit	<i>Foi</i>	Mager
Vaskia	<i>Vos</i>	
Takia	<i>Fei</i>	
Singor	<i>Fei</i>	

Table 3e. Comparative terminology frames, breakwaters, steering paddles or rudders and paddles.

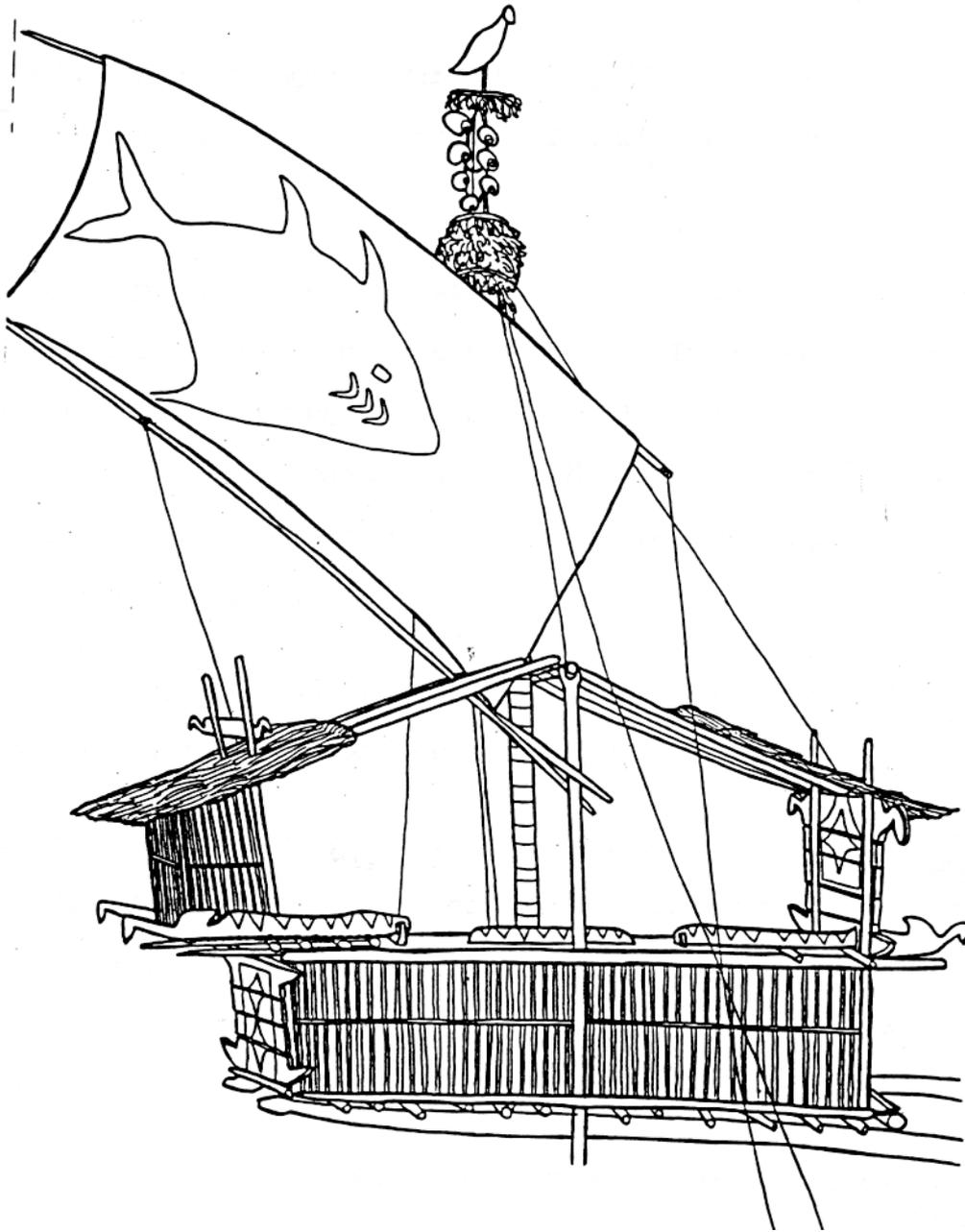


Figure 113. Front view of rigging, sail and pot cage. Illustration by Lee Christensen.

Part 2. Customs associated with building a canoe in traditional times

Malinowski who lived amongst the Trobriand Islanders during three expeditions between 1914 and 1920 was able to watch the men build and sail canoes in the traditional way and made the following observations:

A canoe is an item of material culture and, as such, it can be described, photographed and even bodily transported into a museum. But - and this is a truth too often overlooked - the ethnographic reality of the canoe would not be brought much nearer to a student at home, even by placing a perfect specimen right before him.

The canoe is made for a certain use, and with a definite purpose; it is a means to an end, and we, who study native life, must not reverse this relation, and make a fetish of the object itself. In the study of the economic purposes for which a canoe is made, of the various uses to which it is submitted, we find the first approach to a deeper ethnographic treatment. Further sociological data, referring to its ownership, accounts of who sails in it, and how it is done; information regarding the ceremonies and customs of its construction, a sort of typical life history of a native craft - all that brings us nearer still to the understanding of what his canoe truly means to the native.

Even this, however, does not touch the most vital reality of a native canoe. For a craft, whether of bark or wood, iron or steel, lives in the life of its sailors, and it is more to a sailor than a mere bit of shaped matter. To the native, not less than to the white seaman, a craft is surrounded by an atmosphere of romance, built up of tradition and of personal experience. It is an object of cult and admiration, a living thing, possessing its own individuality (1960: 105).

Having studied the construction of a trading canoe, I followed Malinowski's advice by investigating the oral traditions about customs associated with building and sailing these craft. While the actual construction of the canoe in 1978 was important, many customs and ceremonies were once regarded as essential if the canoe were to function properly. Discard these magic ceremonies and the canoe would no longer have had the power to operate or the protection against evil spirits according to the beliefs of the local people.

2.1 Choosing the tree and de-sanctifying it

The ceremonies began in the village with a discussion of the need for a new canoe amongst the *likon* or weather men:

Bashan said:

The canoes only lasted five years. When the men wanted to make a new one, they had a meeting of all the *likons* - those from Yabob, Bilia, Kranket, and Bilbil. The men would tell the *likons* that they wanted to make a new canoe and the *likons* would talk about this and then tell the men, "All right you can go to the bush and cut a new canoe". So the men would go to the bush to cut the tree for the canoe (Mennis, 1980b: 78).

Before they began to cut the tree, another ceremony was necessary. The spirit of the tree had to be placated and begged to vacate his abode. Being animists, the ancestors saw this as common courtesy and a way of co-operating with the spirits which they believed inhabited every living thing. They also observed certain rituals as a protection against evil spirits.

Bashan told of the procedure in the old days:

Bashan: The men come and sit in front of the tree and rid it of all the *masalai*. They say, "Who is it that lives in this tree. You can't be cross with me. We want to cut this tree now. You should be sorry for us. You must not break this canoe".

- Mennis: When they are chasing the *masalai* from the tree do they tell them to go to another place?
- Bashan: Yes! They say, “We want to cut the tree so you come down and help us”. They hold the tomahawk up and say, “We will cut the tree with this. We want to *raus* the *masalai*”. We say, “it is no good. You go and live in another tree.” They say this. Of course there are no *masalai* there really, but the men’s ideas were strong. They believed it. So the *masalai* came down and went to another tree (Mennis, 1980b: 65-66).

Wholesale destruction of a forest would have been abhorrent to the ancestors because the forests were their storehouses providing materials for their tools, houses, canoes, fish traps, wooden plates, *mal*, ornaments in fact everything they owned and worked with came from the forest, which they treated with awe. These same forests are now being torn down by JANT, a timber company with its bulldozers, cranes, graders, fork lifts and jinker trucks which work noisily felling the large trees and carting them off to the chip mill (De’Ath, 1980: passim).

Of course, in the old days, the men only had stone axes, which restricted the number of trees they could cut down. Tomasin explains the actual felling of a tree:

- Mennis: The tomahawks or stone axes the men used before took a long time to cut the trees down didn’t they?
- Tomasin: Well, there were special formulas to say over the stone axes to keep them sharp and make them cut the tree down quickly. If these words were not said then it would take a long time to cut the trees down.
- Mennis: Did they talk to the *masalai* in the trees?
- Tomasin: Yes, there were big *masalai*. They appealed to them to make sure the tree did not split and that it fell quickly. Then the tree would fall down.
- Mennis: Did they know how to cut the tree so that it fell in a certain direction?
- Tomasin: Yes, they would cut one side and then the other so that it fell one way.
- Mennis: How many men would cut the tree?
- Tomasin: Maybe two or four. One man would chop at the tree and when his breath was short then another man would take his place. In this way the tree would be cut quickly (Mennis, 1980a: 78).

A spell used in the Trobriand Islands and recorded by Malinowski expressed the same sentiments as Bashan attributed to his *tumbuna*:

Come down, O wood spirits, O *tokway*, dwellers in branches, come down! Come down, dwellers in branch forks, in branch shoots! Come down, come, eat! Go to your coral outcrop over there; crowd there, swarm there, be noisy there, scream there! Step down from our tree, old men! This is a canoe ill spoken of; this is a canoe out of which you have been shamed; this is a canoe out of which you have been expelled! At sunrise and morning, you help us in felling the canoe; this tree, old men, let it go and fall down! (Malinowski, 1960: 127)

Malinowski’s informants told him that if the *tokway* (spirits) were not evicted the canoe might be heavy or the wood full of knots and that there would be holes in the canoe or that it would rot quickly (1966: 127). Tomasin offered a different reason for the magic spells. He said the men must stand at the base of the tree and think magic words and pray to the *masalai* or else, “the tree would split at the top and bottom and would be useless. They wouldn’t be able to use it. The old men told me and I heard them. I did not use their ideas because now there is a new law” (Mennis, 1980a : 79).

2.2 Felling the tree

Bashan and Tomasin were the two informants who threw most light on this process. Bashan said that, after the right spell had been said, the men cut around the bottom of the tree:

Mennis: In the old days did they use stone axes for this work?

Bashan: Yes the stone axe. It would take them several days to cut the tree down. If the axe wasn't sharp they had to sharpen it again and again.

Mennis: What did they sharpen it with?

Bashan: With a stone. They would appeal to the *masalai* of the area to look after the axe and not blunt it so they could cut the canoe well. Then when they had cut some of the tree they would burn the chips in a fire. They would do this all the time. If they left them there, the *masalai* would get the bits and put them back on the tree. So the men picked them up and burnt them. That's the way they cut the tree (Mennis, 1980b: 65).

Since stone axes required so much effort for such a small result, it would be logical for the men to believe that someone must have been replacing some of the chips. Malinowski does not mention any spells used in the felling of the tree. Already, in his day, the Trobriand Islanders were using modern tools. He wrote:

In the olden days, when stone implements were used, this must have been a laborious process, in which a number of men were engaged in wielding the axe, and others in resharpener the blunted or broken blades. The old technique was more like nibbling away the wood in small chips, and it must have taken a long time to cut out a sufficiently deep incision to fell the tree (1960: 128).

Tomasin agreed with Bashan that it might take two days or more to cut a tree down. If the men worked slowly, it might even take a week and finally, "If the tree had strong magic in itself it would take a long time". Then they would measure the tree for the length they needed and cut off the end. (Mennis 1980b: 8). Bashan also mentioned that the men would shape the log to make it lighter (Mennis, 1980b: 65).

Hogbin's account of felling trees was in the Wogeo area of the Schouten Islands which lie west of Manam on the north of Papua New Guinea whereas Astrolabe Bay lies east of Manam. In Wogeo, the men felled trees which were "close to the shore or the work of haulage will be too great. A good deal of the middle is removed and the ends roughly shaped while the log is still lying in the bush". Contrary to the Trobriands and Madang area, Hogbin stated that, "No magic is preferred to remove evil influences from the tree before it is felled, nor is there a rite to prevent it from splitting". Hogbin expressed surprise about this because a log was often rejected after two or three days' work (1935: 390). However, the Wogeo sang a spell over the log while it is being hauled from the bush. The owner, Marigum, called on the canoe by name, *Urem Tariga*, and addressed it as if it were alive saying, "*Urem Tariga your blood hastens, your vitals hastens Urem Tariga is first and the others are behind etc*" (1935: 378ff). The main purpose of this spell was to make the log lighter for the haulers just as it was in the Trobriands.

2.3 Transporting the log to the hulling site

Traditionally hauling the log to the hulling site was quite a big operation. A path would have to be cleared through the bush and rollers placed down to pull it over. The only possible way to haul it was by using manpower unless it was near a river. In Madang there were few rivers nearby.

Tomasin described what happened:

- Tomasin: They would cut the bush vine and tie it to the end of a log. Then all the men would come and pull it to the beach to the place where they were going to make the canoe.
- Mennis: What rope did they use to pull the canoe to the beach?
- Tomasin: Bush rope.
- Mennis: Did they cut a small track for the log?
- Tomasin: Yes they would cut a narrow path and put the rollers along it and then pull it through the bush.
- Mennis: What sort of rollers?
- Tomasin: Little logs from the bush. They put them on the path and then pulled the canoe along on top (Mennis, 1980a: 78).

There was much ceremony connected with shifting the log from the bush to the village. Mager lists the word *kanisuzi* in his Gedaged - English Dictionary to describe these customs in the Madang area:

Kanisuzi, the sham fighting and horseplay takes place when a canoe is transported from the bush into the village. One group starts to transport the object with much shouting. They are met by another group waiting with clubs, stalks of *gof*, or even spears. A sham battle is staged after which the second group takes over the transport until met by the third group and some more fighting and shouting takes place. This continues until they reach the village when the *bog* (a group of men) comes and does some more beating and taking away of everything in sight. They then sit down to feast (1952: 137).

Bashan emphasised the magic ritual involved in hauling the log to the village. He said, "The play-acting when they are pulling the hull is to rid the log of the *masalai* who make it too heavy."

- Mennis: Did they have a pretend fight on the way?
- Bashan: Yes they would *giaman* fight to expel the *masalai* and tell them to return home. It is hard work to pull the log, so they make this play. Some pretend to fight not only the log but the men pulling it. Then they come to the beach where they sleep and wait till dawn and pull it around to the village.
- Mennis: Do other men come and help with the pulling?
- Bashan: Yes, if the Krankets cut the tree down, the Biliias might come and help pull the log.
- Mennis: Did they use the *gorgor* (ginger plant) at all?
- Bashan: Yes, when the canoe has been shaped and they are pulling it through the bush, they hit it with the *gorgor*. They strike it at the front, the middle and the back. "We want to take the log down to our place now". They start to pull it, then they throw the *gorgor* into the bush. Then the *masalai* leave. These men used to think that the *masalai* made the canoe heavy.
- Mennis: When they were bringing the log to the beach did they use rollers?
- Bashan: Yes when they were pulling the main log they brought plenty of rollers and put them on the ground one after the other. They pulled the log over the rollers and when these have been used up then they go and get them and put them again along the track in front of the log until they reached the beach [at their village].

When they got back to their village, they did not cut the rope straight away. It was very thick. They cut it and cut it before it broke. They would put it on a piece of wood and cut the rope. They would talk to the thing inside the rope. "You who are inside the rope you clear out. I want to cut this rope now. You *mama bilong rope* or *papa bilong rope* you must clear now. We want it" (Mennis, 1980b: 66).

These customs associated with hauling the log to the hulling site were very similar to those described by Malinowski:

The transporting of the log is not an easy task, as it has to be taken out of the uneven, rocky *raybwag*, and then pulled along very bad roads. Pieces of wood are put on the ground every few metres, to serve as slips on which the log can more easily glide than on the rocks and uneven soil. In spite of that, and in spite of the fact that many men are summoned to assist, the work of pulling the log is very heavy. The men receive food in payment for it. Pig flesh is cooked and distributed with baked yams; at intervals during the work they refresh themselves with green coconut drinks and with sucking sugar cane. Gifts of such food, given during work is payment of communal labour, are called *puwaya*. To describe how heavy the work sometimes is, the native will say, in a characteristically figurative manner:

"The pig, the coco drinks, the yams are finished and yet we pull - very heavy"!

In such cases the natives resort to a magical rite which makes the canoe lighter. A piece of dry banana leaf is put on top of the log. The owner or builder beats the log with a bunch of dry *lalang* grass and utters the following spell:

"Come down, come down, defilement by contact with excrement! Come down, defilement by contact with refuse! Come down, heaviness! Come down, rot! Come down fungus"! and so on, invoking a number of deteriorations to leave the log, and then a number of defilements and broken *taboos*. In other words, the heaviness and slowness, due to all these magical causes, are thrown out of the log.

This bunch of grass is then ritually thrown away. It is called *momwa 'u* or the "heavy bunch". Another handful of the long *lalang* grass seared and dry is taken, and this is the *gagabile*, the "light bunch", and with this the canoe is again beaten. The meaning of the rite is quite plain: the first bunch takes into it the heaviness of the log, and the second imparts lightness to it (1960: 129).

Similarities with the Madang customs which are immediately apparent are the use of rollers or slips on the ground; the expulsion of *masalai* whom they blamed for the heaviness of the log; the need for a great number of men to help in the pulling and the use of a bush rope tied to the log to pull it along. It is interesting too that Bashan mentions the fact that they did not cut this rope straight away, but cut it ceremoniously telling the *masalai* to leave it. Malinowski describes the more elaborate spell used to cut through the rope which also was not done at once, but after a day or so (1960: 130).

In the Madang area, the reward for the group, the *bog*, for helping transport a log can be high, depending on the resourcefulness and cunning of the helpers. Known as *bog* after the fish eagle it was a term used from Riwo to the Rai Coast. As a reward the *bog* could take anything they could lay their hands on - betel nut, net bags, pots or even a young girl, from the owner of the canoe hull (Mager, 1952: 36).

2.4 Hulling the log

Although this is a very long process, taking months in some instances, the ceremonies associated with it take no longer than those for hauling the log to the site. Hogbin wrote, “Hollowing out the centre, except in the final stages, requires no special skill and was left mainly to the village youths”. However, once the arduous work was done, the finishing touches to the interior and to the prow and stern were done by skilled older men. As elsewhere in Papua New Guinea, recompense for the work done was in the form of food from the owner’s garden, with the women doing the cooking (Hogbin, 1935: 382).

Bashan of Bilia Island informed me that the men used *tok bokis* to confuse any malevolent *masalai*. This entailed using a secret language (see 3.1) or picture language. Instead of calling the hull *wag hun* they would call it “belly of a man” in their language. When they sharpened the adze to hollow the log they used to say, “I want to sharpen this adze so I can take out the belly of this man now.” The huller then implored his ancestors or friendly *masalai* to help keep the axe sharp. “Look after this adze until the canoe is finished” (Mennis 1980b: 68). Malinowski described a long spell, which was once said over the adze before the huller began work. Bashan included a similar spell in the Bilia language in Madang.

2.5 Launching a canoe

The ceremonies were much the same whether the canoe was a new one or an old one that had been renovated. Here is a description from Siar Island by Sungal. The big men would show the canoe all around and hit it. They would hit a dry coconut on the front of the canoe and say, “you must cut the saltwater like a snake, you must work hard. You have a long mouth to leap over the waves”, then they would call out the name of the canoe. The men would come down and hit the boat’s crew and captain with pieces of wood. Later they would go and eat a feast and praise the canoe builders for their fine canoe. Next day they would go to Sek and Riwo Villages and the same celebrations would be held. They would sleep there and the next morning they would go as far as Bilbil (Mennis, 1980b: 44).



Figure 114. The canoe was dragged and pulled to the water over rollers which facilitated the process. Many of the village children excitedly helped at this stage.



Figure 115. Close-up of the designs as the canoe was put in the water in 1978.

Bashan's version of the same ceremony in Bilia was:

The people splash the crew with seawater. They hit the water with branches and wet everyone. It is something new. They shoot the top of the mast with arrows. They sing out, "You *masalai* you cannot sit down on top there. You must clear out. It is our canoe now. We are happy with it". They would do this and pull the canoe into the water (Mennis, 1980b: 69).

When the canoe is finished, the men test it on the water to see if the ropes are taut enough and if it is water tight. They bring their *kundu* drums and sing the song called *Bazok*. I can't sing this song but the big men knew it. The *likon* sings to each piece of wood that was used to make the canoe. He sings out these names and beats the *kundu* until morning. Then the men would burn some leaves which burn like fire crackers. They would burn some bamboo too.

Next morning they put the canoe in the water. If there is only a small wind they stay on the beach and wait for the *talio* or another wind to blow. Then they rushed into the water with the other canoes for there would not be just one canoe, but many.

The *palangut* went first because it had two sails and the *lalongs* would follow. They would go to Kranket or Yabob or Bilbil. Then they would come home and talk about the canoe and whether it was running smoothly or the ropes were too slack. If this was the case they would bring the canoe onto the beach, remove the ropes and fasten them again, making them stronger. Later they would decide on a day to go to the Rai Coast or to Karkar. They would fill the canoe with pots, and put them in the baskets. Then they would sail to Karkar and sell all these pots and the Karkars would give them galip, (*Canarium polphyllum*) pigs etc. (Mennis, 1980b: 63-4).

According to Mager's dictionary, a *baz* is a spell used to ward off evil spirits and to render them ineffective. On the other hand, the *naiz* is black magic. Such incantations were used for canoes, gardens, lovers and so on.

Opim Dua

At the time the canoe was launched, the owner usually rewarded the helpers by killing a pig and having a large feast. In the 1920s, Nomu did this as a recompense for those who had helped him build his canoe. In this case, the helpers came from the four clans in Bilbil, Gapan, Murpatt, Dugus, and Luan (Mennis 1980a: 102). Beg did the same in Yabob when he built his canoe in the 1930s. These feasts were called the *opim dua* of the canoe (opening the door).

When a new canoe visited the Rai Coast, there would be *opim dua* ceremonies at each village. The canoes would be greeted by men throwing spears and firing arrows at the mast of the canoe. Coconuts would be thrown at the bow of the canoe as a welcome and to open the door to the trade items. Damun said that this welcome was extended to all the canoes during the 1935 trading trip which was the last of the big *dadeng* to be held (Mennis 1981b:16). Once the canoe had been opened, the pots were laid on the sand and exchanged for other trade items in the village. Usually the trade was between a particular clan on Bilbil and a particular clan in each of the Rai Coast villages being visited. Within these two respective clans, there would be individual trading partners which were often passed down through the generations. Harding attested that trade friendships in the Madang - Siassi region lasted for years (1967: 165-166).

Figure 116. Dancers at the opening of the Madang Visitors and Cultural Bureau and Museum in 1981.



Part 3, Secret Customs and Weather Magic

3.1 Tok Bokis, the secret language

The Rev Father Aufinger, a noted anthropologist who ministered in Yabob Village in the 1930s, wrote about the *Geheimsprachen* secret language or *tok bokis* of the islands near Madang in *Anthropos* (1942: passim). He stated that there were two versions of the secret language.

First type of secret language

The first is a poetic language of metaphors and pictorial phrases, which uses everyday language that everyone understands immediately. So a twig becomes the hand of a tree but has a secondary meaning. Here are a few words listed for the picture language on Panutibun Island in Madang Harbour (1942: 34-35):

Secret language with the equivalent words and the words that replace them.			
Graged Word	English meaning	Secret language	Meaning
lai	sail	banid	wings of a bird
wak	canoe	lagalag	wood for canoes
yarum	bilge water	tanaid	our entrails
tamol	man	dauai	male pig
pain	woman	palaik	secret for women
panu	village	ul	bird's nest
ab	house	ul	bird's nest
fi	bow	panapan	shoot arrows
tibud (european)	spirit	folanen tea	having no g string
tim	wind	pilipalti	tossed by the wind
nimad	arm	banid	wings of the bird
bol	pig	tan pilian	secret word for pig
yeb	betelnut	auwad nen	for our mouth
sam	outrigger	ned aten	soles of our feet
ayad	booms	ned	feet
yamel	cloth clothes	sinilon	skin
niu	coconut	afad	name in secret lang
nal	drinking water	mididiu	secret for water

Collected by Fr Aufinger (1945: 634-5).

Table 4. First type of secret language.

Second type of secret language

In the second type of secret language, the speaker hid the true meaning of the words and only those who have been taught knew the real meaning. This was used to confuse sea spirits but was also used in the village in the presence of women and children. This type has quite a different vocabulary and used many foreign words in the speech, some words are invented and others were borrowed from neighbouring language groups (Aufinger, 1942: 631-632).

English	Panutibum	<i>Tok Bokis</i>
Canoe	<i>Wak</i>	<i>Lagalag</i>
Woman	<i>Pain</i>	<i>Palaik</i>
Coconut	<i>Niu</i>	<i>Afad</i>
Tobacco	<i>Kas</i>	<i>Us</i>
Anchor	<i>Tabal</i>	<i>Tasaleo</i>
Calm	<i>Manin</i>	<i>Malau</i>
Galip nut	<i>Ganal</i>	<i>Gunin</i>
Yams	<i>Anau</i>	<i>Digon</i>

Table 5. Second type of secret language from Panutibun Island.

Aufinger said that his informants told him that:

Originally this secret language was invented to mislead the evil spirits of the sea who it was believed understood the direct language of the people. The seafaring words of the secret language are those best remembered (1942: 633).

Examples of this type of secret language are given above from Panutibun Island. The translation of the secret word cannot always be given because it was not even known to the user. It is like an alternative vocabulary.

Aufinger collected his information in the 1930s and it is interesting to compare his account with testimonies collected in the 1970s. Bashan of Bilia was the most vocal of the informants. He said that the Karkars and Bilia and other people near them used the *tok bokis* when travelling in the canoes and in the village. He gave the same reason as Father Aufinger for its use. "It would be no good if the things that are in the water heard us in the canoe, so we *tok bokis* and hide our meaning" (Mennis, 1980b: 84).

Bashan:

If you went out in the canoe and felt hungry you couldn't say, "I'm hungry". No, you had to talk in a secret way. You had to mention a rope called *mabud*. If you cut this rope then the leaves fell limp very quickly. So the boy would say, "They have cut the *mabud* rope and it wants to cry now" which means, "I am hungry and ready to fall down". If they saw the water had got into the canoe they would say, "*Yu outim bel bilong yumi*". If you understood then you would go and bailout the water.

Again if the wind did not blow the sail along the men would say "*banid miliau!*" That means, "my hand is weak or our wings are slack now. We can't paddle that far. Let's cook some food and wait for the wind to start again". If they went along and saw a house on the beach or the point they couldn't call it a house, they would call it *us* which means the pig's nest. If they were out sailing and they saw the smoke of a fire they could not say, "that is the smoke of a fire", they had to say, "*Sub ga*" which means "we have a big sickness". If they saw a big canoe coming they would say "*sig a sub*". If they saw a man coming they would say, "*gasan i kam*". This means a bush or a tree (Mennis, 1980b: 83-4).

This *tok bokis* described by Bashan is the first type of secret picture language described by Aufinger. Bashan did not give examples of the second type.



Figure 117. Looking across Bilbil Island towards Astrolabe Bay and the Rai Coast.

3.2 Weather Magic

There were many different types of magic, which were usually owned individually or by a clan (Morauta, 1974: 19). There was magic for fighting, for gardens, for hunting and for peace making. To the Yabobs and Bilbils, both seafaring people, the magic for weather, winds and calming the seas was of paramount importance. (Aufinger, 1939: 227).

Aufinger studied the weather magic of Yabob and Bilbil villages in the 1930s, when the old rituals and spells were still remembered. Yabob is near Bilbil and was founded from the latter (Mennis, 1981a: 33 to 34). The two villages had the same weather magic although different spirits may have been addressed. I have quoted at some length from Aufinger because his detailed account is fascinating and because most of this magic has been forgotten by the Yabob and Bilbil alike. They, however, remember many facets which Aufinger does not include.

The oral testimonies plus Aufinger's work together should provide an overall insight into the weather magic of the Yabob and Bilbil.

Aufinger distinguished four types of magic:

1. Rain magic;
2. Sun magic;
3. Sea magic; and
4. Wind magic.

3.2.1 Rain magic

This was not of great importance to the traders, who preferred clear days and seas that were not too rough. For details see Aufinger (1939: 277 - 82).

3.2.2 Sun magic

This was used after a long time of bad weather so that a planned trading trip could go ahead. Aufinger described this magic as follows [The scientific names of the leaves were not mentioned by Aufinger. I have added them where possible]

In the morning the weather magician goes to the bush and gathers the following things:

- (a) yellow croton leaves; (*Codiaeum variegatum*)
- (b) hibiscus green leaves; (*Libiscus rosa-sinensis*).
- (c) *tanget* leaves; (*Taetsia fructicosa*)
- (d) *tald* leaves; (a shrub with red leaves which are used as ornaments in the arm bands)
- (e) *wobuI*, leaves of the *Cordyline* family;
- (f) *kruaru*, twig of the *kruaru* bush;
- (g) *gimoru*, bush vine, *gimoru*;
- (h) *kamara*, twigs which are used by the spirits;
- (i) *dotrombu*; (species of *Dendrocnide*).
- (j) *bubus*; [?]
- (k) *wap* fruits; (*Calophyllum inophyllum*).

(Aufinger, 1939: 282-3)

The items listed above were used for their bright colours, strong smell or for their magic qualities: the green of the hibiscus; the yellow of the croton and the bright red of the *tanget* (ginger leaves) were all used to adorn the dancers during *singsings*; *tanget* leaves were also used a great deal in magic, particularly in chasing off evil spirits (Mihalic, 1971: 192); the *talat* leaves usually have a magic formula spoken over them before being stuck into the wearer's armband (Mager, 1952: 310); *wobu* leaves have a special significance for the traders as they were used on the sail to show wind direction (Mennis, 1980a: 76); the *kruaru* bush has a rich sweet smelling sap; the *Gimoru* vine has a strong smell and is used in love magic and also to cover strong odours (Mager, 1952: 106); the *kamara* sap is used for medicinal purposes to cure colds; the *kamara* tree grows for a few years then dies (Mager, 1952: 136); *Dotranbu* is a nettle-like plant; and the fruit of the *Wap* tree is used as an amulet by women to drive away evil spirits (Mager, 1952: 349).

Aufinger continued:

The magician gathers all the above and adds betel nut, peppers and limes. Then he offers them all to the spirits, *Lelei* and *Inad*, and appeals to them not to urinate any more. (Their

urine is said to be the rain). That evening back in the village the magician rubs himself from head to foot with coconut oil and paints himself red and white. He dresses in a long decorative skirt, armbands and leg-bands, into which he inserts the flowers and leaves already mentioned. He dons the red *mal*.

Meanwhile a meal is prepared and the magician comes into the village square carrying an old pot or a wooden bowl with pepper, lime and the leaves of the *kalapulom* tree. He shouts, "We want to have a meal". At this the headman and the other men gather around. The magician burns all the leaves in the bowl and then spins it. The men sit around and drink their *koniak* made from roots (Aufinger, 1939: 284).

The magician calls out to two spirits:

*O Bipoi, O Sagui,
I give you these gifts,
Lime I make,
Pepper and betel nut I give to you.*

The headman hits a coconut with his axe and the magician addresses the two spirit women:

*O Lelei, O Inad,
Take these knotted skirts,
Tie them between your legs,
I give you lime and betel nut,
Take these decorations,
The tortoise shell for your arms,
Snail shell rings for your hand,
Red paint for your bodies.*

Then the magician spins the bowl again saying:

*O Sagui, O Bipoi,
I give you presents,
Don't rain any more fluid,
Climb higher up the ladder,
The ladder of the kariri tree,
Leaning on the Finisterre Range,
Walk along the heavens,
Back to your houses at Bunu.*

Once the coconut is smashed completely, all sing out, "Eah Hae!" and then the feast begins. The magician gives a speech telling his people not to fight or commit adultery. Then he tells them to drink up the *koniak* so they will sleep well. For the following two months the magician observed certain taboos.

The making of *koniak* (*Piper methysticum*) is a very interesting process. The local name is *aiu* in Kranket and *ajiu* in the Bilbil and Yabob language. According to Mager; it is a species of pepper and the drink made from it is quite intoxicating. The Fijian equivalent, *kava* (also *Piper methysticum*) is an ancient crop of the western Pacific. The word *kava*, and its various other terms is used to refer both to the plant and the beverage produced from its roots. *Kava* is sedating and is primarily consumed to relax without disrupting mental clarity. Its active ingredients are called *kavalactones*.

Aufinger described how it is made in Yabob:

The roots of the *ayuw* bush are dug out, dried in the sun and left in the house for two months to dehydrate further. These dried roots are then softened in water and beaten with a stone. For a big party, a large bowl is filled with water and the young people chew the softened roots and spit them into the bowl. The mixture is then left to brew. The roots are chewed again and returned to the bowl. Later it is tested to see if it is strong enough (Aufinger, 1939: 279 - 80).

3.3 Sea Magic

The third type of magic Aufinger lists is to make the sea rough in time of war to protect the islands of Yabob and Bilbil. It involved only the strongest wind. Besides other ceremonies the magician would beat a hand drum and nodding his head would say: (Aufinger, 1939: 287).

“O! *Ongo* I give you this *kundu*. Stand up. Hit the drum, make the wind so that it comes out of your mouth.”

3.4 Wind Magic

The fourth type of magic described by Aufinger also involved a wind which is causing rough seas. This is done when the men want to set out on a trading trip: (Aufinger, 1939: 290-1). The magician cannot drink water or food cooked in water for two days before he begins the magic, nor can he have intercourse. After these two days, he begins the weather magic, which is partly done in public and partly in private.

Aufinger described wind magic indirectly. He wrote that when the Yabob people needed a good southeast breeze to visit their friends on the Rai Coast, they adapted the sea magic for favourable winds and special spells were said. Moving his head to the beat of his hand drum, the magician addressed the good spirit:

*O Namungo,
Blow a south-east breeze,
From your mouth,
In your hand I place a drum,
I put flowers in your hand,
Band your arm,
Nod your head,
The south-east breeze will come,
From your mouth,
Keep standing still,
Lest the sea get rough again.*

Public magic:

The sea magician takes betel nut line, pepper, a stone axe, a bowl called *dod*, made from banana leaves, *kanaka* broom and finally a black stone (obsidian) that comes from a nearby volcano or perhaps further afield through trade.

The magician takes all these things to the village square and the same ceremony occurs as for sun magic (see Sun Magic) but different spells are used. He puts all the things mentioned on the ground and the headman sits near him. The *koniak* is drunk and then he turns the drinking bowl and says:

*O Dangekpain, O Rorpain,
Make the sea quiet,
Look upon Id-auwan Strait (near Karkar),
Look upon Cape Sogorom,
Put one foot on Id-auwan,
And the other on Cape Sogorom.*

Then he spins the bowl again and says:

*O Dangekpain! O Rorpain!
I give you betel nut and pepper,
O Kilibob! O Manup!
I give you this special axe,
Smash the middle of the sea,
And smooth the waves,
I break the black stone for you,
Hit the waves of the sea with it.
O Dangekpain! take this broom,
Please look down and make the flat sea last.*

The Yabob believe that it is the sea monster *wagawag* and the two women spirits who cause the storms because they let out the storm from their mouths, ears and anuses. Another spell is made calling them to close these orifices. Finally the dog *Tarangau* is called upon because he can devour the wind. He is supposed to live in the harbour of Crown Island known as *Kuluk* by the Yabob.

The magician chants:

*Now I grasp the wind,
And push it into Tarangau's mouth,
I cover the entrance to Kuluk,
With a large mal blanket.
I close Tarangau's mouth,
And put his tail in the hole.*

Once this spell is finished, the coconut is broken and distributed.

Private Magic:

This magic is a matter for the magician and his wife. The content is much the same as for the public magic even regarding the spells. Both the husband and wife dress in new clothes. The husband wore a *mal* and the wife a knotted skirt. When the public or private magic is finished the magician throws all his tools and materials into the sea which will soon calm down. If this does not happen then someone else is guilty and not the magician or the magic which has proved itself for centuries (Aufinger, 1939: 287 - 291).

Father Aufinger was one missionary who could see the beauty and poetry in these old customs and wrote that he was anxious to record them because, "the old culture was dying out since European contact began". Ber remembered Father Aufinger as being very interested in the local culture and wanted the people to retain as much as possible.

3.5 Weather magic remembered in the 1970s

The Yabob and Bilbil people in the 1970s did not remember the details of the rituals and spells described by Aufinger but, on the other hand, they remembered some rituals not mentioned by him. Their name for the weather magician was *likon*. In the Mager dictionary, a *likon* is a sorcerer or magician who is

supposed to be able to control the weather (1952: 169). The last of the *likon* in Bilbil Village was Sangal who died in 1943 during the Pacific War. His brother, Kasare, and his son, Lalu, were both my informants and gave an insight into Sangal's life and work.

Sangal, the *likon*.

The title of *likon* was hereditary and the tools of the trade were handed down from father to son. These included knowledge of the rituals, the sacred slates or stones, the names of the little *likon* spirit men and various powers. Since the magic knowledge was only passed from father to son, the line of transmission was very tenuous. A father could die before he passed on the knowledge and all would be lost. Sangal did pass on the knowledge to his eldest son, who died when still young. Lalu should have received the knowledge then, but the Lutheran Mission came and Lalu never learnt the magic in any detail (Mennis, 1981b: 5).

However, Lalu learnt the general knowledge of the *likon*, as did Sangal's brother, Kasare. Their testimonies tally closely, but both deny intimate knowledge of the magic. While *likon* was the name of the weather man it was also the name of little dwarfs or *tambarans* who lived in the *likon* house. They were actually the ones who controlled the elements, but Sangal, in turn, controlled them.

Lalu explained it as follows:

The little *likon* men each had power over certain elements. Some had power over the wind, some over the rain, etc. Sangal knew the names of the individual *likon* men, He would sing out to the one he wanted and ask him to control the element he had power over. My father, Sangal, bossed the *likon* and the *likon* men bossed the rain. They talked and the rain began - they talked and the rain finished. They talked and the sun shone brightly. If Sangal wanted the dry season to finish and the wet to begin, he would talk to the *likon* and they would heed him. Other people would come and ask Sangal to stop the rain or make the sun shine and he would do this. It was his work (Mennis, 1981b: 5-7).

The only other informant who mentioned the little *likon* men was Kasare. It would be reasonable to suggest that these *likon* men were part of the secret knowledge passed from father to son but was no longer regarded as secret as these men were now Christians.

Kasare described the little *likon* men as:

Little people like children who lived in the house. If I came into the house, they would hide from me. If I went out and everything was quiet they would come out and play. They would tell things to my papa, Sui. He was the one who looked after them. Sangal too looked after them. Sangal sat and talked to these *likon* men and they appeared to him in dreams (Mennis 1981a: 43).

Magic stones or slates

The slates or stones which were kept in the *likon*'s house, were supposed to have magic qualities. Kasare described them as being like the slates of Moses. They were kept in the *likon*'s house in a large basket in which the little *likon* men resided (Mennis, 1981a: 42). Kasare said that his ancestor brought the slates with him when he came to Bilibil Island. He along with three other men, Singisungi, Gad and Sekarius, were the first to arrive on Bilibil Island (Mennis, 1981a: 65). Again Lalu is the only other informant who mentioned the slates. He said that Sangal would hold them in his hand and talk and talk and then he would wash his hands in the sea (Mennis, 1981b: 7).

Both Lalu and Kasare agree that the slates had writing on them (Mennis, 1981a: 42). If so, from where did they come? Kasare said they came with Kasar who was from Israel. However, these slates are likely to have been of volcanic origin. In Mager's *Gedaged - English Dictionary*, a stone, called *likon pat*, is

described as: “a round black *gabis*, magic stone, which the creator-god *Kilibob* dropped into the sea for the people to use for weather control especially to cause rain” (1952: 169). Aufinger (1939: 287) also described a black stone which the weather magician used to calm the sea.

Lalu had the most knowledge of the different types of rituals Sangal used for various weather situations and the mediums he used, as this excerpt from recorded interviews shows:

Mennis: Did he have *tanget* leaves and *kavava* in his house? [*tanget* is a shrub (*Taetsia fruticosa*) used in sorcery].

Lalu: Yes, and half pots too, to make the magic over the sun to make it shine. Sangal would cook the *kavava* in the pot over a special fire. [Note: *kavava* (*Zingiber officinale*) is a ginger root used in sorcery].

Mennis: What about the magic for calming the sea and the wind?

Lalu: He would put red paint on his hands and wash them in the sea. It would be special paint used for decoration like the paint on the sail.

Mennis: What if there was a big storm? Did they have magic for this too?

Lalu: When the lightning struck and the thunder was loud, Sangal would know which *likon* man to talk to. He would sing out the man’s name (Mennis, 1981b: 7-8).

In his testimony, Lalu was bewildered by the fact that his father, Sangal, was a good man using what he described as God-given powers:

Before this power was God’s. It was a good power, but when the mission came and men were frightened of the mission, they thought these old customs were bad. They did not call out to the *masalai* of the sea or the mountains. No! God put these little *likon* and told them to boss the sea and rain and gave them power. He told Sangal to look after these things. They were good things. They were not evil like back-biting or making trouble. No! They stayed quietly in the house. But now Sangal did not tell us the names of these *likon* so we are not able to use this magic. We called him *likon* because he was a big man in these matters. He was a good man. He was not a sorcerer, who made bad magic, nor did he spread gossip, he was a man who was *bel isi* that is, he had a good disposition and was even tempered. He sat down in his house quietly. If he had been a bad man or a bad sorcerer, then he would not have been able to boss these *likon*. He was a good man. He did not go and shout out in the middle of the village and begin fights with other people (Mennis, 1981b: 8).

Apparently there were many arguments between Sangal and the mission workers. Damun’s father, Nomu the great canoe builder and mariner, had become a staunch Christian and wanted Sangal, “to throw out all those slates and stones and give them to the mission”. Kasare was also sure that Sangal was ahead of his time because he would talk to Anut who was their god. He was like a Christian because he understood about the one true God. Plenty of men did not understand this but the *likon* man did (Mennis 1981a: 71). So Sangal became a sad figure in Bilbil. By the time he died in the 1940s, the trading trips were finished, his magic was banned and he himself was bewildered by the new Christianity. The beautiful old rituals and customs had all been demonised whereas less dogmatic missionaries may have been able to incorporate the old rituals and customs into the new beliefs such as is now happening in the Rabaul area with the introduction of the *Tubuan* to religious ceremonies (Mennis, 2007: passim).

Much of the weather magic performed by the *likon* dealt with the winds. This magic could be divided into four groups: to start the wind for becalmed sailors; to cause the right wind to blow; to change the wind; and to calm wild winds. Haddon and Hornell (1975-294) stated that, “when becalmed, the natives (in Astrolabe Bay) summon the wind by whistling or blowing on conches like European sailors”. Pall said the men blew on conch shells to summon the wind.

Maia pretended he was a *likon* in regard to the wind:

If there was no wind for instance, I would sing out, “*Yawarti*, eh you wind, start blowing, take this canoe to the shore”. All right then the canoe would go ashore. On the other hand if the wind was too rough, I would think about *Yawarti* and chew *kawawa* and spit it out. The wind would slacken then so we could continue our journey (Mennis, 1981a: 106).

Kasare when asked whether Sui used the slates when he was trying to calm the wind answered, “Yes, he would hold his hands like this and talk into his closed fist”. He would say, “You *likon* you must give us a good wind” (Mennis, 1981b: 43). Sangal did not have to be in the canoe to control the wind, according to Lалу. If he was still in the village he would notice the rough sea, say his magic formula and think special thoughts and then wash in the sea, which would become calm.

Rev. E. Hannemann, a Lutheran Pastor, said some of the old men described the work of the *likon* over the wind:

Before, men made magic over the wind and taught this magic to their children. If a man wanted to go to another place he made this magic. If he wanted to go to the North Coast he had to go and see the *likon*, the man who makes the wind magic and say to him, “I want to go to the North Coast”. The *likon* would address the wind in the direction of Bogati and told it to blow towards the North Coast. We call this wind, *Jawan*. Now there are no men who know this magic. Now the wind keeps its own time (1939: 113).

Sometimes, Sangal instructed other men to use magic over the wind but not always successfully. Pall remembers one occasion when Sangal instructed Han how to control the wind while he was on a trading trip. Han made the magic, but he did not listen properly. He did not thrust the *gorgor* leaves in the direction they wanted to go. Instead, he waved the *gorgor* around his head in all directions. The wind blew all around everywhere. The men asked who had made the magic and were told it was Han.

General knowledge about the *likon*'s work was gathered in many testimonies in the Madang area. Maia, Damun and Pall of Bilbil, Kasare and Ber of Yabob, Bashan of Bilia and many other informants described the *likon*'s work of making magic to change the winds, calm the sea, stop the rain or bring out the sun. Damun added that Sangal, the *likon*, would fasten a *tangete* (leaf) for the wind so it would, “take the canoes where they wanted them to go”. He confessed to scant knowledge of the *likon* and his work. Each of the five trading villages had its own *likon*. Bashan explained that the five *likons* would meet once a year to discuss the control of the wind and the weather. However, if one of the *likons* were absent from this meeting and a canoe was subsequently lost in a disaster, then they might accuse the absent *likon* of the mishap. “They might go along and find this *likon*, ask him what the trouble was and make peace with him” (Mennis, 1980b: 78).

Bashan described the work of the *likon* over the wind:

The *likon* calls out to the wind and fastens the *tanget* on the wood so he knows what wind will blow the next day. If it is the *rai* wind season, he must stop it blowing and start the *talio* wind in the morning. The crew on the canoe say to the *likon*, “You must look after us when we are out at sea”. The *likon* also calls out to every point where there are *masalai*. They would say to these spirits, “See this canoe - we have made it with our hands. You can see it, but don't wreck it. If we come up to your point, you can see us, but don't get cross, don't stop us”.

- Mennis: Does the *likon* walk around to the other points when he says this?
- Bashan: No, he stands up on one point and talks towards the other points where other *masalai* live. It is like a telephone. He knows the names of all the other points so he calls out to them.
- Mennis: Does he make a noise with the *garamut* drum or from his own voice?
- Bashan: He uses his own voice. In the morning before dawn he has a wash and bangs around with the small twigs of the *sibon* tree and then he calls out to the *masalai*. Then the men bring the canoe down to the saltwater as the sun is rising. The *likon* he hits the canoe with the *gorgor* and sings out to all the *masalai* on every point. “You *masalai* you look at this new something. We want to sail in it, now you look after us”. He hits the canoe with the *gorgor* (ginger twigs) and throws it into the sea. Then they leave (Mennis, 1980b: 69).

It can now be seen that Aufinger’s account and the modern memories are quite different in some ways while being similar in others. Aufinger gives the details of the ceremonies, spells and names of the spirits who were supplicated. The later testimonies give the historical context of the changes that occurred and the plight of Sangal, the last of the *likon* men who was caught between two sets of beliefs. Aufinger does not mention the *likon* people who lived in Sangal’s house, but then I only stumbled on them by accident when I was interviewing Lalu and Kasare. For a long time when they mentioned *likon* men I thought they meant only the weather magicians. I do not know if this was restricted to Bilbil only or if Yabob also had these little *likon* people to help their weather magician.

Figure 118. Two Yabob women potters show their pots to an old villager.





Figure 119. Young girl Astrolabe Bay. (Finsch, 1888: 108)

Part 4, Importance of Winds in Trading

4.1 Navigation

It is interesting to compare traditional sailing methods used in Papua New Guinea with the systems of navigation described by David Lewis amongst the smaller islands scattered around the Pacific. The latter steered by the sun, stars, currents, clouds and were even guided by the appearance of birds (Lewis, 1972: *passim*). Because they sailed far out of sight of land they needed as many aids as possible. This was a different situation from that found in Papua New Guinea where the islands are mostly near the coast. The traders rarely sailed out of sight of land so they did not need an elaborate knowledge of the constellations and so on. They mainly needed to know the winds and currents. If they studied clouds it was to look for possible warnings of storms at sea, not for the presence of some land formation.

In his discussion, Lewis compares the Siassi methods of sailing with those in other oceanic islands:

The basing of a wind compass on shore landmarks would be impracticable on oceanic islands for any but restricted travel within sight of land or to give the most approximate bearings. In Vitiaz Strait between New Guinea and New Britain, where the Siassi do use a compass based on local geographical features, both these criteria of visible landmarks and short passages apply (Lewis, 1972: 78).

Thomas Harding agreed that the Siassi did not depend much on navigation by the stars since they rarely travelled out of sight of land, but he added, “rather it is a question of having the fortitude and skills necessary to cope under frequently perilous conditions of wind, wave and current” (Harding 1967: 26).

Similarly, in the Trobriands, the men were usually in sight of land and Malinowski stated:

Taking the bearing by sight, and helped by the uniformity of winds, the natives have no need of even the most elementary knowledge of navigation. Barring accidents they never have to direct their course by the stars. Of these, they know certain outstanding constellations, sufficient to indicate for them the direction, should they need it. They have names for the Pleiades, for Orion, for the Southern Cross, and they also recognise a few constellations of their own construction (Malinowski, 1960: 225-226).

The Bilbil sailing skills were described by Finsch. In many respects they are similar to the Siassi and Trobriand mariners, “The Bilbil natives are not great sailors. They may go as far as Karkar, a distance of 40 miles, but they never go out of sight of land, nor do they put to sea in rough weather - but on the whole the sea here is calm” (Finsch, 1888: 83-85). Finsch does not mention whether the Bilbils ventured out at night using the stars to navigate. First-hand knowledge of this is found in the diaries of Baron Miklouho Maclay, who lived there before Finsch.

In 1877, Miklouho-Maclay travelled on a large trading canoe sailed by Kain and Hassan. He commented on their navigational ability:

They have studied this area, the prevailing winds, their periodical changes, the currents, the convenient places for landing along the shore etc. It was therefore quite natural that I should leave to my companions all the navigational part of the expedition, persuading them only that we stop at each village as long as would be necessary for me. Kain and Kitem explained to me that all the travel from one village to another along the coast will be done in the evening or at night, utilizing the shore breezes which blow uniformly every night, beginning an hour or two after sunset and continuing until dawn. During the day it would be impossible for us to struggle with the opposing sou-wester which sometimes blows very fresh. So, about 8 o'clock in the evening the natives of Bongu helped the Bilbil men to push

both heavy vangs into the sea. The wind was insignificant so that we moved forward very slowly (Sentinella, 1975: 270).

Baron Miklouho-Maclay recalled setting off from Bilibil Island in a *palangut* with Kain at 3 a.m one day in August 1872. Kain apparently tried to put off getting up, saying it was too early (1975: 202-3). One hundred years later, when there were only the memories left of these trading trips, Damun reminisced about sailing trips and using the stars to indicate the coming of the dawn: “We used to sail by night because the sea was not rough and the men were happy to sail then. They would sail along the coast and look out for the different points of land and the mouths of the rivers etc. At dawn when the *Rai* wind rose, they might venture further out with the help of the wind. At night, they would sail slowly and did not like to lose sight of land.”

Mennis: And they looked for different stars?

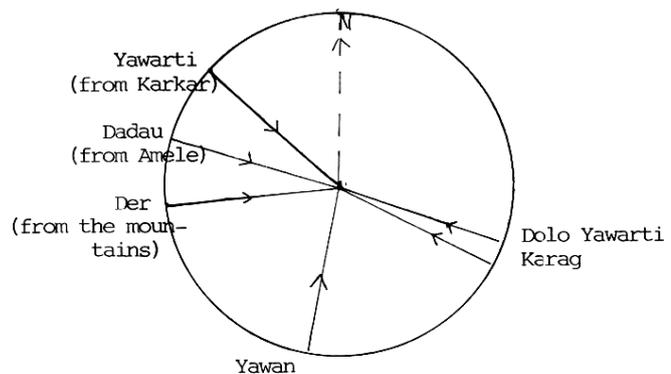
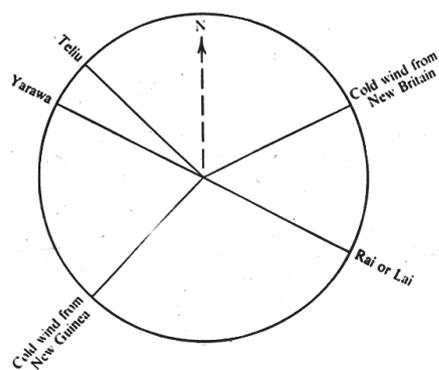
Damun: Oh yes! They looked out for the big stars not the little stars. I do not know their names. One star which they watched was the morning star - the big star which appears in the morning and when they saw it they would say, “the dawn will be here soon. Here is the big star to show us” (Mennis, 1981b: 15).

In another interview, Damun qualified this statement about night sailing saying that the men never ventured out in the middle of the night, but only in the pre-dawn: “About four o’clock in the morning we would see the morning star and know the time. We would wait for the dawn and see Karkar Island and head for it. Because it is an island we cannot use the stars to find it. When we went to the Rai Coast we used the stars. The *Boi* star must be on the saltwater side and then we could go. It must be clear”. The men sometimes used the stars to guide them along the coast, provided they could pick out landmarks to help them. However, the consuming interest of the Bilbil mariners was the winds - their strength and direction. Both these factors were of paramount importance to all mariners in the Pacific. Pall said, “Before you leave you must think of the wind and make your calculation”. He was speaking of the *dadau*, a north-west wind which begins to blow around at 4.30 p.m. “*Dadau* does not last long and the wind may change. Also it may get dark before you arrive at your destination and it is dangerous to sail in the dark. So we must be careful of sailing in the afternoon” (Mennis, 1981b).

It is interesting to compare this lack of intimate knowledge of the stars to the vast knowledge of the heavens that the Caroline Island sailors had (Lewis, 1972:62). They sailed by 32 constellations which they used in a star compass and did much of their travelling by the stars. They would be amazed by Damun’s

Left, Figure 120. Siassi Wind Compass. (Lewis, 1974: Fig 6)

Right, Figure 121. Madang Wind Compass.



statement that, “because Karkar is an island we cannot use the stars to find it”. Another consideration was that Astrolabe Bay is hemmed in by mountain ranges and so there is not the multiplicity of winds found in other parts of Oceania like the Cook Islands, where there are 32 winds on the sailors’ wind compass making one wind for every point of the compass (Lewis, 1974: fig. 6). The Bilbils have 6 main winds and corresponding breezes from the same direction. The wind compass for Siassi as given by Lewis is very similar to the one I was able to compile from testimonies of the informants in Bilbil village.

4.2 Different winds

Dadau

This is a northwest wind blowing from Amele towards Bilbil Island and during the wet season this is the prevailing wind. In January and early February it was used by the sailors to go to Rimba, Kul and Singor, but the wind could strengthen during the day. If the sailors were not careful, the wind would blow them straight to Biliau (Mennis, 1981b: 46). In March, the *dadau* slackens to a breeze, the *dadau dere*, which gives way to the *yawan* from the south. March is a month of doldrums. Then, in April and May, the *dadau* blows very early in the morning and the trading canoes used it to go to the Rai Coast. By mid morning, the winds blow from the south-east in these months. In December, the *dadau* begins again very strongly. It is not good to go trading when this wind is blowing. However canoes can use the southerly *yawan* land breeze if they leave long before dawn and arrive before the *dadau* blows from the opposite direction (Mennis, 1981b: 50-51).

Sometimes only a soft breeze blows from the same direction as *dadau* - the north-west, the *dadau dere*. In January and February, the *dadau dere* or *dadau* breeze starts blowing at 4.30 in the afternoon. Pall warns that this too can prove hazardous for sailors hoping to arrive at their destination before dark. This wind does not last long either and may change quickly, in which case the sailors would find themselves off course and in the darkness - two things to be avoided (Mennis 1981b: 46). The *dadau dere* is much the same as the *talio* or *yawarti* wind in strength. However it blows from the WNW whereas the *talio* comes from NNW. According to Mager’s dictionary, the north-west wind is called *dadau* in quite a large area of Madang from Riwo to Bilbil and from Takia on Karkar to Kranket. On the Rai Coast it is *dodau*. Mager also mentions that the various *dadau* winds are named after certain places e.g. Guntabag *dadau*, Surou *dadau* etc (Mager, 1952: 52).

Karag

This is the wind that is really feared most by all mariners in Astrolabe Bay. It is called *karag* meaning an angry man. It always refers to a wild wind because the usual wind coming from the same direction is called *dolo yawarti*. As soon as the *dolo yawarti* strengthens past a certain point it is called *karag*. The *karag* blows south-east from the direction of Saidor towards Bilbil and is strongest in August (Mennis, 1981b: 45).

It is interesting to compare my interviews with the diary entry for 23 August 1871 by Baron Maclay:

Got ready to go to Tiara [Siar] (an island and a village of the same name) which lies I don’t know myself where, but as there is a fresh ‘nor-nor-west wind blowing and a strong swell the natives asked me to wait for good weather; a nor-nor-west blowing from the open sea is usually accompanied by a considerable swell and is called by the natives *karag*. The west-north-west is also a very common wind here, but it is not accompanied by big waves, for it blows from the shore; it is called *yavar*. I walked all over the island, and found some shells on the beach (Sentinella 1975: 201).

This diary entry is for August when the *karag* blows strongly, but Baron Maclay had the wind direction as nor-nor-west which is amazing as this is the prevailing south-east season. One possible answer maybe the Russians in the 1880’s described the wind direction by the direction it was blowing towards and not

Trading by the months, seasons and winds.				
Month	Season	Wind	Trading Trips	Crop
January	Wet	Dadau and Yawarti northwest winds prevail. Dadau Dere in the afternoon. Yawan is a night land breeze.	Can travel early in morning. 1000 to 1300 too rough to sail. Yawarti from NW OK.	Small Taro. Plant Yams.
February	Wet	Same as January, but Dadau, not so strong.	Use Dadau to go to Rai Coast. Return with Yawan land breezes.	Small Taro.
March	Wet	Early morning Yawan then Dadau Dere until late afternoon. Late March, start of doldrums.	Good time for Rai Coast. Return early in morning before dawn.	
April	In between season.	Doldrums. Morning, Yawan. Afternoon, Yawarti.	Yawan takes the canoes to Sek in the morning. Return with Yawarti but, if at Rimba, come home in morning.	
May-July, Trading season	Dry	Dadau from north overnight and the Dolo Yawarti from south east prevails during the day until late afternoon.	Leave before dawn using Dadau to go to the Rai Coast and could sail back to Bilbil by the Dolo Yawarti in the afternoon.	Big Taro from Bogati and Sehan.
June-July	Dry	As above.	Both Dadau and Dolo Yawarti are good trading winds	Harvesting of Yams and Taro.
August	Dry	Karag from the south-east in the day and is a dangerous time to sail. Yawarti returns in the late afternoon.	Winds too strong for sailing during the day but, by 1600, the Karag has dropped, and Bilbil canoes can use the Yawarti to go to Bogati, Saidor, Mindiri on the Rai Coast.	Galips from Karkar Tapioca
September	Dry	As above.	As above	
October	In between season.	The doldrums. Yawan in early morning, then Dadau Dere		
November	Wet	Dadau or Yawarti changing to Dadau Dere in the afternoon.		Hungry months
December	Wet	Dadau is stronger, blows until 1730 when the Yawan starts.	Not a very good time for trading.	

Table 6. Trading by months, seasons and winds.

from. In this case his nor-nor-west would be our southeast. This is more or less confirmed by his entry for July 1877, during his second trip to the Rai Coast. In this diary entry he is sailing along the coast from Bongu towards Saidor in a south east direction and he says, "During the day it would be impossible for us to struggle with the sou-wester which sometimes blows very fresh". The wind could not possibly be opposing if it was blowing the same way as they were sailing.

He is obviously referring to the south-easterly winds *dolo yawarti* or *karag* which do get fresh at this time of the year. Harding quotes a wartime intelligence report about Siassi, which is in the same weather zone as Bilbil. "Prevailing winds are from the southeast during May to November and from the northwest during January and February. March, April and December are uncertain months, where winds may be expected from almost any quarter, often springing up and dying down very suddenly ... The south-east winds usually reach rather high velocities and continue so for long periods of time" (Harding, 1967: 12). Harding shows that the prevailing wind in the months of August are from the south-east (1967: 92, figure 3).

Here is a story by Pall of a well-remembered battle against the *karag* in his father's Chinese boat:

One time my father and I were going to Karkar and we called in to Sek Island to see Dazub who was my father's friend. A woman had died in the hospital at Alexishafen. We sat in the men's house and heard all the women crying for her. My father said, "We will never get any sleep here". So we put the boat in the water and set sail for Karkar. We left Sek Island and sailed through the night. About 5 o'clock in the morning a strong *karag* began to blow and buffeted the boat.

Before the *karag* began, we had had an easy journey with a good wind, but now the sea was very rough and we were blown around. The wire on the boat broke, so we held on to the rope that hoists the sail. The big men held on and gradually lowered the sail and turned the boat. Then we went ashore at Karkar at a place called Biu. The sea was very rough and the Karkar men were very surprised to see we had come in such bad weather. “Why did you come?” they asked. “Well, we were at Sek and the women were wailing and we couldn’t sleep so we thought, we might as well continue our journey, but then this *karag* came”, my father told them. So then we stayed with the Karkar men and the *karag* blew for many hours with rough seas (Mennis, 1981b 51).

Comparative terms for the *karag*.

- Kazag* Kranket and Riwo
- Kadang* Nobonob
- Karag* Bilbil, Bongu, Ham, Takia, Vaskia, Swit and Singor

Dolo Yawarti

This wind is called the brother of the *karag* and blows from the south-east direction from Siassi and Arop towards Madang. If the traders were at the Rai Coast and wanted to return they would use this wind. It blows mainly from May to July, which are the best trading months. It was during these months that the long trading trips took place.

Yawarti

In *Tok Pisin* this wind is called *talio* which is also the name for the monsoon season. It is the north-north-west wind, blowing from Madang or even Karkar. It follows the coast and turns slightly so it is a good trade wind to take canoes to Saidor and Sio. This wind was used in the trading months from May until July. In January and February, the *yawarti* blows from Karkar until two or three in the afternoon, when the *dadau* blows again (Mennis, 1981b: 46). Pall said, “The *yawarti* can get very strong and break the

Table 7. Wind Chart, Madang area.

Wind Chart, Madang area.												
Time	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
0000 to 0600	Yawan land breeze			D O L O R U M S	Yawarti or Dadau night breeze used by traders before dawn			Yawan land breeze		D O L D R U M S	Yawan night breeze	
0600 to 1200	Dadau and Yawarti NW winds		Dadau Dere breeze		In April, winds are variable. Then the SE wind, the Dolo Yawarti prevails. Good for trading			Wild Karag SE winds. Dangerous for canoes			Yawarti and Dadau winds	
1200 to 1800	Dadau Dere										Dadau Dere breeze	
1800 to 0000	Yawan land breeze				Yawarti night breeze			Yawarti wind			Yawan night breeze	
								Yawan breeze				
	Wet season			Dry season						Wet season		

outrigger and mast. If you want to use this wind you must leave early in the morning before it gets too strong and then pull the canoe ashore when the wind is strong” (Mennis, 1981b: 46).

Comparative terms for *yawarti*

<i>Jauazti</i>	Kranket, northwest wind
<i>Jawarti</i>	Bilbil, Singor, Takia, Bongu
<i>Joazti</i>	Riwo
<i>Joaoti</i>	Nobonob
<i>Jawar</i>	Swit

(Mager, 1952: 126)

(Note: Mager uses the “J” to denote the “Y” sound)

Yawan

In June and July, the *yawan* land-breeze blows from the southwest in the morning until midday when the *yawarti* wind begins to blow. The *yawan* is also a night breeze and was used to travel from Bongu or Bogati back to Bilibil Island. The *yawan* starts at 5 o’clock at night and stops at six in the morning.

4.3 Disasters at Sea from strong winds

Pall listed four ways a trading canoe could turn over while in rough seas:

1. The outrigger could go down too far and the rest of the canoe could topple over.
2. The outrigger might go too high in the air and the canoe would overbalance, sending the outrigger right over the mast. This would happen if the wind was too strong for the sail.
3. The canoe might dip down too far in front and the canoe could be blown over. This happened if two masts were put on a small hull and the wind blew strongly from behind.
4. The canoe could topple backwards if the wind caught the sail too strongly.

If the canoe looked like sinking there were certain procedures to follow. Damun said: “We would cut off the outrigger, together with some rope and holding this we floated to the shore. If there was time, we would cut the vines and tie the planks, platform, and outrigger together. The hull and sail would be cut off and sink” (Mennis, 1981b: 53).

When sailing, the mariners used to watch the wind on the sails. Pall explained why, “When the wind blew on the *sam* side [outrigger side] you must turn the canoe so the wind blew on to the *tai* [the side withiut the outrigger] and then you could sail well. Later when you came ashore to trade and wanted to go again the steersman had to turn the canoe again so the wind blew on the *tai* side that doesn’t have the outrigger” (Mennis, 1981b: 47). The men would pull on the rope which pulled the sail around, “so the wind blew on it but you could also turn the canoe (with the steering paddle) to give wind to the sail. If the wind suddenly changed direction and strengthened the men would slacken the ropes to turn the sail”. If they didn’t do this the canoe would fall over. Alternatively they could roll up the sail to save the canoe.

Los of Kranket described one near-tragedy at sea in *Buk Tomalai Suliken*:

Once five men decided to go trading in their large canoe. The canoe belonged to two big men on Kranket Island, Mapalsen and Malbak. They set off with another canoe for the Rai Coast. As they neared the Rai Coast the *karag* blew from the south east towards Bagabag. One canoe managed to go ashore but the canoe with Malbak and his friends was blown towards Bagabag in the high seas. The men threw off some of the cargo, their *saksak* and

pots, as they thought they were sinking. The canoe was blown ashore at Boriau passage on Bagabag, where they were met by Bison. He knew Malbak, having met him on Karkar. The men stayed at Bagabag Island and later they went to Karkar where the people put on *singsings* and feasts. They lived there for two or three months. Meanwhile the second canoe from Kranket returned home with the news that Malbak's canoe had been blown out to sea and probably had sunk in the big seas. The Kranket people mourned Malbak and Mapalsen and the rest of the crew as dead. They hacked at their coconut and *betel* nut trees and destroyed them. They donned their clothes for mourning and sat and drank their *koniak* and worried about the men dying at sea. Two or three months past then one of the men on Kranket Island heard a *kundu* drum beating a happy tune out to sea. He ran to the beach and saw Malbak's large canoe. "I think the men who were lost are coming home", he said. He went down and saw the canoe and welcomed them ashore. 'We thought you were dead and the people here have broken everything you owned'. Then they all went to the village and everyone was delighted to see them. They took off their *bilas* for the dead and then sat down and talked to them" (Hannemann, 1939: 112-3).

This is an interesting story of a trading canoe being blown off course and subsequently returning. There are accounts of new settlements being established permanently as a result of such drift voyages. There are, however, many stories of disasters in the canoes.

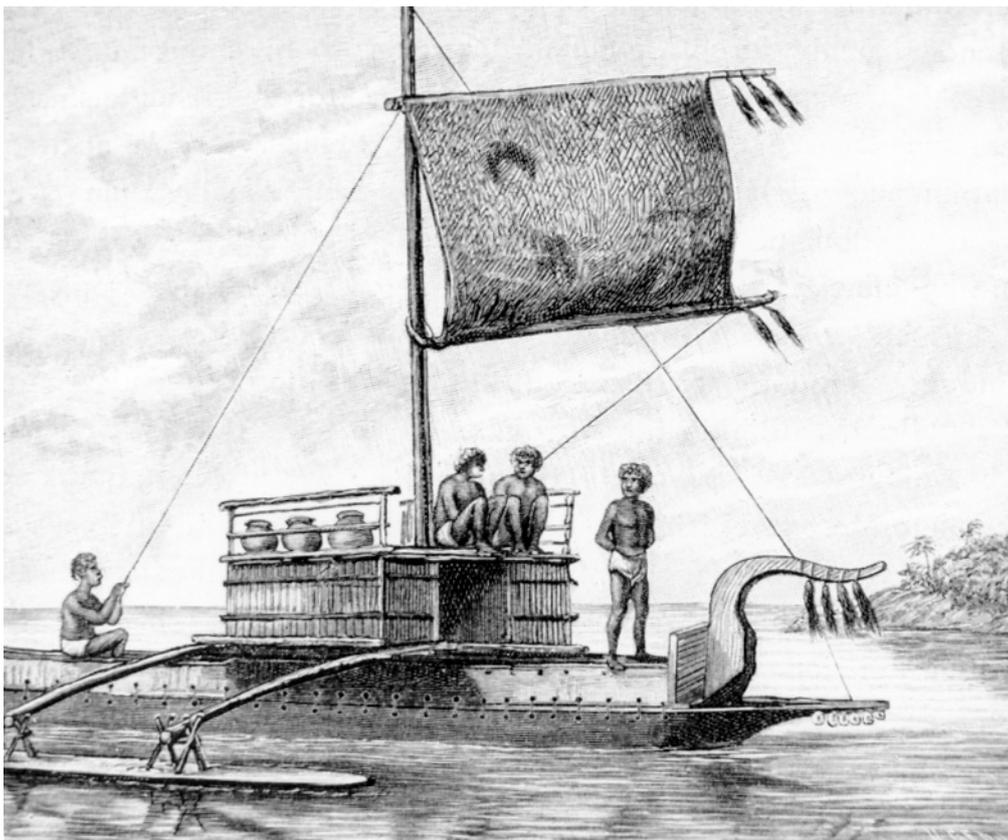


Figure 122. Traditional Astrolabe Bay canoe on a trading trip in the 1880s. (Finsch, 1888: 84)

Here is one story of a canoe swept back by the *dadau* wind.

Once when Pall was a young man, he was trading pots at Rimba with his father, Tagari, and Jumei and Kason when a *lalong* was lost offshore. It was December and the Singor people had risen early to use the southerly land breeze to cross Astrolabe Bay. They were on their way to a *singsing* at Hudini and were hoping to land at Bilbil before the *dadau* rose. Their calculation must have been out as, before they landed, a strong *dadau* rose and blew them back. It became rougher and rougher and they were defenceless against it. Many hours later the *lalong* arrived back in the Rai Coast (five hours sailing away). Pall, Tagari and the others were on the seashore at Rimba and they saw the *lalong* in the rough waves. They got a long pole and tried to help the people. They put rollers on the beach to pull the *lalong* ashore, but it was all to no avail. They were blown back to the open sea. The *lalong* drifted away while the men on the beach waited for signs of it but it sank in the big waves. Only one man survived. His name was Budinaio and the sea carried him up on to the rocks.

There was a Singor man on the beach and he accused the Rimba people of not helping the Singor people on the canoe. They were accused of killing the them. Many Singor people came to Rimba while Pall was still there to hold court over the matter. The Bilbil men were witnesses.

They were asked, “Did the Rimba people kill the Singors?”

“No, they didn’t”, was the reply, “they tried to help, but the wind blew the canoe towards Siassi”.

Budinaio, the man who survived, was the best witness to what really happened and the Rimbas were cleared of the deaths. This story showed that people along the coast were expected to help mariners who were in trouble. It showed what happened when the sailors miscalculated the winds and their arrival time. If they were caught by a contrary wind they could be blown right out of their course with dire consequences to passengers and cargo. This tragedy was, in the end, attributed to bad sorcery or poor *likon* magic.

Even Pall, a Christian, said, “In former times the *likon*, made strong magic over the wind. He could make the *dadau* strong enough to blow the canoes to Siassi. In this time of the big magic the *likons* could make the sea very rough.”



Figure 123. Hansemann Range. (Finsch, 1888: 100. Courtesy of State Library of Queensland).

Part 5, Trading Items and Trading Voyages

5.1 The *Dadeng*, trading voyages in Astrolabe Bay

In traditional times, the canoe was a vital part of the trading networks along the coast. Most of these canoes were built by Austronesian speakers who traded over large areas of sea and the islands. On the north coast, they trace their origins back to Yomba Island, which according to traditions once stood at Hankow Reef. Genealogies of between ten to twelve generations deep were recorded to ancestors who left the island. In studying the common features of Austronesian groups near Madang, one can postulate that on Yomba Island they would have spoken an Austronesian language; made pots of the anvil and paddle method; built large sea-going canoes and been involved in long distance trade. Of the groups who migrated from Yomba Island to the coast and nearby islands, only some groups continued all these customs.

The people who migrated inland to the Gogol kept the pottery craft but obviously lost the art of building sea-going canoes within one generation. Those who escaped to places which did not have clay deposits, like Kranket Island, lost their skills as pot-makers within one generation. Adpa of the Genasi Clan on Kranket Island said, “[My ancestors] made pots on Yomba Island but those who came here to Kranket stopped making the pots.” There was no clay available. Instead the Kranket people specialised in making canoes and canoe hulls, which they used as trade items against pots. Those people who went to Yabob and Bilbil Islands probably kept most of the old culture making clay pots and building large canoes, both characteristic of most Austronesian speakers. Within the village context, their *dadeng* trading system played a large part of their lives. The women made the pots and the men constructed the canoes. In the Gogol area where the men lost the need for the large canoes they became the pot makers - perhaps to give them status as this industry gained importance.

5.1.1 Informal and formal trading

In the Madang area, there was formal long distance trading on the one hand and short distance informal trading on the other. Peter Lawrence commented, “Informal trade went on continually. On the Rai Coast, Ngaing brought bowls and bark cloth to the coast, and returned with fish, salt, dry coconuts, pots and valuables. At Madang, mainland groups exchanged wooden plates for pots and valuables from the islands. For formal trade, the Madang groups assembled canoes —” (1964: 27).

The Bilbil/Yabob had informal trade with the people in the Madang Harbour and nearby mainland villages. Their formal trade happened on the long voyages to the Rai Coast, between the months of May and July when they assembled fleets of canoes and required much preparation: the men built the large canoes while the women made hundreds of pots. The feverish pace of these activities shows the high social levels of organisation and the high level of technical knowledge. The main purpose of the maritime systems on the north coast was the acquisition of food (Harding, 1967: 242). The large sea-going canoes made it possible to cover great distances; up to 160 kilometres from east to west (Bodrogi, 1979: 270). By travelling in fleets of canoes, these traders had some protection against enemies and a quick escape. This can be contrasted with inland trade systems in the Highlands, where the distance traversed was rarely more than 16 kilometres. Tribes in that area were only involved in Short Distance Trading as they had little method of protection against enemies. Hughes explained “the presence of enemies not physical distance was the principal obstacle” (Hughes, 1977: 302).

5.1.2 Trade Friends

Trade friends were an important component of the social life in the trade system. Bonnemaïson (1985: 32) took the common anthropological view that it was in the relationship of man within his village that, “a feeling of identity is forged”. Trading partners shared this identity with their partners giving them a place in the social structure of each of the villages visited. If the trade was seen as a chain between villages,

then the trade partners were the links in the chain at each place of call. They were passed on from father to son and linked people, not only in the present, but with past ancestors as well.

Different roles were played, depending on whether the trader was the host or the visitor and each category had its own rules and customs to be followed. Hosts had to ensure the safety of their visitors or risk losing their reputation. They had to welcome them and ensure they were adequately fed during their visit. The Russian scientist, Miklouho-Maclay, witnessed an example of this expectation while on a trading trip with the Bilibil Island people to Singor Village on the Rai Coast. Bilibil headman, Kain, upbraided the host village for not killing a large pig for a welcoming feast and they rushed to comply (Sentinella, 1975: 74). Visitors on trading missions also had to follow a set of rules providing the right trade goods of an acceptable quality. If they were an inland tribe they had to make sure they had appeased the spirits of the unfamiliar territory as they travelled. They could not look back for fear of disturbing the spirits. They had to ensure their own safety by not taking too many risks or venturing too far and they had to bring the trade items for future transactions with their trade partners.

Pall of Bilbil mentioned the *dinau* system, a type of delayed exchange, when a trade friend was given products on credit. “*Dinau* was a good system because you did not have to provide the pots then and there. If a man insisted on receiving trade goods straight away he would not be considered a good trade friend. He might lose trade friends through this” (Mennis, 1981b: 59). For example, if the Bilbil men had no pots to exchange for the materials to make a canoe, then they could obtain the bamboo, the logs and vines and deliver the pots later. If, however, the Bushmen insisted on instant pot exchange they would be on shaky grounds in the partnership. In the Schouten Islands, partnerships were also regarded as very important and handed on from father to son (Hogbin, 1935: 398). In some areas like Sio, the people deliberately under produced food to promote trade with Siassi and keep in touch with their trade partners for social reasons (Ian Lilley, pers. com).

5.1.3 The *Dadeng* part of a larger sphere.

Bellwood mentioned “three overlapping trading spheres” centred on Tami Island, the Siassi and Bilibil Island, in which, “hundreds of ecologically and culturally specialised communities are involved, exchanging root crops for coastal fish, coconuts and pottery with three groups of sea-borne middlemen” (Bellwood, 1978: 103). On the other hand, Thomas Harding described a trading system centred on the Vitiaz Strait with the trading systems of Astrolabe Bay and the Huon Gulf as part of it, although on the periphery (1967: 13):

Primarily because of the known two-way role played by the Tami Islanders, connecting as they did the Huon Gulf system with that of the Vitiaz Strait, and the possibility that Bilibil Island played a similar role in the west, it is unwise to attempt to specify rigid boundaries. Indeed, it may be best to consider the Huon Gulf on the one hand, and the Astrolabe - Karkar island trading area on the other, as components of a larger system centred in and embracing the Vitiaz Strait.

Harding thus viewed the Bilbil network [including Astrolabe Bay] as part of a larger network centred on the Vitiaz Strait. A more likely scenario is that described by Bellwood of at least three overlapping trading zones. Perhaps each major trading place naturally saw themselves as centric to their own zone. Certainly the Bilbil/Yabob mariners did. Their trade network embraced the following: Karkar Island and many other villages along north coast to Korak, Sarang and Megiar; people in the Madang harbour including Bilia, Siar, Riwo and Panutibun Islands; inland villages in the Gogol Valley and more importantly with many villages on the Rai Coast as far as Sio. But the Karkar Islanders who produced *kunum* (mortar and pestle), drums, canoe hulls and galip nuts would have a view of their own centric trading system to the north coast and as far south as the Rai Coast when they travelled with the Bilbil traders.

Although there was a certain overlap between the Bilbil and the Siassi and Tami Islands trade systems, some artefacts remained exclusively in their own areas, particularly if different trading zones had their own variety of the same items. However there were exceptions. Although wooden bowls were made on the Rai Coast, they were not as delicately carved as those from Tami Island and so the latter were a desired item of trade over a large area. The Rai Coast was an area of considerable overlap: Bilbil pots were traded for Siassi and Tami pig tusks and dogteeth ornaments; Tami wooden bowls were exchanged for Rai Coast pigs, bark cloth, wooden plates and Bilbil pots; even completed canoes were trade items from both Bilbil and Siassi into the greater trading system, which extended into New Britain.

Academic writers often have their own bias when describing trade networks. Those interested in the arts such as Bodrogi have quite a different perspective from those of ethnographers, anthropologists, pre-historians or linguists. Bodrogi postulated that artforms in New Guinea were limited by trade and that certain forms of artwork prevailed in certain geographical areas and were rarely traded outside that area. He developed the concept further identifying different styles amongst the trade items and categorised them according to 'distribution of elements and types' and added that each trade system had its own style of artwork in its artefacts (Bodrogi, 1979: 267). Harding on the other hand was interested in the economics of the Siassi people in the Vitiaz Strait among whom he lived, but rarely did he allow his field notes or anecdotes to impinge on his economic study. He was more objective and analytical than Hogbin who gave an interesting subjective account.

5.1.4 Environmental, Economic, social and religious factors

The physical environment had a direct effect on trading systems. The rocky ground on Bilbil Island was completely unsuitable for gardening. Even to dig a hole for house posts was a big job - sometimes the men resorted to using already standing trees as house posts. As a result, only a few small gardens were made on the island and others on the mainland but these were not sufficient for their needs in the hungry times of the year. The men had to sail with their cargoes of pots to obtain food: they were sailing for survival. In spite of the small size of the village and the number of sailors, Bilbil mariners were held in high esteem and were famous for their skilled navigation. In 1888, the island's population was only estimated at between 200 and 250 (Harding, 1967: 14), so there could not have been more than 80 able-bodied men to sail the canoes at any one time. However Finsch called them the patricians of the bay and counted thirteen canoes on the island beach (Mennis, 1996: 15).

Furthermore there were no clay deposits on the island but clay was found on the mainland near their gardens. For safety sake, the men accompanied the women when they went collecting the clay but were rarely attacked, partly because they were strong fighters but, more importantly, because of the pots. If the Bushmen killed off or stole the women collecting clay, who would make the pots? Economically the trading system meant that these island people were comparatively wealthy. Their specialisation in pottery and monopoly over it, led to quite of high standard of living on the island, remarked on by Otto Finsch in 1884 (Mennis, 1996: 16).

The environment even determined the places the traders could visit. The *palangut* and the *lalong* of the Bel group were light enough to be beached and pulled up on rollers at coastal villages, whereas the larger, heavier Siassi canoes had to be moored offshore and needed a quiet anchorage. Although the economic need for food was the basic object of the *dadeng*, the Bilbil people traded their pots for many other goods. Social obligations were also fulfilled during the *dadeng* particularly with trade friends in each village visited (Harding, 1967: 23). The spiritual aspects of the journey required protection against evil sea spirits, which might otherwise jeopardise the trading trip including using the secret language to confuse these spirits. Another religious aspect of the long trading voyage was that the mariners were going to the Rai Coast following the spirits of the ancestors who had gone before them to *Degasub* to the cave of dead souls where *Tiningai* guarded the entrance. In this respect the *dadeng* can be compared to the *hiri* voyagers who also travelled in the direction of the souls of the dead in their journey to the Gulf.

Among the maritime groups in Papua New Guinea, the Trobriand Islanders had their *kula* ring; the Motuans the *hiri* trading voyages; and the Bilbil Islanders the *dadeng*. These long sea voyages were seen as spiritual journeys needing many special rituals to ensure the success of the venture. Among the many anthropologists who attest to this belief is Bonnemaïson (1985: 32ff) who wrote that in Vanuatu, the journeying was “carefully controlled by the group, which endowed it with a purpose and celebrated it as a rite in particular, departures for other islands by outrigger canoes involved a whole social organisation, lengthy material preparations, the acquisition of navigational techniques and special rituals”.

5.2 A typical Bilbil *Dadeng*

Reasons for the trading voyage

Damun Nomu discussed why the Bilbil and Yabob went on the *dadeng*: “The Bilbil and Yabob did not make things with their hands, apart from pots. They only made small gardens because Bilbil Island is so full of stones that if you dug there for one day you would feel like dying. The bush people had plenty of land and made big gardens so the Bilbil said, “you grow the food and we will buy it with the pots” (Mennis, 1981a: 29). So popular were the pots that if one place wanted to fight the Yabobs and Bilbils, other places would combine to attack that place. Bilbils attacked other people, but were rarely attacked themselves (Mennis 1981a: 30). If the Bilbils and Yabobs were insulted by villagers, the mariners would put a *tambu* on that village which could only be broken by a big feast (Mennis, 1981a: 29). As a result, villagers welcomed the Bilbils and Yabobs and other members of the Bel language group with pig feasts, worried that recriminations might fall on them. On the positive side host villages were pleased to acquire pots for their inland trade.

Each clan in the Bel group had trading relationships with particular clans in the host villages. Various clans in Riwo village had a relationship with different clans in Bilbil village: the Tabad Clan on Riwo were trade friends with the Dugus Clan; half of the Mulpau Clan were trade friends of the Luan Clan and the other half with the Gapan Clan; and the Kaidudaiman Clan were trade friends of Murpatt on Bilbil. Trade with Riwo would only be for short informal trading trips. For the longer trading trips, the Bilbils headed off to the South-east in the months of May or June using the *dadau*. Often other members of the Bel group including Riwo and Kranket Yabob might join with them on the trading trip, making quite a fleet of canoes.

Preparation and departure:

Traditionally, there was much preparation before a trading expedition: Hulls for new canoes had to be bought; old canoes had to be restored and re-lashed; material for the superstructure was collected from the bush people who would send smoke signals to the island when the material was ready (Mennis, 1981b:80). While the canoes were being built, the women were busy making pots needed for bride price, for home use and for further trade. Their speciality protected them. Gain of Bilbil pointed out that “Hudini, Yagaum and other places traded food for pots. If they fought the Bilbils they would no longer have pots or even *mal* and wooden plates which the Bilbil used to bring from the Rai Coast” (Mennis, 1981b: 3).

As the time approached for the trading season, the *likon* chose a propitious time for the voyage; the men painted the canoes, decorated themselves and everyone gathered for a feast. When it was time to load the canoe, the men beat the *garamut* and the women hurried down with *bilums* filled with pots (Mennis, 1981a: 4). Before loading the pots, the bottom of the pot cage was lined with *limbum* leaves and the pots were laid on top of these leaves – the big ones on the bottom and smaller ones above. Pots were marked with ash to distinguish their maker. If the canoe were a *lalong*, it would take two men to fill up the pot cage. If it were a *palangut*, it would take four men. When all the pots were in the cage more *limbum* was laid on top and fastened down to stop the rain spoiling them. There might be 100 pots in a *lalong* or 200 in a *palangut*. If *galip* nuts (*Canarium polphyllum*) or *mals* were added they would be stored with the pots too and *tanget* leaves specially wrapped would distinguish one *mal* from another.

Before they left, the men told their wives to work hard and behave themselves for if they fought, fooled round or got lazy, their pots would return unsold (Pall, interview 19 June 1977). When the canoes were nearly ready to go, the *likon* was approached again and offered gifts to make the day's weather fine and the sea calm. Before leaving the beach, the men got *gorgor* (ginger) leaves and stuck them in the end of each canoe. Then the sails were raised and supported on the mast by the mast prong and the canoes were ready for launching. Each captain waded out beside his canoe, grabbed the *gorgor* leaves and beat the canoe to rid it of evil spirits exclaiming "You, *masalai*, you leave us now". Then he would climb into the canoe and hit the mast and the sails yelling out the same thing. Lastly, the captain threw these leaves dramatically into the water yelling, "Off with you, you *masalai*".

The canoes could carry up to ten men but needed at least four men: the captain, two steersmen and a young boy to fetch water and climb coconuts. If this young boy had not been to a certain village before, it was the custom to get some sand from the beach of the new village, heat it and put it on his back so he would not get sick. If the canoe were new there would be certain ceremonies at each place. The people would kill a pig, cook it and eat the pork sitting on the mats in the village. This feast was followed by the *opim dua* ceremony when the palm leaves covering the pots in the canoes were lifted. The pots were then exchanged for plates, dogteeth and so on (Interview, 19 June 1977). Because of lack of space, some items were left behind to be picked up on the return trip.

While they were away, the *likon* had to stay quietly in his house in the village, even up to a month or so. His wife would have to feed and care for him. While he sat quietly, the sea would be quiet for the trading trip. When the mariners wanted to return, the *likon* would start up the *rai* wind for them (Pall, interview, 19 June 1977). But the mariners were not completely reliant on the *likon* for their safe travel. They had general knowledge of the most favourable winds, of landmarks and of the stars to guide them. With their navigational techniques they knew how to manipulate the sails to take advantage of the winds that occurred in the Rai Coast area and across Astrolabe Bay and what to do if a state of emergency arose.

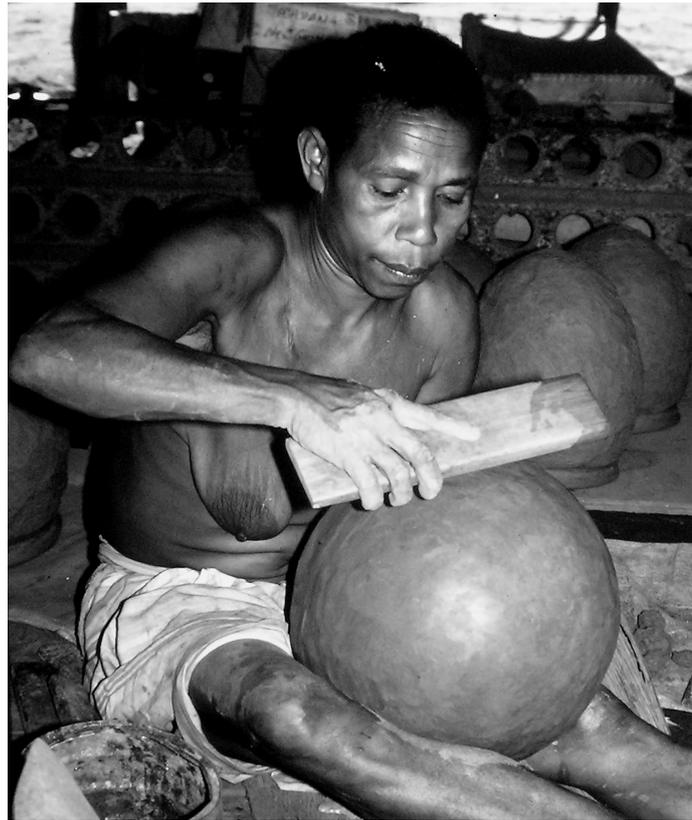
Discipline at sea

Because of the hazards of sea travel, the crew had to be prepared to obey the captain of the canoe instantly. Sungai of Siar described the young men as the boat's crew. They steered the canoes, bailed out the water or pulled the ropes on the sail. The captain would give the orders, just like the captain of a ship (Mennis, 1980b: 48). Each canoe also carried young boys and girls to do the chores. When it was time to go ashore these children would take the water bag and fill it up. Others would collect coconuts or mangoes.

Masil gave a good account of discipline at sea:

When we go out in the canoe, we must listen to what the captain says. If Derr is the captain, he says the Rai wind is blowing so you must have the sails this way. Then you must obey him. If you do the wrong thing then the outrigger will go down and the canoe will turn over. If the *Rai* is strong then Derr must teach me how to steer. It might take many months to learn. Later he will appoint me as captain and I'll take a crew to the Rai Coast. If I'm wrong, Derr might say, "You sit down" and then he'll do the steering because it is no good if you sink the canoe.

If Derr is very cross with me, he might put me ashore. If we are out in the sea and the captain tells the crew what to do, "You are the cook; you are the one to steer, you must listen to me. If you are the cook you must prepare food for the captain, the steersman and the crew." If the wind changed and a crewman didn't pull the right ropes or the ropes broke, the captain might get so angry, he might throw the crewman into the water and he must swim. The canoe will go ahead leaving the man behind. Then the canoe will turn back and pick him up and the Captain will say, "You understand now?" And the man would say, "Yes I understand", and then they would bring him back on top of the canoe and the captain would say, "in future you must do as I say" (Mennis, 1980a: 91).



Left Figure 124. Kube blowing on his conch shell as he stands on the front of the lalong.

Right, Figure 125. Sibol making a Bilbil pot.

Derr remembered one particular occasion when this happened: “My father, Mul, and I were once going to Matukar and one man, Wildon, went *longlong* and would not listen. My father told him to pull the rope and fasten it well. He did not fasten it properly. My father got very cross and pushed that man into the water. He swam around and we sailed on a bit. Then we stopped and threw him a paddle. He grabbed it and swam over to the canoe and climbed up. After this he listened to my father and obeyed him. This sort of thing happened lots of times” (Mennis, 1980a: 92). Sungai of Siar, however, was not aware that the discipline on the canoe was as severe as Derr and Masil described. When asked if the captain would throw people in the water he replied: “No, not in the water, but he would be sent ashore. It was like being on a ship. If I was on a big ship and disobeyed the captain or the first mate they would send me ashore so a new man can take my place. It was just the same” (Mennis 1980b: 44). While they were sailing they also had to use the *tok bokis* language to confuse the spirits. So instead of referring to the sails as *lai* they would say *banid* which means the wings of a bird. It was thought that the sea spirits could understand the ordinary language of the people (See *Tok bokis*, 3.1).

Conch shell signals

Each clan had its own special sound to blow on the conch shell, *tai*. The Gapan clan’s was called *yauri* and if their trade friends heard it when they were out of sight the beach they knew that the Gapan clan men were approaching. *Yauri* sounded like the following with L being the long sound and S the short and dashes for pauses:

LLLL S LLLLLL - L - LLLLLL - LLLLL- LLLL - LLL - L - LLL LLL - L - LLL - SS S S S S

The name for the conch shell sound for Dugus clan was called *salali* and went:

LLL - SSSS - LL - SSS - LLL -SSSS - LLL - SSSS – SS - L - SS LLLL SS LLLL - SS - LLL - SS LL
- SS - - LL - SSS

The Luan clan's conch shell sound was called *anil*:

LLLLLLLLL S L S LLLL S - L. -S LLLLLLLLLL ~ S- L – SS - LLLLLLLLLL - S LLLL - S - L - SS

Murpatt's was called *Samor*:

L-L-L-L-L-L-L-L-L-L-L-L-L-L-L-L-L- LLL - LL - LS - LS - L - L - L - LL - LSSSS - LSSS - LSSS LSSS
LLL - L S - L S - L S LLL LLL - LLL - LLL

These signals were drummed out for me by Maia on a *garamut* which was used to produce the same identifying tattoo of longs and shorts for each clan before a *singsing* began. These signals were rather similar to morse code combining long and short sounds with pauses in between, although the only message they conveyed was the identity of the clan. Notice that the *yauri* signal consisted mostly of long blows on the conch shell; the *salali* has a combination of long and short sounds; finally *samor* groups long and short sounds together with spaces in between. This means that if the listener has not heard the whole signal he would still have a fair idea as to which clan was blowing on their conch shells. According to Maia and his relative, Gabor, at least two of these signals were introduced - the *anil* from Biliau and the *samor* from Yeimas. *Singsings* and conch shells signals could be bought as trade items from other areas (Mennis Notebook I: 138-141)

Figure 126. Pots ready for firing in a trough of leaves and sticks, Bilbil Village, 1994.





Figure 127. Sibol cooking taro and yams for a village feast.

Damun of Yabob said, “They used to blow on the conch shell and the people would hear them whether they were in the bush or in their gardens and they would be happy” (Mennis, 1981a: 28). As well as the conch signals, each canoe was identified by the totems on the mast. The Rai Coast people knew where the trading canoes were from by their totems and sail decorations. Damun said that some of the men and women from Bilbil were married to people on the Rai Coast and they also had friends and trading friends there at Galek, Suit Yaimai, Biliau, Bonga, Malalamai and nearly every place on the Rai Coast. The fleet of canoes might be away for as long as two months and called into all or some of the following places: Bongu, Marakum, Rimba, Lila, Kul, Kumisanger, Bili, Ganglau, Mindiri, Dein, Lamtub, Singor, Warai, Biliau, Teterai, Yamai, Galek, Suit, Yeimas, Wab, Suri, Saidor, Fangger, Murk, Sel, Malalamai, Bonga, Yari, Roinji Singorokai, Malasanga and Sio.

As already mentioned, the canoes would drop off the pots on the way down the Rai Coast and on the return trip pick up the food, the *buai* and other trade items (Mennis, 1981b: 54-55). At each place of call there was feasting and *singsings* to welcome the crew and the canoe. Damun described the *opim dua* ceremony as the “price on the canoe” and included the feast as part of the ceremony to open the door of the canoe:

The people [the hosts] had to feed the traders before the door to the pots would be opened. They would shoot pigs, cook the *taro* and crush the galip nuts and then give it to the men who came in the canoe. This was the price for trading to begin and the [visitors] would take out the pots. *Mal*, plate, *galip*, *bilum* bow and arrows would be exchanged for pots (Mennis, 1981a: 28)

Return trip

Maia described the return trip very aptly:

When we arrived back in Rimba [on the Rai Coast we rested for two days. While there, we killed some wild pigs, cut them up, boiled them in clay pots and put the pieces in baskets and innards in bamboo. Then we Bilbil said, "Tomorrow we will leave in our canoes". Next day we left for Bongu and Bogati. There might be about ten canoes: some *palangut* and some *lalong*. After we left Bogati, we headed for home. We sailed and sailed and then at last we came to Bilbil. The men would meet together and talk, then wash themselves and *bilas* their skins and put feathers in their hair and wear their *mal*. Then they would return to the beach, and pull the canoes further up the beach. The women too would decorate themselves and wear their best *purpur* [grass skirts] and paint their faces. They would all rest until three o'clock in the afternoon. It was then time to empty the canoe and take everything to their houses. Then they would prepare for a *singsing*. They would line up behind the freshwater pool and fix their decorations. They did not have mirrors in those days. One by one they would look in the fresh water pool and adjust their feathers and fix everything. Then they were ready for the *singsing*.

From the women's point of view a look-out was kept for days for the sails of the returning trading canoes as far away as Bogati on the Rai Coast. As soon as the sails were sighted, the women busied themselves preparing a large meal. When the canoes came ashore, there was great excitement at seeing their menfolk again but also of the trade goods which they brought. They would line the shore to greet the mariners who would describe their voyage and chide those whose pots were not sold. "You must have played up while we were away." The women would get the pigs ready and cook them in a long line of pots. They ate a lot of food during the feast (Mennis, 1981a: 102-3).

5.3 The Pot Trade

5.3.1 Bilbil Pots

The most important single trade item of the Bilbils was and still is the pots. The women made the pots but once they were placed in the potcage, they became the property of the menfolk to use in trading transactions. Because the men were often visitors to other places selling this important commodity, they were able to be the aggressors in the trade and kept the monopoly. Kasare of Yabob (previously of Bilbil) saw the pot-making as almost an obligation of the Yabobs and Bilbils, "We had pots and it was our work to supply them to all these places along the coast. Yabob and Bilbil had the right clay and it was the *lo* (custom) that we look after all the places" (Mennis, 1981a: 67). Some of the inland people who traded with the Bilbils became middlemen in the pot trade with villages further inland. Kaltem of Hudini remembered his people bought the Bilbil pots with bush materials and red paint and later exchanged them for other items from Amele. The Hudini people would sometimes accompany the Bilbil men on trading trips to the Rai Coast since they had no canoes of their own (Mennis, 1981b: 77).

These days, however, things have changed with the introduction of tradestore pots. Some earthenware pots are still made for the tourist market in town or sold to visitors to the village. Bilbil women, themselves use trade-store saucepans to cook with, finding them easier to use and clean and they last a lot longer.

It is quite a long process to make a pot. First the clay must be collected from the clay deposits which are about one kilometre inland. The women make it an all morning affair and there is much gossiping and laughter. One of them shovels the clay up while the others shape it into large balls, which are put in the *bilums* or net bags. At the end of the morning, they compete with each other to carry the heaviest *bilums*. Back at the village, the balls of clay are stored under the houses. When needed, they are broken open and small pieces are placed on top of sand and hammered flat with a stone. These flaky pieces of clay are then



Figure 128. Buying a pot in the Madang Town market.

put on a large piece of bark, sprinkled with water and left for at least two days. Again they are pounded, mixed with sand and water and shaped into a mound of wet clay. After being left for a few more days, the mixture is ready to be used. A lump of clay is kneaded like dough and formed into an oval shape. One finger is inserted and whisked round to shape the top of the pot. Then a stone is used to hammer out the inside shape of the pot and later, when the tapping job begins, the stone is held inside the pot and the potter beats against it with a thick paddle. The women are experts at making the pots perfectly round without the aid of a potter's wheel. It takes the young girls about two years to learn.

Once the desired shape has been obtained, the pots are again left to dry for about two days before a red slip is painted on the outside and they are then preheated beside a small fire. Meanwhile a trough has been constructed of dried coconut fronds with firewood underneath. The pots are stacked in this trough and the fire is lit. More leaves are piled on top until the pots become a glowing red. They are then left to

cool off. These days the pots are still used as part of the bride price in many Madang villages although not much for cooking.

During a feast we attended in the 1970s, the pots were lined up in the traditional manner and firewood was stacked around the pots which had been filled with taro, yams etc. A fire was lit at one end and soon the whole line was cooking merrily. We sat on mats in the village square and enjoyed the meal of flying fox and chickens cooked together.

Pots still fetch a high price at the Madang market. The bigmen of Bilbil encourage the women to continue making the pots as a form of income for the village although the men also have trucking businesses and poultry runs and families grow many of their own vegetables. However pot exchanges continue up and down the coast via the coastal vessels. Sometimes truck loads of inland people arrive and trade pots for food. No money changes hands but there is straight exchange of bilums full of vegetables for pots. However, in the town market, pots have a price on them as they are sold to townspeople and tourists. Although the Bilbil and Yabob potters were very important in traditional times, they were not the only potters on the North Coast. To the North West the people of Matukar were potters and traded with Karkar. Inland were the Gogol potters and on the Rai Coast were the Mindiri potters.

5.3.2 Gogol pots

The Gogol pot makers are Austronesian speakers, claiming common ancestry with Bilbil village. A genealogical tree has been made showing the ancestor who travelled to Gouua and his links with a Bilbil family (Mennis, 1978: 41). The Gouua and Atu ancestors of the Gogol area would have once built canoes and been mariners but this knowledge lapsed when they moved inland. The women were once the potmakers but now it is the Gouua men who make the pots. It was as if having lost the prowess of being canoe makers the men took over the next most important activity and became the potmakers. There are quite a few differences between the Gogol and Bilbil pots. Gogol pots have a different shape being made with coils of clay. They have a smaller opening at the top. The Bilbils liked to exchange their pots for Gogol or Mindiri pots because the food tasted differently but there were other advantages.

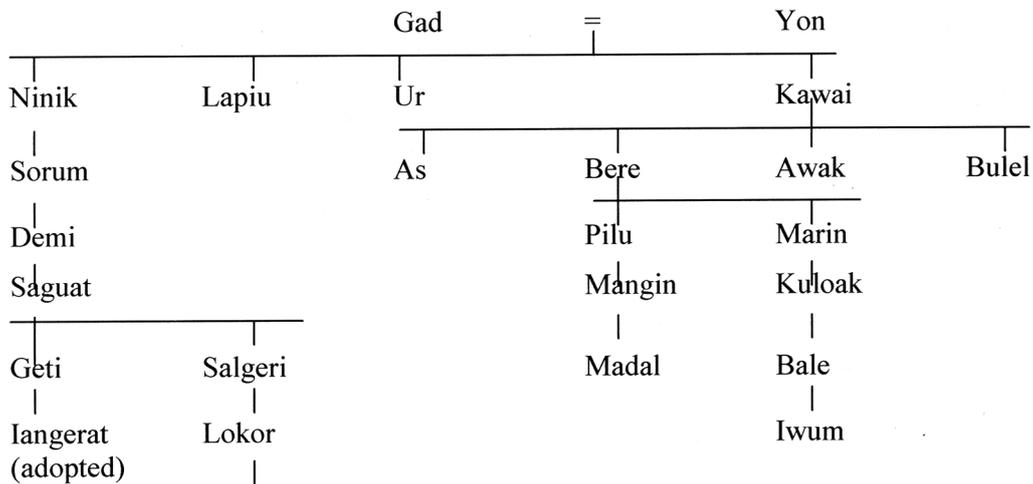


Table 8. Genealogy of Gad of the Murpatt Clan (Tahon) of Bilbil Village, showing the Gouua (Gogol) line on the left and Murpatt (Bilbil) on the right (Mennis, 1978: 41):

This genealogy shows the connections between the bush people in the Gogol valley and the coastal people of Bilbil and Yabob. Ninik and Lapiu travelled inland and began a new village in the Gogol Valley. They lost the art of canoe building as they had no use for them and they varied their pot making activities to suit the local clay and designs used by their new neighbours. From this genealogy, it seems fairly evident that some of the Gogol People came from Bilbil Island some time after Yomba sank. Some may have gone straight inland in the earlier population movement.

Pall had this to say about the Gogol pots:

Bor, Atu, Gonua, Sehan, and the villages on the highway road near Amele make the pots with the long base. The Bilbils like to cook the *saksak* in these pots. They make the *saksak* sweet. So the Bilbils exchange their pots for Gogol pots. These pots have a small opening at the top and the water does not boil over. The Bilbil people buy pots from Gonua, Batik, Atu. On the other hand the Gogol, Gonua and Atu people buy Bilbil pots. They like them because they cook the food quickly. "Our pots take a long time to cook the food, the Bilbil pots cook quickly" they say. Gala, my friend, wanted to gather a bride price so he sent word down that he wanted some pots. He killed a pig in exchange to buy a bride for his son. Gogol pots and Bilbil pots are both used for bride prices (Mennis, 1981b: 57).

Colin De' Ath witnessed a marriage exchange transaction in the Gogol. There were two platforms full of gifts. One platform was for the father and one for the mother. Although this wedding took place in the late 1970s there were still many traditional items among the gifts. He set out his description as follows:

Father's Platform

3 round plates (Rai Coast)

8 long plates

33 pots, half from Gogol, half from Madang Coast

Mother's Platform

3 round plates

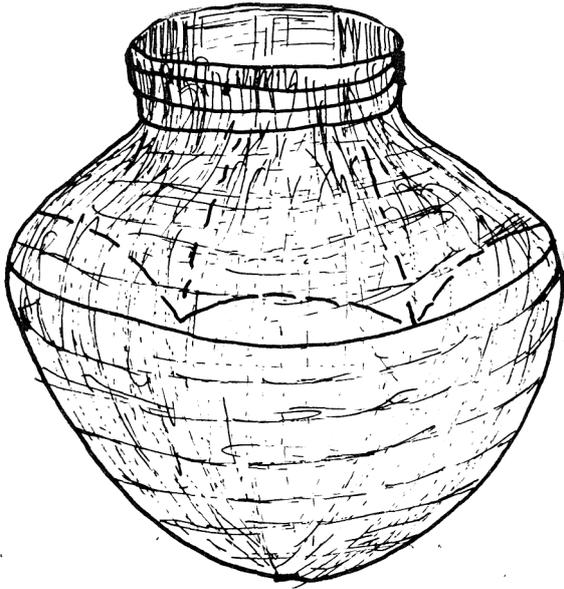
8 long plates

36 pots, half Gogol, half Madang Coast

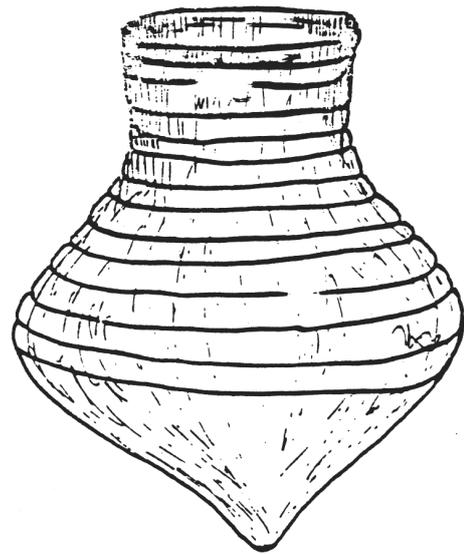
(De' Ath, 1979: 43).

5.3.3 Mindiri Pots

Mindiri Village is on the Rai Coast and was visited by the Bilbil canoes when on trading trips. Both the Mindiri and Bilbil people claim common ancestry from Yomba Island. As the Mindiri belong to an Austronesian language group, their origin claims could be correct. Their pottery is very similar to the Bilbil ones and also made by the women. They were the same shape, but had a rougher texture than the Bilbil ones. Derr described them as being thick and strong and made of black clay. The one disadvantage he saw was that they took a long time to cook the food, but they lasted just as long as the Bilbil ones. He judged that the food cooked in each tasted just as sweet (Mennis 1981b: 24). From Derr's account there would be no advantage in trading Bilbil pots for Mindiri ones, however Wangum of Mindiri averred that they did last longer (Mennis, 1981b: 24). Whatever the differences, the Mindiri pottery industry ceased many years ago. When I visited the village in 1978, there were only two old pots to be seen.



Left, Figure 129. Bilbil pot.



Right, Figure 130. Gogol pot.

Illustrations by Anton Gideon.

5.3.4 Economic Warfare over the pot trade

Before the Europeans came, there was a big fight between the Yabobs and Bilbils on the one side and the Mindiri on the other. Ber of Yabob gives an interesting reason for this fight:

The Mindiri made many pots and sold them along the coast. When the Bilbil and Yabob went to Singor, Lamtub and Biliau, no one wanted to buy their pots. “We bought some from Mindiri”, they were told. The Yabob and Bilbil people were very angry about this.

The Mindiri were asleep on the beach at Yabob after a singsing and the Yabobs crept up and broke the strings on their bows. Next morning when the Yabobs started a fight, the Mindiri rushed to get their bows and arrows but they couldn’t fight. Many men and women from Mindiri were killed that day. There were not many children in those days so a Kakon clansman saved three small boys. Siso and Kidamon were the names of two of them. He hid them and, later, they fled to Kranket. The Krankets took them to Siar where they grew up and married.

Later, Kore of Mindiri came and made peace with the Yabob and Bilbil and there was a big singsing. After this the Mindiri continued to make the pots but at a reduced rate. The Yabobs and Bilbils remained the bosses of the pot trade (Ber, Interview, 27 August 1977).

According to Ber, this fight took place a long time ago before his grandfather was alive. The Bilbils and Yabobs must have hidden their anger well because the Mindiri did not suspect treachery at the party and left their weapons in their canoes. It seems that Ber justifies the action taken by his forefathers by the fact that the Mindiri flooded the Rai Coast with their pots causing a glut. The Madang pots were no longer wanted and the very livelihood of the Yabob and Bilbil was threatened. The Siars sided with the Mindiri over this fight. Although they were not actually present at the time, they helped the survivors. The Siar testimony of this same fight was given by Male, a very old man, who said it happened when his grandfather, Wak, was living on Siar Island:

Male of Siar:

The Yabobs tricked the Mindiri by feeding them and talking to them. Feeling secure, the Mindiri left their bows and arrows in their canoes. But some of the Yabobs crept back to the canoes to break the strings on the bows. After the Mindiri had eaten, the Yabob and Bilbil started the fight on Yabob Island and the nearby bush. They fought and fought until only three young Mindiri boys were left. The Yabob gave them to the bush people at Amele. The names of these three boys were, Kistamon, Kasan and Sisoï. Later on, a Siar woman, Sason who was married to the Kranket man, Manio, was at a market near Amele when she saw the three boys. The boys said to her, "Are you from Siar?" "Yes", she answered, "I am a Siar but married into Kranket". So she took the boys back to Kranket and hid them in the top of her house. She then sent word to the Siar people to come and get them. The Siar men took them over to Siar Island. Kasan died soon after, but the other two married and their offspring are still here on Siar Island today. Kistamon joined the Digfung clan and married Leletian from Yabob. Sisoï on the other hand joined the Lilung clan and married Masindi, they had many children, among them Kadang (Mennis, 1980b: 36).

From this time on, the Siar and the Mindiri people were close friends. Baron Maclay mentioned this in his diary for 8 July 1872 when he was visiting Mindiri on the Rai Coast: "The local people have continuous interchange with Siar Island, sometimes spending some months on that island, and the inhabitants of Tiara (Siar) came here to stay for a long time" (Sentinella, 1975: 275).

Wangum of Mindiri gives the Mindiri view of the fight:

The Yabob tricked the Mindiri into believing there would be a big feast on Yabob Island. They told them that the Bilbils had been making the *saksak* for a feast. All right. The Mindiri were tricked. They got all their singsing things together, got into their canoes and went to Yabob Island. Meanwhile the Yabob went to Bilbil Island and told the people there to prepare for a big fight on Yabob Island and nearby coast. The Bilbils hid in the bush and on the island to help the Yabob. The Yabob broke the strings on the Mindiri bows and arrows - all of them except the bow and arrow belonging to Dua. When Dua tried to shoot the men, he shot the bottom of a tree, then he himself was shot and fell into the water. Tidok, a Mindiri man, also went to Yabob. When the Mindiri wanted to fight, their bows and arrows were useless. Three young boys ran away and hid in the reef. Later they went to the bush and stayed near Sisiak and then the Siar people adopted them. One was Siroi and another Bas. The Siars looked after these young boys, but the Bilbil and Yabob killed off many of the Mindiri. When the news of the killings was brought to Mindiri they realised they had lost many of their big men that day. Later on when the Germans were here and exiled the Siar, Bilbil, Yabob and Kranket to the Rai Coast, the Siar came here to Mindiri. They had good friends here because of these happenings (Mennis, 1981b: 92-93).

Wangum confirms Male's version of the story, especially the way the Yabob tricked the Mindiri and the escape of the three boys from the massacre (Mennis, 1980b: 36). This fight probably occurred not long before Baron Maclay came to the Rai Coast. He notes in his diary for 7 July 1872, "Kain pointed out the village of Mendir, (Mindiri) but it was burnt down and was abandoned by its inhabitants, who settled in another place" (Sentinella, 1975: 272). Male noted that this fight took place when his grandfather was alive which would put the story in the 1870s. It seems that this fight was an historical fact as we now have evidence from three sources, Siar, Yabob and Mindiri and, although each gives a slightly different story, most of their testimonies tally. This was an economic war over the pot trade. The Yabob and Bilbil were prepared to fight anyone who threatened their monopoly over the pot trade. From that time, on the Mindiri were wary of the Yabob/Bilbil combined strength. When Wangum was asked if the Mindiri

used to trade pots to Bogati he answered, “Bogati eh? No The Bilbils and Yabobs bossed this section of the coast from Bogati to Kul” (Mennis, 1981b: 92). Furthermore the Mindiri did not sail with the Yabob and Bilbil on their trading trips. However the Mindiri called into Yabob and Bilbil villages on their return trip from Siar (Mennis, 1981b: 92) Wangum can remember going on a trading expedition with his father when he was small. His father’s canoe was a *lalong* and five or six of these canoes sailed together because, “you could not sail by yourself”. They went to many places - Singor, Warai, Biliau, Terere, Yamai, Galek, Suit, Yeimas, Gumbi, Wab, Dawang, Mur, Fangger, Sel, Malalamai and Bonga along the coast. (Mennis, 1981b: 92).

5.3.5. Extent of the Pot Trade

Sungai of Siar was very eloquent in his praise of the Siar canoes. He said they were so strong they could have sailed as far as Lae and Moresby but were restricted because they feared the strange inhabitants along the coast (Mennis, 1980b: 48). His testimony about the fear of strangers is borne out by Baron Maclay who accompanied Kain of Bilbil on a trading trip to the Rai Coast. They came to the village of Telyata near Singor and Kain refused to go any further. It is interesting to read the entry for his diary July 8th 1872:

In the evening I had a long conference with Kain, trying to persuade him to go on farther. I promised one, and even two axes, knives, red calico, but he stood his ground: “No” - “I cannot” - “they will kill” - “will kill all of us” - “eat us”, etc. That is all that I could get out of him. I pointed to my revolver. Although he begged me to hide it, he still continued: “they will kill” - “Maklai is only one, they are many”. For two hours I battled with him but for all that, I could not talk him over. Annoyed at his opposition, I turned my back on him and went to sleep, probably before he had finished speaking (Sentinella, 1975: 276).

It may be a bit far fetched to say that the canoes could have ventured to Lae or Moresby as Sungai would have us believe, but it’s true they could have gone further than they did. Kain refused to go further than Telyata which is just past Singor. Damun said the traders used to go as far as Malalamai many miles beyond Singor before turning back and Derr said Yarai which is a little further on (Mennis, 1981b: 20 and 21).

Margarete Schurig suggested in her thesis (Schurig, 1930: 56) that the “Bilbil people left home and stayed away until after several months the south-east allowed their return”. A place she included on their trading trips was Rooke Island of the Siassi group. Further she added, “The Rooke Islanders often accompanied them on their return journey and stayed for one season on Bilbil where they traded their woven goods”. The reference she gives for this is Hagen’s *Unter den Papua* (1899) published after the German Government had established contact with all coastal villages and peace had been established between them (Lawrence, 1967: 35-37). Comparing Hagen’s description with Maclay’s comments seemed to verify this. The fear of trading with more distant villages was diminished after German contact. However, this does not eliminate the possibility that in pre-recorded times, the Bilbil traders sailed as far as Singor and from there across to the Siassi Islands, although this seems unlikely in view of the fact that rough weather could force canoes ashore in alien territory.

Trade with Siassi

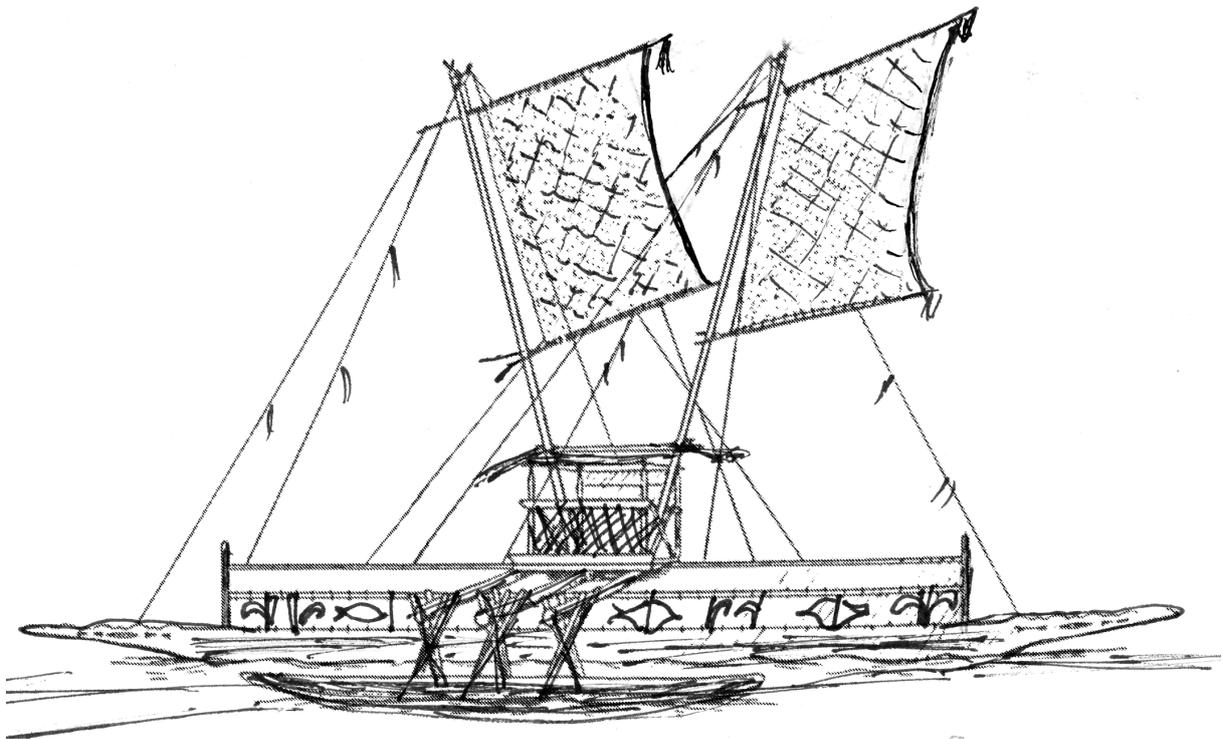
Damun said that in the past, before the Europeans came, the Siassi men did not visit Bilbil. He added that when the companies set up plantations in Bogati and Madang, they brought Siassi men in as labourers and this established friendships between the Bilbil and Siassi. He remembered seeing one large Siassi canoe in Bilbil when he was young, but this had been blown off course. The Bilbil lost no time in selling them pots before they sailed for home. Derr, who is much older than Damun, also said that the Siassi mariners had large canoes and came to Bilbil. He thought that the Bilbil canoes would have been good enough to sail to Siassi but the Bilbil were, “afraid of the men who might kill them if they were thrown up on a strange shore if the wind blew them off course” (Mennis, 1981b: 23). The usual procedure is explained

by Derr. The Bilbil would sail as far as Sio where they sold many pots. The Siassis would then sail to Sio on their trading trips and buy these pots in exchange for plates which could be bought by the Bilbil at a later date (Mennis, 1981b: 14).

Garong of Siassi had an interesting story of a time when a Siassi canoe was blown off course to the mainland near Yabob. When the women saw them, they were anxious that the Yabob men did not kill them and defended them saying, "They have women and children the same as you. What have they done wrong?" These Siassi men stayed at Yabob for three months waiting for the *rai* to change to the *talio*. As they were leaving for home, the Yabob gave them *tanget* plants to grow in Siassi. These plants grew and grew for many years, but suddenly they turned dry. The Siassi people took this as an omen that the Yabob were in need of help. They sailed in their big canoes to Yabob and found their friends were indeed in trouble with the government (this was in 1904). (Mennis, 1981b: 95). From this time on, the Yabobs were friendly with the Siassi men and some of them even married Bilbil women. The Bilbil pots which the Siassi men took home were traded across to East New Britain for *mal*, *bilas*, beads, *muruk* and decorations (Mennis, 1981b: 95).

Sidi of Siassi also had another story of the Siassi mariners being blown ashore at the Gogol River where the people found them. He did not mention when the trade between Bilbil and Siassi began but mentioned the trade items they brought as being wooden plates, dog teeth and pig teeth and in return they bought Bilbil pots and Karkar pigs and paints. The Siassi were the intermediaries for these items. The Bilbil pots, he said, were taken to New Britain for bride price payments (Mennis, 1981b: 98). They also sailed with many other canoes in convoy to protect each other in bad seas. The Siassi also sailed to Sialum, Sio, Finschhafen, Tami, Bukawa and the Rai Coast as far as Bilbil.

Figure 131. Siassi canoe (after Haddon and Hornell and Neyret)



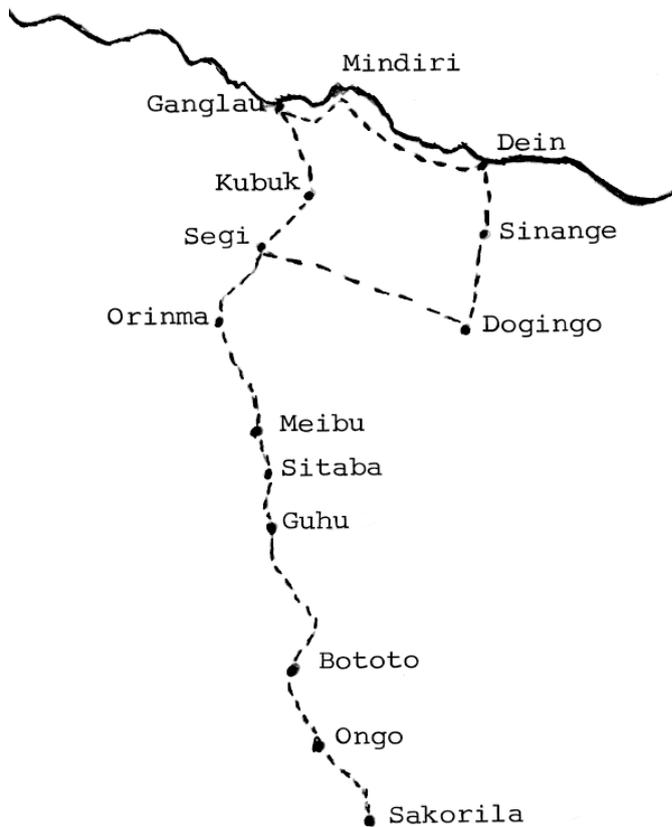


Figure 132. This map shows the tracks along which the inland traders travelled.

But what do the scholars say about the trade between Bilbil and Siassi? We have seen that Schurig said there was regular trading between the two places (Schurig, 1930: 56). Harding on the other hand believed that most of the Madang pots which reached Siassi were traded through intermediaries particularly with Sio and Malalamai on the Rai Coast (1967: 130). His conclusions tally with those of Derr just quoted. However he also adds that, in recent years, canoes from Malai (Siassi) have sailed to Madang itself to procure these pots (Harding, 1967: 37). Whether there was direct contact between Siassi and Bilbil traders is academic when discussing the extent that Bilbil pots travelled eastwards. Garong of Siassi said that his people traded Madang pots to New Britain. (Mennis 1981b: 96). Westwards the pots were traded through intermediaries as far as Prinz Adelbert Harbour on the coast opposite Karkar Island. (Krieger, 1899: 162) quoted (Schurig, 1930: 60).

5.3.6 Inland Trade

Figure 132 shows the tracks along which the inland traders travelled. The Orinma people who lived in the foothills of the Finisterre Range walked down to Segi and Kubuk and then through Ganglau to Mindiri.

The people in Meibu walked down to Orinma and followed the same route as the Orinma and sometimes travelled together. The people of Dogingo were of the same language group as the Meibu but they used a different track down to Sinange and Dein. From Orinma the trade items were exchanged further inland into the Finisterre Ranges to Meibu, Guhu and further into Bototo, Ongo and Sakorila. Imso Kau of Orinma, which is inland from Mindiri, gave the best testimony about the inland trade (Mennis, 1981b: 88-9). He said that traditionally the Yabobs and Bilbils people did not trade directly with the inland people, but only through the Mindiri.

Imso Kau of Orinma Village:

The Yabob and Bilbil would call into Mindiri, leave some pots there and continue on to Saidor and Sio. The Mindiri would then arrange a market day for the inland people. They would do this either by marking a coconut palm frond or knotting a piece of vine for the number of days. As each day passed a piece of frond would be pulled off or a knot would be broken. When the market day approached, the people from Orinma, Meibu and Guhu formed a big group and walked down to the coast together as they were too frightened to travel by themselves. These inland people brought bows and arrows, wooden plates which were round or oval, taro, *kaukau* and pumpkin (Interview, 7 June 1977, Mennis notebook 2: 190). [Pumpkins were introduced by Maclay].

Imso Kau, speaking of the time when he was young, said that the Bilbil pots were always snapped up because they were not always available. They were popular because they cooked food faster than the Mindiri pots, but they broke after a year or two. For this reason, the Mindiri pots being thicker and less breakable were also in demand:

If there was a choice between the Yabob pots on the one hand and Mindiri pots on the other then the bush people would prefer the Yabob ones. “The Mindiri pots will be here next time we come”, they would say. At these markets the Mindiri people could understand the language of the Segi, Orinma and Kubuk even though their own language was very similar to the Bilbil and Yabob language. The *garamuts* were beaten and feasts were held at these markets.

The Mindiri divided the pots into groups, “These are for Segi, these for Orinma”, etc. The inland people would leave their trade items at Mindiri for the Bilbil and Yabob who would pick them up on their return trip. Orinma people only made bows and arrows to exchange for the Bilbil pots. The wooden plates came from Bototo, Ongo, Sokorila, Bagonda, Wangeto, Sarakiri and Funyunde. They made round and oval plates of all sizes because they had plenty of the trees needed to make them: *namui*, *geram*, and *mambung*. These trees were not plentiful around Orinma so we did not make them.

To buy the plates from these people further inland, the Orinma men had their own market days in which they exchanged the coastal pots for plates. They beat the *garamut* to summon the Segi people who are between them and the coast. The Meibu could hear the *garamut* message and they relayed the messages by *garamut* further inland at Sitaba, Guhu and Bototo who sent it on to Ongo and Sakorila. When the Orinma people acquired many inland plates they took them to the coast for the next market day. Bototo, Ongo and Sakorila are inland places and only recently do they come to the coast for the trade of the Bilbil pots. Before the German government and the missionaries came they were too afraid ((Interview, 7 June 1977, Mennis notebook 2: 185 to 190).

Monopolies over Inland Trade

Imso Kau did not refer to any monopoly by the Mindiri over the inland trade, but his testimony showed there was little interaction between the Bilbils and the inland people behind Mindiri. The Mindiri had separate market days for the Bilbils and the inland villagers. This gave them control over the flow of trade items from beach to bush, but once it got to the bush, other villages like Orinma became middle men with their own market days. This pattern was repeated up and down the Rai Coast to the hinterland. Schurig noted that the Bogadjim villagers initially prevented the Bilbil from trading with their hinterland because they preferred to be the intermediaries themselves. However, the Bilbil retaliated by forcing their way to the hinterland by boycotting the Bogadjim trade. Finally, a compromise was reached and the Bilbil were allowed to trade directly with the hinterland on certain days and in certain places (Schurig, 1930: 56). In fact, according to Krieger (1899: 223), the Bilbil were nearly the only island people who had the privilege of trading directly with the mountain people, a thing, which was mainly left to the coastal people (Schurig, 1930: 57). This situation contrasted to that at Mindiri which maintained its monopoly over the inland trade when the Bilbil mariners visited, but then Mindiri was also a pottery centre and would have had a stronger bargaining position. From the discussion so far, one conclusion that can be drawn is that trading procedures can change for various reasons. The Yabob and Bilbil killed off many Mindiri before the Europeans came and this drastically changed the status quo. Less than eighty years later, when Imso Kau was young, we find the Mindiri had recovered their position and gained monopoly over inland trade. But by the turn of the 21st century the Mindiri pottery industry was dead. So their economic situation peaked last century, then dropped after the fight, rose again, gradually until the 1930s and has now disappeared.

Geographical influences on Trade.

The Madang coastline has a narrow coastal plain backed by foothills, which lead to high mountain ranges of the Finisterre Mountains, broken at intervals by gorges and swiftly flowing streams. Blocks of villages tend to be cut off between streams and mountain ranges. They have close contact with villages within the block, but little contact with the next block of villages unless contact is possible over the rough terrain. Usually, on the Rai Coast, contact is easiest when the inland villages met on the beach just as the Dogingo people would meet the Meibu people at Mindiri at pre-arranged markets. Villages on the coast are quite large while those further inland are smaller and widely scattered. Harding made a diagram showing the Schematic Representation of Local Trade Spheres (1967: 16). According to this diagram, Mindiri would be a port community; Orinma the hinterland middleman community; and Bototo and the other villages would be Interior Ethnic Blocks. Along these trade routes, the Bilbil pots could be exchanged many times deep into the mountains. The exact extent of their penetration will probably never be known.

By travelling in fleets of canoes, mariners were protected against their enemies. In the highlands, however, the people had few protections against their enemies and this curtailed long trading trips (Hughes, 1977: 302). Furthermore in the Highlands people were self-sufficient in their garden plots and could afford to trade for other items. Since the terrain and climate was similar over a wide area, the same crops were produced thus lessening the incentive to trade in foodstuffs. They, however, needed fibres and shell ornaments from the coastal areas and traded for them through many hand to hand transactions between tribes all the way over the Bismarck Ranges. Hughes noted that, "while the large scale and famous ceremonial prestations involved the accumulation and distribution of large quantities of pigs and staple vegetables, for most of the highlands regional trade was not for staple food" (1977: 204). In both coastal and highland areas some goods travelled enormous distances through intermediaries - in the Highlands, salt, stone axes, pottery, shells and pigments were traded over an area exceeding seven thousand square miles. On the coast, obsidian from Talasea travelled extremely long distances both along the coast and into the interior. Intertribal trade played the most important role in the communication system. In fact it was the very basis on which many other relationships rested, for example, marriage.

5.4 Other trade items

Food

Taro is the most important food item exchanged in local trading (Harding, 1967: 30). There are two types of *taro*. The large type which is planted in June and July and is harvested the following May to August. It is available from Bogati, Sehan and all the places to Nobonob. After September, it rots quickly (Mennis, 1981b: 54). The small *taro* which is fast growing is planted in January, February and March and harvested within two months. One type of fast growing yam is grown with this *taro* to bide the people over the hungry months (Interview Maia, 22 May 1977). Dau described how the first man on Tabad Island exchanged the fish he caught for *taro* brought down by a bushman. This legend seems to suggest that island people were once not familiar with *taro* as a food (Mennis, 1980b: 8). Baron Maclay described a visit to the Rai Coast by some Graged (Kranket) people in April 1872. Apart from other trade items, the cargo consisted of a large quantity of *taro* (Sentinella, 1975: 164).

Yams - Just like the *taro*, there are two types of yams - the fast growing and the slow growing. As noted the fast growing variety is planted with the *taro* in January and February and is harvested in March. Yams that are slow growing are planted in August. The gardens are prepared in July, planted in August and not ready until the following June. The time of the rising of the Pleiades Constellation, the Seven Sisters, is counted as the start of the New Year and time to harvest the yams. The *likon* man, Sangal, would wait on the cliffs on Bilibil Island waiting for the stars to appear in about June. When they did appear in the early morning he would drum on the *garamut* and call out for everyone to rush to the sea and wash off the old year. The Pleiades were thought of as young unmarried women and when these stars appeared in mid-June fertility rites were observed (Mager, 1952: 18).

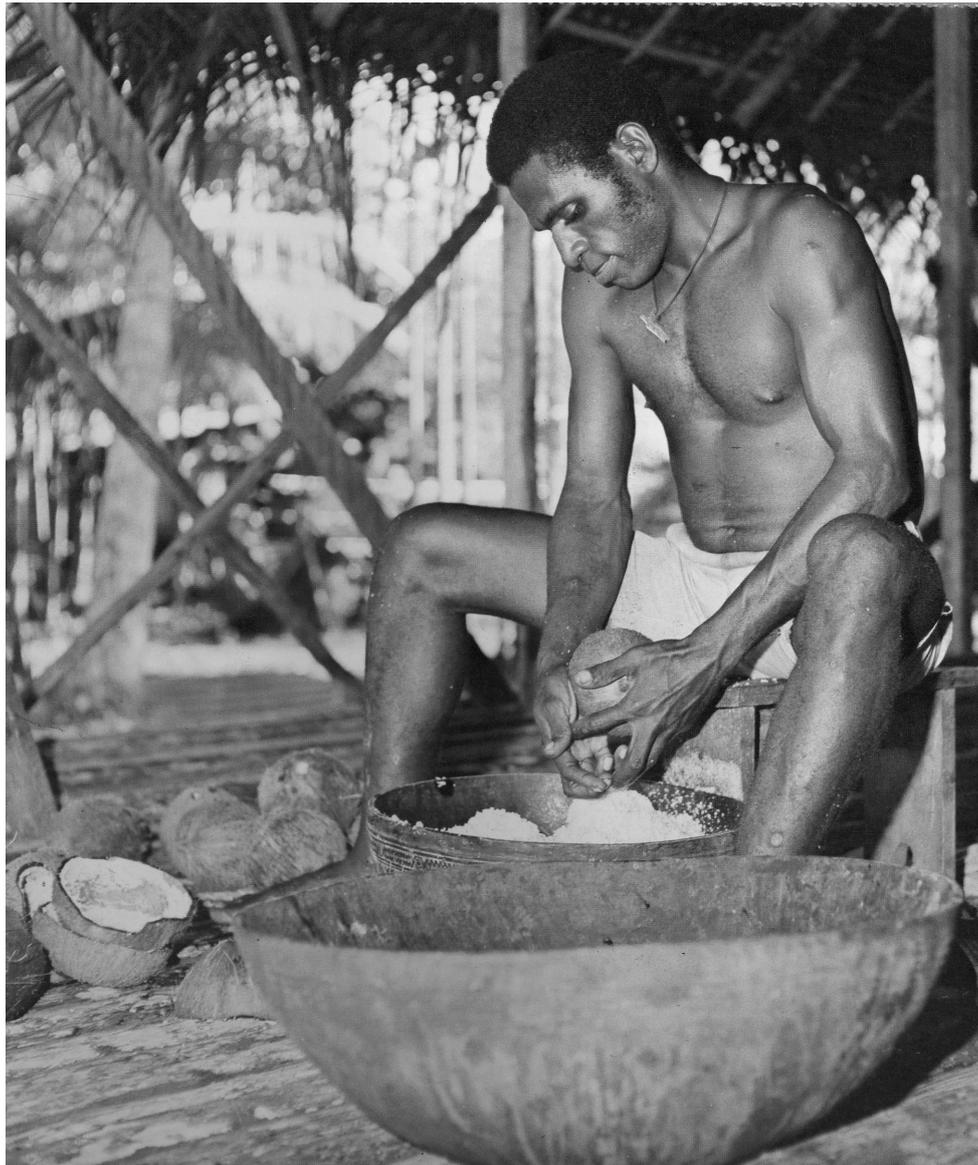


Figure 133. Scraping coconut into a Rai Coast wooden plate. Bilbil Village 1970s.

It is interesting that certain Aboriginal tribes also view the Seven Sisters [the Pleiades] as being very powerful and proficient at keeping the country fresh. . “It was lovely, those old people would wake up in the early morning and they would look to the east, they would sing out ‘Look there are the Seven Sisters, they have appeared’ and they would all start to sing. The people would sing to the stars to make their children strong and give them new grass and trees“ (Bradley, 2006: 62).

Traditionally, in Madang, the harvesting started with a yam feast in June but these days they do not wait for the rising of the Pleiades but use a calendar. Our family attended one such village feast near Pall’s house in 1977. Pigs were killed, heaps of yams were prepared and cooked in a row of clay pots around which firewood had been stacked and set alight. Yams were peeled and cut into small pieces and boiled in water in the pots with *taro* and pork to which seawater was added for the salt taste. The top of each pot was closed off with a bunch of leaves over which a broken piece of pot or stone was placed. The row of pots glowed bright red as the fire caught on and then sat in glowing embers. Once cooked the yams and

pork were distributed to each family group on large wooden bowls and then divided up again for each member. We all sat around on mats on the ground and talked. When it grew dark a hurricane lamp was used to light the area. In the following weeks, Pall stored yams in his yam house at the side of the village.

The Bilbil had gardens on the mainland in traditional times, but these were not sufficient for their needs and they sailed to the Rai Coast for extra supplies. Yams were bought in the north-west from the villages of Siar, Riwo, Malamal, Sek and Kranket and from the south-east on the Rai Coast from Galek, Warai and Singor. They were brought back to Bilbil and stored in yam houses. Some were used for eating and some for planting (Mennis, 1981b: 54). Yams are now frequently bought in the Madang market even by the Kranket and Siars who once exported yams from their gardens but some of their best land is now covered by the Madang airport and other businesses. On this subject, Harding notes that Rai Coast was a high productivity area characterized by “an absence of annual food shortages or hungry times” (1967: 28).

Saksak (sago) came from Gogol to Bogati and inland from Gonua, Atu, Barum, Bur and Didiwala. All these places made *saksak* and sold it for pots. When the Bilbils wanted *saksak*, they would send the word out and make market days to exchange pots for *saksak*. They bought *saksak* also from Foran, Silibob and Kauris. *Saksak* is made from the sago palm (*Metroxylon sagu*).

Galip nuts (*Canarium polphyllum*) came from Karkar and the Rai Coast in May and June. Sometimes the Karkars would bring a cargo of *galip* nuts to Bilbil to trade for pots. They also sold the *kunum* mortars and pestles for grinding the *galip*.

Wild pig and other meat and fish

On the trip down the Rai Coast, the Bilbil mariners dropped off pots to the closest villages between Bibi and Rimba and on the return trip called in to these same villages to get perishable items. The local people here filled bamboo poles with pig meat and fish for the Bilbil and other Bel traders who had come with them. Maia remembered one time he and the other mariners rested after a long trading trip for two days in Rimba where they killed wild pigs, cut them up and boiled them in clay pots. “We put the pieces in baskets and the innards in bamboo” (Mennis, 1981a: 102). Damun, however, said the pig meat and fish were smoked if brought from the Rai Coast. A major export from Karkar was live pigs tied to poles and the Bilbil people would have a great pig feast (Mennis, 1981a: 19). These days they use PMVs (Public Motor Vehicles) and little coastal ships to bring meat from Yeimas or Galek but, before, it was hard work to sail that distance and bring the meat home.

Bilums came from Malalamai and Bangor where the women made them - the large ones were bought to carry the pots. Coarse *bilum* string is made from *kunai* on the Rai Coast. Sometimes the Bilbil women made their own *bilums* from this string which then became a trade item in itself (Mennis, 1981b 59).

Weapons

Spears

Biró noted that the *Tamol* (local people) hunted crocodiles and wild pigs with spears. If the crocodile was not dead at the first spear thrust, the men would throw themselves on it and grab its tail while someone speared it again. Fish were caught in the fishnets and would be eaten but could also be smoked as a trade item. Other times when they were hunting, the people would set a fire in the grasslands and the men speared the terrified animals as they fled the flames. They would also dig pit traps to catch pigs which they then speared (1901: 70).



Figure 134. Fishing spears, Astrolabe Bay, 1994.

Otto Finsch on spears:

The main weapon here as in other parts of Melanesia is the throwing spear, which is a heavy, round stake about seven to ten foot long, usually made from palm wood. The base end is thinned, the point a little thicker and occasionally a few notched teeth or a groove are carved into it. A second kind of throwing spear, named *serwaru*, is also made from a wooden stick, but fitted with a wide lance type (70 cm long) spike made from bamboo and therefore a very dangerous weapon. The bamboo spike is tied with finely split reed and the joint is artistically decorated with feathers and *cuscus* fur etc (Mennis, 1996: 22).

Spears were an important trade item and were stored on long sea voyages on wooden spear racks that were often decorated. A spear rack in the Queensland Museum has three grooves on it to hold the spears and is 550mm long. Made in Karkar, this rack would have served the men when they went trading to Yabob/ Bilbil and the Rai Coast and could have been offered as a trade item to the Yabob/Bilbil who used these spear racks on their canoes.

Mager's dictionary mentioned that spears were sometimes made from the wood of the *fag* tree, which was an areca palm. A *kabu* was a spear with a piece of cane added at the end of the shaft, some of which are long and others short. A fish spear has two or three points and is called *kidiai* (1952: 146).

Bows and Arrows: Pall said that these were made in the Rai Coast and the Bilbils exchanged them for pots:

The bush people traded bows and arrows to the coastal villages and we bought them from the people at Bongu, Malalamai and Sei. The bush people near the Rai Coast were the real makers of the bows and arrows and they also made *bilums* which they sold to the coastal villages. Sometimes if the bush people had not traded these things with the coastal people then the Bilbils would wait on the beach for them to travel down and exchange pots directly for their bows and arrows. This happened if bush people wanted to pick a certain sized pot in exchange for their bows and arrows (Mennis, 1981b: 59).

From this it seems that Schurig was right when she said the Bilbils did their best to break the monopoly of the coastal villages on the inland trade (Schurig, 1930: 57). We have seen that the inland people of Orinma made bows and arrows which they traded to Mindiri who then passed them on to the Bilbils, but there must have been times when the market days were disorganised by bad weather. When this happened, it is possible that the Bilbils traded directly with the inland people instead of waiting for the intermediaries in the coastal villages.

Shields and slings

Big round shields had a circle carved in the middle called “the eye” and a handle carved on the back. In Bogadjim, Biró bought a little shield, which had been traded from Balaj Village. Specially made carry bags held these shields over the men’s shoulders as they walked. On the other hand “The large round shields of Bilibil, the *dimu*, appear to have been used in exceptional times during a fight as they were too heavy. Some of them had a diameter of 90cm and a weight of 10kg. Possibly, they served in the protection of the village when attacked by enemies and were kept in the meeting houses” (Mennis, 1996: 24). Slings from Bogadjim were used to kill birds with amazing accuracy. The pouch was made from pandanus leaves grown on the coast while the string would have come from inland bush areas. Even though they seem flimsy and light, they would have been trade items because of the vine which was not locally available.

Stone Adzes and axes

Pall gave the following information about stone axes:

Before, they did not have steel axes, they only had stone ones. Bilbils did not have the stones for axes so the bigmen used to get them from Karkar or Siassi. It was hard work to cut the bush vines with these stone axes. They would put the vine on top of a piece of wood and then cut it with the stone axe. That was a bit easier (Mennis, 1981b: 58).

Mager, in his dictionary, noted that there were different types of stone adzes and axes: “The axe called *adiu* was used to hollow out canoes; *balod* was used to make adzes; an axe with a rounded cutting edge was known as *makak liwon* by the Bilbil people” (1952: 16). The Bel people were familiar with sharpening axes as stone axes blunted easily from use. They could also repair axe handles or make new ones. Stone axes were amongst the first objects to change in the time of first contact. As soon as Miklouho Maclay

Figure 135. Large war shields from Astrolabe Bay, 1890s. (Biro, 1901: Table xvi opp page 166. By courtesy State Library of Queensland).



arrived with steel axes and nails, the people could see the benefit of these new tools and were able to adapt them for their own use (Sentinella, 1975: 86) and, as a result, stone tools were no longer seen as important objects in the culture. If a more efficient tool became available they would be discarded. This may have been because the stone axes were utility objects and not symbolic as were the wooden ornaments used in initiation ceremonies. These ornaments were highly valued as connecting the men to their ancestors and had a spiritual significance (Mager, 1952: 15).

Brus, tobacco.

Pall of Bilbil in 1974:

Men from Nobonob to Bogati used to sell *brus*, but now I have seen the Nobonob and Amele people buying *brus* in the market. Before when my father was alive we got *brus* from Nobonob, Silibob, Kauris and Amele, or we went up the Gogol River to Aut and Dogia. We also went to Bogati and Bongu to buy *brus*. Now we get it mostly from Bogati and the Gogol River. Bongu does not grow much *brus* now. Atu and Bogati grow *brus* and sell it in the market wrapped in *limbum* leaves or to the *haus tabak* [tobacco factory] (Mennis, 1981b: 56).

Harding stated that little tobacco is grown in the coastal belt. It appears to grow best in the inland areas and is traded to the coast (1967). Bashan added that *brus* was also bought in Karkar and Ber speaks of people climbing the mountain behind Yeimas for *brus* (Mennis, 1981a: 22).

Buai, Betel nut

Buai was important for social occasions when it was handed out to visitors but also as a trade item. Derr tells us what happened during a visit between the Bilbil and the inland villages. "In the hills behind their village, they would decorate themselves, oil their skins and put feathers in their hair and visit their friends". Then they would put their bows and arrows aside, sit on a mat at the friends' house and eat *buai* (Mennis, 1981b: 17). Pall said, "The Bilbils would only buy small amounts of *buai* on the way down the Rai Coast - just enough for them to chew while they were sailing. *Buai* did not keep well and if they bought it on the way it would be stinking after the two month trip. On the way back they bought large amounts at Malalamai and Bonga and stored it in baskets for the trip home" (Mennis, 1981a: 55-56). Harding mentioned that the coastal villages often made their own *kambang* (lime) from shells to chew with the *buai* (1967: 34). In 1977, I observed Maia of Bilbil doing this. He said that August was the best time to make the lime from the shells. The shells were split open and wrapped tightly in *saksak* leaves and the bundle was then smoked over a fire. Alternatively the shells can be laid on bamboo sticks formed into a small platform with dried grass and leaves heaped on top and the whole thing set alight. This is the way Maia did it and he repeated the process several times. The shells were then crushed and turned into lime to chew with the *buai*.

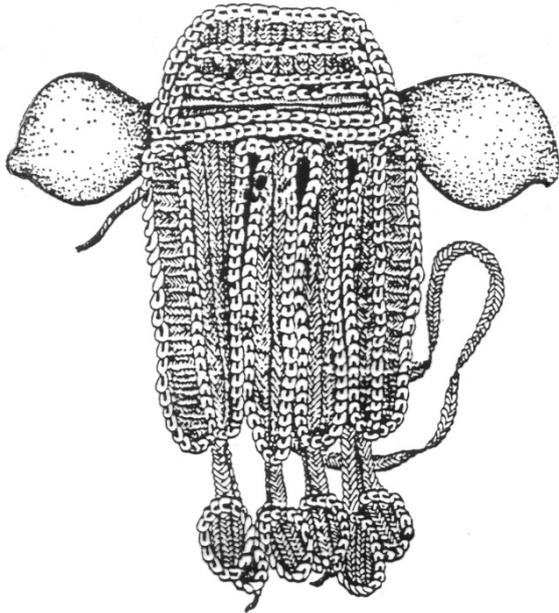
Decorations used as trade items

Bula

Bul is the name of the white shelled mollusc (*ovula ovum*) which is used as an ornament, a medium of exchange and in divination (Mager, 1952: 46). Mager also said the decoration which was held in the mouth was called *bula*. A white shell is on each side of the decoration.

Dogteeth

The canine teeth of dogs are worked onto woven headbands, V shaped breastplates and shoulder bags which are all valuable trade items. (Harding, 1967: 49-50) The Bilbil men would buy the headbands, *bali*, from Siassi and the Rai Coast. They also made their own according to Maia Awak. Mager's Dictionary (1952: 15) said that the term *bali* means to be pointed and refers both to the dog teeth and to the decoration made from it.



Left, Figure 136. Bula decoration worn on the chest. Illustration by Anton Gideon.



Right, Figure 137, Bali Badam bag. Illustration by Lee Christensen, 1975: 109.

Bali kolkol

Bali kolkol is the breastplate like decoration which is tied around the neck and hangs in front. It is made from woven vine to which dog teeth and *tambu* shells are attached. The Malalamai, Bongo and other people of the Rai Coast would trade them for the pots of the Bilbil. Sometimes the Bilbil bought the single dog teeth and made their own *bali kolkol*. An excellent illustration of one is found in the book *Madang and Siassi* edited by R. Christensen (1975: 99). Another *bali kolkol* can be worn on the back. The inland villages behind the Rai Coast also traded *kapul* teeth, dog teeth and flying fox teeth for pots.

Bali badam

Bali badam is a *bilum* or shoulder bag which is used to carry *buai* and lime and so on. It is also used as part of a bride price. (Christensen, 1975: 109)

Feathers

Feathers are an integral part of the people's traditional dress and the more beautiful the feathers, the higher the price. Pall said that Bonga, Malalamai and Sel traded the red feathers of a fowl and expressed some surprise at the cheap cost of feathers in those days: "You had to buy them, just like today. In those days one small pot would buy the feathers off one bird. It was easy to buy things with pots'.

Paspas

Paspas are the armbands used for *singsings*. They are rarely made these days but were highly valued as trade items in former times. The red *paspas* came from Karkar and the black from Yasula, Orinma and Meibu, inland from Mindiri on the Rai Coast. The Karkar also exchanged the *paspas* in sections for so many pots and the Bilbils made their own. For instance, Maia knew the art and said that the young boys learnt how to make *paspas* when they were initiated on Bilbil Island (Mennis, 1981a: 75). However they



Figure 138. Maia Awak with dogteeth headdress, carrying adze and bone spatula, 1975.

still preferred to buy them whole from Karkar with pots. Derr said that the Bilbils were also middlemen for this *paspas* which they traded on the Rai Coast for food. Bashan agreed with Derr in his testimony (Mennis, 1980b 65).

Pigteeth

Only certain places made the boars' teeth decorations. The main producers were the Siassi and Tami people. They would extract the upper teeth of small pigs and the lower teeth would then grow long and curved (Mennis, 1981b: 56). The most valuable pigs' tusks are those that are almost circular (Harding, 1967: 47). Pall explained "Once the teeth have grown long enough these pigs are killed and then the body is eaten but the head is covered with leaves until it stinks and then the teeth are extracted. You cannot cook these teeth in the fire but the flesh must rot away and then the teeth are extracted carefully" (Mennis, 1981b: 56). He also mentioned that some of the inland villages near Madang knew how to

grow the long pig tusks and that the people believed they had to live a quiet life with no fighting if the teeth were to grow properly. The Bilbil did not grow these teeth on their pigs, but they were middlemen in the trade (Harding, 1967: 56). Mager's dictionary gives the term *paramat* as the Bilbil word for the tusk ornament which hung down from the neck flat on the breast. Those forming a perfect circle were the most valuable and were worth a pig (Mager, 1952: 247).

Kundus

According to Harding, the Bilbil traders distributed the Karkar *kundus* to the Rai Coast (Harding 1967: 1). Pall, however, expresses doubt about this because the Bilbils bought the Siassi and Tami *kundus* from the Rai Coast. Pall can remember some Rimba men making a *kundu* when he visited there with his father, but he expressed ignorance about whether the Bilbil made *kundus* or not (Mennis, 1981b: 57-58).

Kunum

A *kunum* was a mortar made of wood used to grind nuts like *galip* and to mash bananas, *taro* etc. (Mager, 1952: 159). The Bilbils bought them from the Karkars with pots (Mennis, 1981b: 55).

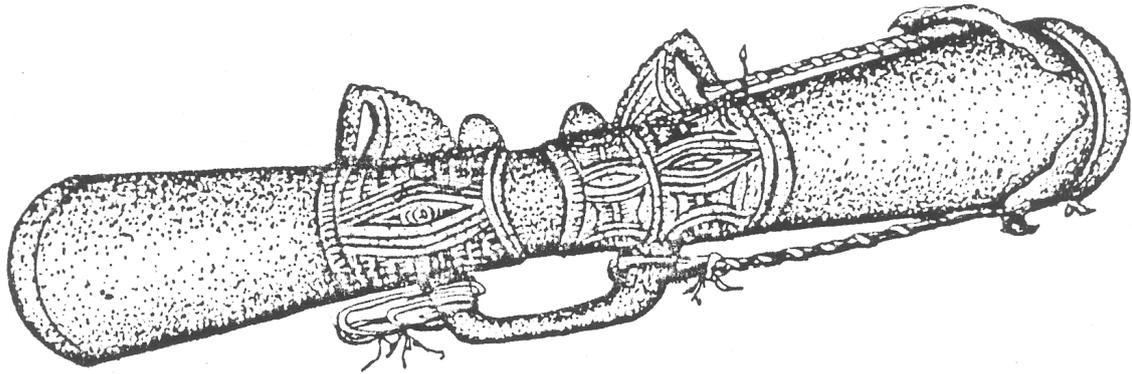
Mal

Pall describes the *mal*:

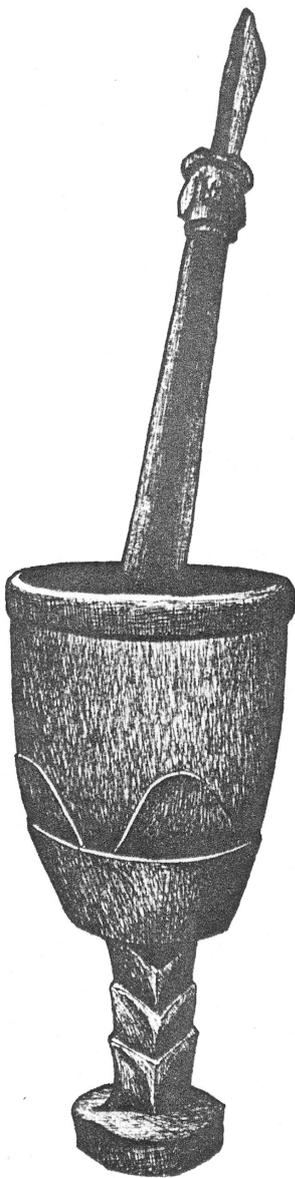
Mal comes from the bark of certain trees that only have branches at the very top. The Rai Coast people grow these trees then they cut them down and beat the bark with a stick. They then take the bark off, beat it some more then they paint the *mal* and hang it up in the wind. It is not good if the sun dries them out as they must dry slowly. The *laplap* blanket is very good. Before, when I went with my papa to Malalamai, his trade friends gave him plenty of these blankets. We covered up the *mals*, *bilums* etc. with it. The blankets are made from *limbum* and are very big. Some have designs and some are used just for covering things. They were as big as the trade store blankets. When I was little we used to use these large *mal* blankets for mattresses and covers. It is all right if you wash it before you lie on them. Otherwise it is too coarse.

Figure 139. Singing group beating kundus.





Above, Figure 140. Madang kundu. Illustration by Anton Gideon.



Left, Figure 141. Mortar and pestle from Long Island. Illustration by Lee Christensen, 1975: 21.



Below, Figure 142. Paspas armband from Long Island. (Finsch, 1888a: 17).

The best Rai Coast *mal* came from Malalamai and Bonga, as they are soft on the skin. My forefathers used to buy them from Malalamai, Bonga and Sai. They like these *mals* very much. Galek Suet, Biliau, Singor had *mals* too, but they were coarse *mals*. Batasin makes *mals* too and markets them for singsings but my forefathers did not buy them from there. They only bought them from the Rai Coast. The mountain people behind the Rai Coast would make *mal* and sell them to Galek and Suet. Singor, Suri and Mul, Sel, Malalamai and Bonga all had good *mal*, soft *mal* which we like. If the *mal* were big they would divide them up and make several *mal* for the boys (Mennis, 1981b: 58).

Harding (1967: 44) said that the small *mal* were made on the coast while the large *mal* blankets were made in the interior and from this, it would also appear that the Bilbil were middlemen in the *mal* trade.

The following is an account by Maia of the return of a trading trip:

We returned along the coast to Yeimas to get *galip* and *mal* and to Biliau for *mal* and plates. Here we stayed a couple of days to cook a pig. Then we sailed back to Singor where we collected *mal* and plates. Next port of call was Mindiri where we got *mal* and *yams* (Mennis, 981a: 102).

Notice how much *mal* was bought on this trip and the fact that Mindiri was often a port of call in spite of their past enmity.

Paint

Black and red paint were the main colours to be traded. The best type of red paint according to Derr came from Siassi. An inferior variety was obtainable from the bush places along the Rai Coast (Mennis, 981b: 23 - 4) and from Hudini and Amele inland from Bilbil (Mennis, 1981b: 78). The red paint for the *lalong* was obtained from Ou on the Rai Coast and called *tan bem*. This powder is used to paint the skin for *singsings*, but it can be mixed with the seed of the *bemai* tree and the juice of the *dim* tree to form paint for canoe decorations (Mennis, 1980a: 55). The red ochre, used for painting a slip on the pots, is different again and is found at Yabob (Mennis, 1981b: 23-24). Another red ochre paint was collected from the ground on the northern part of Karkar Island. The white paint was made from lime obtained from shells that had been heated and crushed. Black paint came from Siassi and bush places behind Saidor and Mindiri including Orinma. It is called *mumu* (Mennis, 1980a: 55).

Rai Coast Plates

Rai Coast plates are called after the beach where they are bought. If they are bought in Singor they are called *Singor daig*. If the Bushmen bring the plates down to the beach they are still called after the beach from where they are traded (Mennis, 1981b: 57). Wab, Suri, Mur, Sel, Malalamai and Bonga have the long Rai Coast plates, and the round plates came from Yamai, Galek, Biliau, Warai and Singor (Mennis 1981b: 14). The Bilbils acted as middlemen buying these plates from the Rai Coast and taking them to Karkar (Mennis, 1981b: 25). Imso Kau of Orinma said that the people inland from his village made the round and oval plates of all sizes because they had plenty of the trees needed to make them (Interview, June 1977).

Siassi and Tami Plates

Speaking of the Tami plates or bowls Harding wrote, "The Tami bowls are hardwood with expertly carved designs that place them among the most artistic products of New Guinea. The Rai Coast, bowls are generally small ovoid in form and made of softwood. They don't last as long as the others" (1967: 38). Pall said it costs between twenty and forty kina to buy a Siassi plate which are similar to the Tami ones and that they were more expensive than the Rai Coast bowls. Traditionally, the Siassi people would bring both Tami and Siassi plates to Bonga and Malalamai to trade and the Bilbil would go there and exchange

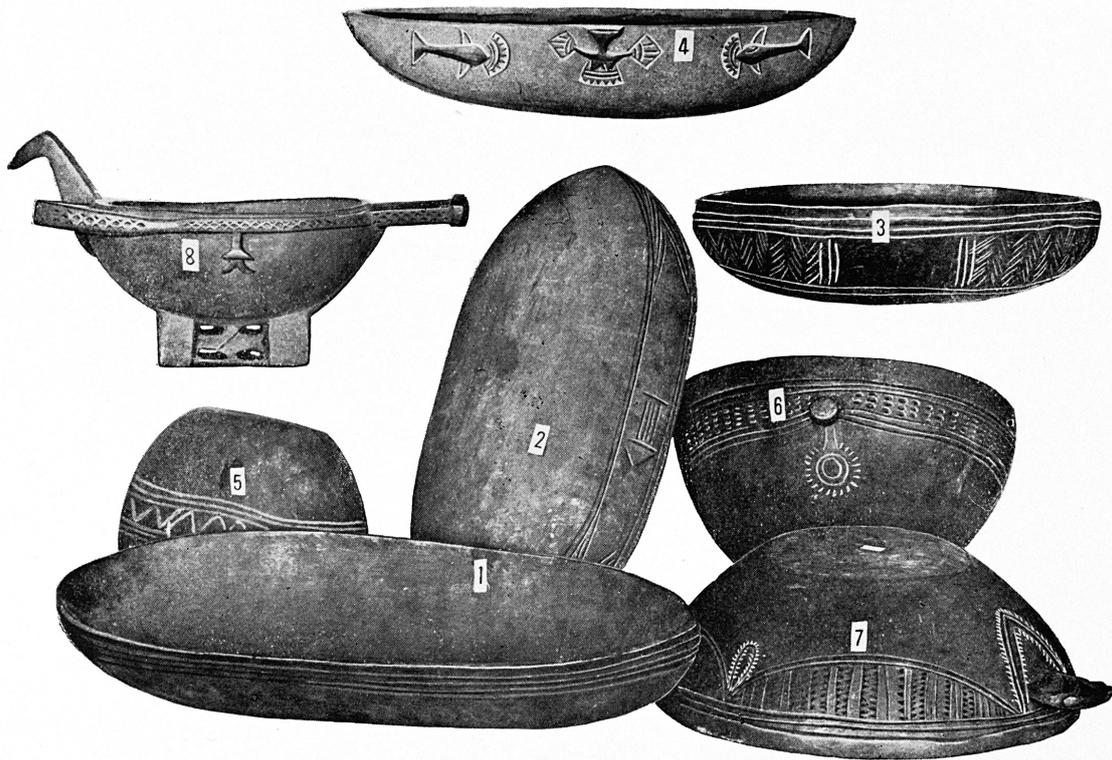


Figure 143. Wooden plates and bowls traded in Astrolabe Bay in the 1890s. (Biro, 1901: Table vi, opp page 88. By courtesy of the State Library of Queensland, Queensland).

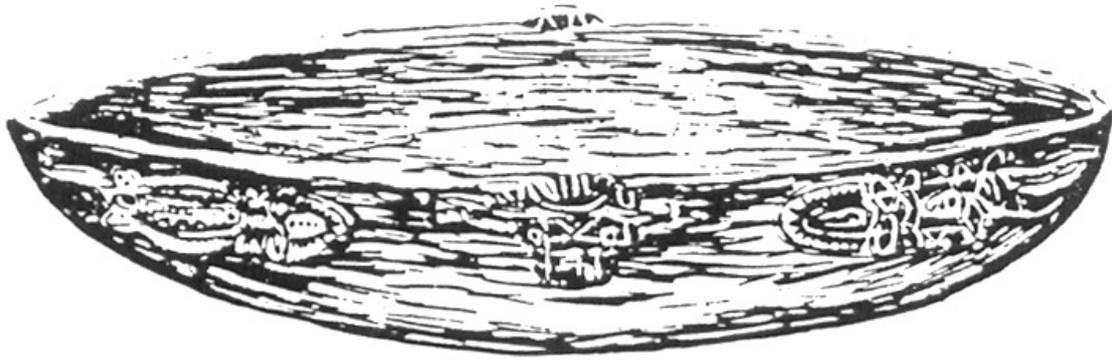
plates for pots. In more recent years the Bilbil sailed to Siassi and Tami and exchanged pots for plates, but if they just buy them with money without trading, then they are expensive according to Pall (Mennis, 1981b: 57) Damun can remember a visit of a Siassi canoe to Bilbil. The traders brought the long Siassi plates, *doar*, made from kwila (Mennis, 1981b: 15)

Wood and vines for canoes

In the old days these were bought from the inland villages of Hudini and Yagaum etc. The Bilbil men would choose what material they needed for their canoes. It might be bush vines or logs for booms, mast and outrigger. The Bushmen would cut these and then send a message to the men on Bilbil Island. They would decide on a day in advance and when everything had been cut and dragged to the beach, the Bushmen would light a fire on the beach and signal the island. The Bilbil would bring pots over to pay for the wood. If however, they had no pots they would use the *dinau* system of delayed payment (Mennis, 1981b: 59).

Kalik, headrest

Kalik is a wooden headrest or support for the neck. Some of the old Bilbil men knew how to make them but others were traded for pots from Long Island. Once the Germans came these carved head rests were replaced by pillows (Christensen, 1975: 45)



Above, Figure 144. Rai Coast plate.



Left, Figure 145. Rai Coast bowl.

Illustrations by Anton Gideon.

5.5 Comparison with the customs of other people in Papua New Guinea

Ian Hogbin studied the people of the Schouten Islands: “I have spoken of the large canoes which were constructed during my visit for the voyage to Koil. Three of these were decorated at the same time on the beach alongside my house so that I was able to make observations of the time spent in the work” (1935: 385). Because the trade was still actively engaged in while he was doing his research he could capture the excitement and details of the customs and preparations for the long trading trips and the characters of the men involved. Before the culture became too altered by foreign influences, he and others gave us first hand knowledge of the way it was - the pride in the canoes, and the prowess of the traders. The earlier accounts of the trading systems recorded in diaries or from first hand accounts can be used as primary source material. Miklouho-Maclay, who has been described as a “scholar, scientist, explorer, adventurer” (Greenop, 1944: 140), studied the people of the Rai Coast and Bilibil Island in the 1870s. His diaries give a detailed account of the people, the trade and the trading trips from first hand experience in diary form: “Thus my neighbours, not much occupied with fishing, had decorations predominantly of flowers, leaves and seeds, whereas the inhabitants of Bilibili and Karkar, living on the open sea and occupied with fishing and sea creatures, were adorned with ornaments of shells, fish-bones, tortoise-shell and so on”.

Bilbil/Yabob Trade Ring.		
Imports	Exports	Middlemen
From Rai Coast: Wooden Plates Bows and arrows Bilums Axes Mal Black Paint Mindiri Pots Pig meat	Bilbil and Yabob pots and canoes	Wooden Plates and Mal from the Rai Coast.
From Tami via Sio: Headrests Bowls Drums Clubs	Bilbil and Yabob pots	Wooden Carvings from Tami
From Siar, Kranket, Malmal and Riwo: Taro Yams	Bilbil and Yabob pots	Mindiri Pots Gogol Pots
From Gogol: Pots Bush Materials Saksak Paint (From Hudini)	Bilbil and Yabob pots	
From Karkar: Galip Nuts Mortars and Pestles, dishes and red paint	Canoes and pots	
From Siassi: Pig Tusks, canoes, obsidian	Bilbil and Yabob pots	Obsidian from West New Britain
From Sarang and Korak: Tobacco, Korak pots	Bilbil and Yabob pots	

Table 9. Bilbil-Yabob trade system.

The trading canoes played a large part in the lives of the Bilbil men. Living on the rocky island, the people depended on the canoes for their very survival. Each canoe became a symbol of their need to conquer the sea and reach their trading friends: a symbol of their culture. They adorned it, painted it in bright colours and set their totem on the mast proudly showing their beautiful craft off to the other villages.

Malinowski realised this when he wrote:

To the native his cumbersome, sprawling canoe is a marvellous, almost miraculous achievement, and a thing of beauty. He has spun a tradition around it, and he adorns it with his best carvings, he colours and decorates it. It is to him a powerful contrivance for the mastery of nature, which allows him to cross perilous seas to distant places. It is associated with journeys by sail, full of threatening dangers, of living hopes and desires to which he gives expression in song and story. In short, in the tradition of the natives, in their custom, in their behaviour and in their direct statements, there can be found the deep love, the admiration, and the specific attachment as to something alive and personal, so characteristic of the sailor's attitude towards his craft (1960: 106).

Compare Malinowski's description above with Hogbin who was describing the attitude of the Wogeo people to their canoes in the Schouten Islands: "They regarded the vessels as extremely beautiful and were very proud of them. Several men told me how good it was to feel oneself, carried forward through the waves while the spray dashed up into one's face" (Hogbin, 1935: 389). The Bilbil men were also justly

proud of their *lalong* when they finished building it and sat around admiring it (Mennis, 1980a: 55). It is interesting to compare the Bilbil trade in canoes with that made to the north-west in the Schouten Islands. The Wogeo group imported pots whereas the Bilbils exported them (Hogbin, 1935: 389). Furthermore since they grew all their own food, the Wogeo group only traded for luxury items and needed to trade at infrequent intervals (Hogbin, 1935: 376). The Bilbil on the other hand, were dependent on the food that the pots were exchanged for and their trading trips were more frequent. The long trading trips were only undertaken once a year but shorter informal trade exchanges were happening all the time.

The annual trading trip of the Bilbil was similar to the *hiri* trips made by the Motuans on the south of Papua New Guinea. The *hiri* canoes took large cargoes of pots, carefully wrapped in banana leaves, and bartered them for food in the Gulf villages. The fleet left in September or early October with the last of the south-east trade winds and returned in the north-west season (Barton, 1910: 96). The canoes were first tested to see if they were seaworthy (Barton 1910: 104). Bashan mentions that this happened too in Madang. The Bilbia men would sail the canoes to Kranket and back and, if necessary, the vine lashings would be replaced and sail ropes tightened. Then, and only then, did the men consider sailing to Karkar on the Rai Coast (Mennis, 1980b: 64).

The arrival of, the Papuan *lagatoi* in the western villages was marked by set ceremonies which compared with the *opim dua* ceremony of the Bilibil (Interview, 19 June 1977). Only after these ceremonies were performed were the pots taken from the canoes and lined up on the beach, each man keeping his own pots apart from the rest (Barton, 1910: 109). Compare also with Malinowski (1960: 350-351). Many places have taboos on the women who are left behind while the men are away trading. Pall tells us that the women had to be good and live quietly while the men were away (Interview 19 June 1976) and Barton said that the wives of the *baditauna* and *doritauna* refrain from washing themselves while the *hiri* fleet is absent (Barton, 1910: 112).

Long Island Trade		
Imports	Exports	Middlemen
Large Siassi Bowls Bowls Bilbil Pots Sio Pots Canoes Sago Bows and Arrows Cassowary Plumes	Pigs Dogs Boars' Tusks Dogs' Teeth Fowl Feathers Betel Mortars Drums	Obsidian (from West New Britain) Stone Axes

Above, Table 10. Long Island trade and products.

Below, Table 11. Rai Coast trade and products.

Rai Coast Trade		
Imports	Exports	Middlemen
Bilbil Pots Gogol Pots Tami Bowls Sio Pots Yams and sago	Mal Mindiri Pots Betel Nut Taro Sweet Potato Bilum String Finsihed Bilums Bows and arrows Fish Coconuts Dogs and dogs' teeth Bowls	Axes from inland Bows and Arrows from inland Tami Products Bilbil Pots Gogol Pots Tobacco

Weather Magicians were employed by both the Bilbil and the Motuan. Barton explains; “two old men, who are considered to be sacred during the voyage, are especially commissioned to accompany those expeditions that they may use their influence in appealing to the gods of the winds and the sea to refrain from bringing any calamity upon the party” (Barton, 1910: 119). We have already seen the special place of the *likon* in making the weather magic in the Bilbil canoe voyages. Motuan magicians on the *lagatoi* had a special area on board the vessel and had to sit quietly to ensure the success of the voyage. This compares with the Madang *likons* who had to sit quietly in on shore while the voyage took place.

Canoes may be borrowed from an owner for a fee (Malinowski, 1960: 119). The Bilbil did not mention if canoes were borrowed, but the Chinese boats were borrowed from the Kranket and Riwo in the 1935 trading trip and paid for in pots. However, the boats that belonged to Yabob, the sister village of the Bilbil, were not paid for because they were *wantoks* (Mennis, 1981b: 11). The Wogeo custom of not charging passengers from the other side of their island when the latter accompanied them on a trading trip (Hogbin, 1935: 393) was also followed by the Bilbil who would allow the inland village men to accompany them to various places (Mennis, 1981b: 81).

The Bilbil could cook on their canoes and a fire was always kept smouldering in an old pot in a bed of sand (Mennis, 1981b: 11). This would also be used to light the *brus* cigarettes which were kept in the *sareg dob* basket which swung out from the canoe (Mennis, 1980a: 76). In the Wogeo, “all the canoes carry a fire in a potsherd for the purpose of lighting cigarettes” (Hogbin, 1935: 395). The Bilbil and Wogeo people both had customs for young boys or women who are going on the trip for the first time. In Wogeo they are told, “to crouch down as low as possible and, keep their heads covered as a safeguard against the spirits who might make them ill” (Hogbin, 1935: 395). Pall tells us that if a young boy had not been to a certain village before on a trading trip, it was the custom to put hot sand on his back so he would not become ill (Interview, 19 June 1977). Chewing of *buai* or betel nut is permitted on the Bilbil trading trips. Pall tells us that on the way down the Rai Coast the men buy enough betel nut to chew on the trip (Mennis, 1981b: 56). The Wogeo, however, banned the use of betel nut on the voyage (Hogbin, 1935: 395).

The use of the stars to help with the navigation is general amongst the four trading groups mentioned. The Wogeo have only a limited knowledge of the stars, but enough to navigate at night (Hogbin, 1935: 96). The Trobriand Islanders use the stars the least of the four groups for, as Malinowski says, “Barring accidents they never have to direct their course by the stars”. But they do know enough about them to steer a direction if necessary (1960: 225-6). David Lewis refers to the Motuans use of an ingenious instrument which helped the sailors to navigate by the stars. It was called *kino kino* and was “a staff with a long whip-like pennant at one end”. It was lashed to the rigging with its tip aligned with Venus or other stars (Lewis, 1972: 95). The Bilbils use of the stars was described as minimal in the testimonies. The morning star *boi* was used to sail to the Rai Coast (Mennis, 1981b: 15) However this could be seen more as marking the time to leave on the canoes than on using the star to guide them although they knew to keep it on the starboard side when travelling in the pre-dawn dark to the Rai Coast.

Planters, missionaries and public servants also provided first hand accounts, for example, the detailed description of the 1906 *hiri* which was recorded by Captain Barton from the crew. Malinowski, although an ethnographer, valued the knowledge of people like Captain Barton: “Certain works of amateur residents of long standing, such as educated traders and planters, medical men and officials, and last, not least, of the few intelligent and unbiased missionaries to whom Ethnography owes so much, ... surpass in plasticity and in vividness most of the purely scientific accounts” (1960: 18).

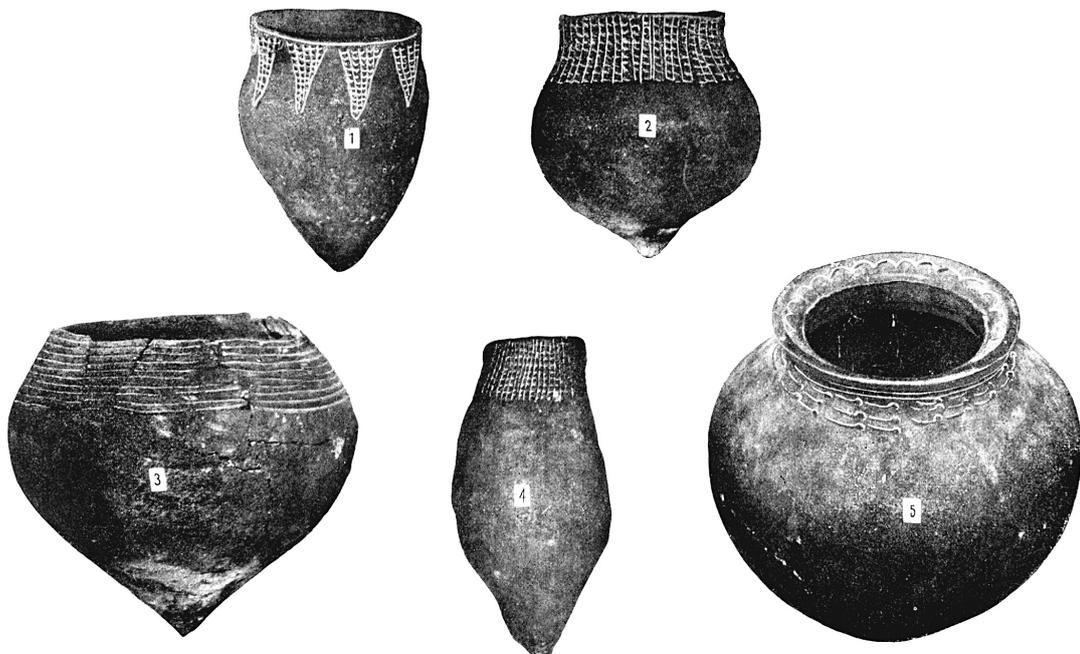
Malinowski was interested in the trade and customs in the *Kula* Ring and its effects on the relationships between groups. Although he had a good balance of the scientific and the anecdotal approach, he pointed the way to change in his field notes: “An Ethnographer who wishes to be trusted, must follow clearly and concisely, in a tabularised form, which are his own direct observations, and which the indirect information that form the bases of his account” (Malinowski, 1960: 18).

More recent accounts by economists and anthropologists usually analyse and compare trading trips in an objective way. Magic is analysed and compared. Trade items are weighed and measured and put into tables. History that was once alive now becomes arid and it reaches the point where researchers write treatises about other treatises and get further and further removed from the reality of the life and the cultures being studied. Brookfield and Hart investigated trade from the economists' point of view, studying the modes of transaction. The distinction drawn between 'transfer' and 'trade' is quite irrespective of the mode of transaction. They also speak of the originator or maker of an artefact and the receiver:

Within a contact field - and rarely in expeditions beyond it - most transactions are interpersonal, involving only a single 'link'. If more than two 'pairs of hands' are involved, the ultimate originator and receiver are still mutually known and may come into direct contact at another time. This type of transaction we call 'transfer'. Where goods pass outside any one contact field, they are subject to a series of transfers involving a multiple of interpersonal links to make up the whole 'strand' from originator to receiver: such transactions we call 'trade' (1971: 315).

In any trading zone, trade partners were important and some Bilbil clans favoured one village to trade with over others. It also solved the problem of entertaining many mariners who might arrive at once on the Rai Coast. Each Bilbil clan had its favourite trading villages. For example, the village of So was friendly with the Luan clan (Mennis, 1981b: 82). The Dugus clan favoured Yeimas (Mennis, 1981b: 51) although Damun seemed to think that on the trading trips all the canoes called into every village (Mennis, 1981b: 12). Gabor of the Gapan clan said that his whole clan traded with the Autungai Clan of Saidor, but he, Gabor, had a special trade friend called Babarang. So it is quite feasible that all the Bilbil canoes could call into Saidor but be entertained by members of separate clans.

Figure 146. Various pots used in the Astrolabe Bay trading system. (Biro 1901: Table vii opp page 92. By courtesy of the State Library of Queensland).



Harding mentions individual transactions between trade partners in Sio more than between one clan and another (Harding, 1967: 111). Each man from Wogeo “has at least one trading partner in every one of the villages visited” (Hogbin, 1935: 398). Similarly the Motuans had their own chosen trading partners (Barton, 1910: 108). The Gapan of Bilbil in the Madang area had a tradition that when visiting Siar village they would visit their special trading clan, Waifun, before visiting any of the other clans. The same went for market exchanges. If, for example, the Dugus wanted to sell pots to Lilung or Difun they must first negotiate with Badalong. However, once they have chosen a day, they could sell pots directly to the other clans in exchange for *saksak* or other food (Mennis notebook 2 Pall: Interview 16 October 1972). This tradition was extended to Europeans who befriended them. Lajos Biro’s trading partner on Kranket Island was Lavelot. This partnership was begun with an exchange of gifts and he was in trouble for not visiting Lavelot as a middleman before going to Siar Island. This particularly irritated Lavelot who attacked Biro when he was bird hunting on Kranket. (Molnar-Bagley, 1993: 128) I had the same trouble with Maia Awak when I began to visit Pall Tagari in Bilbil village. Maia was upset and explained that it was expected I visit him first each time as he had been my main informant before Pall. I tried to follow the village rules but not always successfully.

The Bilbil used conch shells to announce their arrival in the trading village, each clan having its own combination of long and short sounds as already mentioned (Mennis, Notebook I: 139-141). (see page 107). The *Hiri* traders may have used the *sede* bamboo musical instruments mentioned in the legend of the origin of the *Hiri*, but Barton does not mention it in his description of the fleet’s arrival in the west (1910: 108).

Various customs were followed when the traders returned home. The Bilbils were welcomed back by a big feast prepared when the canoes were first sighted. The men once ashore would blow on the conch shells and on their flutes and beat the drums and prepare for a *singsing*. But first any woman who had humbugged or whose pots had not been sold was severely reprimanded by her husband (Pall, interview 19 June 1977). Similar recriminations were voiced against the wives of the Trobriands traders (Malinowski, 1960: 218) and the Wogeo (Hogbin, 1935: 403).

It seemed that the building and ownership of these large trading was of paramount importance to the clan leaders. Like modern man with his expensive cars, a villager was judged by his prowess in the making and running of these big craft. The greeting which the ‘captains’ received when the canoes arrived in coastal villages presupposed that they were bigmen in their own villages and the names of these mariners became household words over a wide area.

Nomu, the leader of the Dugus Clan in Bilbil, organised the building of a *palangut* in the 1930s and captained it on many occasions. His name is still associated with his canoe today (Interview 25 February 1977). Other bigmen who are still famous canoe owners from the past are Beg of Yabob who owned a *palangut* in Yabob (Mennis, 1981a: 11) and Bais of Riwo who owned a *palangut* in the 1920s (Mennis, 180: 27).

Bilbil pots, a distinctive style of pottery.

In 1884, Otto Finsch compared the Bilbil pottery making with earlier techniques he had witnessed in Port Moresby. In both places it was the women who made the pots, which were the central pivots of the trading expeditions:

The island is famous for its pottery and that trade, which like everywhere else in New Guinea, rests in the hands of the women and happens in the same way as it does on the south-eastern coast. The pots are made with the help of a flat stone and a small wooden mallet, used to evenly spread out a lump of clay, which requires a good eye.

The firing happens in the same simple way as in Port Moresby, in the open. The pots, which were carefully dried in the shade, were lightly covered with wood and when it was lit they were kept in the high temperature for only a short time. But the product appeared to be on the whole quite durable at times more elegant than that of the southeastern coast. I saw amongst other things pots that were decorated with bumps. The often-insignificant nail imprinted patterns were not really important but, as in Port Moresby, a trade mark. As my sketch shows, a potter is at work on the peculiar globular shaped pots, which are the same as nearly every else in New Guinea. Here, preferably, two types of pots are made, one with a wide opening for cooking (*bodi*) and one narrow as a water container (*io*). As Port Moresby is the centre of pottery and the trade of pots on the southeastern coast of New Guinea so Bilibili is the same to Astrolabe Bay and even further (Mennis, 1996: 28).

May and Tuckson wrote that the Motu and Bilbil pots were quite different in texture and clay type (Pers comm.). However, Finsch noted three areas of similarity between the Bilbil and Motu pottery. Firstly, they were fired in the same way; secondly, the markings on the pots were like a trademark of the person who made them; and thirdly, they were at the centre of the trade network along the coast (Mennis, 1996: 28). There are also other points of similarity. The fact that the potters were of Austronesian stock and that the women made the pots is interesting. In some places, for example the Gogol area near Madang, it is the men who make the pots. Finsch was wrong in his conclusion that only the women made pots.

In 1975, Brian Egloff of the Papua New Guinea Museum made a preliminary survey of eighteen pottery bearing sites along the Madang Coast and on Karkar and Long Island. Dating was done on pottery found at a site at Malamal village near Madang, and was found to group around 550 years ago (about 1400 A.D) (Egloff, 1975: 1).

In discussing his survey, Dr. Egloff said

In the coastal Madang area an archaeological survey located a number of historic and prehistoric sites once occupied by pottery using peoples. The pottery recovered from these sites is directly ancestral to the modern industries of Yabob and Bilbil, particularly with respect to the predominate vessel form and the presence of a red slipped surface finish (Egloff, 1975: 1). —Three archaeological sites have been recently investigated on Arop, an island 15 km east of Madang. The island lies within the historic Bilbil trade network — the sites lie underneath a volcanic ash, which was probably deposited shortly after A.D. 1700 (Egloff, 1975: 14).

The dating of this pottery would have implications for Yomba Island Pottery. Further investigations might show where these shards originated.

Figure 147. Newly fired Bilbil Pots.



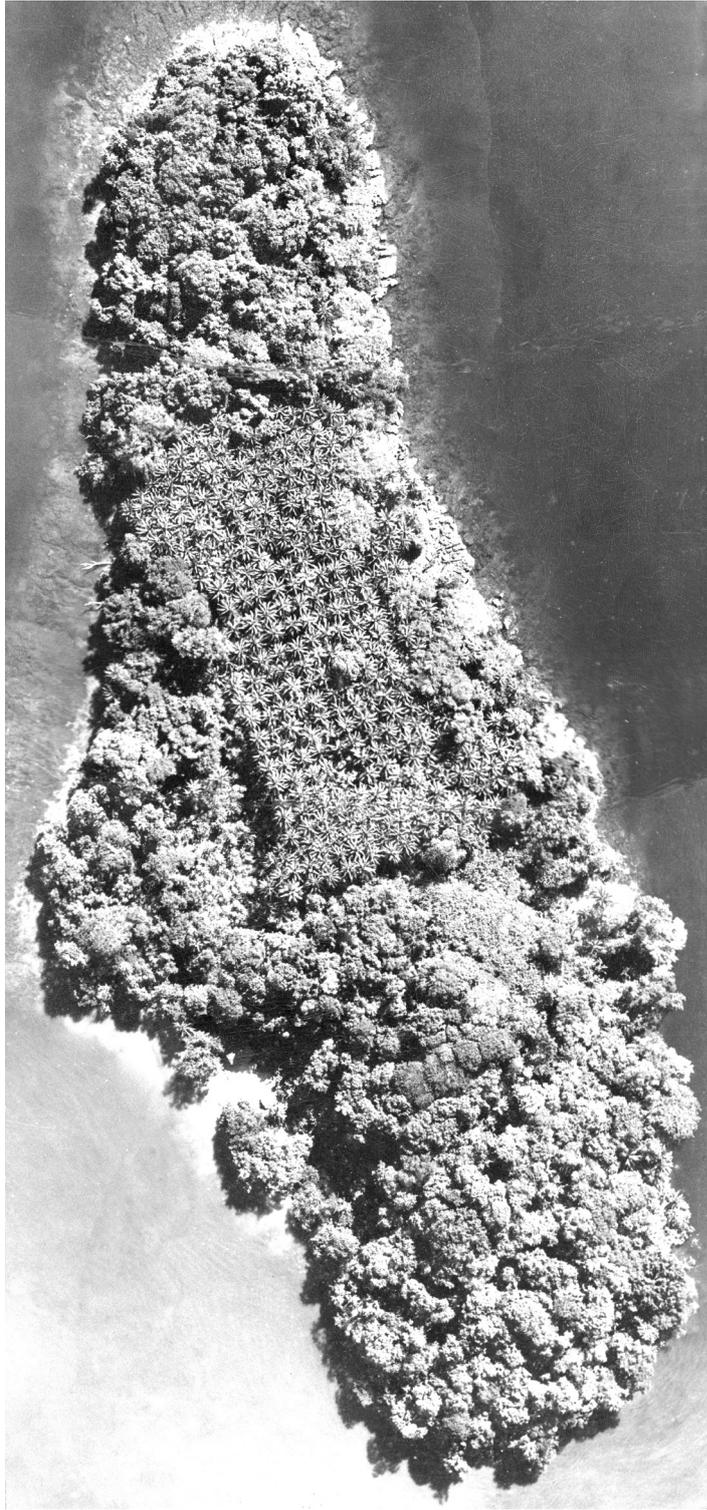


Figure 148. Aerial photograph of Bilibil Island, looking like a giant footprint.

PART 6, Changes in Trading Customs

In 1885, Otto Finsch sailed into Astrolabe Bay on board the *Samoa* and observed a large Bilbil canoe laden with pots on a trading voyage. He was impressed by the boldness and enterprise of these mariners (Harding, 1967: 1910) and was one of the first ethnographers to witness one of these trading voyages which ceased within sixty years of contact for various reasons.

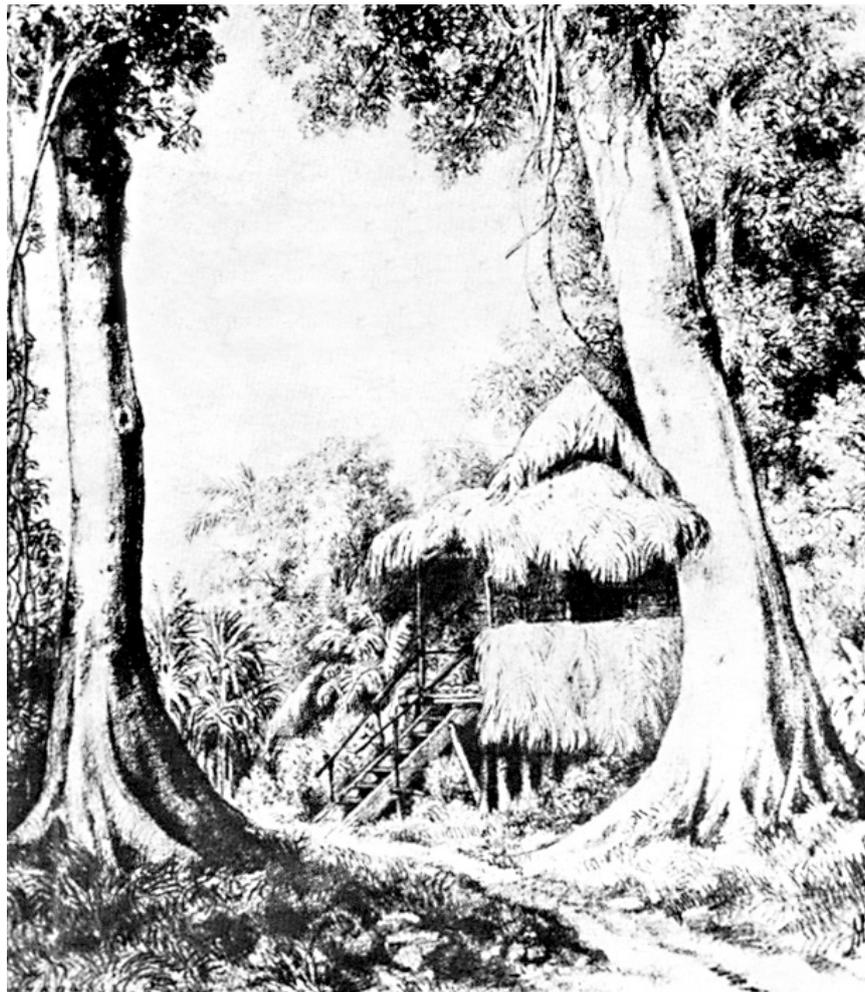
6.1 The passing of the Trading Canoes

6.1.2 Outside contacts

Social and technical changes began in 1871 with the arrival of the first outsider, Miklouho-Maclay. While he himself did not try to introduce changes, the people he met could not fail to compare their stone-age tools with his iron ones; their clay pots with his saucepans; and their frail craft with the ocean going ship that he arrived in. The people did not judge their own material culture as aesthetically beautiful for they were pragmatic. Having seen what they considered to be superior tools, pots and crafts, not only in efficiency, but also in longevity, they wanted to procure them as soon as possible and use them alongside their own.

The following passage from Maclay's Diary in October 1871 shows the effect his utensils and clothing had on the Bilbil people:

Figure 149. Miklouho-Maclay's house in 1871, on the Rai Coast.. (Tumarkin, 1982: 68)



The people from Bili Bili (sic) inspected everything with astonishment and interest, the saucepans and teapot in the kitchen, my collapsible chair, the small table, my shoes and socks enraptured them. They never stopped opening their mouths - uttering long drawn out "Ah! Ahs" and "EE! EEs" and smacking their lips and on extreme occasions putting their fingers in their mouths. They liked the nails also and I gave them some (Sentinella, 1975: 40).

Maclay was followed by a group of Australian gold prospectors, and Hugh Hastings Romilly, the British Deputy Commissioner for the Western Pacific who visited Astrolabe Bay on board HMS *Beagle*. Then various blackbirders arrived recruiting for the Australian canefields (Sentinella, 1975: 344). In November 1884, the German flag was officially raised in the harbour of Friedrich Wilhelmshafen (Madang) claiming the area for Germany under the auspices of the newly formed Neu Guinea Compagnie. In those early years, Johann Kubary, Company manager on the Rai Coast, was under pressure from the directors to establish plantations. Having inspected the area along the coast from his boat, he landed on Yabob Island and 'bought' the said land from the islanders who were not even the rightful owners! (Phillips, May 1932).

Writing about this transaction on 30th September 1887, Kubary said, "The inhabitants of the Yambomba Islands (Yabob) who own lands stretching up to Friedrich Wilhelmshafen expressed the wish to transfer them voluntarily to the Company" (Phillips 1932: 8). Previously he had 'purchased' large areas of land from the Bilibil Islanders through signs and gesticulations as there was no common language. The people were unaware that in accepting a few trifles, they were selling hundreds of hectares of land to which they had no right (Sentinella, 1975: 328). Although the Neu Guinea Compagnie 'acquired' these large areas of land, it was years before much of it could be surveyed and registered (Sentinella, 1975: 327). Even when German rule ended in 1914, there were still many unsettled claims especially in Astrolabe Bay: 56,685 hectares had not been surveyed or registered of a total of 137,144 hectares (Encyclopaedia of Papua New Guinea 1 1972: 493).

The impact of this alienation of land on the people and their culture was disastrous in many ways and led in part to the revolt of 1904. "The ferment of unrest in the various coastal districts of Kaiser Wilhelmsland which have no contact with each other was obviously due to the spread of plantations in the region of the Astrolabe plain" (Sack and Clark, 1979: 251). Even though this land alienation occurred over a period of 20 years, it was to have far reaching consequences on the traditional ecological and economic life of the people.

6.1.2 Ecological changes

The natural environment near Madang was profoundly disturbed when the German Neu Guinea Compagnie began to establish plantations. For centuries, the village people had respected the trees, the forests and the *masalai* who inhabited them. The forests provided them with food and material for all their needs and the balance of nature was never threatened because they took only what was needed and nature provided bountifully. The forests were the people's storehouses providing canoe trees; hardwood trees for house building; animals and birds for hunting and berries for food; clay deposits for pottery; vines for rope; bark for caulking canoes; and a myriad of other material which they needed in order to survive. German companies, supported by the Reich's imperialist policies, sought profits from plantations. To the new colonists, it appeared that this land was not being utilised by the indigenous population. The bewildered people were employed to clear their own forests and expected to keep set hours whereas traditionally they had had a very flexible timetable guided by the sun, the moon, the seasons and their own customs and traditions. They were expected to make roads and fill in swamps around the new town of Friedrich Wilhelmshafen instead of spending time gardening, preparing feasts, trading or resurrecting the *meziab* for initiation. It is no wonder they revolted - their way of life and their lands were threatened by these invaders. After the 1904 revolt, the punishment meted out was severe.

6.1.3 Introduced diseases

First contact also brought new diseases to which the people had little resistance. The Neu Guinea Compagnie's report for 1894-1895 mentioned, "A particularly severe misfortune which struck Kaiser Wilhelmsland when smallpox broke out in Stephansort in June last year [1894] having been brought in by a Malay stoker who arrived on board the Steamer *Lubeck*. The disease attacked the Melanesians with great severity" (Sack and Clark, 1979: 110). However, by the following year, it had subsided.

Haddon and Hornell saw this epidemic as having a severe impact on the culture of the north-eastern of New Guinea. "The principal cause of the neglect of canoe making and sailing was the smallpox scourge which decimated and in some places wiped out villages. The old men, who possessed the art of canoe making and sailing, succumbed leaving a few children who were too young to be instructed" (1975 11: 54). For the Bilbil people, at least, this was not the principal cause of the demise of the canoes. At no stage did any of the informants claim that their forefathers had died of this disease - Tagari, Sui, Kain, Mul, Awak were all still living in the early 1900s and still actively involved in canoe building and trading. There was no other epidemic as big as this in the 1890s, so Haddon and Hornell must have been referring to this one.

6.1.4 Economic and Political changes in the 1890s

When an economic situation becomes important enough, it often becomes a political issue. In 1885, the Neu Guinea Compagnie was granted a charter under which it was to "exercise rights of sovereignty for an indefinite length of time" (Encyclopaedia of Papua New Guinea Vol I: 486). Within four years, the German Imperial Administration took over the colony from the Compagnie and set up new headquarters at Herbetsohe (Rabaul). J. A. Moses quotes Bernard Dernburg, Secretary of State for Colonies:

[We need] an understanding of the purpose of colonisation. These purposes are material and mercantilist. They must be achieved with that distinction which is the criterion of a merchant who is equal to his economic and cultural tasks, and not for nothing in his return but rather

Figure 150. House on Kranket Island in the 1890s. (Biro, 1901: 22. By courtesy of the State Library of Queensland).





Figure 151. Young boys on Kranket Island in the 1890s. (Biro, 1901: Table i opp page 14. By courtesy of the State Library of Queensland).

there must be an exchange of goods and men for culture and civilization. These last two we must bring to the native inhabitants (Inglis, 1968: 53).

Dernburg, also wrote, “One of the most important things that a civilised people is in a position to impart is pleasure in work and gainful activity” (Moses, 1968: 51-54). What the new German rulers failed to comprehend was that the people had been gainfully employed with their trading, pottery, gardens and canoe building from which they had always gained much pleasure and esteem. It was very difficult to interest them in contract work as they were used to a basic subsistence economy.

The Germans were anxious to introduce their own culture and monetary system into their new protectorate. On 1 April 1902, all transactions in shell currency between the villages and officials were banned. In Madang, there was no shell currency as such but a system of barter of which the pots were the basis and this was affected by the new ordinance. In addition, with the introduction of tin plates, trade store pots and other items, the importance of the clay pots was diminished, leading to a reduction in the need for trading voyages. Despite this, the pots continued to be manufactured, albeit in reduced capacity, until modern times, as cooking utensils, bride price items and in transactions for food.

A discerning comment came from the Neu Guinea Compagnie’s medical officer, Dr. Otto Dempwolff:

The Papuan is a born agriculturalist made for plantation work, powerful and adapted by natural selection and inherited characteristics to the climate of New Guinea, peaceful and in a certain sense both industrious and keen. He works only for himself obeying only necessity. He does not have the idea that he could work in preparation for an uncertain future nor does he reflect that by working he could come to enjoy a comfortable life. By contact with white

men he is neither spoiled nor decimated (since the sale of spirits and weapons is legally prohibited); but the gulf between the two races is so great that the Papuan would not wish to imitate the European. Neither will he do anything for the European for the purpose of assisting in his agricultural labour, nor from any rationalised idealistic or materialistic motives but only from need, from habit, or from compulsion (Moses, 1968: 51).

Most German officials did not understand the villagers' attitude to wealth or the fact they did not amass wealth but traded on any surplus foodstuff or artefacts. As a result few villages were better off than others. Finsch described the village on Bilibil Island as being wealthier in decorations and lifestyle than their neighbours as a result of their monopoly over the pot trade but this was an exception (Mennis, 1996). They looked on their trade as barter and non-profit. Now they were confronted by the German culture with its Lutheran ideals of the value of work in itself and the view that man was born to work "by the sweat of his brow". Compare this with the *laissez faire* attitude of the village people who rested when it was hot, but worked when necessary in their gardens to provide enough food for themselves or for bartering. During the festival times, they were happy to dance and sing for days with little thought of the future.

In the new state of affairs, from the 1890's onwards, many village men were recruited to work on plantations. Their absence from village life was another reason for the weakening of the trading system. As early as 1891, a labour depot was opened at Friedrich Wilhelmshafen taking in "native labourers temporarily, until they are delivered to plantations or stations" (Sack and Clark, 1979: 80). Maia described how he was recruited in Bilbil to go to Rabaul in the 1920s and on his return was recruited by Ludwig Schmidt to go to the Highlands (Mennis, 1979: 23-39).

6.1.5 The Revolts of 1904 and 1912.

The 1904 Revolt.

The Bel people of Siar, Kranket, Bilia, Yabob and Bilbil, had their own political order with friends and allies over a wide area as well as their traditional enemies. They had clan leaders and more importantly, weather magicians, the *likon*, who decided the best times to harvest, to trade and to travel. The role of the *likon* was hereditary, passed on from father to son with the accompanying knowledge of ceremony, poems and power. During the time of the *meziab*, the leaders called large assemblies that were attended by villagers from a wide area. Traditional enemies travelled safely within the time of this general truce. At those meetings, decisions were made that affected hundreds of people through the trading system. There had been a time in the past when the Mindiri threatened the Yabob/Bilbil monopoly in the trade network, and there was a procedure in place to deal with such threats. The new German authorities were probably placed within that old order. Because the local village people vastly outnumbered the German community, members of the Bel group were summoned – the Siar, Kranket, Bilbil, Yabob and Riwo people and their allies to retaliate against this new enemy, the German Government.

Historian Rufus Pech mentioned a meeting was held around January 1904 "under cover of the initiation ceremonies being carried out with unprecedented fervour. It involved the four inner Bel villages and Bilbil" (1991: 145-146). Lawrence speaks of a "full council of conspirators" who met later on Bilibil Island with the Siars taking the lead. This may have been at a *meziab* meeting held in the *darem* (men's house) and was attended by the paramount clan leaders from the Bel group, Bogati and Bongu. Lawrence wrote "The natives of Siar and Graged Islands were to stealthily cross to the mainland and suddenly rush the police barracks and seize the rifles - when they had succeeded killing all the whites at Madang, the natives at Bogati and Bongu would do the same" (Sentinella, 1975: 333).

Hannemann (1944: 27) described the mood:

In "plenary council" the influential men of the four villages and representatives of the Bilbil seated themselves in a circle and in the presence of the ancestral spirits discussed their

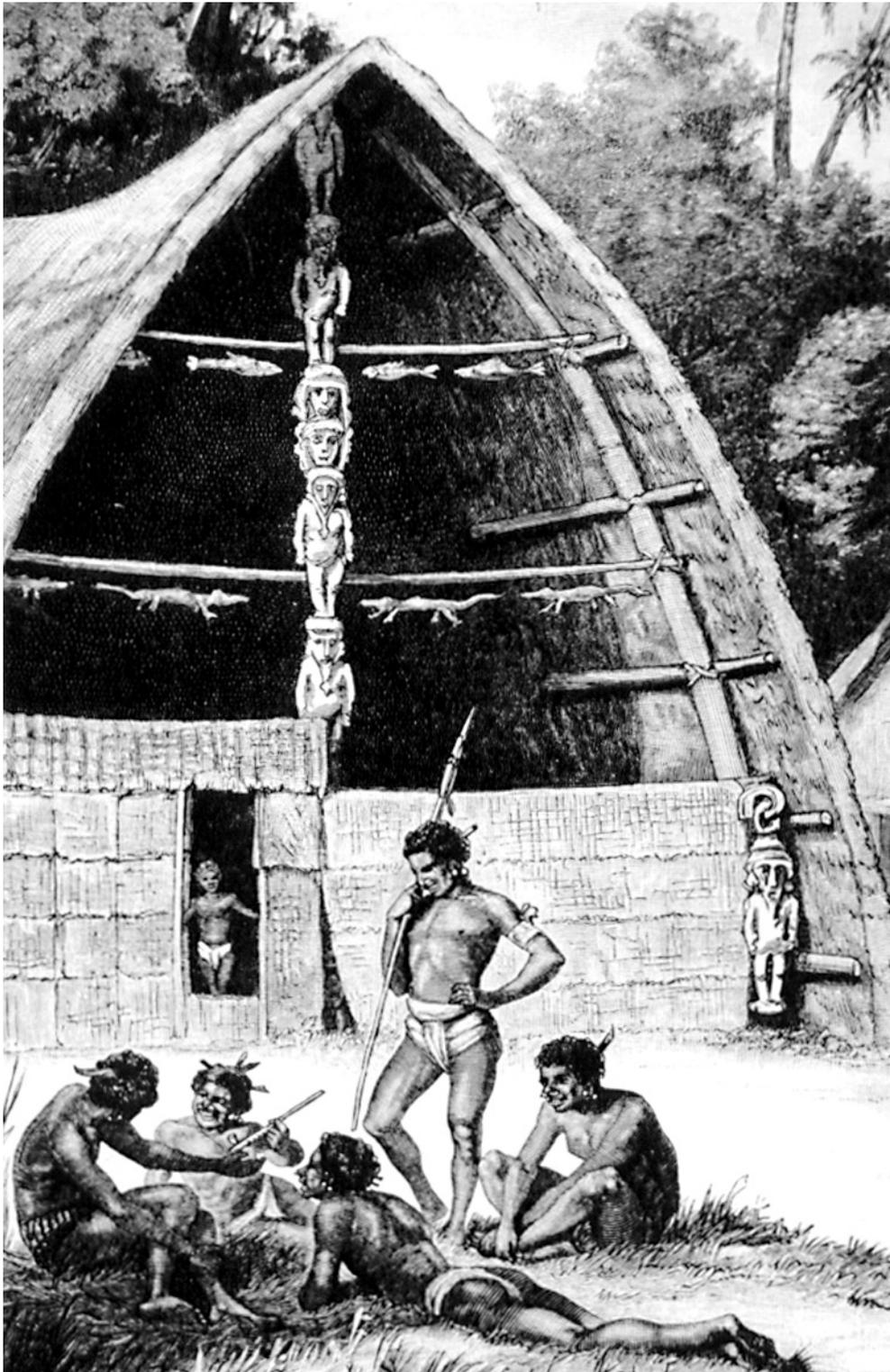


Figure 152. Men's house on Bilibil Island. (Finsch, 1888:75).

problems. Betelnuts were handed around. The loud tapping of the bone spatulas on the shell opening of the lime-calabashes expressed the determination of these men. A few were a bit hesitant. Yet they sanctioned what the rest said. The whites had come to stay and would demand things from the natives in increasing numbers. Now was the time to deal with the insistence, impatience and acquisitiveness of the whites regarding land and labour and their solicitude regarding socio-religious teachings. These whites (called *tibud* or spirits), no doubt were reincarnated spirits who had come to enrich themselves at the expense of the natives.

At the meeting in the men's house on Bilibil Island, they discussed many things and decided they wanted to revert to their old way of life, which was under threat including trading and canoe building. The Bel people were a proud and powerful people who did not answer to anyone and reacted to the increasing threats to their culture in the usual way with sorcery, subterfuge, and by summoning allies to attack the common enemy. Returning to the old ways would also mean returning to the days when they built large canoes and went on trading trips with their cargoes of pots; to a time when the Bel group were the 'patricians of the Bay' and known widely as famous mariners. This time in 1904, they did not have to invite the Germans to a feast before they killed them, as the Germans would have feasted the night on the goods and liquor provided by the German steamer which was due to leave Madang Harbour on 15 July 1904. With full bellies the German officials would not be prepared for the attack purposely timed for this day. Various reasons were given for the revolt: concern over loss of land, fear of losing more land and anger at being forced to work on filling swamps and laying roads in Madang. But, over and above all that, it is my opinion that the root cause was the loss of power felt by the Bel group that sparked the revolt.

For some reason, the Yabob and Bilbil people withdrew from further negotiations. They may have taken fright at what they had begun or the bad weather impeded them from travelling across the open sea to the Madang Harbour when wild winds would have buffeted their canoes.

Pall Tagari of Bilbil:

The (Krankets) sent the *buai* to every place. One lot went to Bilibil Island with the message, "Here you Bilbil men eat this *buai* and then get ready to fight the German *kiaps*". Dadau was *luluai* and Tagari was *tultul* at this time. Tagari was my papa. Dadau heard this talk and ate the *buai* but he did not go to fight. Bilbil was too far from town and the men did not want to fight. They heard the talk but didn't want to join in. They ate the *buai* but did not go to town. You see Bilibil Island was far from Kranket and the men would have to go in their big canoes.

Furthermore it was nearing the time of the *karag* wind when it was safest to stay at home.

The Siar, Kranket, Bilia and Riwo people had lost most land and labour because of their close proximity to the township of Madang and while they continued with the conspiracy against the Germans, the Bilbil men decided to remain neutral. Kasare said that the people revolted in 1904 because of all the hard work they had to do on the road from Madang to Yomba. The people were making a big road in Madang and the men got tired of the hard work. They used the *tok bokis*, language saying "let's cut the grass" but they meant "let's kill the government" - the secret language was used in the battle against the German Government (Mennis, 1981a: 68).

The Administration's Annual Report for 1904 - 1905:

The inhabitants of the islands of Siar, Rargetta and Bilbil attempted, in July 1904, to seize the Friedrich Wilhelmshafen Station and to kill all the Europeans. This attempt was foiled and the guilty parties were punished. The ferment of unrest in the various coastal districts of Kaiser Wilhelmsland, which have no contact with each other, was obviously due to the spread of plantations in the region of the Astrolabe Plain, Hansa Bay and on the coast of

Berlinhafen, either because the natives, not knowing the future boundaries of the plantations, began to fear for their own livelihood, or because they were led by greed to commit outrages or launch attacks (Sack and Clark, 1979: 251).

The phrase 'led by greed' referred to the people wanting their land back which the Germans had taken in the first place. Details of the punishment meted out to the ringleaders was given by Lutheran Minister, Frerichs:

July 16, 1904 was the day chosen by native men of the Madang area to massacre all white men living there: Government, Commercial, and Mission. The white women were to be taken as wives and Bergmann's son was to be spared. However, at a late hour a young lad, [Nalon], divulged to a Government Official what was about to take place. Swift action followed, and many arrests were made. Nine leaders were sentenced to death. Three later received clemency but the other six died before a firing squad (Frerichs, 1969).

In 1966, Rod Lacey interviewed Sabub and Labuk of Siar. This recorded interview was subsequently disputed as there was no common language (Hiery, 1993 II: 170). These two men spoke the Graged language which was translated into *Tok Pisin* and then into English by Paul Bloomfield a *kiap*. However the substance of the interview was recorded:

Siar, Riwo, Graged [Kranket] and Bilia – men from these villages had to do forced labour for the buildings of Madang. They were involved in draining the marsh, shore clearing and bridge and road building. These villages began to deteriorate because of forced labour. The result was resentment. The Graged people planned together to provoke these villages to insurrection. Ul, from Graged, took a rope of beletnut to Siar, assembled the older villagers and planned the assassination of all Europeans.[in the town]. A magical spell was cast on the *buai* (betelnut) to give them strength and courage and a meeting was held in secret about what and how to do things. They all went by canoe in the morning to Madang, to the part near the centre where the Harbour Master's place is now. Fighters were left on the land and the canoes sped offshore. The Bilia people did not join them except for Nalon. Nalon betrayed the plot to the District Medical Officer, Dr Hoffman. The police authorities were informed and they marched on the conspirators who fled in their canoes. — [Initially] the Siar people escaped unscathed – they believed they were immortal. [However] the Siar people were held responsible for the whole plot. Therefore the Germans came here [to Siar] first. They came in a whale-boat with a police officer and native policeman from Rabaul and Finschhafen. Nalon had given a list of the conspirators' names to the Germans. All of them were brought to Madang under the false impression that there would be no retribution against them. Some of them were imprisoned in Madang and some were returned to Siar Island. The prisoners were later sent to Rabaul. Those who were returned to Siar were marked for execution. They were blind-folded, all chained and handcuffed together, with the leader fastened to a house post and then each shot individually. Seven men were shot representing each lineage group (Lacey, 1973: 20 to 24).

This interview is very much from the Siar Island perspective and does not incriminate the Yabob or Bilbil people at all. However evidence from other sources and even German sources accused the Bilbil as the instigators of the revolt. These events of 1904 remained vivid in the minds of the Madang people even in the 1970s when a few of the oldest men - Siang of Siar, Kasare of Yabob and Los of Kranket had been alive at the time of the revolt. Although they were too young to remember first hand, they received graphic accounts as soon as they were old enough to comprehend. Bille of Kranket said, "the cause of the trouble was that the Krankets, Siars, Biliars were all working on the big Meiro road and it was hard work. They had to begin at five o'clock in the morning. The Germans were very strict and often whipped them with the *kunda*. The Kranket, Bilia and others were tired of this work and decided to get rid of the

kiaps and the Government. They reasoned that if they got rid of the Government they would go back to their old way of life and *stap gud*. However someone reported this to the Government and the police were ready for them” (Mennis, 1980b 91).

Who was this man who betrayed his people to the German Government and what were his reasons? His name was Nalon and he was from Bilia village. His son, Siang Nalon, gave me the following account of why his father did it. “All the men had to work filling up the swampy holes with stones. Madang was very swampy. The villagers all had to work and they got tired and wanted to kill the Government. My father, Nalon, heard about this. He was worried because he knew there would be recriminations against them and many people would be killed because they had no strong power. Only the Germans had the strength. So my father went to the *kiap* and told him” (Mennis, 1980b: 55). Nalon must have been farsighted enough to realise the Madang people could never take on the might of the German people. Because he betrayed the plot, widespread bloodshed was averted amongst the German settlers and the Madang village people even though the ringleaders were severely punished.

There were many other reasons for the revolt. It could be seen as a chance of payback between villages where there were simmering tensions. For example there had been a long standing feud between the Siar and Kranket over land and the latter were hoping to incriminate the Siar in the eyes of the German Government (Mennis, 1980b: 101). Early in 1904, a Kranket woman planted *morata* (sago palm trees) on disputed land and the Siar chopped them down. Her husband was a policeman for the Germans and he reported the incident. Hostility flared up again between the Siar and Kranket. The Kranket people saw this as one of the main causes of the trouble but the Siar informants did not mention it.

Gabud and Madaig of Kranket relate what happened next:

The Kranket got the *buai*, and made magic over it and then sent it to Siar. The Siar ate the *buai* and became angry with the German Government. The Siars went in canoes to the mainland where the Madang Club is now and the [German] office used to be. They were armed with bows and arrows. Nalon heard about this trouble and reported it to the German Government. The policemen came with their cutlasses and saw the Siar in their canoes and shot over their heads. This trouble did not just start as a rebellion against the Government, no; there was something deeper than that between the Siar and the Kranket.

The Kranket were exonerated even though they accompanied the Siar to Madang because some of them had protected their Lutheran Pastor when he was endangered on their island.

Another problem was the lack of communication between the German officials and the local people. The Germans did not understand the language or the culture of the people and vice versa. Lajos Biro, a Hungarian ethnographer and art-collector, lived in the Madang area for a few years, during the 1890s. He was so reliant on his local word list when visiting Kranket Island, that the people said that his mind was ‘wrapped in paper.’ Looking back from the 1970s, Los of Kranket commented, “The people didn’t understand the German Government’s way. They had to work all the time on the road. Work all day and then return at night. Before they didn’t work like this, they only worked in the old fashion. They wanted to go back to the old ways. They decided to kill the Government. If the Government got cross and killed them all, then that would be the end” (Mennis, 1980b: 113-4).

Pall said:

The Germans had already been warned about the uprising, but it was not until the last minute when the Kranket and Siar were already approaching Madang that they listened to the warning from Nalon, a Bilia man. Nalon said to the German Officer, “Are you just sitting there? The canoes of the Kranket and Siar are already here and they have come to shoot you now”. So the *kiap* was startled and rushed off to get the cartridges in the arms house near the wharf.

The police officers armed themselves too and went down to the wharf. They fired over the heads of the Siar and Kranket who all turned and fled in their canoes. Only one man was killed. His name was Tian of Mis. He was my *tumbuna* and lived at Kranket. He was fishing at Gauten at the time and was shot. My father told me this when I was little”.

After the insurrection, the Bilbils were blamed by the German officials as being the instigators of the plot and the Bilbil people showed their guilt when they fled in their *lalong* and *palangut* canoes to the Rai Coast. They cut the outriggers off the canoes and hid them in the pitpit and bamboo.

S. Firth said, (1982: 83):

The Bilbil had fled to the Rai Coast, where they made the most of their traditional trading contacts. Every year canoes laden with the pots which they specialized in making visited the coast to the south-east; now again they loaded their canoes with pottery and on reaching the village of Singor, held a feast, inviting the hill peoples to select earthenware vessels and assist against the police. The strategy worked. Frustrated by days of fruitless searching on an expedition in October 1904, the police sergeant Beyer promised a reward for every Bilbil.

Pall recalls:

The Bilbil women continued to make the pots at Rimba from the clay called *mund* near the Malun inlet. The German officers tried to find where the Bilbils were hiding. They asked many people at Rimba,

“Have you seen the Bilbil people?”

But the Rimba said, “No! Where would we hide them?”

The German officers got mad and then they put a rope around the neck of Abinon, the big man of Rimba. He was pulled along the beach by the neck as if he were a dead pig. After they had pulled him like this they stopped and said, “Maybe you will tell us now, where the Bilbil men are hiding. We think you are hiding them”.

Abinon said, “No, I don’t know where the Bilbil are.”

The German officers were very cross and pulled Abinon again but he was strong and said, “The Bilbil? - I don’t know where they are”. The Germans kept torturing him with the rope until he nearly died. He said he had heard that the Bilbil had run away but he did not know where. All this time the Bilbil were with his people hiding in the bush (Mennis, 1981b: 47-48).

In the 1970s, Male of Siar Island remembered: “I, Male, was twelve or so when I went to the Rai Coast after the Siar Revolt. I remember planting coconuts there. We stayed at Mindiri at first but later we built another village in the bush behind Mindiri. If the Germans came in their pinnace we would run into the bush. The missionaries used to visit us and they built a church there.” So the friendship between the Siar and the Mindiri people was ongoing (Mennis, 1980a: 36).

Effects of the 1904 Revolt

The 1904 Revolt and its aftermath had a devastating effect on the trade and canoe building in the whole of the Madang and Rai Coast area. There was complete halt to canoe construction and trading while the Bilbil were hiding in the Rimba bush. Pall mentioned they dismantled the superstructure of the canoes and hid them in the bush. The women were still able to make pots, but these could not have been traded far, and were probably just for their own use. This break in the traditional pattern of sailing and trading must have been quite devastating to the Madang and Rai Coast area. Here the people depended on the pots for trade, for bride price and for the inland trade. Furthermore when the Bilbil returned they were no

longer allowed to live on their island but were forced to live on the mainland where the German Officials could keep a close watch on them.

According to the Annual Report for 1906 – 1907 the “Bilbil people have retained the coastal strip allotted to them as their new home, on the mainland opposite the island which they inhabited before the uprising. It has not yet been possible to complete the allocation of reservations to the natives who revolted in the year 1904” (Sack and Clark 1979: 265). This official German announcement of banishment from their island is contrary to the accounts given by the informants who regarded this as the people’s idea and not punishment inflicted by the German Officials. Kasare of Yabob, formerly of Bilbil, said: “We didn’t go back to the island. My father said it was too hard to paddle back and forth to the island. They said, “No, let’s go and live on the mainland” (Mennis, 1981a: 34). The German reports are also at variance with some of the oral accounts concerning the involvement of the Bilbil in the 1904 revolt: “The authorities have succeeded in making peace with the Bilbil people who were chiefly involved in the uprising” (Sack and Clark, 1979: 257).

The 1912 Revolt

P. Hemptenstall:

Cowed by this reversal, [of 1904] the people resorted to passive resistance in the following years, until 1912, when their agitation at the accelerating growth of European settlement and land cultivation prompted discussion of a new campaign against the whites. Whether the project ever got any further than discussion is still a matter of debate, for it was at this stage that the movement was again betrayed. The German administration arrested a number of the alleged ringleaders and, urged on by the white community, banished the remaining Madang groups from the vicinity (1975: 46-64).

After the first uprising, the Germans were suspicious of any actions that might lead to further trouble. As a precaution, they established relationships with trusted village leaders including Tagari, of Bilbil Village, who had been taken overseas to Europe and Africa and was aware of the strength of the German people. Tagari was no fool. By befriending the Germans, he knew he could make his own position stronger in the village scene and that he would be listened to by both villagers and the German officials and settle personal scores resulting from his time in Africa.

From the Bilbil perspective it appears that the second uprising was a non-event and was caused by the German policy of recruiting village men as local auxiliaries to assist in the policing of German East Africa, (now Tanzania). Proof that they went is found in Dempwolff’s life story. He was in Africa in July 1905, where 150 recruits from German New Guinea were working for the Germans to help quell a local revolt. Dempwolff was pleased to find some Bilbil men among them with whom he could converse (Pech, 1991: 149). Most of the recruits were so weak and sick from the long sea trip that Dempwolff considered only half of them strong enough to fight (Baumann, 2009: 95 to 96). By May 1906, these recruits returned home to New Guinea apart from Tagari who was taken on a visit to Europe. The men returned to village life but it was never quite the same again. They had had a taste of the outside world and observed many different people and customs. On their return, some found that their wives had been unfaithful in their long absence thinking they would never return home. Some had even remarried. If bride payments had not been finalised before the men left for Africa, the wives considered themselves at liberty to remarry. Among them was Minai, Tagari’s first wife. A second marriage had been arranged with a Siar man and the bride price paid. Since this marriage had been organised by Minai’s brother, Tagog, there was some bitterness between Tagari and Tagog.

Gab of Bilbil said: “Some of the big men went to Africa as policemen and, when they came back, there was trouble over women. Minai was Tagari’s first wife. He had not finished paying the bride price and her brother Tagog found her another husband for her. There was big trouble over this. Tagari told the

Germans, “We have three bigheads here at Bilbil - Tagog, Nusimai and Kangu”. The kiap said, “Bring them here”. So Tagog, Nusimai and Kangu were rounded up. Tagog’s wife went with them. There was trouble on Kranket over a woman and some of Siming’s line went to Rabaul too” (Mennis, 1981b: 4).

Sack stated the official German view:

At the time of the alleged uprising in Madang in 1912, Hahl was almost at the scene. *Tutul* Tagari of Bilbili informed District Commissioner Scholz of the plot on 23 August, and Scholz had just begun to arrest the ringleaders named by Tagari when Hahl passed through on the Lloyd steamer *Coblenz* on 24 the August, taking the first prisoners with him to Rabaul. On 25 August Scholz continued his investigations. When Nalon from Beliao [Bilia], who had betrayed the 1904 conspiracy, corroborated Tagari’s evidence, Scholz called an emergency meeting of the District (Advisory) Council to discuss what measures should be taken (1973: 111).

This is interesting; Tagari’s son was my good friend, Pall Tagari, of Bilbil Village. He was my guide and informant during most of the 1970s. Pall said his father knew Nalon, the man who had reported the 1904 revolt. Nalon was ready to report further trouble to the government in 1912 because he thought the Siar and Kranket were making trouble over women.

Pall Tagari tells the following:

When Tagari, my father, heard about the problems the second time, he was worried that the trouble might come up again [like the first revolt] so he went to the government with names of troublemakers in Bilbil Village. The government came and banished these men to the Bainings area of New Britain. The Murpatt Clan had a big *darem* (men’s house) on the island and the government came and put all the people in this place. My father told me this. My mother was not there. She was working in Megiar in the gardens. She was expecting me then. The men and women were herded together and the pigs were all shot, then the government official called out the names of those who had to go to Rabaul: Tagog, Nusimai and Tangu, who were all Murpatt Clan men and their wives.

Years later, Tagari admitted to his son, Pall, that the gist of the trouble in 1912 was over women and that he, himself, was involved. He became caught up in a domestic crisis because he had not finished paying the bride price for Minai. Her brother, Tagog, had arranged a new marriage. Subsequently Tagari married Sebulas, a woman from Mis Village, who was Pall’s mother. This talk was still around when the second trouble started. Tagari went to the *kiap* and told him that the Murpatt clan men, Tagog and the others, were *bigheads*. His accusations were taken very seriously particularly by Judge Hahl who picked Tagog and members of his clan up on his official launch and took them back to Rabaul to face court. The Germans came down heavily and banished Tagog and others of his clan to the Bainings in New Britain. There is no indication they were involved in any second uprising against the Germans. In reality, it appears that Tagari used his high standing with the Germans for his own benefit.

Kasare of Yabob mentioned another man called Nusimai of Bilbil, who was also causing trouble over a woman called Landau. Initially she was Kankan’s wife and then Samlang bought her and later she was living with Bainluluai. So they took Bainluluai prisoner with Tagog to the Bainings with the Siar and Kranket men. Kasare said, “Tagari deceived the Germans with his talk”. The second time it happened, it was just false rumours, but the officials banished some of the men (Mennis, 1980a: 50). It was called the Second Revolt against the German Government but in reality it was caused by the trouble over the women. Similar domestic problems had been noted in Kranket and Bilia caused by the absence of the men in Africa.

Meanwhile, the men banished to New Britain told the German government that they had been wrongly accused and the S.M.S. *Condor* returned them to Madang for trial. Scholz called a meeting of the District Council to which two officers of the S.M.S. *Condor* were invited. The meeting concluded “it has been proved beyond any reasonable doubt that a widespread conspiracy had existed which aimed at murdering the whole white population”. At first, there was a delay since it was thought that none of the relevant laws covered the situation adequately but about July 1914 moves were made to confiscate the land of the guilty villages but World War I intervened (Sack, 1973: 111-2).

There may have been other reasons for the wide-scale arrests and banishment in 1912. According to Pech, there was growing uneasiness felt by the people in 1911 when the Germans began to make inroads into the Gum/Gogol land originally purchased illegally by Kubary and others in the previous century. With this new move to drive them off their ancestral lands, the mounting level of Melanesian frustration in the coastal areas of Madang again reaching boiling point. “The new round of initiation ceremonies was celebrated with greater vehemence and fervour. Under cover of these the call to arms from their Bel allies, armed warriors from as far afield as Karkar and Sarang were moving down the North coast and deploying themselves in the Rempi-Seg area” (Pech, 1991: 151).

But this may be based on conjecture after the event. Further action against the Germans could have been on the minds of many of the people who were now aware of their might. The gist of the trouble was over women and Tagari, for one, took this opportunity to accuse his opponents to the Germans saying they were plotting against the government. Kasare of Yabob, who was only young at the time, was working in town for a *masta* as a servant. His people were not affected the second time when these false rumours (*giamon tok*) happened as they were working on a road with a surveyor, a Mr Bayer.

Speaking of the 1912 time, Kasare of Yabob said was just *giaman tok* (empty talk). According to Kasare, the men were helping a German man called Bayer with clearing of the Bilbil road when the police arrived to arrest them. Bayer said, “They were only bringing my cargo up. I was with the men making a road” (Mennis, 1981a: 49-50). As a result the Bilbils were not re-settled the second time. However, some of the bigmen of Bilbil were imprisoned after Tagari implicated them in the second Revolt.

Kasare:

Mr Bayer was a good German *masta* and was in charge of making roads (a surveyor) and he vouched for his men. At that time, he was making the road to Bilbil, which we travel on today. They had to cut out the stumps of the trees. In the books, it tells lies about us and says we went with the Siar and Kranket. We did not go. I am angry about this. Only the *lapun* were rounded up and sent to the Bainings. Our *luluai*, Sangui, was jailed. Three men from Yabob - Beg, Nanto, Sangui were sent to the Bainings. The Germans said it was partly Sangui's fault and they sent him to jail. When he came back, Sungai was not *luluai* any more (Interview, 5 January, 1979).

The Administration's annual report described the 1912 revolt as being similar to the 1904 Revolt. The case was re-opened and it was concluded that a wide spread conspiracy had existed and the ringleaders had been banished for life and the land confiscated and taken over by plantation owners. The false rumours became believed as the true state of affairs. This is verified by the annual report for 1912 - 1913: “In August 1912 a conspiracy was formed among the villages in the vicinity of Friedrich Wilhelmshafen. The villages taking part - Siar, Rargetta, Panutibun, Beliao and Jabob (Yabob) were resettled on the Rai Coast and in Megiar near Cape Croisilles and their land near Friedrich Wilhelmshafen was confiscated” (Sack and Clark 1979: 354).

In recent years Hermann Hiery suggested that the 1904 Revolt was just a figment of imagination. He warned that “historians need to be extremely careful with what has been presented as so-called oral,

meaning unquestionable, indigenous evidence” (Hiery, 1993: 170). Perhaps an argument for Hiery’s case would be the fact that Nalon of Bilia betrayed his people in both revolts. Did he have an ulterior motive? Certainly he did in 1912; he was aided by his friend Tagari. Hiery spoke of the local people taking advantage of their position “to gain personal advantage.” This was certainly the case with Tagari, although Hiery was actually referring to interpreters used in 1966 by Rod Lacey concerning the 1904 revolt. Hiery argued that as there were two lots of interpreters one from the Graged language to *Tok Pisin* and then another translating this language into English, the potential for errors and misinterpretation was there. [The many interviews I made on this subject were in *Tok Pisin* and I was intent in getting the views of as many sides as possible].

Hiery asserts that Bilbil men were part of the armed villagers that went to Madang on 16 July 1904. However the Bilbil men I interviewed said their forefathers pulled out of the conspiracy as they would have to travel to Madang in their large canoes which would have been too obvious. Hiery also stated that there was, “surprisingly little information on the key issue itself, the alleged plot”. My research shows that there had been a plot and that the Bel people were quite adept in planning attacks on their enemies when necessary. Overall the Revolt of 1904 was well planned but that of 1912 was probably a chimera.

As early as the 1890s, the German Government encouraged villagers to establish their own small plantations and sell the coconuts to help pay for the head tax. This was seen as drawing them into the moneyed economy. Some men worked on the newly established German plantations and, when they finished their contracts, returned home with money in their pockets and purchased clothing and other goods at the German stores.

While the men were absent, there was a labour shortage in the villages, and this had a substantial effect on the material culture. It meant there were fewer men to build canoes or trade the pots. Furthermore, with the growing moneyed economy, the pots were no longer seen as the only form of currency or the only cooking utensil. Although pots were still a favoured trade item needed for cooking in some areas and as a part of bride price, more and more people used the trade-store saucepans, which lasted longer. As a result, the Bel men were no longer the powerful traders they had once been and the hitherto indispensable cooking pots: previously the only cooking container available, were now under threat.

The effect of the 1912 disturbance was even more devastating than the 1904. The villagers returned to find their villages destroyed and their forests cut down. Those who were most affected were those closest to Madang - Siar, Bilia and Kranket. Bashan said that those who lived in the Madang harbour lost the art of canoe building after 1912.

Bashan of Bilia Island:

These customs (of making canoes) stopped. We lived on the Rai Coast. We didn’t have the means to make our canoes down there. When we returned we didn’t have canoes anymore - they had rotted on the beach (at Bilia). We of Bilia cried. We had lost our island. We came to live here inside the passage. We no longer had the trees near our village (to make canoes). It was hard work to go into the bush and pull the logs down. We only cut down small trees to make small canoes. We never made the *lalong* or *palangut* again. This art was finished at this time. We who live inside the harbour lost this art - the Krankets, Siars and Biliars (Mennis, 1980b: 69).

Land losses brought hardship for some people who had to travel a lot further to access what little forest they had left. This was a burden on the people who had to carry heavy loads long distances. On the positive side, the German roads helped the people to access more distant places now pacified and markets for food and earthenware pots opened in the interior and further along the coast when they were permitted to sail their canoes again. But, in some cases, this did not happen until the Germans lost their colony in 1914.

The Yabob and Bilbil did however continue building both the *lalong* and *palangut* canoes for another twenty-five years until after the 1935 trading trip. (See 6.2). The fact that people in the Madang harbour made fewer large canoes after 1914 was for many reasons:

1. Economic - the people's land had been cleared and a new economy introduced;
2. Political - the traditional leadership of the big men was undermined by the new order and the *meziab* outlawed;
3. Social - the lives of the people were disrupted by banishment to the Rai Coast;
4. Technical - new types of boats were introduced. Nevertheless, essentially it was the introduction of new religious beliefs that changed the people's outlook on their culture; and
5. Religious - they joined the Lutheran Church which banned the rituals associated with canoe building.

Since the Bilbils were not banished to the Rai Coast in 1912 when the Yabob, Krankets and others were, this is one reason why their canoe making and sailing outlasted those of the harbour people. There was no abrupt halt to their traditional customs for these three years.

6.1.6 Mission influence

This is a very controversial topic particularly in the Madang area where cargo cult thinking was very strong. The Lutheran Mission established the first station in the Madang area at Bogadjim in 1887. It states in the German New Guinea Annual Report for 1886 -1887 that the mission became established "only after secular activity and political occupation" (Sack and Clark 1979: 12). As we have seen, the German Neu Guinea Compagnie was well established by the 1890s and many hundreds of hectares of land had been cleared, which had an effect on the canoe building and trading. Then, in 1904, the people revolted: their land was confiscated; the people fled to the Rai Coast; and ceased canoe building and trading. There was more trouble in 1912, but most informants believe that this was a trumped up case (Mennis, 1981a: 49). Be that as it may, the German Government reacted swiftly and the people of Bilia, Siar, Kranket and Yabob were banished to the Rai Coast and their land was confiscated in their absence.

All of this had a big effect on the culture of the people and it all happened before the mission influence had spread very far. Biskup, Jinks and Nelson write that, "The missionaries have been accused of destroying too much of village life yet the majority were aware of the need to replace old beliefs and customs rather than just ban them" (Biskup et al, 1968:40). It is then unfair to blame the mission in the Madang area, alone, for destroying the culture of the people, for, by the time their influence spread, much of the damage had already started. However it is safe to say that the final blow to the magical rites and sacred artefacts was made by the Lutheran Missionaries whose policy was that all the paraphernalia for magic should be burnt before baptism. Within the Madang Harbour, this happened in the years after 1914, when they returned from banishment and adopted Christianity *en masse*. It seems that this religious fervour was for the wrong reason - the people feared that they would be banished again if they did not become Christians (Mennis, 1980b: 45).

The two Siar men interviewed by Rod Lacey blamed the Lutheran Mission for their exile after 1912:

The Siar people were still unwilling to accept one supreme God. — This refusal to accept Christianity led to further disagreement between the Siar people and the Germans. The mission contacted the German government. It suggested that the Siar people be exiled. Following mission suggestions, the government, together with the company's commercial interests, planned the alienation of the Siar lands. (Lacey, 1973: 20 - 24).

The people had to leave their livestock and houses behind and were put on board the Madang, a steam boat and taken to the Rai Coast where they stayed with their old friends, the Mindiri. All the Siar canoes were tied together and towed into Madang, perhaps so the people could not sail away. Later, when the villagers had been moved, the two informants took the canoes back to Siar Island, and were left in charge of the village (Lacey, 1973). Again this was very much from the Siar point of view. Testimonies from different villages need to be analysed from different perspectives.

As Los of Kranket said:

At first the mission was at Siar and then they left Siar and came to Kranket. The missionary stayed here and worked and worked, but the people did not like the missionary and no one would listen. Then God got cross and the trouble came up and, in 1904, the people were banished from the villages for three years. God didn't like the people when they refused to listen to the missionaries. The Kranket, Siar, Bilia and Yabob were all sent to the Rai Coast. After this, they began to listen to the missionaries and became Christians. Later on [in 1912] they were sent again to the Rai Coast and the English came and said they could go back to their villages. Then they changed their attitudes to the mission (Mennis, 1980b: 114).

The Mission and Cargo Cult Beliefs

While they were on the Rai Coast, the people began to rethink their position and decided that they must listen to the missionaries' message. Sungai of Siar puts it from the people's point of view: "If the mission had not come we would know this this magic. The *tambarans* and other things that were no good were all destroyed in the big fire. The men were afraid of the time they were banished to the Rai Coast and said, 'If we disobey the mission, they will banish us again to the Rai Coast, so they threw everything out'" (Mennis, 1980b: 45).

Peter Lawrence said, "When the exiles were allowed home in 1914 they adopted Christianity *en masse* and became the first Lutheran Congregation in the southern Madang District" (Lawrence 1964: 53). With their limited knowledge of Christianity, "they assumed that Christianity, by explaining and validating the new way of life, would automatically explain and grant control over the essential ingredient - the Cargo" (Lawrence, 1964: 74). So inadvertently the missions had a profound influence on the beliefs of the people and their desire for the cargo (Lawrence, 1964: 80). The people believed that to get rid of Satan, all the customs of which the missionaries and God disapproved - polygamy, sorcery, the ceremonies honouring the spirits of the dead, initiation, dancing, love magic, agricultural ceremonies - had to be eradicated as they blocked the road of the cargo (*Tok Pisin, passim rot belong kako*). Only when they had disappeared entirely, would God feel obliged to honour his covenant with the people (Lawrence, 1964: 80).

Thus the Lutheran Mission inadvertently had an influence on the culture particularly in regard to the trading and canoe building. However many people had a different view of Christianity than the missionaries. The people expected Christianity to produce material results and confused it with cargo cult thinking. Consequently they were anxious to do away with the *masalai*, magic and ritual and most of their culture in order to obtain the cargo. Pall explained that the cargo cultists accused the missionaries of hiding things from them - the way to get money or the cargo. Even some men who had become Christians said this (Mennis, 1981b: 61).

The Lutheran Mission's attitude is evident in the Rev. Flierl's writing:

Must I enlarge on the fairy tale about the happy primitive native, whose happiness missionaries should not be permitted to destroy by the introduction of Christianity? True, the native appears happy and jovial before the white man whose acquaintance he has made. He delights in bedecking his body with flowers, feathers and paint; he will sing and dance for nights on end, he will chant sad songs of despair or in preference sing songs of victory. Only he who

has spent long years among the tribes of New Guinea, who has evinced a loving interest in acquiring a knowledge of their language, is able to penetrate the depth of the soul of these poor people. It is necessary to appreciate their heathen customs, to know of their ghost lore and fear of ghosts, their witchcraft, ascribing every death to be due to some sorcerer, resulting in everlasting blood feuds. The never-ending murders one village over against the neighbouring village are evidence thereof (Flierl, 1937: 7).

It was true that there was a dark side to the culture of the people which the missionaries tried to eliminate; the only trouble was that many of the harmless customs were also destroyed as they depended on the people's belief in magic, *masalai*, and the *meziab*. In the 1904-1905 annual report of German New Guinea, the Rheinische Mission stated that, "the most important obstacle to be combated is the so-called secret cult... called *meziab* in Siar - Rargetta. This secret cult in conjunction with magic and belief in ghosts, holds the people in its vice". The *meziab* cult was practised in the *haus tambaran* which was the centre of the culture. It was there that the boys were initiated; the weapons were stored and sacred instruments were played. In the *haus tambaran*, the men celebrated the homecoming from a trading trip on a canoe and planned their next trading trip. *Meziab* dances in the *haus tambaran* or *darem* might last weeks and "expressed the solidarity of the society composed of the spirits of the dead and those of the living" (Mager, 1952: 199). The *meziab* was present in all the coastal villages of the Austronesian speaking people near Madang, Riwo, Siar, Kranket, Bilia, Yabob and Bilbil.

Los of Kranket had this to say about the *meziab*:

When the men wanted to have a *singsing*, they would start up the *meziab* and have a big *singsing*. *Meziab* was a good thing for the heathens. If the men wanted to celebrate the opening of a *hausboi* they would get the *tambaran* which were the *meziab* for the *singsing*. They would kill a pig and have a feast. The mission did not like this *tambaran* (*meziab*). The women were not allowed to look at them (i.e. magic flutes and other sacred things), but the missionary Mr. Helmut said, "The women should be able to look at the *tambaran*" (Mennis, 1980b: 114).

Gabud and Madaig of Kranket expounded on what exactly the *meziab* was: "Everything that the men blew on inside the *hausboi* was called *meziab* - the *mambu* (bamboo flutes) and the *kambung* (large flutes) from the Rai Coast. These would shake when they were blown on. It was *tambu* for the children to see them. If the women or children viewed them in the old days their whole village would be wiped out" (Mennis, 1980b: 105). The following incident exemplifies the dire consequences that followed when a woman flouted this taboo. Ber Nanci of Yabob told the story of Sibor Village and of a woman in the village who defied the exclusion of women from the men's house. She entered it disguised as a man to get a firestick. When she was discovered, the men of Sibor sent messages to Yabob and Bilbil to come and destroy their village and kill everyone because the secret of the *tambaran* had been disclosed. The village was duly wiped out. Ber pointed out where their bones were all buried. There were strict laws about the men's house and the women knew they would be killed if they entered it. Yet even in those days, there were strong-minded women who were ready to defy the restrictions laid on them by the men.

In the Madang area, Father Aufinger, a Catholic priest of the Divine Word Mission, was fascinated by the local customs of the people and tried to encourage the Yabob people to keep them. Ber noted however that the people had been influenced too much by the other mission (Lutheran) and wanted to give them up. Father Aufinger then told Ber that, "if you insist, we will send the things to Rome and later they might get sent back" (Ber, pers. comm.) when asked what sort of customs and artefacts were given up Ber replied, "Things for making the gardens grow well, for *singsings*, for fishing and for giving the canoes power. All those things were given to the Father or burnt - all the good things were *raused* along with the things that were no good". This comment of Ber's is interesting as it shows he is aware that some of his customs could have survived in conjunction with Christianity. On Manam Island, the Catholic Mission

to this day allows the people to retain their *hausboi* and sacred flutes when they become Christians. They are preserved as symbols of the old culture, and many of the old customs are retained (Nancy Lutkehaus, pers. comm.).

On the other hand, Los remembers the fires that were held before the people became baptised into the Lutheran Church in Madang: "In 1914, Mr. Wullenkord was here and many people were baptised. Then they gathered all the heathen things together and burnt them. This happened three times when the three clans were instructed and became Christians. I saw these things when I was little and I heard the stories from my father" (Mennis, 1980b: 108). Nor is Los the only informant to mention these fires before baptism. An old missionary's wife, Mrs. Braun, told me how she had attended one of these fires and noticed the tense atmosphere when the people threw all their heathen things on the fire (pers. comm.). Bashan was a teacher for the Lutheran Church most of his life and he described the fire that was held in Bilia village. He was not necessarily being critical of the Mission but was merely stating facts: "They banned all the magic. They had a big fire and burnt all the things for making magic. They had big meeting and burnt everything. The Kranket and Siar came here to see it" (Mennis, 1980b: 71).

Kaltem had a similar story about the fires held at Galilo Village:

Mr. Welsch and Mr. Wullenkord were the Missionaries. All the people who wanted to hear the Christian message went to Amele and later were baptised. The Missionaries said that the magic for making gardens or for bringing the fish was Satan's works and all the materials for this magic should go into the fire. We did this for God and Welsch (Mennis 1981b: 79).

Men who lost interest in the Mission felt disillusioned. They commented that now they *stap nating*. To them a void remains with few customs remaining and no Christianity. Many of the village leaders were cargo cultists and when it was left to them to decide what went on the fires they wanted to destroy everything so the cargo would appear. Is the Mission being blamed unfairly?

Pall was a catechist with the Lutheran Church and tried to have a balanced view of what happened. He did not deny that the fires took place, but that the missionaries only did it in the interests of the people.

The mission came in 1886. They saw all the secret things in the *haus boi* and learnt there was big *tambu* on the women going inside this men's house and seeing the flutes and wooden statues. If they did the men would kill them. The mission heard that the men appealed to wooden statues to give them strength before they went out to fight but told the men that this was *giaman tok* (nonsense) and they should not pray to wooden men as they only had wooden mouths and could not answer them.

Pall saw a wooden statue in the *hausboi* when he was young and the men told him it was the strength of the place. While it was there everything would be all right. The people would not get sick or be involved in fights. This wooden man was like a god who looked after the people.

They [the missionaries] told us to look at our culture and to distinguish what was good and what was bad in it. They did not tell us to throw it out altogether. The people did not burn cultural things when they had the fires before baptism but threw in the vines with the strong smell and *purpur* and wood that had a strong smell. The missionaries told the people to put the wooden statues and other things on the table and they took them back to Germany (Mennis, 1981b: 60-61).

The Spiritual Beliefs of the People

Why should we study the effect of the mission influence on the culture, when discussing the reasons for the demise of the canoes? The answer is obvious when it is realised that all the traditional customs and magic associated with canoe building and sailing was based on the old spiritual beliefs of the people.

Planting crops, hunting, fishing and trading, building canoes were all accompanied by magic rituals which gave power to the fisherman, the gardener, or the canoe builder (Encyclopaedia of Papua New Guinea, Vol 2, 1972: 1001). The people of Papua New Guinea were animists, believing that the world was alive with spirits who inhabited the trees, forests and reefs and had to be placated. Rituals were carried out at every stage of the development of the canoe. There was also a secret language used to avoid recrimination by angry spirits. Furthermore, the *likon* requested the spirits to help with the weather - to make the right wind blow; to calm rough seas and to turn the wind for the return trip (Mennis, 1980b: 66). Thus the spirits played a very big role in the building and sailing of these canoes.

When the Lutheran Missionaries came, they said that only God could control the seas and the winds and that all this *likon* magic was against God. The people had to get rid of all these practises before they could become Christians. They also came to see their belief in tree spirits and other *masalai* as bad and abandoned the magic rites associated with them. Canoes and canoe building were however acceptable to the missionaries and encouraged. But the fact remains that the magic rituals played such an important role in building the large sailing canoes that you could not have one without the other. Throw out the traditional customs that were thought to give the trading canoes power for hundreds of years and the whole structure of trading and trading canoes collapsed. There was such a delicate balance between the supernatural forces and the natural processes that, if the former were forbidden, then the latter is no longer feasible.

Baio, of Ohoru, village has been a mission worker for many years, but he still believed that in the days of the *tumbuna* the people were helped by the *masalai* when they sailed to Siassi. He says, "If you go to Garam in Siassi you will see how far it is. Our *tumbuna* were helped by the *masalai*. They could not go by themselves - the *masalai* put the canoe on their shoulders and carried them to Siassi" (Mennis, 1981b: 76). He believed that this was the only feasible way his ancestors could have travelled so far in the old days even though he himself has embraced Christianity. He adds, "But the missionaries brought God's message and all the men thought their message is true and our *tumbuna* were wrong. God was the creator of the ground and water and now we understand" (Mennis, 1981b: 76). Pall on the other hand does not exclude the possibility that the *likon* man worked in with God's plan before the missionaries came, "Before the people believed that *Anut* (their god) made the sun and the rain and the wind *Anut* was the boss, he was a god" (Mennis, 1981b: 61). The influence of the mission can be seen from the fact that the Bilbils continued to build the large trading canoes and sail them to the Rai Coast until they became Christians. The last big trading trip was in 1935, after which, they joined the Lutheran Church.

Damun says:

When we came back from the 1935 voyage we joined the *haus lotu* (Church) and all the men who wanted to be baptised came. The mission said if you want to hold the word of God you must discard these things (sacred things). The Bilbil were the last to become Christians (Mennis, 1981b: 13).

During the 1935 trading trip, all the magic rituals for making and sailing the canoes were used, but afterwards the *likon* stopped making his magic. This is exactly the same as what happened after the 1904 revolt. The villages within Madang Harbour stopped making the canoes, once they became Christians. Although it is difficult to decide in retrospect the exact effect the missions would have had on the trade and building and sailing of the large canoes, it did have some effect.

Missions and Education

Traditionally the children learnt the village crafts: potmaking, house-building and canoe construction by watching at their father's side. Derr said: "When I was little I was taught canoe building by my father, Mul. I sat next to him and watched as he built his canoe. I watched as he smoothed the planks and tied

them on to the hull. I watched as he put the platforms on the canoe and the bed on top and the house on top. I looked at all this and now I remember. This was how the young boys learnt the village craft. I saw my father work the canoe. I saw his hand make it” (Mennis, 1980a: 100).

Damun Nomu’s father, Nomu, was one of the last of the canoe builders. Because he taught Damun how to construct the canoes, Damun was able to help build a canoe in 1978. Nomu, however, was influenced by Los, the first Lutheran catechist in Bilbil who was adamant that the Bilbils must do away with the *likon* magic. Nomu supported him when he became a Christian after the 1935 trading trip (Mennis 1981b: 13). Sangal’s son, Lalu, remembers the effect this rejection had on his father. “He got cross with the head mission worker. Nomu and Sangal had some arguments Nomu wanted Sangal to throw out all his slates and stones and give them to the mission” (Mennis, 1981b: 8).

Whether Nomu was influenced by cargo cult thinking is not known but it seems he was anxious to abandon most of the old culture and from that time on did not build any more of the large canoes. Sangal did not become a Christian and he passed on his knowledge of the *likon* to his eldest son but, when this son died, he did not train his other sons Lalu or Sui. When Lalu was asked the reason for this he replied, “Because the mission said it was the work of Satan, the men were afraid and tabooed all the children from learning about the *likon*” (Mennis, 1981b: 12). This sounds very much like the cargo cult thinking referred to by Lawrence. “A constant watch had to be maintained against Satan: the old gods and goddesses who were trying to lure the natives back to the ‘bad’ ways of the past” (1964: 80). So the old ways were abandoned and the children were no longer taught many of the old crafts. However, pot making, house-building, gardening, fishing and, to a lesser extent, trading of pots was still carried on in Bilbil. The clan leaders tried to eliminate most of the other traditional customs including *singsings*.

Many of the young received rudimentary education in the village schools which were established by the Lutheran Mission. By 1902, the Lutheran Mission had four schools and 136 pupils in the Madang area at Bogadjim, Siar, Bongu and the main one which was on Kranket Island. It was here that Los from Bilbil village was educated. Returning to his village he established a school there. It was at this school that Damun, Derr, Pall and Maia were taught a few rudiments. Maia was cynical about the teaching and said it was not a true school. He spent three years there until Los died. Derr was less critical and said he learnt reading and writing from Los. He made the interesting comment that at Kranket, Los had been taught half in the Kranket language and half in German. Children began to spend longer and longer in school and gradually traditional customs meant less to them. Pall who was about ten years younger than Maia and Derr stayed at school for many years training to be a Catechist and as a result he knew less about canoe building than the other two. These comments should not be construed as being critical of education in schools, but it was a fact that the longer the boys spent in school, the less they learnt from the village people and the less of the culture was passed on to the next generation.

6.1.7 Technological changes

When the Bilbil built a trading canoe in 1978 like the ones they once sailed, they were amazed at the ingenuity of their ancestors who could build canoes up to 15 metres long using only bush materials and tools made from stone, shells, wood and bones. When making the *atat* support for the superstructure of the canoe they were able to fashion T shaped joints without the help of nails, hinges or glue (Mennis, 1980a: 22).

Alas, the materials needed for these large canoes were soon cleared away from the coastal strips when the plantations were established. Rev Flierl wrote about a visit he made in 1926 to Madang, “From Nobonob on the Hanseman Mountain one has a fine view of all this region. Straight ahead towards the seas, as well as to the right and to the left, the land which formerly belonged to the natives of the small islands of Rargetta, Siar, Riwo, Bilbil, and others, and to those of villages on the main land, is now cut up into plantations owned and managed by whites” (Flierl, 1937: 115).



Figure 153. Catholic Mission schooner, Raphael, and whale boats in Madang Harbour (Courtesy Catholic Mission).

Pall mentions these plantations too but adds another comment about the forests that were left. “The missions made a fence around their land and said the timber belonged to them. There was a sawmill at Sek”. Pall gives this as one reason for the cessation of the canoe building. However necessity is the mother of invention. Some of the Chinese labourers who had been brought into Madang as coolie labourers were boat builders and they managed to collect enough wood to make planks for their boats. Pall mentioned that there were some large trees left in the swamps. Although it was too difficult for the canoe builders to drag them out, the Chinese cut them up into planks and carried them out:

Apau and Awo used to saw planks in their pitsaw and they would give them to the men who were building the boat. They lived at Bilia and cut the wood from the bush. These boat builders made a boat for the Biliyas and later for the Yabobs and Krankets who bought it with a little money. They were not expensive in those days, 100 or 200 marks to buy one boat (Mennis, 1980b: 81).

Communications

Shipping

It was not only the Chinese boats which heralded the new technology around Madang. Overseas ships must have dwarfed the canoes and awed the people when they first appeared in Madang. The first ship in 1871 brought Baron Miklouho-Maclay who befriended the Bilbils. After that, many ships called into the Madang harbour which was developed as a shipping centre (Annual Reports 1893-94 Sack and Clark 1979: 102). We read also that there were some 250 local labourers employed around Madang and “are usually called on to assist with the unloading of the mail steamers”. Men from Kranket, Siar, Yabob and Bilbil were employed in this work and in cutting drains and roads, (Mennis, 1981b: 31). It is interesting to compare this with what happened in 1978 when the men were sometimes unable to work on the canoe because they had gone to unload ships in Madang (Mennis, 1980a: 45).

Roads and railways

As soon as possible, roads were built in two directions from Madang. The old men in Bilbil remember helping with the road from Madang to Amele. Pall mentions the road between Bilbil and Madang which followed the same route in the German times as it does today. There was no bridge across the Gum River and the men had to swim. The Germans swam their horses through the water if it was high tide. (Mennis, 1981b: 31). The Annual Report for 1907-1908 mentions the commencement of the road from Madang to Alexishafen (Sack and Clark: 183). The road to Bilbil and Amele had an affect on communications with the Bilbils too. Originally when the Bilbils lived on the island, people on the mainland had to make smoke signals on the beach when they wanted to contact them. Then about 1906, the people left the island and built a village on the mainland opposite giving easy access to Madang and to their old trade friends in Amele and other places.

Railway tracks were laid from Madang to Stephansort early in the time of the German colony, and the Annual Report for 1900-1901 adds that it was to be extended to Erimahafen (Sack and Clark, 1979). These new forms of communication, particularly roads, meant that the Bilbil were not so dependent on their canoes to travel around. They could leave their mainland village and walk to Madang. Because peace had been established, they could communicate with more people and trade their pots with people who may once have been inaccessible. As early as the 1899-1900 report, mention was made of how the people were beginning to appreciate the value of good roads. They could see for themselves that, in many ways, it meant development although at the expense of their culture (Sack and Clark, 1979: 192). No longer did they need to live on their island secure from their enemies on the mainland. They could build a village on the coast and freely wander to bush villages where once they would travel at their own peril.

Figure 154. Donkey drawn carriage on a railway line with German officials (Courtesy Noel Gash).



6.2 The 1935 trading voyage

Unusual circumstances enabled accurate dating of the 1935 trading voyage from the many hundreds of other such voyages the Bilbil would have made.

Firstly, it was the last of the big trading voyages. This has been attributed to the fact that the Bilbil became Christians after their return and all the magic rituals associated with sailing the canoes and controlling the weather were banned by the Lutheran Mission. Without the magic and the help of the *likon*, the weather man, the Bilbils felt they were no longer protected on the long trading trips or perhaps the canoes were doomed already for economic, political and technical reasons.

Secondly, it was the voyage made after Schmidt's labourers had returned from the Highlands. Schmidt was a German goldminer and prospector who hired a team of coastal men as labourers. Because of atrocities committed while prospecting, Schmidt was later arrested and tried for murder in Wewak, Salamaua, and Rabaul. The case in Salamaua was held in the latter half of 1935. Some of the labourers needed as witnesses were down the Rai Coast on a trading trip, when they were summoned. For this reason this trip has remained significant in the minds of the Bilbil men. This has facilitated research on this particular trip.

Damun, describing the 1935 voyage, said that some of the men on the trading trip had just been to the bush with Mr. Ludwig Schmidt. Their names were Maia, Sui, Dolua and some Kranket men. "They killed some men in Hagen and Goroka came to the Sepik and then returned to Bilbil." Bulus of Kranket was Schmidt's *bossboi*. Maia and Bulus were very worried about the possibility of a court case. They were aware that plenty of men were killed while they were in the Highlands as this extract from Maia's interview shows: "Yes, he (Schmidt) gave us cartridges and muskets and rifles and we shot all around as we walked along. Plenty of men died. Masta [Schmidt] would fire. POW! A man might die on the road". Schmidt eased their minds by saying: "These men are wild men. If they kill you, who will take your place? *Maski* you must shoot them first and make them sorry. If you do not do this, they will kill us and we will be all wiped out," (Mennis, 1979: 70).

Maia, Sui and Bulus, not really understanding white men's ways, had melted back into the village scene as if they had never been away. They helped to prepare for the trading trips as Maia described: "We went back to Bilbil and found the men building a canoe. We helped to finish it and then went to the Rai Coast. It was Christmas time and we went to Suit and on our return we called into Galek village. We were told to return in the pinnace to Madang. Four of us went and we were told we were going to Salamaua" (Mennis, 1979: 70).

Meanwhile the preparations for the court case had been finished at Salamaua, and Schmidt had been transferred there from Wewak. The government officials were told to produce witnesses from amongst the labourers who had accompanied him. They arrived at Kranket only to be told that the men they were seeking were away on a trading trip. Knowing that these trips could take up to two months they decided to send the government boat after them. Apart from the fact that the arrival of the *Wandora* was an intrusion, its arrival did not surprise the Bilbil as Maclay's ship had done some sixty-five years earlier. Ships like the *Wandora* were a common sight in the bay.

Bulus has the details of the incident:

The *kiap* who called us up was Colin Mclean. He asked me where Maia and the others were. I told one of the men to go with me in the *Wandora* and find the others from Schmidt's line. So we went to Galek where they were going to buy *mal* and other things and we went to Suit near a river there and that is where we found them so we anchored in the passage. The *palangut* arrived and I saw Maia and Sui. We sent word that they had to go to Salamaua. So they all told their friends to exchange the pots for mats and plates and food and they returned to Madang with us (Mennis, 1979: 50).

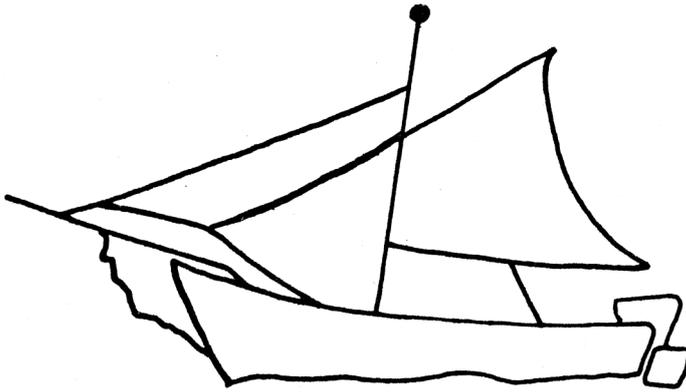


Figure 155. Sketch of Chinese boat by Pall Tagari.

Balafun of Kranket was on the trading trip too, but Bulus refused to take him and another man as witnesses because they would give damning evidence. It is interesting that Bulus refers to two other men as being picked up by the *Wandora* whereas Damun states there were three men - Dolua, Sui and Maia as well as some men from Kranket.

Dolua was evidently another witness

that Bulus did not want. There must have been quite a heated discussion before the *Wandora* returned to Madang. Those on the trading trip must have felt the arrival of the *Wandora* was an intrusion on their normal trading procedures. They were certainly feeling the long arm of the law. On the way down the Rai Coast, they gave pots to their trade partners. Now on the return leg they were calling in to collect the trade items owed to them: the *mal*, plates and other items. Maia in particular was always a man to follow customs to the letter so he would have felt frustrated by the intrusion of the government vessel. Woe betide the men if they didn't collect all the things owing to him.

This 1935 trip was the last of the big trading trips and it is interesting that on this trip they still believed in the magic of the *likon* (Mennis, 1981b: 10). They still carried out the traditional customs for turning the wind. Chinese boats had been introduced at this stage, but they were able to be adapted to the traditional trading patterns. The *likon* magic could be made for them too and they could sail with the canoes and receive the traditional welcome of a pig killing (Mennis, 1981b: 11). So it may be concluded that, although the Chinese boats had changed the style of the trading voyages, they could have survived by incorporating this new style of craft. The trade routes and customs of carrying trade goods were not affected by them.

The following testimonies are descriptions of the 1935 trading trip by different informants: Maia Awak, Pall Tagari, Damun Maklai and Derr Nalon, all of Bilbil Village. They are presented separately.

Testimony 1, Maia:

When Maia left Schmidt and went on the trading trip to the Rai Coast, the most remarkable change he noticed was that they could communicate much better with the Rai coast people than their ancestors had. This was because the boys had been going to school on Kranket Island and could now speak the Graged language. This change had been taking place since he left for Rabaul in the 1920's (Maia Interview, 15 February 1977, not taped):

When we went on this trip we only took pots - in return we received plates, *mal* and *laplaps*. There were three *palangut*, 10 *lalongs* and three Chinese built boats, which were called *Margui* (Bilbil) *Gauten* (Kranket), *Arbus* (Yabob). The *Margui* was owned by Tagari, Pall's father. The Bilbil cut the timber from a *Nar* tree to make the planks and gave them to the Chinese man. He made the boat and the Bilbil bought it back from him. It had one large sail and one small one, but no engine. It carried 10 men. I was one of them. Only Bilbil men went on this trip. They decided on a date and they all gathered in the canoes and boats at the beach on the mainland near Bilbil village.

Sangal, the *likon*, did not go with us but, before we sailed, he made magic over ginger leaves and some seeds of a plant called *sibol*. He rubbed the ginger leaves and left them in the water. The *sibol* seeds were crushed and put in the sea to make it calm. He said, "I have bossed the

sea. It won't get up; only a cold wind will help you. When it is time for you to return from the Rai Coast I will sing out for the *rai* wind to blow you home again". He spoke the truth. When it was time for us to come back, he picked the ginger leaves up from the sea and the *talio* wind or *rai* wind started and blew us home.

Sangal was the big boss of the trip. Tagari was the boss of the *Margui*. He was a good man. He was a *tultul* in German times and now the leader of the Dugus clan. Derr was in a canoe. Pall was in the *Margui*. It was the dry season. It took one month to go and one month to come home again. When we got near the Rai Coast, we blew on the conch shells. We came to Biliau and the men who were in the bush heard the conch shells. "Oh the canoes have come", they said and rushed to the shore. When they saw all the canoes they were amazed. Margui and Gauten had a conch shell each, so did each of the canoes. They had no *kundus* or *garamuts* with them. Each clan had its own cry on the conch shell. On this trip Luan made its particular *singsing* on the conch shell. Each clan took turns blowing on the conch shell. Biliau has a reef all around and a passage. It is good for all the canoes.

On this trip, *Margui* and *Gauten*, the Chinese boats, went into Biliau and anchored outside. Murpatt clan, Luan and some Gapan canoes also went to Biliau; some others went on to Tetera. The canoes did not all go to the same place. For one thing, there were too many to feed in one village. For another, many of the villages on the Rai Coast had trading partners with one clan and not with the others. Later in the voyage from Malalamai to Suit, they all went ashore together for one night at each place. The beaches in this area were protected and there was no surf. Back at Suit there was a bit of surf and it was not suitable for all the canoes to land at once, just one or two of them. Each clan had trading friends at different ports of call. Luan had friends at Biliau, Gapan at Tetera and Dugus at Sel. The next port of call after Suit was Galek on the homeward-bound trip where we were met by the Government pinnace summoning us to Salamaua.

Testimony 2, Pall:

I want to talk about the time we Bilbil went to the Rai Coast in three boats and three canoes. The *Dadau* wind took us to Rimba. It was July or August and the *karag* had not begun. There were easy winds then to take us to the Rai Coast. One boat was from Kranket and was called *Gauten*, one from Yabob called *Arbus*, and *Margui* from Bilbil. There was one *palangut* belonging to Nomu and two *lalong*. We went to the Rai Coast and the first place we went to was Rimba. Next morning we went to Siliau. Mr. Nurton was there before, but at that time he was not there. Then we went to Biliau, some canoes stayed there, but my father, Tagari, and I went to Yeimas. Nomu's *palangut* went to Yeimas with us. We slept there and then we went to Galek. We gave pots to our friends and got *mal* and plates in return. We followed the old customs in those days. When we went ashore we gave presents to our friends. They in return would shoot a pig for us. This happened at every place as far as Saidor.

Some of us went ashore at Wab, some at Yeimas, some went to Mot. After trading at each place they set sail again and we all met at Suri and went ashore. At some places we gave our friends pots and later we returned for trade items. They would say, "You wait and later we will give you things". So we went on and some of us went ashore at Sel and other places. My father and I went to Sel, and then we left there and went to Malalamai which marked the end of our journey. Then we followed the custom of changing the wind and the sea. All the young men went to the Babal River and there we washed ourselves and our *mal* and other clothes. We threw them towards Madang to change the wind and the sea. And then the *karag* came and blew us back to Madang. The tide too changed when we followed our

customs. The savvy men were Tagog, Beg and Sangal. Beg of Yabob knew what to do. Tagog belonged to Murpatt clan: he was Nusmai's brother. They changed the wind and the sea and then the men cooked some *taro* and pig. We stayed one week there and then put the sails up and came home (Interview, November 1978).

At an earlier interview on 25 February 1977, Pall had filled in some of the details of this trip:

Each *lalong* had 3 crew members and one young man to bailout and be the *manki masta*. He would climb the coconuts trees for nuts, carry water and bring the *daka* for the betel nut. This boy could not be lazy or complain, or he would be told, "You stay home with your mother and make the pots". The captain of the *palangut* was Nomu who was also the owner and leader of Dugus Tan clan. Kore of Gapan was the captain of one *lalong* and Koro of Luan of another. Pinsar was the captain of the *Arbus* of Yabob. As he was the only Yabob man, some Bilbil men went in this boat too. It had four paddles. *Margui* was the Dugus clan's boat. It had six paddles. *Gauten* - belonged to Male of Kranket. This had Murpatt's line in it. Tagog, the boss of this boat, was the leader of Murpatt. The three boats had white sails. The canoe that Kore captained sank on this 1935 trip. The sails were still up and it just filled with water. The cargo was washed away but the people still stayed on board. Kore brought it safely to the beach with assistance.

Testimony 3, Damun:

There were four Chinese boats - *Margui* from Bilbil, *Arbus* from Yabob, *Gauten* from Kranket and the *Gabriel* from Riwo. The Bilbil borrowed these four boats and went to the Rai Coast. Riwo and Kranket received pay for this, but not Yabob because they are our *wantoks*. These Chinese boats were about 10 to 15 metres long and had big sails like Europeans have on their boats made of canvas. If there is big wind, these boats went faster than the *lalong* or *palanguts*. If there is a very big wind then the *palangut* went faster. It was not a race though, as we all wanted to go ashore together. If some canoes went ahead, they would wait for the others to catch up. There was no shelter and you could not cook on these Chinese boats because they might catch fire. We had to go ashore to cook the food. There were planks to sit on but we sat in the sun.

The Chinese-made boats did not have a captain. Our canoes had captains because they were the ones who organised the building of the canoe. They bossed them. The captain decided who was going to be crew and which children could come. They would not take all the children in one family in case the canoe sank and the children drowned. On this trip there were three *lalongs* and one *palangut*, which was captained by Nomu, my father. There were six men on each canoe and ten men on each boat - about 60 men on this trip. We all went to Rimba and then stayed there over night. At 5am next day, we put the canoes in the water and using the cold wind we went to the next place. Then we all went to the next place together. It was the same when we returned to Bilbil, we all came back together.

After Rimba, we went to Mindiri where people shot a pig for us. The Mindiri bought some of our pots even though they made their own. When we left Mindiri we went to Lamtus and Singor. Lamtus shot pigs for us and so did the Singors. They counted the canoes and boats and shot eight pigs for us. Afterwards, we went to Warai where the same thing happened. Every place gave us eight pigs. Then we went ashore at Biliau and they shot pigs too. Then Yamai and Galek, Yeimas, Wab, Suri (near Saidor) and they shot pigs. They went ashore at Mur too and Sel and Malalamai and then Bonga which was the last place. We were away for one month when we wanted to come home, the wind changed. We Bilbil men had told the *likon* the day so he knew. It was no use wasting time waiting for the wind to change. If you missed the day you should return on, then bad times might come up. You must start returning

on the day the *likon* has been told and then you would return home together. When we came back from the (1935) trip we made the *haus lotu* and all the men who wanted to be baptised came. This mission said if you want to hold the work of God you must discard these things. The Bilbil were the last to become Christians [of the island people near Madang].

Testimony 4, Derr:

Mennis: Did you go to the Rai Coast the time Maia was taken to the court at Salamaua?

Derr: Yes, I went on that trip. Some of us went in *palanguts*; some went in *lalongs* and some in Chinese boats. We went as far as Bonga and Yara before we came back. On the way back the government boat picked them all up at Galek and Suit.

Mennis: Who did they want?

Derr: Bulus, Sui, Maia. The officials said, “*Maia i stap?*” and Maia said, “*mi stap*”. “*Bulus i stap?*”, “*Yes mi stap*”, said Bulus. “You must come with us”, said the official and he took them in the ship to Salamaua.

Mennis: When you went to the Rai Coast how many *palanguts* and how many *lalongs* went too?

Derr: Five *lalongs*, three boats, two *palanguts*.

Mennis: You all went together?

Derr: After Maia and the others left we went towards Rimba but the *Talio* caught us and we were blown to Garim. We had to stay there the night because of the wind. The next morning we went to sea and went to Rimba with the cold wind. After that we headed home. We went to the island first and got all decorated up to show the women and children how happy we were to be home. We had a wash too. Then we blew the conch shell to show the people we had returned home to Bilibil and they could hear us. They put the rollers down on the beach for the canoes.

Masil: Derr’s mother and sister and all the relatives of all the people were there. It was a big day for all the clans. Murpatt, Dugus, Luan and they gathered on the beach and were happy to greet their men coming home.

These four testimonies were given by Bilbil clan leaders. None of them regarded this trip as being particularly extraordinary at the time. They were not aware that trading trips using the large trading canoes were coming to an end. Nor did the presence of Chinese-made boats cause a great stir because they had been using them for a period of time anyway. There were discrepancies in the number of boats used for the trip. Maia, Pall and Derr said there were three whereas Damun counted four. The various numbers of canoes and boats given are as follows:

It would be rather difficult to remember how many canoes went on a particular trip as the 1935 trip was only one of many trips over the years. The average number of vessels given by the informants was three Chinese boats, two *palanguts* and five *lalongs*, so some estimation of the number of men on this trip can be made. The *palanguts* and Chinese boats would take at least ten crew plus cargo (Maia Testimony 1) and the *lalongs* about eight crew. This means between 60-65 men went on this trading trip (Damun Testimony 3).

The number of pots would be 200 pots in each of the *palanguts* and 100 in the *lalongs* plus another 100 in each of the Chinese boats (Pall Testimony 2). This means about 1,200 pots. So the preparation for this trip would have been very time consuming for the women making the pots. It would be necessary to have this quantity of pots when the number of ports-of-call are listed. These pots were not only for the coastal villages, but also for the inland trade. In fact this number 1,200 may well be an underestimation

of the number of pots. One thing that the four informants agreed about is that there was a mixture of Chinese boats, *lalang* and *palangut* on this trip. Nomu, who captained one *palangut*, seems to have been the leader of this whole expedition. Pall's father, Tagari, was the first Bilbil man to purchase a Chinese made boat. He could see the advantages of these boats over canoes and accepted the innovations. Tagari's step-father, Bais, had also been ready for adaptations when he bought a Siassi canoe which he converted with a Bilbil superstructure (Mennis, 1981b: 54). All the informants agreed that Sangal, the *likon*, used his weather magic on this trip. Afterwards, when the Bilbil had accepted Christianity Sangal's magic was frowned on by the mission and Christian villagers. Sangal continued to use his magic, but this was the last trip where he was regarded as the controller of the weather.

There is some discrepancy between the testimonies as to whether they all called into every port of call or whether some called into one village and other canoes continued to the next port of call. Maia probably had the most realistic account of this side of the story. He said that the villagers on the Rai Coast were

Informant	Chinese Boats	<i>Palanguts</i>	<i>Lalongs</i>
1 Maia	3	3	10
2 Pall	3	1	2
3 Damun	4	1	3
4 Derr	3	2	5
Average	3	2	5

Table 12. Estimates of numbers of Chinese boats, palanguts and lalongs which took part in the 1935 dadeng.

amazed when they saw all the canoes arriving. They were probably also hiding their consternation about how they were going to feed so many visitors. Maia explained, "Canoes did not all go to the one place. For one thing there were too many to feed in one village. For another many of the villages on the Rai Coast had trading partners with one clan and not with others" (Testimony 1).

Pall also agreed that different canoes and boats called into different villages. "Some went ashore at Wab, some at Yeimas, some went to Mur" (Testimony 2). Damun, however, said that all the canoes and boats called into each village and stayed there together (Testimony 3) As they were approaching each village, the men blew on the conch shells, with each clan taking it in turns to blow their particular call. Even the Chinese boats had a conch shell call each (Maia testimony 1) and had the *likon* magic made for them just like the canoes. The informants were pragmatic about the Chinese boats: there was no shelter on them as there was on the canoes; the men could not cook on them; and they only had hard plank seats - not like the bamboo flooring on the upper platform of the canoes. All informants agreed it was the 1935 trip that was interrupted by the government boat *Wandora* summoning Maia and the others to the court at Salamaua. Maia's testimony ends at Suit on the return trip when he boarded the *Wandora* for Madang (Testimony 1).

Derr had the best account after the interruption of the *Wandora*. The men called into Rimba and then returned to Bilibil Island to prepare for the feast on the mainland. Bilibil Island was still very much part of the psyche of the trading trips. It was from there that their ancestors had departed and returned for hundreds of years. Although Bilbil Village was now on the mainland, they still acknowledged their spiritual ties to the island on significant occasions.

In the 1970s, the Bilbil pots continued to be popular in the Madang villages in spite of the introduction of metal pots. We witnessed one such transaction in 1979 when the Bilbils took a truck load of pots to Erima Village on the Rai Coast and traded pots for food with the mountain people from Aiyau who had walked two days for the occasion. Writing in the 1960s, Harding said, "in spite of the widespread use of metal cookware, there remains a lively demand for clay pots" (Harding, 1967: 211). He mentioned the pot's superior heating characteristics as one reason for the continuing success of the clay pots because the food in pots tasted better than the food cooked in the tin saucepans and probably does not burn as easily when overheated.

6.3 Conclusion

This study of the mariners of Madang has detailed the construction of a traditional trading canoe in Astrolabe Bay as well as the trading voyages they were used on. This body of knowledge has been accumulated and presented at a time when it was in the process of dying out forever. In 1978, there were only five old Bilbil men left who knew this process. The trading canoe which these men helped to build was the first for forty years and it is extraordinary that the knowledge of construction was still available. The details of their construction were stored in the minds of these old Bilbil men who were able to pass on their knowledge to a new generation.

As a long-term resident of Madang, I was able to do my research over an extended time and become well acquainted with the people of Bilbil, their customs, canoes and construction techniques. This approach has enabled me to correct Haddon and Hornell's *Canoes of Oceania* in some details. Writing in the 1930s, they said that little was known about these canoes. "So far as I am aware, no one has described the rig of these canoes in sufficient detail" (1975 II: 297). They alluded to photographs taken by Neuhauss (1911) and Hagen (1899). Their knowledge of Astrolabe Bay canoes was limited to old photographs and descriptions by early explorers many of whom had only a cursory interest in canoe construction. In the forward note to *Canoes of Oceania* (1975), Roland Force described the book as a most comprehensive work and said that the authors, Haddon and Hornell, achieved a monumental task. Despite this, even Force adds a note of warning that, "many of their conclusions must be considered inferential owing to the admittedly imperfect historical and traditional material with which they worked". He goes on to elaborate about the model canoes and old photographs with which Haddon and Hornell worked, concluding that, "distortions of reality were inevitable" (Haddon and Hornell, 1975: vi).

In describing the canoes of Astrolabe Bay, Haddon and Hornell extrapolated Bongu and Bogadjim terms from Semayer who in turn took them from Biro's book and applied them to the whole bay (Haddon and Hornell, 1975 11:293). Investigation of Biro's *Nemet-Ui-Guineai*, shows that the model canoe he used was actually a Morobe canoe and not even from Astrolabe Bay at all. So one gets a long line of misinformation passed from one specialist to another. A later researcher of Oceanic canoes, Neyret (1960), lists these same terms which he got from Haddon and Hornell but without reference to Biro or to the fact that these terms were taken from Bongu and Bogadjim dialects.

Another difficulty that faced Haddon and Hornell, when they based so much of their information on photographs, was that they might make the wrong conclusions. Judging from a photo of a Bilbil canoe by Wegener in 1903, they quoted from Semayer: "The connectives appear to be Y connectives. The booms rest in the fork of the Y sticks and for this reason may be termed crutch connectives. So far as I am aware, Y connectives did not occur elsewhere in New Guineas, and their presence in Astrolabe Bay points to a special cultural drift" (Haddon and Hornell, 1975: 296). In actual fact, the Bilbil used pairs of undercrossed sticks as connectives in their canoes using the same style prevalent in the Astrolabe Bay, so there was no cultural drift involved. The description of undercrossed sticks was also found in Haddon and Hornell, but they were unsure which was correct.

Just because a photo of a canoe was taken at a certain place it does not mean that the canoe necessarily belonged to that village. It may be visiting from another place. Their illustration of a Ragetta (Kranket) canoe was actually of a Bilbil canoe visiting Ragetta (Haddon and Hornell, 1975 11: 297). Furthermore, Haddon and Hornell made an inaccurate drawing of this canoe based on a photo by Neuhauss. Having seen one of these canoes being built, observations were made of the mast stepped into a diamond shaped block of wood called *puarang*, which sits in the hull of the canoe.

Many other canoe enthusiasts have criticised Haddon and Hornell in one way or another. David Lewis is critical of some of their statements (1972: 262). Doran (1981) disagrees with their wave theories of migration of canoe people, but he also points out that Haddon and Hornell lived before "radio-carbon dating made possible the construction of absolute chronologies." Yet, in spite of some problems Haddon

and Hornell is a valuable guide to the beautiful canoes of Oceania, and to the literature that has been written about these canoes. I have referred to them constantly as they have gathered together much valuable information about the canoes of Oceania.

The advantages of watching a canoe being built are manifold. Being on the building site means that the right term for each part of the canoe is learnt. If you ask a man the name of a vine in a finished canoe, he may give you the name of the binding, the vine or even the hole through which it is lashed. But if one is there at the time one can see the vine soaking, watch it being used as a lashing, and get the separate names of each without confusion.

The importance of trading canoes and trading expeditions in pre-colonial and early colonial social and economic life is overlooked in the standard works of historiography. In their book *Papua New Guinea, A Political History* (1979), Griffin, Nelson and Firth make no mention of the effect German politics had on the traditional trading patterns and canoe building. Even the Siar Revolt of 1904, which had such far reaching social and political effects on all facets of traditional life, is ignored. In a book by Amarshi, Good and Mortimer, *Development and Dependence, the Political Economy of Papua New Guinea*, mention is made about the specialized skills in the pre-colonial times - canoe-making, sago making, pottery, magic and ritual (1979: 3). They conclude that the "production systems may be said to fall within the modes of production of the primitive community". Mention is made of certain local trade items - pearl shell, beche-de-mer and sandalwood - but these were local items earmarked for foreign business interests. It was these foreign trade interests that had first brought outsiders to Papua New Guinea shores. These same interests radically changed the grass roots traditional trade between villages. These writers, however, ignore this in their study of Papua New Guinea's place in international politics and economy.

Reed, in his book, *The Making of Modern New Guinea*, mentions some of the effects of the changes on the local trading patterns: men were abandoning their "slower canoes and seek passage on the boats of the recruiters and other white men." This, however, was in the wider context of the effect of contact on local cultures (Reed, 1943: 257). He added that inter-tribal trade expanded because of pacification of hostile tribes. The nature of trade items also expanded with the introduction of European goods (Reed 1943: 257). Most historiographies depend on secondary sources for their information and these sources are written by foreigners. It is only by going to the grass roots level - the villagers themselves that the changes can be recorded from the local point of view.

In this research on the Mariners of Madang, I have tried to fill the gap in the usual historiographies by showing the effect that outside political and economic pressures had on the local trading scene and trading canoe production. I have also described the social and economic relations which underline the construction and sailing of such an expedition. Finally, I have isolated the circumstances leading to the demise of the trading expeditions and canoe construction: canoe transport was sometimes replaced by Chinese boats and, later, by motorised pinnaces; politically, village leaders lost power; economically pottery was no longer the basis of the economy; and, spiritually, the old magicians lost power with the spread of Christianity.

The presence of schooners and pinnaces became an accepted part of life; quite often they were manned by local crews. Such an accepted part of life had they become, that the villagers themselves were buying plank boats built by the Chinese (Mennis, 1981b: 9). They could see that these boats were easily available if sufficient funds were accrued and this led to an awareness of the German monetary system. No longer was it possible to buy hulls with so many pots to the satisfaction of both parties. The Bilbil had to sell pigs and coconuts to get the cash to buy these boats or, alternatively, trade these items for them. Times had indeed changed profoundly.

As already stated, the canoes were doomed for political reasons. Before the German Colonial government collapsed, it had been extending its influence with the establishment of the *luluai* and *tutul* systems which meant the beginning of the erosion of the traditional village leadership. The *luluai* were supposed to organise the villagers to work on the roads and to fill in the swamps around Madang. This, plus loss of

their land, had led to the Siar Revolt in 1904. In turn the repercussions after this revolt led to a suspension of village life in the immediate vicinity of Madang for a period of three years from 1904 and again for two years after 1912.

Economically too, the trade system was doomed with the introduction of plantations. For not only did these strip the people of their land and forests but also took some of the village men away as labourers. The introduction of the German monetary system also changed the pattern of the people's lives although, within the village itself, the old system continued. Technically, the introduction of the plank boats made by the Chinese did have an effect on the trading canoes. These lasted longer than the canoes and were available already built. Lastly there was the religious impact of the mission which was fundamental because it threatened the spiritual beliefs of the people. Their traditional ideas of creation and their way of manipulating the weather through the services of the *likon* were both challenged by the Lutheran pastors. The Bilbil were the last people in the Bel group near Madang to become Christians. Up to this time they had a Christian teacher, Los, but no pastor. They became Christians soon after the return from the 1935 trading voyage.

One of the main purposes of this research was to record the lives of the mariners and some of the material culture of the past: the canoe construction, the trading system and trade partners that were part of a large social network between villages all along the coast and inland so that future generations know about their colourful past. This research may also have implications for the future. If the price of fuel gets higher and the supplies of oil run out, maybe more wind-power will be used to navigate between the coast and the islands as is happening already in some parts of Papua New Guinea. These Madang canoes could be built again, even after this long time, as a colourful reminder of the past. In Port Moresby, the *lagatoi* canoes are being revived for the Hiri Moale Festival each year. Why not revive the *lalong* on the North Coast as well? Hopefully, the diagrams and instructions in this volume may be used as a guide for this very purpose, so that others may benefit from the instruction of the canoe builders of the 1978 *lalong*.

In a recent communication 31 August 2010 from Dr Simon Day, he said "I noticed in 2005 and 2006 that in many of the out-of-the-way places (Schouten Islands, Witus, Umboi, Tolokiwa) they are now building big sailing canoes again for trade and fishing because they can't afford to operate motor boats any more." So it appears the big sailing boats are becoming vessels of the present and future. They are no longer just a part of the former material culture of these places but seen as having a vibrant position in the present. It would be interesting to compare the construction of these present craft with the traditional canoes of their ancestors.

In this account I have tried to capture the realities of the lives of these mariners who lived traditional lives in the village - the excitement when a fleet returned home from trading and the flow of life and the changes that occurred when the first of the European explorers and settlers arrived in the area. Malinowski complained of "survey work" by ethnographers which give us an excellent skeleton (1960:17) of the tribal constitution but lacks "flesh and blood". "We learn much about the framework of their society, but within it, we cannot perceive or imagine the realities of human life, the even flow of everyday events, the occasional ripples of excitement over a feast, or ceremony, or some singular occurrence." I hope I have been able to follow Malinowski's advice on providing the excitement of their lives as well presenting an informative and interesting factual account of the trading canoes and the mariners who sailed them.

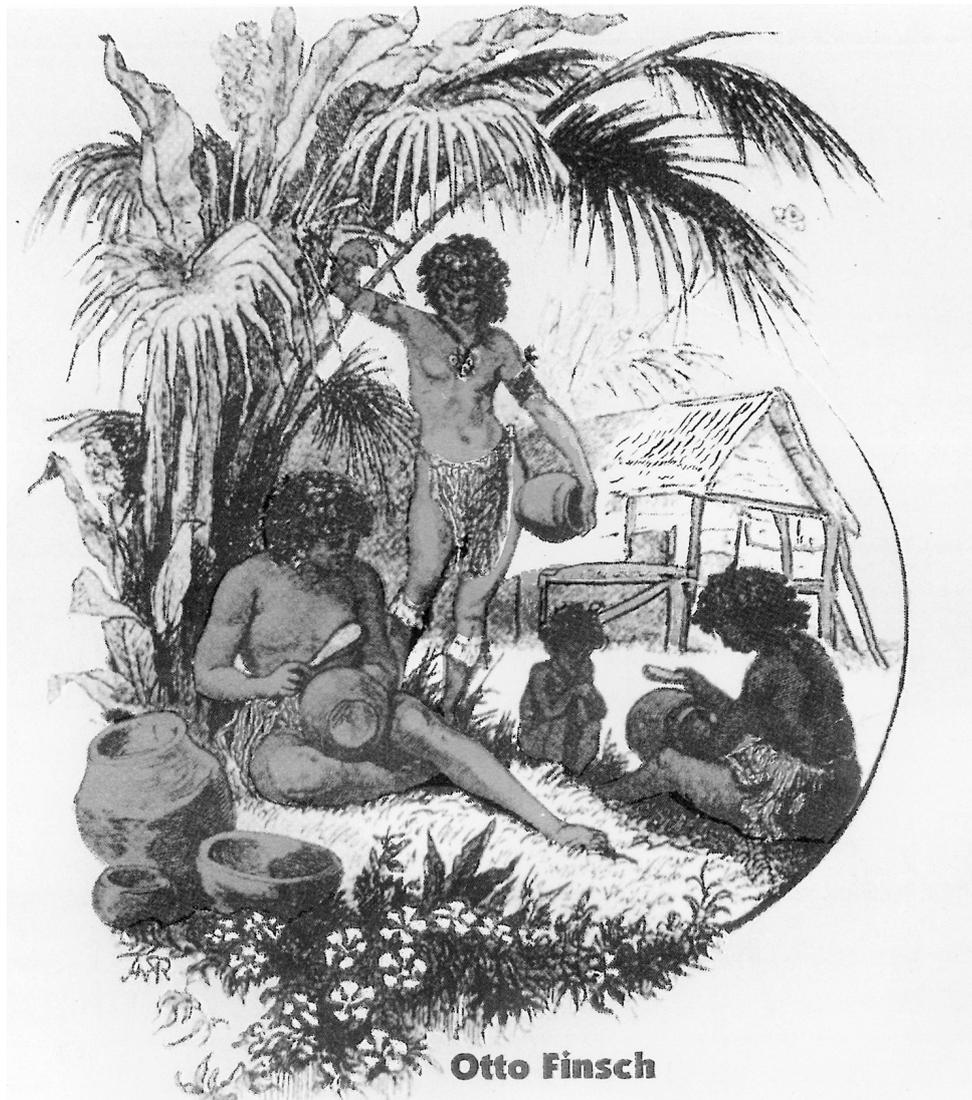


Figure 156. Potters on Bilibil Island (Finsch, 1888: 82).

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Note:

Names of Europeans are indexed in the normal way with surname first followed by christian name or initials and then any title.

Names of Papua New Guineans are indexed by their given name first and then their father's name, if known. There are a number of cases where the father is indexed under his own name as well if there is information on him.