SAILING FOR SURVIVAL

A Comparative Report of the Trading Systems and Trading Canoes of the Bel people in the Madang area and of the Motu people in the Port Moresby area of Papua New Guinea.

by

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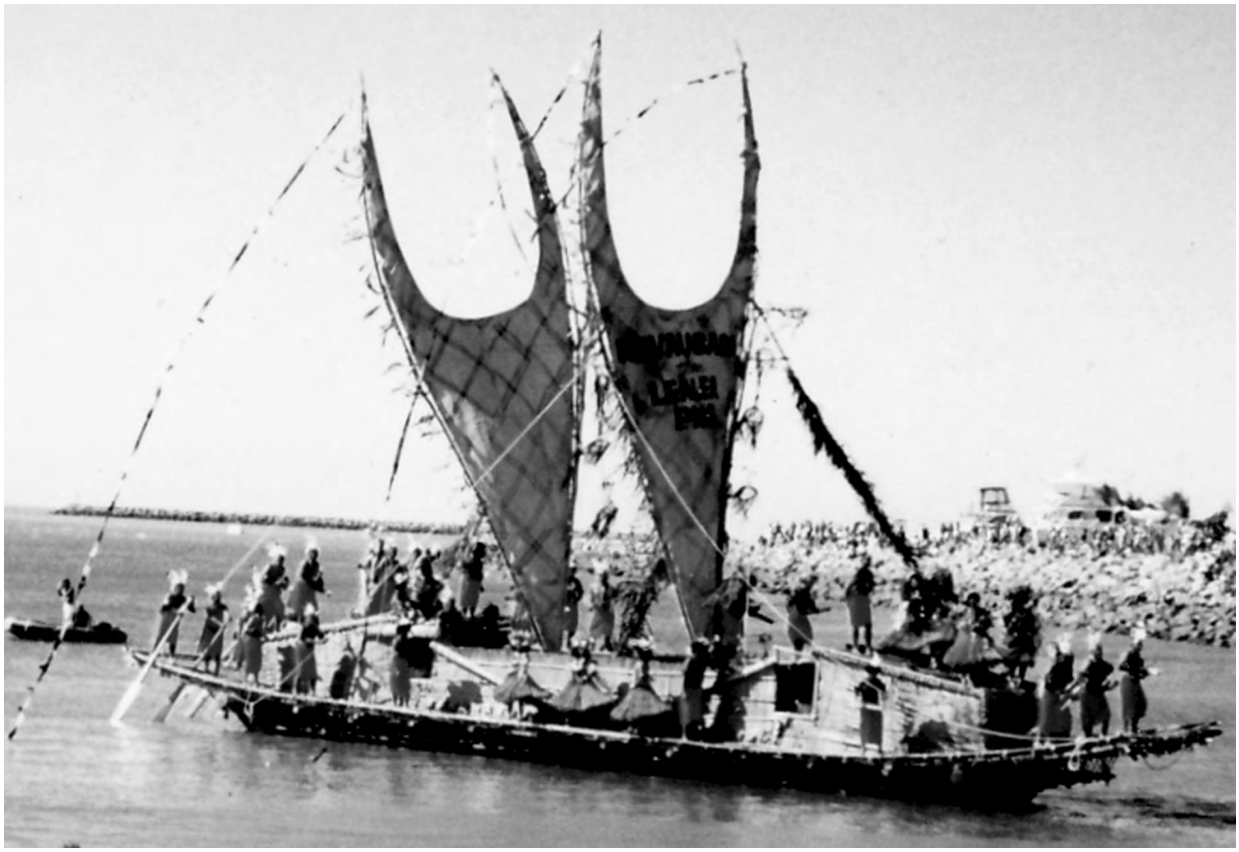
MBE, MA, MSocSc



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Notes:

In *Mariners of Madang*, and in earlier works, the two mast Bel canoe was termed *Palangut*. It appears now that the correct term should be *Balangut*. Accordingly, the latter term has been used in this volume.

There is a lot of confusion, still, on the correct spelling of Bilbil, Bilibil, Bilibili. In this volume, I have adopted "Bilbil" for all references to the village, people and the island.

There is a problem with the word for a *Hiri* canoe. Modern practice seems to use *lagatoi,* while *lakatoi* seemed to be used in the past. In the text, the modern *lagatoi* has been used, but the older version was maintained for quoted text.

Abstract

Sailing for Survival is a comparative study of the trading systems and canoes of two groups of people in Papua New Guinea: the Bel people of Bilbil/Yabob on the North Coast, near Madang and the Motu people on the South Coast, near Port Moresby. There is now no doubt that they shared a common ancestry in West New Britain. They both belong to Austronesian language groups but had no contact with each other on their trade routes, separated as they were by twisting coastlines and rugged mountain ranges, nor did any trade items [apart from obsidian] pass from one trading zone to the other for over two thousand years. Yet the trade systems they developed independently have an amazing array of commonality harking back to their common ancestry in the Bismarck Archipelago. The association between archaeological and linguistic distributions suggests that the movement of Papuan Tip Cluster speakers to the west along the Papuan Coast took place about 2800 years ago, and the time depth for the spread out of the Bismarcks area of North New Guinea cluster languages may be within the last 1500 years.

The members of each group, the Bel and the Motu evolved their own system of survival through trading pots on long trading voyages which became a focal point of their culture, beliefs and ritual. In their response to their environmental conditions and, influenced by introduced technological features, they developed quite different trading vessels: the *lagatoi* of the Motu people and the *lalong* and *balangut* of the Madang people. One of the aims of this report is to relate the construction of each of these vessels and compare and contrast them with the conclusion that form follows function.

Many of the characteristics of the two trading systems the *dadeng/waing* of the Madang area and the *hiri* of the Motu are comparable: the need to trade because of infertile soil; the clay pots that the women made; the position of the women in the trading system; the mythology and origin myths of the trading system; the belief in magic to protect the traders and enhance the weather; the use of geographic points; the winds; and the stars to aid navigation. Their similar ancestral origins and culture was adapted to the environmental conditions in which the people found themselves. Although there were cultural and social reasons for the trading trips, the primary reason was economic - the men were ***Sailing for Survival.***

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.

Notwithstanding that she married in 1964 and subsequently had four children, she maintained her interest in Papua New Guinean oral history and traditions through transfers to Mt Hagen, Madang and Port Moresby.

She is the author of several books based on her research, and this current volume continues her ethnographic odyssey of Papua New Guinean canoes and the trading associated with them which commenced with *The Mariners of Madang*, and is now extended to the Hiri on the Papuan coast.

Sailing for Survival was the title for her second Master's thesis, and is now greatly expanded to cover both the North and South coasts of Papua New Guinea.

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

Bel man from Kranket Island, ready for a singsing *in the 1880s.*
Finsch, 1888**.**

Motu men dressed in their finery.
Groves, 1957. (PMB 43_152)

Authors Note

When reading Percy Chatterton's book, *Day that I have Loved*, I was fascinated to read that, as a five year old at Sunday School, he fell in love with a picture on the wall depicting a Papuan house on stilts over the water. In front of the house, sitting on the beach was a "grass-skirted Papuan girl watching over a baby in a string bag suspended from a joist." That picture led him eventually to becoming a missionary with the London Missionary Society in Papua. I got to know Percy in about 1980 and found him to be a fund of knowledge about the Motu people and their culture. He had spent years in the villages around Port Moresby and Delena and had seen many changes.

When I was about eight years old and living in Dunedin, New Zealand, I ventured into the Otago Museum and there hanging from the ceiling was a long Pacific war canoe. It was wide and red in colour, carved with swirls which were inlaid with mother-of- pearl shells. I was mesmerised. I stared at it for so long my sister chided me. I had fallen love with the intricate designs on its sides and the power of the men who must have rowed it in the past. My fascination with canoes was roused again when I lived in Papua New Guinea and I have written extensively about trading canoes and trading systems. And now this book on more canoes of Papua New Guinea will be published by Otago University with the help of Professor Glenn Summerhayes. My life has gone full cycle to where it all began.

In 1971, after living in Rabaul for nine years, our family moved to Madang. It was the centenary of the arrival of the Russian scientist, Nikolai Miklouho-Maclay, who was the first outsider to live amongst the Rai Coast people of the Madang area, and Russian scientists arrived for the occasion and set up a monument where he had landed near Bongu village. Among other things, he had described the large triple-deck trading canoes the people built. He was fascinated by their construction and often sailed on them around Astrolabe Bay.

After reading his description of these canoes, I asked my Bilbil village friends when they had stopped building these canoes and found out that it had been during the war when the Japanese bombed the last of them. In the 1970s, there were only five of the old mariners left who knew how to build them: Pall Tagari, Maia Awak, Damun Nomu Maklai, Gab Kumei and Derr Mul. They had helped their fathers build the last *balangut*. After much discussion and many delays, I persuaded them to build another canoe. We went by truck to the bush with some younger village men to gather the materials needed. Once they started building the canoe, the old mariners had to pool their knowledge about the construction. As a result, a one mast trading canoe, a *lalong*, was built in 1978 on the same beach as in traditional times. I recorded the process in a diary and interviewed the men about the stages of construction and information about the old trading trips, the use of ritual and the trade items. The village headmen enjoyed renewed vigour from being seen as possessing much useful knowledge and skills which they taught to a younger generation (Mennis, 1980a: 97). Unfortunately the last of these old men died in 1995 – if it had not been for the 1978 project done and recorded, maybe much of this knowledge would have died with them.

Since I lived in Papua New Guinea for over twenty years and had a lot of contact with the village people in the Madang area, perhaps my work could be best described as ethnography, the study of a particular human society through fieldwork. Although I did not live in Bilbil village, I lived nearby in Madang and had close contact with the people over eight years and sometimes participated in their everyday life while keeping an objective detachment. Visits to Bilbil Village and many other places were carried out at least twice a week for an ongoing amount of time. My closest informants were Pall Tagari and Maia Awak who provided specific information on many aspects of their cultural life and oral traditions. I kept detailed notes and taped interviews in *Tok Pisin* as well as using many terms from the Bel language and photographing many aspects of village life while being aware of the current literature and cultural theories.

Writing this book has been similar to making a pot. First you gather the raw materials and then you begin to mould and shape it. Unwanted bits are extracted and then the shape begins to emerge with much handling and skill. Then the final polish or slip is applied making the product ready for the fire of editing and publishing. Then the book sits as a new creation like a newly fired pot, ready for the market. Will it be accepted and valued or will its defects emerge?

My first major work on Madang was *a Potted History of Madang*. Unfortunately, this is not readily available, except by direct contact with the publishers, Lalong Enterprises. For this reason, it will be noticed that a lot of the materiel and photographs in that volume have been duplicated here to make it more available.

In 1995, I was privileged to be part of a team on Magnetic Island, off the coast of Townsville, Queensland, studying two *lagatoi* being built by a group of men from Pari and Lealea Villages in Papua. They were a major part of the 50 year celebrations of the end of World War II and were invited by the Mayor of Townsville in recognition of the

wonderful work the 'fuzzy wuzzy' angels had done helping wounded Australian soldiers, particularly on the Kokoda Track in the Port Moresby area.

Through interviewing these men and some of the women, we obtained information about the stages of making the canoe, the historical background to the *hiri* trading voyages, the associated myths and folklore, the materials used and many of the rituals and dances associated with those voyages. The reports, written by team members on the *lagatoi* on Magnetic Island, were studied and illustrations made will be used with their permission.

Because of this first hand experience in documenting both types of trading canoes and the associated trading systems, I feel I am justified in recording this research. Both were memorable experiences.

In 2011, I wrote about the construction of the *lalong* entitled *Mariners of Madang,* which was published by Queensland University as a Research Paper (Mennis, 2011). Professor Ian Lilley and Dr Sean Ulm kindly helped me in particular with its publication. The book included a detailed manual recording the process of constructing the canoe including the trees, the various joints used, the bush material for the potcage and the sails etc. Soon after its publication, I sent copies to the Madang Provincial Government as well as to Bilbil village.

In 2013, I was delighted to see on the internet that the Bilbil village men had built a *balangut* – a two mast-canoe for the Independence Celebrations in Madang and named *The Spirit of Balangut*. It was the first time since the 1970s that one of these canoes had graced the waters of Astrolabe Bay. The canoe was launched by the Provincial Governor, Jim Kas, with a *singsing*, bands playing and large crowds cheering. Jim Kas stressed that it was a great event in the cultural history of Madang and of the Bel people. The Bilbil men were justly proud with their achievement. On Independence Day two weeks later, 15 September 2013, the Governor General of Papua New Guinea arrived for the first Madang Festival and inspected the *balangut* for the occasion. Afterwards the guests boarded the *balangut* and went for a sail in this graceful craft, a job well done by the men of Bilbil in continuing an important facet of their culture in the Madang area.

At the same time, on the other side of the country in Port Moresby, the Motu people celebrated Independence Day with the Hiri Moale Festival when *lagatoi* were sailed into the harbour. Each year the Motu people build more *lagatoi* for the festival and they are greeted enthusiastically when they arrive at Ela Beach by girls with swinging grass skirts. Special huts were built on the beach supported by spindly legs just as Percy Chatterton had seen in the picture on the wall. He would be so proud of his Motu people to have resurrected the *lagatoi* in the Hiri Moale festival.

In my research on the Madang area I collected many oral traditions about Yomba Island, in the vicinity of Hankow reef, the place where the people's ancestors once lived. There were conflicting statements on how this island disappered; did it just sink, or was there an eruption? Once my initial work, *Yomba Island Fact or Fiction?* appeared in Oral History (Oral History, 1978), and in the Cooke-Ravien Volume of Volcanological Papers (Johnson, ed, 1981), archaeologists examining pottery shards on Long Island accepted the presence of Yomba as probably real.

Egloff and Specht, 1982, wrote of pottery shards found on Long Island, and indicated agreement with my earlier hypothesis:

> These oral traditions describe the existence in the past of an island called Yomba westwards from long Island. The Yomba islanders are said to have made pottery prior to their escape to the mainland at the time that Yomba erupted. Mennis (1978) argues that the destruction of Yomba took place before the last major eruption of Long Island; her estimate is not too early for some of the Long Island pottery to have originated from Yomba (1982: 440).

Having read the reports about Yomba Island, scientists from the University of California visited Hankow Reef during an extensive study of other volcanoes in the area in 2004 and I received an email from Professor Ed Silver with the news that, while Hankow Reef was volcanic, it had not erupted for thousands of years.

> We were very intrigued by the Yomba stories and spent significantly more effort studying the flanks of Hankow Reef than many of the other volcanoes. I can say with some certainty that our data do not show compelling evidence for a young (within the last 1000 years), major collapse structure. The reason we spent so much extra time there is that there is a major submarine break that could indicate an ancient collapse (greater than 100,000 years), though there are other explanations for this structure" (Personal Communication, Ed Silver, August 2005).

At least we now knew that Hankow Reef was volcanic and Yomba Island is now listed on the international list of volcanoes in the world, but the question remained was how did the island disappear? Although some informants stated that Yomba Island erupted before it sank, others denied this saying there was no eruption but the sea "drowned the island." which indicated a tsunami occurrence.

Simon Day, a tsunami expert from London, and his colleagues were intrigued by these oral traditions. In 2005, they combined their geological research with investigating collections of oral traditions. They searched the area of Astrolabe Bay including Bilbil Village for past evidence of giant tsunami waves – in particular, for large rocks that may have been swept to higher ground. Amazingly on the beach at Bilbil Village they found boulders which Day described as "coral boulders from a 500 old tsunami deposit, associated with oral traditions of the disappeared island of Yomba" (pers. comm).

It was an exciting find which verified the people's traditions about Yomba Island - it had been a real island where their ancestors had lived. Tim Stephens, staff writer of the University of Santa Cruz in California, wrote "Simon Day and his colleagues, using carbon-dating on dead coral reefs now sitting on dry land found physical evidence that uplift had occurred" in the Madang Harbour in about 1450 causing some islands to emerge from the reefs. Later, a large tsunami struck the islands further out to sea (Stephen, 2007). This article was written exactly thirty years after I had first heard of Yomba Island and its disappearance. At last there was scientific evidence to back up the oral traditions of why and how the island had vanished.

Malcolm Ross, linguist, writing in 2009 about the Yomba traditions I had collected, concluded that, because they were so similar and detailed over a long stretch of coast, they are "substantially true" (2009: 7). Ross agreed that Yomba Island could have been the cataclysm leading to a population shift to small pockets of Austronesian speakers up to 50 kilometres apart. He dated the separation into eastern and western dialects of the Bel languages as happening after the survivors from Yomba arrived in their new settlements and noted that the similarity in their languages suggests fairly recent dates of diversification. "In general, Bel speakers tend to retain their vocabulary, perhaps because vocabulary is taken to be the essence of language and their languages are emblematic of their identity, distinct from their Madang-speaking neighbours" (2009: 12).

From now on the presence of this island is important for scientists, historians, linguists and others in viewing the pottery spread, the dialects that developed in the Austronesian Bel languages; language of the Austronesian speakers spread after the island collapsed and even land claims of the survivors. The survivors from Yomba became landless having lost their island where they made pottery, spoke a Bel language and traded on large canoes, they were forced on to sparse islands and where possible they made pots for trading in their large canoes so they could go ***Sailing for Survival***.

Acknowlegements

There are many people to thank in writing this book. Some have given me advice over the years.

In Madang, Papua New Guinea: I would like to thank Sir Peter Barter for his practical help and interest and providing photos of the *balangut* canoe built last year in Bilbil Village and in contacting the councilors of the village to allow us to do further research there; Patrick Matbob for his help with a photograph of the *Spirit of Balangut*; nor should I forget my old friends, Pall Tagari, Derr Mul, Maia Awak and Gab Kumei of Bilbil village near Madang who built a *lalong* canoe in 1978 and patiently taught me the process of the construction.

On Magnetic Island: The Motu people who had come down from Port Moresby to build the two *lagatoi* for the VP50 celebrations in August 1995 patiently answered our questions and taught us so much about their culture, history and the *lagatoi* in the ten days we were there: Miria Vaina of Lealea, Lohia Daure, Mataio Taboro of Pari, and two women, Hera Taboro and Miriva Kohor. At that time, Mataio Taboro had just finished as Deputy Chairman of the Motu-Koitabu Council the National Capital District Commission. We would not have learned anything without the input from the Pari and Lealea people; my appreciation goes also to my colleagues who took part as a team of students from James Cook University studying the *lagatoi* including Mary Bani, Keith Tapp, Megan Croese, and Ed Boylan. In particular, I thank Megan Croese and Keith Tapp who gave permission for their illustrations to be used.

In Townsville: My appreciation goes to Dr Maria Friend, lecturer at the James Cook University in 1995, for her help with the initial project; and Michael Chambers from Townsville for a photograph of the *lagatoi* on Nelly Bay.

In New Zealand: My appreciation goes to Professor Glenn Summerhayes of Otago University, who is enthusiastic about Madang pottery and is preparing to do research on Bilbil Island in 2014 with which I will be involved. Thanks to him too for arranging for the Otago University to publish this book so that it can at last see the light of day; Ms Fuli Pereira, Curator of the Auckland Museum, took me through the many storage areas where a vast amount of Pacific material is carefully housed in an impressive building and gave me much information.

In England: Dr Simon Day, of London University and tsunami expert, helped with his research in the Madang area; Professor James Fairhead of Sussex University provided information on the wreck of the *Hydrus*.

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In France: Hubert Creusat, the President of the Association Des Amis Des Musees De La Marine, gave permission to use sketches by Neyret in *Pirogues Oceaniennes*; and my long time friend, Bob de Viana who assisted with the translation of parts of this book.

In Brisbane: The staff of the John Oxley for help with finding maps of Papua; Professor Ian Lilley of the University of Queensland for ongoing interest and encouragement; Dr Nikki van Kammen who edited one of the latest drafts; Imelda Miller of the Queensland Museum who gave us assistance and access to Papuan artifacts in the storeroom of the Museum; Mrs Janetta Douglas who was the editor of the Hiri Moale Magazine, 1994; Peter Edwards for the maps of the Madang area; and my family and friends who have given me time out from other activities.

Last but not least many thanks to my husband, Brian, who has helped with editing the manuscript, and with the technical side of computers and printing; without his help it would not have been possible.

Photographs, diagrams, maps and tables: These are acknowledged in the text. Those that have no acknowledgement are, with a few exceptions, by the author. The exceptions are where the origin is unknown and are obvious.

Lealea girls on Magnetic Island in front of their lagatoi**,** 1995.

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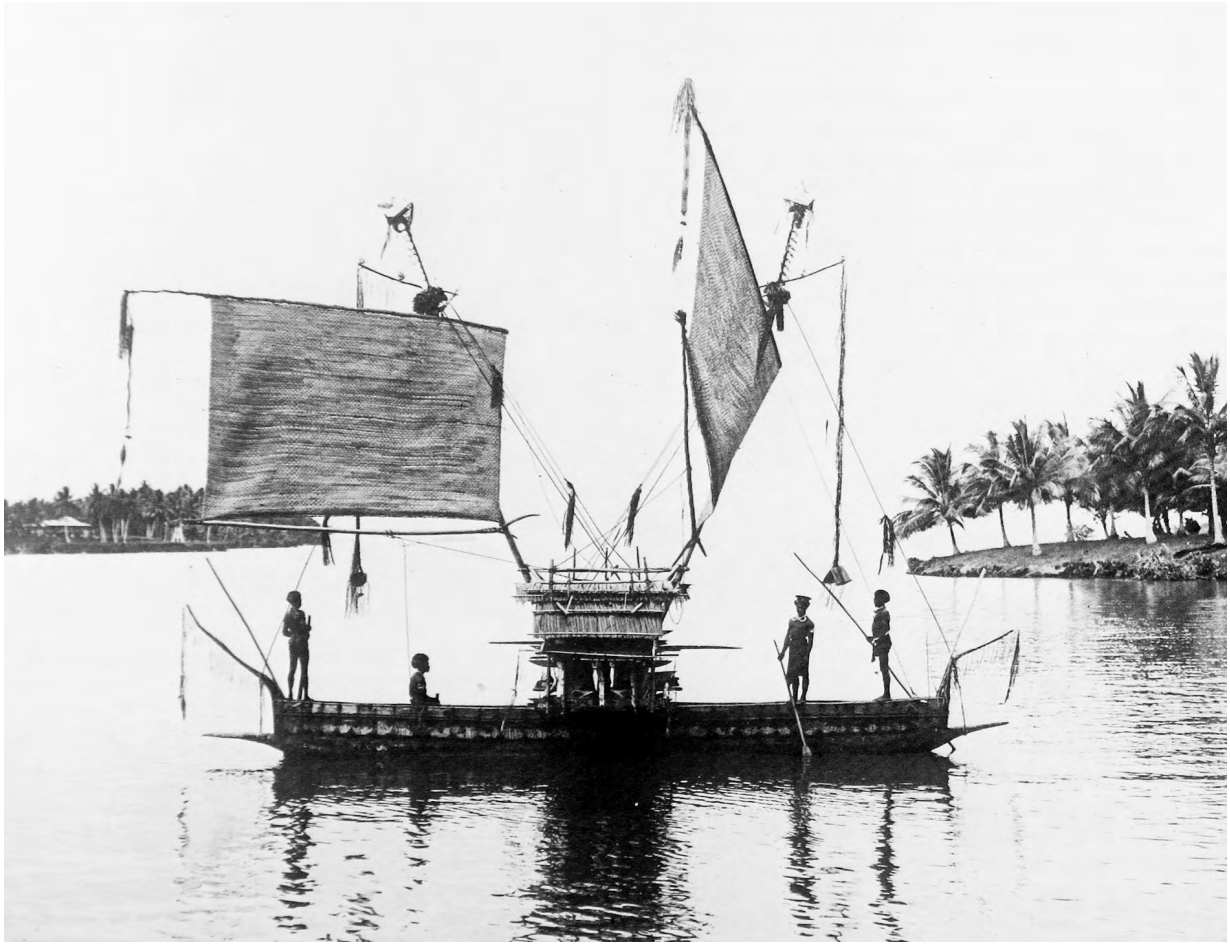
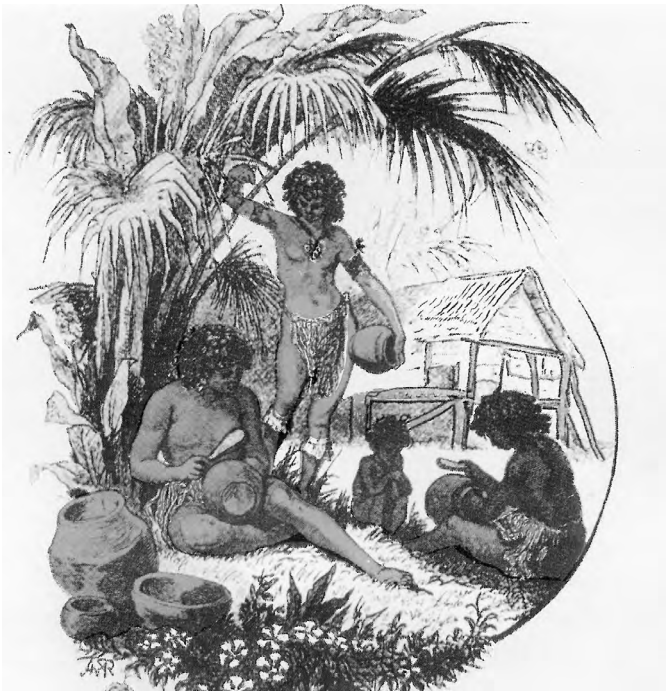
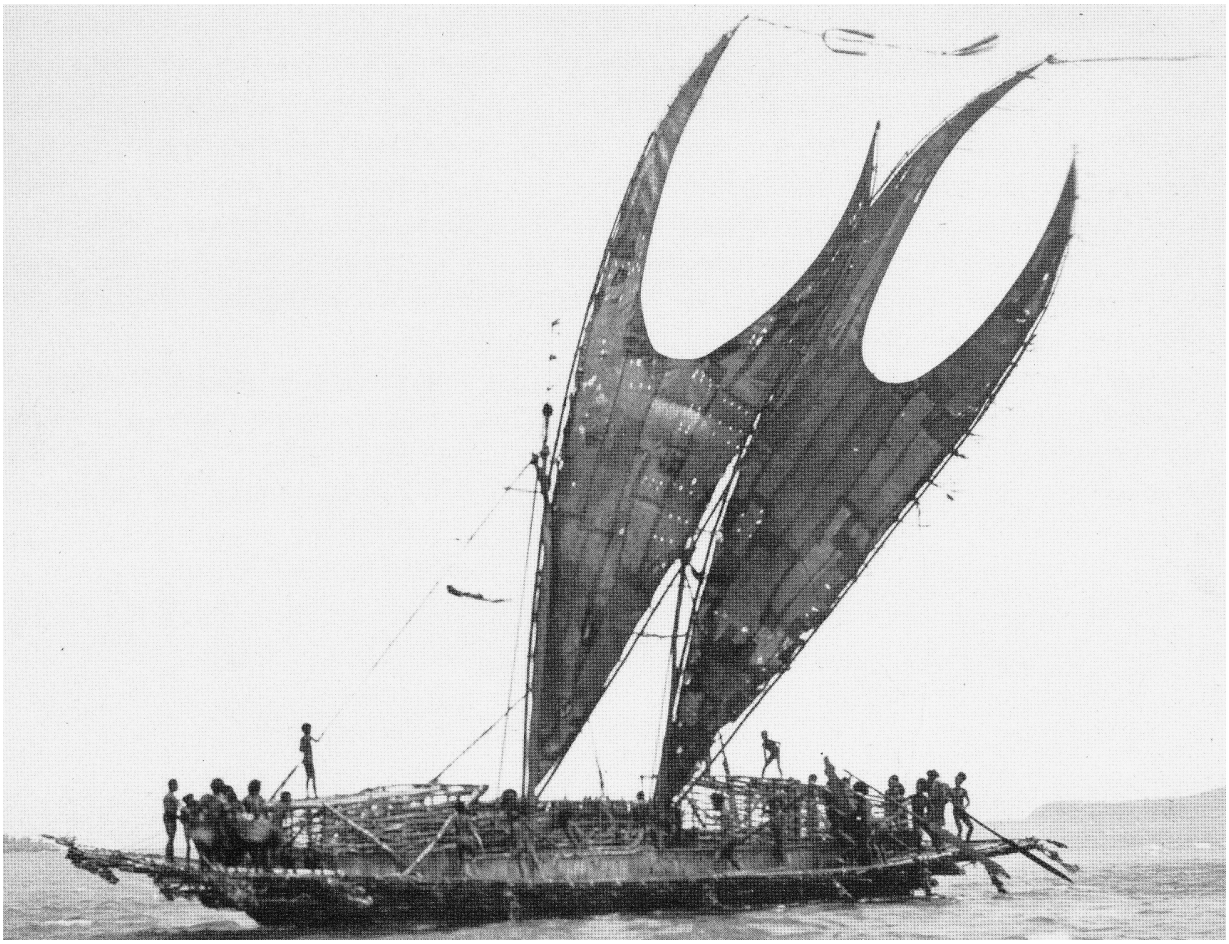


A Bel balangut *in Madang Harbour.* Bethk, 1905.

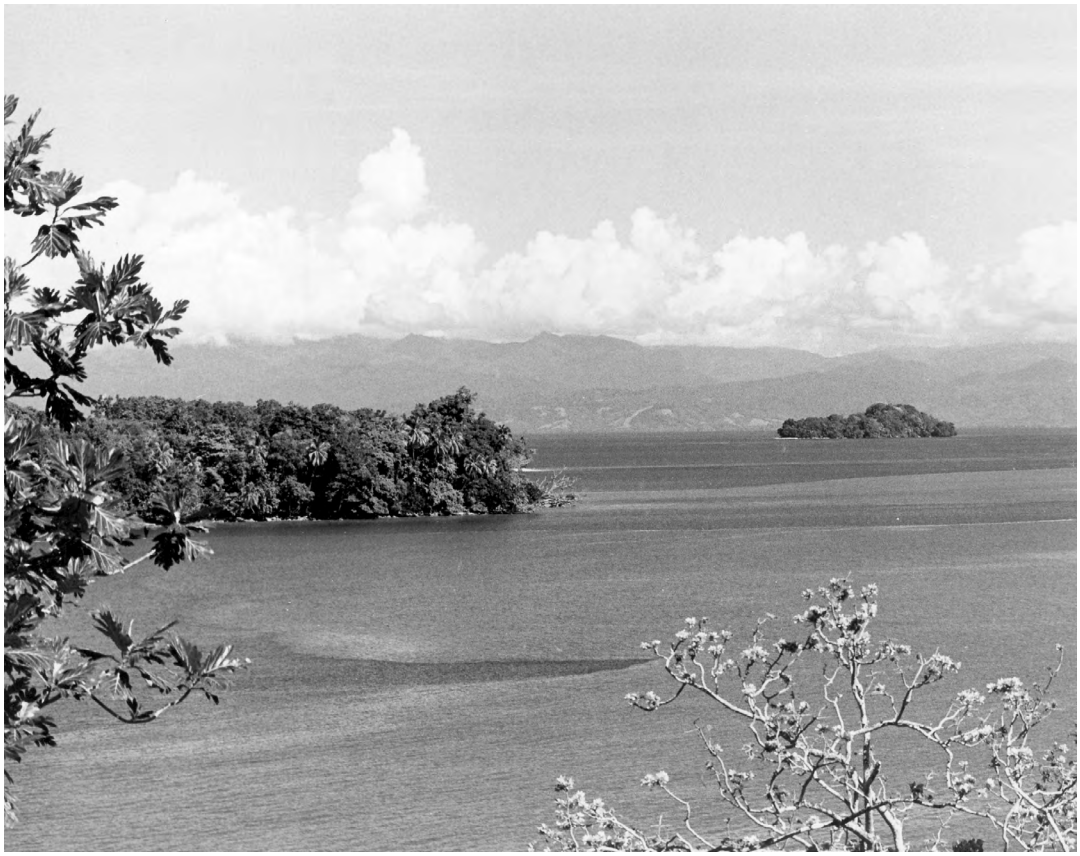


Bel potters on Bilbil Island, making pots for the Bel trade. Finsch, 1888.



Above. Lagatoi in Port Moresby Harbour, 1880.

Below. Motu women potters in Port Moresby, making pots for the Hiri *trade, 1900s.*



Above. Looking across Astrolabe Bay to Bilbil Island

Below. Hanuabada Village, Port Moresby. Seligmann, 1910.

Introduction

The objective of this book is to make a comparison between two traditional trading systems in Papua New Guinea and to study the trading canoes and the pots in each system. The *dadeng* or exchange system was carried out when the sailors went on a *waing*, a voyage, to carry out the *dadeng*, trading, on the north coast in the Madang area whereas the *hiri* was on the south coast near Port Moresby and was carried out by sailors on board the *lagatoi*. The *dadeng* trading sphere stretched from Karkar Island in the west to the Rai Coast and to the Siassi Islands in the east, whereas the *hiri* trading sphere stretched from Port Moresby across to the Gulf of Papua. The principal trade items in each case were the earthenware pots, which the women produced, but there were many other trade items as well. The men built the large canoes needed to trade these pots in both the *dadeng* and the *hiri*. The trading canoes used in each of these trading systems were studied at close quarters while they were being built.

> When some 3500 years ago, Austronesians began expanding eastward from Island Southeast Asia, they took two main routes. Some sailed east across the Philippine Sea to the Marianas Islands and, some centuries later, to the Belau (Palau) group --- others took a more southerly route along the north shore of New Guinea - - to the Bismarck Archipelago off the massive island's northeast coast. --- --- Current evidence indicates that the descendants of those seafarers who followed a more southerly route to New Guinea's Bismarck Archipelago and then turned east, really opened up the Pacific to settlement. After a century or two in the Bismarcks and its environs, during which they traded and intermarried with local populations and adopted some of their food plants, the then genetically mixed sailors continued eastwards (Howe, 2008: 133).

There is now further evidence that some of these Austronesian speaking Lapita people travelled west down under Papua New Guinea and settled on the Papuan coast some three thousand years ago. So they did not just continue travelling east towards the Pacific but some doubled back to the southern part of New Guinea. Recent discoveries of Lapita fragments nearly three thousand years old in Caution Bay, close to Port Moresby point to settlements of ancient pottery makers who had moved from the Bismarck Archipelago and travelled southwest along the Papuan coast establishing settlements. Lapita pottery has so far not been found on the north coast of New Guinea except for one sherd in the Sepik area, The Type X pottery described by Ian Lilley which appeared on both sides of the Vitiaz Strait and in the Siassi Islands, dates to around 1000 AD and seems to mark the beginning of the Vitiaz Strait trade network described by Harding (1967) (Ross, 2009: 27).

Professor Ian Lilley encouraged me to see the bigger picture of the movement of the Lapita people to the north and south coasts of Papua New Guinea. The Lapita pottery found recently in Caution Bay was of the late Lapita style and other Lapita people had already travelled from West New Britain towards Tonga before these ancestors of the Motu arrived in the Port Moresby area. There could even have been a circular movement of Polynesian people back from the Pacific to the Papuan Coast which would account for the features of the Motu people. Lilley agreed that there was no doubt the Motu and Bel had common ancestry in the West New Britain area, proved from linguistic and archaeological findings, but the Bel, who settled along the Madang Coast arrived at a much later date than the Motu people did on the south coast. (pers. comm. February 2014). Matthew Spriggs noted the connection between "the spread of pottery use along the north New Guinea Coast corresponds to the distribution of the North New Guinea Cluster An [Austronesian] languages (1995: 122).

How else did these people travel but on large canoes adapted to sail across the sea. The canoes used in each trading system will be studied. **Firstly**, the types of canoes in the Madang area will be described: the *lalong* (one sail) and the *balangut* (two sail) canoes will be discussed; the particular characteristics of the canoe with the outrigger and the potcage and the process of construction of the canoe; decorations on the canoe and the sail which were marks of identification. **Secondly**, the Motu canoes, the *lagatoi*, will be described: they were large vessels made by lashing several canoe hulls together with shelters at each end. The pots were stored in these shelters and in the hulls for the long trip to the Gulf. Comparisons will then be drawn between the *lalong* and the *lagatoi* and conclusions made about the canoes and their place in the culture of the people and the fact that the form of the canoes followed the function they filled. It will be seen that each style suited the purpose in ***Sailing for Survival.***

This study helps us understand the extent to which culture is affected by the physical environment. The clay-rich soil but poor soil environment of Yabob and Bilbil meant they depended on their pots and their canoes for survival. The Motu people, too, lived in a geographically poor area and needed to sail their *lagatoi* to the Gulf for food. It, too, was a case of ***Sailing for Survival.***

There has been a great deal of research carried out on the Austronesian speakers in recent years in Papua New Guinea and in the wider arena of the Pacific. *The Austronesians: Historical and Comparative Perspectives* edited by Peter Bellwood et al, was published in 1995. Chapter One by the editors gives a good overall introduction to the Austronesian speakers in history where they came from and how they have spread across the world (1995: I). Tom Dutton's chapter on *Language Contact and Change in Melanesia*, provides a map showing the Austronesian spread. In 1996, another publication, *Origins, Ancestry, and Alliance, Explorations in Austronesian Ethnography*, was edited by James Fox and Clifford Sather. The chapter by Bellwood, *Hierarchy, Founder ideology and Austronesian Expansion* suggests that founder members of Austronesian speakers settlements had the pick of the land and 'free access to all resources' (1996: 30). We will see that this did not happen in the Austronesian speaking villages mentioned in this report because the non-Austronesian speakers had already settled on the most fertile land.

The *Dadeng/Waing* trading system in Madang

The Madang trading system was first noted by Miklouho-Maclay, a Russian scientist, in 1871. He went on several trading voyages with the people and described the *lalong* and *balangut* canoes (Sentinella 1975). The people have two words to denote their trade. One is *waing* which describes going on a sea voyage and the other is *dadeng* which is the trade that is undertaken on that voyage. I have decided to call the system the *dadeng* rather than *waing* as this could mean any sailing trip whether to catch fish or travelling to another place. *Dadeng* denotes the trading transactions that took place.

In 1888, Otto Finsch, a German scientist, made observations on the culture of the Bilbil and Yabob people and on their trading canoes (Mennis 1996:18-24). *The Gedaged-English Dictionary* by John Mager (1952) provides a comparative analysis of terms used in different Madang villages and local variations in dialects of the many Austronesian speakers' groups. The Yabobs and Bilbils see themselves as belonging to the Bel language group. Mager also provides insights into the culture of the Bel people.

The results of research, based on the taped evidence of the former traders themselves, are also useful here. The Bilbil men in the 1970s could still remember going on trading trips before the war. Over a hundred interviews were translated into English from *tok pisin* and published by the National Museum, *Oral History as Oral Testimonies from Coastal Madang, Parts One, Two and Three (*Mennis, 1980-1981*)*

The trading stopped before the Pacific War and the Bilbil people no longer live on the island but have settled on the nearby mainland. This is a study of the traditional trading system, called the *dadeng*, which must be spoken of in the past tense. The diary kept during this time was published in *The First Lalong canoe built for forty years, Bilbil Village* (Mennis 1980a), and expanded subsequently in *Mariners of Madang* (Mennis, 2011).

The *Hiri* trading system in Papua

Rev J. Chalmers, a missionary with the London Missionary Society, in his book, *Pioneering in New Guinea* (1887), described the *hiri* canoes. That same year, J.W. Lindt in *Picturesque New Guinea* (1887), wrote an historical account of the manners and customs of the Papuans with many illustrations in the text including some of the *lagatoi* at sea. Lindt was a photographer of some note and he gives a clear description of the *lagatoi* being built. Captain Barton gives an eyewitness account of the *hiri* in a chapter entitled, *The Annual Trading Expedition to the Papuan Gulf*, published in *The Melanesians of British New Guinea* (Seligmann, 1910). The myth of Edai Siabo, a legendary ancestor, who taught the Motu people how to make the *lagatoi* and go on *hiri* trips, is described by K.K. Moi, himself a Papuan, This incorporates many of the traditions, rituals and laws governing the *hiri*. *The First Hiri Trade Expedition from the Central Province* in *Oral History Vol. vii Number 6. 1979.*

Charles Gabriel Seligmann (1873–1940) was a doctor and ethnologist who developed a life-long interest in anthropology while attached as a doctor to the Torres Straits expedition of 1898 led by A.C. Haddon. He joined the 1904 Cooke-Daniels expedition to New Guinea as scientific director where he collected material from the south coast of Papua New Guinea, including the Mekeo, Roro, and Massim areas. This expedition, together with his notes from 1898, provided the basis for his 1910 publication *The Melanesians of British New Guinea* (1910).

J. Allen, an archaeologist, saw trade as a mechanism for social interaction, integration and elaboration. In his article, *Fishing for Wallabies* (1977), he offers a reconstruction of the social and economic life of the Motu. In a further article, *Pre-Contact Trade in Papua New Guinea*), in *Melanesia Beyond Diversity* (1977), Allen wrote extensively on the pre-contact trade in Papua. Allen paints an overall picture of trade and trade links along the coast and inland of the whole country, placing the *hiri* trading system in a geographic and economic perspective, in relation to other

trading spheres (1977). Nigel Oram describes the role of the pots as well as the *hiri* trading system. The paper has three maps giving locations of trading villages. It is a scholarly work with many references to other academics' and missionaries' research and is essential reading for anyone studying the *hiri* trading system (1982).

Tom Dutton and Iru Kakare wrote *The Hiri Trading Language of Central Papua, A first Survey* and found that the trading language was "an important and flourishing language associated with the *hiri* trade cycle" (1977:15). Dutton later edited *The Hiri in History, Further Aspects of Long Distance Motu Trade in Central Papua* (1982). This is a significant work on the *hiri* generally. The emphasis is on the pottery, trade items and archaeological research, but it also mentions ceremonial rituals and customs that take place on the *lagatoi*. Dutton is a linguist and other contributors include archaeologists such as Jim Allen, and a student of religious studies, John Gwilliam, as well as oral historians. Because they came from such varied backgrounds, they are able to give a holistic approach to the *hiri* voyages.

General References on Canoes

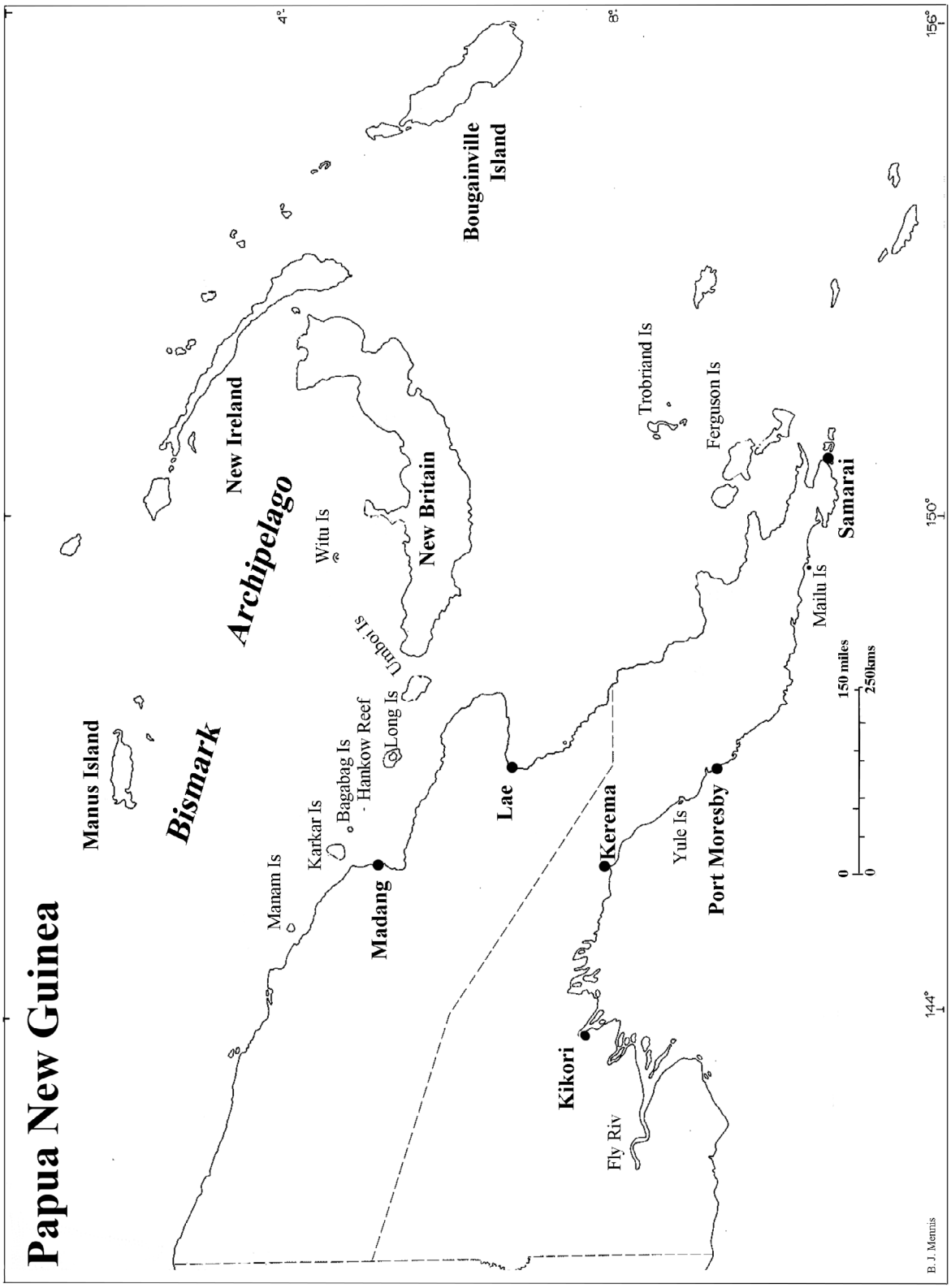
The main authorities on canoes of the Pacific are A.C. Haddon and James Hornell, who wrote *Canoes of Oceania*¸ with particular reference to Vol ii. *The Canoes of Melanesia, Queensland, and New Guinea* (1991). This work is the most comprehensive of its kind and is an excellent reference tool but it has some shortfalls. While Haddon and Hornell did some field research of their own, their book is mainly a compilation of research results and information gathered by other authors and put in one large reference book. Another authoritative book is by J. Neyret, *Pirogues Oceaniennes*¸ 1976. Volume I. This work is in French and deals with the technical details of canoes in Melanesia, the construction of the canoes, the sails, rigging, and outriggers. To some extent it duplicates the work of Haddon and Hornell to which there are many references but, at the same time, this volume adds much to the knowledge of these canoes, particularly in the precise illustrations. A recent publication on canoes of the Pacific is *Vaka Moana, Voyages of the Ancestors* (Howe, 2008), which has been described as "the most comprehensive and complete account of those ancient seafarers who developed the world's first ocean going vessels".

Definition of Terms Used

The name of the trading system of the Motu people was *hiri* which means 'tied' and probably refers to the many hulls that are tied together to make a *lagatoi* which were the vessels used during the *hiri*. Haddon and Hornell, the authority on canoes, include *lagatoi* as canoes although they also refer to them as large sailing rafts (1991: 230). The *lalong* are one-mast outrigger canoes and the *balangut* are the two-mast outrigger canoes in the Madang area. For this report the word canoes will be used to describe both the *lagatoi* and the *lalong* vessels. A distinction needs to be made between the terms gift exchanges and formal exchanges, which can also be called trade. Gift exchanges cover any gift, which is given for the sake of friendship rather than of trade. Thus the Bilbil and Yabob traders would be greeted on arrival with betel nut and a gift of a pig which would be killed and eaten in a village feast of welcome. Later the formal trade exchange took place. Harding described 'delayed exchange' which he argued was a type of social exchange similar to the *kula* of the Trobriand Islands where certain objects might be passed around the trading sphere (1967: 243). The term 'delayed exchange' used by Harding best explains the trading system in Madang where the goods exchanged for the pots are picked up at a later time and not in a direct exchange (1967: 243). Harding details exchanges in the Vitiaz Strait which he likens to the social exchanges of the *kula* Ring in the Trobriands.

Brookfield and Hart, in their geographic interpretation of trade in Melanesia, studied the transactions from the economist's point of view and concluded that the distinction drawn between "transfer" and "trade" is quite irrespective of the mode of transaction. Transfer should be more in the line of barter whereas they analysed trade as having a multitude of "inter-personal links" (1971: 316). Allen defines trade as, "the exchange of raw materials and manufactured goods and to a limited extent labour and services between individuals and groups of individuals over short and long distances" (1982: 193).

In this publication, I have gone from the general picture of the trading systems, which set the scene, followed by the particular descriptions of the canoes, pots and the trade items.


Papua New Guinea
Manus Island
Bismark
Archipelago
New Ireland
Bougainville Island
Witu Is
New Britain
Umboi Is
Trobriand Is
Ferguson Is
Samarai
Mailu Is
Karkar Is
Bagabag Is
Hankow Reef
Long Is
Manam Is
Madang
Lae
Kerema
Yule Is
Port Moresby
Kikori
Fly Riv
150 miles
250kms
0
0
4°
8°
144°
150°
156°
B. J. Mennis

Part One: Introduction to Peoples and Places

> *Some anthropologists nowadays refuse to discuss pre-history of [ethnic] societies at all on the grounds that the evidence being so sparse, conclusions can be mo more than guesses. I agree with them that we must be very cautious and precise in our use of evidence but I do not agree that the past must remain unknowable in the absence of written records. ---Various historical influences may be made as a result of ethnic classification. If two peoples are entirely different in every possible respect it may be inferred that they have never been in any sort of significant contact with each other. if two people are very, very similar it may be inferred that they have had prolonged and intimate contact or even that they are of common descent having somewhere, at some time, been a single people* (Groves, 1957: 330/335).

The Motu and the Bel people both belong to the Austronesian language group but had no contact with each other for over two thousand years as they lived on opposite sides of Papua New Guinea, separated by high mountain ranges and hundreds of kilometres of twisting coast. On the north coast, the Bel group traded pots for food and artefacts while on the south coast, the Motu people traded their pots for sago and artefacts. However they had an amazing array of similarities in their cultures and in their response to the environment which can probably be traced back to common origins in the Bismarck Archipelago.

Their distant ancestors left Taiwan and were part of the most widespread language family in the world with "between 1000 and 1200 distinct Austronesian languages." Spreading halfway around the globe, including Easter Island and Madagascar (Bellwood, 1995:1). Austronesian speakers in the Bismarck Archipelago of New Guinea developed a Lapita pottery style around 3,500 years ago. Three hundred years later the Lapita people started heading east to become the first humans to settle the Solomon Islands, Vanuatu and Fiji, moving on canoes of all types. But some of them turned back towards the mainland of New Guinea where they continued their maritime existence, building large canoes, making pottery and spreading their populations along the north and south coasts (McNiven,2011: 4).

Archaeological research finds Lapita pottery in Papua

Evidence is now emerging that there were Lapita pottery makers living on the mainland coast of Papua [the Motu area] for an extended time and they were not merely passing through as previously thought. With the LNG Project being established in the Caution Bay area much vacant land has been bulldozed, uncovering wonderful archaeological sites. Initial archaeological excavations have unearthed deposits of Lapita pottery, tools and many other items of material culture. According to an ABC Science Program, the Caution Bay finds will transform the history of southern coastal Papua New Guinea. Archaeologist, McLaren added, "We document the first known occurrence of Lapita peoples on the New Guinea mainland. The new Lapita sites date from 2900 to 2500 cal BP and represent a newly-discovered migratory arm of Lapita expansions that moved westwards along the southern New Guinea coast towards Australia" (McNiven (2012: 1). The arrival of Lapita colonists 2,900 years ago found the area already occupied by non-Austronesians and land transformed by more than 1000 years of prior human settlement and they had to adapt to new circumstances and environment.

These finds show that Lapita people had sailed around the coast of New Guinea thousands of years ago and continued to make Lapita pottery in the same style as their ancestors had on New Britain. "So suddenly everything changed. These weren't just people moving out into the Pacific moving further and further east. We now know they came underneath the bottom part of Papua New Guinea and settled on the mainland," says McNiven. "This is a whole new chapter of Pacific history that nobody knew about." Radiocarbon dating indicates the material is "between 2500 and 2900 years old" (quoted Weule: 2011). "Our new results indicate that a major rethinking of earlier models of south Papuan ceramic colonization, Lapita dispersal and regional trends are required. This new south Papuan evidence will be significant for a better understanding of the early ceramic and cultural history of the island of New Guinea and the Western Pacific" (David et al, 2011: 588)

Professor Glenn Summerhayes, from the University of Otago, an expert in Lapita archaeology, was not involved in the project, although he says some of the pottery from the site is definitely Lapita but from the Later Lapita period as it is less intricate. The site of these discoveries may have once been part of an island. Roro traditions reported that Hall Sound once had islands. Furthermore, Redscar Head, which is today joined to the mainland by a mangrove swamp, was "recorded by the Spaniard Don Diego de Prado in 1606 as being an island" (Summerhayes, quoted Weule, 2011).

Both areas of this research in Madang and Port Moresby had stories of disappearing islands and changes in the landscape. This may have been partly from a build up of silt from the rivers flowing into the Papuan Gulf but then bearing in mind Papua New Guinea is on the Pacific Ring of Fire it would have experienced many tectonic events with volcanoes erupting, strong earthquakes or tsunamis sweeping over the coasts over the past thousands of years. Some islands sank and others became part of the mainland over time.

This present study covers the lives of more recent Motu pot-makers possibly the descendants of those Lapita people who migrated and set up pottery centres and looked for other coastal people to trade with. Pottery found in the Torres Strait and a rock painting of a large *lagatoi* points to visits from *hiri* canoes to the north coast of Australia. The *lagatoi* must have made a big impact on the Torres Strait Islanders for them to illustrate it amongst their rock art. Whether the *lagatoi* visited there intentionally or were blown off course during a normal *hiri* expedition is not known. On the north coast, Madang mariners were occasionally blown off course and survived on a distant island where they would wait for the storm to subside.

The Bel and Motu people shared a common ancestry

Matthew Spriggs describes the situation succinctly:

> The spread of pottery use along the north New Guinea coast and indeed up the Markham Valley -- corresponds to the distribution of the North New Guinea Cluster An [Austronesian] languages. The association between archaeological and linguistic distributions suggests that the movement of Papuan Tip Cluster to the west along the Papuan coast took place rapidly about 1800 years ago, and the time depth for the spread out of the Bismarcks area of North New Guinea cluster languages may be within the last 1500 years (1995:122).

The Austronesian speakers of the North New Guinea Cluster include the Bel language group whereas the Motu on the south belong to the Papuan Tip Cluster group. Many aspects of the culture of these two groups point to a common ancestry and now there is confirmation from both archaeologists and linguists. Common characteristics in their cultures may or may not be attributed to the mother colony from which they originated.

The Motu and the Bel groups had a similar set of myths and rituals to protect their large canoes which they built and sailed to other villages to trade their pots for food and other necessities. Differences were found in the style of canoes they developed, in the social structure of the clans and in the trade items, which were traded against their pots. Bellwood said that, “every Austronesian speaking society has a different history and it would be futile and divisive to allocate degrees of inherited Austronesian-ness” (1995:2). I beg to differ. It is fascinating to see how two lots of people of distant common ancestry adapted to their environment. The Bel and Motu people certainly had their own history but it is not pointless to study how they adapted to the circumstances they found themselves in and to compare and contrast their pottery and canoes and their trading systems. Whether it is worthwhile to take it a step further and decide which of their cultural facts were specifically from their Austronesian origins or inherent Austronesian-ness is a matter for further discussion. Irwin also wrote, “There may be something to be gained by comparing different episodes of colonisation with one another to see what they have in common as processes” (Irwin, 1991: 506).

A problem with this is that some non-Austronesian cultures in Papua New Guinea shared similar cultural traits with the Austronesian speakers in that they made pottery which they traded along the coast in large canoes. A case in point is the Mailu people on the south coast of Papua who traded their pots in large double canoes with the crab claw sails similar to the Motu ones. Although their language is now classed as non-Austronesian, the Mailu have many Austronesian words in their vocabulary. Did they adopt Austronesian characteristics along with the Austronesian terms? Or were they once Austronesian speakers who later changed their language? Spriggs said authoritatively, “The pottery making centre at Mailu along the South Papuan Coast is now non-Austronesian (NAN) speaking, but this is obviously a recent switch. Genetically, the Mailu population group with other South Coast Papuan AN-speaking populations” (1991: 10). Oram noted that a group of villages on Yule Island, the Marehau, who undertook *hiri* voyages and spoke Motu at the time of contact later changed their language to the Roro Language (Oram 1981: 215). So the Mailu, although now non-Austronesian speaking, once belonged to that language group and changed their language. Genetic testing shows their true origins.

Although dates for dispersal into new areas have been suggested, the Bel villages in Madang were established at a much later date. They trace their origins to an offshore volcanic island, Yomba situated where Hankow Reef is now, and which sank during a tsunami between 1400 and 1450 (Day, 2012). Some of the people escaped the sinking island

and settled along the coast of Madang and offshore islands where these small pockets of Austronesian speakers still trace their origin to Yomba Island and recognise the close ties they have with each other (Mennis, 1978: 2). Perhaps the initial population movement was from West New Britain to Yomba Island 2,500 years ago where the people built canoes, and made pottery which they traded across ro the Siassi Islands. Malcolm Ross noted that, "The Meso-Melanesian, Papuan Tip and North New Guinea Clusters appear to have come from a single ancestral linkage. They are more closely related to each other than to any outside group" (1989:137).

Andrew Pawley added, "Following settlement of the Southeast Papuan region, speakers of a Papuan Tip language moved westwards along the south coast of Papua. This last movement can be correlated with the appearance of a pottery-bearing culture in the Central Province around 2000 years ago" (1995: 63). Here they settled and later began the *hiri* expeditions to the Gulf to obtain sago. They sailed in large *lagatoi* canoes the first of which was built by Edai Siabo who, according to legend, was taught by a spirit in the cave while he slept.

The people on Yomba Island, now Hankow Reef, made pottery and traded them in large canoes along the coast. The island was closer to the Siassi Islands and the previous inhabitants often traded there. Some were visiting the mainland to collect pigs for a feast and survived the tsunami. When they stood on the mainland cliff and looked out, their island had disappeared. Those who escaped Yomba brought their skills of potmaking and canoe construction with them but not all their descendants could use these skills because of the new environment they found themselves in. Tabad, Riwo, Siar and Kranket Islands could no longer produce pots because they had no sources of clay. Yabob, Bilbil and Mindiri and some in the Gogol area were the only people to continue the pottery production as they had access to clay deposits. The Gogol people of Barum no longer made the large canoes because they had moved inland. Linguist Malcolm Ross concluded that, "Proto Bel was indeed spoken on Yomba. but after the island's disappearance and the dispersal of most of its people onto nearby islands, there was an initial diversification into dialects" (2009: 19).

A. The Bel people of the North Coast of Papua New Guinea (Madang)

The Madang area on the north coast of Papua New Guinea has lush coastal plains and densely wooded mountain ranges. The major rivers are the Ramu and the Gogol. Offshore, the province has five volcanic islands: Manam, Karkar, Bagabag, Crown, Long Island, and Hankow Reef, a submerged volcanic island. Linguistically, the people of the Madang Province are divided into two main groups: the Austronesian speakers (AN) and the non-Austronesian speakers (NAN) who settled first. Malcolm Ross, linguist, wrote that, "the Bel languages belong to the large Oceanic subgroup of Austronesians. ….. Linguistic and archaeological scenarios for the expansion of the Austronesian language family largely match each other. The archaeology indicates that Austronesian speakers reached the Bismarck Archipelago around 1400 BC. In contrast with the rapid settlement of the previously uninhabited islands of the Pacific, Austronesian settlement of mainland New Guinea was much slower, because it was already long occupied by Papuan-speaking taro- and yam-cultivators" (2009:6).

Bel Dancers. By courtesy, Rosalie Christensen.

There is a legend on the north coast of the first meeting between a taro-eating bush man and an Austronesian speaker related by Dau of Riwo in 1977:

> *A bushman walked down to the coast and saw a Tabad Island man making a canoe but the bushman did not know this. He stood on the mainland and watched the canoe being shaped. Later, that Tabad man got in the canoe and started paddling to the mainland for freshwater. When the Tabad man walked towards the creek, the bushman stood in front of him between two sticks and the Tabad man was afraid, thinking a fight might begin but the bushman took a small*

> *bilum from around his neck and offered the Tabad man some taro. They had to use sign language as they did not understand each other.*
>
> *The Tabad man refused the food thinking it would poison him. He spoke with his hands.*
>
> *The bushman shook his head and said with his hands, "No! It is good food," and he ate some himself. Then the Tabad took a tiny piece and tried it. He waited to see if he would die and then took a larger piece. After this the two of them became friends and marked a day for exchanging taro for fish. They would mark the day for the trade on their fingers and meet on the beach (Mennis 1977).*

In the Madang area, the Austronesian speakers still construct canoes but they are smaller coastal ones. They no longer need the larger *balangut* or *lalong* to trade their pots. They live on the north coast at Bogia and Medebur, on the islands of Manam, Karkar, Kranket, Riwo, Siar, Bilbil, and Yabob, on the Rai coast at Mindiri, Biliau and Wab and inland in the Gogol Valley at Ham and Barum Villages. Those who escaped from the sinking Yomba Island found themselves on small abandoned islands and a few infertile coastal areas which no one else wanted and turned to making and trading pots to support themselves. Common language, similar customs and culture, and ancestry bonded their settlements to each other so they often accompanied each other on trading trips. "We are brothers. Our ancestors swam from Yomba Island together." The oral traditions and genealogies on the Rai Coast connect small pockets of villages there with the Bilbil and Yabob villages through their ancestors who fled Yomba Island (Mennis, 2006). Linguistically they are right in their assumptions.

Riwo Village, Western Bel dialect (Graged)

> From Bilbil to Sek, the language is much the same. We undrstand each other; we have the same *bel*. We are the Bel people (Dau, of Riwo, 1976).

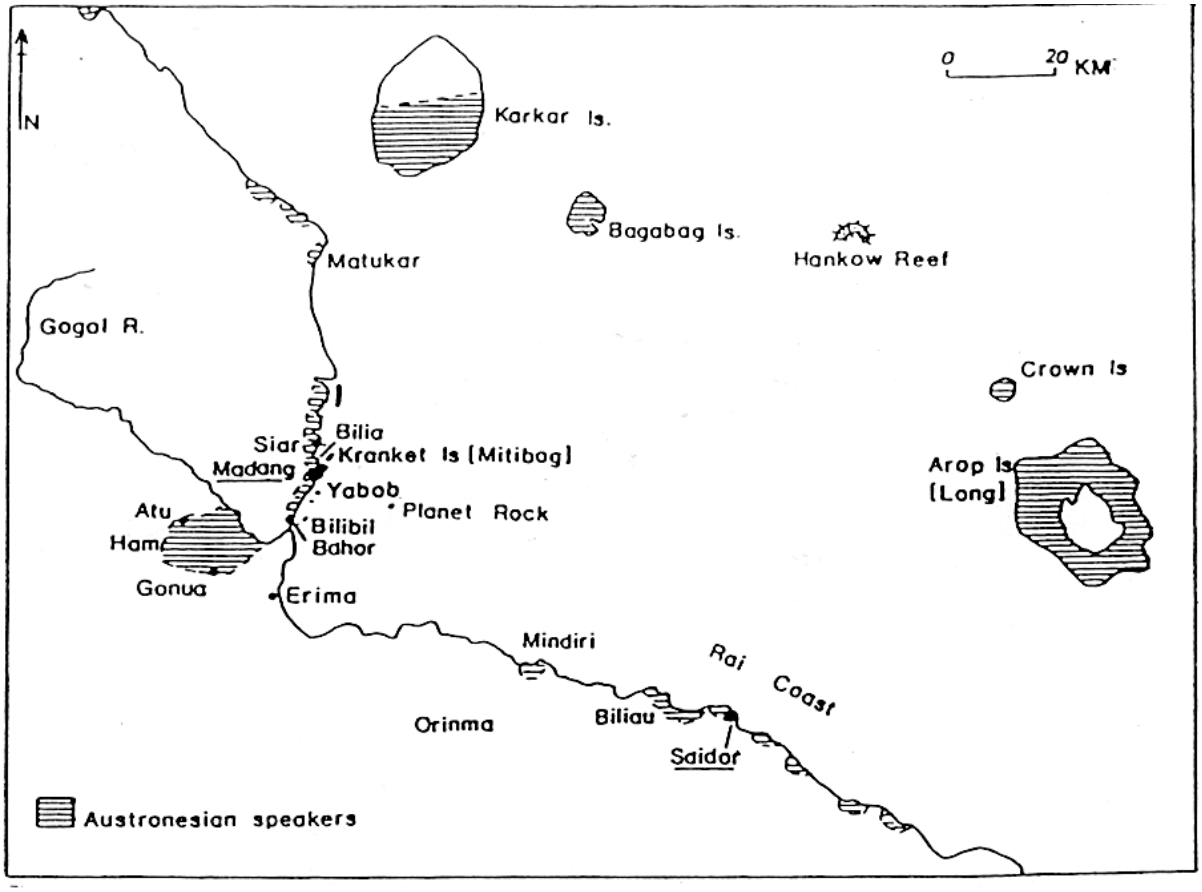
The Riwo people did not make pots but they built the large trading canoes, *balangut*, and sailed with the Bilbil traders on their long trading trips. Riwo and Tabad are nearby islands and remained friends until the Riwo invited the Tabad to a *singsing*. While there, some of the Riwo women tried to entice the Tabad men and the Riwo men got angry and trouble started. They sent a message to their allies on Sek Island. They also put some magic red juice from the *talad* plant in a pot and sent it to Sek to incite them to battle. The Sek prepared for the fight and called on their allies to come and wait for dawn. Then they got in their canoes and followed the reefs between Sek Island and Tabad.

Dau describes the fight:

> *On the morning of the fight, an old man on Tabad got up early and went down to the beach to wash his face. He looked out to sea and saw the line of canoes. He didn't see clearly and thought the canoes were a long shadow across the water. "It is only dawn and the sea is still in darkness", he thought and he went back to his house. He hadn't been there long when the fight began. Many died but some escaped. So Dauz, with the help of Balem, began a new settlement here at Riwo. My ancestors lived here and I live here. We have joined with the Riwo now, but before we lived on Tabad Island.*

From the above account, it can be seen that to get people on side, the Bel people used a pot with the betel nut mixture and magic red juice that was sent to other villages urging them to join in a fight or a revolt. If a member of the Bel group took some of the red concoction, it was a sign they were willing to join with their allies. Bek, of Riwo Village, dated the story about the origin of Riwo to the time before Kilibob and Manup so it was in the realms of antiquity. The Riwo were also famous for their canoe hulls which were bought by the Bilbil as the base for their great trading canoes (Mennis, 1980b: 44; 1981b: 49). Riwo had some clans who were Austronesian speakers and some who came down from the bush. Using sign language, they taught each other about their different customs and language. The Riwo people did not make pottery as they had no clay but they see themselves as *wantoks* of the Siar, Yabob and Bilbil people who were able to continue this tradition from Yomba Island. In

Origins of Clans in Riwo Village		
Clan	**Sub-clans**	**Place of origin**
Tabad	Takalafun Lelukanen Miu	Tabad Island. Before that the Tabad came from Yomba Island.
Badinanen	Azunanen	As above
Binogaz	Kumuiang Taupain Kadudoman Bazimuf	From Sek Island 7 generations ago
Siazagaz	Dabag	Came from the point near Nagada Plantation
Dauzagaz	Dujun Dugaten	From Duad island near Riwo
Mitiuntibun	Damonanen	
Malapau	M-fonen M-panenen	Came from Nobonob in the bush



Austronesian speakers in the Madang and Astrolabe Bay areas.

1904, when the people revolted against the German rule, they sent the Bilbil pot around to their allies with the magic juice inside to fire their bellies.

Siar Island, Western Bel dialect

Siar is a beautiful island very close to the coast and was part of the western dialect of the Bel group. Otto Finsch visited Siar Island in 1884 when the island was known as Dsiar. He found it smaller than Kranket Island and heavily forested, with only a few coconut palms. It had a lot of inhabitants for its size and the people had a domineering position in the area. They did not make pots but built the large canoes for trading and sailed with the Bilbil men on their long trading voyages.

Finsch described his visit to Siar in the 1880s:

> We landed on the beach on the western side and inspected the village. The houses are very scattered, very large, well built and stand on low poles. In front of the door is an entrance, which is covered on both sides by the overhanging roof. I even discovered the meeting house of the men, called *darem*. Set slightly apart from the rest of the village, it was hidden under the trees. Two very large drums (*do* or *garamut*) were new to me. As the men pointed out, each had a large hole drilled in one end, making them easier to move when a rope is attached. The Siar canoes were similar to the ones in Bilbil but did not have S-shaped beaks. Instead there was a curved prow, which was decorated with nautilus shells. The latter decoration was only fitting for the canoes of the headmen (Mennis, 1996: 51-56).

There are seven clans on Siar Island: Waifun, Lilung, Dikfon, Badalon, Sibontain, Banablau and Mizimu with each clan having its own particular mythical ancestor and totem. The Waifun Clan claimed descent from a noted ancestor who was the war-chief and a weather magician and master builder of canoes. With his magic he could make allied fighters strong, but also make his enemy weak. He would beat a war-cry on the *garamut*, calling the allies to come but another war-cry warned the enemy of an approaching battle. When there was warfare against non-Bel villages,

House on Siar Island in the 1880s. Finsch, 1888.

the Siars could depend on the Krankets and summoned them through the *garamut*. Although Kranket and Siar had their battles, they were generally allies with the same language and background.

Siar is in between Riwo and Kranket and they were usually strong trade friends of the pot-makers of Yabob and Bilbil. They also traded northwards to Karkar and the Rai Coast as part of a large Bel fleet. Their bush provided the materials needed for the large canoes, *balangut* or *lalong*, and specialist canoe builders made magic over the adzes, used to shape the hull (Hannemann, 1944: 15). Pech (1991) stated that the Siars were the foremost canoe builders and traders of the Bel group and held the dominant role in trading along the Rai Coast. However the Siars did not make the pots which were the currency of the day and the basis of the trade. For these they relied on the Yabob and Bilbil pottery. The Siars may have thought they were the major traders, but this is doubtful.

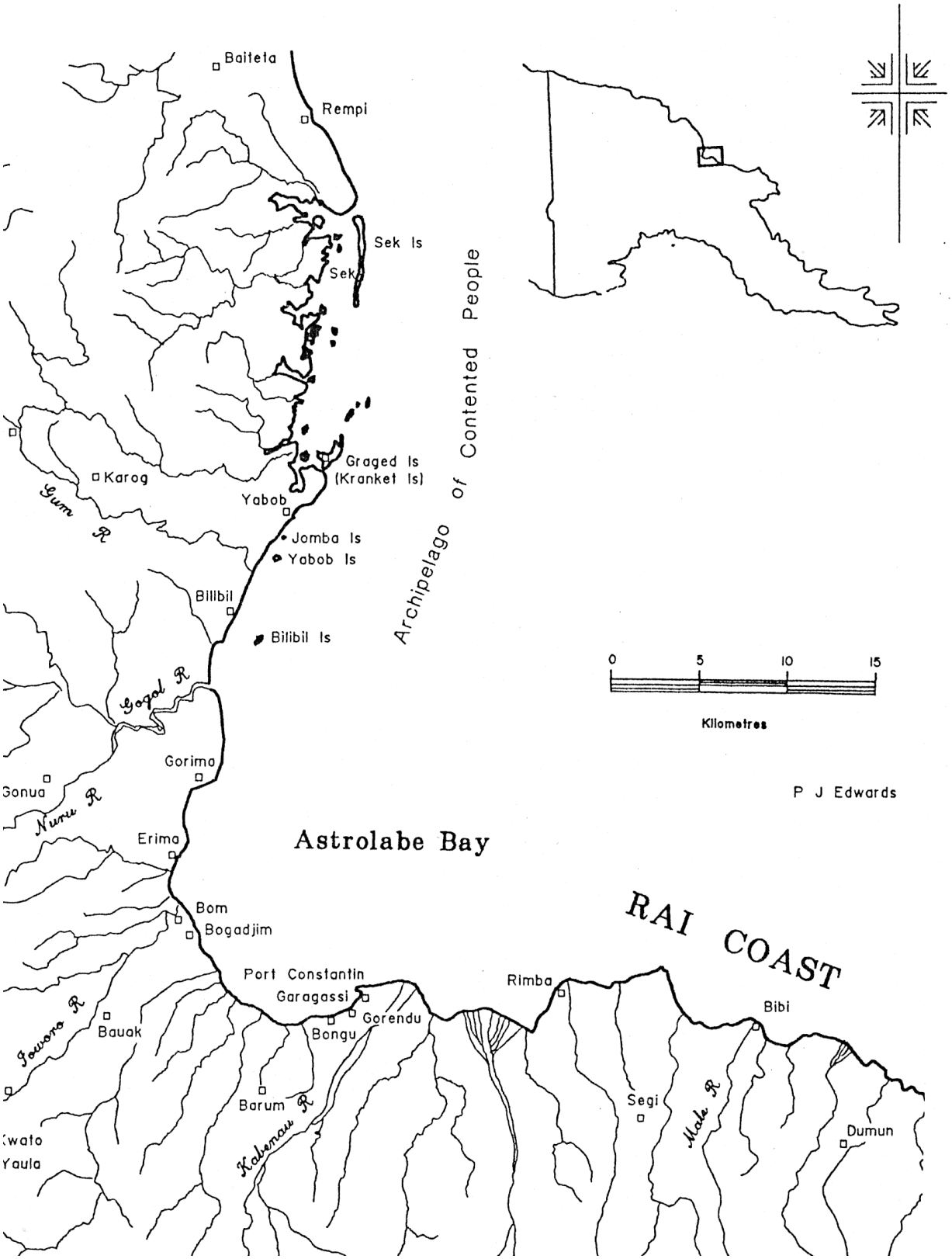
The Siar and the Riwo people traditionally traded toghether and this frendship is still celebrated in the *Deb* festival. The traditional Deb festival was still celebrated on Siar Island in the 1970s at the full moon, when the Riwo people were invited to a night's celebration by the Siar people. They were greeted by a large structure, the *Deb*, to celebrate the long friendship between the two villages. The *Deb* is a tuna fish and the towering fish-like structure is a least twenty metres high and dwarfs the people standing alongside it. Inside the structure are parcels of sago and galip. The food and clothes around the base are presents to the visiting Riwo people. Young Riwo girls danced the moon dance during the night of celebration. After the celebration the *Deb* is lowered and the food in the stomach of the fish-like structure is distributed.

Kranket Island, Western Bel dialect

Kranket Island is a small island off the coast of Madang town and is also known as Graged or Mitibog and, geographically, lies in the middle of the Bel group. Riwo and Siar are within the harbour whereas Kranket is at the entrance to the harbour and Yabob and Bilbil are around the coast in the open sea. Because of their position, the Kranket played an important role as an ally to all the other villages. The Kranket Islanders were conscious of the common bonds of the Bel group tracing back to Yomba. Madmai's genealogy was ten generations deep, originating with Berma and Glomba, two of the ancestors who escaped from Yomba before it sank. They apparently tried to live on several other islands before coming to Kranket. Their descendants had to adjust to their new environment and no longer make pottery as they had no access to clay. Instead they concentrated on building the large canoes and traded the hulls for pots which were lined up alongside the hull and which they could then sell as trade items further north.

In pre-contact times, these Kranket Islanders were amongst the first to see large foreign sailing boats passing them. They called them *anut wag* or god's canoe. They had information about a large boat with sails that went past but did not come into the harbour but they saw the fire and smoke from the ship. It was before Maclay's time. The men on board drank bottles of whisky and threw the bottles over board. The people found the glass bottles and did not know what they were. They thought the *masalai* in the sea had made these things. Later another ship came close to the place where the lighthouse is now. They anchored and white men got into their dinghies which the people called plate-canoes as they reminded them of the Rai Coast plates.

Women and children on Kranket Island, 1890. Biro, 1899.



Map of the "Archipelago of Contented People", so called by Miklouho-Maclay.

At first the men on the boats beckoned to the people to come in their canoes with them but the people ran away. Later, they went out on the large plate-canoes to the ship. They went on board and were given rice which they thought was white ants eggs so threw it away. However they liked the paint and the knives and tomahawks that were given them.

In the 1880s, Otto Finsch had the following to say about an early glimpsing of Kranket Island [Gragar]:

> As with all the islands of the *Archipelago of the Contented Humans*, Gragar consists of thick coral rock and is heavily forested. It has only a few coconut palms, I counted only seventy. The island possesses two small villages, Gragar and Tebog, each with about 12 to 15 houses. Gragar is the larger village and gives the island its name. In general the people have no proper name for their islands or strips of land, but call them after the most prominent settlements.
>
> Each of these two villages had a meeting house, small and insignificant without any ornaments or carvings. Inside were only the usual shelf beds, drums and shields and the lower jaws of pigs. A couple of these jaws were later served carefully wrapped in leaves, like a pieces of boiled fatty pork meat. These were hung up as a reminder of the just celebrated feast, a *marsap*, instead of the *ai* as they are called in Konstantinhafen.
>
> As no women are allowed to participate or even to listen to the sounds, I was not at all surprised by their absence. As usual, the men were armed as a precaution against our unusual visit. The feast had gathered many participants from neighbouring islands, who went home in their canoes with bowls brimming with food. I'm sure they had plenty to tell about us, the foreigners (Mennis, 1996: 34-35).

When Finsch arrived, the people were just finishing a *meziab* festival in which a number of young men had been initiated into the tribe. The *meziab* celebrations were extraordinary, as this was a time when there was freedom of trade and movement of people on a great scale. The trade friends of the Bel people were able to travel fearlessly over a large area without fear of being attacked. Each village attended the festival in rostered order, which meant that each festival could take several weeks. It was also a time when the Bel partners could be the hosts for all their trading friends who were usually their hosts on the long trading trips. The Bel people were accustomed to being the feted visitors in place after place along the Rai Coast – now this was a chance to repay this hospitality.

In 1895, a Hungarian artifact collector, Lajos Biro, arrived in Madang which had been a German colony since 1884. After settling in, Biró began collecting artefacts to send back to Hungary. His ability to wade in the swamps and the forests was seen as unusual by the Germans who avoided both. It also showed a fearlessness that landed him in trouble. One day in March 1896, he went to Kranket Island to shoot some birds for his collection. He took two guns with him and a word list of the Graged language. As he passed a village on the island, several young boys joined the group. Biró did not mind, as they were always good spotters of the birds he wanted. After some time he fed the boys a meal of rice and pigeon and went off looking for beetles leaving two of them at the picnic spot with the spare gun. Suddenly a shot rang out and pellets sprayed the air. Biró rushed back. There was no sign of the boys who, frightened of being punished, ran back to the village saying the European was chasing them and had already shot at them.

Unaware of the lies that had been told about him, Biró continued searching for more specimens with the other boys. Meanwhile, the villagers prepared to attack him. Arming themselves with spears and bows and arrows, they drummed the war didactic on their loud booming drums. Suddenly Biró realised he was the object of their attack and began fumbling through his word list to say, "Don't shoot", but he knew they were not going to wait while he found the appropriate words. Among themselves the Kranket people said the "*tivul-tamol* (foreign devil) keeps his mind wrapped in paper". Biro managed to keep cover for several hours, protecting himself behind a hillock from a full attack as their spears and arrows were only effective at a certain range. At last, help came from the Siar people who arrived in their canoes with the missionary. Having heard the drumming on the Kranket garamut,

Young boys on Kranket Island in the 1890s. Biro, 1899.

they even knew it was a European who was being attacked. Rescued at last, Biró attended a village meeting to explain what had happened and in compensation was given a handful of arrows, a spear, an old shield, which had been made with stone tools, and a basket of taro (Molnar-Bagley, 1993: 25).

This story shows the situation on Kranket Island in 1896. Firstly, the village people were still in awe of Europeans viewing them as devil men. Secondly, it was a time when recalcitrant villagers could be beaten for their misdemeanors, so they were frightened of the Germans and any other Europeans. Thirdly, communication between the villagers and the German government officials was still quite difficult. Apart from the missionaries, many of the Germans fumbled like Biró with the word lists. Nor did the village people know much German or even pidgin, which was introduced later by the Chinese workers. However, the traditional village system of communication through the drumming of the dactylic rhythm was still well in place between the Krankets and their allies, the Siars.

Kranket Island in 1977

It was on Kranket Island that I first heard about Yomba Island. It was the 7 July 1977 and I duly wrote 7/7/77 in my notebook. It had been a stormy morning and after dropping the children at school, I caught the small mission boat that ran the route to the island. On the way the storm strengthened with thunder and lightning and we were nearly swamped by the waves. Being the only passenger, I was handed a bailer to keep the water out and I began to feel a bit frightened and very foolish at venturing out on such a day. Then the sun came out and the weather was beautiful. Not only that but the early stormy weather prevented the people from going to their gardens and I was able to have several interviews. They gathered around anxious to talk and excited to find someone ready to listen and tape their evidence. These people were the great grand children of the people who had confronted Birò with his Graged word list. Today we conversed in *Tok Pisin* and they gave me genealogies back to their ancestors Berma and Glomba who had escaped from the sinking Yomba Island on coconut husks tied together and who came ashore at Kranket. That day these informants could not agree whether Yomba erupted before it sank or whether it just sank. "Yomba was in the middle between Karkar and Bagabag where the reef is now. It erupted [or just sank] and now it is not there any more," they said.

It sounded like a myth at first but over the following months I found more and more people along the Madang coast had the same story of an island called Yomba that long ago had either erupted or just sank and that it had stood where Hankow Reef is now. I duly contacted some earth scientists, including Russel Blong, about these oral traditions but received a negative response. There had been no eruption coinciding with a volcano at Hankow Reef, although it was classified as a volcanic reef. No ash, no eruption. So Yomba became a mythical island (even Mary's mythical island). Sometime later, I re-visited Kranket and told my informants the verdict of the scientists. They were not happy. They drew themselves up to their full height and said, "Missus, do you believe us or them?" After that I believed them. But to the scientists it remained mythical until thirty years later when Dr Simon Day of London University did research in the Madang area and discovered evidence of a large tsunami that had hit the coast between 1400 – 1450AD. Yomba Island had disappeared at this time. The island had not erupted but had sunk into the sea. The genealogies the villagers had given me would have been telescoped with many names omitted. Berma and Glomba being significant names were remembered as the founding fathers.

This new research, done thirty years after I had first heard of Yomba Island, proved that those Kranket Islanders were correct all those years ago. Yomba was no myth! But too late to tell my Kranket informants! They were all dead, and their descendants now take this new evidence for granted. The crux of the matter had been whether Yomba erupted or just sank. Some village people had said it had not erupted but that the sea had taken the island. They must have had some warning as many escaped on canoes and coconuts floating to the coast. They established settlements and adapted to the new environment.

After reading about my initial research, Malcolm Ross, linguist, wrote in an article:

> There is widespread agreement that the inhabitants of Yomba made pots and brought their skills with them to Bilbil. There is also a story among both the Bilbil and the Dami [Ham] supported by shared genealogies, that the ancestors of the Dami [Ham] moved there from Bilbil. This appears to have happened about six generations ago because of increasing population pressure on Bilbil Island. The fact that these stories are told with a good deal of detailed agreement in what, for practical purposes, are quite widely separated places suggests that they are substantially true (Ross, 2009: 12).

When I met Malcolm Ross in 2013, he said he would have believed the people's version in the first place because it tallied so well with his linguistic findings. "In general, Bel tend to retain their vocabulary, perhaps because vocabulary is taken to be the essence of language and their languages are emblematic of their identity, distinct from their Madang-speaking neighbours" (Ross 2009: 12). This may indicate that people of a language in the Ngero-Vitiaz network were making pottery on Yomba from 1000 to 1600 AD (ibid). According to Ross, the different Bel Language styles developed after the ancestors had left Yomba Island. With the dating of the disappearance of Yomba, "the Dami [Ham] history may imply that Proto Bel was indeed spoken on Yomba, and that after the island's disappearance and the apparent settlement of most of its people on the islands, which were later Bilbil and Gedaged speaking, there was an initial diversification into dialects that became 1. Proto Bel; 2. Eastern; and 3. Western Bel." (2009: 19).

1. Proto Bel: is spoken in Mindiri.

2. Proto Eastern Bel; is found in in Wab (Rai Coast) Biliau, Ham, Matugar Bing and Dami.

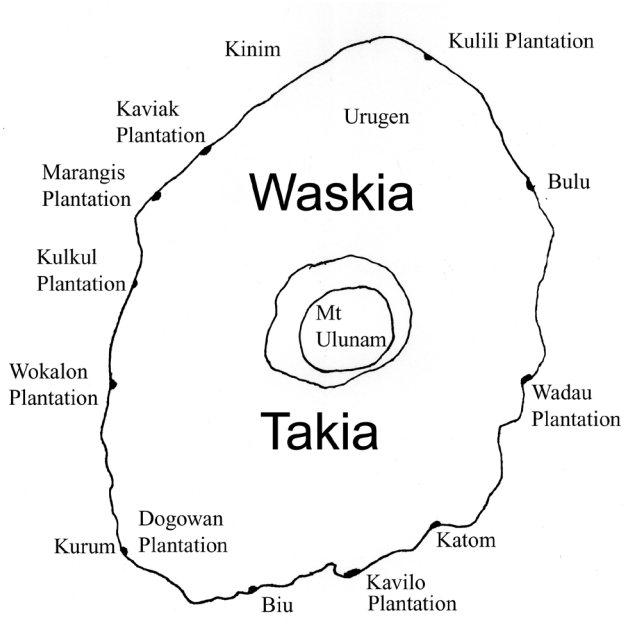
3. Proto Western Bel included; a: Gedaged, Riwo and Siar; b1: Proto Bilbil and Takia; b2: Takia dialects: Takia proper, Megiar (Ross, 2009: 6)

The Bel languages belong to the large Oceanic subgroup of Austronesian. Proto Oceanic was evidently spoken in the Bismark Archipelago stretching in an arc of large islands from the north to the east of New Guinea (2009: 7).

The eastern Bel groups on the whole did not build large canoes or go trading though some of them did make pots, for example, Ham. The western Bel all built the large canoes for trading but not all of them made pottery as they had no access to clay.

Karkar Island, Western Bel dialect

The Takia people of the southern part of Karkar Island are related linguistically and culturally to the Bel group on the coast of Madang, The Takia traded informally with the inland people of Karkar and made trading trips to Manam Island and the Laden coast to the north and then all along the coast to Bilbil and the Rai Coast. In this way they, became middlemen for Bilbil pots and were mutual trade friends. In return, the Bilbil acquired many items from Karkar including red, black and white ochre, mortars and pestles, dogs, woven armbands, galips, (canarium almonds), betel nut (the nut of the Areca palm) and wooden plates and drums (McSwain, 1977:18).



Karkar Island.

It is interesting that the Takia people have the story of a tsunami in their oral traditions as reported by McSwain: "A Takia oral history reports that 10 generations before the 1960s a large tsunami killed most of Karkar Island's inhabitants, and the island was then occupied by the ancestors of the Takia" (McSwain, 1977:24). The date of this event appears to correspond with those stories about the disappearance of Yomba. And the Takia people are part of the Bel language group. Their ancestral being, also called Karkar, climbed out of the sea. It is doubtful he was mythical but was real Austronesian speaker who managed to survive the tsunami and came ashore. There is even a genealogical tree of his descendants ten generations down to the 1970s (1977:10).

The Karkar people did not make pots but were strong seamen and canoe builders. They specialised in making the hulls as trade items and were paid by a line up of pots the length of the hull. They could then use these pots for further trading along the north coast.

The Ham Group, Eastern Bel dialect

The Ham group of pottery villages lies between the Gogol and the Naru Rivers. These villages are accessible by following the Gogol Road past the village of Bilbil and heading inland. These people are Austronesian speakers. The Ham men made the pots which were fashioned by the coil method. As they lived inland, they could no longer make the large canoes and lost this skill within one generation. They also trace their ancestry to Yomba Island and moved to to the Gogol after several generations at Bilbil Island.

This oral tradition was backed up by Z'graggen when he noted that, "The Ham people originated in the Bilbil clans and, according to their oral history, were cut off from the others by a natural catastrophe. The Ham people are now completely surrounded by non-Austronesian speakers and cut off from the sea; this apparently brought about the aberrant nature of their language (Z'graggen, 1975: 39)." A genealogy was traced which included both the Bilbil and the people of the Gonua Clan of the Ham people in the Gogol in a common ancestry (Mennis: 1978). See page 148.

Geti said that his ancestors had come from the island that sank off the coast of Bilbil and Yabob and gave me a ten generation genealogy. With Geti's testimony, we are viewing Yomba Island from a distance. Although this Ham group in the Gogol are geographically isolated from Bilbil and surrounded by non-Austronesian speakers, they have retained the story of the island sinking and their relationship with the Murpat Clan on Bilbil. These coastal dwellers who moved inland to Ham and Gonua lost all their techniques for canoe building, fishing and all the cultural paraphernalia that went with it, the terms, magic, customs and techniques and some trade items, but they retained their pots which they traded inland and to the coast. But even their pottery style changed from the original style and, through mixing with the neighbouring styles, has undergone a convergence into a new style (Mennis, 1978: 2-78). However, amazingly enough, they managed to keep their language.

The Bilbil used to trade their pots for the Gogol pots, in which they cooked the *saksak* because they make it sweet. The Bilbils bought Gogol or Barum pots from Gonua, Boi and Atu. These people also bought the Bilbil pots because they cook the food more quickly than their own. All kinds of pots are used in bride prices. Sometimes there may be a three-way exchange. For example, a man a might kill a pig to exchange the meat for pots so he can make up a bride price.

Mindiri Village, Proto Bel dialect

The Mindiri people were also Austronesian speakers, speaking a slightly different version of Bel as denoted by Ross above and they traced their origin back to Yomba Island. In fact, Ross has indicated that the Mindiri version of the Bel language was probably that which was spoken on Yomba Island (2009: 19). As mentioned, the Mindiri made and traded their pots to such an extent that they threatened the Yabob/Bilbil market. When the Yabob and Bilbil men went to trade along the Rai Coast they were told, "No we don't need your pots any more because we get them from Mindiri." These were fighting words and the Bilbil and Yabobs got angry and plotted revenge. Inviting the Mindiri to a feast on Yabob Island, while they were eating, they holed their canoes with stone axes and then massacred them. This story shows the supremacy of the pottery trade which was stronger than their friendship with fellow Austronesian speakers. This happened about 1871 just before Miklouho-Maclay arrived and settled nearby. He was shown the ruins of the old Mindiri Village on the Rai Coast and the site of the new village there. The Mindiri survivors of the massacre were rescued by the Siar people and the two villages have been friends to this day. When the Siars were banished to the Rai Coast in 1904, after the revolt against the German Government, they stayed with the Mindiri people who looked after them for years. As a result the Siar dialect is quite well known in that area.

Yabob and Bilbil, Western Bel dialect

The ancestors of the Yabob, Bilbil and Mindiri people were fortunate to find clay deposits in the new area and they continued making pots and building trading canoes. Other survivors from Yomba were not so lucky for example those who came to Kranket Island had no access to clay deposits and so lost the art of pottery making. They, however, teamed up with the Yabob and Bilbil people as part of the Bel group on their trading voyages to the Rai Coast. Others moved inland into the Gogol and soon lost the art of canoe building, but still kept close relations with their fellow Austronesian speakers on the coast retaining genealogical links with the Bilbil Village from where they had branched out. It is a classic example of adaptation to new environments. These two villages of Yabob and Bilbil have often been seen as the major canoe trading centres in traditional times. Living on islands on the open sea they had to be skilled sailors and builders of these canoes for their very survival, whereas the Siars lived in the comparative safety of the Madang Harbour with easy access to land.

Nikolai Miklouho-Maclay.

Their islands are rocky and infertile. Damun of Bilbil said: "the island of Bilbil is full of stones. If you dug there for one day you would feel like dying. The bush people had plenty of land and made big gardens". The Bilbil people said, "You grow the food and we will buy it with the pots" (Mennis, 1981a).

Despite the size of the village and the number of sailors, Bilbil Village was held in high esteem by other trading networks. Its population was estimated at 200-250 in 1888 (Harding, 1967:14). The two islands inhabited by the Yabob people are situated to the northwest of Bilbil Island, nearer the present town of Madang. In 1939, Aufinger estimated "the entire Yabob population, from the islands and the mainland, number 200 - 250 heads" (1939).

As we have seen, the Bilbil people came from Yomba many generations ago and brought the art of pot making and canoe building with them. After the people had been settled there for about two generations, Arop (Long Island) erupted. The ash from Arop covered the island and the people huddled in their houses. Every now and then some of the men went outside to brush the thick layers of ash off the roof to prevent the houses from collapsing. Being unable to explain the situation, the Bilbil attributed it to sorcery and blamed the bushmen for the calamity. Because the ash destroyed most of the gardens, they faced starvation for many months. Accustomed to trading their pots for food, they were now unable to trade for several months as their trade partners in other villages kept what little food they had for themselves and as seed for planting new crops.

Bilbil Island itself is only small and consists mainly of coronus, which is uplifted coral reef. As Bellwood suggested, the latecomers in all the migrations received the worst geographic places for agriculture. However, the Bilbil people turned this situation around and, being forced to turn to trade to survive, developed a monopoly on the pot trade. They built large sea going canoes and traded for hundred of miles up and down the Madang and Rai Coasts exchanging pots for food, wooden bowls, *mal*, pigs, paint for *singsings* as well as other items.

Kain of BilBil, friend of Maclay.

The first European to travel to the coast of Madang and leave a record of his visit was Miklouho-Maclay, who visited Bilbil Island in 1871. He liked the island and saw it as his second home. He described it as covered in jungle with several very large trees. He mentioned the beach where the village is nestled and the steep cliffs on the other side where the waves roar in. Overall, it was the view of the coast and out to sea that gave him the notion that it would be a good observation point to watch for the Russian ship that was supposed to be coming to pick him up after his sojourn on the Rai Coast. One day, when he was visiting Bilbil, a baby boy was born. He asked that it be called after him which duly happened. The grandson of that child was Damun Mul Maklai who proudly carried the Maclay name all his life. He was one of my best informants in the 1970s.

Miklouho-Maclay mentioned the Bilbil's prowess as canoe builders and he saw them in action in 1871. He lived closer to Bilbil than to Siar, while Hannemann lived closer to Siar and thought they were the best canoe builders. Through their writings we can see their bias. Perhaps it would be safest to say that, as a whole, the members of the Bel group were all premier canoe builders. However, conclusions drawn may depend on the origins of the informants. Maclay noticed the large trading canoes pulled up so high on the beach they appeared to be in the village itself. As it was raining he looked around for somewhere to sleep, "so I asked them to show me a place where I could spend the night. They suggested to me the hut or cabin of one of the large canoes drawn up on the beach." (Sentinella, 1975: 129).

Otto Finsch arrived on board the *Samoa* in 1884 and noted the large canoes decorated with colourful bunting. He admired the rich culture of the Bilbil people:

> 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. Bilbil 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 (Mennis, 1996: 27).

Finsch described one village on the Island as having about twenty-five houses, "very solidly built and erected on strong posts above the ground." Armed with his gun, Finsch wanted to collect some bird species, "from the massive tree giants, amongst them huge bread fruit trees, the dull hum of the white fruit doves (*carpophaga spilorrhoa*) sounded." These were white pigeons that appeared on migrations and stayed on the island. Because they were special to the people, Kain, who had been a friend of Miklouho-Maclay, was given the job of calling the birds up every year with his special magic. Sometimes the people would climb the trees to pull the birds off when they were nesting and eat them, but Kain would not kill them, they were like his totem and he was probably appalled at the way Otto Finsch just shot them in the big ficus tree.

Finsch wrote:

> From the giant trees, including large breadfruit trees, the dull hum of the white fruit doves (*Carpophaga Spilorrhoa*) sounded and we bagged many of them. Like everywhere with these children of nature, the first shot had the same effect: general shrieks and a wild escape! But soon the more mature youth got used to the bang and admired the action of this unknown sinister weapon. At a later excursion along the coast, the smarter Bilbilites endeavoured to make good use of our superiority and serve their interests: we should fight and destroy an enemy tribe! (Mennis, 1996: 22)

Finsch purposely made friends with the people as he had an ulterior motive – to make a peaceful settlement possible when the German warships arrived to claim the area for Germany. "We had formed a good relationship with them, which was part of the purpose of the expedition." And he added that, "for missionary undertaking there is no better place than Bilbili. --- I can best recommend this island to the first German missionary who may find the calling to bring the 'Light' into this region" (Mennis, 1996: 32, 33).

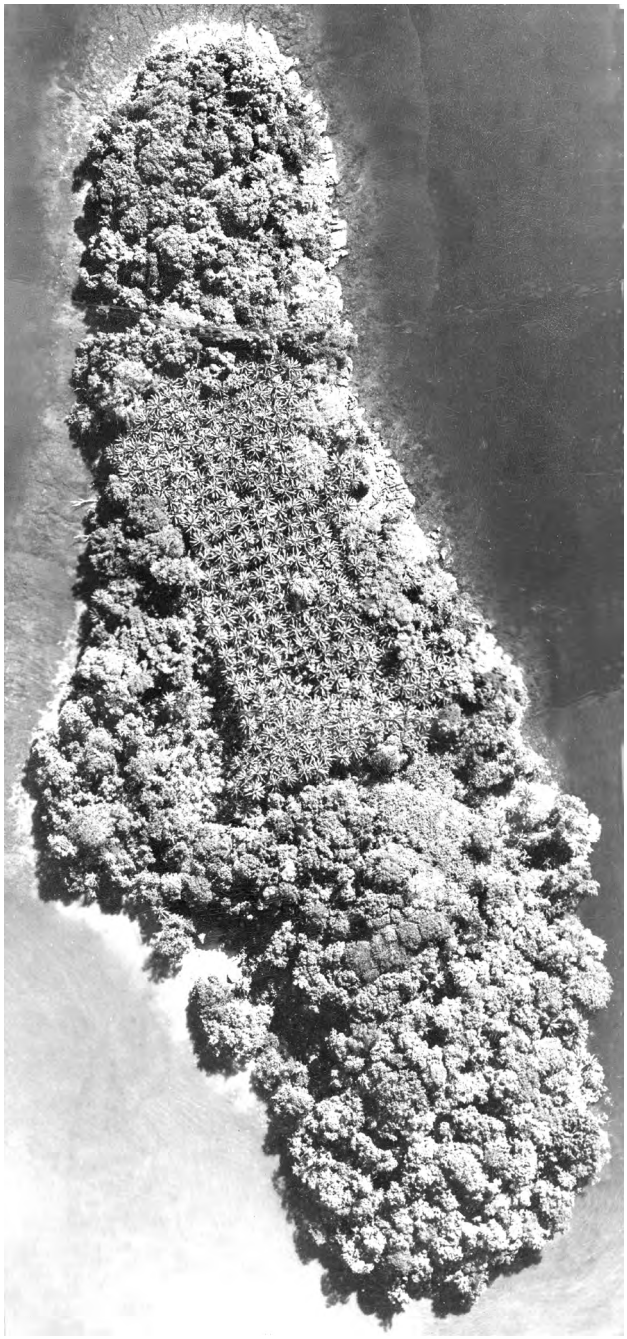
Bilbil Island is no longer inhabited. The people were evacuated forcibly by the Germans in 1904 and moved to the mainland after they revolted. In planning the revolt they sent one of their pots with red magic liquid in it to Kranket and Siar to make them *bel hot* and ready to attack the German people in Madang. Sounds familiar? That was what the Riwo used a long time ago to incite the Sek people to join them in a battle against the Tabad Islanders.

Bilbil Island is shaped like a large footprint. On the heel of the island is the land belonging to the Murpat Clan and the land in the middle belongs to the Luan and Gapan Clans. The front of the foot belongs to the Dugus Clan with a sub section the Dugus Lat having the higher land and the Dugus Tan the lower area near the only beach on the instep of the foot. Because the beach is only small, it was divided up into clan areas, with part of it called *lilung lang* for the common use of all the clans for canoe building and storage. Tracks all over the island lead to the ocean side where the people enjoyed the cool breezes in the afternoon. This cliff side was also used to jump off into the sea. If the young boys hesitated or did not jump far enough, they could land on the rocks below with dire consequences.

Houses on Bilbil Island had a utilitarian shape. Because the ground was very hard, houses were often built using existing trees as supports and dragging another tree stump and roots for the remaining corner. Houses were built with the roofs coming down to the ground so that walls and roof were one continuing structure. The houses were closely packed together because of the lack of space but, in front and underneath, there was room for the women to make their famous pottery as they sat in the shade. To get the clay, the people had to paddle over to the mainland in their small canoes. The men would accompany them as security against the enemy tribes although attacks were rare.

Bilbil Island in 1977

I accompanied Maia Awak one day in 1977 to Bilbil Island. We went over by canoe and landed on the only beach and Maia began hunting through the long grass for the old village well which was the only fresh water source on the island and never ran out. It is now defunct but was once much wider than it is today and people went down a ladder to fill their pots. They washed themselves in the sea with a separate area for the women and men. Maia pointed to some trees growing along the beach and said they were not there before as the beach was needed to build the



Aerial view of Bilbil Island, shaped like a giant footprint.

canoes. In those days the whole island had many houses and some big trees. Dugus Clan had the largest section of the beach, but did not mind other clans using it. However with big projects like canoes each clan had to keep to their own part of the beach. Maia pointed out that the ground on the island was too hard to dig foundations. They had to invent new ways of making house posts, shifting whole stumps as supports for the houses. Each house accommodated several families with a hewn ladder leading to a loft.

Domesticated animals included pigs, dogs, and hens which were red, white and black. Many flying foxes lived in the caves and they shot them with bows and arrows and then ate them. As mentioned, migratory birds, some black and some white, came to the island in the dry season and perched on branches in the trees, or coconut fronds and were killed. The people had small gardens on the island and other gardens on the mainland. The yams were dug up at the time of the rising of the Pleiades stars which marked the beginning of the year. There would be a yam feast and the rest of the yams were kept in the yam house for several months for food or until the shoots appeared and then they were planted about October. The people caught small fish using nets, *umbenes*, and used fish baskets to trap fish. The big fish and sharks were killed with spears. At night, they lit *bumbum* to attract fish and used a poisonous rope, *weremer*, to stun the fish (Mennis, Notebook One).

Maia said that there had been over two hundred people living on the island and there was always plenty of activity: s*ingsings*, marriage feasts, ceremonies for initiation, preparations for trading trips and welcoming feasts when the traders returned home. Visitors sometimes came from other islands to visit or to trade their wares for the pots. Fights sometimes broke out and the Bilbil, feared as strong fighters, would summon their allies to help. They sometimes sailed over to the mainland at night attacking the bush people with blood curdling yells in a dawn raid before retreating once more to their island. They were safe from attack on their island refuge as these villagers did not have canoes and were afraid of the sea. But, sometimes, the bush people attacked the Bilbil in retaliation when they landed on the mainland to collect the clay for the pots. The women had to be heavily guarded by the men while they worked if retaliation was expected. This did not happen very often, as the Bilbil pots were a highly desired item of trade and if the women potters were killed or prevented from collecting the clay then there would be a dearth of pots. They knew not to kill the goose that laid the golden egg.

When Bagar, a clansman, was young, he planted galip trees to mark the boundaries between the Gapan and Luan clans. Maia saw him when he had grown old. Bagar's brother, Gab, knew Miklouho-Maclay. The various clans got on quite well as they had ties through marriage, had gone on trading trips together and joined up against common enemies. If the clans had a disagreement they did not burn each other's houses. Probably because they knew how long it took to build them. They would try to clear up a fight before nightfall and then they would sit down and talk about it. The Dugus Clan was the biggest clan and had the largest area of land, including many galip trees These were

cut off about ten feet up from the ground and then used as supports for their house. The *hausboi* for the Dugus clan was in the middle at the top of the hill.

There was one *hausboi* (men's house) for each clan and women were excluded. Boys were initiated in these *hausboi*. They fasted and were beaten, and sat inside the men's house while their male relatives made armbands for them, whirled the bullroarers and beat the drums. On the day of the circumcision, the boys were painted, and had the jewellery put on them and then were fed (Biro, 1899: 25). Musical instruments were important in the village scene, both in the usual *singsings* that were performed, and in the secret men's society. Bullroarers were made by men and for men only, as they were sacred musical instruments.

Maia and I were walking across the island when he stopped suddenly and looked into the water in one of the many small rock pools. "This used to be our mirror," he said pointing down. "We used to line up one behind the other and adjust the feathers in our hair before a feast." They decorated their hair with bamboo combs, and then they painted themselves red while looking in the pool or they would paint each other. Their earrings were from a loop of tortoise shell, or ornament, painted red. Around their necks they had the dogteeth necklaces and the *bulra* made from pigs' tusks. For a battle they painted their faces black and wore black wigs with cassowary plumes feathering out on each side to frighten the enemies. Around their waists they wore the *mal* made from beaten bark. When armed, they carried large back shields and bows and arrows. Great adventurers and traders, they were fearless sailors but only if they had the protection of the sorcerer, the *likon*. If they had a bone, they would put it through their nose for added effect. That reminded Maia that I did not have a hole through my nose and he was worried about me. "When you die, Missus, your spirit goes to Degasub on the Rai Coast and there Tinigai, who guards the underworld, will inspect you to see if you have holes through your ears and nose. If you don't, you will be cast aside." He offered to make a hole through my nose but I resisted. Sorry Maia, I do not believe in Tinigai.

Cooking for a feast

Maia described a traditional village feast. They cut up the food: the yams, taro and meat and put them in the large pots and then add water and a little seawater for the salt. They make little fires around each large cooking pot, lit them and when they were cooking well they put more water in the pot. When the food was cooked the fires die down and it was time to bring the food to the plates - some plates were from Siassi and some from Galek. Then they put mats on the ground and with coconut leaves in the middle and with the food on the plates on top. If there are twenty men at the feast then you must have twenty plates. The men who organised the cooking must get the plates and put them beside each man and his children come and sit next to him. Afterwards, the women pick up the plates with half the food and go back to their houses, eat some and put some in the cupboard. Then the men all sit around, chew the betel nut, smoke and drink the drink called *aiu* made from the roots of the *aiu* tree. The roots are cut out and put in the sun to dry with the leaves. When they are dry they are beaten and put in fresh water. They are then turned in a coconut shell with water. The bits are taken out. Then it is put in a little shell to drink like wine. Their spoons were made out of sea shells and the husk of a coconut.

That day, Maia pointed out many other places on the island: where the people used to sit in the afternoon to catch the cool breezes; the place where Miklouho Maclay built a small house; and where the boys used to jump off the cliff into the sea. I leaned over and it seemed a long way down. It was a memorable glimpse into the past of his people. It says much for their stamina that they were able to overcome so many obstacles to become the most outstanding and successful entrepreneurs in Astrolabe Bay. Their high standard of living would not have been possible without the artefacts they obtained through trade. Study of these artefacts has shown that quite different objects can be manufactured in adjacent communities, so a pot or a canoe can be said to generate its own material system. The people around the Madang area were limited by the environment even in their choice of tools, which had to be made from shell, wood, bone or stone.

Maia's daughter, Sibol, cooking for a feast.

Like the people of Mailu in Papua, they saw their island as the hub of the universe (Saville 1926:29). They may have

admitted that the Siassi traders made better two tiered canoes; they may have thought that the Manam Islanders had superior magic; they may even have admitted that the Mindiri pots were better for cooking certain foods, but they had a strong belief in themselves.

Bel Society

The Bel society appears to have been highly organised with clans, division of work, celebrations to anticipate, and bartering of excess items and for food. Living in villages of over 200 people or more, the people had a subsistence economy enhanced through trading which worked for them over many generations since they had arrived from Yomba and would have continued unabated if the period of European contact had not happened. They developed some of their own myths and beliefs about the past that served them well. Separated along the coast, while following the general traditions of the group as a whole, they developed their own separate dialects, traditions and myths.

The people were only partially self-sufficient with their gardens which had to be supplemented by food traded from other areas. The Bel people were also the makers of large canoes and were traders, with the basis of their economy being the earthenware pots. They used only material from nature – bones, shells, timber, clay, bark, leaves and grass. They had knowledge of basic weaving and used coconut and pandanus fronds to weave mats and walls for their houses and sails for their canoes using the warp and weft method.

The men did the hard work: cutting down trees; building the houses and canoes; making the garden fences; hollowing out new drums; making sago in the bush; making the yam mounds; and preparing the gardens for taro. They also hunted with their bows and arrows and killed and butchered the pigs. In preparing for a feast, the men grated the coconut and rolled the sago patties in it and then they grated the bananas and taro. If it was a special feast, the men did the serving when there were honoured guests. They also made a special grace calling for protection from the spirits over all those present at the meal. And, of course, they made the long trading trips and bartered the pots made by the women for other trade items. On the other hand, the women planted the taro, did the weeding, carried the food, water and firewood as well as cooking and looking after the children and fed the pigs. They also fished in the sea and the rivers both with nets, fish traps and hook and line. In the evening, the women would make *bilums* and pots or weave fish-traps with various vines.

Ways of keeping time: days, moon phases, star appearances

Days were, of course, regulated by the sun and, since the people had no other form of light apart from fires and fire torches which they carried with them, they had to rise with the sun and be finished most of their tasks in daylight hours. Moonlit nights were used for fishing and visiting but travelling at night was done only in groups for fear of enemy tribes or bad spirits which inhabited the bush. Their first look at artificial light when Miklouho-Maclay walked around with a lantern created awe and fear in the minds of the people. They thought he had broken off part of the moon to help him see at night.

There were simple ways of counting off days if planning ahead was required. If two tribes wished to mark off a day for a fight or a trade day, they would get two fronds of the coconut tree and cut off all the leaves except those needed. The prospective trader would take one frond home. As each day passed, another leaf would be cut off until the trade day arrived.

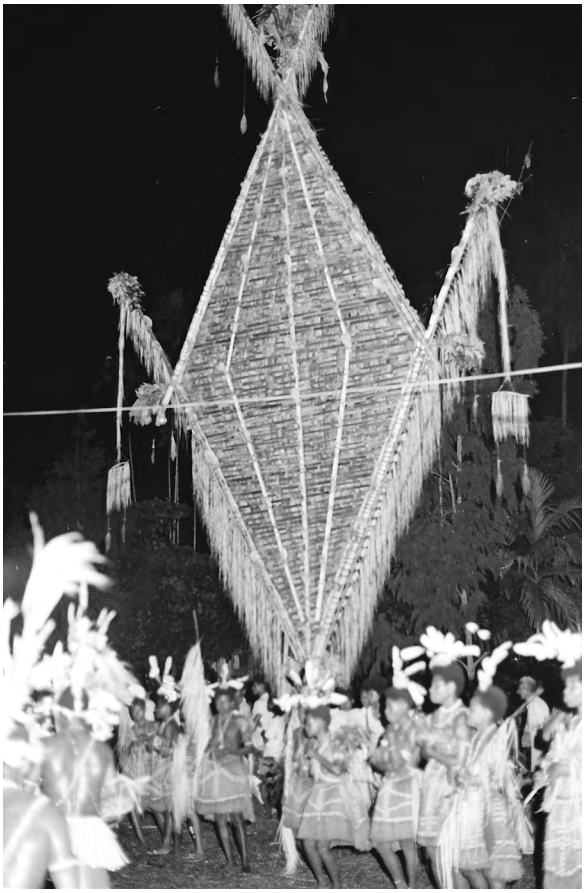
On 27 November 1871, Maclay noted the customs during the full moon:

> The full moon appeared majestically above the trees and I have now come to the conclusion that the shouts we heard were raised in honour of the rising moon, recalling as I do that at the appearance of the moon, the natives utter some particular cry, as if to welcome its rising. As I have noticed, the natives hold special gatherings at full moon; they pay each other visits, the inhabitants of one village visiting the inhabitants of another village. They go on such visits much more decorated than usual and their singing on such nights, which is a kind of penetrating and protracted howling, can be heard as far as Garagassi (Sentinella, 1975: 69).

Of course the moon was a great marker of time and plans were made according to it. For example, they might say, "in two moons time" we will go trading etc. For the Bel people, every phase of the moon had a descriptor, even the days before the new moon, the people would say, "only the dog and the cat can see the moon we will see it tomorrow." Or they might say, "the moon has appeared like the edge of a spoon" (almost first quarter). The moon was called *fulei* and the full moon is described as a shield. Again, the time the moon takes to rise each evening after the full moon is also noted. "At first it is said the moon has cooked spinach and rises early; in the next stage, the moon has eaten grass tips and so on. The people

saw the moon as a woman and, when it is morning before it rises, it is said she is menstruating". Circles around the moon are seen as an omen that someone is going to die. When there is no moon, the villagers had a rest day and stayed home. This happened also when someone died (Mager, 1952: 86).

The rising of the constellation, Pleiades, which occurred in the middle of June each year, marked the beginning of the year. On Bilbil Island, it was the task of the *likon* to watch on the far side of the island overlooking the ocean in the days before the stars might appear. Gazing at the night sky like an ancient astronomer, he would note the various constellations but keep his gaze focused where the Pleiades would rise. There were legends about these stars. Honpain, the women who taught the Yabob people how to make pots was said to have come from the Pleiades and she returned there on a rope after an argument with the people. The *likon* would remember all this in his lonely vigil and as soon as the stars were seen he would blow on his conch shell. The men would then rush to the village and beat the heavy *garamut* drums to wake the people who all rushed down to the water and bathed before the sun rose to avoid calamities for the following year. Those who did not bother to bathe ran the risk of being attacked by a *no* fish or a crocodile in the following months (Mennis, 1981b: 6). Mager added that, "the young people were all anxious to rush to the sea so they would be healthy, tall and beautiful" (Mager, 1952: 18). It was also time to have a yam feast to celebrate the coming of the New Year.



The Deb Festival in Siar village in 1978, usually celebrated at full moon.

Seasons and winds in Madang

There are only two seasons in Madang as in most places of Papua New Guinea - the wet and the dry. The wet season is from November to April, and the dry is from May to October. The trade winds do not correspond exactly with these seasons.

The northwest wind called *dadau* was used by the traders in January and early February for short trading trips to the coastal villages (Mennis, 1981b: 46).

In April and May the *dadau* wind blows more strongly and was used by the traders to go to the Rai Coast for the long trading trips calling in to various villages and staying overnight or longer before travelling to the next village. During these months, by mid-morning a gentle south-east wind, the *yawarti*, blows and could be used to travel short distances in the opposite direction (ibid: 50-51). For the long return trip from the Rai Coast, the traders waited for the *dolo yawarti* wind to strengthen in about July to bring their cargo of food to Bilbil and Yabob.

If they waited until August, they would strike the wild southeast wind, the *karag* (angry man), which was feared by all traders. When it blew in Astrolabe Bay, it was time to stay home. *Karag* is also the Bilbil word for the southeast season or the dry season (Mager: 139). As soon as the *dolo yawarti* strengthens past a certain point it is called *karag* (Mennis, 1981b: 45). One oral tradition was of Malbak and Mapalsen, two traders from Kranket Island who were on a trading trip with the Bilbils down the Rai Coast when the *karag* struck. Their canoe was driven out to sea by the wind and tossed around. At last, they landed on Bagabag Island where they fortunately had trade friends. They lived there for quite a number of days until the wind subsided and they could sail back to Kranket Island where their people were holding a funeral feast for them believing they must have perished in the tumultuous waves. Overall there were six winds identified – *karag, dolo yawarti, yawan, dadau, dadau der, and yawarti*.

Landmarks. Damun of Bilbil said, "We sailed at night because the sea was not rough then and the men were happy to sail. We would sail along the coast and look out for the different points of land and the mouths of rivers etc. At dawn when the *Rai* wind rose we might venture out further with the help of the wind" (Mennis, 1981b: 15).

Bel Calendar, Seasons and Activities.

Months	Bel weather	Winds	Men's activities	Women's and other activities.
January	Wet	*Dadau* and *yawarti* northwest winds prevail.	Small trade trips to inland places.	Collecting clay and making pots.
February	Wet	Wet season *Dadau* wind.	Trade to the Rai Coast.	Pot making.
March	Wet	Early morning *yawan* then *Dadau dere* .	Building canoes. Helping collect the clay.	Pot making Clay collecting Gardening on the mainland.
April	In between Hungry month.	Doldrums begin.	Building houses and fishing nets.	Collecting clay from the mainland.
May	Dry Hungry month.	*Dadau* from north at night south-east during the day.	Finish canoes. Go to the Rai Coast in this hungry time.	Helping the men by making the *dim* putty to caulk the canoes.
June	Dry	Rising of Pleiades stars. Start of year.	Trading to the Rai Coast for food in the hungry time	Preparing yam feast to celebrate the yam harvest.
June/ July	Dry	*Dadau* wind.	On the Rai Coast trading.	Clearing land for new gardens.
July	Dry	*Dadau* wind then *karag* begins.	Men return from long trading trip.	Women prepare feast for returning traders.
August	Dry	*Karag* wind blows fiercely.	Men don't trade now as winds too strong.	Making pots for local trade.
September	Dry	As above.	Big taro traded for pots with nearby Bogati and Sehan.	Women tend the new gardens on the mainland.
October	In between season.	The doldrums.	More trading for food. Yams planted.	Exchanging pots for food with nearby village.s
November	Wet	*Dadau* wind in morning and *dadau dere* in the afternoon.	Initiation ceremony for young boys.	Cooking for the *meziab* feast but do not take part.
December	Wet	*Dadau* and *yawarti* winds.	Hunting bats and migratory birds.	More potmaking.

Village economy

Lawrence (1964: 11) said there were three basic characteristics that distinguished the village economy from European practices:

Firstly, they had little specialisation; people were expected to take part in all the tasks within the village like building houses, growing food, and making tools and weapons. There were a few exceptions to this; for example, "the manufacture of major artefacts (canoes, slit gongs and sacred instruments) and in ritual which were the prerogative of male experts."

Secondly, the primary emphasis was on subsistence, "with no concept of profit".

Thirdly, "Lacking the concept of profit, saving and reinvestment, the economy had no strong internalized forces of change and tended to be stationary." (1964: 11)

Because of lack of specialization, there were no "occupational groups". Comparing the Bel and Motu groups there seems to be some specialisation. Certain Motu groups were better at making the *ageva* beads and left others to make the pots.

Motu Calendar, Seasons and Activities.

Months	Motu names of months	Season of the year	Men's activities	Women's and other activities
January	*Biria Kei*	Wet season, *Lahara*, hot winds	First *lagatoi* returns from the Gulf with *Lahara* wind.	Cooking the sago for the traders when they return.
February	*Guirauara*	Wet season, *Lahara* wind.	More lagatoi return from the *hiri.*	Women greet the men as they return.
March	*Goha*	Wet season, *Lahara* storms	Monsoon finishes.	Pot-making for local trade.
April	*Lailai*	Wet season, *Laurabada* wind begins.	Planning for *hiri* voyage and *Tabu* feast.	Rehearsing dances Planting gardens.
May	*Darodaro*	Dry season, *Laurabada.*	Harvesting of yams begins.	Dancing season starts.
June	*Divaro*	Dry season, *Laurabada.*	Men make houses and new gardens.	Women make short trading trips to sell pots.
June/July	*Veadi*	Dry season, *Laurabada.*	*Matagara* nets made for dugong and turtles.	Clearing land for new gardens.
July	*Veadi* haro	Dry season, *Laurabada.*	Work building *lagatoi* begins.	Women potters gather clay.
August	*Veadi hirihiri*	Dry season, *Laurabada.*	Wallaby hunt with *Koiari.*	Women making pots for trade.
September	*Urria*	Dry season, *Laurabada.*	*Hiri* to the Gulf.	Women tend the gardens. New gardens planted.
October	*Laga*	Dry season, *Laurabada.*	More hunting for food. Yams planted.	Girls tattooed, Hula traders arrive.
November	*Manumaura*	Wet season, *Lahara* begins.	Small *lagatoi* go to Mekeo.	Girls tattooed, more potmaking.
December	*Bria bada*	Wet season, monsoon *Lahara* wind.	Men trading in the Gulf area.	Women greet the returning *lagatoi.*

The Motu Koita year consisted of thirteen "months" that would be identified by the weather and therefore directe the activities of the village. The western name for these "months" is only an approximation. *www.michie.net/pnginfo/motucal.*htm, (Groves, 2011). (Douglas, 1994).

The Bel group had specialty groups in those listed above by Lawrence. For example, only certain clans could build the *balangut*; others were restricted to the *lalong*. Other clans specialised in magic with the *likon* (weather magician) being a hereditary role. Still others looked after the magic to bring the migratory birds back each year. The women on Yabob and Bilbil were the makers of pots. Bilbil was seen as the wealthiest village in the area with more ornate houses and better decorations than the other villages and this was remarked specially by Finsch in 1884. Could this have been because they did have a surplus with their pots being the 'money' of the local economy?

Their traditional economy limited growth as all surpluses was traded on. Initially, the people's views clashed with the German ideal of the creation of surplus and profits to develop a new economic climate. When the Neu Guinea Kompagnie established industries and plantations in the area in the 1880s, the Germans found the local workers did not have the work ethic required, coming to work sometimes and wandering off on trading trips or building a house if it was required in their village. The Germans frequently complained of their attitude and it led to misunderstandings on both sides. However there were many positives in the culture which were appreciated. New Guinea was one of

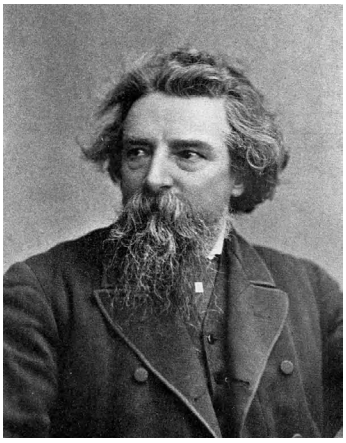
the last places to be subjected to colonisation by Europeans and those who came found the culture of the Bel Group people of Bilbil, Yabob, Kranket, Siar, Riwo and Sek was very colourful and the social life was highly organised. According to Hannemann, the social structure was, "both patrilineal and patrilocal within the community". This means that the family usually lived in the father's village and inherited through the male line. An interesting point made by Hannemann was that, "The Madang natives have the conception that land cannot be alienated permanently. It is sanctified by the graves of the ancestors, besides, a great number of folk-tales bind the people to the soil" (1944: 11).

Tattooing was unknown; instead the entire body was painted red after being vigorously rubbed with oil. The hair was coloured black with a colouring named *kummu*. The necessary red colour was bartered from the mountain inhabitants. This contrasts with the Motu villages where tattooing was used all the time as a decoration for the body particularly for the women.

Chewing betel nut is very prevalent in Papua New Guinea. While chewing the nut, lime is added into the mouth by means of a wooden spatula. Lime containers can be made from various materials – from gourds or sections of a bamboo node and more recently from tobacco tins. Like the rest of their neighbours, the Bel people indulged in chewing betelnut. The Motu people to the south also enjoyed the betel nut which was a trade item from the Mekeo.

B. The Motu People on the South Coast of Papua New Guinea

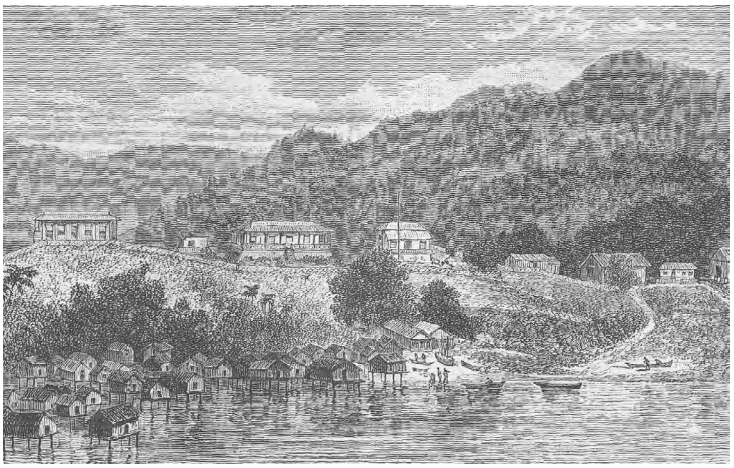
The Motu people live in many villages scattered along the coastal zone on each side of the present Port Moresby, now the capital of Papua New Guinea. The first official European to come into the area was Captain John Moresby who arrived 20 February 1873 on board the *Basilisk*. (See page 194). Moresby explored the south coast and spent time trading with villagers at Hanuabada and along the coast. One day, he was absent for so long the captain of the Basilisk became alarmed and sailed into Caution Bay, named because of the many shoals in the area. Moresby was found near Lealea Village and boarded the *Basilisk* which then sailed through a gap in the reef which he named Basilisk Passage. That same day they sailed into the harbour, which he named Port Moresby after his father (Ian Stuart, 1970: 14).



James Chalmers.

In November 1874, a year after Moresby had found the harbour, William Lawes arrived with his wife and children to establish a mission centre for the London Missionary Society (LMS) in Port Moresby. They were the first settlers and fever was a constant trouble. Sadly, their young son succumbed and died. Lawes brought in Polynesian teachers but many suffered fever and died. In the next four years, he established eleven new mission stations and was in demand for his knowledge of Papua and its people. In October 1877, James Chalmers joined Lawes. The two made a good team. Chalmers was resourceful, full of adventurous spirit and usually cheerful and anxious to explore the country.

In 1880, starting from Kerepunu in a small row-boat, and accompanied by two native teachers, Chalmers set out into Hood Lagoon. After pushing through swamps they climbed up a thousand feet and came to the people of the Animarupu district. He found the people starving to death after a long drought. Their enemies had refused them food and were ready to destroy them; Chalmers (also knoiwn as Tamate) brought peace between these tribes and also with the chief of Aroma on the coast so that trading of seafood could be initiated with the Animarupu people. Soon after this the rains came and disaster was avoided (Lennox, 1902: 82). Chalmers was fearless, going unarmed into hostile areas and winning



Port Moresby, in the 1880s. Chalmers, 1885.

people over with his kindness. However, he was often in danger because the abuses of the labour traffickers and the crimes of lawless traders had taught the people to fear the white man.

From a few mission houses over the next ten years, Lawes and Chalmers brought peace to many areas. When Admiral Erskine arrived to make a proclamation of sovereignty over Papua, he knew that with the missionaries' help, a peaceful take-over was possible.

Boevagi, chief of Port Moresby.
Chalmers, 1885.

Although Henry Chester had "annexed" British New Guinea on 4 April 1883, this was not recognised by the British Goverment. The official Annexation was made by Erskine on 6 November, 1884 (Stuart, 1970: 32). For the occasion, fifty chiefs were brought on board the Commodore's ship, the *Nelson*, by the Rev. W. G. Lawes. One of the most prominent chiefs was Boevagi, the chief of the Port Moresby tribe, who was entrusted with the "responsibility of upholding the authority and dignity of England in the island." Mr Lawes presented Boevagi with an ebony stick, with a florin (two shillings) with the Queen's head embedded on the top telling him, "this stick represents the Queen of England. and is 'an emblem of the authority' over the tribes and their chiefs" (Chalmers, 1885: 19 -20). It was a tough assignment for Boevagi with all the warring tribes along the coast and inland.

Five warships were present for the ceremony and there was much pageantry and noise from booming cannon and fog sirens. At night search-lights were shone and rockets fired. Lawes and Chalmers were both called on to explain to the local people what was happening and what a Protectorate was. At several places along the coast, chiefs were taken on board the flag-ship, "where the proclamation was read, translated, and explained to them; with the hoisting of the Union Jack and the exchange of presents. Tamate (Chalmers) accompanied the Commodore on this cruise of proclamation. It lasted for three weeks" (Lennox, 1902: 125). Chalmers welcomed the Protectorate as he was hoping it would put an end to the Kanaka traffic.

Motu villages and their neighbours

Like the Bel people, the Motu are Austronesian speakers and are also divided into eastern and western villages, more by location than by language differences. The ten western villages are: Pari, Hanuabada, Porepore, Tanabada, Elevala, Porebada, Lealea, Manumanu, Vabukori and Tatana The eastern villages are: Tubusereia, Barakau, Gaire and Kapa Kapa. (Oram, 1988: 90). In modern times the Motu and Koita people are seen as one people: the Motu/Koita people because of their long association and friendship.

Traditionally, the Motu people had a maritime culture. They arrived over 2,000 years ago and ruins of ancient village sites show that they had shifted to various locations over time. When they first arrived, all the best places were already occupied, leaving them only infertile land, very similar to what the Bel people had also experienced. Fortunately, for the Motu, the Koita people ceded some of their coastal land to them and they have lived beside each other ever since (Oram, 1981: 227). Over the following centuries, the western Motu produced pots and built the large sea-going *lagatoi* for *hiri* voyages to exchange their pots for sago in the Gulf area. Although the eastern Motu made pots and built some canoes, they traded locally and usually did not make *hiri* voyages. This was partly because of enmity between some of the eastern and western Motu and partly because the eastern Motu could trade their pots locally with the inland tribes in the poor seasons. Furthermore they would have had to travel further and pass enemy villages to reach the Gulf until more peaceful times arrived.

The following is a short study of the villages around Port Moresby, their connections and history.

The Koita People, non-Austronesian [also known as Koitapuans]

The Koita tribes were neighbours of the Motu. They were non-Austronesian speakers and occupied the fertile areas further inland with good gardens. According to their oral traditions, they ceded part of the coastal stretch to the Motu people. The Koita provided security in time of warfare and helped supplement the Motuan's diet with vegetable supplies in return for seafood and pots.

James Chalmers wrote of the Motu and Koita people:

> By no conquest do the Motuans live here, the Koitapuans allow them, saying "Yours is the sea, the canoes, and the nets; ours is the land and the wallaby.Give us fish for our flesh and pottery for our yams and bananas" (1887: 2).

The Koita continued to have a close association with their land:

> Land is our identity in the sense that the land, for example, from this riverbank to that mountain ridge down to that beach. Our territorial boundary was known to others in adjoining land areas and that signified our cultural boundary and heritage. Because our ancestors were hunters and gatherers while their neighbours, the Motuans, were sea-going fishermen, my people were unique in their association with the land. Each group was given the land and sea to cultivate and to take care of, in the same way they were given their own lives. We therefore coexisted with the land, forests and the sea that provided our life's sustainability and sustenance. Our land and sea are us, and we are them. This rather unique attachment to the land is almost religious and emotional – when our trees are cut down, big holes are dug up, and the rivers are polluted – we feel the same pain that our land feels (Gaudi, 1999).

Ahuia Ova, herediary chief of the Koita, of Hohodai. Seligmann, 1910.

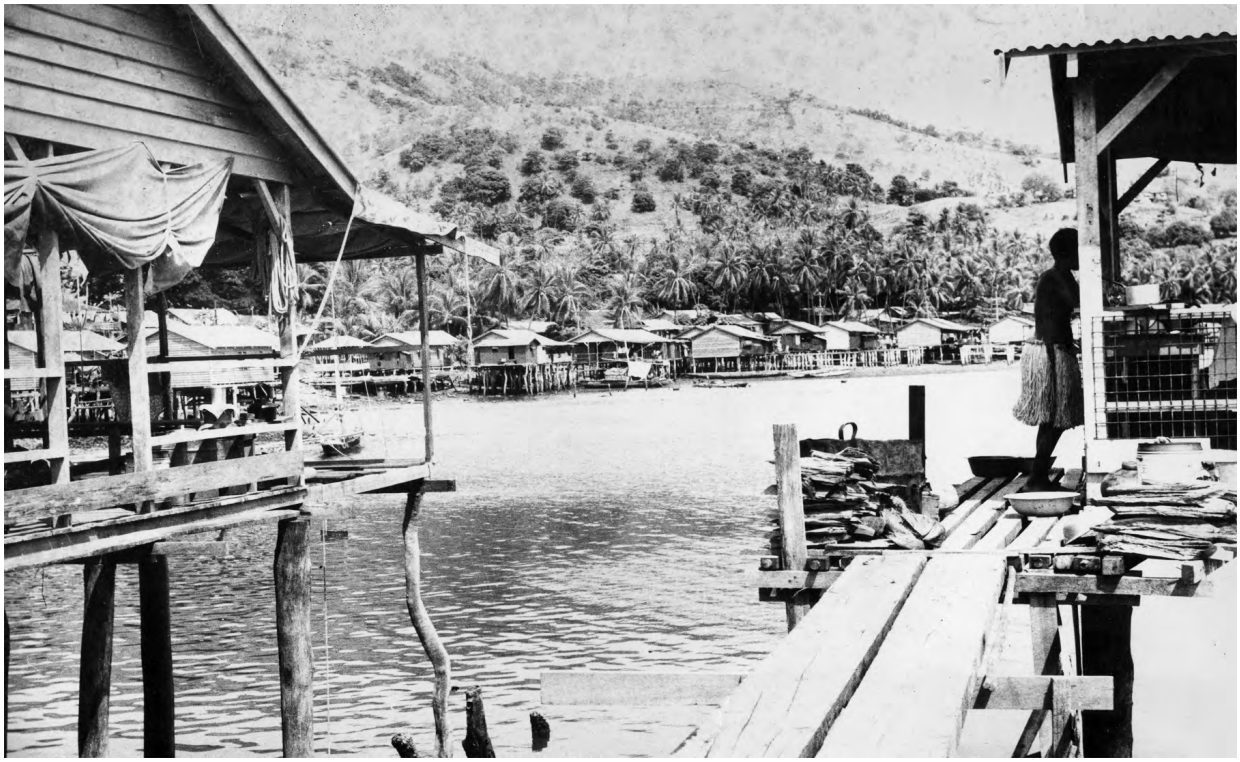
Although non-Austronesian, the Koita could see the advantages of having these sea-faring pottery-making Motuans in close proximity. The Motuans did not find empty areas ready for occupation but managed somehow to make a peaceful settlement in occupied areas in this win/win situation. Further inland are the Koirari people who owned large stretches of land and the Koita, feeling pressure from them, were happy to share their areas with the Motu as an added protection. Some villages had a combined population of both Motu and Koita living in harmony. The Kabadi were the sworn enemies of the Koita and "the Motu sometimes combined with the Koita, as a single fighting unit, that is to say as if the inhabitants of one of these villages all belonged to one tribe" (Seligmann, 1910: 126).

Seligmann studied the Koita people at length over a century ago and concluded:

> The Koita, [are] a tribe speaking a Papuan language who have for generations intermarried with the Motu and whose villages are usually built near, or even in direct continuity with those of the Motu. Although the Koita still speak a Papuan language, the majority of the males speak Motu, a Melanesian language, and have adopted to a greater or lesser extent certain Motu customs, such as the *hiri*, the annual trading voyage to the Papuan Gulf, while their women make pots, an art learnt from the Motu (1910: 16).

Oram noted the warfare between the eastern and western Motu but the various Western Motu villages rarely attacked each other. They were bonded by the *hiri* expeditions and their potmaking. Also the Motu and Koita appear rarely to have made war on each other. However, although they might be allies, they did not always share the same enemies or friends. Some villages who traded with the western Motu were hostile to the Koita because they thought that the Koita caused wrecks and loss of sago through sorcery -- "the western Motu waged intermittent war against the eastern Motu to the north-west and they raided as far as Yule Island" (Oram, 1994: 7). There was a complicated system of allies and enemies because allies did not always share the same enemies.

In 1875, Goldie described the preparations for a fight which turned out to be a non-event. Some inland people had been killed by the Motuans who were expecting retribution. That night they evacuated their villages which were left in complete darkness. The Motuans built fires up all around and waited with blood-curdling screams to ward off their enemies.



Hanuabada village. Groves, 1957. (PMB43_153).

> All night long they kept up an infernal howling and shouting and threatening an invisible foe. Blowing the cong [conch] shells added to the uproar. At break of day all the natives turned out, armed with bows and arrows, spears, clubs and shields, the women joining with them likewise bearing arms. They scoured the countryside in the neighbourhood of their villages in strong parties. This excitement lasted a few days and nights during which all work was suspended (Mullins Editor, 2012: 89).

It all came to nothing and there was no retribution.

Hanuabada Village, Western Motu

Seligmann traced the origins of Hanuabada village. "Its people originally lived at Gwamo, somewhere to the west of Tupuselei, whence they moved to an island Motuhanua, off the mouth of Bootless Inlet, where they stayed some time on terms of close friendship with Tupuselei." All went well until a fight broke out and the Hanuabada were driven out to a village site near Taurama beach, but the Tupuselei attacked them again at night and they fled to their present site. Here they stayed for many years, and were joined by "the Hohodai Koita under their chief Ova Abau some three generations ago" (1910: 48). So their enmity with Tubusereia dates back many generations.

Tabu *feast in Hanuabada.* Murray, 1925.

The Hanuabada people like some other Motu Villages built their dwellings on stilts over the sea with the houses linked by walkways with the level of the base of the houses about two metres above the highest tide. Flooring was made from old canoe hulls split sideways and walled with "fronds of nipa palm,

sewn together, and they are thatched with kunai grass. Their frames are made of tough mangrove saplings joined together." The houses are over twelve metres long and ten metres wide. A most important part was the front veranda where the family gathered or meetings were held (Groves, 2011: 123).

In the 1880s, J.W. Lindt wrote a description of Hanuabada. This village, he said, had a population of a thousand people, "700 being pure Motu people and 300 Koitapuans. The former are seamen and travellers who came in past ages from the distant west" (1887: 122). This is one of a few statements that the Motu came from the west. However recent discoveries of Lapita pottery shards in the Port Moresby area point to an eastward origin from New Britain. So although the Motu came from the east at a distant point in time, there is a possibility that one tribe moved from the east to the west and later moved back towards the east in a circular movement as has happened on the north coast. During the Pacific war, the people of Hanuabada were moved to safety and a fire destroyed their houses which had been built of bush materials. After the war, the Australian army built a new village made of planks and iron.

Porebada Village, Western Motu

Porebada is 18 kilometres west of Port Moresby. Like the Motu people in Lealea and Hanuabada, the Porebada have obtained land rights from the Koita people through marriage and are often referred to jointly as the Motu/Koita people. In traditional times, "the Koita saw some hope that amalgamation with the Motu might give them strength to withstand their enemies" (Lett, 1944: 82). Despite their union with the Koita people, the Motu kept many of their social structures intact.

Each Motu Village had a distinct social hierarchy:

> The villages were divided into descent groups called *iduhu*, which formed residential sections. Membership was ideally through patrilineal descent, although others might have found separate lineages by a process of accretion. Marriage within the village was preferred and there was a high degree of inter-relationship among village members. The size of *iduhu* varied greatly and a guess can only be made that the size of pre-contact *iduhu* varied between twenty and fifty members. The number of adult males capable of leading an expedition would then be between five and twelve, although it is not clear how many adult males were needed to carry out the functions of an *iduhu* (Groves, 1963:21).

The dubu *erected at Pari village for a* tabu *festival.* Seligmann, 1910.

Pari Village, Western Motu

There is an oral tradition of Kevau Dragora, a Western Motu cultural hero, who founded Pari Village in the late eighteenth century. His mother had escaped Taurama Village when it was under attack by the ancestors of the eastern Motu, the Lakwaharu. Later his mother gave birth to him in Badihagwa Village. When Kevau grew up, he attacked the Lakwaharu to avenge his father's people and then established a new village, Tautau, not far from the old site of Taurama Village. Here his people had plentiful fishing grounds and the people's throats were wet from eating fish. Hence the term Pari, which means wet in Motu. Its geographical and temporal aspects are reasonably corroborated by archaeological evidence. Oram noted that Kevau Dragora was about twenty when he led his warriors to battle and gives a date of 1750 for the founding of Tautau which later became Pari Village (1988: 94).

Dancers in Port Moresby. Murray, 1925.

The Motu may have had fights and wars but there were also times of great feasts and gatherings of the tribes like the *tabu* feasts. Seligmann mentioned the *tabu* feast held in Pari in 1904:

> The *tabu* is probably the most important feast of the Koita, Motu, and the neighbouring folk, --- It is found among the coastal tribes of the Central Division eastward as far as the Hood Peninsula. At these feasts the whole countryside assembles, and they are so long recollected that the *tabu* held by the Dubara and other clans during their migrations under Ova Abau were remembered, and even used in argument, to fix the order of their migrations. Few *tabu* are now held among the Koita and Motu, indeed the *tabu* held in 1904 at Pari was distinctly in the nature of a revival, and it is pleasing to record that it was a complete success (1910: 64).

Hanuabada and Pari Villages hosted large *tabu* in the past. There was much dancing, feasting and distribution of food, including bananas, sugar cane, coconuts, yams and tapioca, pork and other meat. Planning for such a feast took a long time as large gardens had to be grown and cared for in advance.

For this special occasion, a structure, *dubu,* was built. It consisted of a rectangular platform about three metres above the ground, supported by four carved posts. During the festival, only men who had been on a *hiri* could sit on this platform. In the middle were tall posts on which the food was tied. During the festival, the men of the feast-giving clan or clans sat quietly while their visitors arrived, singing, and dancing. When the excitement subsided the visitors sat around the *dubu* and waited. Presently, the *tabu biaguna* called to the women of the visitors to gather round the *dubu*. His clansmen then descended and filled their big string bags with yams and other food. Later pork strips were added. The success of the gathering was determined by how long the visitors stayed and how much food was given away (Douglas, 1994).

This festival is similar to the *Deb* festival held in Madang when yams were tied to a large fish structure and later given to visitors during a big feast held at the full moon in Riwo Village to honour their friendship with the Siar Village people.

Lealea Village, Western Motu

Lealea village is a pretty Motu Village nestled close to the water in Caution Bay. Here, a bustling community thrives. The locals are fishermen, coconut harvesters and crab men. The village lacks water and one of the onerous tasks of the women is to go to the village well everyday to collect water. Recently (2013) Dome KRB was setting up a project to provide water to the village which would be really appreciated by the villagers especially women and children.

Now with the development of the huge LNG facilities outside Port Moresby, four villages closest to the LNG Facilities have been identified as Porebada, Boera, Papa, and Lealea. LNG has put a considerable amount of money into a cultural study of these villages and, through some preliminary clearing, has unearthed archaeological sites in Caution Bay. Apparently LNG did not at first unearth sherds of Lapita pottery. It was only when McNiven et al began excavations that these discoveries were made "Lapita sherds were only identified after we commenced our major excavations in September 2009 with no Lapita sherds evident on the surface of any site". Some of this Lapita is more than 2000 years old. This is evidence that Lapita people had sailed around the coast of New Guinea thousands of years ago and continued to make Lapita pottery in the same style as their ancestors had on New Britain. This does not mean, however, that these people who made the Lapita pottery were necessarily the direct ancestors of the Lealea people today. There was a lot of movement of villages through pillage and plunder. Remains of abandoned ancient villages can be unearthed in the area like the ancient site of Konekaru Village and Taurama Village which was destroyed by its enemies The survivors moved on and later formed Pari Village (McNiven, 2011).

Following investigations, the LNG Cultural Heritage Environment report noted:

> The pottery manufacturing villages along the coastline from Boera to LeaLea date back to at least 1,200 years (with earlier sites considered likely to exist). At the centre of the ceramics industry were the ancestral villages of Davage, Ava Garau just to the north of Boera and neighbouring sites located approximately 3 kilometres to the south of the LNG Facilities site security fence. Aemakara, an ancient village site of the Koita people, occurs approximately 700 m to the south of the LNG Facilities site security fence. Archaeological sites associated with Konekaru, an ancestral village site, begin 130 to 750 m to the north of the security fence (2012: 16.4.4.1).

These ancient, former villages were occupied by the people who made the Lapita pottery and their descendants may have shifted to the present day sites of Pari and Lealea. Settling there, they had to make do with poorer areas of land as the best land was already occupied by non-Austronesian people. So they built canoes and made earthenware pots, which were traded for food and other items.

[Pari and Lealea Villages are of particular interest in this study as it was *lagatoi* from these two villages that were studied closely on Magnetic Island in 1995 by a group of researchers from the James Cook University. Some Motu people had brought all the necessary materials to Nelly Bay to construct two *lagatoi* to be sailed across to the Strand on Monday 14 August 1995. Photographs in the Townsville Bulletin of 14 August that year depict young Papuan girls dancing in their swirling skirts as the *lagatoi* arrive at the Strand amidst a crowd of thousands].

Boera Village, Western Motu

Boera Village is on the coast about 30 kilometres west of Port Moresby. The women made many pots and traded them locally up the rivers but the men took most of their pots and sold them on the long *hiri* voyages to the Gulf (May and Tuckson, 1982: 62). Traditionally the population of Boera was over 900 people from seven different clans. On one side of the village, a white beach leads down to the water while on the other side are the gardens spreading towards the hills. Some people build near their gardens but others still prefer the houses on stilts over the water where views of the sea are enjoyed. This aspect once offered protection from witchcraft and enemies.

Seligmann quotes from Captain Barton about a fight between Porebada and Boera villages in about 1870. Some Porebada men were fishing near Boera when the latter insulted the Porebada and an argument developed during which the Boera attacked the Porebada men with sticks. The Porebada took offence at this and called on the Poreporena to help them to revenge the insult. They agreed and some of their visiting Gulf trading partners joined in the battle. Half the attacking force went to Boera by land and half in canoes by sea; the Boera people were thus caught between the two forces, and several were killed and perhaps the village burnt (Seligmann, 1910: 127).

Manumanu village. Groves, 1950. (PMB43_151).

Manumanu Village, Western Motu

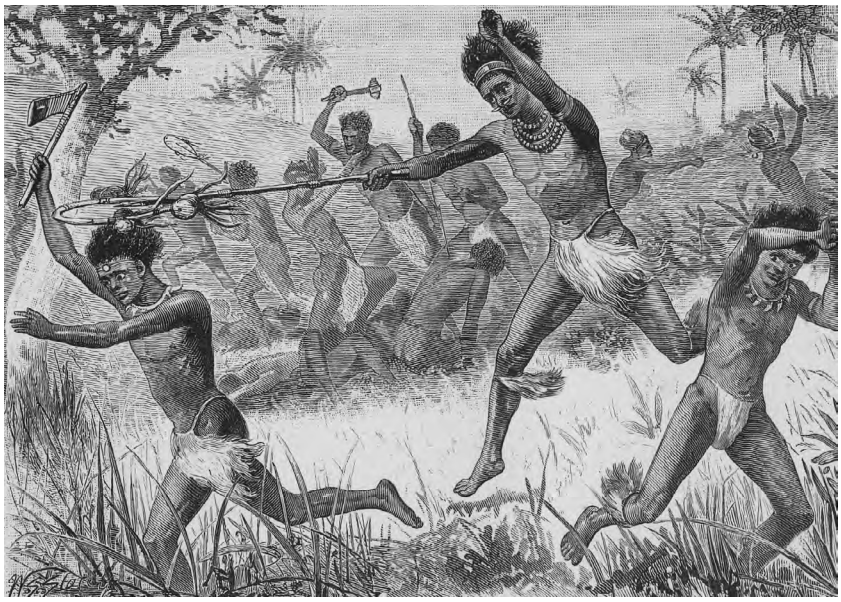
In the 1960s, Maslyn Williams described Manumanu as "a neat village with two rows of houses facing each other across a wide main street, one row backing on to the beach and the other onto garden lands and groves of coconuts." At that stage there were about forty more or less identical houses "set on posts, five feet or so above the ground and with a ladder leading up to the front veranda, this being the centre of family life". It is "hung with fishing nets edged with shells which act as sinkers. Fish spears, paddles, cooking pots and baskets complete the décor. Under the house the canoe-sails are kept, rolled around the main-mast; the ropes, unfired clay pots, fibres to be dried for shirt-making, or for spinning thread, or twisting into rigging" (1964: 87 - 8).

Dr Murray Groves, an anthropologist, initially chose three Motu villages to work in between 1947 and 1948. **Firstly,** he chose Manumanu because it still followed the traditional life; **secondly**, Porebada where the traditional life was beginning to change and **thirdly,** Elevala where the old ways had already been 'dissipated to a high degree'. He wrote, "I lived several hundred yards from the Port Moresby village cluster, of which Elevala is a component village, and in that period I made friends there, but I did not then make any systematic study of village social life" (Groves, 2011: xii).

Born in 1926, Groves was the eldest child of William Groves who became the director of education for PNG from 1946-68. Groves spent most of his childhood in Papua New Guinea mixing freely with his Papuan friends, learning their language and identifying with their customs. After graduating from Melbourne University, he began to make detailed academic studies of the Motu people.

From July 1954 to August 1955, Groves rented a house in Manumanu Village and had a few modern conveniences, like a kerosene lamp and an out-board motor for his canoe. He lived and ate with his Manumanu friends. His food was often the barramundi caught locally and cooked in coconut milk, wrapped in a banana leaf and broiled in the embers of the fire. When Maslyn Williams visited him, he enjoyed the meal. "There is no dish of sea-food in the world to better it." They sat on his veranda with Enno, the village headman, and talked about the *hiri* system. A local man, Akea, cared for Groves' canoe and outboard motor and later that moonlit evening he steered the double canoe to Moresby taking Maslyn Williams home while Groves slept on the deck.

While living in Manumanu, Groves witnessed *lagatoi* making and the storage of pots in the hulls. He described logs of soft wood which are "felled up-river in the dense rainforest." While the men are working on the logs they live in



Tribal fight. Chalmers, 1885.

a shelter on their double-canoes. The logs were then hulled out roughly with adzes before being transported down river to Galley Reach and to Manumanu village. Once shaped, the hulls are pushed one by one into the water and then attached to each other with vines. When the superstructure is finished and the shelters made at each end, the log for the mast, complete with some of the roots system for supports, is carried by a line of men and then hoisted into the canoe. Once in the *lagatoi*, the senior men prepare the lashings to hold the roots in place. Two long saplings hold the matting sail in place. "Pots are stowed on racks built along the floor of each dug-out hull. Each pot is protected from damage by banana leaf wrappings which have been heaped up on the deck for use by the men who are storing the pots" (2011: 118 -121).

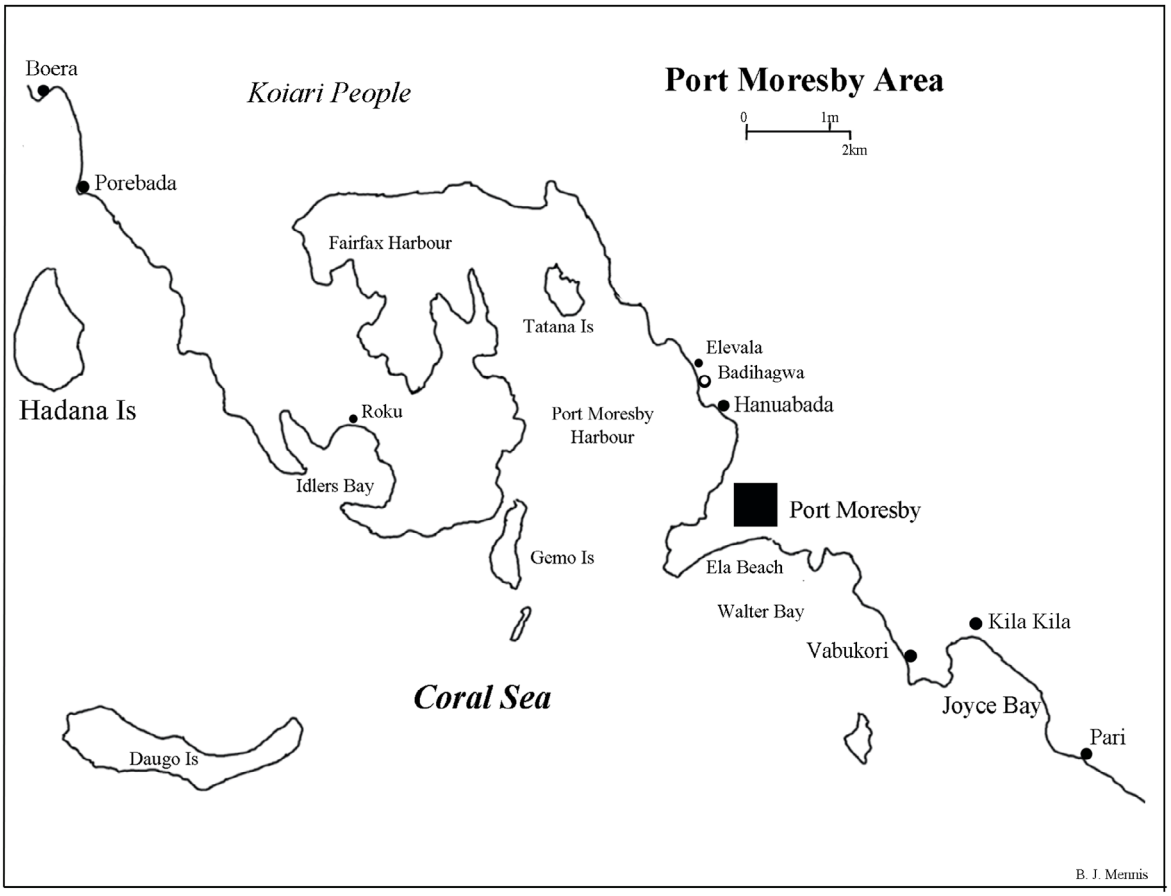
During the dry season, from May to November, Moresby often lacked water with its low rainfall. During the wet seasonal crops can be grown. Some Motu villages had access to fertile areas and could grow crops although most of their land lies brown and unfertile in the dry season. On the other hand, Manumanu Village owns and cultivates rain forest clearings on the banks of Vanapa River (Groves, 1960: 7).

Motu Villages on Yule Island

While living in Port Moresby in 1980, I, the author, stayed on Yule Island for a holiday. To get there we travelled across on a double-hulled canoe. It is a beautiful island nestled near the mainland and is shaped like a fish. While there, I interviewed Joseph Abau, headman of Tsiria Village. He was an elderly man who had a fund of knowledge about the old days. We sat on the veranda of his village house, catching the cool afternoon breezes. He said that the Motu people always regarded Yule Island as a rich source of clay for their pots. Because of this, it was often the scene of fierce battles between rival clans. The Manumanu people who lived on the mainland, made pots for the *hiri* but had no clay deposits of their own so, for many years, they collected clay from Yule Island.

Joseph Abia's story:

> Over two hundred years ago, a group of Motuans fled from the Mekeos on the mainland and settled at the end of Yule Island in three villages one of them being Poukama. At first, the Poukama people allowed the mainland Motu to collect their precious clay, but eventually disputes arose and the Poukama people barred the Motuans including the Manumanu people from access to the clay deposits. After this, a mini clay crisis developed. Manumanu declared war against the Poukama people and sent a knotted string to mark the battle day. Both sides prepared for war. Summoning their allies, they readied their spears and stone axes. The Poukama sought the help of the fierce Roro tribe on the mainland. On the day of the fight, the Manumanu warriors, bedecked in war paint and feathers, embarked in their long war canoes across Hall Sound. Fifteen to a canoe, they stood one behind the other pulling on the oars. With swift strokes they rowed in unison as they headed to what they thought was to be an easy victory. There were so many of them that the last of the canoes had hardly left the mainland, when the first arrived at the island. Drawing their canoes up on the beach, they set off towards Poukama. Unknown to them, the Roro warriors were creeping silently over the central hills. Coming across the unguarded Manumanu canoes they attacked them with stone axes and clubs until they were holed and useless Then they surged along the beach and surprised the Manumanu men in a rear attack. In the ensuing fight, the Roro were the victors and the few surviving Manumanu escaped across to Hall Sound on logs. So grateful were the Poukamas for the Roros help, they invited them to settle on the island. "You have fought for this land so we must share it," they said (Interview, Mennis, 1980).



So the Motuan people of Poukama Village became allies with the non-Austronesian speaking Roro against another Motu group over the clay deposits for their pots. This shows the over-riding importance of the *hiri* trade. The Manumanu were prepared to fight fellow Motu over the access to clay deposits. The importance of the pottery trade over-rode their friendship with fellow Austronesian speakers. The Manumanu recovered from this battle and afterwards collected clay freely from the Lealea Village deposits until about 1959 when the Lealea decided to charge them for it. After this they lost interest (May and Tuckson, 1982: 64).

Speaking about the *hiri*, Joseph Abia said the Motu people often pulled into Yule Island on their *lagatoi* on their way to the Gulf. He showed me a large cave where the men sheltered from stormy weather while on a *hiri* trip. The entrance to the cave is very small and we had to crawl in under a low rock but it soon opened up to a large area where dozens of people could fit comfortably. There was also a hidden tunnel from this cave to the other side of the island.

Percy Chatterton told the next episode of Joseph Abia's story: Frictions developed between the Motu and Roro people on Yule Island. The Roro, who wanted to make pots like the Motu, plotted to kill

Koiari tribesmen. Lindt, 1880.

Koiari tree house. Lindt, 1880.

the Motu headman and steal his wife, Kaia Mea, who would then teach them the secret of pot making. The plot was foiled and the Motu people fled back to the mainland to set up another village. Eventually they were joined by more Motu and then some Roro people. This was the beginning of Delena village and the people there mainly speak the Roro language (1974: 40).

Joseph Abia had earlier mentioned that Yule Island was sometimes visited by the *hiri* traders. This information was verified when I spoke to Mataio Taboro of Pari Village on Magnetic Island. Taboro went on a *hiri* trip in 1937 and described going ashore at Yule Island:

> We left our home at 9 or 10 o'clock in two *lagatoi*. We had a good south-east wind and at sunset we anchored at Yule Island at midnight. We could not cook on board the *lagatoi* so we cooked on the beach with flour, bananas and yams. We slept on board and then in the morning at about 10 o'clock or so when the wind began to blow we took the two *lagatoi* out to sea. After Yule Island we did not put the anchor down for three days and nights. At night we used the stars - we did not sleep at night or day because, if we did, it showed we were not strong enough to be on the crew (Mennis 1995).

Tubusereia village, Eastern Motu

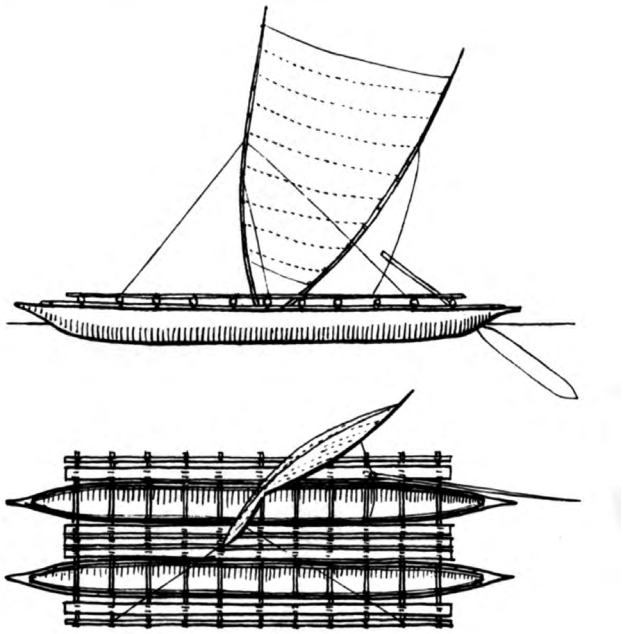
In the 1880s, Lindt described Tubusereia Village as "a Papuan Venice built in the sea, on piles, and entirely isolated from the land, communication being through canoe travel." The houses were at quite a distance from the shore and it must have been very difficult to build and transport all the needed materials. They may have built there as a defence means from attack by their enemies. They had good garden land on the mainland and so were almost self-sufficient and therefore no need to venture on the *hiri*. Being further around the coast to the east they would have had to travel much further than their western Motu. They were also expert fishermen. The women of the eastern Motu villages of Tupuselei, Gaire, and Kapakapa, were all potters, and the men are first class sailors yet they "equip no *lagatoi* and their pots are chiefly bartered with the bush tribes for food" (Seligman, 1910). Oram noted that there was a "long period of warfare between the Western Motu living in the Taurama area and the ancestors of the Tubusereia people who were then called Lakwaharu" (1998: vol2: 93). As mentioned, originally the Tubusereia and the Hanuabada people were allies and lived nearby. All went well until a fight broke out and the Tubusereia drove the Hanuabada out towards Taurama beach, and attacked them again. After this, they settled at their present location.

Kapa Kapa, Eastern Motu

Lindt said when they arrived at Kapa Kapa, they found the old village was a charred ruin because the Hula tribe had attacked them two years previously. They spared the women and children and the villages fled to a neighbouring village. "The present village is built half over the water, and the other half over dry land and the number of inhabitants is 500" (1980: 60).

Koiari Villages – inland tribes

In the 1880s, Lindt accompanied Mr Hunter, an expedition manager, into the hills above Bootless Bay. It was a time when there were warring tribes everywhere and their safety could not be guaranteed. He and Hunter and carriers left the coast on horseback. On the first night, a shower of rain developed and, before they turned in, their carriers



Double hulled Roro canoe. Neyret, 1926. Courtesy of Association des Amis des Musee de la Marine, Paris.

asked Lindt to fire off a round on his gun to keep the devil away. He agreed and the shots echoed down the valley. Next day, they travelled all day and climbed up a steep hill before coming to the village, Sadara Makera, where they would spend the second night. Four huts were built up in the trees reached by tall ladders, but sixteen other small houses were on the ground. The view was wonderful, "The whole extent of Bootless Inlet lay spread out before us like a map. The setting sun threw fantastic shadows across the hillsides to the seashore." Later, with the light of the hurricane lamp, Lindt viewed his quarters with its piles of yams, taro and other edible roots on three sides. "On the walls hung shields, clubs and mouth ornaments; sheafs of spears were stacked horizontally between the rafters and thatch. In the centre of the floor, which was made of battens of the sago palm, stood the fireplace." That evening when darkness had truly descended "dusky warriors made their appearance creeping in Indian file through the low doorway on hands and knees." They were wearing headdresses of cassowary plumes and feathers. "Their white nose ornaments contrasted with their faces painted in traverse streaks of red and black in sign of mourning" (1887: 43).

These village men had come into the hut to narrate the story of a raid that had just happened against their village. A peace *baubau* was passed around and Hunter and Lindt expressed sorrow at the losses of the Koiari tribe and promised to report the attack to the Commissioner in Port Moresby. The village men left about nine o'clock that night and like all keen photographers, Lindt set about changing the plates from his camera and adding new ones for the next morning. The night was full of sounds and interruptions from pigs, dogs and crying babies. Next morning, some of the men climbed agiley up the ladders to the tree houses and posed for Lindt. On their way back to Port Moresby, they came across a deserted village, "whence this tribe had been driven by a hostile tribe with a loss of sixteen lives" (1887: 43).

On another occasion a Koiari man was killed accidentally by a Koita man during a wallaby hunt. A blood price was set at "a large pig and ten articles of value including *toia* [shell armlets], *doa*, *tautau* [shell ornaments], *mairi* [pearl-shell ornaments] and *dodoma*" If this had not been acceptable, then the vendetta would have continued (Seligmann, 1910: 127). These Koiari people owned a large area of land inland from Port Moresby and traded vegetables, stone axes; bird of paradise plumes; bark cloth; tobacco; betel nut; ginger; lime (Allen, 1977: 436) with the Koita and the Motu in exchange for the coveted pots.

Hula village. Hurley, 1924.

The Roro People

The Roro people learnt to make pots from the Motu clans who joined them. Seligmann knew the people of Delena in 1900 or so. By that time they were all Roro even though two clans had originally been Motu:

> The village at one time contained members of two tribes in no way closely related to each other. The original

Kerapuna village, near Hood Point and Hula village. Brown, 1908.

> inhabitants of Delena were folk of the nearly related Roro-speaking tribes of Roro and Paitana, but to these were early added members of two *iduhu* (clans) from the Motu village of Boiera, one of which was called Marehau. It appears that this name has been extended to include both *iduhu*, and that the Roro-speaking Marehau are in fact the descendants of these Motu whose tribal identity has been completely merged in that of the earlier Roro-speaking settlers(1910: 197).
>
> The Roro-speaking tribes are not great traders, and their relations with other tribes appear always to have been limited. Canoes are made locally both at Siria and Waima, and probably at other villages of the Roro-speaking tribes, but they are also bought from the Toaripi. Further one tribe, the Roro, have learnt from the Motu to build *lakatoi* as they have to make pots, and one *lakatoi* called by the Roro-speaking tribes *au nohi* usually starts each year from Yule Island for Toaripi. Besides this, Waima has for long done a small coastal trade with the Papuan Gulf, taking especially shell ornaments, which come from further east, and the locally made fretted turtle shell ornaments, *koiyu*.
>
> Sometimes a Waima double-canoe bearing a cargo of coconuts may visit Port Moresby. The members of the Mekeo and the Roro-speaking tribes exchange garden produce for fish and shellfish, usually meeting at specially appointed market-places about midway between the two districts. Besides this, the Roro-speaking tribes formerly obtained practically their whole supply of adze blades, club-heads and dancing feathers through Mekeo (1910: 204).

Hula Village

Hula Village is to the east of Port Moresby and the people are non-Austronesian speakers who visited the Western Motu villagers while the men were away on *Hiri* trips. They would bring food and other items to trade for pots and returned home about the time the *lagatoi* returned from the Gulf. Seri Bodibo of Porebada village remembered when he retuned from the Gulf they were met by many Hula wanting to barter their fish for the sago (Gwilliam 1982: 51).

On their way to the Port Moresby area, the Hula looked out for Taurama Head which they called *ola nama* which meant 'good mountain' as it guided them into Port Moresby Harbour. The *hiri* traders always kept quiet when passing this mountain as they feared the *Taurama Buasi*, a large serpent who was supposed to live on top of the mountain (Oram, 1988: 90).

The Hula are generally very attractive looking with their long straight or curly hair, light-brown skin and fine facial features. Many people say they very much resemble the Malay seafarers who were some of the early explorers along the Papuan coast. It is known that the Malay traders did venture to Papua in pre-contact times.

Miklouho-Maclay visited Hula in 1880 with its houses built out to sea. "It consisted of long rows of huts built on piles in the water, at a distance of a quarter of a mile to half a mile from the shore; this long row was divided into several groups." In front of each house was a veranda or platform facing the shore with a ladder giving access to the water below. People accessed the shore in canoes or by swimming or at low tide by walking while carrying items and babies on their backs above the water. Maclay noted the tattoos were much the same as those in nearby Karepuna but the practice was frowned on by the missionaries and would soon fall into disfavour (Tumarkin, 1982: 411).

James Chalmers stayed in Hula in the 1880s and noted the tattoos the women had including one around her neck as a necklace "to please the future husband, who has to pay liberally for it." At that stage, Chalmers did not seem to be against tattoos describing them as "simply perfect." Their grass skirts were greatly admired as they are ornamented by alternate "red and yellow stripes of the pandanus leaf." In the evening a young man came up to him wearing the horn of a hornbill as a forehead ornament. The beak of the bird extended far over his nose (Seligmann, 1885: 289).

Ways of keeping time: days, moon phases, star appearances

In former days, the year had thirteen months corresponding approximately with the moon phases and these directed the activities of the village. The western name for these 'months' is only an approximation and identified by the weather. Here are their names: January, *Biria Kei*; February, *Guiraura*; March, *Goha*; April, *Lailai*; May, *Darodaro*; June, *Divaro*; June/July, *Veadi;* July*, Veadi hado*; August, *Viadi hirihiri*; September, *Uria*; October, *Laga*; November, *Manumaura;* December, *Biria bada*.

In May and June, the Motu people harvested the yams which were stored in special yam huts and lasted for months. In July, the people began to clear their gardens to plant the next crop. The Motu men who were planning a *hiri* made sure they had enough food for the rituals and to feed the crew on the voyage. They also made fishing nets, *matagara*, as July was a good fishing time. June was also the time for the dancing season to begin. In September, the *hiri* began and the *lagatoi* set sail for the Papuan Gulf. While the men were absent, the women tended the gardens and the girls were tattooed. October was the hunting month when areas of grass lands were set alight and wallabies were caught in nets laid across the land. The weather was now hot and the traders from Hula arrived as they often did when the *lagatoi* were away in the Gulf each year, bringing much needed food with them.

In November, the first rains of the *lahara* (wet season) arrive and the last of the small *lagatoi* left for the Mekeo area for local trade. In January and February, the fastest *lagatoi* return from the *hiri*. The Hula people who visited from Mekeo area bring food while the *lagatoi* that are away now sail home after getting some of the sago. Then more *lagatoi* arrive home in the wet season. In March, the *lahara* finishes and then in April the *laurabada* winds from the south-east start to blow (Michie.net: 2011).

Further reasons for the *Hiri*

As their pockets of dry land were not enough to live on, the Motu had to sail further afield in their trading canoes to get supplies of food. Oram described the Motu as a 'sea people' who had settled in an area without major rivers. He also stated that the extent of the hunger was difficult to measure but that many died from hunger and others died from the ill effects of relying on the bush food which made them sick and may have caused dysentery. "Therefore they often urgently desired additional food, which they could obtain only from the Gulf region" (Oram, 1982: 26). It seemed then that,

*Waima girls showing tattoos. S*eligmann, 1910.

for health reasons, the Motu people needed the sago for nutrition and to protect them from diseases acquired from living off the available bush-food in their own area. As the *lagatoi* did not sail if the local harvests of yams were good, this gives added weight to the view that the main purpose for the *hiri* was economic (Oram, 1982: 27). A further economic argument was that the crews on the fleet of *lagatoi* spent many weeks or even months in the Gulf and so were being fed by the Gulf people during a lengthy period thus taking the pressure off the local Motu communities to feed them.

There was controversy about the nature of the soil. Was it poor soil or lack of rainfall? From the earliest reports of the British administration, it was made clear that the people of the Western Motu area only took trading expeditions to the Gulf when the harvest was poor (Oram, 1982: 10). Oram noted also that, because of "the low rainfall and poor soil, the villagers in the Port Moresby area were rarely able to grow enough food to last until the next harvest was gathered in April and May" (1976: 9-10). Vasey disagreed with Oram's verdict about the poor soil and cited recent scientific tests that show the soils in the Port Moresby area are quite fertile though lacking in nitrogen. "The soils of the coastal plains, were not too thin or too rocky to permit gardening, are generally of good nutrient status and would retain moisture in the long dry seasons" (1982: 133-135). He contended that the soil would have been fertile enough for prolonged seasonal gardening in the pre-contact time.

In the 1930s a government employee thought he would help the Motu people by ploughing a field to facilitate planting their crops. They "watched the operation politely" but refused to use the field:

> And the reason was that they knew the sub-soil to be corrosive, and that cultivation had brought the poison to the surface. Also since the land had been not only ploughed but harrowed, they shook their heads as they saw the finer surface soil being carried away by the trade wind that blows from the south-east during the eight months of the year (Lett, 1944: 82).

In the long dry season, there was no rainfall for the gardens as Port Moresby is in the driest part of the country and the plants would often just die without water. The Motu people themselves view the soil as too poor to support them all year. This situation was exacerbated by grass fires, the burning sun and insufficient rain (Moi, 1979: 67). The Motu Austronesian speakers had only small pockets of land compared to the nearby Koita people and much of their land was dry and stony. This was one of the main reasons given for their need to have the *hiri* trading expeditions each year when they exchanged their pots for the sago and other items from the Gulf area.

Oram noted the Motu, with their unfavourable environment, often relied on the sago from the Gulf (Oram, 1982:24). For their very survival they built their large *lagatoi* and filled them with pots their women had made and faced the wild seas between their land and the Gulf. "It is against this background that such questions as the extent to which the *hiri* is economically based and the relative strength of the Motu, Gulf and other peoples involved in the exchange network must be examined" (Oram, 1982: 26). The Motu harvested their yams in April before the dry season began which approximates to when the Bel people harvest their yams with the big feast at the beginning of the year marked with the rising of the Pleiades in the sky. In about November or December, yams begin to rot and the hungry months would begin. In traditional times, manioc and bananas were available but not in sufficient quantities to bide them over and it was time to set out on the *hiri* trade voyages again.

Seasons and winds in the Port Moresby area

The Port Moresby area has a long dry season with very little rain from May to November. The topography of the area influences the poor rainfall with an average of about 100mm (39 inches), "with strongly marked wet and dry seasons" (*Encyclopaedia of Papua New Guinea*: 183). The seasons are called after the winds – the *laurabada*, the southeast wind and the *lahara*, the northwest wind, although there is only a rough correlation. The southeast trade winds occur from May to October. The Motu traders began their long voyages to the Gulf in September with the south east winds and returned home with the north-west winds during the wet season at the end of the year between December and the end of March.

In 1995, in Nelly Bay, I interviewed Vaina of Lealea Village who listed seven main winds in the Port Moresby area and told how they affected the *lagatoi* when the traders were sailing. The *laurabada* was the main wind to blow the *lagatoi* to the Gulf in the *laurabada* season and the *lahara* wind blew them home again (Mennis: 1995). The winds to be avoided were the *orei*, a strong wind blowing in the same direction as the *laurabada* and the *guba*, a strong wind in the same direction as the *lahara*. If either of these two strong winds blew, the sails were taken down. Other winds were *mirigini* and the *tanodai*, a strong land wind from the NE which blew only at night and caused the sails

to be taken down and finally the *deio* which is a light sea breeze that blows only in the daytime. During an interview, Tau Boha said "when the cold *laurabada* wind comes, we put the *lagatoi* in the water, board it and leave for the *hiri* saying ceremoniously *dobi ni karma*, we have left our home and sail" (Boylan, 1995).

The Motu people used a number of landmarks as they travelled day and night to their destination in the Gulf. These included Cape Cupola, Cape Suckling, Clump Hill, Gubbins Hill and Port Chalmers where Port Moresby is now (Boylan, 1995). The Motu rarely sailed out of sight of land and used knowledge of landmarks like beach heads and river entrances to plot their course. They feared having to beach the canoes in enemy territory.

Comparison between the Bel and Motu Villages

Winds and use of landmarks

The Motu people sailed to the Gulf using the *laurabada* wind and returned home by the *lahara* wind; the Bilbil and Yabob people used the *dadau* wind to take them to the Rai Coast and the *dolo yawarti* winds to take them home again. Because their long trading trips were in opposite directions, the *dolo yawarti* was the equivalent of the *laurabada* and the *dadau* was the same as the *lahara*. However the canoes were rarely at sea at the same time as their long trading voyages were in opposite directions using the prevailing winds to sail with. The Motu people did their trading from September and were away for a few months according to Tau Boha, whereas the Bilbil people sailed between May and late July. Both the Motu and the Bel relied on the magicians to make the right winds blow for the journey home. By the time the Motu people were on their way to the west with the *laurabada* wind, the Bilbil and Yabob people were home sheltering from the *karag* wind. However there was one big similarity: both groups of traders had to stay in their furthest point and wait maybe weeks or months for the wind to turn so they could return home. This enforced stay meant there were fewer mouths to feed in the hungry months in their home villages but it meant the host villages had to bear the brunt of feeding their long staying trade partners who were their guests. Time in the Gulf was spent making larger *lagatoi* for the heavy load of sago for the journey home when the wind turned.

Both the Motu people and the Bel people used the stars to guide their canoes at night. The *lagatoi*, in particular, kept sailing day and night up to a week unless they called into Yule Island where the canoes could be safely anchored. Enforced landings in unknown territory could mean attacks from enemy tribes. Knowledge of the stars and constellations was crucial for them. They knew the evening star, *Ardor*; and a circle of stars, *Nohobo* and the nearby Constellation, *Wadawa* "from midnight to 3.00 a pair of stars, *Dona* and *Larkin* were used and then between 3.00 and dawn the morning star, *Darbor*, was used" (Boylan, 1995).

The Bel people of Yabob/Bilbil used the evening star sometimes but their main star was the morning star known as *Boi*. The sailors often left one village and sailed to another on the Rai Coast using the morning breezes before the winds got too strong. Derr, of Bilbil Village, said that if they got lost at sea they could tell where they were by the stars and also the direction of the wind, "This is the season of this ---- wind so we must be must be going in this direction" (Mennis, 1980a: 101). The direction of the wind could also be indicated by the telltale streamers hanging from the stays on the mast. Hogbin indicated that the people of the Schouten Islands may have had a more advanced knowledge of the stars, as they navigated through the night. But even so he thought this knowledge might be "slight and only just adequate for their needs. -- at any rate it did not compare with the great knowledge the Polynesians had to cover their vast sea areas" (Hogbin, 1935: 396).

Adaptation to the environment

In studying these two groups of people, many similarities and differences have been noted in their response to the environment, which can encompass many things. Firstly, there is the physical environment which includes the climate - weather, temperature and winds; location - coastal, insular or inland; soils - rocky, fertile, sandy. Secondly, there is the cultural environment of the people. Robert 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. As Spier says "no man can --- dwell in a totally natural environment. He will alter it in some way" (1970: 10). In both places, the poor environment had a profound effect on their culture, necessitating trade with other places. However environment is not the only factor to shape a culture.

Environmental determinism was a theory held in the nineteenth century and early twentieth century in which much emphasis was placed on the environment determining a culture. Spier viewed this determinism as too simplistic. Firstly, he agreed that environment placed limits on a culture, but he argued that, given the same environment, different people

evolved their own customs. (This will be proved right in this present book on the Bel group and the Motu people). Secondly, Spier divided up the 'technological stock' - his name for the material culture - of a culture into innovative and diffusionary. The innovative part of culture was developed by the people themselves and was closely related to the environment. Diffusionism, on the other hand, stresses the borrowing of cultural features from outside cultures and undermines local innovation. This may have happened with the technical knowledge in building canoes. Thirdly, Spier states that "the biological needs of man, as related to environmental problems (of drought, heat, cold, forestation) may be expected to channel thoughts in certain environments" (ibid). The people's response to their environment helps them to develop their material culture, but many other factors may be involved. When people settled in a new environment, they brought a set of beliefs and customs which they then adapted to the new surroundings (Spier, 1970:10). The Motu people and the Bel people shared similar ancestral roots as Austronesian speakers, who had made Lapita pottery, but they developed quite different trading vessels - the *lagatoi* of the Motu people and the *lalong* of the Bel people. Does this bear out Spier's diffusionist theory of the technical knowledge being imported?

Technical knowledge

The technical knowledge of building canoes was not just developed in a response to the environment. According to the myth of the first *lagatoi*, the creator being who taught the Motu people canoe building, Edai Siabo, may have been a Malay man from the west. According to some "not entirely satisfactory genealogical evidence, he lived some nine generations ago" (Oram, 1971: 426). There is evidence that Malay traders frequented the coast of Papua for centuries and this is reflected in the physiognomy of the people with their straighter hair and rounder features. Haddon and Hornell also discussed the influence of the Moluccans (Malaysia) and the Indonesians and the 'Papuo-Melanesians' on the canoes of New Guinea on both the south and north coasts (1991, iii: 64). Even the names of canoe parts show Proto Malayo-Polynesian origins. For example, *asi*, the Motu word for the hulls, derives from the PMP word *katir* (Pawley, 1989: 6).

This technological aspect is an important part of the argument against material culture being determined only by the environment. The influence of outside technology from Malaya or Indonesia was a definite possibility according to the literature. The Bel canoes were similar to the Siassi ones as they both had built up sides and outriggers, with some cultural differences in the prows and in the totems e.g. the Siassi canoe had crocodile heads carved on their splashboards. Having said this, these canoes could themselves become trade items. Pall's father, Tagari of Bilbil Village, was very proud of the Siassi canoe he had bought with many pots.

Bodrogi postulated with Harding that certain art forms are limited to the trading spheres of the high sea traders (1979: 271). I would like to take this a step further and theorise that the large trading canoe styles themselves were somewhat limited to the trading spheres. For example, when the Gulf people wanted to build a trading canoe which they had never built before, they built the *bevaia* which resembled the Motuan *lagatoi* and were even helped by the Motuan mariners in the construction. Because they had contact with other trading centres, the craft the Gulf people designed were more comparable to the *lagatoi* than they were to canoes in other trading spheres. So the *lalong* and *balangut* of the Bel are more similar to the canoes found in nearby Siassi, Finschhafen and Tami (Haddon and Hornell: 290) than to the *lagatoi* of the south coast. The *lagatoi* on the other hand is more akin to the canoes of nearby Mailu and Roro Villages. It appears that once canoe styles had been introduced from outside contacts or developed by the mariners themselves, then the canoe style became stabilised within a trading sphere. Even the development of various stages of canoe styles could be limited within a trading sphere. Haddon and Hornell argued that the *lagatoi* could have been developed from the double outrigger canoes which are found also to the west in the Gulf and to the east in the Mailu areas. The first large canoes the Gulf people made were the *huruka-irohi* which were double outrigger canoes and had paddles for rowing with temporary sails and then a permanent sail was added and lastly the *bevaia* was built which approximated to the *lagatoi.* The Mailu also had double-outrigger canoes and others similar to the *lagatoi* (Williams, 1932: 141).

Environment and the Culture

Having pointed out that the technical knowledge was diffusionary to a certain extent and therefore not dependent on the environment, it must be stated that the physical environment also affected the culture of a people: the winds and the seasons, the rainfall and the nature of the soil all had a profound affect on the survival of the village people and their need to go further afield to trade for food. The Motu people needed to undertake extensive voyages to the Gulf to get the sago they needed, and developed a style of canoe suited to these environmental conditions. Their trade friends in the Gulf lived in river villages where the large *lagatoi* could be easily moored. The Bel mariners on the other hand were able to

trade along the coast at many villages to obtain the required objects and food. As a result they developed lighter canoes which could be easily pulled up on the coastal beaches. The environment influenced the materials and tools of both these peoples. They had no choice but to use what was available. Tools were made of shell, wood, bone or stone found in the environment. Both areas in this study had the clay deposits necessary for potmaking, which were the basis of the trading system.

Both the *lalong* and the *balangut* of the Bel and the *lagatoi* of the Motu had a significant place in the culture of the people and reflected their highest form of technology and art. For example, the *atat* elbow structure found in certain trees provided the strong foundation for the upper structure of the *lalong* and *balangut* whereas the use of a whole tree structure, including the roots, was used in the *lagatoi* to give the mast strength. In both cases these were ingenious techniques used by the people who had no knowledge of hinged joints (Mennis, 1980a: 35-36).

The canoes in this study were part of the material system of the village. According to Barrie Reynolds, "each item in a material culture has its own material system and each culture may, therefore, be seen as a mass of parallel overlapping and interlocking systems" (Reynolds, 1987:156-7). So a pot or a village house can be said to generate its own material system. Studying the houses of the Kwandu people, Reynolds found many aspects of them that exemplified "a number of principles of village life," including division of labour, technical skills, the material available, the standards of construction and social links (1987:160). Both the *lalong* of the Bilbil people and the *lagatoi* of the Motu people, generated a material system in the following areas: the technical skills of the people and material they used to make the canoes; their belief system which encompasses mythology and magic; their social order; the economics of trading; the style of their artefacts and the shape of the canoe being determined by its function in carrying these artefacts (Mennis, 1980a passim).

One environmental factor, which impacted on the culture of the places in this study, was the nature of the soil. Some soils were ideal for growing food, and provided bush material for houses. Unfortunately the soils where the Bel and Motu people lived did not fit this category but clay soil needed for making earthenware pots was available. Thus the micro-environments e.g. soil, and rainfall in a location can determine the materials available and the artefacts that can be produced. On the other hand, the macro-environment of the wider trading area with its winds, seas and the geographical nature of the coastline challenged the people to develop large trading canoes that could fulfil the function required of them. The canoes had to carry cargoes of pots in one direction and loads of food and other artefacts home again. The people may have imported the technical knowledge from outside but they had to apply it to their conditions and needs. The Manumanu villagers were Motuans who made pots for the *hiri* but they lacked the clay. As we have seen this led to warfare with the Yule Islanders and later arguments with the Lealea Village after which they gave up the pottery making altogether.

On the north coast, the presence of populated offshore islands led to the establishment of trade networks between Karkar, Bilbil and Siassi and the mainland centres. Perhaps for long distance trade to be vibrant, there needs to be off-shore islands for the canoes to call into along the way as in the above listed trade networks, to provide safe harbours where items for trade can be obtained. The exception to this rule is in Papua where the paucity of islands, apart from Yule Island, meant that the traders had to sail a long distance to reach the Gulf without stopping on the way.

The canoes that were developed on the north coast fulfilled their function for short or long sea trips, which would rarely be out of sight of land. There was a myriad of villages the traders could safely call into in this area and they did not need to carry very heavy loads. The dearth of islands, as happens between the Huon Gulf and the Trobriand Islands, led to very scanty trade connections. In the case of the Motu people, few island havens meant sailing day and night until landfall in the Gulf area unless they called into Yule Island. To cater for the changed circumstances, their canoes had to be large and sturdy like houseboats with sails.

The question arises whether the Mailu Islanders are an exception to the rule or not. Their language was classed as non-Austronesian and yet their women made pots and the men built large canoes with crab-claw sails in which they went trading: two characteristics of Austronesian speakers. However, their vocabulary includes many Austronesian words and genetically they are an Austronesian race of people who were once Austronesian speakers (Spriggs, 1991: 10). When the ancestors of the Motu left the Bismarck Archipelago, they would have passed the Trobriand Islands and Mailu Island and perhaps some of them stayed on there introducing their language, pottery skills and canoe manufacture. The Mailu continued to have a strong trading sphere of their own for many hundreds of years interacting with the Motu and trading with them. Seri Bodibo said the crab-claw sail is "like our body we have two arms which help us to keep balance, so does the sail. Also the two flaps help to catch the wind better." Gwilliam, 1982: 49).

Social Reasons for the trade.

Did these people carry out the trade only for environmental and economic reasons like poor quality soil and the need to supplement food resources or were there social reasons for the trade as well? Harding described a type of trade in Sio as 'delayed exchange' which he argued was a type of social exchange similar to the *kula* of the Trobriand Islands where certain objects might be passed around the trading sphere (1967: 243).

The *dadeng* and the *hiri* were of great social importance in the yearly calendar of the people. It was a time to make new trade partners or renew old friendships. The prestige gained by going on a *hiri* expedition was a great incentive for the men. They could boast of their prowess and those who had not made a *hiri* trip, felt pressured to go. The festive time of preparing for a *hiri*, taking part in it and the return voyage, hailed as returning warriors could have been an end in itself to highlight an otherwise mundane existence. The rituals and rules that accompanied the *hiri* were a significant part of the spiritual life of the Motu villages. Many magic rituals were used over the elements – the seas, winds and coast. The men felt that through these rituals they could have some control over their environment with the help of the spirit world.

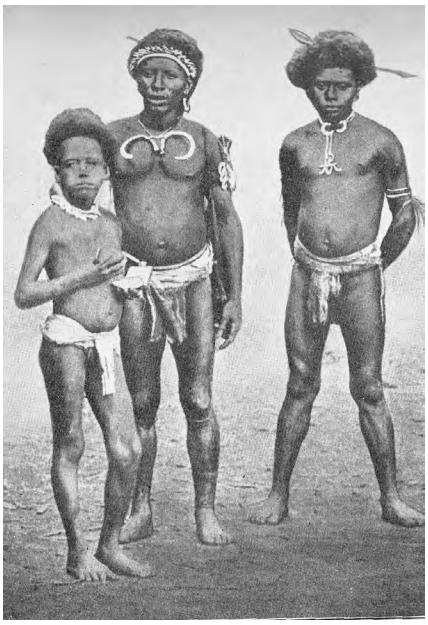
It may be concluded then that, given some similarities in environment, the Bel people and the Motu people were able to devise similar systems of survival, by making earthenware pots and by sailing to other areas and trading for food. The technological innovations achieved to build their large canoes may have depended on outside technical knowledge or may have been devised by the high-sea traders themselves adapting double outrigger canoes into the *lagatoi* as Haddon and Hornell suggested. Their material culture cannot be said to be wholly developed as a result of the local environment even though they relied on local bush material to build their canoes. As we shall see, these trading voyages were organised by people who had a high level of technical knowledge and familiarity with the winds, the stars and the seasons and for their very existence: they were ***Sailing for Survival.***

Walkway in a Motu village. Groves, 1950. (PMB43_154).

Part Two: Myths, Oral History and Magic Beliefs

> *To many scholars of the west today, legends are folktales and do not have historic significance, but their assumption should not absorb the thoughts of Papuans and New Guineans because they were perhaps the recorded historical events that have been transmitted from generations through the medium of story telling (Jojoga, 1975: 104).*
>
> *Historians faced with the problem of reconstructing the past of oral societies such as the African one, did not rely solely on a study of oral traditions. They sought help from other sources, primarily archaeology, linguistics, ethnographic data, biological facts, as well as written data from visitors to the society* (Vansina, 1971).

In Papua New Guinea, myths and legends are far more than a collection of stories. Essentially they provide an ideology to explain the world in which the people function and are also the basis of many customs. Often there is little separation between the spiritual and the physical world. Various tribes had similar myths of the first trading voyages, giving credence to the ancient nature of the trading system. Wogeo had the story or Mafofo and Wongka; the Manam Islanders the story of Jari; the Motu people the story of Taurama, Keura and Edai Siabo; the Bel people the story of Kilibob and Manup. All of these culture heroes took part in some spiritual journeying to show people the way. Sometimes the historical facts in some myths are more difficult to see than in others, but it was one way that history was passed down from one generation to another.



Three men of Madang. Brown, 1908.

A. Trading Myths of the Bel

Bel myths can be reviewed on several levels. They can be seen as myth/dreams and viewed only on the level of fantasy about the doings of spirits, creator beings, or deities who would never have lived. Myths can have other functions as well: they can begin cargo cult thinking when people are waiting for the good things to arrive; they can describe the origin of things like trading systems or they can be a way of handing on historical events from one generation to the next and they might also show common links between the people who have the same myth.

A.1 The Kilibob/Manup myth of Madang:

The ownership of this myth may point to a common ancestry. Peter Lawrence said the Sengam, Som, Yam and other seaboard peoples shared a complex of origin myths, which the sub-coastal and hinterland people did not possess (1964: 21). The Takia of Karkar Island and the Yabob and Bilbil people would also be included in this list. They are all Austronesian speakers with a common ancestry. In many interviews I had with informants from Bilbil, Yabob, Kranket, Siar and Kauris, the birthplace of the two brothers was usually Budup, just north of Sek.

Dau, of Riwo village, in 1976:

> *The two brothers, Manup and Kilibob, lived at Budup with their mother and father. They thought that if they killed their father they would have as much knowledge as he did. Their mother was cross with them, "You should not have killed your father." The two brothers were frightened by their mother's anger and accused each other. They continued to argue in this fashion and their mother was angry and showed them her stomach where they had both been in her womb. The two of them were very ashamed but it did not stop them fighting.*
>
> *Manup made a* lalong *canoe while Kilibob built a ship with sails. The two of them fought and fought and then they rested. They went to Karkar and fought and then they left. When Kilibob came to Riwo, my ancestors were here. He went to Kranket, Bilia, Bilbil and Bogati. He gave each place* singsings *and feasts and all the customs of the ancestors. Then he left for the Whiteman's land. My ancestors used to talk about this. "Later on he will come back and bring good times for us." My ancestors heard*

> *these stories from their* tabuna*. When the Whiteman came they thought they were Kilibob and Manup and they would bring the good times. When the Japanese came they thought again about Kilibob. The story was that when Kilibob came back there would be fighting. Men with the mal would appear and bring cargo. So when the Japanese arrived and we saw they were wearing mal, our thoughts went back to our* tabuna *and we said , "True, now the good times will come up"* (Mennis: 1980a: 1-7).

Cargo cult thinking

The above myth has cargo cult overtones. Harding said: "Lawrence was the first anthropologist to take these stories seriously and to analyze their didactic and epistemological value to the people who told them. In his analysis, the major story line was central to cargo cult activity in the Madang area during the 1940s and 1950s" (Harding, 1994b: 4). Peter Lawrence, in his *Road Belong Cargo*, gives a comprehensive look at cargo cults but missed some historical connections, which would give these myths a deeper meaning. He was particularly interested in the spiritual beliefs of the people as a basis for the cargo cult thinking. Because Kilibob promised to return bringing the cargo, Lawrence viewed this myth as the basis for the first cargo cult in the Madang area (1964: 24) which he placed at the arrival of Russian scientist, Miklouho-Maclay. But it began earlier at Budup when a group of sailors wrecked their small ship on the reef at Doylan. They repaired their ship and sailed off promising to return with many good things. When other people like Maclay or the German officials arrived, they were all initially thought to be Kilibob returning. When the cargo was not forthcoming, the people were disappointed but never gave up hoping. Even the Japanese ships were thought to be Kilibob returning with the promised cargo. The fact that Kilibob had promised to return bringing cargo did, however, lead to a cargo mentality amongst some of the people.

Japanese occupation money became known as Kilibob's money, as Budup Point was apparently depicted on the right.

Harding commented on Kilibob and Manup but does not give it any historical credence:

> A fight between them causes one to leave home and embark on a creative odyssey along a specific geographic route. Along the way, the protagonist creates plant, animal, and sometimes human populations. In the much more comprehensive and lengthy versions presented here, he teaches important skills and introduces technological innovations, subsistence activities, heterosexual sex, and a multitude of dances, languages, songs, rituals, and various other cultural forms. He may be a trickster, a womanizer, and a rogue. Through his travels, the legend also describes significant geographical, cultural, social, and economic "facts of life" according to a more general cosmogony/cosmology. (1994b: 6).

Harding continues:

> Each story line is classified locally almost without exception as a "sacred history" across the area in which it is found. The story's content imparts codified information about cosmogony/cosmology; about concepts of humanity, morality, and personhood. Some episodes outline the Vitiaz Strait trade network and explain ethnic diversity and intergroup relations. Important skills, technology, and subsistence activities can be traced to other episodes, as can population migrations and other symbolically encoded cultural and ethno-historical events pertinent to their teller (1994:10.

Myth of the First Trading voyage

The myth of Kilibob and Manup was not just the beginning of a cargo cult, it is also about the first trading voyage in the Madang area from west to east as implied in Harding's comment, "Some episodes outline the Vitiaz Strait trade network and explain ethnic diversity and intergroup relations. Important skills, technology, and subsistence activities can be traced to other episodes as can population migrations" (1994b: 10). Rufus Pech, who wrote at length on Kilibob and Manup, stated that this myth described the first trading trip. He describes these culture heroes as "Two

Disparate Brothers: One of the two or both of them, are credited with the establishment of a special maritime culture, the founding of distant new colonies and the initiation of an overseas trading system" (1991: 28). Finally, Kilibob left and created islands on the way towards the Rai Coast - the direction the Bel men went on their trading trips. This myth is very similar to that of the Motu two-brother myth of Taurama and Keura which is viewed by the Motuans alongside Edai Siabo as beginning the *hiri*. The Bel myth probably has a similar function in the Madang area of the trading voyages from west to east. Rufus Pech, agrees with this view (1991: 28).

Pech described these culture heroes as two brothers, Kilibob and Manup, who are usually described as an older and a younger brother. The older brother may be considerate, conservative and imitative, the younger one willful, imaginative and inventive, or vice versa. Further one may be a skilful craftsman, the other inept; one may be a crafty trickster; the other a stolid dupe; one a wandering trader; the other a stay-at-home-gardener (1991: 28).

One version went as follows:

> *Once there were two brothers, Kilibob and Manup who lived on the north coast of Papua New Guinea (in the bush near Budup). They were always quarrelling because they each thought they were the best at everything. One day Manup decided to go fishing while Kilibob went off hunting. Kilibob wandered up near the village gardens and shot an arrow at a bird. The arrow missed the bird and fell into a garden where Manup's wife found it and decided to keep it because of its beautiful design. She would only return the arrow to Kilibob if he tattooed the design on her leg. Kilibob did this and she stemmed the blood with a leaf, which she threw in the water. The leaf floated down to where Manup was fishing and he saw the blood. Later he saw the design on his wife's leg and recognised it as Kilibob's mark. This began a big fight between the brothers. Kilibob went to the bush behind Budup and built a ship with sails never seen before. Manup built a trading canoe like the ones the Yabobs built to trade pots in. He took his men on board and sailed towards the Sepik. Kilibob sailed in the other direction in his ship towards Madang and as he went he pared off parts of the mainland and created the islands off the coast. In this way Sek, Malamal, Siar and Kranket Islands were created. He then carved out Dallman Passage and other islands to the southeast* (De'Ath, 1981: 70 –71).

History in Myth

Some myths are purely fanciful with animals taking on human characteristics but others have historical facts imbedded in them. Scientific evidence can be used to test possible facts in the myth. Through the modicum of story telling oral histories are passed on from one generation to the next.

> In common usage the two words 'myth' and 'history' are used as if they denoted contradictions. A story is, so we are likely to be told, either true or false. If it is true, it is history, if it is false, it is a myth. Historians --- aim at replacing the products of human phantasy, mythology by the products of historical research-history. --- Myth and history in a very special sense are interdependent. They fertilise each other and it is doubtful whether the one could exist without the other (Munz, 1956).

In investigating the historical truth in the Kilibob and Manup story, I have sought help from other fields of research. The ship with sails in the two-brother myth was a real ship wrecked near Budup in the first half of the eighteenth century. In the 1970s, an old headman, Larnau, showed me the place where a ship had been. The sailors had repaired it in a hollow where Kilibob was said to have built his ship. The sailors lived there for many days, learned the local language then sailed away promising to come back.

Franz Moeder told me that, in the 1920s, an old man, Ngangai, said his father had seen a ship with sails that had been wrecked. This would have been between 1830 and 1850 (Mennis, 1979a: 93). In this same hollow at Budup, ship's fittings, chains and ebony statues of soldiers had been found as well as Kris swords in scabbards. There definitely had been a wreck there and somehow it was woven into the Kilibob and Manup legend. Kilibob was given the qualities of the captain of this ship and sailed it away. .

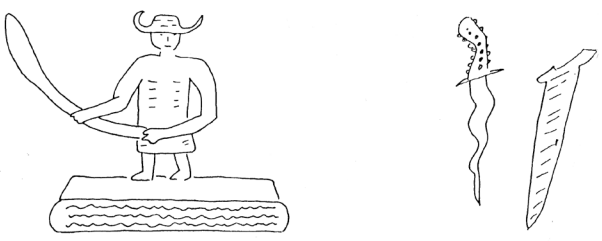


Illustration of items from the wrecked ship by Franz Moeder.

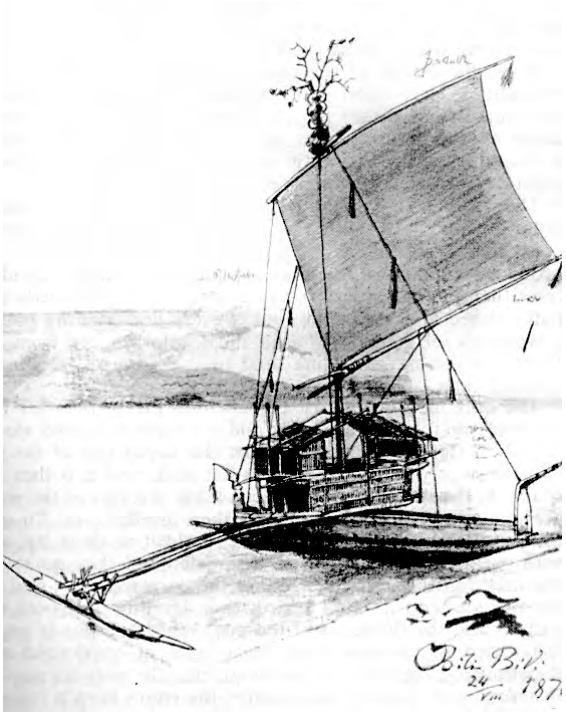
Wreck in the Budup area, possibly the *Hydrus*

The wrecked ship referred to in the myth could have been the *Hydrus*, a cutter with sails and anchor as described which was lost in this area in 1844 and which fitted the ship in the myth. According to a newspaper (Singapore Free Press, 1845), Captain Bond and four sailors arrived in Singapore on an Arab vessel from Ternate, in the Moluccas, in October 1844. He maintained that he had lost his ship, the *Hydrus*, in about 145' E longitude off the Coast of New Guinea. The longitude quoted is directly in the Budup area. He related that his officers, and the rest of the crew, were murdered by the natives of New Guinea. A different report, in a Dutch newspaper, appears to contradict this story stating thst the *Hydrus* was wrecked in the Admiralty Islands, and the crew was attacked by "natives and 11 sailors were killed" (http://kranten.delpher.nl). Whether it was the *Hydrus* or not, a sailing vessel defintiely was wrecked at Budup about this time.

According to oral evidence provided by a missionary, Father Noss, to find their bearings the sailors from this ship struggled to the top of the ridge, chopping the trees with their axes. People came from miles around to see the cuts in the trees, amazed at how well their axes worked compared to their stone axes. The sailors repaired the ship and departed leaving ships fittings, chains and statues in a hollow and promised to return bringing good things with them. Later, the missionaries at Alexishafen found ebony statues of soldiers, ship fittings and swords in this same place. These statues were the most important material evidence that a wreck had occurred at Budup. Whether the ship in the myth was the *Hydrus* or not, the fact remains that a ship had come into the area and been washed ashore. There were too many artefacts found as evidence to ignore the truth of this.

How old was the Kilibob and Manup legend?

Was the myth of Kilibob and Manup an ancient myth? Elements of it could be very old: the two brother conflict; the rivalry over a woman; the separation of the brothers as a means of stability; also these two creator beings creating all the islands offshore. To Kabinana and To Karvuvu, two creator beings in the Rabaul area were also credited with creating islands off the coast of New Britain. It was a common element.



Sketch of a lalong, *by Maclay*. Sentinella, 1975.

Lilley questions the age of the myth because, "the basic elements of the myth – that is, what happens to, or is done by Kilibob – are very similar wherever it is told" (Lilley, 1986: 92). If it were an ancient myth, more variations would be expected. Secondly Kilibob was not described as the 'creator' in the Siassi area but rather, "visited existing populations and provided them with knowledge and skills. It suggests that the myth may have originated in the western area and diffused to Siassi via Arop" (Lilley, 1986: 92). He goes on to say it may have developed after the eruption of Arop Island. We now have a seismic event two generations earlier than the Arop eruption when Yomba Island sank in a tsunami. This could have been the flood recorded in the Karkar oral traditions. The survivors dispersed into small settlements along the Madang and Rai coasts and established trading systems through which myths were passed along with trade goods. They then became assimilated into the local village culture. Sometimes new events were added as a chapter to the myth for example the arrival of the large boat that got wrecked at Budup near Sek. So Kilibob, the elder brother was then given the added aura of a sea captain of a ship with sails that had never been seen before. The superhero could do anything. He filled his ship with goods and sailed off promising to return.

Some elements may be more recent than others but there could be a facet of the myth that is ancient. Now with the earlier evidence of the island of Yomba existing at Hankow Reef there is another possibility of its origin. The people who once lived on Yomba Island were traders and potters who sailed their large canoes to the Siassi area to trade over many centuries before their island sank in a tsunami in about 1450 (Day, 2012). When they escaped they established themselves along the coast bringing their myths with them. Through their trading systems, the myth spread to Siassi

and the Vitiaz Strait. As I have shown, there was also history in the myth about a real ship which was transposed into the myth and Kilibob was accredited with building that ship and sailing off along the north coast.

Kilibob built a great ship with sails never seen before in this exact spot at Budup and promised to return bringing the cargo and this gave rise to a cargo cult. Peter Lawrence did not realise the importance of Budup and this sailing ship when he was doing his research in Madang. The first cargo cult began earlier then he estimated. The myth of Kilibob and Manup is found along the Rai Coast and through the Siassi group and across to West New Britain. It follows the trade route that the Bel made as far as Sio and carried further by the Siassi traders.

The discussion revolves around how ancient is the Kilibob and Manup story. If it began in Budup as one version states, it would not have been an ancient myth.

Kulbob (sic) and Manub on Karkar Island

On Karkar Island, the people have their own version of the Kilibob and Manup myth calling the brothers Kulbob and Manub. They claim Kulbob was born on Mt Kanagioi and that he and Manub "lived at either end of Kulbob Bay." When Manub's wife cajoled Kilibob into carving his mark on her leg, there was a 'violent quarrel' over this. Kulbob escaped up a *ngaul* tree like a lizard and when Manub's men tried to cut it down, Kulbob replaced the chips back in the tree. Only when they burned the wood chips were they able to chop the tree down with Kulbob in it. The tree fell into the water and Kulbob made a large canoe from it. In another version, a large ship appeared 'stocked with European goods'. Kulbob filled this vessel with the 'finest artefacts, animals, and food-plants'. When Kulbob reached Sek, Manub was already there and Kulbob ordered him to go towards the west "to distribute cultural items in those areas". Kulbob himself sailed eastwards, "forming islands and reefs as he went bestowing his Austronesian language, his people, goods, techniques, certain ceremonial dances and songs – in this way, the cultural and linguistic characteristics of the north coast of New Guinea came into being" (McSwain, 1994: 17).

It is interesting that in the map by McSwain depicting the travels of Kulbob and Manub, they both went to the Sek area, where Budup is and from there departed on their further trips; Manub to the west and Kulbob to the east. It was here that the remains of a wrecked ship were found. It seems that the Karkar people borrowed much of their story of Kulbob and Manub from the Budup area and turned it into their own version. In the map, (McSwain, 1994), the directions the two brothers travelled followed the trading routes of the Bel people. "Traditional trading networks doubtless determined the deities' routes, the alternatives given for Kulbob's journey may be taken as indications of the changes and extensions of trading journeys over time" (Pech, 1994: 11). It was possible that the Karkar people 'borrowed' some of the details of the Sek/Budup version of the myth and claimed them as their own. For example, the ship that Kilibob built, the place where the two brothers fought, the fight between the brothers and the tattoo on the skin of the wife - all very similar to the Bel myth.

Karkar Island is divided linguistically into the Waskia, who are non-Austronesian speakers, and live on the north half of the island and the Takia, the Austronesian speakers on the south. The Waskia claim Manup as their creator being whereas the Austronesian Takia claim they are descendants from Kulbob. The apposition of the myths, the Takia and the Waskia, their origins and different languages is explained through the stories of Kulbob and Manub. As already mentioned, one clan on Takia claim descent from a man called Karkar who arrived after a big flood [tsunami]? The people living there would have been affected by the tsunami which took out Yomba Island leaving the large Hankow Reef in its wake. The southern part of Karkar Island could have been affected with great loss of life and the Takia, could have come and taken possession of the empty land:

> People [on Karkar] claim that long ago, a tidal wave or a flood covered Karkar. It was followed by a volcanic eruption which few of the inhabitants survived. Then the first ancestor, a being called Karkar, arrived or came into existence on the island, marking the transition from superhuman to human ancestors. As the Takia put it: 'He was close to being like us', Because of his partly mortal state, the people felt that they could claim reasonably precise descent from him. His descendants spread out and populated Takia (McSwain, 1977:24).

This man, Karkar, was an Austronesian speaker and probably brought survivors when Yomba sank. In that case, he was a real man not a superhuman. The Takia even have a genealogy of about twelve generations deep for this man which fits in well with the genealogies of other Bel people of a tsunami which swamped Yomba Island in 1450 A.D. (Day, 2012.). Perhaps in the light of this evidence, some of the Karkar story needs to be revised.

A.2. The Cassowary and the Fowl: a legend about a trading trip was told by Pall of Bilbil:

> *The* muruk *and the fowl made a canoe and went on a trading trip to the Rai Coast. The muruk who was steering got jealous of the fowl who was sitting on the top platform and whose feathers were fluttering in the wind. He demanded he be given a feather. This the fowl did but the* muruk *was not satisfied and broke the canoe with his claws thinking to drown the fowl. The fowl was able to fly away but the stupid* muruk *was beginning to drown in the sinking canoe. He asked the fish to help but they would not and then he persuaded a turtle to carry him to shore in return for betel nut, taro and bush tobacco which he would get from the villagers. The turtle became suspicious and tried to leave. The* muruk *hurried after him, turned him over and tied one leg to a tree. The* muruk *then went off to tell the villagers to come and kill the turtle. While he was away a rat came and spoke to the turtle. "What did the* muruk *tell you?" he asked. The rat knew the* muruk *was tricking the turtle and helped him escape. The villagers were so angry at the loss of the turtle that they turned on the* muruk *and killed him* (Mennis, 1981c: 98- 100).

In this myth the people extended their humanity to include a cassowary, a fowl, a turtle and a rat – all animals which were important to them. "Another thing that such myths and legends do is to provide an ethical set of rules for people to live by" (De'Ath, 1981: I). This story shows up the perfidy of trading companions (as opposed to trading partners) who cannot always be trusted. The fowl and the *muruk* began as friends but jealousy put an end to the successful completion of the trading trip. Often canoes were swamped out at sea just as in the story but the traders usually helped each other safely ashore not like the fowl which flew off leaving the *muruk* to his fate. This story has a moral to it about trust and mutual help without which no trading venture would be successful. It was also a custom that coast villages must come to the aid of the traders if their trading canoes were in trouble at sea. This myth depicts expected behaviour during a trading trip by describing the worst case scenario if it is not followed. Many aspects of trading are depicted in this story – the Bel people from the Madang area went trading to the Rai Coast; the village people gave the traders betel nuts and small pieces of taro as gifts before they started the exchanges of pots for trade items.

A 3. Honpain of Yabob who introduced the art of pottery-making:

> *A man from Yabob went to the beach and looked at the Pleiades stars. "Is it possible that one of those stars is a woman? Come here I desire you." As he spoke, a bird called the* kere-kindu *or kingfisher came and offered to go to the stars to talk to a woman there. He did this and the woman offered to come down to earth. "Tell the man to make a hole in the roof of his house. During the night I will come in the middle of a thunderstorm". So the woman, Honpain, spoke and so the bird told the man. That night the man made an opening in his house and the woman come down in a storm. He hid the woman in his brother's house and when his brother kicked a bladder ball in through the opening, he discovered her and told his mother. Honpain later married the Yabob man and they had a son. One day when the child was older, Honpain went to the gardens on the mainland and left the child in the care of his grandfather. However, he burnt some of his grandson's grasshoppers when he was cooking them. The child threw a tantrum and the grandfather scolded, "That comes from of your mother not being a Yabob woman. That comes from her being a woman from the sky. You have made me angry*." *When the child told his mother what had happened, she said, "Oh my son, I am not a Yabob woman, I am a mountain woman, a sky woman", so she spoke, but she was angry with the grandfather. Her father let a rope down from the sky. Honpain began firing a pile of pots and when the smoke surrounded her, she climbed up the rope and returned to her people in the sky with her son. Then she cut the rope, which fell back on a pile of pots breaking them into fragments. One developed two holes, which was the first water pot* (Dempwolff, 1910/1911: 63-102*).*

This text of the myth does not mention the fact that Honpain taught the women of the Kakon clan to make pots and yet headman Balem Beg of Yabob in 1976 said that when Honpain came, they did not have pots, "Honpain taught them to make pots" (Mennis 1981a: I8). Damun of Yabob agreed (Ibid: 26) as did Kasare (ibid: 44). A myth that describes the founding of a ritual is an etiological myth so perhaps this myth could be described as such.

Honpain is credited with making the first water pot.

Could there be any historical truth in this story, which has been passed down in the oral traditions of the Yabob people? Honpain's arrival seems to have been heralded by a storm and her departure was the time of earthquakes, and perhaps eruptions. Looking back, Honpain may have come from the sea from Yomba Island before or after the island sank during a tsunami in about 1450 A.D. Honpain was obviously Austronesian in her way of making pots. In the first ever recorded version of this story by Dempwolff, he mentioned that Honpain is from the stars but also stated that she was from the mountain and from the sky. Yomba Island had a mountain on it according to some of the informants. The fact that Honpain was described as having come from the sky is not unusual for newcomers to the area. When Miklouho-Maclay, came to the Rai Coast, the people there thought he was from the moon, (Greenop, 1944: 63) and when he was seen carrying a lantern at night it was said that he had brought a piece of the moon with him. It is doubtful that Honpain was just a mythical bringer of the pot tradition but maybe she was one of the people who escaped from Yomba Island or came from the sea at some stage in the past. Damun, the Yabob headman, had the impression that she may have left Yabob at the time there was a big eruption and earthquakes, which would account for the broken pots. Honpain belonged to the Kakon Clan and this story may be their way of having a patent over potmaking. The Yabob water pot with its two holes is said to be a legacy from Honpain who broke the pot when the rope fell on it from the sky.

B. Trading Myths of the Motu

> The Motu people are the traders, theirs is the sea. Now it is interesting to go back to the origin of things. How interesting it would be to know to a certainty all origins. But we do know from out of a very distant past, so distant that all we have comes through cobwebs of many, many generations, a kind of myth which many present day scholars accept before fact. Well myth or whatever else, here it is. Away, far away, in those hoary ages, a canoe with several men on board went fishing. They lowered their net and all dived; one named Edai Siabo [dived] near a large rock in which there was a cave and into which he looked and was seized by a spirit. (Lindt, 1980: 120).

In studying the following Motu myths, some parallels with those from the Madang region will be immediately apparent. Listening to a myth is like listening to a story which people retain and remember far better than factual history. So myths often retain history in their various versions as in the two brother myths of the Bel people.

B I. The myth of the two brothers Taurama and Keura as told by Mataio Taboro of Pari Village in 1995

> *Taurama and Keura were two brothers who lived near Pari Village. These two brothers were always disagreeing. Then they had a big argument and Keura left the Port Moresby area and went to the Gulf of Papua, on the way creating the small islands of Manubada, Lolarua, near Moresby, Dagu (Fisherman Island), Dava, Idia, Rarurava and others. Keura took all the sago, bananas and taro with him, and left Taurama with nothing and went as far as necessary, so that he did not see the smoke from Taurama. After this, Taurama was forced to go to the Gulf to collect the food and from then on the Motu people went each year to the Gulf to get the food. Later Taurama and Keura became two mountains* (Mennis, 1995).

Taboro was in his element when relating this myth as it belonged to his village. Conversely, the men from Lealea were reluctant to relate the same myth, as it was not from their village. This reluctance is common in Papua New Guinea and in Madang where 'copyright' of myths lies in the village of origin. Colin De'Ath noted that, "When myths and stories were being passed on through different generations, PNG people were very strict about who could do this. Usually the old men were given the task because it was believed that the fewer people and the more knowledgeable they were, the better and more accurately the stories would be kept" (1981: 2).

A longer version of the Motu two brother myth was told by T. Vagi of the Central Province:

> *Taurama and Kumea were hills and Taurama was the older one. The fertility of the area around these hills was so great that people from all over the area used to come over to trade with them. In return for their plentiful food supply, both mountains were given armshells, spears, pots and other forms of wealth. Soon Taurama got married and his wife came to live with him. Life was very pleasant for the newly-weds for the first few years. Then one day while sweeping around the bamboo hut, Taurama's wife looked up to see a handsome young man looking down at her. The youth said, "I am your brother-in-law. I trade with people and that is why my brother is rich enough to marry you". The*

woman didn't finish her sweeping before leaving but she had been attracted to him --- their meeting led to a big romance. These things happened while Taurama was away hunting. Finally the woman got pregnant. - - -(Taurama scolded his brother when he found out) – "Kumea, you should know very well that you shouldn't take another man's wife particularly your brother's wife. You must leave this place immediately. You will travel to the west where the dead live and you will never set foot again in this land."

Kumea left taking with him the people, the fertile plants and leaving only the sick. Even Taurama's wife went with him. In his anger, Taurama broke all the shell money and all the riches he had. Facing the west, he said in a tone that shook the earth, "Kumea, you and your people have done me wrong. You will live only in your area. Should you return by sea, my waters will rise up to challenge you." This is why canoes dare not pass by the mountain at night. Only in the daytime do they travel. Because of Kumea's flight to the west and because he left nothing good for the Motu people, they started the Hiri. *This is a trading expedition of the Motu to the Gulf for the sago and the betelnut in exchange for pots* (De'Ath, 1981c 60-63).

Mataio Taboro and author in front of the Pari lagatoi, *1995*.

This myth of the two brothers explained the origins of the *hiri* trade. The brother Taurama was left in the poor area around Port Moresby with the low rainfall and insufficient harvests. According to Oram's interpretation, Keura went west and became Aird Hill carrying with him "coconuts, sago, betel nut, betel pepper, *taitu* (sweet yam), and yam leaving his brother Taurama, armshells, beads, wild yams and bananas" (Oram, 1971: 425).

Oram also mentioned another version of this myth which showed the opposite progression of Taurama leaving the Gulf and settling in Port Moresby which led to the theory that this was a migration myth (ibid). Recent discovery of Lapita pottery in the Port Moresby area points to a migration of the Motu, who are Austronesian speakers, as coming from the east rather than the west. Linguistic evidence also supports this migration route.

Rufus Pech has a similar slant on the two-brother myth. He thinks it may be an account of the Austronesians and non-Austronesians settling all along the coast. This would be true for both the Bel and the Motu people. In both areas there were continuing struggles for land holdings for the newcomers and often they were forced back to the sea to find a place elsewhere (1991: 29). The Kilibob and Manup myth of Madang is very similar to this Motu myth. Both concern an older and a younger brother who fight constantly. The solution is for one of them to leave and go elsewhere. On their way they create islands and introduce trade items and the trading system. The fact that Kumea was told to "travel to the west where the dead live" is interesting. The Motu people believe their spirits travel to the Gulf after death just as the Bilbil people believe their spirits go to the Rai Coast where Degusub takes them to the underworld. In both myths this shows the spiritual significance of trading in those areas where they will eventually go after death.

B.2. The Story of Edai Siabo

The origin story of the *hiri* trade tells of how the sea spirit, Edai Darava, dragged Edai Siabo from Boera into an underwater cave while he slept and taught him how to build the first *lagatoi* was told by Rei of Lealea Village:

Edai was from Boera Village. He went fishing to Idiha Island. He anchored his canoe and fell asleep. While he was sleeping, the sea spirit, Edai Darava, took him inside the cave. His friends looked for him and did not find him. They looked and looked and then they went back to their village, Boera. Edai stayed inside the cave for one week and was taught how to build a lagatoi, *how to make magic and how to make the right winds come. They taught him all about these things in one week or two weeks. He came out from that cave and went back to the village. Everyone was surprised to see him there. After*

about a week he made a small lagatoi *and it floated. He made a little sail and put it on the water like over there (points at the sea) and he made a* singsing *and a dance.*

Then he came back and walked across the beach and made a singsing *and dance. Edai and his wife had to live in separate houses. He could not see her because he was building a* lagatoi*. All that time they lived separately. The people in the village collected all the materials for the* lagatoi *and over two or three months they built the* lagatoi*. First, they dug the canoes - two or three of them and tied them together. Every night they made a* singsing *in front of their houses until the* lagatoi *was finished and then they went to the west coast. While they made the* lagatoi *the women made the clay pots and the other things to take to Kerema. One man would take ten or twenty pots or clay dishes. When they sailed away, the village women hid in their rooms and did not say goodbye. Day and night they stayed in their house.*

Edai Siabo had told them, "If you want us to go on a hiri*, you must wait two or three months for our return". When the men were away on that first* Hiri*, some of the wives got tired of waiting for their husbands. They thought "These men are not coming back, they have been killed or died." Some of these women got new husbands and when Edai returned they were most distressed. Edai brought sago, taro and bananas and other kinds of goods.*

The village people made a big feast for the men. The lagatoi *was anchored at the beach for a week and remained closed. When the week was over, Edai stood up and told everyone to get the cargo out of the* lagatoi*. Then they prepared for the* singsing - *the women in their grass skirts made a* singsing *and danced. Everything was taught by Edai, who learnt through a miracle* (Mennis, 1995).

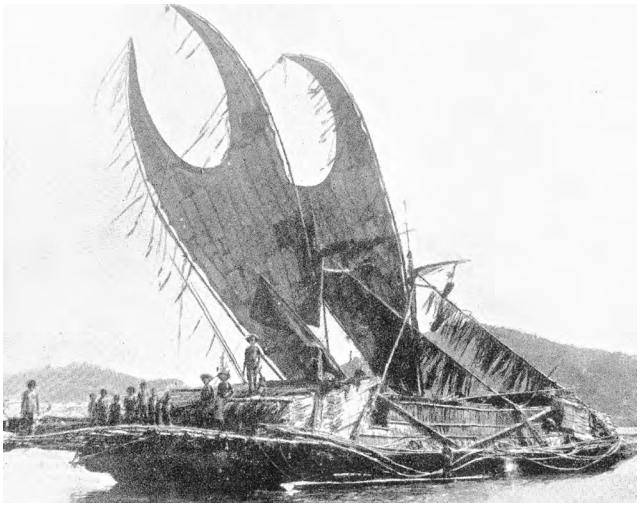
The myth is significant to the Motu people as it gives supernatural sanctions to their *hiri* voyages. It is an etiological myth as it established a ritual of behaviours to be followed for the success of the *hiri*. Siabo dreams of making a *lagatoi* and going on a *hiri* trip and it details all the rituals of how to make a *lagatoi,* the rituals that must be obeyed for the *hiri* to be successful and the prohibition on the women having relationships while the men were away to empower the trade trip and make it successful.

The story of Edai Siabo is usually told in a much longer versions than this. The *hiri* is one of the most important features of the traditional Motu life and this is reflected in this myth which is the main one of the first *lagatoi* and the *hiri* story. Edai Siabo lived in Boera some twelve generations ago and was accredited with beginning the *lagatoi* and the *hiri*. Could he have come from the west possibly with a group of Malay traders with the knowledge of canoe making? Haddon and Hornell, the authority on Oceanic canoes, concluded that the *lagatoi* was developed from the double-canoes which were found at Mailu Island to the east of Port Moresby (Haddon and Hornell, 1991 ii: 230). Oram noted that there were many examples in Papua New Guinea of spirit-inspired inventions (Oram, 1993: 526).

Rosenstiel believed that this myth showed the Motu came from the west and that this was the general belief of people in Port Moresby in the in the 1940s. "It is generally considered that the Motu are an immigrant stock which came from the west and settled in territory formerly occupied exclusively by the Koita. Motu myth in substantiation of this, relates how they came from a far off place to the west and settled first at Taurama" Edai Siabo is said to have come from the west and was probably Malay (Oram, 1971: 423) and that, according to some "not entirely satisfactory genealogical evidence, he lived some nine generations ago" (1971: 426). Archaeological records and linguistic research however, now show that the Motu came from the east in the Bismarck Archipelago, the home of the Lapita pottery makers.

In 1995, at Nelly Bay, I interviewed people from the Motu Villages of Pari and Lealea. The main myth that the informants associated with the first *lagatoi* is this one of Edai Siabo

Early photograph of Pari village. The WWW.



Lagatoi *in Port Moresby Harbour.* Murray, 1925.

who taught the men how to build the canoe and gave the people many of the customs related to the *hiri*. All the informants agreed that he was from Boera Village, which has the rights over the myth. The men from Lealea Village, which is geographically close to Boera, were quite happy to relate the Siabo story but not so the Pari people – they were worried they might get the story wrong.

It is interesting to discuss the relationship between these two Motu myths – the myth of the two mountains and that of Edai Siabo. When Tau Boha was asked what the connection might be, he answered: "Before Edai was in the cave and built a *lagatoi*, Keaure had left and had walked off to the Gulf" (Mennis, 1995). In his estimation, the two-brother myth was the older myth as it dealt with the origin of two mountains as well as the beginning of the *hiri.*

Oram described Edai Siabo as a resident of Boera Villages. He collected seventeen versions of the myth and concluded that there is no key to this myth. "The vagueness of Edai's genealogical origins enables members of different social groups to claim him as their own" (1993: 533**)**. However, the Pari people I interviewed definitely did not see Edai Siabo story as theirs.

In one of the versions Oram collected:

> *Siabo was born at Davage Village and his sister was called Boio Siabo. She married a man from Koita called Bokina Bokina. One day Edai Siabo made a big fish net, the matagara, which he cast from the bow of his canoe. He took his net to Bava Island and fished all night but did not catch a single dugong. So he went across to Idiha Island looking for turtle. He dropped his anchor by a flat rock above a large cave which was under the sea. Then he rested. When he was asleep a spirit pulled him down into the cave below and revealed to him how to make the big trading canoes called lagatoi. While building his lagatoi he requested food from his Koita brother-in-law, Bokina Bokina, but was rudely rejected three times. So Siabo and his crew left for the Gulf without this help. When the lagatoi returned with loads of sago his sister, Boio Siabo, was sent by Bokina Bokina to beg for some sago. Twice she was refused because of the lack of previous help but when she returned a third time with her husband, Siabo forgave them. He 'opened the door' of his lagatoi, and gave them betel nuts, betel pepper and lime in welcome. He gave them "carefully chosen large cone-shaped bundles of sago called gorugoru and smaller bundles called kokohara, sticks of roast sago, more betel nuts and peppers". Boio and her husband were very thankful and returning to their village collected bananas and a pig and gave them to Edai Siabo. "At that time Edai Siabo initiated and laid down the method of provisioning the lagatoi and the exchanges between the Motu and Koita called abilakwa." After this reconciliation, the Koita always exchanged their vegetables and meat for fish and trade goods of the Motu. When a hiri was being prepared, they also engaged in the abilakwa exchanges which means 'food for a journey' and in return received sago and betel nut from the lagatoi on its return* (Oram, 1993:527-528).

Edai Siabo sailed to Baimuru in the Gulf and carried two anchors. He left one at Baimuri Village and the other at Davage where it stays until today. Baimuri is on the Purari Delta and marks the furthest point of the *hiri* voyages and has an abundance of sago. Two of the versions Oram collected were from the Purari Delta. Here Edai Siabbo's son was killed by the Muru people and so he left and moved with his sister Boio and his son's corpse and landed at Idiha Island where they were found by the Boera people. This may have led people to think that the Motu people had migrated westward to the Port Moresby area from the Gulf (Oram, 1993: 528).

The two-brother myth of Keaura and Taurama is a myth of the origin of the *hiri* system when the men travelled to the Gulf to get the food and fruit, which Keaure had taken there after his fight with Taurama. The informants at Nelly B**ay** knew no separate story about the first pot although Veri suggested that it might have been Siabo's sister, who

Motu pot. From the Macgregor Collection, Queensland Museum, 3399.

made the first pot. He was the only one of the informants to volunteer this information.

Later, a myth of the first pot in the Port Moresby area came to light. In this story, the first pot originated beside the *Irimo* tree, which are the trees used to make the hulls for the *lagatoi*. Is it a coincidence that the first pot was to be found near an *Irimo* tree and that it too appeared in a dream to a younger brother? This myth explained that having pots enabled people to boil their food where previously they could only bake it or cook in *mumu* style earth ovens. This myth also gives the places mentioned the 'copyright' over pot-making sanctioned by the myth.

Oram wrote that the Edai Siabo myth "describes and validates the establishing of an economic order based on the sea, fishing and trade. It contains 'creation' stories relating to nets, trading canoes and patterns of trade – such as that between the Motu and Koita. It also prescribed and validated the rituals and taboos associated with the *hiri*" (1993: 533).

The Erema people of the Gulf Province have a myth of the origin of the *hiri* as well. Their originator was called Eti Apo and he called his first *lagatoi Kevaubada*. This canoe sailed to Baimuru Village where Eti "traded with a man called Waro Koiva. On his second voyage he sailed to Mei Village in Kerema Bay where his trading partner was Miria Lelae." (Douglas, 1994: 17).

B.3. Myth about the first pot

> *Long ago there were no cooking pots. The people baked their food in the fire. Two brothers lived near the Vanapa River, Doura. One had a dream about a pot and where to find it near an* irimo *tree. The pot told him where it could be found but designated several rules that must be followed. "Tell your wife to peel your food and put it in the pot and boil it on the fire. Then you must clean the pot and put it upside down." The next day, the younger brother found a pot near the* irimo *tree. He bought it home and told his wife what to do. The family were happy to eat clean food. When the older brother wanted a pot, he was given one by the younger brother with the instructions. Not long afterwards the rules were forgotten and the pots were left unclean. One pot flew back to the* irimo *tree. The younger brother had another dream. In his dream, the pot said to him, "you have disobeyed my rules. Therefore tomorrow cut some sticks as clubs. Then go to the place where you picked me. See if you can hit me and break a piece off me."*
>
> *The younger man went the next day but couldn't hit the pot. The pot flew from one village to another along the river singing this song*. "Uro Vanaba arani owia Toura etabua. Uro aro many boino eravo. Auai e bara."
>
> *This means: "The pot lived at the source of Vanapa River. It is looking for a place to live away from Doura. It flies like a bird but people try to knock it down". The pot flew to the coast and travelled westwards as far as Delena where a piece was broken by the flying sticks. It returned eastwards. At Manumanu, a little piece was broken off. A bigger piece was broken off at Boera. A large piece was knocked off at Porebada. A little piece at Barakau and the last piece at Tubusereia. The villages that hit the pot and made a piece fall were the villages which were able to make clay pots. The other villages missed so they couldn't make pots. Anonymous* (De'Ath, 1981: 117-120).

Comparison of the pot myths in Madang and Motu

In both the Bel and the Motu myths there is the competition between brothers or children playing in the village. The pots are broken and the shards spread around in the Bel version whereas the shards in the Papuan version are spread along the coast to villages which subsequently became potmakers. In this aspect, it echoes the two-brother myth of the first trading trips in both Madang and Port Moresby where islands are created along the coast. In the Papuan version, the pot appears of its own accord whereas, in the Madang version, Honpain made the first pots and

then taught the other women to make them. In some respects the Papuan myth of the first pot is more in line with the two brother myths of the first trading trip. In the story of the first pot, pieces of the pot were dropped off in various villages which can now make pottery whereas in the first *hiri* story, one brother took off and caused islands to appear all along the coast by dropping soil.

On the other hand, the Motu myth of the first pot is like the Edai Siabo myth in that there was a dream on both occasions and instructions on how to use the new canoe/pot. The Honpain myth is also similar to the Edai Siabo myth as, in both cases, the person introducing the new skills came from outside the village and the story could be actual historical facts cloaked in myth that has survived the telling through the generations.

The Honpain myth is comparable with that of Edai Siabo. It is a long story with parts of it concerning the real world of canoes, pots and trade and parts of it are surreal and other worldly. The man,in the Honpain myth, dreams that one of the stars of the Pleiades constellation is a woman and his dream comes true just as Edai Siabo dreams of the canoe and it becomes a reality. Both myths deal with someone who introduces something important to the culture of the people. Honpain introduces pottery while Edai Siabo introduces the *hiri* and the *lagatoi.*

Myths have their own beauty and power like the Honpain myth. It is often through myths that culture is passed on through the generations particularly in a non-literate society. The owners of the myth might retain a copyright over it and it might sanction the people's right to certain items of material culture. Only the Yabob and Bilbil people had the right to making their style of pottery because it had been taught by Honpain.

Some rituals are outgrowths of myths particularly the Edai Siabo myth. Here is a man being taught by the sea spirit while he slept how to make a *lagatoi* and being given all the steps and also the rituals that must be obeyed for the *hiri* to be successful. He wakes up and remembers everything clearly: the material construction and the rituals and even the songs to sing and the prohibition on the women having relationships while the men were away to empower the trade trip and make it successful. In part, the rituals of the *hiri* were born out of the myth. But then many of the rituals were similar to other trading spheres; so how can that have happened? Perhaps the rituals and the technical knowledge were there first and the myth was built up about them. As Malinowski said, "sometimes the origin of rituals in a society can be traced back to a myth or a fictitious account, thereby providing a justification for those rituals. Myth gives rituals a hoary past and thereby sanctions them" (Malinowski, 1926).

Conclusions about the Bel and Motu Trading Myths

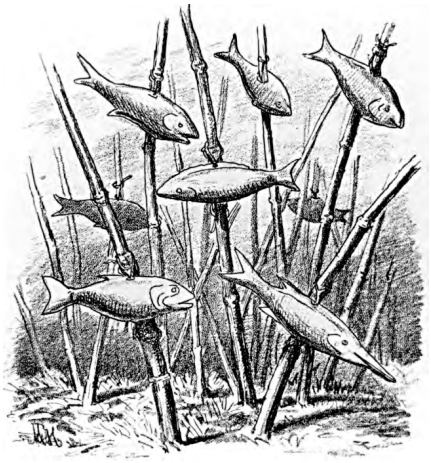
Two-brother myths: The two brother myths of the Motu and Bel people are parallel stories. Because this story is widespread amongst the Austronesian speakers over the whole of Papua New Guinea, it points to a common ancestry. These two myths have much in common. The filial conflict between the two brothers leads to their parting for the sake of peace; the one who goes, makes islands on the way and leaves culture in the many places that he creates. The two brother myths also symbolise the link between trade partners.

Two brother myths are prevalent in Papua New Guinea. In Rabaul, the two brothers were To Kabinina and To Purgo and were also credited with creating the islands, mountains, canoes, and many social customs. Janssen concluded, "We may call To Kabinina and To Purgo the first makers and teachers, and themselves a part of the mythical explanation of the dichotomies and incongruities in the cosmos" (Janssen et al, 1973: xv). This may also be attributed to the two brothers in the above myths of the Bel and the Motu.

Ownership of myths: This is an important part of the myths. The Edai Siabo story belongs to Boera, whereas the two-brother myth originated in Pari. People from outside those areas do not feel free to tell these myths in full. In Madang, however, the two-brother myths of Kilibob and Manup are owned by many villages along the coast, each place with its own variation and addition of its own place names (Pech, 1991: passim). The Honpain myth, however, belongs to both Yabob and Bilbil, the sister islands, and puts a 'patent' on pottery-making preventing people from other villages making their style of pots.

In August 1995 at Nelly Bay, the Motuans were conscious of the ownership of the Edai Siabo myth. Unless the myth was from their village, the researchers had to hear the myth from someone who 'owned' it before they could re-tell it. In Tau Boha's case, he had been told it by Moi of Boera Village but still felt he could not relate the story of Edai Siabo to me. I had to find other people with the right credentials.

The story of Edai Siabo is full of directions on how a trading trip should be conducted. Admonitions are given to the women how to be chaste while the canoes are at sea. In the Madang myth of the *muruk* and the fowl there are warnings about trust and against jealousy developing between members of the crew and between the traders and their partners they meet along the coast. Trade partners were entrusted to be loyal and fair in their transactions. If this trust was broken, fights break out and new alliances were sought (Lawrence: 1964).



Fish trap near Riwo. Finsch, 1888.

Fish Myths of the Bel and the Motu

Myth of Riwo Island of the Bel group

Riwo is close to Sek Island and it is the furthest of the Bel group in the Madang Harbour. At least one of the clans traced its origins to Yomba Island and so were Austronesians. They were the builders of large canoes but did not make pottery because there was no clay for them. Even in building canoes, they were not as keen as the Yabob and Bilbil who lived near the open sea. The Riwo still saw themselves as traders, as part of the Bel group and friends of the Bilbil and Yabob people. They were like brothers but, like brothers, they also fought. However, some researchers saw them as being rather retiring. "The Riwo were reputed to be cautious and half-hearted overseas traders who seldom spent a happy night away from home and they excluded themselves from extensive and intensive trading partner relationships" (Pech, 1991: 38). I don't agree with Pech here as I think he is repeating the biased attitude from other people. The Riwo were good hull carvers as they had the right trees nearby in traditional times and they sailed with the Bel traders..

The Fish at Riwo

> *A long time ago, the fish went to a* singsing *or dance on the Island of Riwo. When the men and women in the village went to work in the gardens, the fish leader,* Langor*, used to go and search the village to see if there were any people there. Then he would go back to the beach and call out to his friends the fish –* langor*,* bacel *and others to come and meet and have a* singsing*. They would stay there all day until mid afternoon and then they would go back to the sea.*
>
> *When the men and women returned from the gardens, they would see bits of* pulpul *(leaves) or body decorations on the ground and say, "Who has been here? What people have been dancing while we were away"? This continued to happen each day until they decided that on the following day one man would stay behind in the village while the rest of them went to the gardens.*
>
> *The next day, the man was hiding while* Langor *came to search the village. He looked and looked but did not find anyone so he went back to the salt water and called out to the fish. They all came out to sing and dance. The man who was hiding saw them dancing. Then at three o'clock in the afternoon, the fish returned to the sea and a little while later the men and women returned from the gardens.*
>
> *"Who came while we were out"? They asked the man.*
>
> *"It was not people who danced," he answered, "It was the* langor *fish, and others".*
>
> *The people decided to paddle their canoes next day around the point and then hide in the bushes. The fish then came out as usual to sing and dance. Suddenly the men jumped from their hiding place and rounded up the fish. Some got caught in the trees. Some were tangled up in the vines and others got bogged in the muddy ground. A few escaped to the sea. From that time on the fish never danced again in the village of Riwo* (De'Ath, 1981).

This legend shows some aspects of the Riwo culture which depended on the sea for much of the food. Understandably, fish took on a mythical state and were given human characteristics like dancing. This legend may be referring to a tsunami when fish were washed ashore as described in many oral traditions. When this happened the fish were left stranded by the big waves and the people ran around and killed them. In this myth, we see that the people as a whole decided what to do to find the culprit who was untidying their village while they were out gardening. Villages were

often deserted during the day while everyone was at the gardens. This Riwo myth is rather similar to a Motu myth about the first dugong which reflects some of the cultural patterns of the Motu people

The First Dugong, a myth from Hanuabada Village

This is a précis of the myth:

> *In former times there were no dugong, only turtles and fish. February and March were the turtle hunting months. The Motu brought their catch of turtles in and set some aside for the Koita people who lived nearby as they needed to appease the Koita sorcerers. They hesitated to go themselves but one Hanuabada man offered to be the envoy with the Koita. He insisted on choosing the most tender parts of the turtle. However, this middleman kept all the turtle meat for himself and gorged on it between catches. After a while his wives became suspicious of his distended stomach and his fat body.*
>
> *They decided to follow him the next time he got some of the catch. Peering through the bushes they saw him eating half the turtle and keeping some for later. They went home and told all the villagers what they had seen. They all decided to surround him as he ate the rest of the turtle and they shook their rattles to frighten him.*
>
> *He ran off down a steep hill and fell and hit his head which became quite altered in shape. His nose was flattened. He leapt up and faced them all*
>
> *"I have fooled you all but now I am going to pass away and you will hunt me from now on. But you must follow certain rituals and abstain from your wives and eat certain foods before you go fishing for me and you must make strong nets. See my legs are changing and I am becoming a dugong and then he disappeared into the water" (*Rosenstiel, 1953: 41).

This is an origin legend telling of the first dugong which is as strange looking animal having some of the characteristics of a man's face. Perhaps this is where the myth originated. But it is also about subjugation of man over this animal and lists the rituals that must be followed if the dugong hunt is to be successful. The emphasis on the use of sea creatures for food is common to both these seaborne cultures. The way the villagers worked a plan together and then crept up on him to find what was happening is similar to the Riwo myth. It also has a moral imbedded in the story about a man who gets fat on food that should have been shared with the Koita people and is turned into a dugong. "In the metamorphosis of the greedy man into the dugong we have the most vivid personification of this trait. For the greedy man had taken from his people the fat meant for their survival; it is his duty to return it in kind. Therefore the spirits punish him by removing him from the earth to the sea". The dugong's fat body is a great delicacy amongst the people. The method of catching the dugong has been sanctioned by this myth of the first dugong. The Motu people adhered to the rules of eating only certain food and refraining from relationships while fishing for it to ensure a successful catch. "By surrounding the dugong hunt with many supernatural sanctions and taboos, the spirits reinforced in the minds of the Motu the importance of food which the dugong provides, the retribution which is sure to follow unethical conduct, and the reciprocity which is so integral a part of their lives" (Rosenstiel, 1953: 41).

Fishing nets drying in Manumanu village. Groves 1957. (PMB43_150).

In the 1940s, Percy Chatterton witnessed first hand some of the taboos that were still in place in Delena Village for a dugong hunt. He described the palm leaf enclosure around the net makers for the dugong catch; the calling out of the ancestors' names to make the net strong; and the food taboos that had to be followed. The daughter of the leader of the net makers 'became a sort of mascot'. She shared the food taboos and was not allowed to wash until the first of the dugong was caught. Luckily for her, this happened just before the dugong season had finished (1947: 59).

The following legend is associated with fishing and was to do with activities the people did during the year. The fish were used for trade with the inland people.

This is a Pari legend about a fish called *Kidukidu* told by Mataio Taboro:

> *There was a married couple who lived on a mountain. The man was called Vagiboge and his wife was Igutaivane. While there the woman got pregnant. She went to Dagulata beach and while there she gave birth to five little tuna fish. When her husband came home he found her lying down sick and she told him she had miscarried the baby. Next morning, when her husband went to the garden, she went to the beach to feed her fish babies and returned before her husband. After a month the fish were getting bigger and her husband grew suspicious. One day he followed her to the beach and saw what was happening.*
>
> *The wife had a secret way of bringing these fish to the beach. She broke the branch of the mangrove tree and then these fish knew it was their mother calling them. Her husband now knew the secret and the next morning speared one of the fish. He ate some of it and took the other half to his wife who knew it was one of her sons and she didn't want to eat it.*
>
> *Next morning when she called her fish children, they were too afraid to come because of the death of their brother. At last when the four of them came she fed them and told them, "As from now on you will go to the blue seas and don't go near the reef. From now on people will make nets to catch you." From that time until now Motu people make a special way of getting tuna in our place at Dagulata. There is a fishing season from May to September when the tuna fish go inside the bay at Dagulata and our people catch them* (Mennis, 1995).

As stated, the people of that village were dubbed Pari because they had moist throats from eating all their fish and their being so dependent on the sea for a living.

***Varimoro*, the Magic Fish of the Motu people**

The Motu have a magic sail fish called *varimoro* and say the story is about fishing before the time of Edai Siabo when people used nets to catch this sailfish in the *matagara,* fishing net. At the time of the full moon the people took their nets to Bava and Hidiha Islands. The fishermen dived down to see when the sailfish are coming in. They then drop the net into the deep water between the two islands and wait. Sailfish can leap out of the water showing off their beautiful colours before they get caught in the net. The designs used for tattoos can be taken from the sailfish, particularly the teardrop tattoo under the eye.

Other Myths and Oral Traditions of the Bel Group

Siar Island

Over the years Siar has become a favourite fishing and swimming spot for Europeans from Madang. In former days the Siar people traded with Bagabag Island and here is a legend connected with their:trading:

> *Long ago, some people from Bagabag sailed on their large canoes to visit the Lilung Clan on Siar Island. As they were leaving, the Lilung gave the Bagabags some* marita *fruit to take home with instructions to boil it in a cooking pot and then pummel it with a stick. But the Bagabag people did not listen. They didn't boil it but pummelled it with small sticks and spears. Angry that they could not eat it, they said, "The Lilung people are tricking us. Just wait until they come to visit us". Later the Lilung Clan sailed their large canoes over to Bagabag and stayed for a few days.*
>
> *While they were there, the Bagabag people went to the* masalai *(spirit) place and caught a snake and tied it up with the food in the canoe on the side that did not have an outrigger. They told the Lilung people not to eat the food out at sea, "wait until you see your place, before you take the leaves off the food and eat it". So the Lilung did as they were told and when they saw the snake, they jumped into the water and swam ashore. The snake went ashore too and climbed a coconut tree.*
>
> *Later, when the men were making a feast, they sent a young boy to climb this coconut tree to get nuts for the feast. While he was up there, he found the snake. The villagers told him to wrap it up in the matting of the coconut tree and drop it down with the nuts. He did this and the people took it back to the*

> *village and put it in a large drum, blocking the top. Bubule, the old woman, knew the snake was a spirit and she told her grandchildren not to eat it. The rest of the people ate the large snake and they all died.*
>
> *Bubule took her two grandchildren and ran away to Nagada. Her granddaughter was Smeipand and the boy was Boniau. (They could have been cousins). They married each other to keep the Lilung line pure as that is what their grandmother wanted. They had two children Boniau and Suai. Suai lived on Siar Island. Sungai, was descended from him. Boniai's descendants went to live on Riwo Island and began the Yaz line there* (Legend told by Sungai of Siar).

This myth describes trading trips between allies who soon fell out over a misunderstanding. This led to population movements to the islands in the Madang Harbour, but it also a story of a new settlement and of identifying ancestors in the myth. These myths can be used as part of a land claim and of the first settler to an island. Snakes can be an important element in a myth.

Kranket Island

Kranket has its own myth about Kilibob and Manup

> *After Kilibob created Karkar, Bagabag and all the smaller islands along the north-east coast, he placed a pair of human beings on each one of them. He shot off pieces of land from the mainland of New Guinea while sailing along with his canoe and when he reached Bilbil Island his bowstring broke so in his anger he threw his bow across Astrolabe Bay onto the land and thus created the Finisterre Range. Thereupon he withdrew to Long Island and is supposed to be living there paying no attention to the human beings he created. Shortly after his arrival there he sent two messengers, Kumuzau, a fish, and Sepazik, a bird, to Gedaged Island (Kranket) to ask for fire because his own had become extinguished. The Kranket people gave him fire but in return requested the two messengers to ask their father to send them some* jaling*, obsidian, because their hair and beards had grown long and they had no means of cutting them. Kilibob sent his messengers back to Kranket with the obsidian but since then they have not heard of him. They thought that if Kilibob came back he would burn them all in a big fire* (Myth from Kranket, after Dempwolf, 1908).

This myth was collected in 1908 by Dempwolff, a famous German doctor who spoke the local Graged language. He collected these myths in East Africa which was then a German colony. Here a group of Bel villagers had been taken to join the German occupation army. They were delighted to meet Dempwolff again and he spent his time recording their myths in their own language. This myth shows the importance and rarity of obsidian which may have come from several sources. This is one of the few references to obsidian that I came across. Summerhayes in his study of obsidian along the trade routes of Papua New Guinea stated that obsidian could come from various sources. The first was West New Britain as obsidian flakes have been found in archaeological sites on mainland New Guinea and arrived there through the Siassi trade network within the recent past. Another possible source could be from Kutau/ Bao as obsidian from there has been found along the north coast of New Guinea. The third possibility might be from Lou Island in the Admiralty Group (Summerhayes, 2009: 119)

Yabob Village

The two Yabob islands are situated to the northwest of Bilbil Island. In 1939, Aufinger estimated, "the entire Yabob population, from the islands and the mainland, number 200 to 250 heads" (Aufinger, 1939: 277-291). They doubled their population by marrying into Riwo, Siar and Kranket, people whom they regarded as their brothers. But, like brothers, they also had their fights and disagreements. Yabob is the sister village to Bilbil and the two island villages were in close proximity. They went trading together and supported each other in time of warfare. There was also frequent inter-marriage between the two villages. This kept the pot-making women on their home ground, thus securing the monopoly of the pottery trade. In Yabob Village, my main informant was Ber Madib. He was a kind old man and had some interesting stories to tell including the following story of a woman who defied the law against women entering the men's house.

Story of Sibor Village:

> *There was once a village called Sibor near Yabob. Long before the white men came, the Yabob people used to gather their clay from a site near this village. This used to annoy the Sibor people and they often made trouble with the Yabobs. So although the two villages were neighbours, they were not friendly.*

One day something happened in Sibor that caused the whole village to be wiped out by their enemies. It happened this way:

A Sibor woman was preparing the evening meal and needed water from the spring, which was quite a long way off. She set off with her waterpots but forgot to build her fire up, so by the time she returned the fire was quite dead. She wondered where she could get a fire-stick to re-kindle her fire.

The closest fire was in the men's house, the darem*. Even now, she could hear mournful sound of the* tambarans *(spirits) talking. This bold woman knew it was forbidden for women to enter the* darem *especially now that the* meziab *were there, but this did not deter her. She decided she would dress in her husband's* mal *(bark loincloth) and his decorations and go into the* darem *to get a firestick and be out before anyone noticed. So she wrapped her husband's* mal *around her waist. She tied her breasts flat with bush vine and hung the boar tusks from her neck.*

Then she crept through the darkness to the darem*. She glided through the small doorway and going up to the fire she picked up a fire-stick. As she stood up again, she noticed several men sitting on the platform blowing the long flutes. "So", she thought to herself, "it is not the* tambarans*, but only the men. They have been tricking us". She crept out of the* darem *with the fire-stick and went home blowing on it, thinking that no one had noticed her. Back in the* darem*, most of the men continued playing on the flutes unaware that a woman had discovered their secret. Only one man suspected anything. He followed the woman home and watched as she re-kindled her fire with the fire-stick. Then peeping through a crack in the house, he saw her undo the bush vines, which tied her breasts down, and he saw she was a woman.*

"Oh", he whispered to himself. "This woman went into our darem *and knows our secret now. Our sacred house is sacred no longer." Full of shame, he went back and told the other men what had happened. They knew what they must do now for there was a law that once the secret of the* darem *became known by the women, the village must be destroyed by other villagers.*

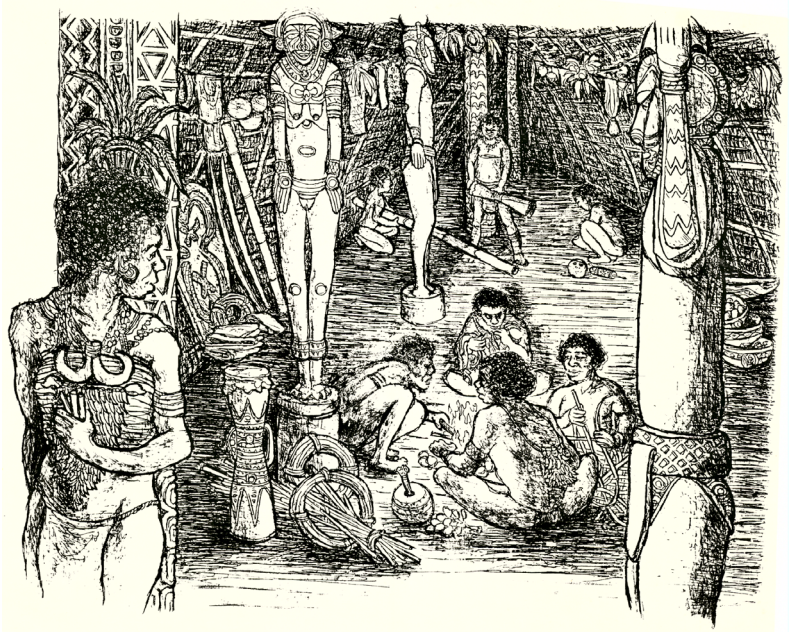
"This darem *must be destroyed now", one man said sadly.*

"And our people of Sibor must die", added another.

"Yes", agreed another shaking his head, "our sacred flutes have been seen by a woman".

So they sent word to every village around, to Yabob, Bilbil and the bush people that the secrets of the meziab *had been disclosed. A big force of warriors came and destroyed that village and killed all the people so that now there are no descendants of Sibor Village. Their bones were all buried together on the hill near Yabob Village.* (Told by Ber Nanci of Yabob village, 1975).

This story illustrates many interesting things about daily life in all of the Bel villages. There were strict laws about the men's house and the women knew they would be killed if they entered it. The men wore the traditional *mal* and the boar's tusks. Although Sibor Village was near the clay deposits, the women did not make pottery so the people were probably not Austronesian in origin. Even in those days there were strong-minded women who were ready to defy the restrictions laid on them by the men. One wonders if this woman had



A woman in the Sibor men's house.
By courtesy, Rosalie Christensen.

Maclay's house at Garagassi, 1871. Greenop, 1944.

entered the *haus tambaran* before without being noticed by the shadowy figures of the men. Was she lazy and forgetful? The women had to remember many details in their daily life like collecting water and not letting the fire go out. The women on Yabob Island had wells from which they could draw their water but the Sibor women who did not live next to spring water, had to walk for miles to fill their containers with water.

This story sounds like a myth about sanctions and taboos against women going into the men's house. It is also about a liberalised woman, who was a feminist of her day and not restricted by the many rules surrounding her life. She made a decision to take a short cut to the nearest fire and then caused a fatal result with all her people being killed. This sounded like a myth but it is not a myth. Ber of Yabob told me this story and when he had finished he said to me. "Missus! See those bananas growing over there? That is where the dead from Sibor village are buried. No one wants to eat those bananas because of that".

Ber died in the 1980s but years later in 1994, I met his son David who told me another story. It too began like a myth but it was historical truth. It is a classic case of sailing for survival. Against great odds a little boy survived a rough ride in the sea.

The Story of Malu, from Yabob,

> *Once in Yabob Village, there was a baby boy who was very sick with yaws. His parents tried to heal him, but to no avail. They didn't want to kill him so they went to the forest and got the* pangal *(fronds) of the* saksak. *They cut it up and built a small platform on a little canoe. Putting the baby on the platform they pushed the canoe out past the waves thinking that the sea would deal with the problem. The* talio *wind blew the canoe gently across the water and the parents watched from Yabob Island until it was out of sight. Carried on the current, the canoe with the baby floated past Bilbil Island and was swept ashore at Gorima on the Rai Coast.*
>
> *The waves were strong near the beach and threw the canoe with the baby still on it high on the sand. A Gorima man was walking along when he heard the baby crying as the seawater was hurting his sores. Remembering that no child had wandered along the beach that morning; the man followed the noise until he saw the baby boy on the canoe. He picked him up and washed his skin all over. Then he brought him back to his house and said to his wife, "We don't have any children. This baby has sores and has been tossed up by the waves. Let's look after him and if he gets better then he can be our first born". He told his wife this and they both looked after the child. They got special leaves from the bush to rub on the sores and soon the sores were all gone. Then he became their first born and they called him Malu. (Malu means a duck – a good name for a baby who arrived over the water). Later, he was known as a fighter in big or small fights.*
>
> *This man, Malu, was living on the Rai Coast at the time Miklouho-Maclay lived there. For some reason, he threatened to kill Maclay (perhaps because he was always angry at being called a duck and ready for a fight). When Maclay heard about this he said, "I want to see this Malu of Gorima Village who wants to kill me". On his way there, Maclay met some Gorima men on the beach. They talked with their hands because Maclay did not know their language. Then Maclay went with them to Gorima Village and asked for Malu. But he was in the bush so Maclay sat down and waited for him. He called all the villagers together and gave them tobacco and pieces of cloth. He befriended them all. Then Malu returned and changed his mind about fighting Maclay. But this Malu 'man belong fight' was originally not from Gorima, but from Yabob* (Told by David Ber of Yabob in 1994).

In June 1877, Miklouho-Maclay himself recorded the threats from Malu in his diary. Standing fearlessly in Gorima Village, and surrounded by armed men who did not know him, Maclay proceeded to lay down the law. He told them it was a bad thing to have this threat against him because he had done nothing to the Gorima people and nothing to Abui or Malu who both apparently wanted to kill him. Then he yawned and said, "I am very tired and want to sleep. I am going to lie down and if Abui and Malu want to kill me, well, let them do it while I am asleep, because tomorrow I will leave Gorima." With these words, Maclay went to the men's house wrapped himself in his blanket and went to sleep. His action had an immediate response amongst the villagers. One can only exclaim, "What a man!" Who else in the face of such danger could sleep so soundly? The people were amazed at his courage and fearlessness and decided he must be like a god and unable to die. Through the night, they talked earnestly together while Maclay slept deeply nearby. Next morning both Malu and Abui offered Maclay food as a peace offering and insisted on accompanying him back to his hut near Bogadjim (Sentinella, 1975: 268-9).

Bilbil Island

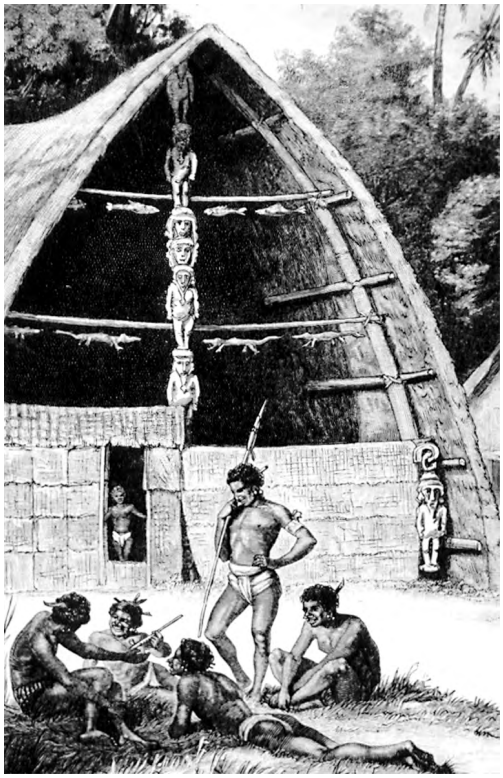
In common with some other societies and similar to the story of Malu, any unwanted child was exposed to the elements. The following story about Dadau, headman of Bilbil was related by Kasare of Yabob formerly of Bilbil:

> *On Bilbil Island they threw the child of Nakun away because he was a boy and they wanted a girl. That's what they did in those days. They put him on the ground behind their house and the wind blew on him and they did not even cut the cord. They said the baby would pull on it and die. My grandfather, Bidimur, heard the baby cry and told his wife, Leli, to go and get it and cut the cord and look after the baby. She washed the baby and looked after it. They called him Dadau after the wind that was blowing on it. When the baby grew up, he walked about with my father, Sui, who was Bidimur's brother. Later, Dadau married Wat and they had a child, Masi, and a girl, Sibul. Sibul's son's name is Gain and he still lives in Bilbil. Dadau, who had once been left to die, grew up to become a leader of his people and a great trader and canoe builder He built large* balangut *and* lalong *canoes. In German times he was a* luluai (Mennis, 1981 a: 61).

The men on Bilbil had several stories about their origins.

> *Once, long ago, the god* Anut *came to Bilbil Island. He was white-skinned and came from a good place where there was plenty of food.* Anut *came and made the land at Bilbil Island. He slept there and created Ngur from clay and then he made a woman called Kananui. The flat area on the island is called Kananui and the mountain is Ngur. At first Ngur did not have a house but lived in a hole and, when he wanted to close off the entrance, he made magic. He did not have to look for food but just called out for it and it came.*
>
> *Anut also made two boys, Salilon and Sumsum, and two girls, Sionpain and Duguspain. Kilibob brought them to Bilbil Island, where they were adopted by Ngur and Kananui. Salilon was a* tabaran *and married Sionpain and they began the Dugus Clan. Ngur gave the* likon *magic to Salilon who gave it to his son Kasare. They had the power to control the sea. Sumsum married Duguspain and they began the Luan Clan.*

It does not worry the people that they might have a few variants of their origins. One was as above and the other was with the story of Yomba island sinking and the survivors arriving at Yabob, Bilbil and other places.



The darem*, men's house, on Bilbil Island.* Finsch, 1888.

The Study of Myths

The study of myths from many countries has led to a whole literature of books analysing myths and the importance of understanding them:

> *Lévi-Strauss suggests that "the structural approach and mental processes dedicated towards analyzing the myth are similar in nature to those in science, he suggests that the foundation of structuralism is based upon an innate understanding of the scientific process, which seeks to break down complex phenomena into its component parts and then analyze the relations between them. The structuralist approach to myth is precisely the same method, and as a method this can be readily applied to literature"* (Wikipaedia) .

Levi-Strauss concludes that the structural method of myth analysis brings order out of a mess. It provides a means to account for widespread variations on a basic myth structure, and is logical and scientific. This was important for the scientist in Levi-Strauss. He says that repetition, in myth as in oral literature, is necessary to reveal the structure of the myth. Because of this need for repetition, the myth is told in layer after layer.

Writing in the 1970s, Hermann Janssen wrote:

> We may argue that many modern Tolai [and other people of Papua New Guinea] have forgotten about their traditional myths or even that they do not want to hear any more about their pagan past. Other arguments against reviving myths may be that they are nothing more that fairytales. These and many other objections certainly have a core of truth. But still, I believe, we cannot do away with the myths in such an over generalised and superficial manner. Myths have changed and will change in future. But what has changed? Has the function of the myth as socio-religious tradition changed? Was the impact of Christianity and Western civilization so effective that the Tolai people [and others] have completely parted from a dualistic world view, from a pragmatic mentality and from ethnocentrism? Or are there new 'myths' and syncretistic forms of the old mentality with a few changes? There is another important problem. African examples teach us that tribal societies come after a few generation of western contact to various forms of a renaissance of their traditional expressions and values. This can be observed in some parts of New Guinea already (Janssen et al, 1973: xix).

B. Bel and Motu Magic

Speaking of the Ngaing people on the Rai Coast, Lawrence noted that the *Male* Cult of the Ngaing was similar to the *Meziab* cult of the Bel group in that bullroarers were twirled and the women and children warned to keep out of sight of the ceremonies. The Ngaing had magic for every part of their lives: for warfare, for gardening, for the weather and to ensure that the trade in dog's teeth and Siassi beads would continue. The ancestors, once called upon, were duty bound to respond and protect their descendants in all their undertakings. "For agriculture, a garden leader breathed Meanderi's (a local deity on the Rai Coast) secret name over shoots of her crops before planting them around a special shrine" (Lawrence, 1964: 17).

The Bel group also had many different types of magic owned specifically by their group (Morauta, 1974: 19). There was magic for fighting, for gardens, for hunting and for peace making. For warfare, special incantations would be said to their creator beings, Kilibob and Manup, as they dressed for a fight and these names were reinvoked as they attacked their enemies. Similar rituals were held before a trading trip to ensure good trade in artefacts and that the weather was favourable. Later, when the traders were sailing, they would again invoke the spirits of their ancestors. As they were seafaring peoples, the magic for weather, winds and calming the seas was of paramount importance. Aufinger, a priest-anthropologist, studied the weather magic of Yabob Village in the 1930s when the old rituals and spells were still remembered. Yabob is near Bilbil and was founded from the latter (Aufinger, 1939). The two villages had the same weather magic although different spirits may have been addressed. Aufinger's detailed account is fascinating because, today, the Yabobs and Bilbils alike have forgotten most of this magic. However, they remember some aspects, which Aufinger does not include. These oral testimonies plus Aufinger's work provide an overall insight into the weather magic of the Yabobs and Bilbils.

Traditionally the Yabob and Bilbil people were animists believing that trees, bushes and stones all had spirits which needed to be appeased. These beliefs affected the construction of the canoe even before the tree was cut down: while the hull was being hollowed; and when the hull was dragged through the bush to the beach to have the superstructure added. The hull was a bush object which the sea spirits might want to harm so a special secret language was used to confuse the sea spirits and thus protect the canoe while it was at sea (Mennis, 1980a: 103).

Rituals were an important part of the Madang culture. The men traditionally had secret clubhouses, *darem,* where the *meziab* would be called up with the magic flutes. Much of the cultural system of the traditional society was centred on the *meziab* and the *darem*. It was here where the young boys were initiated and circumcised and where the customs of the clan were passed onto the next generation. Dancing and feasts associated with the *meziab* were held in the *darem* (Mager, 1952: 199). These ceremonies were forbidden to all uninitiated, especially women. If they were to look upon the magic flutes it would mean instant death (compare with the story of Sibor Village).

Before the trees were cut down for the hulls, the men pleaded with the spirit of the tree, "*Masalai* go and find another tree," they would plead, "this tree is no good." They did this so that the tree would not split when it fell. When they were cutting the trees with their stone axes, they would burn the chips every night for fear the *masalai* might put the chips back in position during the night. It might take two or three days to cut a tree down with a stone axe, a very slow process. As many as four men would take turns in chopping with the stone axes which they kept sharp with special magic. They also made magic over the hulls as it was being pulled through the bush by striking it with the *gorgor* (ginger plant) which they then threw away (Mennis, 1980b: 65).

In many places, special ceremonies were made over the new canoes. Bashan of Bilia in Madang mentioned that the song called *basok* was chanted over the canoe. Later, the *likon* or magician performed special ceremonies for the canoe. There were different rites for winds, sun, and calm weather and special songs to bring the right conditions. There was magic over the elements associated with sailing these canoes over the sea, the winds and the rain. Before any trading trip started, the crew would consult with and pay the *likon* to ensure he made the correct magic for the journey. Later he was asked to call up the right wind for the return trip. Conversely, the *likon* could also make bad magic if he had not been paid enough and could stir up rough seas against an enemy canoe. The *likon* in Bilbil and in other places within the Bel group had bigman status. Bashan of Bilia (Mennis, 1980a: 93) said that the *likon* of his village was Gasu, who was the boss of the *balangut* canoes and of the weather. The *likon's* position was hereditary from father to son. On Bilbil Island, Bidimur was Sui's father and Sui learnt the magic from him and handed it on to Sangal, his son, who was the last of the *likon* men. Sangal would hit the front of the canoe with *gorgor* (ginger) and then throw it in the water to keep off the bad spirits before the canoe set sail (Mennis, 1980a: 93).

From interviews he conducted in 1939, Aufinger described four types of magic used on Yabob Island: rain magic; sun magic; storm magic and magic over the sea. He commented, "It stands to reason that island folk such as the Yabobs, who in their daily hard fight with the sea, weather and canoes for their existence, paid special meaning and attention to the weather magic, to ask for the possibility of what they wanted, rain or sun, or to have a quiet or stormy sea" (Aufinger, 1939: 177-91).

For the sun magic, the *likon* would collect herbs from the bush. He decorated his body and specially bound his genitals hoping that the spirits would do the same and so stop the rain. He would call out to the spirits:

> Oh Sagui, oh Bipoi, now I pay you with ornaments! Betel lime I make, betelnut and pepper I give you. A loincloth, a long good one, I tie [around your loins], I give it to you. Then all the male and female spirits are called by their names and to each of them ornaments and presents are offered. The magician beckoned the spirits to please climb the ladder, which by now leans on the Finisterre range, that they may wander along the horizon and go home via the Northwest to Bunu (Aufinger, 1939).

The magic of the sea was used to make the sea quiet particularly before a trading expedition. The *likon* was not allowed to drink water or have sexual intercourse for two days before making the magic and ate only food that had been roasted. After the two days a feast was held and the magician put his special objects by his side while the headman and the rest of the men sat in a circle around him. The headman himself sat exactly across from the magician. Then they drank the 'cognac' made from fermented coconut tips. After having his drink, the magician spun his bowl like a spinning top and intoned a message. It is interesting that as part of the magic formula, he appealed to Kilibob and Manup to calm the seas.

> *Oh Kilibob, Oh Manup, The betel nut and pepper I give you. Oh Kilibob, O Manup, the hatchet I place in your hands. Now chop the middle of the sea, and make the sea smooth* (Aufinger, 1939).

Motu Weather Magic

In the 1880s, Lindt described the magicians in Hanuabada Village, which consisted of both Motu and Koita people. The Koita were quite capable of making black magic so the seas would get rough during an expedition and they had to be appeased and paid:

> [The Koita] -- are much feared because of their wonderful power over sun, rain, heaven and earth; north-west and south-east monsoons, these especially are theirs. An old chief --- marched through Hanuabada, and some occupant from nearly every house came out to meet him with a present --- so that he might be friendly to the proposed trading expedition (1990: 119).

With arrival of the missionaries, the Koita sorcerer was persuaded by James Chalmers to show his collections which consisted of a fragment of pottery and two small river stones. Romilly noted, "The Motu were disgusted when they saw it and said, "Is this what we have been paying our best armshells and tomahawks for so many years?" (Romilly, 1885). But the Motu people had their own form of magic.

In 1995, Ed Boylan interviewed Tau Boha of Lealea who spoke of four kinds of magic to overcome dangers at sea. Two of these were the same as the Madang ones:

1. To quell big seas threatening to capsize the *lagatoi* a wooden pin called *kuluha* made from a light wood, *Tai* (same wood as used on the outriggers), was used. If I am the sorcerer, I blew on the *kuluha* and drove it into the hull saying, '*lagatoi barkenia'* which means, '*lagatoi* pull up'.

2. When water is coming up between the hulls the sorcerer prevents this by taking a small amount of sago in one hand and throwing it down between the hulls using a rigid arm in front of him and says *"basul dail"* which he translated as "stop".

3. To stop a strong wind, an ember (*larhi*) was taken from the fire, and the sorcerer blew on it and threw it down by first stretching his hand horizontally to the side, swinging to the front and then delivered the 'throw' with a sharp downward movement. The sorcerer said *"lai ardo"* which means "wind stop".

4. When the *lagatoi* was being driven towards a headland, an identical movement was used as in the second type of magic except now his hand was empty. This action is followed by a sharp scooping motion as the hand is dragged quickly from in front to behind his back. He says *"edu karkaru"* which means point come behind. The direction from where the winds came was indicated using his arm at the same time indicating their names and relative strength (Boylan, 1995).

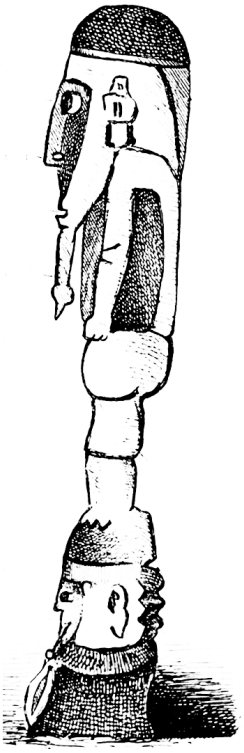
The Motu feared Koita sorcerers when their fleet of *lagatoi* were getting ready to sail and they had to appease them so that they did not make bad magic over the waves. "The Koita were considered able not only to inflict illness and death on the Motu but also to control the weather upon which the Motuan economic system depended." (Allen, 1977: 449). Groves quotes Livingstone on the power of a sorcerer:

> He can make or mar a trading or hunting expedition. The catch of the fishing depends on him, as does also the return from the garden work and planting. He, and the spirits who help him, control wind and rain, famine and plenty, health, sickness, and death. Against this, the idea of a supreme Creator and beneficent God has to contend" (2011: 41).

Other Magic: Groves earlier noted that in 1958, at Manumanu, a great proportion of the pots manufactured for the *hiri* broke in firing. The women regretted their losses and found others to blame as they extracted the broken pots from the fire. It might have been because the men did not dig deep enough to get the clay so "there are too many impurities". Secondly "someone was causing the pots to break by means of sorcery". In 1958, a Doura man with whom the people of Manumanu were in dispute came under suspicion. Some women said that they suspected the Koita, but no one could suggest any specific reason for Koita ill-will (1960: 18).

The *Meziab* – Magic beliefs of the Bel group.

Rituals were an important part of the people's life as expressed in this belief of the spirits or *meziab*. Much of the cultural system of the traditional society was centered on the *darem, which was* observed by Finsch. (See page 57). He described the steep roof that descended to the ground; the high carved posts on the outside and inside the thirty foot long beams and the carved statues and the sleeping platform for the men. No women were allowed. "This building was not a temple and neither were the woodcarvings gods, as every missionary would have immediately interpreted it" (Mennis, 1996:18-19). One *Meziab* feast, in 1891, lasted for several days and during the first part, the young initiates were fed meagerly and received instruction about the secrets of manhood. On the night of the ceremony, the boys were lined up trembling for the emergence of the *meziab* from the cult house. Looming up at the frightened boys in the ghostly light of the fire, the five ghostly masked figures emerged and began to beat the youths



Aimaka figure of the Darem *house, supplicated for good harvests.* Finsch, 1888.

with canes pretending to tear them apart as if they were being swallowed by the *meziab* and made whole again. This was followed by an eerie sound high then low in pitch, said to be the voice of the *meziab* itself. A slight circumcision followed this.

> The *meziab* were generally believed to be the spirits of the ancestors constituting a social unit and spoken of in the singular. The young men were initiated into the secret cult of the *meziab* before being led to the *dazem* where the men again reproduced the voice of the *meziab* by playing on the bamboo pipes. Once the owner of the *meziab* had cut open a coconut, it was the signal for the dance to begin.
>
> The dancing would continue for three or four weeks. During this time there was much feasting on pork and other food, which had been prepared for the *meziab*. While the *meziab* ate the spiritual part of the food, the initiated men would eat the substantial part. The dancing and feasting expressed the solidarity of the society composed of the spirits of the dead and of those living. The boys that were considered old enough were initiated into the secrets of the *meziab* and taught the laws and customs of the tribe at this time. They were now to perpetuate the customs of the ancestors, and any one deviating from these would be beaten with clubs or spears (Mager, 1952: 199).

The novices were circumcised and crescent shaped wounds inflicted on the temple. After the wounds had healed and the boys had come out of their hiding, the women and children were told that the teeth of the *meziab*, who had swallowed the boys and then regurgitated them, had caused the wound. The women looked upon the boys as new and wonderful beings. While the *meziab* danced, the gables of the *darem* house were decorated with the *sima* ornament, a long piece of coloured bamboo (Mager, 1925: 286).

What is the origin of the *meziab*?

There seems to be three separate myths that explain the origin of the *meziab*. Hannemann gathered stories that implied it seems to have come from the Rai Coast near Galek Village. The following three myths are a synopsis of Hannemann's stories. A fuller account of these myths can be found in Hannemann (1955: 5-8).

The first myth explains the origin of the sacred gourds and flutes:

> *A large tau tree once grew in the foothills near Galek Village. The trunk was from the tau, but the branches were from various trees, such as wild mango, breadfruit, and others. One night, an Irandung man went out hunting small game. When he came to the vicinity of this tree, he heard it talk. The people decided to chop the tree down. From the stump a gourd grew with fruit for a meziab instrument. At night the gourds sang and danced. Hearing the different voices, the surrounding villages heard them and took the seeds and planted them.*

The second myth explains the origin of the bullroarers used in the *meziab* and why women were banned from witnessing the rituals. This myth has similar connotations as the Edai Siabo myth in that this man is given instructions on how to make a bullroarer and the rituals that must be used. Mager describes bullroarers as being attached to a pole and whirled around to make the whirring sound to warn women and children to leave the area because the ancestral spirits were coming (Mager, 1952: 230).

> *Once a man from Saror Village kidnapped a small boy while his parents were fishing. The boy grew up and said to his foster father. "If you kill me, I shall do something extraordinary". This the father did and the spirit of the boy revealed the secrets of the* meziab*. He said "You must cut down the* piziz *tree, split the trunk in halves and cut off a piece as long your your arm. Take aerial roots of the* aiau *and fasten a bamboo rod to this handle the length to about three times the length of the handle. Swing this instrument in a circle above your head to produce the voice of the* meziab*".*
>
> *The man did this and sent his wife into the woods to try out the bullroarer. However, she could not make it work. She swung it round and round, but it did not give forth a sound, only her breasts flapped*

> *against her body,* pappappap. *So she gave it up and said to her husband, "You go and do it. I will cook the food; you look after the* meziab *and I will serve you". That is the reason why women are not allowed to take part in the* meziab *celebrations and are not permitted to see the instruments".*

The third myth describes a young man, Salpot, who taught the *meziab* dances:

> *He was born ugly with large lumps and his sister ignored him. When he grew up, Salpot left the village and built a house for himself "under an* aiau *tree and ate its fruit." One day, a flock of kay birds landed on the tree. They were* meziab *and taught him the magic of the* meziab *instruments, the gourds, bamboo and flutes that gave off an eerie sound. The also taught him the* meziab *dance"* (Hannemann, 1934: 5-8).

It was at a secret meeting of the *meziab* on Bilbil Island that the plot against the German Government was hatched in 1904. It involved sorcery and the red fluid in a Bilbil pot which was handed around to made the Krankets and Siars angry. At this stage the Bel people were not only angry at the loss of land and trees, but they were also furious at having their lives regulated to working on roads and filling swamps. The men wanted to continue celebrating the *meziab* in the *darem* particularly at the time of initiation of the young men and this upset the German officials. The people missed the freedom of dancing and singing for weeks as they pleased. It was partly because of the infringement of their privileged position that caused them to revolt. The people were also upset at the opposition to the *meziab* expressed by the German Government, who viewed the accompanying feasts as a great time waster and a threat to their government. In the end, they were the ones who were betrayed and many were executed by the Germans in retribution.

The Lutheran missionaries viewed the *meziab's* sacred instruments and rituals as satanic and insisted that the *meziab* be exposed to the women before the people could be received into the Lutheran Church. The missionaries in particular were against the secrecy of the *meziab* and the attitude to the women it brought with it. They encouraged the people to burn their sacred flutes and other paraphernalia so they could join the church. One of these ceremonies was held in 1919 at Kranket Island and at this ceremony, the sacred objects were revealed to the women (Fugmann, 1978: 264).

It seems that, later, the Lutherans were critical of this practice of that their predecessors had of burning cultural items. By the 1970s, there was a reversal on the ban of initiation ceremonies. The people were encouraged to retain some of the initiation rites, as they prepared the youth for adulthood. This gave them a sense of belonging to the clan and taught them obedience and social mores.

An authority on the subject was Gernot Fugmann, a Lutheran missionary, who wrote:

> Initiation was still important and remained an integral part of their changing culture, despite the fact that in 1919 the village leaders of Graged revealed the *meziab* cult publicly, followed by the burning of cult objects. The issue remained controversial and had evidently not been accepted unanimously among the Bel villages, because initiation rites were still performed in certain clans. Some boys were sent to the Rai Coast where they had traditional trade and marriage links. A few were initiated near Madang. The initiation rites were formally revived among the Bel villages in 1939. The reason was that the young generation did not obey the village rules anymore, they lacked energy and their attitude did not reveal vitality or virility (1978: 265).

Fugmann found that there was no objection in the modern church to the now modified initiation ceremonies to take into account religious sensitivities. They are now not used to introduce the young men to a secret cult but prepare them for life. Although the ceremonies he witnessed had no prayers or religious side, there was nothing anti-religious in it. The young men needed the initiation ceremony, in which the elders taught them the rules of village life and they learned to obey those in authority. Fugmann, in his article, concluded that initiation was good for the youth, "a remedy has been found to solve the problem of tribal disintegration. In preserving and promoting identity with the traditional culture, their tribe, and their roles as men, initiation becomes necessary and as such constructive and not destructive. This alone justifies its continuing practice" (Ibid).

Magic stones or slates

These were slates or stones which were kept in baskets in the *likon's* house and were supposed to have magic qualities. Kasare of Yabob described them as being like the slates of Moses (Mennis, 1981a: 42). Kasare said that his ancestor brought the slates with him when he came to Bilbil Island. Along with three other men, Singisungi, Gad and

Sekarius, he was the first to arrive there. (Mennis, 1981a: 65). The Mager Dictionary describes the *likon* as a sorcerer or a magician who is supposed to be able to control the weather. A stone called *likon pat* is listed and 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). [It may have come from a meteor or obsidian flakes]. Aufinger also describes a black stone, which the weather magician uses to calm the sea (1939: 287).

Madang Magic for sickness:

If a man was sick, someone would call the *kadal tamol,* a sorcerer, to come with his bush medicine made from bark and vines. The *kadol tamol* would first say the magic words over the medicine to ensure that it worked and then would spit some of it on the skin of the sick man, as well as giving him some to drink. Sometimes, ginger was added to make it stronger. The *kadal tamol* mixes the ginger with betel nut and if it goes bright red then the man will live. However, if a man had a high fever, the *kadal tamol* would say that someone must have made sorcery over him and he will die. People would come from everywhere to try to find the one who had made sorcery over the sick man. Sometimes, the sick man was given a human bone to hold, as it would give him power and knowledge of whoever had made the sorcery over him. His relatives sat around to hear what he had to say.

The sorcerer was a villager who took part in village life like anyone else but he had special powers. If he wanted to made *sanguma,* sorcery, he would mark a wild pig or wallaby or even a crocodile and his soul would enter one of these animals. Because of this, the people hesitated to kill animals. If they needed food and saw a cassowary in the bush they might kill it but if it were near the village they would be afraid it might be possessed by the *sanguma* man. One old headman described how the sorcerer might hold your gaze while he picked up some rubbish you had left lying around with his feet. He then took this and wrapping it in a banana leaf held it over the fire while muttering some magic words so you would get sick and even die. Of course, when someone did die, the villagers tried to discover who had made the magic over that person. The people lived in fear of sorcerers who could even make magic over their footprints. Ginger is often used in cooking and in sorcery because of its hot nature. The men would chew the ginger, which was supposed to make them strong and courageous and then spit it against the spirits when they were trying to cure a sick person. It was also used as a remedy for stomach-ache (Mager: 1952: 230).

Motu Beliefs in the spirit world

The Motu believed in the existence of spirits called *lauma* which they could invoke for help in their lives. The dead were interred in a place in front of the house and the people felt the dead spirit was present in their lives. "They were in the keeping with the belief that that the new dead came and visit the spirits of the living. There were two types of spirits - good and bad. Evil spirits lurked around at night and the people were frightened to go out after dark. They called in the Koita sorcerer who was supposed to have the power to chase these evil spirits away. The worst spirit was the *Vata*, invisible sorcerers who were supposed to be able to club a victim to death, restore him to life by incantation and then let him die permanently several days later. Examination would reveal that his bones were broken, and in this way the Motu would know that the dreaded *Vata* had done their work again" (Rosenstiel, 1953: 21).

Comparisons between the Bel and Motu beliefs

As we have seen, both the Bel people and the Motu people were animists believing that every object even stones and trees had spirits. Because of this, they would talk to the *masalai* (spirits) in the trees before they cut them down. Their magicians averted storms and calmed the seas. In both cases, magic was used to appease the spirits through the weather magicians. Captains of canoes could make magic over the water. The *baditauna* and *doritauna* meditated for the safety of the *lagatoi* while it was at sea. Bonnemaison wrote similarly of the situation in Vanuatu where the chiefs of each canoe were the 'living emblems' who directed the canoe's course in the first voyage. When the traders set out from the village they knew they had a special purpose to fulfil. They were like ambassadors of their people "entrusted by the entire social group and surrounded by its active assistance" (Bonnemaison, 1985: 32, 44-45).

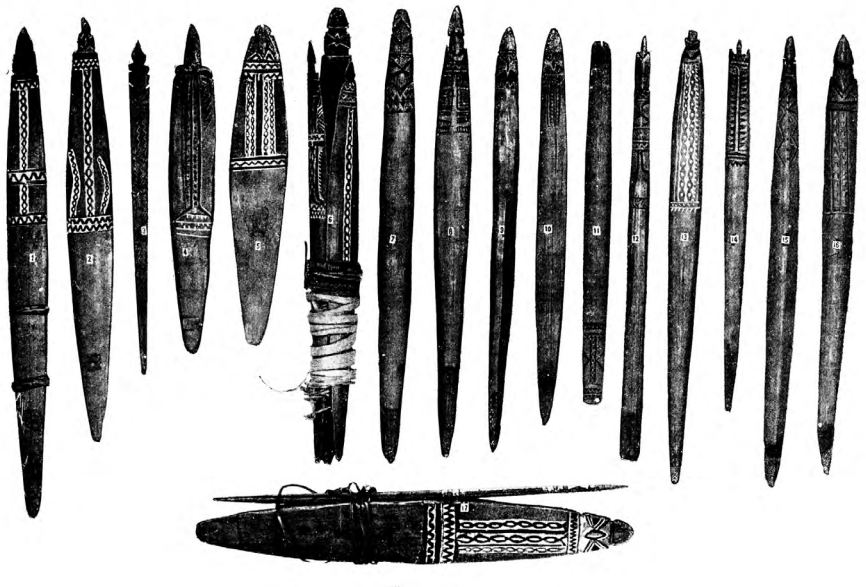
Before the expeditions set out, whether it was the Motu people or the Bel people, the weather magicians had to be paid for their work in making the right winds or calm the sea. The Koita people, who lived in close proximity with the Motu villages, were particularly feared for their black magic and were sometimes blamed if there was a disaster at sea (Oram, 1971: 423).

One can imagine the terrified sailors in a big sea depending on the sorcerers to calm the waves that threatened to capsize the *lagatoi*. Special words were used over a wooden stick which had floating capacities and was then thrown overboard to give strength to the *lagatoi.* Other magic was used to make the hulls watertight with sago being the

object used. The whole voyage was for the sago so it symbolised the importance of food for the hungry people. The cargo of sago must be saved by this magic. To stop a strong wind, an ember (*larhi*) is taken from the fire, by the sorcerer. It was blown on and then thrown. To turn the *lagatoi*, the sorcerer motions with his hand and says sacred words again to influence the direction of the vessel (Ed Boylan, 1995).

The ceremonies used by the *likon* of the Bel or the Motu magician are very similar. The canoe is beaten with the *gorgor* (ginger plant) which is thrown in the sea to ensure the safety of the trip. There were different rites for winds, sun, and calm weather and special songs to bring the right conditions. There was much magic over the elements associated with sailing these canoes - over the sea, the winds and the rain. The *likon* was the weatherman and supposedly had control of the wind and the sea.

In both places the culture heroes were called upon to help with the trading trip. The Yabob and Bilbil people called upon Kilibob and Manup whereas the Motu people called on Edai Siabo in their special songs as they departed their village for the long hazardous journey. The song, *Heona*, which was sung as the traders left. “Edai Siabo, Idiha Dakwai. Edai Siabo, Ba negia dobi. Edai Siabo, Edai-a-Siabo Edai Siabo, Edai-a-Siabo Edai-a-Siabo. *Idiha Dakwai*”. Tau Boha explained, “the song is in the *Hiri* trading language and the people don’t know the meaning of all the words. It is in the old language” (Mennis, 1995).The magic used was to protect the canoes and the traders when they were ***Sailing for Survival***.



Bulroarers used in the meziab *dances were trade items from the Rai Coast.* Biro, 1899.

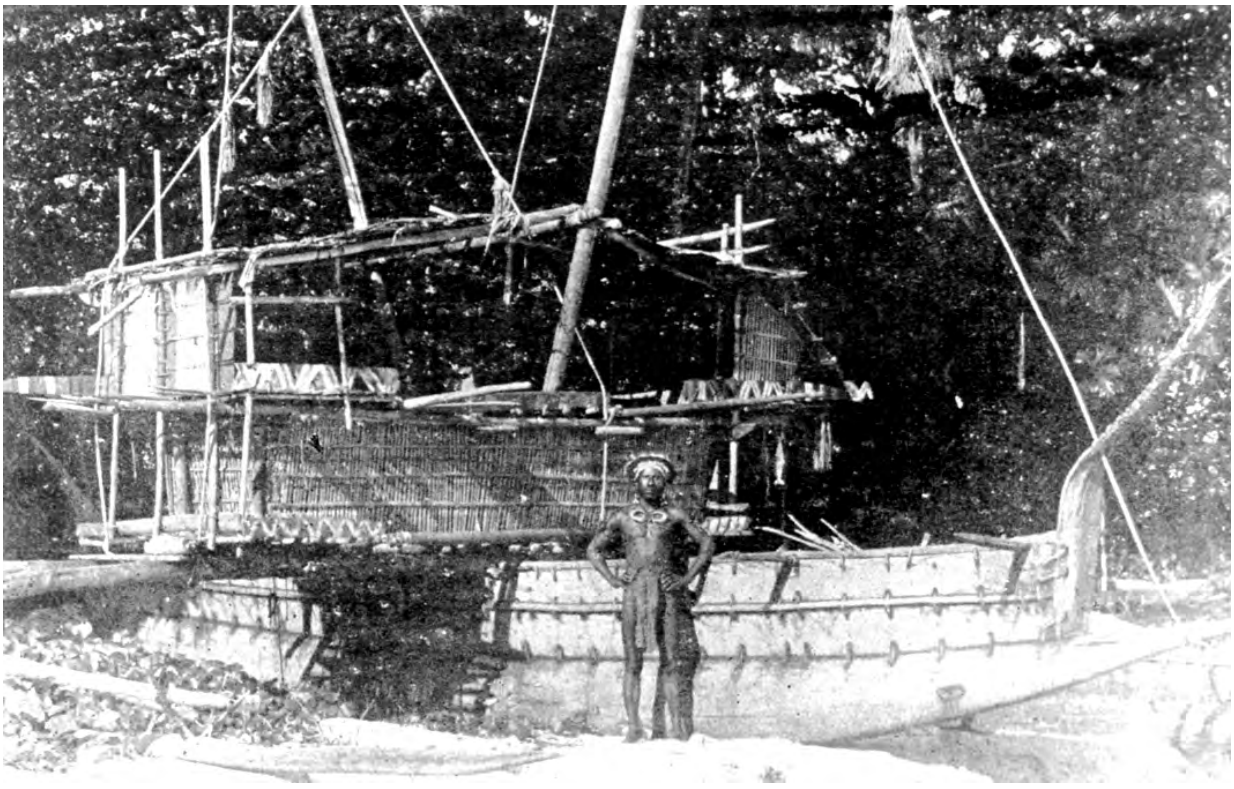
Part Three: The Exchange Systems of the Bel and the Motu

> *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* (Malinowski, 1960).

The *lagatoi* and the *lalong* were once part of the whole material culture in the village setting, particularly in the part they played in the trading voyages. The Bel people called their sailing voyages *waing* and the trade *dadeng*. Both these terms cover the process which the Motu called *hiri*.

The Bel and the Motu systems had many characteristics in common, as well as points of difference: they sailed in fleets of canoes to their destination; both used magic over the weather and called on the spirits of their creator beings for protection; both carried pots and other goods to be exchanged for food which they desperately needed; and both used the trade winds to blow them in the right direction and home again. Traders of both areas were fearless high sea mariners using the stars and landmarks to help them while facing strong winds and rough seas. However, the *dadeng* trade involved in setting off on a voyage, a *waing*, to trade at many villages on the way down the Rai Coast before the final destination was reached; whereas, in the *hiri*, the traders sailed to their destination usually in one long voyage and were at sea days and nights without stopping, except sometimes for a brief stop at Yule Island. Different *lagatoi* stayed in different villages where they had trading partners and stayed at that village for returning home.

The Bel group in Yabob and Bilbil, traded pots, water pots and other trade items and acquired yams and taro; shell ornaments; materials to build further canoes; bows and arrows; wooden bowls and plates; tapa cloth, dogteeth, *bilums*, axe-heads, drums and betelnut from the Rai Coast and Karkar (Mennis, 1981a: 56-7). Once the pots had been delivered to their trade partners, the canoes were loaded with many of the above trade items. The *lalong* and *balangut* canoes were designed with pot-cages to carry the pots in one direction and trade goods and food on the return journey. Furthermore, the Bel people called into many villages along the Rai Coast and spent a few days in



Beg of Yabob village in front of a balangut *used by the Bel people for trading in the 1930s.*

Hoisting the sail on a lagatoi. Groves, 1957. (PMB43_011).

each place. Rimba was often their first port of call and then the fleet moved along the coast, doing small trips in the evening to the next village spending a few days in each place. When they arrived at the furthest destination at Sio or Sialum, they would be accommodated in several villages so as not to overload the hospitality while they waited for the winds to turn for the return trip. On the way down the coast, they set down their pots but did not reload the canoes until the return trip when they picked up the trade items and stacked them in the empty potcage. This meant that the food items and other perishables were stored only for a few days before they reached home. These items were relatively lighter than the parcels of sago which the Motu carried. This had an effect on the form and function of the canoes.

In the Motu area, the people bartered their pots, dishes and bowls, some shell ornaments and betel nut for *sago* and for more canoe hulls. The *lagatoi* needed to be lower on the water to carry the heavy loads and needed many hulls to distribute its weight. These practicalities meant that the canoes had to be designed for this function. The hulls added to the *lagatoi* in the Gulf provided the necessary space for the sago parcels to be stored. The Motu sailed in fleets of *lagatoi* but they could not all head for the same village. They would each have their favourite trading village and would stay there for the duration. The logistics of catering for the crews of a fleet of *lagatoi* in one place would have been astronomical over a period of two or three months,

The Motu crew lived in the semi-detached shelters at each end of the deck after their arrival in the Gulf until they began work on the new wider *lagatoi* with its added hulls. When they dismantled the old *lagatoi*, they used the material to build small huts to live in on near their work site. The crew stayed near the same village and had to be fed for up to two months. During this time they probably helped collect some of the sago which was the main staple diet there. Allen suggested that the Motu also exported their workforce as well as their pots to the Gulf. The men who manned the many *lagatoi* were absent from the Port Moresby area during the hungry time of the year and this saved the people from feeding them. They went fishing with their large nets in the surf off the nearby beach and were fed by their Gulf trade friends (Allen, 1977).

The traders, who took part in the two trading systems traded over long distances but also took part in short trading trips. They exchanged goods but did not always view it as trade in the strict sense. The Motu people in their transactions with the Gulf people would make unequal exchanges. The Gulf people may give sago for a canoe that had been lost with all its cargo of pots and not expect any repayment in the future. As Allen pointed out, the coastal trading systems

were different from those on the Highlands where open systems of trade meant a restricted number of goods passed hand to hand over enormous distances. On the coast, the presence of trading canoes engendered long-distance sea travel with movement of goods; specialised trade and the emergence of centres of trade (1982:193).

Irwin, who studied trade networks on the south coast, particularly Mailu, from an archaeological point of view sees the advantage of comparing one trade system with another. "The next logical step is to try to integrate some other places and cases in a more general explanation of change" (1985: vii). That is what I have tried to do in this present work by comparing the long distance trading system on the north coast with that on the south. I was living in Madang during the 1970s and was able to carry out ethnographic work in the nearby villages over a continuous and long period of time. There were still old headmen in Bilbil and other villages who remembered the German times and went on the *waing* trading voyage to the Rai Coast as far as Sio Island. Sadly they have all gone now, but the information collected over that time has given me a wide background on their material culture not collected before.

As for the *hiri*, I learnt about it first while living in Port Moresby from my Motu friends. Visiting Yule Island on holidays, I learnt about the *lagatoi* calling in there on their way to the Gulf and was even shown a cave where they sheltered from the weather. Then in August 1995, as mentioned, I was part of a team to interview a group of Motu people staying on Magnetic Island for a few weeks while they made two *lagatoi*. It was an artificial setting as it was not part of the normal village scene. However Nelly Bay was a secluded beach and not developed so it closely resembled a beach setting where the Papuans would have made their canoes. The people gathered around the *lagatoi*, cooked a large mumu and a group of girls came to dress up and dance on the beach as the days past. Then they prepared to sail across the bay to Townsville where hundreds of people waited to welcome them on the Strand

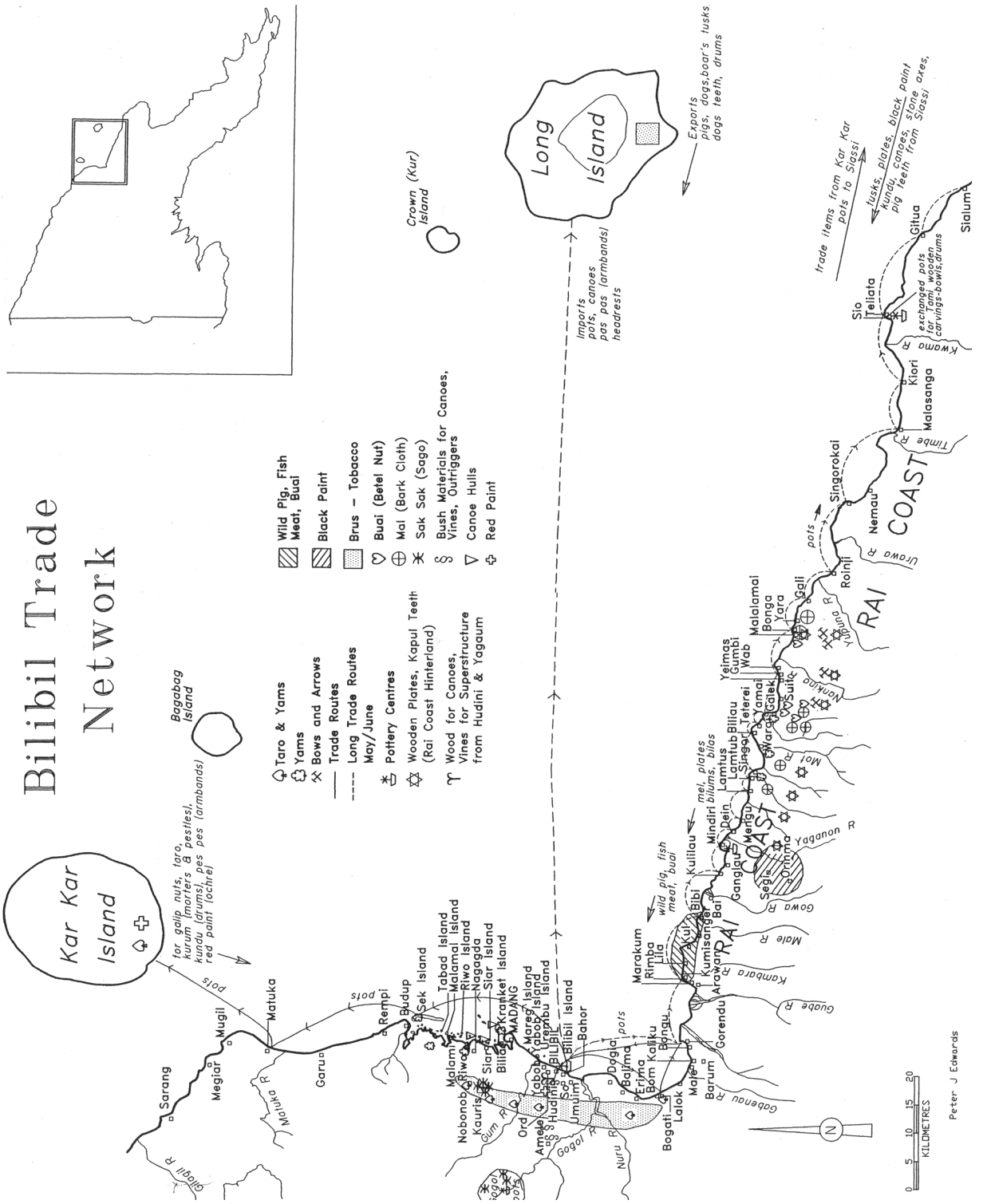
Harding, who studied the Siassi trade network, said it was not the number of objects which impressed observers of these trade networks but the vast distances they travelled. He estimated the *hiri* traders would have covered 800 kilometre in each round trip (1994: 103). The *hiri* traders traded all types of pottery and some shell necklaces to the Gulf as well as other items in local exchanges. The Bel traders traded an enormous number of items and were the middlemen for many more and also travelled hundreds of kilometres along the coast.

A. The *Dadeng* trade while the Bel people were on a *Waing*

The Bilbil people had a sense of identity in the fact that they were long-distance traders, and the makers of canoes and pots. They lived on the small rocky island of Bilbil until 1904 when the people were shifted to the mainland by the German Colonial Government after they had instigated a revolt. The people always insisted that "our pots were our money" and anyone who threatened their pot trade faced retribution. I have a theory that the Bilbil/Yabob people instigated the revolt against the German Colonial Government when the latter introduced a new monetary system and trade-store saucepans which threatened the pot trade. Thirty years earlier, when the Mindiri people threatened their pot trade, the Bilbils invited them to a feast on Yabob Island and massacred them all. During the 1904 revolt, the Bilbils sent a magic potion to incite the Kranket and Siar people to make them angry. While the Bilbils themselves stayed out of view, their allies got in the canoes crossing to Madang ready to wipe out the German settlers. Their plot was thwarted when they were betrayed.

Previously, when they lived on Bilbil Island, the area was divided up into the various clans, with each of the clans having its own men's house where the clansmen would gather and recite tales of their prowess on the high seas. Women were forbidden to go into the men's house and secret rituals were carried out there with the bullroarers and flutes.

Since the island could not provide subsistence for all its occupants, they had to resort to trading and planting gardens on the mainland and making pots - the clay being collected on the mainland. The population of Bilbil was not great and there could not have been more than 80 able-bodied men to sail the canoes at any one time. Their large canoes were capable of carrying up to a hundred large pots in its pot cage (Harding, 1967: 196). Finsch described seeing thirteen canoes on the beach on Bilbil Island in 1888 (Mennis, 1996). Bodrogi postulated with Harding that the Bilbil were on the periphery of a larger trading sphere ranging from Bogia around to Tami Island. His theory is debatable because the Bilbil and Yabob people saw themselves as the centre of their own intensive and extensive trading sphere. Harding does not see this larger area as being exclusive as "these overseas voyagers sustain a significant development of interregional specialisation and created thereby a regional economy" (1979: 269). Although the basic object of the *waing* may have been to travel on their canoes for the *dadeng* trade of pots for food, they traded in many other goods as well. Their specialisation in pottery and monopoly over it led to quite a high standard of living on the island which was remarked on by Otto Finsch in 1884 (Mennis, 996: 16).



Apart from food, there were many trade items exchanged for the Bilbil pots: on the Rai Coast, bows and arrows, wooden bowls, *mal* and shells for decorations; possum teeth and dogteeth would be exchanged for little pots; Bongor and Singor had bird feathers (*kangal*); *brus* (tobacco) came from places from Nobonob to Bogati and Bongu; galip nuts, drums, *paspas* decorations and wooden bowls came from Karkar Island.

A list of the villages visited by the Bel traders on the Rai Coast in order from west to east included: Bongu, Gorendu, Rimba, Lila, Kul, Kumisanger, Bibi, Bai, Ganglau, Mindiri, Dein, Merigu, Lamtus, Lamtub, Singor, Biliau, Teterei, Yamai, Galek, Suit, Yeimas, Gumbi, Wab, Malalamai, Bonga, Yara, Gali, Roinji, Singorokai, Nemau, Malansanga, Sio, Teliata, Gitua, and Sialum Villages.

A1. Types of trading trips on the north coast among the Bel group

Peter Lawrence described trade as being formal or informal:

> Informal trade went on continually. On the Rai Coast, the Ngaing people 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).

"Pots were our money".

So informal trade would be the short distance trade, which was carried on continually, to nearby villages like Nobonob, Amele and Sehan while formal trade would be the long trading trips which required so much preparation and depended on the winds and the weather far more than the informal type. The long trips to the Rai Coast usually took place between the months of May and July. For the previous months the women were busy making hundreds of pots which were carried in the potcage on the canoe. The *likon* would choose a day and the women hastened to finish the last of their pots, fire them and dry them in the sun. The men would get decorated and paint the canoes and gather for a feast. Then the men beat the drums and the women rushed with *bilums* filled with pots down to the canoes. If the canoe was a *lalong*, then two men would be busy filling up the pot cage. If it was a *balangut*, it would take four men to fill up the larger pot cage and put *limbum* leaves on the sides and top of the pots to protect them from the sea. The pace was feverish in the village during the preparation for a trading trip and shows the high level of organisation of the society.

In researching the trading system, the taped evidence of the former traders themselves is of paramount importance. The Bilbil men in the 1970s could still remember going on trading trips before the war.

Pall Tagari of Bilbil Village:

> We went to Rimba on Astrolabe Bay. Then we went to Biliau. Some stayed here, but papa and I went on to Yeimas. We pulled the canoes up onto the beach and ate. We gave them pots and. there were some men from Wab here too. Next day we went to Seure and gave them pots. Our friends came down (from the bush) and gave us betel nuts and smokes. We slept there and the next day we went to Mun. All our friends there shot a pig and cooked it. We sold the pots for *mal* or plates and *bilums*. Then we went on to Yara. Some canoes went there and some went to Bongu which was our last stopping place. We stayed there for a month waiting for our friends to prepare things for us and for the wind to turn.
>
> Then we returned to Mun and others to Seure. They fed us and we went to Yara. Some canoes went there and others to Wab to get what was owed. We all met together afterwards at Siliau. We left and all the canoes together went to Rimba. This was where my father came from, so all the relatives and uncles came down to greet us talking and laughing. We stayed there and they cooked food with coconut oil for us as we sat on the beach. Then the men said, "tomorrow we will go back to Bilbil." There were many people waiting for us and much rejoicing. Later there was dancing and feasting and the people at Amele inland could hear the garamut drums being beaten and would say, "The men are home from trading" (Mennis, 1980b: 87-89).

A. 2. Reasons for the trading trip

Economic

The main reason for the *dadeng* trade was economic. The people traded the pots for the food items which were needed during the hungry times of the year. Pots were seen as an item of currency. The rocky islands that the Yabob and the Bilbil people lived on were by nature infertile. Even though they grew gardens on the mainland there were a few months of real hardship when the people would have starved without the food gained by the trading trips. Pall, of Bilbil Village, said the following food was exchanged for pots: taro, betel nut, sago, sweet potato, *galip* nuts and meat, (Mennis, 1981b: 54-56). Much of the pot trade was for the large *taro* roots from Bogati, Sehan and Nobonob from

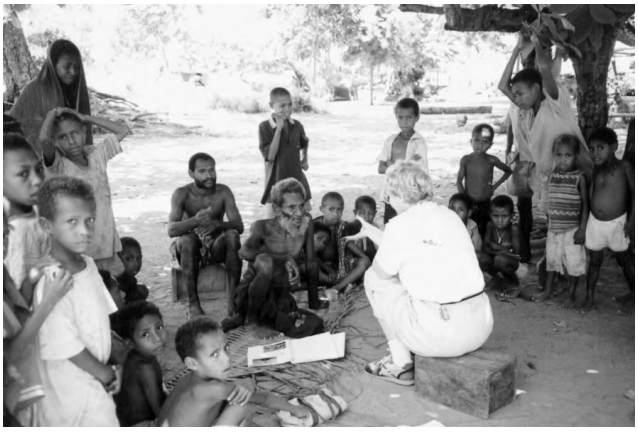
Bongu village.

May until August. January and February was the time for the small *taro*. Pots from Bel villages were traded for yams from Siar, Riwo, Kranket, Malamal and Sek Islands in the Madang Harbour area and from Galek, Warai and Singor on the Rai Coast. The Bel would store the yams in their yam houses for the time of the big winds in August, which prevented them from venturing out in the canoes (ibid).

The Bel men were also the middlemen for a great number of items between Karkar Island and the Rai Coast and the Siassi Islands. Conflicting stories about the extent of the Bilbil sailing voyages, *waing*, may be the reason for the discrepancy between the accounts found in the early German records. Harding quoted Krieger as saying that the Bilbils "regularly travelled to Umboi Island and the Finschhaven area, sailing during the Northwest season and returning by the Southeast trades," and that the Umboi Islanders ventured in the other direction and stayed at Bilbil Island (1967: 196). Damun of Bilbil denied that the people went to Umboi – they met them only on the Rai Coast but he said that the Umboi Islanders visited Bilbil Island quite often and waited there for the winds to turn before returning home (Mennis, 1981a: 25).

Social

Another reason for the *dadeng* and the *waing* was social. The contacts the traders made while they were on a *waing* were wide reaching and their fame travelled far beyond the furthest village they traded with. They were the visitors along the Rai Coast to many villages who rarely reciprocated the visits. This meant the traders were the instigators of the trade and played a proactive role on their trade missions, whereas the people they visited were the hosts and had the less active role in the transactions. While the traders may have been outnumbered, their skills and crafts as pot makers were valued and the host villagers gave them the deference that was usually demanded. So we see the village chief, Kain, of Bilbil Island, upbraiding the people on the Rai Coast for not providing a pig to welcome them especially because Miklouho Maclay, an honoured guest, was with him (Sentinella, 1975: 273). There was great prestige to be gained from these trips and the names of great traders like Kain, Mul and Dadau went ahead of them far and wide so it became part of the system to keep up the social obligations.



Collecting oral traditions of Maclay at Bongu village.

The relationship with trade friends was an important component of the social life of the trade system. Bonnemaison believes that it is in the relationship of man with his place that "a feeling of identity is forged". Trading partners shared this identity with their partners, so that they had an identity in the social structure of the villages visited (1985: 32). Within the village context, the *dadeng* played a large part in village life. Just as most of the work in the village is divided amongst the men or women, so also it is with the building of the canoe. Men did most of the canoe construction, although the women helped with making the *dim* (putty), and sewing the *pitpit* mats for the roof. While the men were building the canoes and preparing for a trading trip, the women were busy making pots for trading and cooking a large meal for the men at the end of each day.

Spiritual

The *likon* made special appeals to the spirits for protection of the canoes and the crew who would be travelling to the Rai Coast, near the Degasub cave where the spirits of their ancestors lived in the underworld. In some ways, their trading voyages were spiritual. Maia said, "When a man is dying the women gather around and wail and the dying man hears them and knows that his last hour has come. Then his spirit goes to the Rai Coast to Degasub where Tinigai protects the entrance to the spirit world". It is a strange coincidence that the Motu people see the Gulf area as

the place where their spirits will go when they die. In both the *waing* of the Bel and the *hiri* of the Motu the traders are visiting the place of their ancestor spirits. This in itself would provide a spiritual basis for the journey. While they were at sea the Bel sailors appealed to their cultural heroes, Kilibob and Manup, to protect them in their travels. The Motu traders appealed to Edai Siabo, their founding father, in the same way when at sea.

A. 3. Preparation for the trading trip

Around May, the *likon* chose the best time for the trading trip and 'organised' the weather so that the winds would blow in the right direction and the seas would not be too rough. As previously mentioned he had magic to quell rough seas or bring out the sun. These ceremonies were long and he had to observe fasts so that the magic worked. The winds were of paramount importance for a successful trip.

He would intone:

> Oh Sagui, oh Bipoi, now I give you ornaments! *Betel* chalk I make, *Betelnut* and *pepper* I give you. A loincloth, a long good one, I tie [around your loins] (Aufinger, 1939: 277-91).

The men would instruct their wives to behave and work well while they were away. Any immoral behaviour and the sale of their pots would be jeopardised. As the men headed off, they would sound the conch shell in the particular 'code' of their clan until they were out of hearing (Mennis, 1981a: 74).

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 similar to morse code:

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*:

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*:

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

A. 4. Discipline at sea

The Bilbil men all agreed that there was strict discipline at sea and that the captain was the boss of the canoe. Masil said, "If the captain says the *rai* wind is blowing so you must have the sails this way, then you must obey him" (Mennis, 1980a: 91). But then also it was the captain's responsibility to train his crew so that no harm was done. Derr remembered one occasion when a Rai Coast man was travelling on the canoe and would not listen to instructions from Mul. "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 the paddle, which he grabbed and swam over to the canoe. After this he listened to my father and obeyed him" (Ibid: 92).

A. 5. Dangers at sea

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 would not kill the sailors 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* wind to change to the *talio*. As they were leaving for home, the Yabobs 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 Yabobs 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 Yabob women. The Yabob pots which the Siassi men took home were traded across to East New Britain for *mal*, *bilas*, beads, *muruk* and decorations (Mennis, 1981b: 95).

When sailing, the traders always kept watch on the sails. Pall said, "when the wind blew on the outrigger side you had to turn the canoe so the wind blew on to the *tai* side (the side without the outrigger) and then you could sail well. Later when you came ashore to trade and wanted to go out again, the steersman had to turn the canoe again so the wind blew again on the *tai* side". The men would pull on the rope used to pull the sail around "so the wind blew on it, but you could also turn the canoe (i.e. 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" (Mennis, 1981b: 104).

Los of Kranket described one near tragedy at sea in the book, *Buk Tomalai Suliken*.

> Once five men decided to go trading in their large canoe. The canoe belonged to two *bigmen* on Kranket, 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 as they thought they were sinking - their *saksak* and pots. The canoe was blown ashore at Boriau passage on Bagabag, where they were met by Bison, who had previously met Malbak on Karkar. The men stayed at Bagabag Island and later they went to Karkar where the people put on *singsings* and feasts and they stayed for many weeks. 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 then 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 put on their clothes for mourning and sat and drank their *kognac* and worried about the men dying at sea. Two or three months passed 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 here," 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 mourning ornaments and sat down and talked to them (Hannemann, 1939: 112-3).

Another story tells of a trip ending in tragedy. Once, when Pall Tagari was a young man, he was selling pots at Rimba with Tagari, Jumei and Kason when a canoe 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 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 canoe arrived back in the Rai Coast, five hours' sailing away. However the sea was too rough for them to land.

Pall and his friends saw the canoe in the rough waves. They got a long pole and tried to help the people ashore, but it was all to no avail. The Rimba people were blown back again to the open sea. The canoe, which was a *lalong*, drifted away, while the men on the beach waited anxiously. The canoe sank in the big waves and only one man survived. His name was Budinaio and the sea carried him up on to the beach. A Singor man on the beach accused the Rimba people of not helping the people on the canoe and accused them of causing their deaths. Many Singor people came to Rimba while Pall was still there to find out what happened. The Bilbil were witnesses and when they were asked if the Rimba people had killed the Singor people, they replied in the negative, "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 Rimba people were cleared of the deaths. This story shows that people along the coast were certainly expected to help traders who were in trouble. It shows too 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 cargo and passengers. This tragedy was in the end attributed to sorcery, or lack of the right magic.

Pall and his father once had a battle against the *karag* wind. They were sailing in the Chinese-made boat on their way to Karkar and called in to Sek Island. They tried to sleep in the *hausboi* there but someone had died and the wailing

continued loudly. Thinking they would never get any sleep, they set off for Karkar at night and had an easy journey with a good wind, But about 5 o'clock in the morning a strong *karag* began to blow and buffeted the boat. "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 men held on and gradually lowered the sail and turned the boat. Then we went ashore at Karkar at a place called Biu. The Karkar men were surprised to see we had come in such bad weather. We stayed with the Karkar men and the *karag* blew for many hours with rough seas" (Mennis, 1981b: 51).

A. 6. Arrival at destination

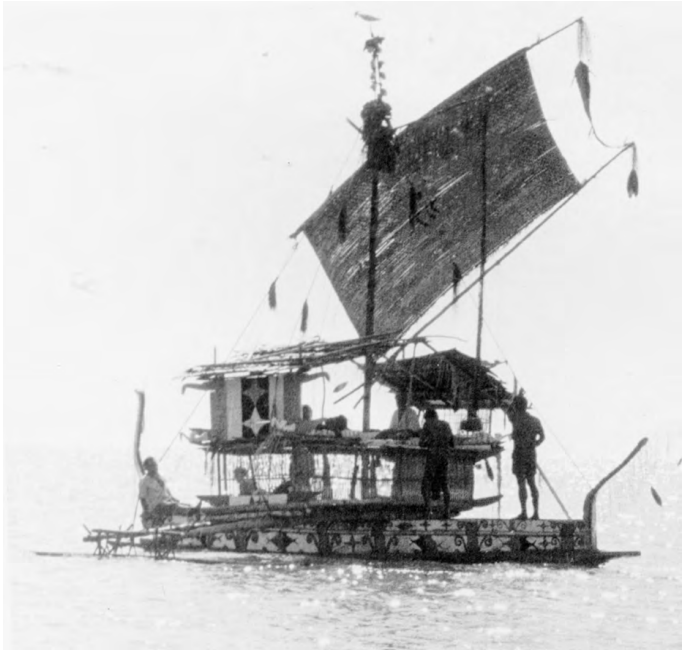
As the traders approached the various villages on the Rai Coast, they would sound the conch shell and people would come running down to pull the heavy canoes high up on the beach. If any of the canoes were new, there would be special feasts held in their honour and gifts given to the owners of the canoe. Damun of Bilbil said that there was a price on the canoe. The people had to feed the traders to open the door to the pots. They would shoot pigs, cook the taro and crush the *galip* nuts for a feast for the traders. This was the price for the *opim dua* [open door] (Mennis, 1981a: 11). Then the serious business of the exchange of trade items took place. Miklouho-Maclay went on a trading expedition to Singor on the Rai Coast and described how a host of people suddenly appeared and dragged their canoe up onto the beach. As mentioned, Kain the captain upbraided the village people for not providing a pig for a welcome feast, especially when such an important visitor had come and they rushed off to do so (Sentinella, 1975: 273).

A. 7. Trade Partners and the Trade Exchange

If the trade system was seen as links between villages, then the trade partners were the connections at each place of call. Trade partners were passed on from father to son, down through the generations in a chain going back through time connecting them to their ancestors. To break the ties with a trade partner had very serious implications. Lilley said the "Trading links between communities were maintained by reciprocity between individuals representing separate households. Most such links were exclusive, patrilineally-inherited trade partnerships between pairs of men" (Lilley, 1986: 79).

Sometimes these pairs of trading friends were within a clan from one village visiting a set clan of another. Clans visiting Karkar from Bilbil Village included: The Dugus Clan visited Kavailo to see their trade friends and exchanged teeth, pigs and *galip* nuts; The Luan Clan went to Kuruk and Dumad and the Riwos used to go Dumad too; The Gapan Clan visited Bog on the North Coast and then travelled straight across to Karkar; The Gapan Clan sailed to Kavailo to see their friends, they still go to Karkar and have friends there. If they were calling in to several places in the old days, they would go to Kurum first then Dumal, Biu, Dangsi and Kavailo but this did not always happen. The Takia of Karkar Island also traded with the villages on the north coast at Megiar and Sarang

Pall mentioned the *dinau* system; a type of delayed payment, when a trade friend was given products on credit. "*Dinau* was a good system because you did not have to pay with pots straight away. If a man insisted on being paid straight away for everything, 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 pay the villagers in the bush for the materials to make the canoes then they could obtain the bamboo, the logs and vines and pay later. If, however, the bushmen insisted on instant payment then they were not considered good trade friends (ibid). In the Schouten Islands partnerships are also regarded as very important and are handed on from father to son (Hogbin, 1935: 398). Harding argued that



Lalong *sailing outside Madang Harbour, 1979.*

delayed reciprocity helped keep the trade-lines open and compelled "further meetings of exchange" (Harding, 1967: 167). The trading of valuable ornaments such as dog-teeth necklaces often stimulated trade to distant tribes who may have put in orders for further necklaces and this had the effect of "institutionalising delayed exchange" (1967: 167).

On the long trading trips down to the Rai Coast, the traders would deliver the pots at the different villages and on the return trip pick up the perishable items, for example meat, fish, *saksak* (sago), *buai* (betel nut) and tobacco. Wild pig would be collected from between Bibi and Rimba. If the village they were visiting had plenty of *buai*, they would give some to the Bilbil men when they came ashore. This seems to have been a down payment for the pots they would receive and a promise of the food that would be waiting when the Bilbil called in later. There had to be trust between trade partners as the transactions were between actual partners rather than group transactions.

Kubei blowing on his conch shell to announce the arrival of a lalong

A. 8. Return trip

As it might be two months before they returned to Bilbil, the men would not take much food in exchange for the pots, but waited for the return trip. Even non-perishable items were collected on the return trip when the canoes were emptier. Brookfield and Hart mention two types of exchange of goods as being transfer and trade. The latter are goods which change hands to areas outside the contact area whereas transfer refers to goods where the receiver and originator are known (Brookfield and Hart, 1971: 316). These contacts on the Rai Coast would incorporate both types of exchange. The Bilbil people would use some of the trade items immediately, betel nut, fresh meat and taro. Other items, wooden plates, *tapa* cloth and bows and arrows, would either be used or exchanged again for other items of trade as the Yabob/Bilbil people were middlemen for a number of items which they traded on to Karkar Island.

Maia described the return trip very aptly:

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).

There were about ten canoes, some *balangut* and some *lalong*. After we left Bogati, we headed for home. We sailed and sailed and then at last we came to Bilbil Island. The men would meet together and talk, then wash themselves and paint their skins red 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 to fix their decorations as 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 men-folk again but also 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: l02-3).

Inland people exchange Bel pots for food.

Later there would be dancing and feasting. This trading trip has many characteristics in common with other such trips along the north coast: the vagaries of the weather; the customs of exchange; and the fact that the canoes went in a fleet probably for protection not only from enemies, but also against the high seas. If one canoe was swamped then another might pick up the survivors.

In conclusion, it may be seen that traditional trading networks were used by the Bel people for economic, social and spiritual reasons. The connecting routes between the villages were on the same level as family connections between individuals within the village. In areas where the traders were well outnumbered, they depended on their trading friends for protection and were treated as part of the family. This was repeated in each of the villages they visited as they had many trading partners. The traders themselves were protected spiritually against the difficulties they might encounter when they ventured away from their own home territories on their trade mission by the supplications and prayers of the *likon*.

A 9. A secret trading language.

The Bel people had a secret language that they used while sailing to confuse the evil sea spirits who might be listening to them. Aufinger (1939) first described this secret language, the *tok bokis* or picture language. The men in the 1970s were still familiar with its usage. If they were travelling in a canoe, they would refer to the sails as 'the wings of the bird' to confuse the spirits (Mennis, 1982: 170). As the Bel people visited many villages of various language groups, they did not develop a trading language to the same extent as the Motu who stayed in the same Gulf village for months and needed to communicate with only one other language group. The Bel people were adept at learning other languages. Pall Tagari could converse in many local languages but further research might reveal there was a trading language in Bel as well or that the *tok bokis* was actually a trading language in disguise. Bashan of Bilia, a very elderly man in the 1970s, said that the *tok bokis* was known by other villagers along the coast and some of the words were borrowed from other places. When asked the reason for the *tok bokis*, Bashan said, "it would be no good if the things that are in the water (spirits) heard us in the canoe, so we *tok bokis* and hide our meaning" (Mennis, 1980b: 84). This language was not a common language of trade as is the *Hiri* trading language. I neglected to ask what language of trading existed in the Bel area other than some of the Bilbil men were conversant in many languages along the Rai Coast. As Pall Tagari's father was adopted from the Rai Coast it is plausible that they knew this language from childhood. As for the many other people traded with, I do not know what language they spoke in common. The Mindiri language is a Proto Bel language and apparently closely aligned to what was originally spoken on Yomba Island according to Malcolm Ross. The Gogol people at Barum who traded with their Gogol pots were descended from a Bilbil genealogy so they had a similar language.

B. The *Hiri* trading System of the Motu.

Each year in traditional times, fleets of *lagatoi* took part in the *hiri* expeditions to the Gulf area of Papua between September and December, using the *laurabada*, the southeast trade winds. They carried a cargo of thousands of *uro* pots, *hodu* water pots and *nau* clay dishes as well as shell ornaments which they exchanged for sago, and additional canoe hulls. They stayed with their Gulf trading friends for two or three months before returning home using the *lahara* wind by March the following year (Oram, 1982: 1). While the men were away the women would tie a rope with knots to mark the days. The Motu men in the Gulf did the same thing and tied a ribbon around every ten knots.

Like the Bel people, the Motu would have starved if they had not travelled further afield for food supplies during their hungry months. Being a sea people, they built the large *lagatoi* and the women made hundreds of pots which enabled them to trade for food wherever they went. Oram found it difficult to estimate how many might have died from hunger during the hungry months. Strangely, he also thought that the bush food they had access to might have made them sick and may have caused dysentery. "Therefore they often urgently desired additional food, which they could obtain only from the Gulf region" (Oram, 1982: 26). It seemed then that for health reasons, the Motu people needed the sago for nutrition and to protect them from diseases acquired from living off the available bush-food in their own area. The Koita and Koiari people managed quite well on this food, so it is doubtful that the Motu could not have done so as well. There just wasn't enough of it sometimes and they needed to supplement it with the sago. The Motu villages who took part in *hiri* expeditions were "the seven villages of the Western Motu tribe and the people of Tatana, Vabukori and Boera villages" who, according to Oram, claimed a different descent line from the other Motu villagers (Oram, 1982: 3). Seligmann noted that the Koita tribes accompanied the Motu on the *hiri* trips and also learnt how to make pots with many or them marrying into the Motu tribe (1910). Seri Bodibo, interviewed by Gwilliam in 1976 -7, said not many Koita people went on the hiri trips. "many of them were not happy in rough seas when the *lagatoi* rocked as they were not good swimmers. Koita people are frightened of the sea" (1982: 42).

Bananas brought to Manumanu village to be traded for pots. Groves, 1957. (PMB43_147).

B. 1. Types of trading exchanges

Allen listed three types of trade on the south coast; internal, local and external trade. The large *hiri* voyages to the Gulf would be classed as external trade which occurred only once a year but other types of trade were on-going all year around and helped with subsistence over the hungry months (1977).

Internal trade between Motu villages: The Motu villages can be divided into those east or west of Port Moresby. The Motu Villages to the west were Manumanu, Lealea, Porebada, Hanuabada, Elevala, Porepore, Tatana, Vabukori, and Pari who did most of the long distance trading to the Gulf. The Eastern Motu Villages were Tubusereia, Barakai, Gaire and Gabagaba and while they made pots, they were more sedentary than the western Motu. As these villages were spread out along the coast for over seventy kilometres, they were in different geographic areas with different environments. Manumanu Village lay furthest to the north-west and was near a river which gave access to non-Koiari villages and through them to other inland people who were happy to exchange pots and shellfish from the coast for food and other trade items. The Manumanu could then become the middlemen for the internal trade with the other Motu villages.

The eastern Motu traded bananas, pigs and yams with the Western Motu for shell beads, pigs and boar tusks (Allen, 1977: 435). Lealea village was near mangrove swamps and could provide posts for houses for other Motu villages. Oram suggested that Manumanu and Lealea did not partake in many *hiri* because they lived "in a more favourable environment than the other western Motu" (1982: 26).

Local trade: Manumanu traded their pots by canoe up the Aroa River to exchange them for Gabadi yams and bananas. By doing this, they were able to provide food for the crews going on the *lagatoi* and to feed the women while their men were away on the *hiri* to the Gulf. Other times in the year, the women took pots locally to Doura and Koita villages in exchange for food. The Motu people exported many items including pots, plates, net bags, coconuts, fish, salt, arm-shells, dog's teeth necklaces and shell ornaments for vegetables, wallaby meat, feathers and betel nut from the Koita; and from the Koiari they could get vegetables, stone axes, and bird of paradise plumes among other things (Allen, 1977: 436). This list shows that, while pottery was important, it was not the only important trade item. Because they lived on the coast the Motu traded fish and crabs inland during the fishing season but sea food deteriorated quickly. Pots on the other hand were more durable for trade and were an important part of bride price if the men married women from other areas. Speaking of the trade items, Oram said "utilitarian goods and valuables all pass through the Motu central exchange, [although] this interdependence can be exaggerated. Certainly the Koita obtained arm-shells through marriage and other exchanges, but as all coastal villages exchanged goods with inland peoples, most of these exchanges would have been carried on even if the *hiri* had not existed" (Oram, 1982: 25).

The Motu people also sailed smaller double-hulled canoes in short trading trips which were called *hirilou* or *hiribudogi*. The Pari people sailed to Gabada where they traded dugong, turtle and pots "for vegetables including seed yams" (Oram, 1982: 14). Other Motu people travelled to the Daiva and Konekone areas on a three week trade mission. "The essence of the short *hiri* was that canoes were not dismantled and new hulls were not added, thus saving a great deal of time" (Oram, 1968, 1-35). This style of trading is very similar to the Bel who also carried out short and long trading voyages.

There are many reasons why pottery was the preferred item of trade rather than fish or crabs from the sea even for the short trading trips: the pots did not deteriorate; they were durable and transportable; the clay was readily available and the pots had many uses including cooking, carrying water and food storage (Groves, 1960: 7) The *hiri* trading system rivaled any other trading system in Papua New Guinea. It could be argued that the Bel traders on the north coast also traded over a vast area but the number of pots that were distributed was nowhere near the number of Motu pots.

Toea armshell, Port Moresby.
With thanks to the Auckland Museum, Tamaki Paenga Hira. AM11420

Long *hiri* trading voyages

Harding estimated that the Motu men "covered 800 kilometre round trips in the annual trade known as *hiri*" (1994: 103). Seligmann noted that the average size of the fleet on a *hiri* trip was twenty *lagatoi*. The ten western Motu villages, listed above, built *lagatoi* and went on the *hiri.* All of these

Above: Pots being transported on a double canoe out to the lagatoi*.* Groves, 1957. (PMB43_144).

Pots being stored on the lagatoi*, cushioned with dried banana leaves.* Groves, 1957. (PMB43_023).

villages made pots with the exception of Vabukori and Tatana who bought their supply of pots from other villages, giving in exchange strings of *ageva*. These *ageva* were made from pierced "discs of a reddish colour obtained by chipping and grinding down pieces of the lip of a marine bivalve shell". A string of *ageva* buys about 12 *uro* pots. Seligmann estimated that about 29 men go on each *lagatoi*:

> In 1885, four *lagatoi* left Port Moresby each carrying an average number of 1628 pots. In 1903, the Kwaradubuna *iduhu* equipped a *lakatoi* named *Bogebada*, consisting of 4 *asi* [hulls]. The total number of pots carried in this *lagatoi* was 1294, giving an average therefore of 324 pots per *asi*. Assuming that 20 *lakatoi* sailed that year, and that each was composed of 4 *asi*, the total number of pots taken was 25,920. In addition to the pots the Kwaradubuna *lagatoi* took in that year 57 *toia*, 2 *mairi*, and 8 *tautau*, besides a certain quantity of trade tobacco and other imported articles. This vessel on her return voyage consisted of 10 *asi*, and her cargo of sago would therefore have been about 25 tons (Barton, 1910: 114).

In the old days, Chalmers described a ceremony that took place near Hall Sound:

> When in front of Hall Sound entrance, the *lakatoi* was brought right up the wind. The chief took his little nephew by the hand and handed him two wisps of cassowary feathers, stood in front shaking them with a peculiar motion of the body, and turning to the foremast did the same, then came aft, and turning to the mainmast went through the same performance. When breaking her off again all shouted, as if driving something away. Long ago, it seems, the Motuans, to keep an open coast, killed many Lolan villagers, who had interfered with one of their canoes, and since then the Lolo spirits have been troublesome in that one place, detaining the *lakatoi*; hence the above incantation to drive them away. We were successful, and got beyond the passage alright, the tide being on the slack at the time (Chalmers quoted in Seligmann, 1910: 107).

The accounts of men who had taken part in the *hiri* are a valuable source of knowledge of the trade. In 1995, I interviewed Rei, of Lealea Village, on Magnetic Island. Rei had been on several *hiri* voyages in the 1950s:

> My cousins and brothers- in-law were the *baditauna* and *doritauna*. We were *maoa* - this was the name of the crew generally. There were 15 to 20 crew for the *baditauna* and the same for the *doritauna*. We left our home in two *lagatoi* - each man had ten clay dishes, pots and water pots. We took a drum of kerosene and some tobacco and clothes because it was after the war. When we left, there was a special kind of *singsing* called *boia*. As we departed from our village, we sang Edai's song. We left our village at 9 or 10 o'clock in the morning and had a good southeast wind. After sunset, we anchored at Yule Island and we slept on the *lagatoi*. We stayed at Yule Island until the following day. We did not cook on the *lagatoi*, but cooked on the beach with flour, bananas and yams. In the morning at ten or so when the wind began to blow, we took the *lagatoi* out to sea. After Yule Island we did not put the anchor down and we sailed for three days and nights. At night we used the stars; we did not sleep night or day because, if we did, it showed we were not strong enough to be on the crew. The *doritauna* and the *baditauna* fasted for three days and nights. We went to Wairura Point to two villages Auma and Haiu. The people were happy to see us, as they wanted the clay pots. They didn't know how to make the clay pots so when they saw the Motu people they were happy with the pots and the goods. There was no message sent ahead. When we arrived they chose various people as their trade friends. I made a friend and gathered all my things to give him. Every time I went to visit him he gave me food because of our friendship.
>
> We did not take the pots out at once. The *baditauna* and *doritauna* told us to leave the pots until the next day. We went to see our friends later. We ate first and then got the pots. When we got all the things out of the *lagatoi* we dismantled it. We took everything out and cut new logs and new canoes while we stayed in Kerema in the Wairura River. On the return they had to wait for the wind. Rei recounted, "until the south west came - it was the *lahara*. The *laurabada* was the wind to take us down there and we came back on the *lahara*." When they returned they danced all night. There was sago, bananas to eat and some young men got married that night. When the young men went down they were single and when they returned they got married to their wives (Rei Interviewed by Mennis, 1995).

B. 2. Reasons for the *Hiri*

Was the trade itself carried out only for economical reasons like poor soil and need for food or were there other reasons and benefits from the trade? The prestige gained by going on a *hiri* was a great incentive for the men. They could boast of their prowess and conversely, men who had not made a *hiri* felt pressured to go. The trading trips had great social importance. Social contacts made when meeting trading friends in the Gulf were more than just for economic reasons. The festive time of preparing for a *hiri*; taking part and the return being hailed as returning warriors could have been an end in itself to highlight an otherwise mundane existence.

Economic. When the *hiri* fleet set sail for the Gulf, in traditional times, there could be up to twenty *lagatoi* carrying thousands of earthenware pots and other trade items like necklaces. The items most sought after by the Motu while in the Gulf were parcels of sago and additional canoes hulls (*asi*) to add to the *lagatoi* for the journey home. There has been estimated that about 500 tons of sago could have been brought back on the return trip (Barton, 1910: 114 -115). In the government report for 1886, it was estimated that that annually "20,000 pots were taken, for which they would bring back in exchange about 150 tons of sago"; other estimates indicate up to 30,000 pots and 500 tons of sago. Sailing fleets of 20 *lagatoi* were not unusual (Barton, 1910). Sometimes these *lagatoi* linked together one behind the other much the same as barges are now linked on the Grand Canal in China. The Motu needed the sago of the Gulf people just as much as the Gulf people valued the pots without which they would have limited cooking methods. Food in pots could be boiled cleanly rather than only baked on the hot coals or in a mu-mu earth oven. The Motu people themselves thought the major reason for the trade was economic because without it, they would not have survived. "The conditions they lived in were poor" Oram noted, but he also acknowledged the work of Vasey, who tested the soil around Port Moresby and said it was suitable for crops (Oram, 1982: 5). The fact remains that there was poor rainfall to grow much food in the off-season. From the experience of living in Port Moresby for four years, I would point to the low rainfall as being a major part of the problem whatever the nature of the soil is.

Social. Besides these trade transactions, there were other reasons for the trading trips. Once they were established, there was an onus on the traders to return to sustain the links, and "to reciprocate in a future form of exchange

Lagatoi *near Hanuabada village.* Seligmann, 1910.

Crew eating on board a lagatoi inside one of the shelters. Groves, 1957. (PMB43_013).

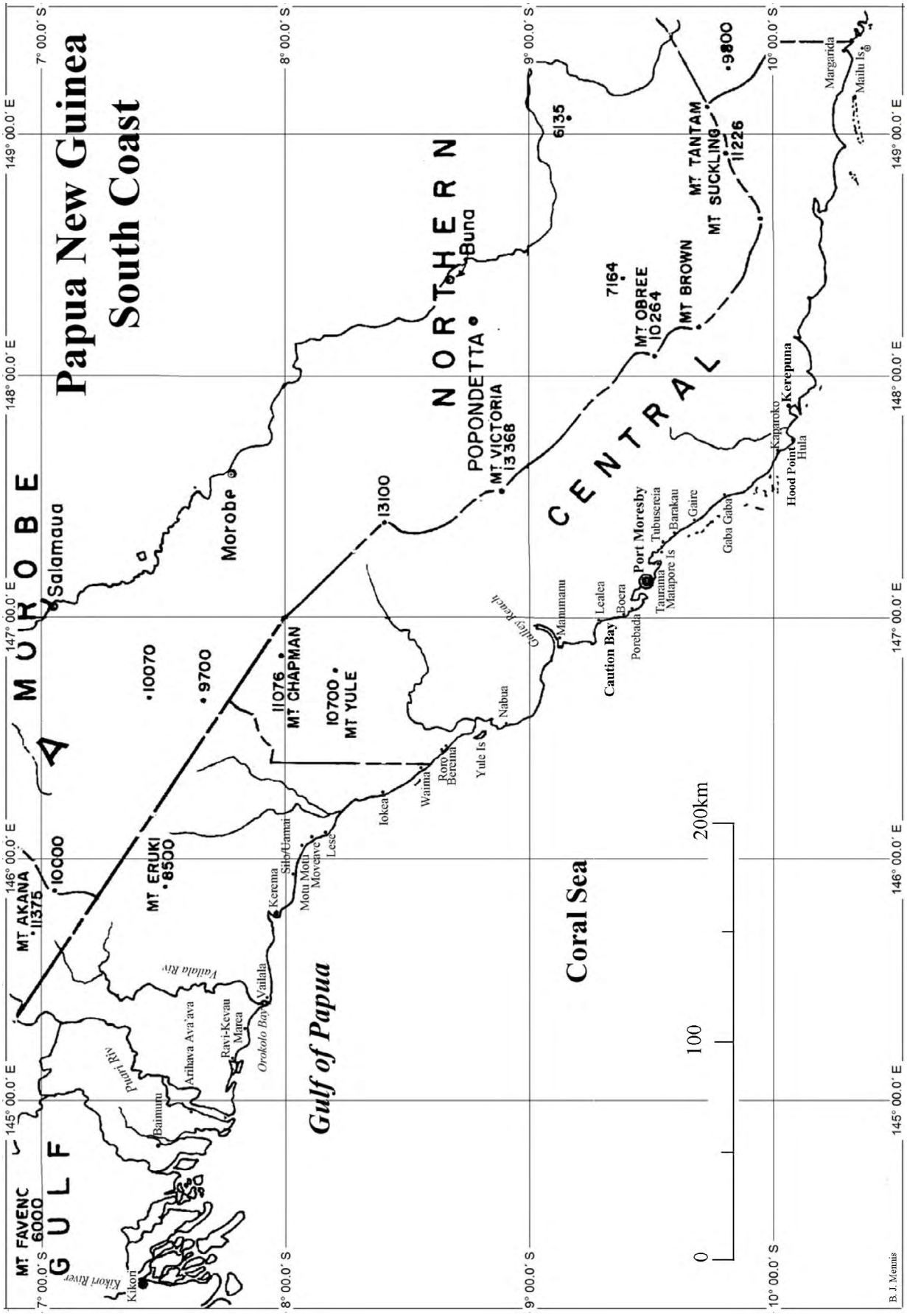
called *kikiri*". A Gulf villager might receive arm shells from a Motu visitor and this might pave the way to a lasting friendship as a trade friend on subsequent trips. The Motu man might be rewarded later with abundant sago when he returned on a subsequent expedition. A further Motu account tells of Gulf villagers giving ordinary crew members large canoe logs in exchange for small arm-shells in expectation that they would organise an expedition and visit them the following year (Oram, 1982: 14). Prestige was another reason frequently given for undertaking an expedition as both the Motu and the Gulf partners gained prestige in the village with both trading partners gained prestige. In 1995, Taboro, of Pari Village, said he was proud and happy to be on the 1937 *hiri* (Mennis, 1995). But many men were pressured into going because of taunts from others who had been. It was similar to modern men being taunted for not signing up for the army. "One man might taunt another for his lack of achievement in feast giving, net making or undertaking *hiri* voyages. He might then accept the challenge. According to some accounts both the challenger and challenged might undertake the expedition" (Groves, 1972: 527). These trade expeditions were celebrated with great festive occasions with dancing and feasting.

Spiritual. Gwilliam studied the religious aspects of the *hiri* and concluded that; "religious considerations were indeed a major factor stimulating the continuation of the *hiri*." He listed new ideas gained from travel abroad; higher moral standards introduced; and the religious beliefs of the people being fulfilled (1982: 40). In the very procedure and ritual of the *hiri,* the people were following the edicts as laid out by Edai Siabo and the ancestors. Some Motu people believed that their ancestors dwelt in the Gulf areas and so it was a journey back to the ancestral lands (1982: 36). In their travels they were protected by the weather magicians and by the prayers of the *baditauna* and *doritauna* on board the *lagatoi*.

Nigel Oram agreed with Gwilliam about the importance of the spiritual side of the journey. He concluded that further research might show that "religious considerations were indeed a major factor stimulating the continuation of the *hiri*, with the sea voyage being necessary for many in their personal discovery of the 'other lands' that lay within the realm of the spirit." Although the sago might be an object in the *lagatoi* voyages, and satisfied hunger, "the balancing of the general village economies and the strengthening of peaceful relationships tasted even better and satisfied other desires and needs. – moral standards associated with reciprocity were maintained and a high value was placed upon personal skills and courage and the religious beliefs of the people were interwoven within these things" (1982:14).

Even before setting out, crew members had to make peace with each other. Siaka Heni of Hanuabada Village said crew members had to confess any ill-will they felt to other members. They were encouraged to make friends again as all knew that "trouble would come whilst that *lagatoi* was at sea if there was any bad feeling not put right". The *baditauna* and the *doritauna* carried their mats and their holy string bags on board the *lagatoi*. The string bags were hung above the sacred mats and contained: a lime pot, betel nut, tobacco and a fork and spoon. Only the *baditauna* and his boy could touch the string bag. [The Bilbil men also had a string bag suspended from the rigging on their canoe and filled with tobacco and betelnut but it was not special]. The mats were very holy. As the *lagatoi* sailed, the two 'holy men' sat on their mats in "a squatting position on their heels while facing the direction of travel". If they wanted to sleep they had to lie on the boards beside their mats. Siaka Heni in October, 1977, also mentioned a small pot containing magic medicine made from the ashes "of mangroves and/or some other trees and dried leaves" the powder was used to bless the *lagatoi* and the new *asi* logs. Once the crew became Christian, prayers were offered morning and evening for the safety of the *lagatoi*. Seri Bodibo added the *baditauna* and the *doritauna* would whisper to their pots to make the *lagatoi* go faster. There was also "rolled packets of dried banana leaves enclosing wild ginger" which was inserted on the *baditauna* end of the canoe" to protect the canoe (Gwilliam, 1982).

The rituals and rules that accompanied the *hiri* were an important part of the spiritual life of the Motu villages. Many magic rituals were used over the elements – the seas, winds and coast. The men felt that through these rituals they could have some control over their environment with the help of the spirit world. Special magic was said over the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MT CHAPMAN 11076
MT YULE 10700
MT VICTORIA 13368
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Ravi-Kevau
Marea
Orokolo Bay
Vailala Riv
Vailala
Kerema
Sisi/Uamai
Motu Motu
Moveave
Lese
Iokea
Waima
Roro
Berema
Yule Is
Nabua
Cuttle Reach
Manumanu
Lealea
Boera
Caution Bay
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B. J. Mennis

anchor and it had its own special song which praised it for keeping the *lagatoi* safe while at anchorage. The magic spells began over the logs to help make them watertight for the voyage. Each "crew member, *maoa*, was a sorcerer with responsibility of keeping evil away from one part of the *lagatoi* be it the rigging, the mast, the anchor or the oars. If disaster struck there was always a reason for it. Perhaps the wives back home were being unfaithful or some other sorcerer was making counter magic. The crew would spend hours mulling over what had gone wrong to bring on disaster" (Douglas,1994:21).

Ivan Kakare and crew of 1992 *lagatoi* said*:*

> The work of the sorcerers started as soon as the logs, poles, canes, rope and bamboo used in the *lagatoi's* construction were cut around and assembled. Spells had to be put on everything, Pigs had to be sacrificed, and rituals had to be observed. Special chants, known as *Hehona* were sung constantly to the beat of the bamboo drums, called *sede*. When the craft was finally launched, each crew member took his *sede* and the herbs, roots and leaves he would use in his magic on board the *lagatoi*. One might chant a magic spell taught to him by his ancestor when he saw a strong wind coming. Another would burn his leaves and roots so that the smoke completely enveloped the *lagatoi* if it were caught in a dead calm sea. They knew the names of the spirits of the wind, the waves the landfalls and the reefs and they chastised them constantly. (Douglas, 1994).

These rituals to the spirits were similar to those used by the Bel traders when the *likon* appealed to the spirits of the ancestors, the spirits of different land points or on the top of mountains to help them. They also had the fear that other sorcerers may counteract their magic.

B. 3. Preparations for the trading trip and setting sail

In pre-contact times, a man who wanted to organise a *hiri* expedition in the following year would begin the preparations by making a large garden to feed those who helped with the construction of the *lagatoi* and became his crew. Usually these were members of his own family. This man became the *doritauna* or leader of the *lagatoi*. He was later joined by a *baditauna*. Each of them controlled a different end of the *lagatoi*. If these men came from two different descent groups they each flew their own *pepe* from the mast (Gwilliam, 1982: 38). The *baditauna* and *doritauna* each had a mast man and a sail man. "If a man had sufficient resources to organise an expedition by himself, this was called *hiridudu*. The *baditauna* was the organizer of the expedition. He did not do any of the actual building of the canoe but gave orders from his house. Once the canoe is finished there is feasting for many days with food provided by the *baditauna*. He was the leader in exchanges in Gulf villages, but he did not navigate the vessel and stayed ritually on his mat during the voyage" (Oram, 1982: 11-12). Over the years, changes began to happen. Groves noted in 1954 the men built "two small trading vessels (*hakona*), vessels with only two or three hulls which carry a deck-house superstructure. These were not regarded as true *lagatoi* but a smaller version and without the ritual. In the weeks previous to sailing the women had been busy making pottery and when they sailed in December they carried about 1,000 pots between them" (Groves, 1960:9).

In 1957, Murray Groves travelled with a *hiri* expedition and recorded the experience in a handwritten diary. Before they left Manumanu the *baditauna* and the *doritauna* combined the sugar, yams, and bananas from the gardens and split the produce in half for the two sets of crews. Groves commented that this was not fair because the number of the crew of the *baditauna* 'greatly outnumbered the *doritauna*' (Groves, 1957: 17 December). Before leaving, the *lagatoi* were sailed around the harbour to make sure they were seaworthy. Standing proudly on the deck and the roof of the shelter the women danced and twirled their grass skirts in the breeze wearing all their finery. The men beat the drums as their bodies sway.

Barton described the scene:

> All being now ready competitive trial sailings are made by the several Port Moresby *lakatoi*, backwards and forwards across the harbour, the air resounding with the metallic clink of the *sede* being beaten aboard, and the voices of those singing. During these short runs to and fro, bevies of young girls collect on the projecting platform (the *maramara*) of that end of the vessel which for the time being is the bow-end, and dance there with great vigour, the springy nature of the platform adding largely to their lively movements. The after-end platform is occupied by the steersmen, of whom there are five or six, wielding heavy steering oars. The vessel does not go about in the usual manner but merely reverses ends, and then the steersmen and the girls change places (Barton, 1910: 105).

After the *lagatoi* have been tested and proven seaworthy, they are filled with the pots. Those belonging to the *baditauna* and *doritauna* "are placed in the *kalaga*, a square cradle fixed to the deck amidship" the rest of the pots belonging to the crew and their families are packed carefully inside the *asi* hulls and in the two shelters, one at each end of the *lagatoi* (Barton, 1910: 106). Then the men take their leave and sail away, whilst friends at home remain to weep. "With a fine breeze following fast, the men most worked are the helmsmen, three or four of them with large paddles standing aft whilst the others are drumbeating and singing" (Lindt, 1887: 123).

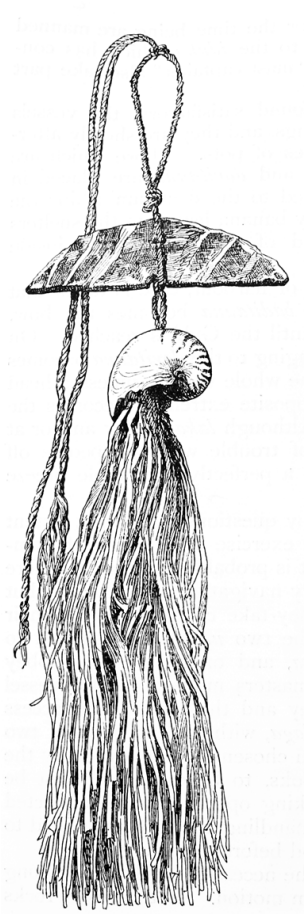
When Edai Siabo made the first *lagatoi*, he sang a song, the *hehona*, which he had been taught in the cave. On subsequent voyagers the traders always sang this song as they left port.

Heona Song: *Edai e siaobo, Edai Siabo, Deai tumour o, o, o; Lalonai nahe gibaru, o*

There is also a special procedure as they sailed out of the harbour. The *lagatoi* can be sailed either way but on the way to the Gulf, the end that belongs to the *baditauna* "becomes the bow end and this end remains the bow until the Gulf is reached" (Barton, 1910: 106). On the return trip the reverse procedure is followed and the *doritauna* end goes first and the sails are turned.

B. 4. The crew at sea and their rituals

While at sea, the crew members were under the direction of the mast captain and the sail captain. Each mast had its own captain and crew at each end of the *lagatoi*. The canoes could be at sea for a week or more (Gwilliam, 1982: 38). John Gwilliam emphasises the importance of the sacred place on the *lagatoi* between the two masts. This is the *irutahuna* where the "two holy men and the two holy boys resided and were confined on their voyage" (1982: 38). Their role was crucial to the safe and successful completion of the voyage. The *baditauna* and the *doritauna* and their helpers called *udiha* meaning the 'people of the mat'. While seated on these sacred mats they "performed their mediating function between the physical world and the realm of the spiritual" (1982: 39). The young boys were called *geditauna*. There was magic for every occasion at sea. Each crew member had his own magic and herbs to use to keep evil away from this vessel, made of bush materials, that but now travelling on the water where they can attacked by sea spirits. Each man had his own area to protect whether it be the sail, the mast or the shelters. Some had chants to change the winds or lessen their strength. One might burn his leaves if the *lagatoi* was becalmed and fill the vessel with smoke. "It was their combined work to make sure the lagatoi triumphed over the harshest of weathers and the heaviest of seas." While at sea the *baditauna* and the *doritauna* had to eat light food because heavy food like meat might weigh the *lagatoi* down. The crew ate food cooked separately from that of the captain who had to eat using a kind of chopstick. The pot could not be cleaned with water but was licked clean with his son's fingers (Douglas, 1994: 21).



A pepe *denoting the clan.* Seligmann, 1910.

Taboro, of Pari, described a *hiri* trip in 1935:

I couldn't look out from where I sat, but I could feel the motion of the sea. I could feel if it was rough or smooth. I was only a youth but my father took me on the *lagatoi*. I was given a big job, the *geditauna*, and because of this I could not move around. That is the law. The others had to do the work for me. The *geditauna* is similar to the *baditauna*. I prayed for protection of *lagatoi* before we left. I was not married, and could not go around with the women. We took our pots to the Kairuru people who gave us sago and new *lagatoi*. They cut new logs for us because we wanted to carry lots of sago (Mennis interview, 1995).

In 1937, Taboro went with his father again. This time he was on 'the other side of the *lagatoi'*, meaning the *baditauna* (the front).

There are two parts of the *lagatoi*, the *badi*, and the *dori*. The *baditauna* is in the front. We owned the front and were not allowed to interfere with the other side. There were three *lagatoi* on this expedition. One from Pari, one from Boera and one from Lealea and they carried 500-1000 pots, clay dishes and toea shells, as well as decorations, grass skirts and tusks. We went to

> Kiaruru in the Kikori sub-district. Edai said that the *baditauna* and the *doritauna* should sit on their mats and meditate while the *lagatoi* were at sea. Nor could they cook anything but the other members of the crew brought them food. They could eat only certain foods using a special spoon. This was one of Edai Siabo's rules while they were sailing to the Gulf. While they are sailing they did not see mountains or land but followed the sound of the wind. As soon as the wind goes against the sails too strongly they pull the sails down. As soon as they see their village, the *baditauna* and *doritauna* get up and do some work. They bail out the water and they steer the *lagatoi* while other people make decorations. While they are sailing they don't wash, but when they approach the village they wash and decorate themselves (Taboro interviewed by Mennis, 1995).

The *lagatoi* builders at Nelly Bay said that one clay pot would fetch 20 kilograms of sago, or 50 coconuts and a large amount of betel nuts. The betel nut in the Gulf was much sweeter and bigger than around the Port Moresby area so was quite highly valued. While the trade transactions were continuing, the Gulf women danced on the beach. The crew had to live in one of the shelters on the *lagatoi* until the negotiations were over. When the trade was completed, the *lagatoi* was dismantled and rebuilt with new logs making a much larger *lagatoi* able to carry the extra loads of sago in the hulls. They could no longer live on the *lagatoi* as it was being re-built and, as they were staying in that one place for a few months, the men built huts for themselves on the beach.

B. 5. Dangers at sea

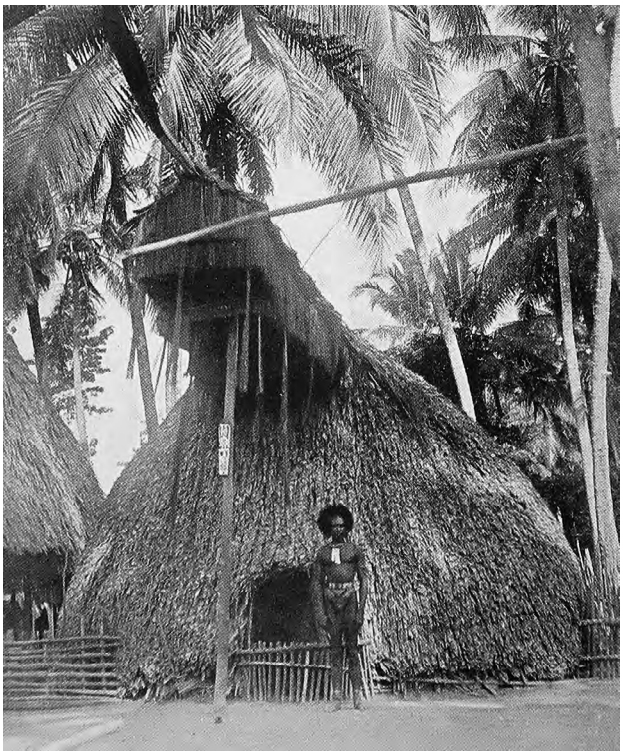
There were many stories of *lagatoi* disasters over the years. Once, a *lagatoi* was swamped near the coast and, while the crew were swimming to safety, one of them was taken by a shark. Another time, a strong south-east wind, the *kou*, blew against a *lagatoi* on its way home with a cargo of betel nut and sago. The sailors dropped the sails and were blown along until they developed a leak in all four hulls. It was raining hard and the old men instructed the young boys to throw some of the sago overboard. The *kou* subsided but then they were buffeted by the *mirikini* mountain winds. The men threw all the cargo overboard, built a make-shift *lagatoi* out of the crossbeams and made it to shore where the coastal people helped them. There was no loss of life but the loss of the cargo was felt to be a disaster.

Taboro remembers a Pari *lagatoi* he was on in 1936 being sunk in a storm in Orokolo Bay. They cut off some of the hulls and threw all the sago out. Two hulls were still tied together and they drifted ashore on them. Luckily the people where they landed were kind and fed them. They were rescued by the MV Doma and returned home. Their people were glad to see them but were sad at the lost sago and everything else (Mennis: 1995).

In 1879, Chalmers visited Vailala Village in the Gulf which he described as being on a point of land at the mouth of a large river. Up this river were many large villages and a big population. Beyond Vailala in Orokolo Bay were six more villages: Namea, Haremamu, Kaeva, Kamu, Marea, Huku and Kavara. The mission boat was surrounded "by a number of well-manned and well-armed large double canoes. Things were not looking particularly pleasant with bows being handled and men taking stations on the platforms that joined the canoes, we thought it well to give a few presents and get away." Later they made friends with the Vailala people (Chalmers, 1885: 142).

Ornament on top of the mast of the lagatoi. Seligmann, 1910.

Four years later, James Chalmers decided to go on a *hiri* voyage with his Motu friends. He boarded a Pari *lagatoi* named *Kevaubada* and encountered the perils of the sea voyage. One night heavy clouds masked the sky and the stars were no longer visible to guide the sailors nor were the landmarks visible. As they neared their destination at Vailala in the Gulf, they were set upon by an enemy coastal village, envious of their cargo. The villagers came out on a canoe and boarded the *lagatoi* armed with bows and arrows and clubs and demanded the *lagatoi* be steered into their village. The intruders looked fierce but the Motu traders treated nastiness with their own version of power. *Aruako*, the *baditauna*, stepped into the enemy canoe looking "black and fierce, asked if they wanted to fight, for his first action would be to break up their canoe, and then with arrows shoot them down" (Lennox, 1903: 106)). This turned the situation around and Chalmers gave the shirt off his back as a farewell gift to the pirate chief who insisted on



Chief's house at Waima. Seligmann, 1910.

rubbing noses with him as a sign of friendship. This time the crew of the *lagatoi* were lucky. The *lagatoi* sailed on and more perils awaited them. Sandbanks had to be negotiated in the dark as they crossed the bar into the river mouth. Many orders were given and paddlers tried to steer the *lagatoi* to the beach but it was tossed back out to sea and once again had to negotiate the heavy seas. Chalmers thought the *lagatoi* would smash in the waves which buffeted their craft. One wave swamped the deck as the *lagatoi* again neared the shore where the Vailala people were shouting excitedly.

As Chalmers relates:

> On we go, on the tops of seas; nearer, still nearer. The men on the shore are close by; what now? We shipped a large quantity of water, and, oh, horror! Close by us was a huge, ugly crocodile. Imagine my feelings, for describe them I cannot, on seeing the monster. We had to keep bailing, and found it difficult to make headway against the strong current. I felt very anxious, as I have a horrible dread of crocodiles (Lennox, 1902: 107).

At last they reached the bank safely only to be invaded by hundreds of the Gulf people who swarmed on board excitedly greeting their Motu trade friends. What a frenzy of welcome!! Then they got off and pulled on the hawsers to drag the *lagatoi* along the bank to their village which was somewhat upstream from the beach. So fierce storms and strong winds and large crocodiles were greatly feared at sea.

This was the first time that a white man had travelled on one of these voyages, so it was quite an adventure for Chalmers. In the Gulf, he was welcomed by Ipaivaitani, the chief of Maipua, and stayed in the great *dubu*, sacred house which he described as the finest he had ever seen. In each of the courts or divisions were skulls of people, crocodiles and wild boars. "The front is about thirty feet wide, and the whole length about 160 feet, tapering gradually down to the back, where it is lower. — It was carpeted with the outer skin of the sago palm" (Lovett, 1903: 224 – 225) The *dubu* had a platform in front about ten feet from the ground, where hung carvings, nets used for river and surf fishing, and fish-traps, made from sago fronds, bows and arrows, and a few clubs. "Entering by a small aperture --When the eyes become accustomed to the darkness many are the charms, masks, bows and arrows to be seen; and, running along each side, places like stalls, inside of which are fireplaces. During the day, very few are about but at night the building is well filled with men, who come tumbling in at all hours. My compartment is seven feet by three, with room for my goods and chattels, and for Johnnie to sleep alongside. I have slung my hammock between the posts on the platform" (Lennox, 1902:102).

When he returned home, Chalmers wrote, "So ends my trip on board the Motu *lakatoi*; I enjoyed it so much it was unique and I shall not forget the kindness of all on board. I was more comfortable than I could have been on board the whaleboat, in which I have often made long voyages" (Lovett, 1903: 224 – 225).

He was fortunate in this voyage which was a great adventure but he also experienced many dangers. Eight years later, James Chalmers was not so fortunate when, on 8 April 1901, his mission vessel, the *Niue,* anchored near Goaribi Island in the Fly River Delta. At daylight, the next morning, a great crowd of natives came off shore and crowded the vessel in every part. They refused to leave, and then Chalmers said he would go ashore with them in the whale boat, and he told Tomkins to remain on board the *Niue*. The latter declined, and went ashore with Chalmers, followed by a large number of canoes. When they got ashore, the whole party was massacred and so ended the life of a brave man (Lennox, 1903: 192). Chalmers was just sixty years old and had spent a long time in Papua where he was loved and respected and had brought peace to so many tribes. The Papuans around Port Moresby honour his memory to this day.

B. 6. Destinations

The *baditauna* decided where the *hiri* destination would be and often did not announce it until the *lagatoi* was past Yule Island. He would sit on his mat and not look at the sea. As the *lagatoi* arrived at their destination, the *baditauna* would leave the *lagatoi* and address the leader of the village (Gwilliam, 1982: 47). Meanwhile the men were busy fixing the anchor in place and tethering the *lagatoi*. Magic spells were sung over the anchor to keep it strong

> When the anchor was being lowered, two men swam down with it into the water to make sure the *vakada* and the *peri* did not become tangled They also had to watch that the rope did not touch the *lagatoi* or the anchor sit awkwardly on the sea bed (Douglas, 1994: 20).

Some of the Gulf people lived in large residential houses called *dobu*. The Motu men during their sojourn in the Gulf usually lived in huts, *kalagi,* on the beach while fixing their new *lagatoi*. Once this was finished they lived in the shelters on the *lagatoi*, while waiting for the right winds to take them home.

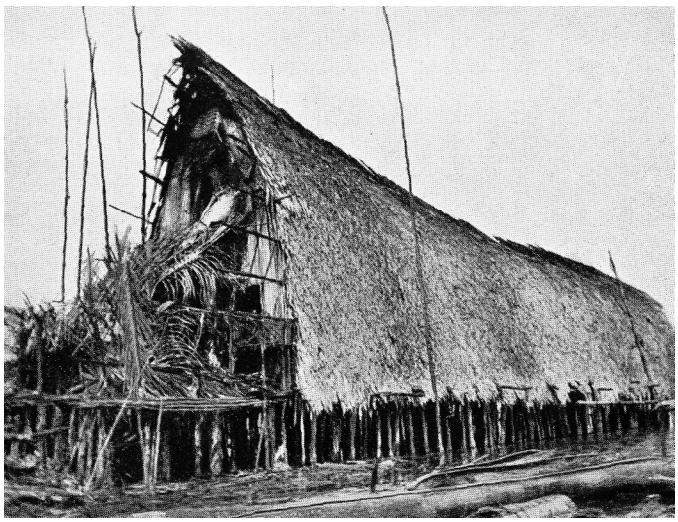
The main places the *lagatoi* visited on the Gulf were the Erema or the Namau group of villages which were furthest away in the Gulf, next to them were the villages of Marea, Konekone and Daivu.

> While Motu informants are diffident on the point, they say that Konekone partners were good but not always as generous as those of other areas. Informants' accounts suggest that "the short *hirilou* expeditions may have involved stricter balanced reciprocity than the longer expeditions. Sometimes they had to buy food during their Konekone stay if their hosts were not sufficiently hospitable in supplying it. The most generous partners were those of the Namau area. This rating of partners reflects the availability of sago in the three Gulf areas (Oram, 1982: 18).

Brian Rice in his article, *Last of the Great Hiri Expeditions*, described a *hiri* voyage in 1931 undertaken by informants from Porebada Village. The name of the *lagatoi* was *Kevaubada*. On this trip both leaders used their secret *iduhu* 'charming magic' to bring good luck and during the trip the men played their *sede* drums on board. Before the expedition began canoe races were held to test the prowess of the *lagatoi*. They set sail on 22 October that year using the *laurabada* winds and arrived at Hopaiku Creek on 31 October being greeted by eager villagers wanting to buy the pots which were stored in the *lagatoi's* hull. On this trip all the crew on the eight *lagatoi* travelled home safely after being in the Gulf for one month, blown home by the *lahara* wind. The Koita people to the west of Port Moresby from their vantage point on the top of their hill could see towards the Gulf for miles. They blew the conch shells to alert the Porebada people that the canoes were returning (Rice, 1991). The mention of conch shells being used by those on the land is interesting. The Bel traders carried these shells on board and blew them to announce their arrival on the Rai Coast.

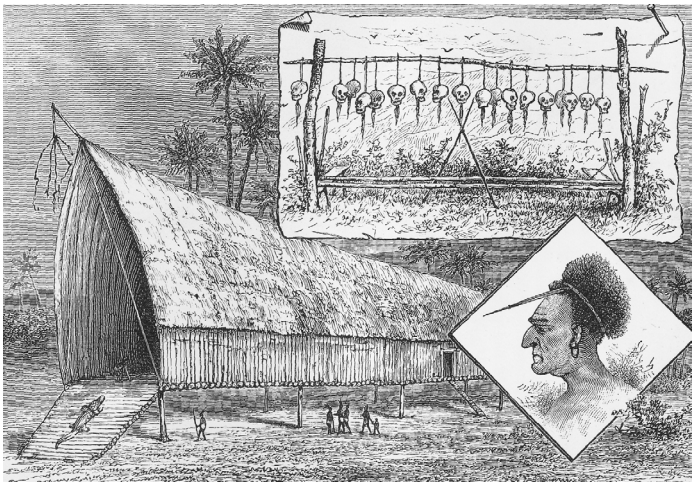
B. 7. Trade partners and the trading exchange in Gulf of Papua

Siaka Heni of Hanuabada Village went on many *hiri* voyages in his life. He was asked about trading friends and whether a *lagatoi* would usually return to the same place? He answered in the affirmative as "once a good trade contact had been made it was wise to keep it. People would be ready for you and they would be angry if you traded with others." If the *lagatoi* traded with a village on the other side of the river the two villages would attack each other with spears and bows and arrows but they would not attack the *lagatoi*. The fighting would end when the *baditauna* held up a pot while standing on the *lagatoi* and then smashing it on the deck. The warring villagers would immediately stop fighting fearing all the pots in the *lagatoi* may be destroyed (Gwilliam, 1982: 55).



Ravi *in Namau in the Puari Delta.* Murray, 1925.

According to Nigel Oram, the Motuans themselves divide the Gulf villages they visited into four section: Daiva, Konekone, Marea, and Namau.



Dubu *house and chief* . Chalmers, 1885.

1. Davu area is the closest to the Motu area and includes Waima and Kivori.

2. The Konekone area includes: Oiabu, Iokea, Lese, Motumotu, Moveave, Uamai, Karama, Silo, and Pesi.

3. The Marea zone includes, Kerema, Keuru, Vailala, Namea, Nuku, Herau, Kavara.

4. The furthest was the Namau region consisting of Orokolo, Maipura and Kairiu (Oram 1982:8)

Lindt also described the arrival in the Gulf now with European goods:

> When the port is reached, they are received with great delight, pigs and dogs are killed for the reception feast, after which they distribute their pottery, to be paid for when ready to take their return journey. They sleep on the *lagatoi*, the shore people cooking them food and taking it to them. They ascend the rivers, cut down large trees, and make canoes of them to take home laden with sago. On the return trip they will have as many as fourteen and fifteen canoes for one *lagatoi*. Now they go [to the Gulf] wealthier than formerly, taking with them tomahawks, knives, beads, looking glasses and red cloth. They return with many tons of sago, which they dispose of to Tupuselei, Kaile, Kapakapa, Hula and Kerepunu, these natives paying them with in arm-shells, and other native articles. They keep very little for themselves. During the time they have it the whole settlement smells of nasty sour sago, as they like it best when it ferments, so keep it dampened in large pots (*tohe*) (1887: 123)

There was much rejoicing when the *lagatoi* arrived at their destination in the Gulf villages of Karama, Orokoro, Geru or Popo. The people would come out in their small canoes to greet them noisily. As soon as the *lagatoi* arrived in the river of a Gulf village, the *baditauna* was greeted amidst great rejoicing by his trading partner. Sometimes the *lagatoi* was towed by the smaller canoes to the village. The *baditauna* captain hadn't washed during the voyage so he jumped into the water and cleaned himself and then was embraced by his trade partner. The *baditauna* and the *doritauna* would begin by exchanging armshells for the pigs of their trading partners. The trading began when the clay pots were unloaded onto the beach and two tallies, *kahi*, were put in each pot, one kept by the Motu man and another by the Gulf trade partner so that a tally could be kept of the number of pots given out and tallied for the amount of sago or other goods which could be exchanged. "The size of the pot was marked by the length of the *kahi*" (Oram, 1982: 16).

There was a special relationship between the trading partners who were regarded as relatives and could be handed on from father to son for several generations. Of course, there could be differences of opinion or even feuds. This happened if one man tried to break the links to his trade partner causing jealousy (Oram, 1982:17).

Nigel Oram gave a detailed account of the exchange:

> Using tallies to keep a count of the number of pots given to each trade partner, the Motu people were given amounts of sago and other items in exchange. The sago itself was in various shaped bundles. "The basic sago bundle was called *vai* in Namau and *kokohara* in Marea and KoneKone and weighed about forty pounds and was exchanged for a cooking pot. *Gorugoru* consisted of six to fourteen *vai* or *kokoha*, contained in a cone-shaped arrangement of sago fronds and were exchanged for armshells. - - An armshell was also exchanged for either a pig or canoe log. The size of the cooking pot to some extent governed the size of the article given in exchange" (Oram, 1982: 16).

Armshells were also used for marriage exchanges in the Gulf and so were a valuable trade item in themselves. Although the Motu people saw the primary purpose of the *hiri* as economic, they did not necessarily view the exchange that took place as equal trade. Tallies used to count pots were frequently not matched in the exchanges. The number of sago bundles might exceed the number of pots, or a partner might provide sago in return even for broken

pots. According to one account, the Gulf people provided sago for a salvaged canoe, even though all its pots were lost when it sank. As already mentioned, "the Motu insist that no debt was created by either surpluses or deficits. They say that *hiri* was not trade" (Oram, 1982: 16).

Brookfield and Hart described two types of exchange of goods as being transfer and trade. The latter are goods, which change hands to areas outside the contact area whereas transfer refers to goods where the receiver and originator are known (1971: 316). The Motu style of exchange is probably the transfer variety according to this definition - transfer of trade items without feeling guilty over uneven rate of exchange. Under this tacit agreement if the pots were not replaced by the right amount of sago, the Motu people would not be upset by the unequal payment. This might have been because of the long time the Motu people stayed with the Gulf people and were fed by them. This hospitality was usually restricted to family members, relatives or close friends and this was often the way the trade partners viewed each other. But, as usual, there could be exceptions and Oram points out that some Gulf people would see any inequalities in the exchange as a debt to be repaid at a future exchange (1982: 17).

B. 8. Return Home

> For the return trip the *lakatoi* are decorated with the specific *iduhu toana* (clan badges) called *pepe* belonging to the *iduhu* of their captains. These *pepe* are of large size; the leaf strips of the example figured being several feet long. *Pepe* are used only on the *hiri* though after the expedition is over the *baditauna* and *doritauna* remove them from the *lakatoi* and hang them from their ridge poles in front of their houses. An ornament consisting of a framework of cane on which are mounted the shells of the large white cowrie fits over the top of each mast (Barton, 1910: 104). (See pages 84-85).

As the Motu men stayed in the Gulf for two months or more there was no hurry to prepare the sago for the exchange. Once the pots had been presented to the trade partners, stick tallies marked the number of pots. These have been kept by the trader and partner and were now checked against the bundles of sago which the Gulf people had made up into the *vai* (sago parcels) (Oram, 1982: 16).

After the *lagatoi* had been absent for about one and a half months, the Koita people who live on the hilltops around Port Moresby kept a lookout and, at the first sight, would rush the news to their Motu friends. "The return of the *hiri* was the signal of great rejoicing" (Rosenstiel, 1953: 19). The *lagatoi* would be much larger with the added hulls and weighed down by the sago stored in the hulls and the cabins. The wives of the *baditauna* and *doritauna* would now be able to wash again and dress themselves for the feast and celebration that would follow as it had been decreed by Edai Siabo of old. There was great rejoicing; debts were paid and sago was distributed to those who had contributed pots and to those who had helped their wives and families when they were away.

In 1943, Annette Rosenstiel, stationed in Port Moresby with the U.S Army, saw the preparations of several *hiri* expeditions. She concluded that there could be as many as twenty *lagatoi* making the voyage and calculated that if each canoe carried about 29 men and over a 1000 pots it would a total "of about 30,000 pots for the entire *hiri*. A single *lagatoi* on the return voyage has been known to carry between 25 and 30 tons of sago" (1953: 188).

B. 9. The trading language

The Motu people and the Bel group both had their own language when trading. The Motuans had the *hiri* trading language, *hiri motu,* as described by Tom Dutton (1977: passim). Another name for this language is Police Motu. This was a language in which "80% or more of the vocabulary is drawn from the Elema languages and the remainder (20% or less) from Motu. Their language was a language of trade and was known to both the people of the Gulf area and the Motu people (Dutton 1982: 9). Rosenstiel noted that the Namau people had devised a trade language with the Motu traders when their own two languages were unintelligible to each other. It was imperative to have this trading language with the visitors who would live with them for up to two months. Even counting the tallies and agreeing on the trade to mutual satisfaction entailed some common language.

Percy Chatterton wrote about the Motu language:

> There are two kinds of Motu [language]. There is the Motu which is the mother tongue of the people of the Motu villages, strung out along the Papuan coast to the east and west of Port Moresby. Then there is *Hiri Motu*, a simpler form of the language. This was the trade language of the people of the south Papuan coast before the coming of the white man. In particular it was the language of the *hiri*, the great trading expedition which the Motu people mounted annually and on which they traded earthenware

pots for sago with the people of the villages fringing the Papuan Gulf. In the 1890s, it became the lingua franca of Sir William MacGregor's police force, and was for many years known as 'Police Motu' on that account. Today it is widely used as a lingua franca throughout the length and breadth of Papua, though not in New Guinea which has its own lingua franca, Pidgin. *Hiri Motu* is the common tongue of the streets and markets of Port Moresby, and an acquaintance with it, however slight, will add to the interest of a visit to that city (1953: 19).

Descriptions of two *Hiri* by Barton and Groves

Captain Barton gave an in-depth view on the *lagatoi* and the *hiri* when he made a voyage on board the *lagatoi*, *Kevaubada*, going to Kaimare in 1906.

The first night from home, the *lakatoi* anchored at Meabada, the crew collected firewood and erected rails at either end of the craft, used as fulcra by the men using the big steering oars. The *lakatoi* left next morning at daylight and went outside Yule Island. Passing Yule Island, the older men put bananas and yams at the foot of either mast; this food is cooked and eaten on the same day by the crew, but the *baditauna*, *doritauna* and their *udiha* do not partake thereof. This operation is known as *irutahuna hanamoa*, *irutahuna* being the name of the space between the masts.

The 'crab-claw' shaped sails are made in the village by the sail captains. They are made of plaited mats sewn together, and attached on either side to long tapering mangrove poles. While under construction the sails are carefully measured to ensure that the two horns of each are of an equal length. A *lakatoi* is invariably moored or anchored from the end of the vessel belonging to the *doritauna*. The anchor is a large stone encased in a network of heavy lashings, and the cable is composed of lengths of rattan knotted together. Anchors are regarded as being in the highest degree *helaga* [sacred]. Should it be found necessary to anchor during the voyage, owing to unfavourable wind or other causes, the cable is watched continually by three men, one sitting on either side of it, and one in the centre with his hands on the cable. These men should be *varavara* (relations by blood or *iduhu*) of the *doritauna*. The anchor being *helaga*, nobody is allowed to step across the cable when the anchor is down.

Although *lakatoi* may anchor at night if there is no chance of trouble with the people off whose coast they are yet, with a perfectly favourable breeze, they usually sail all night. It is difficult to ascertain by questioning, to what extent the *baditauna* and *doritauna* exercise the duties of commanders during the voyage. It is probable that they interfere scarcely at all with the ordinary navigation of the vessel but, that in positions of difficulty, they take charge and give their orders, which are obeyed. The two *udiha* are confined to their shelter beside the *kalaga*, and leave it only to obey nature's behests.

Sago basket from the Gulf District.
With thanks to the Auckland Museum, Tamaki Paenga Hira. AM3814

Their two masters move about the vessel as it pleases them. Only they and the *udiha* have access to the shelter alongside the *kalaga*, with the exception of two cooks who have, one each, been chosen for the voyage by the *baditauna* and *doritauna*. Cooks, to be orthodox, must be unmarried youths, and the cooking operations are conducted with the same restrictions in handling the food as applied to the women who cooked the food before departure. Importance is attached to the necessity for the *vaina* hung above the *udiha* being free from motion. When the destination of the *lakatoi* is Elema, the nearer portion of the Gulf district, the *kalaga* is not used: it is only constructed when the vessel is to proceed to Namau, the further portion of that district.

The *lakatoi* was off Bailala (sic) by the evening and the next morning sighted Kaimare. The *lakatoi* entered the creek through its westerly opening without awaiting permission and was accompanied up the creek by a large escort of Kaimare canoes. The *lakatoi* anchored between the

Kaimare villages. In the old days a ceremony took place near Hall Sound. --- Long ago, it seems, the Motuans, to keep an open coast, killed many Lolans, who had interfered with one of their canoes, and since then the Lolo spirits have been troublesome in that one place, detaining the *lakatoi*, hence the incantation to drive them away. We were successful, and got beyond the passage alright, the tide being on the slack at the time.

The arrival of the *lakatoi* at its destination in the Gulf is an occasion for great rejoicing. As soon as the vessel is moored in the river opposite the village to which it is bound, taboos cease to exist, the *baditauna* and *doritauna* leap into the water to wash off the accumulated dirt of months. A ceremonial visit is then paid by the head men of the Gulf village with their escort to the *lakatoi* and during it each man of the crew selects an individual to be his *tarua* (friend), and they make much of each other. *Baditauna* and *doritauna* each select two headmen for their *tarua* and they adorn these men with the personal ornaments they have brought to barter. As soon as this has been done, but not before, the crew produce their ornaments, and each one proceeds to decorate with them his chosen friend. Every article so bestowed has its recognized value, and, if accepted, the corresponding value will be given in exchange. The villagers then return to their houses and kill a pig or a dog which is thereupon cooked and given to the visitors.

Next day, the pots are unpacked and set in rows upon the river-bank, each man keeping his own pots apart from those of his fellows. The purchasers then come forward and select this or that lot, and the owner of the pots forthwith breaks a number of short slivers of stick as tallies and places two in each pot. The seller and the purchaser then pass together down the rows of pots, and as each pot is passed the two *kae* are taken out, the purchaser retains one and the seller the other. These are in each case tied carefully into a little bundle, and each man retains his bundle in his keeping until the return payment in sago is made some weeks later. This tallying system is followed only in the Elema district (extending from Lese to Orokolo); not in the Namau district. The explanation given by the Motu people is that sago grows in the Namau district in such prodigious quantities that the inhabitants do not place any definite value upon it. The pots are removed meanwhile to the houses of the purchasers. Each of those men in the *lakatoi* who may be driven to purchase new *asi* either for themselves or on commission— will have given a large shell armlet to his *tarua* (trade friend).

The Gulf people who have accepted payment for *asi* go into the forest and bring back the girth measurements of the required trees and, if these are satisfactory, the trees are felled by the Gulf men who float them down stream to the *lakatoi*. There the trees are hauled onto the bank of the river and the visitors hollow them out and shape them into *asi* (hulls). Fire is not employed in this operation. While the *lakatoi* crew is thus engaged, the bulk of the local natives are living in the swamps making the required quantity of sago. The new *asi* having been made, the *lakatoi* is taken to pieces, and reconstructed on a larger plan.

When the sago is brought down, the parcels in which it is packed, the *gorugoru* and *turua*, are put aboard first. These have been paid for in *toia* (shell armlets), *mairi* (pearl shell crescents or, generally in the Gulf, the whole shell for the people there prefer a rather shorter and deeper crescent and so grind down the shell themselves), *tautau* (*Nassa* necklaces), etc. Next day the smaller parcels, the Koita *kokohara* are put aboard and the quantity of each man's sago is carefully checked by the *kae*. During the time that the *lakatoi* remains alongside the Gulf village, the *udiha* lose to a large extent the sacredness attaching to their office. They may go ashore and walkabout with the others and their diet is not restricted. But they still remain in charge of the *vaina* which are kept always aboard the *lakatoi*, and whenever the *udiha* go ashore they must take off their *sihi* and leave them hanging beside the *vaina***.**

Murray Groves with Manumanu man. Groves, 1957. (PMB43_002).

On the return journey the *baditauna* end of the *lakatoi* remains as before the bow-end so long as the wind is northerly. If the wind should change to southerly the *doritauna* end of the vessel becomes the bow. The *baditauna* and *doritauna* and their two

> *udiha* resume the same footing and observe the same restrictions as obtained on the outward voyage. The taboo is not raised until they reach either Boera or Borebada (sic), Motu villages near Port Moresby, and *lakatoi* returning east of these villages always put in at one or the other on the homeward voyage. Here the *baditauna* and *doritauna* bathe in the sea, and adorn themselves with coconut oil, red pigment and the leaves of a strongly scented shrub called *hebala*, and put on their newest *sihi*.
>
> As the time approaches for the fleet of *lakatoi* to return, an intermittent watch is kept for them by men of the Koita tribe from the summit of a hill called *Huhunamo* and as soon as they are sighted the news is passed on to the Port Moresby villages, the view from this hill being a wide one, The hill rises at the north-west end of Port Moresby harbour (1400 feet, 430 metres), and in bygone times, had a Koita village on its summit. The remnants of its people are now settled at the Motu village of Borebada (sic), where they form the *Huhunamo iduhu*. The *lakatoi* are sighted twenty or thirty miles away (30 to 50 kilometres) and, as they stay for a day at Boera or Borebada (sic), the people at Port Moresby have at least two days' clear warning before their arrival. As soon as one is sighted in the offing and recognized, the wives of the *baditauna* and *doritauna* bathe themselves, put on their whole store of ornaments, and go out in canoes to meet the returning vessel, together with the wives and relatives of the members of the crew. Each woman then receives from her husband a *kokohara* of sago with which she hurries back to the village and divides it among her relations-in-law, reserving a portion to be cooked at once for her husband (Barton 1910: 103 – 110).

Barton precisely lists the value and price of the sago bundles:

> The sago is in three kinds of packages:
>
> 1. A *gorugoru* is a package of the shape of an inverted cone, and is made of several pieces of the leathery *spathe* which grows at the base of the leaves of the sago-palm (*goru*), these being sewn together. A *gorugoru* contains from 6 to 14 *kokohara*, the weight varying from 250 to 350 pounds (113 to 160 kilograms.
>
> 2. A *turua* is a bag made of the fibrous leaf *spathe* of coconut palm, and contains about 80 pounds of sago (36 kilograms).
>
> 3. A *kokohara* is a parcel bound together by leaf fragments of sago palm leaves; the average weight of a *kokohara* is about 40 pounds (18 kilograms). One large *toia* buys one large *gorugoru* of sago or one *asi*. One large *uro* buys one *turua* of sago. Small *uro* and *keikei* buy each a *kokohara* of sago (Barton, 1910: 115).

Murray Groves sailed in early November 1957 with two Manumanu *lagatoi* - the *Bogebada* and the *Oalabada* to Uamai Village in the Gulf. Through his short diary entries we have a first hand description of his experience and not just a random description. The leader of the *Bogebada* was Enno Atto and the leader of the *Oalabada* was Roro Heboro. Enno told Groves that the Erema people were astonished when the ADO (District Officer) had instructed them to fix up the rest house for a man called Murray Groves to stay in. They were instructed to show him respect because his father was an important man in Port Moresby. [William Charles Groves was appointed director of education, Territory of Papua-New Guinea, in 1946 and advocated 'an education built upon the traditional culture of the people]. The Erema people at first regarded Murray Groves as a 'new boy' but the ADO explained he had a doctorate and that he spoke Motu fluently. When the *lagatoi* arrived in the Gulf, Groves found the rest house ready for him and he set himself up, ready to study the interaction of the *lagatoi* crews with each other and with the villagers (Groves, 1957).

Groves described the two *lagatoi* anchored on each side of the creek at Uamai Village. The crews lived alongside the *lagatoi* in *kalagi* huts built "largely of material from the *lagatoi*" which had to be dismantled and re-built. They ate and slept in these *kalagi* missing the home cooked meals and tiring of the sago diet.

> The two Manumanu *lagatoi* crews living quarters are clearly set apart from the village hamlets. The Motuans are not in any sense absorbed into the hamlets by their *varavara* (trade friends). --- Most [dealings] with the Erema people is done in the street on the ground, so is eating and sleeping. The Manumanu have all complained about the shortage of fish and the monotonous diet of sago. They long for the more varied fare of their own village. Apart from lack of variety, their food also lacks quantity.

Women on the beach, welcoming home the lagatoi. 1995.

In the late afternoon when Erema apparently eat their main meal, the *lagatoi* crews walk through the hamlet in which they have friends in the hope of being offered food and betelnut. The Erema appear to be very generous with betelnut (Groves, 1957: December).

The Manumanu tried to fish off the nearby surf beach with the large nets they had brought with them but were not very successful. Groves noted how they slung the big nets one beside each other in the surf while other men went further out trying to frighten the fish into the nets. That day, the *Bogebada* caught nothing and the *Oalabada* went fishing again at about 4 o'clock but were again unsuccessful. Even though the two *lagatoi* were from the same village and had sailed together, difficulties arose between them and rivalries emerged as they grew bored with waiting for the winds to change. Enno told Groves he had dissociated his *lagatoi* from Roro's *Oalabada* and the hamlets to the east which they traded with. He and his *Bogebada* crew dealt only with Erema hamlets west of the creek. This in itself caused friction between the two hamlets.

Insults flew between the two crews sometimes. The *Oalabada* crew called out to Enno "*Bogebada* is not your *lagatoi*. It's your father's." This insult was taken badly by Enno who insisted the *lagatoi* was his. He even sobbed his distress. In reply, he shouted that after they retuned home, the special *sibi* would adorn his house to show he had led a *hiri* expedition. Everyone would know then that the *lagatoi* belonged to him. On another occasion the crew from the *Oalabada* urged Enno to board their *lagatoi* but he was advised against this because his father would be angry.

So we see Enno keeping away from the *Oalabada* and also being alienated from his own crew. Custom required that he sleep and eat by himself on the *lagatoi* and that he must not wander around aimlessly. He should leave the *lagatoi* only when absolutely necessary. However the leader of the other *lagatoi*, Roro Hebore "interpreted this rule freely and went ashore during the day. Enno sits in the shade on the *lagatoi* most of the time. He does not get on well with his crew who complain that he needlessly works them from morning through to the afternoon without food." The crew was under fed even though the Erema, who were assigned to help them, brought them sago everyday.

One day, when Groves visited the *Bogebada* crew, they asked him for money to buy some tobacco and sugar. He said he would give it to Enno to share out. The crew was against this as they thought Enno would either give it to his trading partner or keep it for himself. That night Groves gave Enno twelve sticks of tobacco and later the crew pointed out that very little had percolated down to them. Apparently some captains were generous and thoughtful towards their crew but Enno was seen as aloof and not very generous. Enno was *baditauna* and he would not expect to get much out of the *hiri* trip by the time he had finished paying for everything: food for the initial builders of the *lagatoi* and then food for his crew during the journey and in the Gulf, then he must pay the dancers and so it goes on. Groves concluded "He spends resources and much personal effort in pursuit of prestige: if he just wanted a material return of sago for pots, he would do much better to join another man's *lagatoi* rather than his own" (Groves, 1957: 12 November).

In re-building their *lagatoi*, the men added new logs on either side of the old logs and placed more logs on one side to counteract the pressure on the sails from the heavy seas. When the canoes were being loaded, the crew watched the level of the hulls in the water as the weight of the sago parcels began to weigh it down.

When the two *lagatoi* were nearly ready to leave, there was disagreement on the date of departure. Roro Heboro said he thought Enno's *Bogebada* would sail the following Tuesday but his *Oalabada* would not be ready until Wednesday. He told Groves it was wrong of the *Bogebada* people to contemplate an earlier return: they should go together and Groves agreed. However by nominating Tuesday, Enno was trying to force the *Oalabada* to speed things up (Groves, 1957: 14 December).

When it was time to depart, these grievances were forgotten as the crews of both vessels looked forward to returning home to their loved ones and to the home cooking. Murray Groves stepped on board the *Bogebada lagatoi* and his friend, Enno Atto pointed around the scene and said "this is what a *hiri* is all about" The *lagatoi* was bedecked with festive boughs of golden *bautau* hanging thickly. There were bundles of sago standing above the hulls. The crew

were all excited to be returning home with their "scented and painted bodies and faces". Sweet smelling herbs in clusters and the heavily scented *pepe*, the big tassel-like decoration hung from the central post." The crew stood proudly on the roof of the shelter as the two *lagatoi* moved out to sea together with the sails catching the wind. They were proud that they had accomplished a *hiri* voyage. Nor had they forgotten their loved ones as they had small trinkets for them. Unbeknown to them it was one of the last of its kind in their Motu history

It was not long before they arrived back in Manumanu where they were met by the joyful Motu women dancing a welcome on the beach. As the hulls of the *Bogebada* were leaking, it was imperative that unloading begin immediately as the men did not want to spend all night bailing out the water. At about 9.30 pm, Groves was called up byEnno to inspect the *lagatoi* and open it up. He thought this strange as the leader of the *lagatoi* usually did this. But this was an emergency and the usual ritual was laid aside. Groves went in single file onto the *lagatoi* followed by Enno's wife. He couldn't help noticing that the smallest sago parcels had been allotted to him. He had a lot of debts to pay so he was not happy.

Then the unloading began in earnest and each man took his parcels of sago and put them on the sand. "Each of the crew had a paper or book recording his *siaisia gaudia* and he sent the sago parcels to each of those whom he owed sago parcels. Anything left over was his." Some of these debts were paid on the beach and some were delivered to the houses. Groves was amused to see the women taking parcels of sago from the *Bogebada* canoe and dancing up the street of the village. Next morning, just after sunrise, Groves woke from a short sleep, to find "the women were still dancing strongly. At about 8 o'clock, each household brought a dish of cooked sago to a central pool and it was divided by the people of the *Bogebada* who took the dishes and again danced gaily up the street. At about 9 a.m. sweet sago with coconut milk was given to the dancers and even the policeman was fed. The dancing resumed until noon" (Groves, 1957: 14 December).

Groves explains the meaning of the term *siaisia*:

> Locally, women themselves trade pots, but on the *hiri* men act as their agents. Most of the pots that married men take on the *hiri* belong to their wives, while unmarried men take mainly their mother's pots. When pots are assembled for loading, however, men have an opportunity to acknowledge and uphold their special relationships with women of other households by offering to take a pot on the *hiri* for each of those other women. Such offers are seldom refused. Each man keeps a tally of the pots that he transports on behalf of his kinswomen and the members of each household keep a tally of the pots that men from other households carry on their behalf. The custom is called *siaisiai*. Since a man's first obligation on return from the *hiri* is to provide a bundle of sago for each of the *siaisiai* pots that he has taken on behalf of kinswomen from other households, the custom provides those other households with an insurance policy against the loss of their own pots in transit. Yet, unless some pots are in fact lost in transit, *siaisiai* arrangements make no difference whatsoever to the number of bundles of sago that each household with a member embarking in the *lagatoi* (1960: 21).

Comparisons of the Bel and Motu trading voyages

1. Types of trading voyages

The trading voyages could be of short or long duration. In the Motu area, the short trips could be broken again into internal trade between the Motu villages themselves and local trade with other nearby villages. These short trading trips were essential in the day to day gathering of food items especially from near neighbours and it was essential to keep on good terms with them. The Motu pots were not just used for the *hiri* but also as local trade items for vegetables and meat products from the Koiari and Koita. There was also the Motu trade items of shells, salt, shellfish, coconuts; necklaces in exchange for feathers, bird of paradise plumes, net bags; coconuts; and all manner of bush materials from Koita and Koiari exports (Allen, 1977: 436). Even the materials for building their houses and small canoes had to come from further inland. In Madang, there was the similar need to trade continuously with neighbours whether it was bush materials needed for building canoes or food items.

The trading trips discussed predominantly here are the long trips when the crew would be away for up to two months or more. Usually the *hiri* sailed to villages situated on rivers. The *lagatoi* had to be anchored offshore as they were too heavy to drag up on to the beach. If the coast had sheltered water, for example on Yule Island, they could anchor the *lagatoi* and tie it with long vines to the shore. The *lalong* being much lighter could be pulled up on the beach on rollers and this enabled the traders to visit many villages and have trading friends at each place.

Both these trips depended on the winds. In late July, the Bilbil would be returning from a trading trip, whereas the Motu people did not leave until September using these same winds (i.e. in this direction) to travel to the Gulf because they travelled in the opposite direction. On each *lagatoi* and *lalong* there were captains to be obeyed and there were punishments for those who disobeyed. If perishable items were purchased it had to be near the end of the journey so the Bilbil people tended to trade in one village after the other all the way along the coast and call in later to collect the perishable items.

2. Reasons for the trading voyages

The traditional trading systems of both the Bel and the Motu were used for economic, social and religious purposes.

Firstly, the quality of the soil was poor in both places. Damun's statement about the island of Bilbil being so full of stones that if you dug there for one day you would feel like dying (Mennis, 1981a), would probably be echoed by the Motu people if they tried to dig their soil in the dry season.

Secondly, there were economic reasons for the trade. The pots were used as currency for buying many trade items apart from foodstuffs. The Bel people traded pots for wooden dishes, plates, bows and arrows and they were middlemen in trading many of these items on to further places, like Karkar and inland villages. The Motu people bought hulls for their canoes and traded in armshells as well as pots for the sago.

Thirdly there were social reasons for the trade. We have seen that both the Bel and the Motu people profited by meeting with trade friends and the extended family this created. But it was more than just trade friends meeting, it was a constant connection between all the people in the village who welcomed and entertained their visitors.

Fourthly, there were spiritual reasons. The Motu people believed that their ancestors dwelt in the Gulf areas and so the *hiri* was a journey back to the ancestral lands (Gwilliam, 1982: 36). Chalmers also noted that the souls of the good went to the west where thy enjoyed all the food they wanted, while those of worthless people went to Idiha and Bava, the rocky islets near Boera Village (Chalmers, 1887:141). Similarly the Bilbil people believed that the spirits of the dead went to Degasub on the Rai Coast where the traders ventured with their pots. Thus in both places the trade route touched places of spiritual significance – they were setting out on a spiritual journey and in their travels they were protected by the weather magicians and the spirits of their ancestors, their *tabuna* .

If the reasons for the trade missions were only social, they may have still taken place but not with the same urgency. People can be motivated just to gain prestige and power only to a certain extent. The added bonus was the colourful ceremonies, the dances, the rituals that grew up around both the *hiri* and the *waing* while the men were trading their pots for food, but it is doubtful that they would have undertaken such voyages for prestige alone. Sometimes the men they traded with accompanied them on the return home and stayed with the potmaking villages for months before returning home with the next trade winds. The Umboi Islanders thus visited Bilbil Island on the north coast and the Gulf people visited the Motu people. These visits would mainly have been for social reasons and based on trust and friendship. The Austronesian speakers tended to be more adventurous than the sedentary mainlanders – they were the explorers of their areas travelling further than other tribes dared.

3. Preparation and setting out on a trading trip

In both cases there was a hive of activity in the village prior to departure. A fleet of canoes and the cargo had to be prepared - the women made the pots and the men built the canoes. The organisation this entailed shows a high social standard in each area. There were strong clan leaders and weather magicians, amongst both the Bel and Motu people. Strong leadership was important for the trip to be a success. The women in both instances were warned to be pure so as not to jinx the sale of their pots. In each place there was great excitement at the beginning of the trip when the fleet of majestic canoes floated off on the tide to the sound of the conch shells on the *lalong* and the *sede* drums on the *lagatoi*. The Bel women saw their men leave in a fleet of *balangut* and *lalong*, and waited until the canoes were out of sight and they could no longer hear the conch shell being blown. The Motu may have joined their Koiri friends on the hilltops to get the long rang view of the departing *lagatoi*.

4. Crew and discipline at sea

The crew on the *lagatoi* were under the direction of the two sail captains and two mast captains. The men had been trained on the importance of the journey and the need for discipline at sea. The Motu people had a ritualised procedure to follow on board their *lagatoi* while at sea. The *baditauna* and *doritauna* had to sit on their mats and hardly move. They had to pray deeply and meditate for the success of the trading trip whereas the Bilbil had no

similar practices as could be ascertained. The captain of the *lalong* had his own cabin on the upper deck but he was also busy training the crew and changing the sail direction. When the sailors travelled on both the *waing* and the *hiri*, this involved travelling together in fleets of canoes carrying large cargoes of pots on their way to the trading villages and a cargo of food on the return. Both entailed magic rituals to be performed to ensure the safety of the voyage. The Bilbil captain hit the side of the canoe with the *gorgor* or ginger bush to make the canoe go fast and rid it of evil spirits. To turn the wind the captain beat the backs of the young boys as they turned facing the way they wanted the wind to go according to Kasare of Yabob (Mennis, 1981a: 44).

5. Dangers of the trading trip

The Bel people faced the wild winds and rough seas and sailed together in fleets so that if one canoe was in danger the others could come to their aid. Up to twenty *balangut* and *lalong* might take part in a large trading expedition with canoes from Yabob, Bilbil, Kranket, Riwo and Siar. However, smaller ones happened all the time in short trading trips to the nearby Rai Coast or up to Karkar Island. If they were unable to make safe landing the crew could cook on board as they had safeguards against the canoe catching fire.

The Motu traders also faced many dangers at sea and again on the land if the canoes were forced to land in hostile areas. This was one of the reasons why they travelled in fleets. If a *lagatoi* was sinking then the others could come to its aid and save the crew and cargo. Other dangers were from fierce winds and angry water spirits that might attack the canoes and the crew. In December 1954 "after the loss of a *hakona*, (small lagatoi) its entire cargo and the life of an Erema passenger, the people of Manumanu did not undertake any *hiri* in 1955 or 1956" (Groves, 1960: 10). Chalmers had several close calls on board a *lagatoi* that he sailed on in 1883 including being buffeted by wild seas, being harassed by enemy villages and threatened by large crocodiles when they tried to land. If the weather turned nasty soon after they left, the *lagatoi* could call into the safe anchorage at Yule Island and the crew could even crouch in the large cave near the beach to wait out the storm. If the weather was fine they could cook on the beach as no cooking was allowed on board. The return voyage was more daangerous as the *lahara* season brought rain and storms and many *lagatoi* were lost.

6. Destinations

Wherever they landed, there were many more mouths for the host village to feed than normal. Sometimes, the Bilbil people overcame this problem by dividing the fleet up so that some people went to one village and others went to a neighbouring one. Similiarly, the Motu people stayed with their trade friends for two months or more in the one place and sometimes the Gulf people were overwhelmed at feeding so many extra people. Although there were ample supplies of sago, it had to be scraped and rinsed and prepared for cooking. This meant that while they were in the Gulf there were fewer people to feed back home in the hungry months. The *lagatoi* did all not stay in place, but each *lagatoi* found the village where there trade friends lived and stayed there for the duration of their visit. Oram noted Specht's suggestion (1980) that "The Gulf people fed the *lagatoi* crews for considerable periods and thus relieved the Motu villages of feeding a number of their biggest consumers" (1982: 27). The Motu were, in fact, exporting consumers during the hungry time of the year.

The Bilbil people used the pots as the main item of trade seeing it as their money. They traded them for food, particularly the root crops of the coastal people. This pot trade seems to have been both utilitarian and social. Although their need for food had to be fulfilled and paid for in pots they also felt the need to keep up their reputation as great seafarers and traders and renew social interaction with their trade partners. Because they were so often the visitors to other villages, they could be aggressive traders and kept monopolies on the trade. They were outgoing and tough because they depended on the trade for survival.

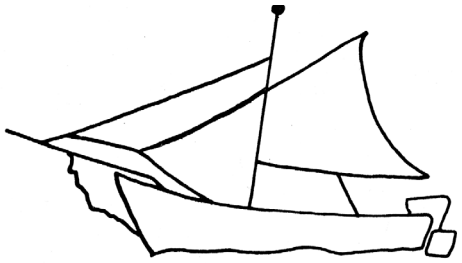
7. Trade Partners and the exchange

In both the Madang and the Motu areas, the trade routes were seen as connecting paths between the villages on a supra-human level. Trading partners were important links in the chain giving the traders status in the villages they visited. They were treated like family members and their friends sometimes made reciprocal visits. The traders themselves were protected spiritually against the difficulties they might encounter when they ventured away from their own home territories on their trade mission and would be assisted by all members of the clan to ensure the success of the mission. Names of traders could travel far and wide beyond the scope of the trade mission. Newcomers were taught how to use the stars for navigation and the correct winds for sailing as well as the correct procedures in the trade negotiations and the rituals carried out at each port of call.

As shown, the Motu people and those in the Bel group had their own language when trading. The Motuans had the *hiri* trading language, which was known to both the people of the Gulf area and the Motu people. The Bel people, on the other hand, had a different reason for developing another language while sailing. It was to confuse the evil sea spirits who might be listening to them and it was not used as a language of communication with their trade friends. Did the Motu people and the Bel people develop into competitive long distance traders only because it was necessary for survival or would they have done it anyway? If they had had enough food for survival, would their sense of adventure and courage have led them to traverse the seas in their large canoes?

A comparison here with the *kula* ring in the Trobriand Islands is interesting. The *kula* was conducted mainly for social reasons and not for economic reasons. Two main trade items circulated the *kula* ring and could take up to a year or more to complete the circle. In the Madang area, Harding described 'delayed exchange' of certain artefacts, which he argued was a type of social exchange similar to the *kula* (1967: 243). There were, however cases cited by Harding in Sio on the Rai Coast, which he described as 'delayed exchange' which he argued was a type of social exchange similar to the *kula* of the Trobriand Islands where certain objects might be passed around the trading sphere (1967: 243).

Harding said that the Bilbils were regarded as the patricians of Astrolabe Bay and maintained this through their aggressive trading. They also had the monopoly on the pottery trade and were determined to keep it (1967: 196). The Motu too travelled for economic reasons and, when the crops were good in the nearby Koita areas, they did not venture to the Gulf, as there was no need for the sago (Oram, 1982: 26). The present analysis shows that there are many points of similarity as well as some differences in the two trading systems. The *hiri* system seems to have more rituals on board the *lagatoi* than was the case on the *lalong* but then the latter was not at sea for as long and came to the first port of call within the first days of leaving home.



Pal Tagari's drawing of a Chinese boat.

Changes in the Trading System

The Bel people

Although the Bel people built fewer canoes during the occupation by the German Colonial Government which lasted until 1914, they continued building both the *lalong* and *balangut* until the 1935 *dadeng* when they virtually ceased their *waing* sailing and *dadeng* trade for many reasons: Economic: the people's land had been cleared and there were few trees suitable for making canoes and a new economy was introduced. Some of the men had paid employment in town and had little spare time. Political: the traditional leadership of the big men was undermined by the new order, the *meziab* secret society was outlawed and the magic of the *likon* was banned. Social: the lives of the people were disrupted by banishment to the Rai Coast after the 1904 and 1912 revolts against the German Colonial Government. Technical: new types of boats were introduced, although these were incorporated into the trading system. Religious: They joined the Lutheran Church in 1935 which banned the rituals associated with canoe building and the use of magic to change the winds and keep the crews safe.

The 1935 Bel trading voyage

Unusual circumstances enabled accurate dating of the 1935 trading voyage from the many hundreds of other such voyages the Bilbils would have made. The information was from interviews with four of my Bilbil informants in the 1970s. These men were all headmen of their clans Pall Tagari of the Dugus clan, Maia Awak of the Gapan Clan, Derr Mul of the Luan clan and Damun Maklai of the Dugus Lat Clan.

There were three reasons this particular trading trip was memorable:

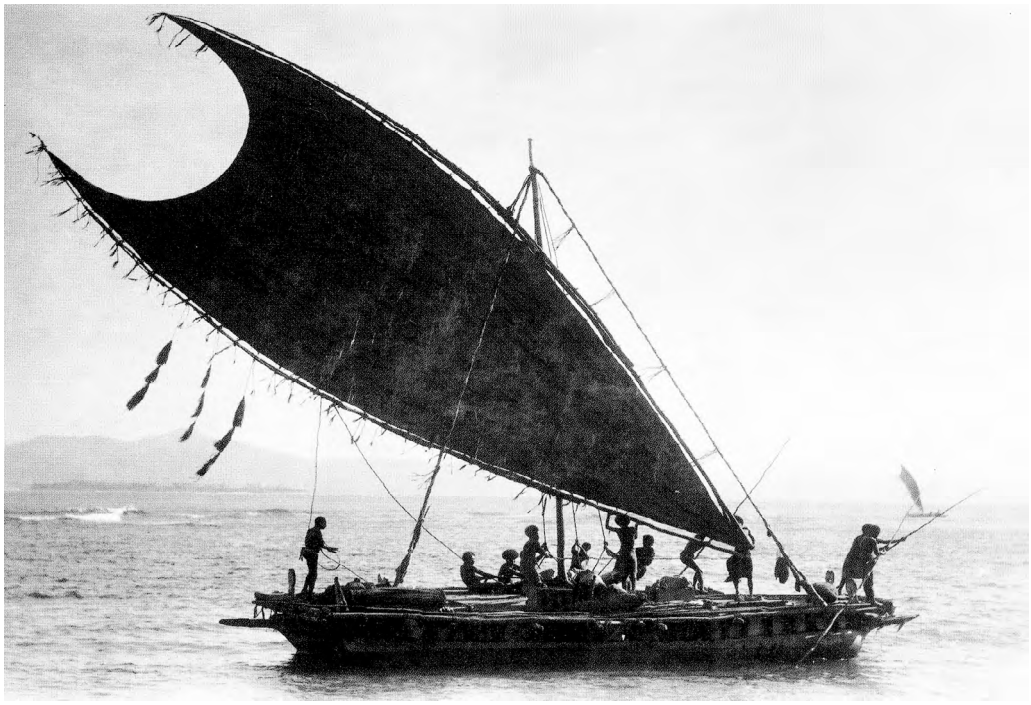
Firstly, the 1935 trip was the last long *waing* undertaken by the Bel people. This has been attributed by the people themselves, to the fact that they became Christians after their return and all the magic rituals associated with sailing the canoes and controlling the weather were banned by the Lutheran mission. Without the magic and the help of the *likon*, the weather man, the Bilbils felt they were no longer protected for the long trading trips. However the canoes were doomed already for economic, political and technical reasons.

Secondly, the 1935 voyage was made after Schmidt's labourers had returned from the Highlands. Schmidt was a German gold miner and prospector who hired a team of coastal men as labourers, including four of the village men on the 1935 *daedeng*. Because of atrocities committed while prospecting, Schmidt was tried for murder in Wewak, Salamaua, and Rabaul. The case in Salamaua was held in the latter half of 1935. The four labourers needed as witnesses were down the Rai Coast, when they were summoned. For this reason this trip has remained significant in the minds of the Bilbil men. One of these men was Maia Awak (Mennis, 1979c).

Thirdly, four Chinese built boats were used alongside the canoes to go on this trip. Pall's father Tagari bought a Chinese boat from a small sawmill near Alexishafen. The boats were about 10 to 15 metres long. However there was no shelter on them; the men could not cook on them as they could on the *lalong*. They had to go ashore to cook; and they had only hard wooden seats not like the bamboo flooring of the upper deck of the *lalong*. The boat had one large white sail and one small one, but no engine and it carried 10 men. (Mennis, 1981b: 10). These Chinese-made boats could be adapted to the traditional trading patterns. The *likon* made magic for them as well and they could sail with the canoes and receive the traditional welcome of a pig killing. So it may be conc1uded that, although the Chinese boats had changed the style of the trading voyages, the *dadeng* could have survived by incorporating this new style of craft into the trade routes. The carrying of the traditional trade goods were not affected by these boats.

In June or July 1935, when the fleet of these various vessels was ready to depart, Sangal, the *likon*, made magic over ginger leaves and some *sibol* seeds. He rubbed the ginger leaves and threw them into the water. Then he crushed *sibol* seeds and put them in the sea to make it calm. He said, "I have bossed the sea. It won't get rough; the 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". When they set off, it was the dry season and the *karag* wind had not begun. An easy *dadau* wind blew them to Rimba, on the Rai Coast. It took one month for the fleet to go down the Rai Coast and another month to come home again. As noted, there were many places the Bel people visited on the Rai Coast. If it was a short trading trip they would maybe visit villages from Bongu to Mindiri. This 1935 trip was classed as a long trading trip and they decided to begin at Rimba which was the closest landfall and went as far as Bonga.

Villages on the Rai Coast visited in order on different *waing*: Bongu, Gorendu, Rimba, Lila, Kul, Kumisanger, Bibi, Bai, Ganglau, Mindiri, Dein, Merigu, Lamtus, Lamtub, Singor, Warai, Biliau, Teterei, Yamai, Galek, Suit, Yeimas, Gumbi, Wab, Malalamai, Bonga, Yara, Gali, Roinji, Singorokai, Nemau, Malansanga, Sio, Teliata, Gitua, and Sialum Villages. When they reached Rimba on the Rai Coast, they blew the conch shells. The Chinese boats *Margui* and



Double hull canoe with crab claw sails near Mailu village. Bernatzik, 1932.

Gauten had conch shells, as did each of the canoes with their own particular 'cry' and the clans took turns blowing them. The Rimba men who were away in the bush heard the sound. "Oh the canoes have come", they said and rushed to the shore amazed at all the canoes. Rimba has a reef all around with a passage which is good for the canoes.

On this trip, *Margui* and *Gauten*, anchored at Bilau and so did the clan canoes of Murpatt, Luan and some Gapans from Bilbil. Other canoes like the Gapan went on to Tetera where they had trade friends. Later they sailed to Malalamai, where they all went ashore for one night. The beach here is protected with no surf. Next 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. The next port of call after Suit was Galek on the homeward-bound trip where the Government pinnace, *Wandora*, arrived to summon Maia Awak and others to Salamaua.

There would be 200 pots in each of the *balangut* and 100 in the *lalongs* plus another 100 in each of the Chinese boats. This means about 1,200 pots. So the preparation for this trip would have been very time consuming for the women making the pots but 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. Pall agreed that different canoes and boats called into different villages. "Some went ashore at Wab, some at Yeimas, some went to Mur". Damun, however, said that all the canoes and boats called into each village and stayed there together. Derr had the best account after the interruption of the *Wandora* had come to pick up the four men who had worked with Schmidt. The men called into Rimba and then returned to Bilbil Island to prepare for the feast on the mainland. Bilbil 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.

Were the Bel and the Motu trading systems only on the periphery of larger spheres?

Was the Bel trading sphere separate from the Siassi sphere or was it merely just on the periphery? The Bilbil/Yabob traders saw themselves as being the centre of their own trade network and definitely not part of the Siassi sphere. The trading systems of the Vitiaz strait were studied by Harding. His area also covered the Siassi Islands and across to Sio Village on the Rai Coast. Remarking on the versatility and size of the Siassi canoes he said the traders were able "to tap the productive capacity of dozens of small-scale societies lying far beyond their own restricted land and sea habitats" (Harding, 1967: 245). He described the trading systems of Astrolabe Bay and the Huon Gulf as being on the periphery part of the Siassi trade. "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" (1967: 13). A more likely scenario is that described by Bellwood of three overlapping trading zones, 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). Perhaps each major trading place naturally saw themselves as centric to their own zone. Certainly the Bilbil/Yabob mariners did. The Motu/Koita people definitely believed they were at the centre of their own trading system. There was the Mailu system to the east and the Gulf trade to the west and a myriad of smaller trading networks in between, but they felt they dominated the area. One look at the literature about trading in Papua would put the Motu system in a prime position as the most important along the Papuan coast.

Irwin postulated about trading systems:

> Generally, the ethnographically described trading systems of coastal Papua New Guinea maybe regarded as a set of connected interaction systems. Like the Mailu system, they had two major aspects. First, there was that of internal movement of people, goods and information in variable quantities within some geographical province. Second, there was the aspect of articulation with other adjacent coastal systems. However, it is more profitable to regard each system as a frequency-bounded space than as some defined region of land and sea. Certainly in the Mailu case it is largely the high frequency of movement within the local network, which demarcates it from adjacent systems. In addition to relative frequency, there are other variables, such as distance, centrality and the nature of the goods traded or local system from one another and from the set of connecting links between them (1978: 408).

However some people thought the Mailu trade, the *vili*, was more prolific and extensive. Here again the trading systems may have overlapped. Certainly, certain trade items like obsidian travelled extensively through different trading zones. R. Firth described the traditional life of the Mailu with their houses of bamboo and thatch while they

cultivated yams and bananas, fished and built canoes and grew yams, bananas and reared pigs. “But these traditional forms of production are being modified and added to as relations with European culture intensify.” With the advent of modern tools, they begin to use axes, saws and hammers when building canoes while still keeping the traditional way of charring by fire. When sailing they began to use “European spritsail type, not Oceanic crab-claw sails and the sail material is now calico, not rush matting.” Furthermore the Mailu people began to get a taste for European food. It is said that packets of rice replaced the sago in many places. To get the cash needed for these new consumer goods, the Mailu produced copra from their coconut palms (1952: vol. 52: 65 -67).

On the north coast, although there was a certain overlap between the Bel, Siassi and Tami Islands trade systems, some artefacts remained exclusively in their own areas, particularly when each trade zone 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. The Bel trade network of Bilbil/Yabob and other villages 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.

Academic writers often have their own specialities 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 art-forms 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 impinge on his economic study.

The archaeology of the Siassi area was studied by Professor Ian Lilley with his thesis *Prehistoric Exchange in the Vitiaz Strait, Papua New Guinea*. He noted the similarity between the material cultures of the coastal areas of the Vitiaz Strait and refers to Bodrogi who said “this picture is uncertain because there is little or no detailed information concerning the archipelago or the Rai Coast, and because it is often not possible to ascertain the place of origin of items of material culture” (Lilley, 1986: 90). It is hoped that this void has now been addressed to a certain extent.

Williams (1933) examined the Gulf Trade to the Port Moresby area and concluded that “The Gulf natives are no sailors by tradition.” They did, however, sail double-hulled outrigger canoes around Kerema Bay. Williams noted the technical advances from paddling canoes with temporary mat sails “next came the use of a permanent mast and sail” and then a double canoe fitted with bulwarks. “Finally we come to the out-and-out *lakatoi*, or what is technically a pretty exact copy of it.” He commented that these *bevaia* were not as big and the *lakatoi* and there were no rituals before the canoe could sail. Furthermore, women were allowed to travel on them as passengers (1933: 140).

An early observer of the *bevaia*, came to the same conclusion. Seligmann noted the following about the return visits of the Gulf people:

> The Toaripi people used to pay a return visit, making *lagatoi* similar to the Motu *lagatoi*. They would arrive toward the end of the north-west monsoon and return with the beginning of the south-east season. They still do so sometimes; two such *lagatoi* arrived at Port Moresby this year [1906]. Enquiries which I made pointed to the customs in vogue by the Toaripi on *lagatoi* being the same, but less strictly ceremonial than on the Motu *lakatoi*. I gathered from the Toaripi people that they had adopted the custom from the Motu. --- During the north-west monsoon many of the tribes of Elema send large canoes of sago to the various villages of the Motuan tribe.... Prior to setting out on this journey, *Avaralaru*, the god of the north-west wind, has to be conciliated. To this end the village sorcerer is engaged at a good fee to intercede with *Avaralaru* and the god of the sea, that they may

> give to the voyagers a safe journey and bring them back safely to their village and friends. 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 – 120).

Comparing life on board the various types of trading canoes:

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 their cigarettes which were kept in the *sareg dob* basket which swung out from the canoe (Mennis, 1980a: 76). When the Chinese-made boats were introduced to the trading system, no cooking was allowed on board. In the Wogeo, "all the canoes carry a fire in a potsherd for the purpose of lighting cigarettes" (Hogbin, 1935: 395). The Bilbils and Wogeo people both had customs for young boys or women who are going on the trip for the first time. In Wogeo, they were told, "to crouch down as low as possible and, keep their heads covered as a safeguard against the spirits who might make them ill" (ibid: 395). Pall Tagari said 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 June1977). Chewing of *buai* or betel nut is permitted on the Bilbil trading trips. Pall said that, before the men left for the Rai Coast, they bought enough betel nut to chew on the trip (Mennis, 1981b 56). The Wogeo, however, ban the use of betel nut on their voyages. (Hogbin, 1935: 395).

Use of Stars:

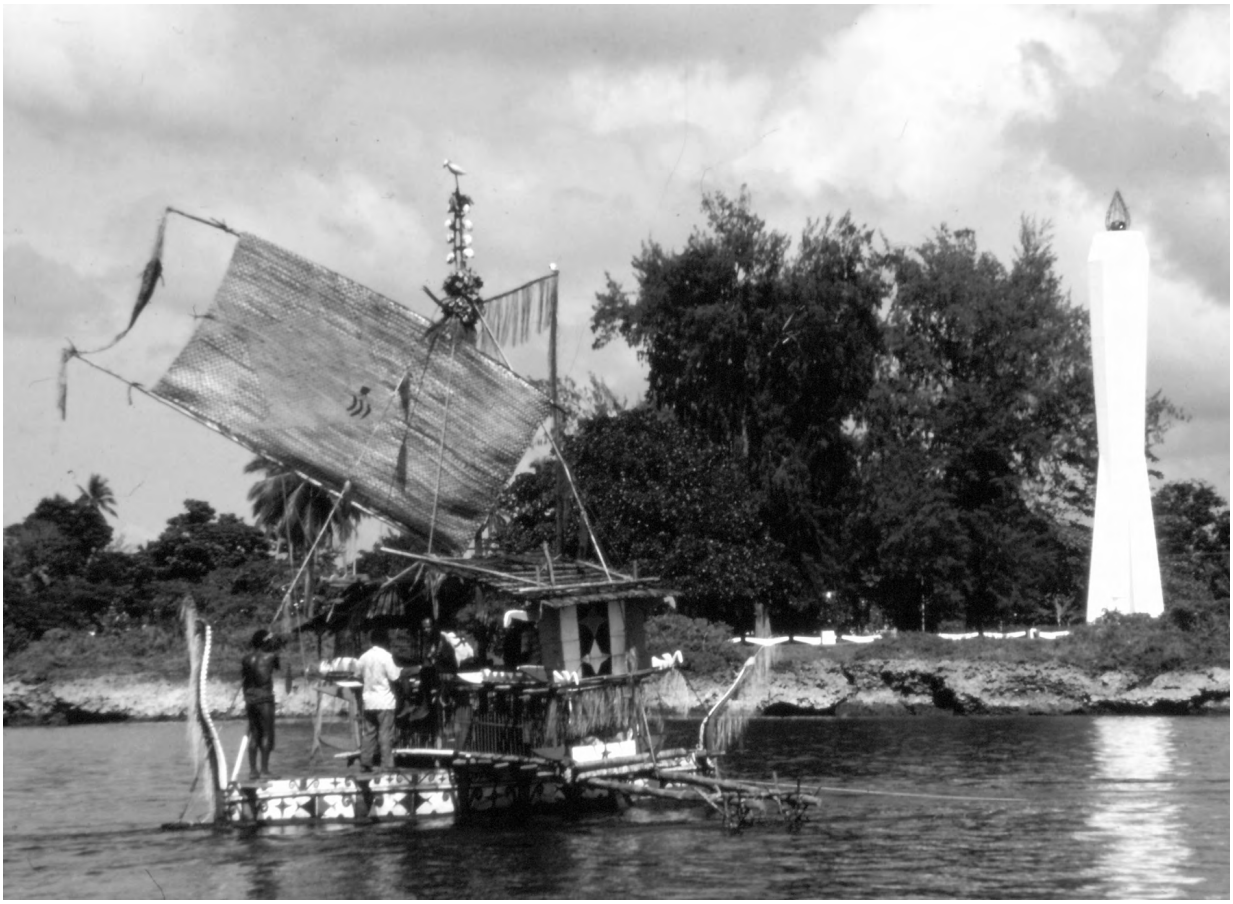
The use of the stars to help with the navigation is general amongst the trading groups mentioned. The Wogeo have only a limited knowledge of the stars, but enough to navigate at night (Hogbin, 1935: 396). The Trobriand Islanders use the stars the least of the different trade systems for, as Malinowski 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). 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 then 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. As mentioned the Motuans used an ingenious instrument called *kino kino* which had a long "whip-like pennant at one end." It was lashed to the rigging with its tip aligned with Venus or other stars which helped the sailors to navigate by the stars (Lewis, 1972: 95). None of the other traders had this instrument and it may have been an invention of a clever sailor to keep the *lagatoi* on course.

Magic beliefs

The spiritual world must be entreated for protection in all trading systems in traditional Papua New Guinea. Nigel Oram concluded that if further research and comparison with other trading systems like the *govi* of the Mailu and the *kula* of south-eastern Papua is carried out, it will be found that religious considerations were indeed a major factor stimulating the continuation of the *hiri*. The Trobriands used magic at every stage of building a canoe and it dominated the *kula*, "as it does ever so many other tribal activities." (Malinowski, 1960: 102) (Oram, 1994: 14). It can now be added that the Bel trading system of the Madang area had many religious aspects to it. Even to the point that when the traditional religious beliefs had to be set aside when they joined the Lutheran Church, they could no longer carry out the trading missions without the help of the *likon* whose magic protected the fleet.

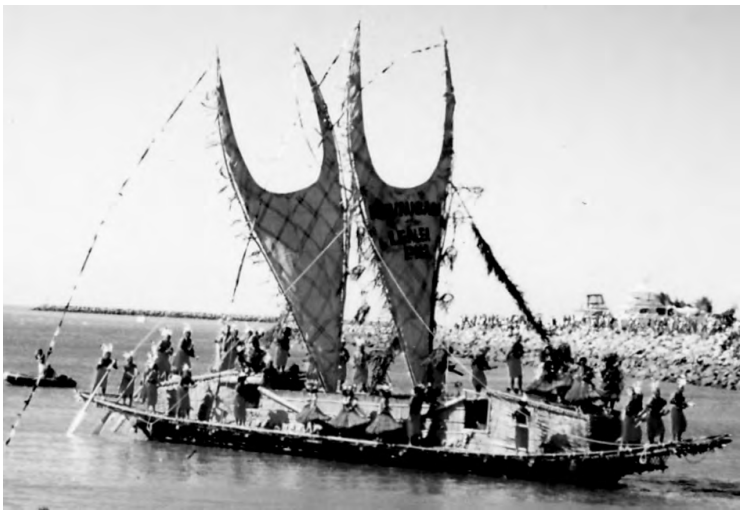
Final comment

There are many similarities of belief, of culture and material goods in both the Bel and Motu trading systems, but each area has also developed their own characteristics which set them apart. The big difference between them is in the styles of the canoes used in the trade systems: the Bel canoes were similar to others on the north coast from Siassi to Madang are five-stage built-up canoes with two or three splash boards, large mat sails and outriggers; while the Motu *lagatoi* are striking with their crab claw sails and wide decks over multiple hulls for carrying the sago home when they had finished their ***Sailing for Survival.***



Above. Lalong *arriving at Madang, 1978.*

Below. Lealea lagatoi *arriving at the Strand, Townsville, 1995.*



Part Four: The *Lalong* and the *Lagatoi*

> *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. --- 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* (Malinowski, 1960: 105).

I have tried to follow Malinowski's advice by studying these vessels as part of a material system of the people who created them. Having studied the canoes in their respective trading systems of the *hiri* and the *dadeng* in the previous chapter, we will now take a closer look at the crafts themselves.

The *Lalong* and the *Lagatoi*

Comparing the *lagatoi* of the Motu people and the *lalong* of the Bel traders, it is obvious that each of these vessels is more like other canoes in their own trading spheres than they are to the canoes on the other side of Papua New Guinea. The sailors of the *lalong* and the *lagatoi* had no contact for over two thousand years and developed quite different craft, even though they were both Austronesian speakers and shared a common ancestry.

The names of these sailing vessels point to common origins in terminology. Haddon and Hornell describe the origins of the word *lagatoi*. "The name is derived from *laka* (Motu form of *wa*, *waka*, *waga*, etc.), and *toi* (Motu form of *tolu*, three)" (Haddon and Hornell, 1991, ii: 230). This term *wag* or *wang* to denote a canoe was widespread along the north coast of New Guinea as well and Maclay refers to the Bilbil canoes as *wang* when he lived there in 1871. According to the Graged-English dictionary, a *lalong* is a one-mast canoe; another name for it is *vang*. In fact the Proto-Malayo-Polynesian name is *vangkang* (Mager, 1952:340). This word is probably the ancient precedent for both the *lagatoi* of the Motu people and *lalong* of the Bel people pointing to when their ancestors arrived from the west. "The Austronesians colonized the Philippines, Indonesian and finally the Pacific via the north of New Guinea, --- [with] the 5-part outrigger canoes (Horridge, 1987: 140).

The *lagatoi* were not really canoes in the strict sense but more like rafts. Although Haddon and Hornell include them in their volumes on the canoes of Oceania:

> The use of these great sailing rafts, for such they practically are, is thus confined to a limited area and to Motu-speaking peoples, but there can be no doubt that the *lagatoi* is merely a development of a double canoe with a crab-claw sail. The absence of wash-strakes and the more simple construction than that of the *orou* of the Mailu may be reductions due to different conditions. The Toaripi of the Gulf, who made *lagatoi* similar to those of the Motu, used to pay return visits. They would arrive toward the end of the northwest season and return with the beginning of the southeast season (Haddon and Hornell, 1991, ii: 230).

Nigel Oram refers to the *lagatoi* as canoes having many hulls, whereas other sources describe the *lagatoi* as consisting of many hulls each of which was a canoe, in this study the term 'canoes' covers both the *lalong* and the *lagatoi*.

In dealing with these two styles of canoes, I will describe various stages in their construction. The fact that the process of construction can be paralleled is in itself a way of comparison: stage one is the hull(s); stage two is joining the hulls and the platform; stage three is making the hull watertight; stage four is the shelters built on the platform; stage five is the masts; stage six is the sail(s); stage seven is the paddles and other steering devices; stage eight are the decorations and totems on the canoe; stage nine is the tools used; and stage ten is the finished canoe its dimensions and shape.

Differences can be observed in the style of canoes. The heavy *lagatoi* of the Motu people could not be pulled up on a beach unless it was dismantled. It could be anchored only offshore in quiet bays or in a river alongside a trading village, whereas the lighter *lalong* of the Bel people could be pulled up on rollers on any beach. This affected the pattern and organisation of the trade system. During the *hiri*, the Motu people sailed through day and night to reach their Gulf destination whereas during their *waing* voyages the Bel people called into one village after another along

the Rai Coast for their *dadeng* trade on the long trading trips, but rarely did they sail day and night. The Motu people were thus restricted in their trade partners to one or two villages along the river in the Gulf whereas the Bel traders could have many trade friends.

In 1978, I studied the construction of a *lalong* in Bilbil, when I accompanied the canoe builders to the jungle to collect the materials and kept a diary of the whole process, which took eight months to complete.

As mentioned, in 1995, some Motu people from Pari and Lealea Villages built two *lagatoi* on Magnetic Island and a team from the Material Anthropology Department of James Cook University including the present author, researched the project and presented reports. The results have been used in this publication.

The canoes of the *Bel* people

The *lalong* was one of three different types constructed by the Bel people. The others were *balangut* which were much the same but longer and carried two sails and the third type was the *mirirog* of a similar construction again, except that the hull was not hollowed out. Maclay reported seeing a *mirirog*, also known as *rak-rak*, on the beach of a Rai Coast village in 1877 (Sentinella, 1975: 272). The *lalong* and the *balangut* both took part in trading trips. Fleets of these canoes from Kranket, Yabob and Bilbil (the Bel group) would set off together with their *tanget* leaves fluttering and with colourful designs painted on their sides. Their trading friends knew what clan each canoe belonged to by the totem on the top of the mast. Long trading trips would take them to the Rai Coast where they traded pots for wooden plates, bows and arrows, pigteeth, paint, food and many other trade items. One of the main characteristics of these canoes was the potcage, which straddled the hull and the outrigger (Mennis, 1980a: 103). Most of the canoes that were built were the one-sail, *lalong*. Using only stone or wooden tools it took just over a month to build these canoes in former days. This was because all the men on the island were trained in the art and there was plenty of manpower. In 1978 however, construction of the *lalong* took eight months, with many interruptions, as the four old canoe builders had to teach the young men..

When Miklouho- Maclay lived on the Rai Coast in 1871, he saw many of these canoes and was amazed at their size. The entry in his diary for 6 October reads:

> 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 neighborhood. 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).

Maia Awak with his model of a balangut.

Both Maclay (Sentinella 1975: 130) and Otto Finsch were lavish in their praise of the canoes lined up on the beach on Bilbil Island, ready for trading trips (Mennis, 1996: 27). Until recently, very little was known about the trading canoes of Astrolabe Bay. When Haddon and Hornell tried to describe them, 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. He gives a good photograph of one at Bilbil with a single mast" (1991, ii: 296). In the illustration by Neuhauss, based on the photograph, the masts are shown as projecting from the shelter with no other support (ibid: 207). When the *lalong* was *c*onstructed in 1978, the mast was firmly embedded in the *puarang*, the mast step, which lay on the bottom of the hull. This shows that the Bilbil mariners provided the information on the rigging and the masts of the *lalong* for the first time.

The following account was compiled while a *lalong* was being built in Madang in 1978. One interesting thing about the canoe that was built in that year was that everything that was used had to be made anew. Often in cases where a canoe is built after a short length of time has elapsed, there are still old *damdam* (prows) and even hulls which have been stored away under a house to be used later. With the canoe in 1978, the hulls, prows, planks, etc. had all to be made anew, as there were no old ones. The only thing to be resurrected was a large old oar.

Hulling the canoe on Kranket Island.

Construction of the *lalong* in 1978

Magic rituals were used at every part of the construction of the *lalong* from before the trees were cut down to when the canoes set sail on the sea. Here we have an object (a log) that was taken from the bush where the bush spirits protected it to the sea where the sea spirits were bound to be angry and attack it. A secret language was used on board the *lalong* to protect it from the sea spirits. When a suitable tree had been found, the men would talk to the *masalai* (spirits) in the trees before they cut them down. "*Masalai* go and find another tree," they would plead, "this tree is no good." They used special magic to keep their axes sharp. Furthermore each night they would burn the chips that had been cut off so that the spirits would not come in the night and put them back. 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 pigs' bone tools (Mennis, 1980). Canoe owners co-opted members of their clan to help put the canoe together once all the parts had been collected.

A.1. The hull

In traditional times, hulls were purchased from Kranket or Karkar Islands and paid for by pots which were lined up for the length of the canoe. In 1977-78, Tomasin of Kranket began to hull the log with the help of two other men. It took several months between interruptions to finish and it was then transported to Bilbil Village by water. On arrival the people were all eagerly awaiting the canoe hull with palm leaves and *gorgor* (ginger leaves) to splash it with sea water in the old way. The men decided that it was too short for a *balangut* so decided to make a *lalong*. They did not measure it, but just went by the look of it. This time, we paid Tomasin in money and not in pots.

A.2. Joining the hull to the strakes and the breakwater

Coastal villagers traditionally supplied some of the materials for the superstructure. Once collected, they would send smoke signals to the Bilbil islanders who sailed to the coast and paid for the bush materials with pots. Bilbil Village is now on the mainland so, in 1978, we took a truck out to the Gogol bush area to collect the materials needed. Here the men cut *gau* trees down and using wedges they split the trunks in two to make planks.

The *tilau* frames, were cut from the *gau* tree. They were L shaped wooden supports 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" (1991, iii: 7). These strakes gave height to the canoe and provided strength for the superstructure – the potcage and the shelters. The men bored 27 holes along the top of the hull on each side and corresponding holes in the top strake through which vines were

The tilau *supports hold the side planks in place.*

Above. Aerial roots cut for the damdam*, breakwater.*

Left.
The damdam *is attached to the* lalong*.*

strung to attach the hull to the *tilau* as well as to the strakes. This lashing made from bush vine is called *milil*. Thwarts were then tied in place sideways, flush with the top of the strakes, and a long wooden rail, the *ro*, was laid along the top of these for the sailors to walk along when they were steering the boat, managing the sails and steering paddles.

The breakwater prows, 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. It was not necessary to cut the whole tree down. To cut the roots out, the men made a hole 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 required length of the root. 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. To secure the *damdam* 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 was called *sual*. Horridge has an illustration of a Balinese outrigger canoe with the hull built up with wash-strakes and a breakwater similar in design to the lower part of the *lalong* canoe. Horridge believed the ancestry to the five-part build up outrigger canoes originated from Indonesia and the Philippines (1987: 18 and 140).

A.3. Making the canoe watertight

After the *damdam* was added, and before the outrigger was joined on, the holes left from the lashings must be made watertight by caulking to make the canoe more buoyant and lessen the risk of the sinking. The holes were filled with putty made by scraping the bark of the *dim* tree (*Euphothiaceae glochition*), which had been soaking for several weeks in the bilge water at the bottom of the hull. Caulking of the canoe was quite a communal effort and it was the one stage that the women were given an active role. They sat and scraped the putty from the *dim* bark with large shells, *kina* in *Tok Pisin* and *kairgat* in the Bilbil language (Mennis, 1980a: 1I14). Once some *dim* was scraped the women rushed it over to the men who inserted it into the holes with tools made from pig bones. Once the *dim* dries it is a very effective way of caulking a canoe. Sungai said that the "*dim* is like teeth. It makes the canoe strong and stops the seawater from going inside" (Mennis, 1980a: 32).

Dimsol *tool used to caulk the holes with* dim*.*

Haddon and Hornell wrongly say Astrolabe Bay canoes were caulked with "shavings dipped in resin" (1991, ii: 295). These two authors are quoting from Semayer who based his work on Ludwig Biro's notes. According to my informants, the large trading canoes along the North Coast of New Guinea were all caulked with *dim* bark and the same word *dim* was used in many places (Mennis, 1980a: 99).

A.4. Outrigger and the bamboo platform

"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 & Hornell, 1991, iii: 8). The outrigger booms were called *yand* in the local language. The float called *sam* was added next.The Bilbil *lalong* had only one float, which was connected to the hull by two outrigger booms (Mennis, 1980a: 34). The Forestry Department in Madang identified the wood used for this float as being from *Annonaceae Cananga odorata* (ibid: 41). The *dom* or connectives between the booms and the outrigger are under tremendous strain and are put in sideways so they will not be dislodged easily.

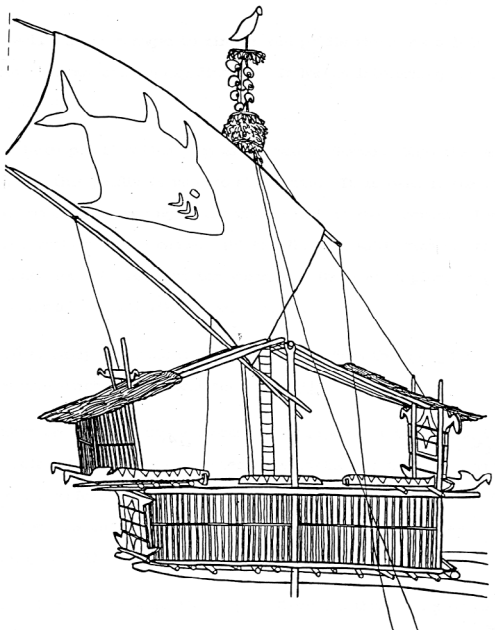
Bamboo platform over lower structure.

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. The booms formed the support for the lower platform. The float was not added at this time because it would dry out and crack.

Short sharpened sticks, the *dom*, held the float. They were sharpened at one end and hammered in at an angle for a strong support. The boom was rested on a support in the correct position and the *dom* were then hammered in. If there was 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).

One lot of the supports for the superstructure of the canoe were the *atat*. This is a T-shaped piece of wood used in addition to the *tilau* as a support for the two platforms of the canoe. The two *atat* supported the platforms on either side of the canoe. To find the right material, the men searched along the Dogia Beach, which is swampy and infested with crocodiles. It was one of the many dangers faced by canoe builders. Although only two *atat* were needed, the men cut six so that the most suitable could be chosen. A smaller *atat*, the *nanau*, was also cut to be used on the mast to hold the sail. The *atat* were cut from the *wap* tree (*Calophyllum inophyllum*).The *atat'*s modern counterpart is the stanchion and took the tremendous force when sailing. The texture of the wood is knotty. It is interesting that the use of this T shaped joint was quite widespread in the built up canoes along the north coast of Papua New Guinea. Richard Parkinson, a noted ethnographer, 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 cited Haddon & Hornell, 1991, ii: 304).

In the *lalong*, the base of the platform is formed by laying poles laterally over the booms. On top of these, other poles are laid parallel to the boom, to form the frame of the platform. The bamboo flooring is then laid between them and carefully sewn in place with a cross-stitch done with a strong vine. A hole is left in the bamboo flooring for the mast to be stepped into the hull of the canoe. Once this platform has been laid the supporting posts are tied to the *tilau* extending their height to the level of the second platform. This lower platform will form the base of the potcage or cargo hold for the canoe. It extends well over the outrigger side of the canoe to balance it and to act as a brace against the wind when on high seas. Damun made the *bidil* cabin on the outer side of the canoe. It has a bamboo floor and a *pei* (board) on one side.



The pot cage of the lalong. By courtesy, Rosalie Christensen.

The pot cage was 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* and slats of bamboo were tied on. Each slat was 4cms in width. On the outrigger side of the pot cage was a small compartment, the *mawarden*, used for storing food, coconuts and firewood - a little bulk-store. The only access to this, when at sea, was by standing on the outrigger.

A.5. The mast

The men chose a *mara* tree (*Rhamnacea 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 the destination of the canoe. If the canoe was only to be sailed locally to Yabob, a nearby island, they might use a bamboo mast. If the canoe was going on a long trip, the mast needed to be 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.

Before the mast was finally installed, it lay at an angle almost horizontally on the beach while the mast extension, the *gungun*; and the mast prong, *nanau*; the totem rigging and the decorations are added to it. The *gungun* consists of two sticks, which are lashed together to the top of the mast, but then diverge and run parallel to each other a few inches apart for a distance of 1.25 metres before being lashed together again. One of the sticks then extends to provide a perch for the white cockatoo, the totem of the Gapan clan. This cockatoo is carved from wood and is the highest point of the canoe. On each side of these *gungun*, a row of four nautilus shells is tied. They are painted in red stripes longitudinally. Underneath the *gungun* is the *nanau*, which supports the sail. This is carved in the shape of a long bird's bill and resembles 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* (*Metroxcylon Sagus*) sago leaves were hung and spliced like the tassels of a grass skirt. These *saksak* leaves are coloured at intervals with red paint. One part of the rigging is the *sareg dob*. On the end of this hangs a basket, the *urel mangas*. This swings out in the wind, but can be drawn back by a small rope that is attached. This vine is not very strong in itself so it is wrapped around the *bu* vine and is then strong enough. *Tanget* leaves are hung on the rigging as tell-tales to show wind direction. Other tell-tales made from bark are in the shape of a long fish. Pall described them as the compass for the canoe and said that if the sailors didn't watch them closely the canoe would not sail well (Mennis, 1980a 107).

The mast is stepped into a diagonal shaped lump of wood, which has a round hole in the middle. This piece of wood, the *puarang*, is laid on the floor of the hull and the mast is fitted into the circular hole and is held in place by the two platforms and the shelter. This contrasts with the Motu mast which is installed roots and all.

Lifting the mast into position.

A. 6. The shelters

The mast step, the purarang*, lies on the base of the hull.*

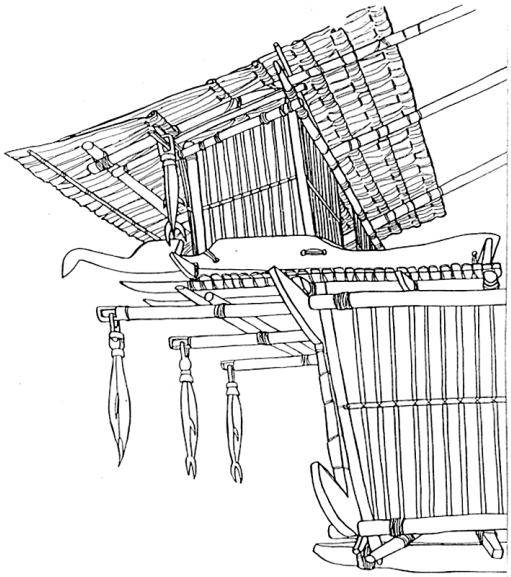
The upper platform was for the crew to sit on, protected by the *morata* roof. The material for the upper platform was collected during the frequent trips to the bush. The outline of the shelter was made of posts, the *senenserer.* Other sticks were crossed at an angle above this second platform to form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

The roof on these canoes is one of the remarkable features. To make the thatching on the roof, the men pull out the centre stick from *morata* leaves, which are then bent over a piece of bamboo about 2 metres long. The leaves are overlapped two at a time to the middle of the previous leaves with a rope made from *kanda.* To 'sew' the leaves together, the skin of a vine, the *mogou*, is peeled off and the vine sharpened at one end. This vine is strong enough not to need a needle and is simply pierced through the leaves in straight stitches. Once these leaves have been sewn over the bamboo stick, that section of roofing is a *pit*. When they have all been attached, the roof is then called *ia tuan*. The name for the whole shelter is *yogou*.

Above. Masil putting the roof on the lalong.

Below right. The mawarden *above the pot cage.* By courtesy, Rosalie Chistensen.



The shelter on the *lalong* may resemble a house as Miklouho-Maclay described it in 1871 (Sentinella, 1975: 40). But on closer observation, it is only an open shelter. If the sides were blocked in as in a house it would be a too strong a windbreak and the canoe would topple over very easily in heavy seas. The supports for the roof are tied to the *tilau* and the *atat* and are very strong. Miklouchо-Maclay really appreciated the shelter on the canoe that he travelled in. The shelter he saw was two metres deep and four or five metres wide. This is larger than the shelter on the *lalong* built in 1978. The roof he 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. He also noted that "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).

A.7. The sail

Derr Mul weaving the sail.

The size of the sail in 1978 was outlined on the sand in a rectangular shape five metres by three metres. Two poles, five metres long are laid on the ground three metres apart. To hold them in place six short stakes were driven into the ground. The men then proceeded to lay the warp of the matting. The vine used is called *mara*. At first the ropes were 6 – 10 cms apart but after much discussion the strands were put a lot closer together and more were added. This was done because, as the men argued, if the *mara* ropes were too far apart the sail would not be able to resist strong winds. The weaving through the warp is done using *garabud* leaves (pandanus) through the warp. According to Haddon and Hornell this is a more advanced style of sail than those used on other canoes in the Pacific where there is no mast and the oblong sail is supported by spars only (1991, iii: 10). Finally a large red fish, the *morogobu*, was painted on the sail. It took only two days to make the sail, which was then rolled up and stored in a house. Before hoisting the mast, the poles that were used to make the sail were removed and new ones added. When hoisting the sail up, a halyard was looped over the mast prong and the sail was hoisted up.

A.8. The Paddles and steering devices

Two sawn timbers of the *pairi* tree (kwila), *bon* (Bilbil language), tree were used to make the paddles. Two planks measuring 4 metres x 20 cms x 5 cms were collected from the local timber mill to make the paddles. Sassai carved one large paddle, the *ulum*. As well the men managed to find an old paddle left over from previous trading expeditions. It had an interesting carving on the handle. When the canoe is sailing this old paddle is used for steering. It is held at the back of the canoe and by moving it one way or another, the steersman changes the direction of the canoe. 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 keel”.

Nautilus shells tied to the mast below the cockatoo totem.

Derr Mul standing in front of the finished lalong.

A.9. Decorations and totems

The Dictionary of Anthropology describes a totem as a natural object especially animal, assumed among North American Indians as an emblem of clan membership (1986: 278). This practice is not limited to the Indians, but is used throughout the Pacific. In Papua New Guinea, some clans chose natural objects like the branches of a tree chosen by the Murpat clan on Bilbil (Mennis, 1981a: 41). The Gapan clan had the cockatoo for its totem. One clan in Bilia village had a black bird whereas another clan, the Matuk, also had a cockatoo. Most of the birds represented here are water birds like the egrets and the *taragau*. A very fitting totem to have on the top of a canoe. The 1978 *lalong* had a nest of leaves at the top of the mast in which the cockatoo totem nestled.

A.10. The finished canoe

The beach section around 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, there were special ceremonies to celebrate the new canoe (Mennis, 1980a: 108). 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 matches the red fish on the sail. Length of this *lalong* was 8.5 metres. Depth of the inside was 46 centimetres. Circumference of the body of the canoe was 176 centimetres. The length of *tilau* was 1.18 metres.

The function of the canoe dictated its shape. It was primarily a trading canoe built to carry over a hundred large 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 and parts of canoes of Astrolabe Bay were themselves seen as important trade items at every stage of their construction. 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. This shows that they played an important part in the material system of the village at any stage of their construction. The technical knowledge that was applied in these canoes was the highest technology reached in the traditional societies who built them.

For a detailed manual on the construction of the *lalong*, see *Mariners of Madang* (Mennis, 2011).

B. The *lagatoi* of the Motu people

Hulling an asi *for the* lagatoi. Groves, 1957. (PMB43_008)

The *lagatoi* of the Motu are like giant rafts with twin shelters on them and a fence running around the perimeter. The dictionary describes a raft as "a collection of logs fastened together in the water for transportation". Haddon and Hornell include them in their volume on the canoes of Oceania, describing them as, "great sailing rafts" (1991, ii: 230). They see that the *lagatoi* as a development of a double canoe with a crab-claw sail. The Motu also built smaller *lagatoi* with only two hulls. A third type of vessel, the *puapua*, were mere double canoes without any special *hiri* superstructure (Groves, 1960:9). Sometimes the individual hulls used in the *lagatoi* were actually used as separate canoes for fishing locally and, if they were of the right length, they could be incorporated into another *lagatoi* ready-made (Douglas, 1994:20).

In the old days, building a *lagatoi* was not undertaken lightly because many sacrifices had to be made.Oram noted:

> Towards the end of the year before an expedition, a man, who informants say, had at least one armshell (*toea*) and other valuables in his box and a canoe hull, set about making large gardens so that he could provide the feasts needed. --- He would then summon his close relatives to a small feast called *lailasi* and they would provide the additional hulls (Oram, 1994: 7)

There were sanctions against husband and wife living together while the canoe was being built. Furthermore to ensure the success of the trading trip, the women had to remain chaste while the *lagatoi* were at sea (Tapp, 1995). Most wives agreed to the undertaking because the venture brought much prestige (Oram, 1976: 10). This is similar to the situation in Bel where the women were instructed to remain pure while the men were away to ensure their pots were sold. One can imagine the conversation between couples if the trading voyages were unsuccessful.

To collect the materials for the first *lagatoi,* the legendary Edai Siabo led his chosen men into the bush with their stone axes to cut down four big trees and turn them into canoes, which were dragged to the river. Other materials like, "timbers, strings, canes, *nipa* palm leaves, dry banana leaves, dry coconut leaves, husks, clothes, old mats and many other kinds of materials of every type were collected and stored together on the spot where the canoes were placed" (Moi, 1979: 49).

In 1883, James Chalmers described a *lagatoi* being constructed in traditional times:

> Four large canoes are lashed together. Their bulwarks are made from the leaves of the Nipa palm sewn together, well fastened with long, strong mangrove poles, and caulked with dried banana leaves. A stage is made all round, so that the sailors can work her without getting inside of the bulwarks. Masts of mangrove, with the roots, are stepped on to the centre, and large sails, made of mats all sewn together and shaped like crab toes, are fixed for working, with ropes made from the bark of the large yellow hibiscus. The anchor is a large stone made fast with long canes, sometimes one hundred fathoms in length. Fore and aft are small covered-in houses, strong enough to withstand a very heavy sea, where the captain, mates, and boatswains sleep and smoke. There are strong divisions of wicker work in each canoe, into which pottery is put, each division having an owner. The pottery is well packed with dried banana leaves, and only when thrown ashore in a gale do they have much breakage (Lennox, 1902: 104).

Chalmers' description of the *lagatoi* matches Miklouho-Maclay's description of the first *balangut* and *lalong* he saw on the Rai Coast in 1871 with its high mast, sails and shelters on the canoe against the elements. Chalmers and Maclay met each other at Hula Village in about 1883 and probably discussed these sailing craft and compared those on the north coast with the *lagatoi* on the south.

B.1 From trees to hulls

In 1887, Lindt described the *lagatoi* as "a species of raft formed of five or more large trunks of the buoyant pencil-cedar tree, hollowed out and skilfully lashed together". Lindt watched up to forty men lashing the logs together and "making splash-boards of lengths of thatch composed of pandanus leaves". Then a gangway was constructed all around from strong saplings and lashed "across the huge sailing vessel, projecting for and aft about 8 feet and 3 feet over the sides forming a gangway all around". Then he noted the two shelters erected on this base. Last of all the mast is stepped into the middle with a sail, "like the claw of a crab". He makes an interesting comment that because these vessels are not really built to sail close to the wind, the people sail in the season when the prevailing wind carries them to the Gulf of Papua (1887: 29).

Barton described the process of felling the trees:

> A *lakatoi* is composed of three or more *asi*, which are made of a softwood tree (*ilimo*) of great size that grows close by rivers in their low alluvial reaches in the Papuan Gulf district. The Gulf natives fell the trees and float them to the *lakatoi* that have arrived on a trading expedition (*hiri*). The trunks are hauled on to the bank of the river, where the visitors hollow them out and shape them. Fire is not employed in this operation. An *asi* is a clumsy dugout with rounded or squared ends prolonged above into a projecting flat beak (l910: 96).

Men celebrating the completion of the hulls, Nelly Bay, 1995. With permission of Michael Chambers, Townsville.

Barton also described certain magic ceremonies that were carried out when the *asi* logs were lashed together. A *lagatoi* sorcerer would burn roots "from a certain wild plant together with bits of cassowary claw and garfish snout in a potsherd." The smoke from this concoction then fumigated the gunwale of the *asi* logs to bring good luck to the *lagatoi* and the crew and ensure a successful trip to the Gulf. Next parcels of green leaves from this same plant were wrapped inside banana leaves and placed in the holes of the gunwale of the *asi* where it will be lashed to the upper deck (1910: 103).

Like the *likon* of the Bel trader, the Motu also had magicians. Their work began with the initial cutting of the trees and collected with poles, canes, rope and bamboo needed for the *lagatoi's* construction. Everything needed to have a spell for its protection. "Pigs had to be sacrificed, rituals had to be observed. Special chants known as *hehona* were sung constantly

Men building the superstructure of a lagatoi. *Note the banana leaves used for caulking the hull.* Groves, 1957. (PMB42_005).

to the beat of the bamboo drums, the *sede*. When the *lagatoi* was finally launched each crew member took his *sede* and the herbs, roots and leaves he would use for his magic on the *lagatoi*" Most *lagatoi* have only four hulls but there was one case recorded of a lagatoi with 25 canoe hulls "which made the vessel as wide as it was long" (Douglas, 1994: 20).

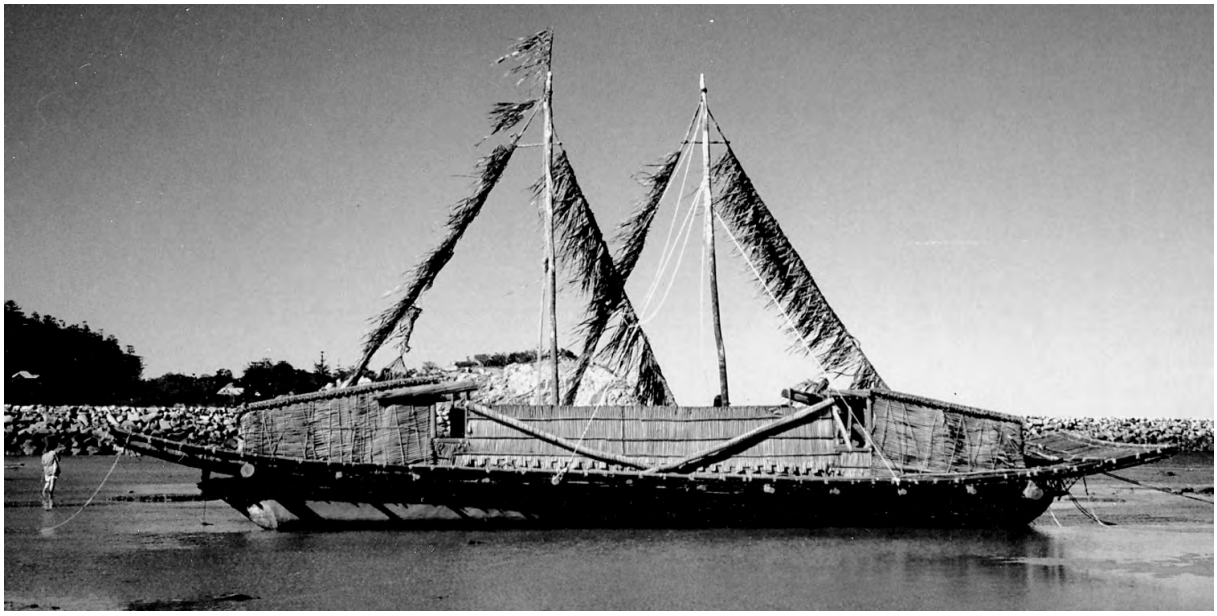
In 1995 at Nelly Bay, it did not take long to construct the two *lagatoi* as the material had been brought down from Papua. The men from Pari built the *Oalabada lagatoi* and the Lealea men constructed the *Kevaubada lagatoi*, for the celebrations for VSO 50 year Celebration Day in 1995 in Townsville. Barton noted that there were not many names to choose from in naming a lagatoi. "There are but three *lagatoi* names, viz, *Bogebada*, *Oalabada* and *Kevaubada*, except in the case of the village of Vabukori which does not use these names". (1910: 103). *Bogebada* means Fish Hawk/Sea Goddess; *Oalabada* means great crocodile; and *Kevaubada* means a large rainbow (Douglas, 1994: 20).

At Nelly Bay, Miria Vaina was helping to build the *Kevaubada* and described the three tasks for the men who had collected the raw materials in Papua before coming down. One group collected the material for the decking. Another group gathered all the cane, banana leaves, sago leaves, coconut fronds and husks required for the lashings and cabin construction. A third group went inland to cut the timber for the hulls.

Lohia Daure of Pari Village:

> I heard it from the old people. If my father wanted to try a *hiri*, the first thing that happened was that the *baditauna* and the *doritauna* met and discussed about making the *asi* for the canoe. Sometimes they cut three or four logs and hulled them for the *lagatoi*. They cut trees and collected material from the bush to start the *lagatoi* (Interview, Mennis, 1995).

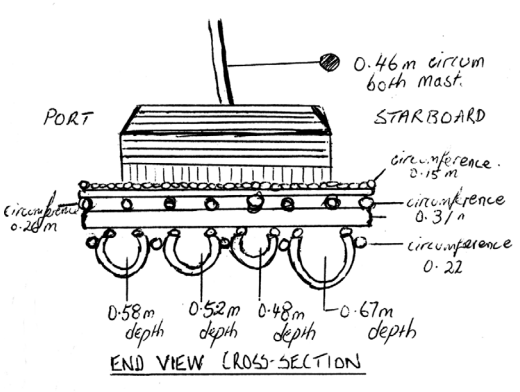
Men working on the shelters of the lagatoi. Groves, 1957. (PMB43_010).

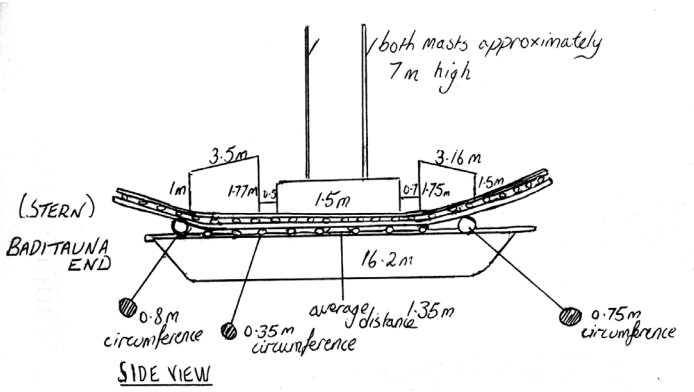


Above. Side view of the Lealea lagatoi *with its supports and rigging, 1995.*

Below left. End view cross-section of Lealea lagatoi. Illustration by Keith Tapp.

Below right. Side view of the Lealea lagatoi *showing dimensions.* Illustration by Keith Tapp.





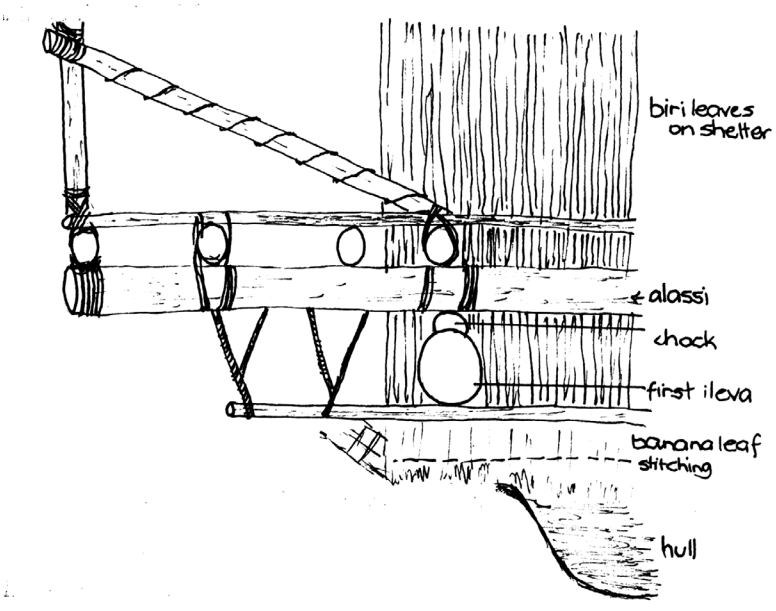
The hulls are made from a variety of trees, which grow in the rainforest, though *irimo* and cedar are preferred. *Irimo* is popular because of its great height and the fact that it has few side branches. It is softwood so easily hollowed. Furthermore the fibres expand in the water causing the hull to float well. Trees growing close to the river tend to be selected, for reasons of ease of transport. The trees cut for the Pari *lagatoi* took only a few hours to fell. Then the logs were hulled over a period of two weeks by six men using steel axes and adzes (Croese, 1995). The Lealea *lagatoi* had four hulls which were felled up river using steel axes and adzes - much faster than using former stone axes. The men made nicks in the trunk of the tree to climb up to reach the correct height at the top part of the tree. There were special ceremonies when the tree was being cut down. The hulls were hollowed out where they fell in the bush. Once the four hulls had been carved they were joined together at the river back turning them into a raft which was floated down the river to the village (Croese, 1995).

In the article on the Upihoi Find in the Gulf, David et al described the hulls of the two *bevaia* which would have been similar to that of the *lagatoi*. It is noted that the front of the hull is that which would have been closest to the ground in the tree from which it was taken. Here it is said the head would be in the front of the canoe but with the *lagatoi* on the return home the head becomes the back showing the *lagatoi* can be reversible:

> The ‘head’, as opposed to the ‘tail’ or stern of a canoe or hull is the thickest end which possesses the greater strength to push through the waves. The bow of both hulls is fronted by a narrow projecting beak-head at the top of the hulls, with the leading stem of the bow sloping forward over a short distance. The stern of each hull slopes backwards and does not possess decoration. Small, square holes immediately below the gunwales (the rim of the hull) were cut out to accommodate a series of transverse

The Pari lagatoi *with its high bulwarks, Nelly Bay, 1995.*

beams by which to link the hulls of the vessel.



Lashings and levels of the Pari lagatoi*, 1995.* Illustration by Megan Croese.

The complete hull has a maximum length of 13.17m along the centre-line, and a beam of 80cm and outer height of 80cm at midships The sheer-line is generally flat rather than curved, with the flat beak also horizontal and only slightly raised. --- Each gunwale rim possesses 10 square holes (the sides of which measures 5–7cm each. The holes are typically located some 6cm below the gunwales. A single, 9cm-wide and 7cm-high raised transverse stiffening member is found on the floor of the hull about three-quarters along its length towards the stern. Such features are typically used as re-enforcement in thin-walled dugouts to strengthen the hull and to stop flexing and bowing of the canoe, as well as to stop the weight of the superstructure from pulling apart the walls of the hull. The hull's outer wall surface is smooth and does not feature cut-marks; in general, the interior wall surfaces are also devoid of clear cut-marks (David et al, 2008: 5).

B.2 The platform base

Barton describes how the *asi* are tied to the cross beams by lashings that "pass through square holes cut in their gunwales". Above this a large platform *(idaho)* is constructed; which "extends beyond the *asi* especially fore and aft" (Haddon and Hornell, 1991, ii: 227). Pratt had more details about the arrangement of the *asi* to form a *lagatoi.* They were laid one beside the other with about 15 cms between them and a wider gap at the ends. "Across the *asi* are placed long bamboo poles, which extend for a considerable distance beyond the sides of the outermost hulls. At regular intervals, along the gunwales of each hull, stout bamboo uprights are erected, and to these the horizontal cross bamboo are lashed" (1906: 72). The dugout canoes forming the hull are held together with a transom, the *ikure*, and a network of bamboo poles (Douglas, 1994: 20).

The construction of the platform is normally done higher up on the beach near the village, where many people could push the finished *lagatoi* into the sea. In 1995 at Nelly Bay, the construction was done near the water as there was a lack of people to help and then the *lagatoi* were pushed into the sea where work continued. Each of the hulls of the Lealea *lagatoi* had forty holes drilled in the top with a power drill in readiness for the ten mangrove crossbeams which formed the basis for the platform of the superstructure. These crossbeams held the hulls in place. At each intersection, the crossbeams were lashed to a section of the hull (Tapp, 1995).

Gangway outside the Pari lagatoi.

This lashing compares with the *milil* lashing on the *lalong* connecting the hull to the *tilau* to which the strakes are later attached. The *milil* binding is very exact and tightly done because the superstructure of the canoe depends on it. With the *lagatoi*, however the many logs were lashed to each other and to the crossbeams to provide a stable base on which to build the platform, which ran in the same direction as the hulls. The platform had to be very strong to withstand the power of the waves when at sea. The lashings were done with lawyer vine which they called *oro*.

It is interesting how the platform base is attached to the hulls, as shown in a photograph on page 113. When hulls were of different height the larger hulls were filled with seawater to bring their level down so the base could be laid across evenly. This water was then bailed out but the larger hulls still stayed at the same level as the smaller hulls. On building the *Kevaubada* there was a problem because one of the hulls had been smashed in Port Moresby and had to be replaced by another hull which was larger.

B.3 Making the canoe watertight

Some caulking was done on the Pari canoe prior to the superstructure being added. Garia Dibora noted that "before the hulls were joined, sticks wrapped with banana leaves were laid along the top of the outer edges of the outer hulls to protect the hulls and stop them from rubbing" (Interview, Croese, 1995). This procedure is regarded as of primary importance. After the crossbeams had been joined and before the decking was tied on top of it, further packing of the spaces was done to make the canoe watertight. Each hull also has banana leaves and other material attached at the end to help with the impact of the waves while at sea.

Keith Tapp studied the process of making the Lealea *lagatoi*. Of the caulking procedure, he noted that dried coconut leaves, coconut husk fibre and banana leaves were wedged in from under the hulls using small sticks. "Longer mangrove branches wrapped in banana leaves as further waterproofing are lashed parallel to the hulls, binding the

wedged waterproofing material firmly to the sides of the hull. Commercial putty is also applied at this time to any cracks, holes and gaps for further waterproofing" (Tapp, 1995).

Mataio Taboro, who was building the Pari *lagatoi,* said:

> Water proofing is done with layers of banana and coconut leaves draped across the edges of the hulls, forced into a tight pack by banging with a piece of timber and held in place by lengths of wood called *ivara.* The excess length is then trimmed back to about half the depth of the hull on the outside. Leaves are also wrapped around the ends or 'heads' of the canoes, folded and tied with cane, so that water hitting the front of the boat runs straight off. The wrapping is further secured by a basket like wrapping. Waterproofing the boat is a careful, difficult and time-consuming process (Interview, Croese, 1995).

In former times, magic spells were laid over the hulls to make sure they stayed water tight. Toensure they were watertight, they were caulked with dried banana fibres. These accounts show that, like the *lalong*, the caulking procedure is done early in the construction of the *lagatoi* while there is open access to all the cracks and holes along the hull needed to be filled. On the *lagatoi*, the spaces between the hulls would have been too large for the *dim* putty which is more suited to the small holes around the lashings of the *lalong*. In each case, the people have found the best material available in the environment to fulfil the need at this stage of construction.

B.4 Making the platform

Pratt described the *lagatoi* platform: "A floor of split bamboo is laid longitudinally across the framework. Openings are left in the floor above each dugout to enable the pottery to be stored in the hulls of the canoes" (1906: 72 cited Haddon & Hornell, 1991, ii: 228). It is probably not wise to generalise about the flooring because different *lagatoi* have different material as the base of the platform. In the *lagatoi,* built in 1995, Tapp described the final platform as being made by the attachment of "numerous small mangrove sticks that comprise the decking (Tapp, 1995). Underneath this are other beams and cross beams as follows:

> Once the crossbeams are fastened (on to the hulls) the overhanging ends are sawn off to an even length. The two large mangrove beams at either end (bow and stern) function to give the decking above it a concave appearance. Eight long lengths of mangrove are then lashed at even intervals above the crossbeams, running parallel to the direction of the hulls. ----- Onto the platform another set of thinner mangrove crossbeams is attached with cane lashings, and the overhanging ends are cut off. Those mangroves used on the platform area that extends further than the hulls are about five metres long, and those along the port and starboard sidewalks are about one metre long. These crossbeams provide the final platform for the attachment of the numerous small mangrove sticks that comprise the decking (Tapp, 1995).

Lagatoi *mast in Manumanu village. Note the roots attached.* Groves, 1957. (PMB43_001).

B.5 The mast

Mast anchored to the platform.

Timber for the masts can come from several varieties of trees including a type of mangrove found in Moresby Harbour. Another tree, the *diharoha*, is also used. When a tree is cut for the mast, most of the roots are removed but some are kept to add balance to the base of the mast. Also care is taken to choose a tree with a proper crook at the top which can be used to haul the sail up on the halyards. To give the mast support when raised into place, the remaining roots was "strapped individually to the canoe hulls to make the mast stand straight and steady" (Douglas, 1994: 20). At the top of the mast is the *Kaivakuku* or clan badge which varies according to the clan. Described as "long cane cylinders decorated with cowrie shells," they are a type of 'tell-tales' to show which way the wind was blowing in the same way as the Bel *lalong* canoe had its *tanget* leaves hung on the rigging as tell-tales to show wind direction. When they are flying at right-angles to the *lagatoi*, the vessel is going well.

Mataio Taboro, owner of the Pari *lagatoi*, in 1995 said the masts are added after the first high-sided fence is built. The preferred timber for the mast is the trunk of the *okari*. Pratt described the masts, but he was not trained in material culture and probably did not note all the details:

> There are two masts, each carrying an Oceanic lateen sail. A mast is made of the stem of a sapling of a species of mangrove, the top having a natural fork over which the halyards pass. The larger roots of the tree are cut off to a convenient length and lashed strongly to the crossbeams of the platform (Haddon and Hornell, 1991, ii: 228).

In making the Magnetic Island *lagato*i, this same procedure was followed. However, Pratt, in his description, did not mention the square of mangrove logs, lashed to the exposed platform crossbeams in preparation for each mast. From observation, the masts are a central part of the interior of the *lagatoi*. Their extensive roots are lashed to these squares of planks to anchor them in the *lagatoi*. They are not, as Pratt mentioned, just lashed to the crossbeams. If this were so they could topple easily in the heavy seas. One is left wondering if the *lagatoi*, early in the century, had masts anchored only to the crossbeams or whether Pratt saw but did not mention the square of logs anchoring each mast to the crossbeams. Mathio Taboro made the observation to Megan Croese that this extra frame is optional, and is added if it is felt that more support is required (Croese, 1995). This shows that the Pari men see the addition of the square of logs used in the Lealea *lagatoi* to support the mast is not always necessary.

Tapp's description of the square of logs is very exact:

> The mast itself consists of the full trunk of a tree and the roots system, which are anchored under the square with large amounts of split cane. The mast itself, which consists of a whole tree complete with root structure, is lashed to the square with copious amounts of split cane. The square and the lashings that bind the mast to the platform are the most important part of the 'root' of the *lagatoi*. Unlike other parts of the construction, these parts are closely inspected by the older men for their approval. The mast must sit very firmly on the square (1995).

When the *lagatoi* were both heading in to Townsville in 1995, one difference was clear between the two canoes. The Pari canoe had a lookout for a 'spyman' on the side of the mast which the Lealea canoe lacked. These 'spymen' watch for changes in the weather and the water. If the wind becomes too strong either the sails will be pulled in, or the boat will head for land. The shells around the fork of the mast are the most important distinguishing feature of the *lagatoi* which belongs to Mataio's family. They are not used by any other clan and allow the boat to be recognised by lookouts on land anticipating the *lagatoi*'s return from trading (Croese, 1995). The Lealea canoe had sails open at the

Inside the shelter of the lagatoi*, 1995.*

top and with a long *pepe* decoration floating down from the mast.

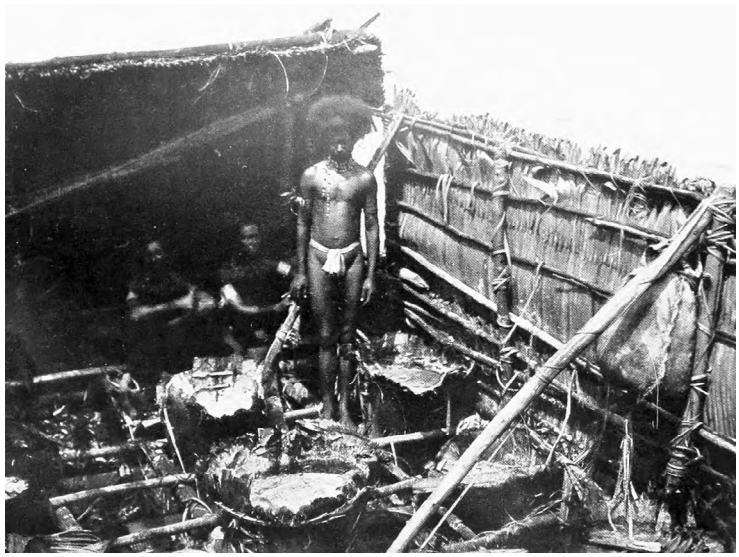
The halyards on the *lagatoi* are the riggings to the mast. These are made from vines called *nanuka*, which are twisted by hand to make them soft. They need to be kept moist because if they dry out the sail will be limp. They are even kept wet while the *lagatoi* is sailing, with a man at the top of the mast pouring water on them (Douglas, 1994: 20).

B.6. The shelters built on the platform

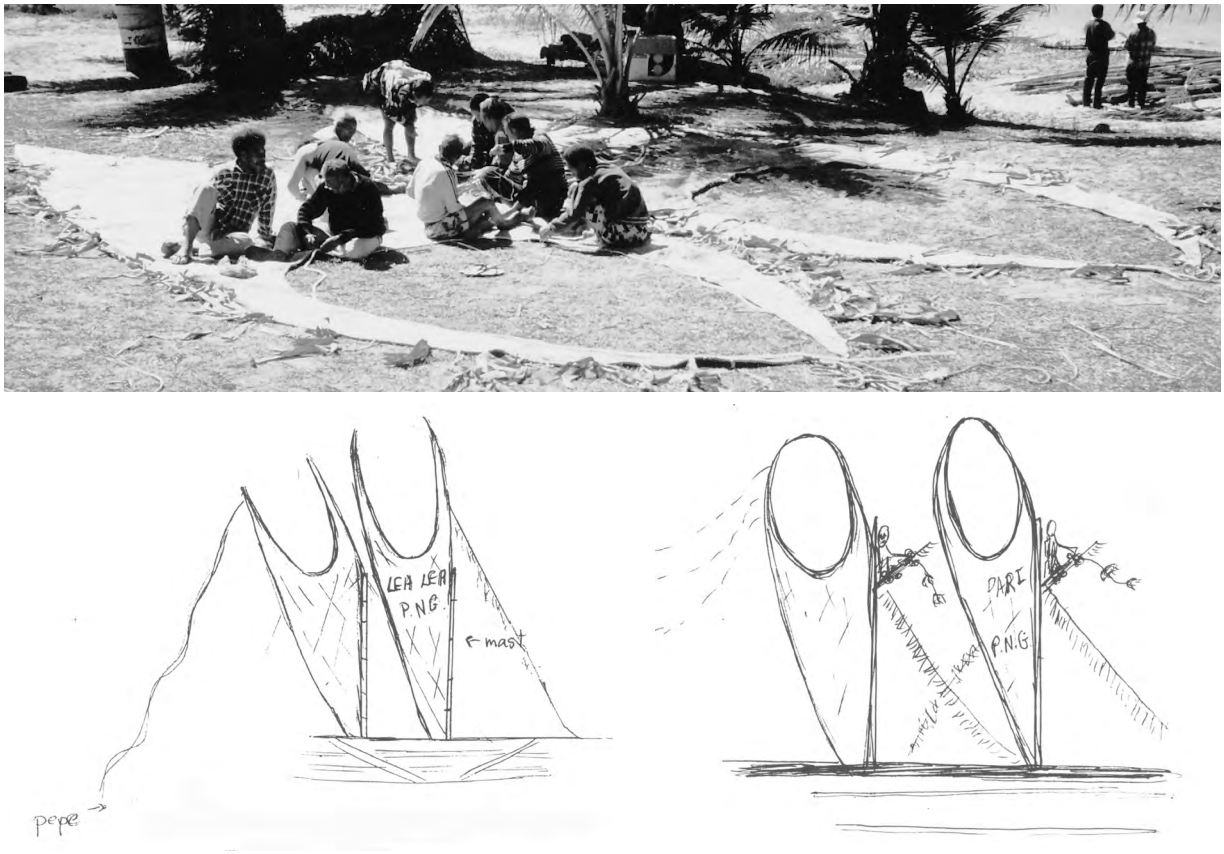
In 1885, Lynne says that, "at each end of the platform, a deck-house is constructed of split bamboo and pandanus leaves. They are oblong huts entirely open toward the centre of the craft and have a flat roof that slopes away from the opening. On each side of the platform large strong crates are made with great care to safeguard the cargo of pottery" (quoted Haddon and Hornell, 1991, ii: 228). These deck houses, or shelters, compare with the open shelters, which the Bilbil people constructed in the *lalong*. However they were open to the weather only on one side thus providing more shade from the sun and shelter from the rain while at sea.

After the platform had been tied on, the next stage with the Lealea *lagatoi* was the building of the cabins of the *baditauna* and *doritauna.* The fence that runs between the cabins on either side of the *lagatoi* is a weather screen for both the pots and the crew. A gap near the cabins gives access to the inside of the *lagatoi* on each side (from observation). The outside of this fence is supported differently in the Pari and the Lealea *lagatoi*. The diagonal supports on the Lealea *lagatoi* is quite a distinguishing feature from the outside as compared to the Pari *lagatoi*, which had only parallel supports. This goes to show that even two canoes from the same area can have distinguishing marks. The cabins are used to store the sago on the return trip from the Gulf. They also provide sleeping quarters for the crew.

Once again it is seen that each village has their own particular way of building the *lagatoi* and it is not accurate to generalise as Haddon



Interior of lagatoi*, showing packages of sago.* Seligmann, 1910.



Top of page. Making the Pari sail on Magnetic Island.
Above left. Lealea lagatoi *sail, with open top. Above right. Pari* lagatoi *sail with closed top.*

and Hornell have done, basing their description on photographs and sightings. In the Pari canoe, apparently there was only a platform running the length of one side of the *lagatoi*. This fence is notably different to the fence of the Lealea canoe, the *Kevaubada*, which has diagonal beams to hold the shelters in place as opposed to the straight supports on the *Oalabada* canoe of Pari. Around the outside of the shelters, a gangway for the sailors is on either side of the canoe to make for easy access from one end to the other.

B. 7. The sails

Traditionally, the outline of the sail was laid out on the beach and pandanus leaves were woven together to fill the spaces then sewn together and attached to two or three long tapering poles made from mangrove timber. The sails were made by the sail captain of plaited mats sewn together and attached on either side of a long tapering mangrove pole or spar. When under construction, sails are carefully measured to ensure that the two peaks of each are of equal length. As the *lagatoi* can be sailed in either direction the rigging is arranged so the backfilling of the sail can be done with a minimum of fuss. Haddon & Hornell quote Pratt's description of the sails as having "the form of an elongated ellipse, one end of which is pointed and the other very deeply emarginate, hence the term 'crab claw sails' Haddon and Hornell (1991, ii: 229). He did not mention that the shape of the crab claw sails could denote which village the *lagatoi* were from. The Pari villagers jealously guarded their right to close the crabs claws together at the top whereas in the Lealea *lagatoi* the two claws were open. Most of the old illustrations in books depict the sails as being open. The Pari people used the design of the closed claw as an identification mark. During a visit to Port Moresby, Haddon remarked that there were no *lagatoi* rigged – once again he had to rely on photos for his description. The group of students on Nelly Bay were able to study the process in detail.

Neyret notes the rigging on a *lagatoi*:

> The two sails are erected in tandem on the masts which are held on the base with crossbeams. Two stays attach the sails to the mast. A fork at the top of the mast serves as a pulley and strong ropes

> serve as halyards. The sail is hoisted first horizontally to the top of the mast, then the point is turned vertically and the lower end is tied to the base of the mast (1976: 121).

Haddon and Hornell quoted Pratt (1906: 73), on these sails:

> Being stretched on a frame they cannot bulge but swing like boards. Their points rest on the deck and work freely in a socket. The sails are hung lightly to the mast by braces and there is no clewing up. In spite of their comparative rigidity they are quite manageable, and in the case of sudden squalls can easily be let go. (1991, ii: 229).

When they visited the Gulf on a *hiri* trip, the crew lived alongside the *lagatoi* in *kalagi* huts built "largely of material from the *lagatoi.*" On Nelly Bay they had more comfortable accommodation near the beach but also built a *kalagi* shelter near the *lagatoi* and another lean-to called *karu* where they cooked meals during the day. Both of these shelters were made of material they had brought down from Papua which would later be used to make the sail. It shows the utilitarian aspect of re-using material for the *lagatoi* for other purposes until needed for the vessel.

In 1995, the woven sails for both the *lagatoi* were brought down with the people from Port Moresby. They had been made in the Gulf where some people are expert weavers. According to Garia of Pari Village, since the sails had been paid for by the City Council, they had to be returned to Port Moresby after the *lagatoi* had sailed into Townsville. The sails are woven "from pandanus leaves which are sewn together and attached to two or three long tapering mangrove poles." From the masts, *pepe* or long streamers swing out denoting the ownership of the *lagatoi* from a distance by their different lengths. (Douglas, 1994: 20).

On 9 August 1995, I observed the process of making the sail in Nelly Bay:

> From where I am sitting I can see a long stretch of beach with headlands on either side. There is a cool breeze coming from the beach and a taste of salt in the wind. Beyond are the fluttering red flags on the Pari *lagatoi* and over yonder is the Lealea *lagatoi* both nearly completed. Now it is time to make the sails in the typical claw design. There is a group of men tidying up the remains of material from the canoe construction. In the middle is a type of clothes line called *kalagi* consisting of a post held between 3 supports. It previously had a covering over it and was used as a shelter. Its name *kalagi* is the same name as the temporary accommodation the men constructed when visiting the Gulf villages. In typical style some of these poles will be used to make the sails for the *lagatoi*. Nothing goes to waste. There is also a small wind shelter shaped like a tepee, the *karu,* and made of three poles and some coconut fronds where they kept their food and water, while working on the *lagatoi.* It is now being dismantled piece by piece by Mari removing the three poles and the coconut fronds. The Pari people are putting out long poles which have been debarked and indented near the top in preparation for making the sails. Daure and Mari begin to work on the framework for the sail by tying the poles together in a V shape. Initially there are four poles; two on each side but they have been extended by additional poles to give the correct length. Later this became the framework for the sails which lay rolled up on the beach. The men then unfolded the sails and marked out the shape of the matting needed for the supporting poles just as the Bilbil men had done for the sail of the *lalong.* Having marked out the shape needed, the pandanus mats were cut and sewn together within the crab claw shape (Mennis, 1995).

B.8. The paddles and anchors

Neither the *lagatoi* nor the *lalong* were paddled in the traditional sense of the term because they were propelled by their sails. However, if the canoes became becalmed, they could possibly be paddled a short distance. The paddles and oars were used to steer the vessels.

Mataio described the Pari *lagatoi* steering and mooring methods: "The *lagatoi* is steered with large paddles which the crew use under the direction of the sailing master. Usually they operate from the back of the vessel but may need to move along the platform to push off from sandbanks" (Interview, 1995). In a large vessel like the *lagatoi* it would not be feasible to paddle the canoe in the way that small canoes are paddled.

Two types of oars were used on the *lagatoi:* The *barar* is the small one with a handle that can be manned by just one person; the *barabau* however is a huge flat, thick steering oar made from very strong timbers. The latter requires 4 or 6 men standing on the platform (*maramara*) projecting over the end of the *lagatoi*. During the voyage to the Gulf,

the *baditauna's* end of the lagatoi led the way so the oars were manned by the *doritauna's* crew. On the return journey the oars were carried to the other end and were manned by the *baditauna's* crew (Douglas, 1994: 20)

In 1995, neither of the *lagatoi* had anchors, as it was thought there was no need for one for the trip from Magnetic Island to Townsville. According to Vaina of Lealea, the anchor of the *lagatoi* was usually in the shape of a large rock, which resembled a pregnant woman (Boylan, 1995). Lindt, who studied a *lagatoi* in Hanuabada in the 1880s said, "The anchor is a large stone made fast with long canes, sometimes 100 fathoms in length (180 metres). The usual method of securing the vessel is to come close to shore and use long lengths of cane tied to tall tripod stakes driven deep into the sand" (1887: 123).

According to the Hiri Moale Magazine, the anchor was made with several large stones encased in a "network of heavy cane lashings. It is attached to the *doritauna* end with lengths of rattan called *vokada* knotted together." Very strong magic and spells were needed to hold the anchor in its place. Strong spells were cast over the anchor because the safety of the canoe depended on it and the cables which attached it to the canoe. "When the anchor was being lowered two men swam down with it into the water to make sure the cables were not tangled. They also had to watch that the anchor did not sit awkwardly on the seabed. Even today it is an offence for "an outsider to touch the anchor or its cable or to step over it". The anchor is regarded as very holy for the *lagatoi* depends on it to keep it safe. There are even special songs to sing to it. (Douglas, 1994:20).

B.9. Decorations and totems

Mary Bani studied the decorations on both the *Oalabada* (the Pari *lagatoi*) and the *Kevaubada* (the Lealea *lagato*i).

> Some of the decorations used on the *lagatoi* belong to a particular clan in the village and others denote the village itself and no specific clan. So we have people of the Gunina clan of Lealea Village who have a particular decoration called *reke*, which hangs down in front of all the hulls of the *lagatoi*. Its purpose is to denote which of the hulls are new and which have been used before. The hooped circle of rattan lashing design (*kobo kobo*) is woven in front of a new hull. This is a good device to record which are the new hulls (Bani: 1995).

B.10. The finished *lagatoi*

In 1995, the two *lagatoi* were anchored off the beach at Nelly Bay ready to be sailed to Townsville for the 50th anniversary of the peace declaration after World War II. Papuan dancers from both Pari and Lelea villages arrived from Papua New Guinea and took part in dances and songs to celebrate the launching. The bunting fluttered from the mast stays and the sails were rolled up ready to be raised. As mentioned, the Pari canoe, the *Oalabada* had a spyman platform at the top of each mast from where a lookout would stand whereas this was missing on the Lealea *lagatoi*, the *Kevaubada.*

Both canoes were made in the traditional way with natural materials. The two shelters on either end of the platform were rather similar in appearance. The fence on the Lealea canoe had long diagonal supports unlike those on the Pari canoe which had parallel supports. When sailing to Townsville, the sails were raised and the fluttering *pepe* decorations on the Lealea *lagatoi* were noticeably longer than those on the Pari canoe. The length of the *pepe* denoted which village the *lagatoi* was from. Crowds of spectators gathered to see the spectacle of the canoes arriving and the dancers on the beach. It was a great occasion reflecting the *lagatoi* of the past.

In 1884, the largest *lagatoi* which arrived at Port Moresby from the Gulf consisted of 14 *asi* and measured 59 by 51 feet (18 metres by 15.5); two smaller ones measured 54 by *37* feet (16.5 by 11.3 metres) (Barton quoted by Haddon and Hornell, 1991, ii: 227). According to the diagram by Keith Tapp, the length of the Lealea hulls in 1995 was 16.2 metres although the overall length was slightly lengthened by the platforms which overlapped the hulls. The masts were 7 metres high and the width of the platform was 4.2m. (1995). There were four hulls used on this *lagatoi*.

Comparison of the *Lalong* and the *Lagatoi*

Malinowski believed the canoe "is an object of cult and admiration, a living thing, possessing its own individuality" but he also stressed that we should not make a "fetish of the object itself" (1960: 105). While the *lagatoi* were anchored on the beach at Nelly Bay in 1995 and the *lalong* earlier in 1978 at Bilbil, crowds of onlookers gathered about the canoes admiring the colours of the designs, the fluttering bunting and the myriad lashings used to tie the whole structure together. The launching of the canoe is celebrated with brightly garbed dancers in grass skirts

The lalong *builders of Bilbil, 1978.*

wearing shell decorations. The Motu dancers played their *sede* instruments. Special songs of welcome to the new canoe are sung and special rituals are performed.

A canoe can be seen as a symbol of a culture and a people. It is often the highest form of technical advancement of the culture. The *lalong* appears to be the flimsier of the vessels. It is built upwards with the potcage straddling the outrigger and hull to provide the pot storage, whereas the *lagatoi* is built sideways with many hulls providing storage for the pots as well as the platform above and the two shelters on either end giving more storage. This was true not only for the materials for the hulls, decking and superstructure but also for the waterproofing material. The end products are so very different. The *lalong* has two platforms as opposed to the one platform the *lagatoi* has. As a result it could tip over more easily than the *lagatoi* which sat lower on the water while at sea.

There are many points of similarity apart from their construction: both canoes were sailed in fleets; both used the prevailing trade winds; both were used to carry earthenware pots on trading expeditions; and both had to have storage within the canoe where the pots could be protected against the elements. Both canoes were the highest forms of technology of their respective villages and the people gained much prestige from sailing them.

1. The hull(s)

In Madang, the hulls were paid for by a line-up of pots the length of the hull as payment. There is a query whether the pots were used to pay for the hulls in the Gulf area. I think the *asi* hulls were part of the whole deal with the Gulf trade partners. The Motu brought pots to the Gulf for the sago but also perhaps to pay for the hulls as well. Brian Durrans (1972: 358) states that the Motu did not buy the hulls with pots. In neither Williams (1972) nor Barton's account of the exchange ratios in the *lagatoi* trade "is there any reference to a canoe hull being exchanged for anything other than an armshell" (Barton, 1910). I tend to disagree – the object of the *hiri* was pots for sago and also extra canoe hulls, so the pots could be part of the exchange also.

The materials for the superstructure of both the *lalong* and *lagatoi* were traded from the local area whereas the hulls were from further afield. In the case of the *lalong*, the hulls came from Karkar or Kranket Island and so were dependent on the physical environment of another area. To transport the hulls from the bush to the village presented some difficulties. The Bilbil would haul the hulls on rollers to the nearest water and then tow the log or finished hull behind a canoe. The *lagatoi* hulls were from the bush areas near Port Moresby but others from the Gulf bush areas were added later. The Motu people relied on rivers to bring the hulls to the coast.

Whereas the *lalong* (or *balangut*) had only one hull, the *lagatoi* had many hulls lashed together. This is one of the basic structural differences in the two types of canoe. The hulls were hollowed in much the same way with a combination of burning and chipping out the shape. Before the trees were felled prayers to the spirits were said, thus safeguarding the canoe and the workers from harm from the spirits. The Motu also built smaller *lagatoi* called *hakona* similar to the *lagatoi* but with only two hulls. They may have been built up with more hulls during the stay to the Gulf. As already mentioned, Groves mentioned a third type of vessel called *puapua*, which were mere double canoes without any special *hiri* superstructure (Groves, 1960:9).

2. Joining the superstructure

There was the same binding of the hull(s) with the superstructure to withstand the forces of the sea. Bush vines were used and most of the lashings were the crossover variety like the *milil* binding used in the Bilbil canoe. Holes were drilled on the top of the hulls to add the superstructure. All materials were collected from the bush areas but often not from the land belonging to the Motu or the Bel people. Vines and canes were used to attach the superstructure onto the hulls.

3. Caulking the canoes

The Bel people used quite a different method of making their canoes watertight from the Motu people. This was because of the style of the canoe. The *lalong* had small apertures around the lashings and the holes could be easily caulked with the *dim* putty whereas the *lagatoi* had wider apertures between the hulls that needed to be water proofed. This could be done only with large amounts of coarse material like banana leaves coconut leaves and husk fibre and even mangrove branches wrapped in banana leaves were used. The *dim* putty was used to caulk canoes along the north coast of Papua New Guinea but the Motu people seemed unaware of its use. It would be interesting to investigate whether the *dim* trees are available on the south coast or whether it was thought the banana leaves, coconut husks and coconut leaves were good enough to fill the large areas that needed to be rendered watertight. Keith Tapp, in his analysis of the caulking of the Lealea canoe, noted that commercial putty was used to fill any "cracks, holes and gaps for further waterproofing." It would be interesting to know what was used traditionally for this procedure of filling the small crevices in the *lagatoi*.

The lagatoi *builders of Lealea.*

4. The platform

In traditional times, the builders of both the *lalong* and the *lagatoi* used split bamboo for the flooring. Bamboo can be cut in long lengths which can be then split sideways and laid on top of the hard crossbeams to give a springy flooring which is comfortable for sleeping as well as for living quarters. However, it is best not to generalise about the flooring of the *lagatoi* because, in 1995, the Motu people used other material for this. As noted by Croese, the flooring is made with *alassi,* which run lengthwise across the *ilava* and form the base for the platform and deck. Thinner sticks are added to complete the flooring. On the Lealea canoe, thin mangrove sticks are used on the platform area. Between 16 and 24 mangrove sticks are required for the construction of the platform (Croese, 1995).

Another similarity was that the *lagatoi* had a wide platform right around it along which the sailors could walk to get from one end of the vessel to the other, while the Bilbil canoe had a much narrower gunwale which served the same purpose and was placed above the top strake.

5. The mast

In both instances the masts were made from tree trunks even though different species were used. In the case of the *lagatoi*, the use of a trunk of a tree together with aerial roots is an ingenious way of using natural materials to give a right-angled shape to give strength and balance to the mast and sail. The tree chosen usually had a natural crook at the top to pass the halyard around. This was a technique to use natural curves and bends in a time when there were no hinges to make right-angled junctions. It is similar to the *atat* on the Bilbil canoe, which is a right-angled piece of timber found along the beach and used to support the superstructure.

In the case of the *lalong,* the mast was cut from the *piari* tree, with the roots trimmed off. It was anchored by a block of wood called *puarang* and held in place by the platforms on the *lalong*. On the other hand, the mast on the *lagatoi* was anchored in the hull by lashing its roots to a square of logs set below the platform

6. The shelters

In each case, the shelters served the same purpose, providing shade and shelter for the crew. Their method of construction was similar in some ways. Leaves were used for thatching and bush vines to connect the many joints. While the shelters on the Bilbil canoes are open on each side so they would not block the wind, those on the *lagatoi* are like small houses with three sides opening to the middle of the canoe. They do not trap the wind, however, because the fencing running along the sides of the canoe protects them and renders the whole top structure as one unit over which the wind passes. While the shelters on the Bilbil canoe are too open for them to be used for pot storage, those on the *lagatoi* of the Motu can store pots as well as the parcels of sago traded for the pots.

7. The sails

In both cases the dimensions of the sail were outlined on the beach and sail supports were anchored to the sand. The men gathered around and discussed the way to make the sail. The sails of the *lalong* had to be woven between the two supports for the sail stretched out on the beach at Bilbil, whereas the *lagatoi* on Nelly Bay had the supports tied on the beach in front of the canoes. The sails had finely woven mats (like floor mats) that had to be cut and sewn together to fill the gaps between the supports of the sails. In traditional times the shape of the crab claw sails of the *lagatoi* became symbols of the Papuan villages that built them and they were totems of the tribes. Both the *lalong* and the *lagatoi* vessels were majestic and gave prestige not only to the crew but also to the whole village that had produced them. The greatest visual impact of the canoe came from the design of the sails and being large in size was probably the first item to be noticed from a distance.

8. The paddles and steering devices

Pall Tagari of Bilbil noted that to steer the canoe there are two things to do. “One is to watch the sail and the other is to watch the outrigger. If the wind blows and you pull the sail around too much you may sink the canoe. So to prevent this from happening you should slacken the sail and not tighten it too much. The steersman must watch the outrigger too so the canoe goes in the right direction for the sail. If he only watches the outrigger, the mast and the sail might break and the *saman* (outrigger) might go down” (Mennis, 1981b: 53).

The *lagatoi* could also tip over in the high seas. They had to be stronger because they could not call in anywhere if the seas were rough but had to keep going to their destination in the mouth of one of the rivers in the Gulf (Barton, 1906: 7). Occasionally, however, the *lagatoi* did anchor sometimes at night if the locals were friendly. One thing these canoes had in common was that the large paddles were not used to paddle as in small canoes. They were used to steer with or to push the canoe off sandbanks.

9. Decorations and totems

The decorations on the canoes in both places usually belonged to the clan and not to the village as a whole. Thus the *Kevaubada* of the Lealea canoe belonged to a clan in the village and was a trademark recognised by their trade friends in the Gulf when the canoes approached. The totem of the clan, the *Kaivakuku,* hangs from the mast and its design depends on who the owner of the *lagatoi* is. “They often consist of long cane cylinders decorated with cowrie

shells. When the *lagatoi* is sailing 'well' these 'badges' fly at right angles to the hulls. A *pepe* decoration is flown on some *lagatoi* and the length of it showed which village the *lagatoi* belonged to (Douglas, 1994: 20).

In the case of the 1978 *lalong*, the totems were from the Gapan clan in the village. On the top of the mast was the totem of the owner's clan and from the mast hung the large mat sail made from pandanus decorated with a large red fish (Mennis, 1980: 29).

Symbol of family life

The canoe itself is a symbol of the partnership between a husband and wife. One old canoe builder, Gab, pointed to the outrigger and said it was the wife and the hull was the husband. Just like in real life the wife must follow her husband wherever he goes, (Mennis, 1980a: 105). The people had a very strong sense of family as described by Otto Finsch in his book the *Samoafarten* (Mennis, 1996: 24). The very naming of various parts of the canoe is symbolic of the importance of the mother/child relationship. The large supports of the canoe were the 'mother tilau' and the smaller ones were the 'child *tilau*'. This pattern was repeated for the *atat*. So that even while building the canoe the men could see that as the *tilau* and *atat* supported the upper part of the canoe, so also did the strong ties between mother and child support the village life.

The same is true of the lagatoi. The anchor was a large rock, which resembled a pregnant woman. Interestingly, the anchor purported to have been used by Edai Siabo, the first *lagatoi* builder, can still be seen at Boera Village. Furthermore the *lagatoi* anchorman could only be a man whose wife was pregnant. This metaphor of family life is fundamental facet of Austronesian canoes. Horridge speaking of the Balinese *jukung* wrote "A canoe is given its life-spirit --- by implantation of gold, the magical symbol of semen – placed in the most important joint. The split stem represents the human crotch. The ceremony of *kawinan*, when the hull is impregnated with life, is pre-Hindu and probably Austronesian or older." He notes that the Balinese, who are not Hindu, have the same ceremonies and Malinowski (1922) describes the same in the Trobriand Islands. Horridge concludes "the Balinese *jukung* ceremonies all reinforce the main theme. The 5-part canoe is a married couple, combining split stem and dugout hull as male and female in a consummated, magical union that attracts and holds the spirit of the canoe" (Horridge, 1987: 72).

Prestige

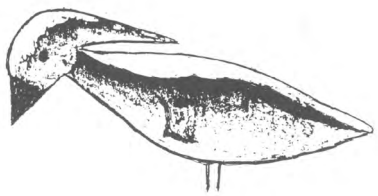
Owners could gain much prestige through their canoes, not only in the village, but also in other villages along the coast and inland along the trade routes. Socially, the canoe was seen as the means of communicating with other villages. The people who lived sedentary lives along the coast saw the canoes as a means of social contact with other villages and they were a distinguishing feature of these people's culture.

General Conclusions on the *lalong* and the *lagatoi*

In comparing the construction of the *lalong* and the *lagatoi*, reference can be made to Spier's work. He mentioned "the three major elements of the technological input are knowledge, resources and labour" (1970: 3). Each of these elements was important in the canoe building. Firstly, knowledge came through the Austronesian speakers to which both the Bilbil and Motu people belonged. Secondly, the resources were found locally or imported using the earthenware pots as collateral. Thirdly, labour was found in the village itself with the older generation teaching the younger ones. All these together made it possible to produce the highest form of technological output - the trading canoes.

Both the *lalong* and the *lagatoi* had a significant place in the culture of the people and reflected the highest form of technology and art. In both cases they used ingenious techniques used by the people who had no knowledge of hinged joints (Mennis, 1980: 35-36).

While the process of building the canoes can be paralleled, as above, each vessel was quite different in appearance: while the *lalong* had only one hull, the *lagatoi* had many hulls lashed together. In this basic structural difference they were more similar to other canoes built in their trading zone.



Left. Close-up of the white wooden cockatoo on top of the mast; the totem of Maia's Gapan Clan.

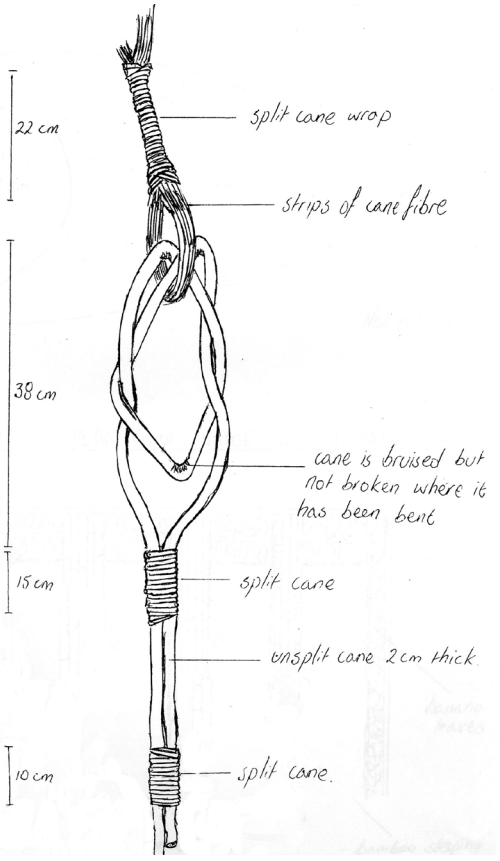
Above. The lalong *sail in the early morning light is at 45 degree angle to the mast and held in place with rigging. Above the sail is the top of the mast with the nautilus shells and white cockatoo totem.*

Left. The sail of the balangut *2013, rolled up beside the canoe. The weaving of the pandanus leaves through the mara vines is wider than that on the lagatoi. (Sir Peter Barter).*

Right. Lagatoi. *Two Pari men putting the finishing touches on the sail, which is joined at the top unlike the Lealea lagatoi. Note the many poles tied together to support the sail.*

Close-up of the sail rolled up near the mast on the lagatoi. *This mat sail was finely woven from natural material and then cut to fit the shape of the crab-claw sail.*

The cane used on the rigging must be wet when it is tied so that the final lashing will be tight. (Keith Tapp.)

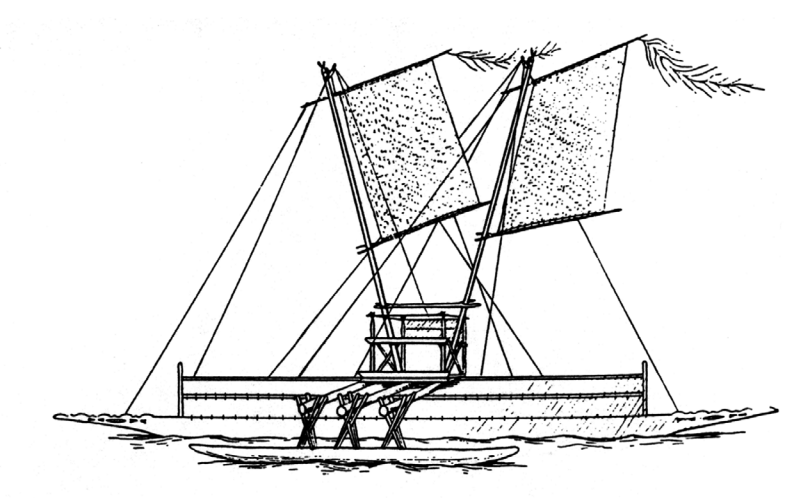


Outline of sail for the Pari Lagatoi.

Comparison of the *lalong* and the *lagatoi* with other canoes in their trading zones

The technical know-how to build the canoes in this study was not just developed in a response to the environment. It was most likely brought with the Austronesian speakers when they arrived. It is interesting that canoes in the Santa Cruz area of the Solomon Islands had the distinctive crab claw sails of the *lagatoi* but more especially of the Mailu as they were of a simpler design (Howe, 2008: 218).

The Motu people influenced those they came in contact with in their own trading Zone and their *lagatoi* are like those in the Roro and the Gulf areas. Similarly, the *lalong* of the Bilbil people was more like the trading canoes of Siassi part of a larger zone of the three trading spheres of Bilbil, Siassi and Tami which interlocked.



Siassi two masted canoe by Sherwin (1936) in (Haddon and Hornell, 1991, ii: 158).

Bodrogi postulated with Harding that certain art forms and artefacts were limited within a trading zone each of which could consist of several trading spheres (1979: 271). The canoe styles themselves also appear to be limited to the trading zones of these high sea traders. Because they had contact with other trading zones, the craft they designed were more comparable to those used in their own greater trading sphere than they were to canoes in other trading spheres. So the *lagatoi* of the Motu people were like the canoes built by the Mailu people to the east and the Gulf people to the west. Similarly the *lalong* and *balangut* of the Bilbil people was similar to the Siassi and Tami canoes to the east.

Siassi canoes were very similar in design to the *lalong* and *balangut* of the Bel. Both had the one long hull with added wash strakes and a shelter on board for the crew. Both had a single outrigger connected to the hulls by curved booms. The Siassi canoes usually had three booms whereas the Bel ones had only two booms. Another noticeable difference was in the breakwaters. While those of the Bel canoes zigzagged upwards, the Siassi ones were squat and carved with crocodile reliefs. Lilley described one Siassi canoe as being 17 metres long, having a double platform and two wash strakes which "increased the depth of the canoe to 1-5 – 2 metres. While it had a crew of five or six men it could also carry many passengers and two tonnes of taro or 200-300 pots" (Lilley, 1986).

Neich adds some details of these canoes:

> The two diverging masts are permanently stepped close together in the centre of the hull, resting on a solid ridge projecting from the floor of the dugout. Both sails are rectangular, made of strips of pandanus leaf in check plaiting. Streamers are attached to the few ends of the yards and boom, giving an indication of the wind direction (Rowe, 2008: 215).

The Siassi men traded in these canoes to the west to the Rai Coast where they traded food for the Bel pots which they then traded across to West New Britain. They also traded Sio goods down to the Tami Islands where intricately carved wooden plates were a popular trade item. Because they had to travel across the Vitiaz Strait, these canoes had to be seaworthy and strong. It has been noted that their canoes were larger and stronger than the Bel canoes. As Haddon and Hornell note:

> The Siassi canoes are essentially deep sea canoes, well built and capable of withstanding tremendous strain they have to bear in the weathering the storms of Dampier strait. If the wind is too strong, the two sails are furled and the float is kept broadside on the seas. The safety of the vessel depends on the solidity of the float and the elasticity of the outrigger apparatus. With a fair wind aft, or on the quarter, these two-masted canoes can cover 60 miles quite easily between sunrise and sunset (1991, vol ii: 155).

Mailu canoes sailed in fleets with their double hulls and crab claw sails, 1927.

Like the Bel, the Siassi avoided sailing in July and August at the height of the trade wind season.

Canoes on the south coast are similar to the *lagatoi*

The canoes built in Mailu to the east of the Motu villages and those built in the Gulf to the west were based on a similar multi-hulled base with the crab claw sails. The Mailu ones were double hulled with a large platform built across the space between the two hulls. On this, they constructed the mast and a crab claw sail (Haddon and Hornell 1991, ii: 236-7). The canoes of the Gulf areas were more unwieldy than the Motu *lagatoi* but were just as big. Both canoes had a common origin, as the technology used in building them was the same (Williams, 1933: 139).

The Mailu canoes

The Mailu have three types of canoes: two smaller varieties for fishing and local sailing and the third variety which is of pertinence here. This is their double canoes with hulls made of the trunks of large buttress trees found on the mainland. These hulls, which can be up to fifteen metres long, are built up with wash-strakes on each side. The hull carrying the mast is usually larger than the other. About 6 to ten booms connect the two hulls together forming a platform. The breakwaters "have some simple pierced carving and terminate in two scrolls" (Haddon and Hornell, 1991, ii: 233). On top of the platform a shelter is built.

The Roro canoes

According to Haddon and Hornell the Roro people have "learned from the Motu to build *lagatoi* and to make pots." One of these *lagatoi* leaves Yule Island each year for Toaripi. (Haddon and Hornell, 1991, ii: 220). The Roro also make the double canoes like those of the Mailu described above. (See illustration page 31).

Neyret compares the two types of *lagatoi* of the Motu and Roro:

> The canoe of the Motu hardly differs from that of the Roro. However, the platform is finished better and stretches more on one side right to the extremity of the dugout. A sort of shield made from vegetable material protects the sides from the waves and spray. There is no real protection elevating the sides of the dugout. This cover is made from coconut fibre (*muru*) and folded length wide and rests on the boom. It is stuffed with banana leaves which provide almost perfect water proofing. The ties for the floats are like those of the Roro but the traverses are different. There is a double rectangular sail with lateral masts (Neyret, 1976: 121)

The *Bevaia* of the Gulf area

In the 1920s, while he was the Government Anthropologist in Papua, Williams studied the trading voyagers of the Gulf people from west to east with a particular interest in the Elema people of Orokolo, Arihava and Vailala. He noted that the Gulf people were "no sailors by tradition" (Williams, 1922: 140). Traditionally they used small outrigger canoes for fishing and double canoes in the Kerema Bay but they ventured out on trading expeditions, the *hahi*, even as far as Yule Island and the Port Moresby area. These large double canoes, the *haruku-iroki*, were often paddled and carried mainly bows and arrows in exchange for shell ornaments "rather than pots" (ibid) as they received enough pots from the Motu traders and Williams concluded the trade did not compare with the *hiri* trade (Williams, 1933: 140).

Williams noted that things changed with the establishment of British New Guinea with its headquarters in Port Moresby. All villages that had been contacted were ordered to pay taxes and the Gulf people needed money for this. There was a sudden interest in trading expeditions not only for shell ornaments and trade goods but also for money.

Bevaia *from the Gulf District, similar to the Motu* lagatoi. National Library of Australia.

It was then that they built large barge-like vessels, the *bevaia*. Williams noted "It is only within comparatively recent years that these natives have taken to exporting sago, and accordingly the trading vessel has altered in character. It has in fact become, under a different name, no other than the *lagatoi*" (1933: 141).

So the Motu did not copy the Gulf *bevaia* canoes, it was in fact the reverse. While they stayed in the Gulf with their trade friends, the Motu traders helped build the first of the *bevaia*. Williams admitted that because the Gulf people were new to the game the finished *bevaia* often "may lack the finish in lashing and caulking which in such a craft is essential to sea-worthiness" (1933: 143). There were many disasters with the *bevaia* during their trading trips, far more than with the *lagatoi*.

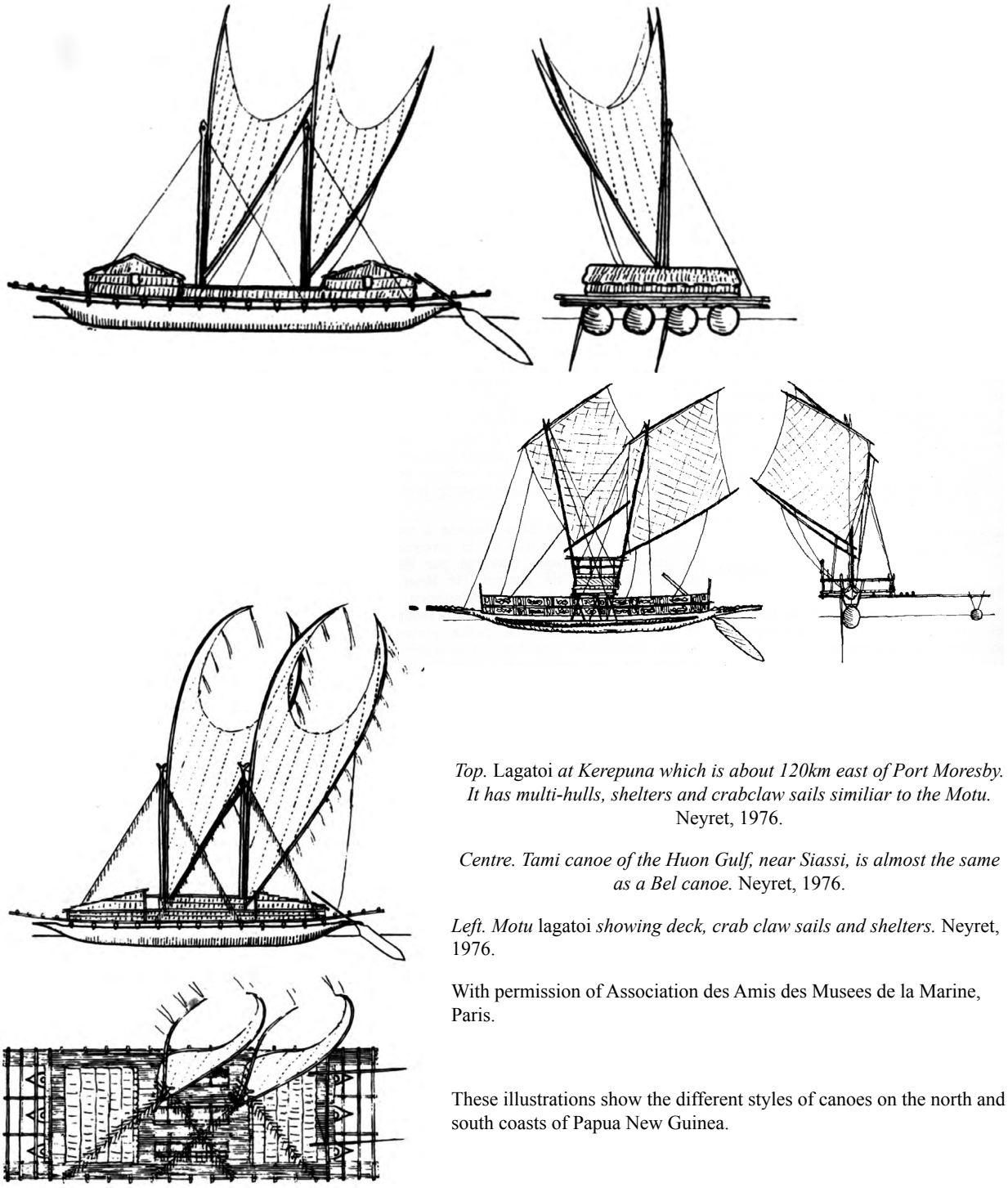
In August 2007, two hulls of one of these *bevaia* were unearthed by villagers from the eastern end of the Gulf Province at Upihoi, near Epemeavo village. An investigation of these finds was made and an article written describing the find, its environmental, cultural and social settings and contexts of discovery, radiocarbon dating, historical assessments, and significance" (David, et al, 2008). It was an exciting find reported in local, national and international attention media.

Form follows function

From these observations it can be seen that the design of the canoes were fairly regular within a trading zone where many trading spheres overlapped with each other. The canoes were shaped according to their function. The wide *lagatoi* were built to take loads of pots to the Gulf where even more hulls were added to carry the loads of sago. The return trip was often more dangerous because the sago weighed the canoes down. The *lalong* of the Bel area also were shaped according to their function. The large potcage built across to the outrigger for support could carry over a 100 large cooking pots to be traded down the Rai Coast or across to Karkar Island.

The canoes the Bel and Motu built were quite different with each canoe having its own particular style. This is first apparent in the design of the sails - the crab claw sail of the *lagatoi* contrasts with the large rectangular mat sails of the Bel canoes. Closer observations show that the *lagatoi* was really a large barge made of many hulls lashed together for stability. The Bel canoe on the other hand was a large outrigger with a pot cage built across the main part of the canoe. Both canoes had compartments for their precious cargo and shelters for the traders on their long voyages.

The large canoes are no longer built for trading but there is a growing interest in them. In 2013, a large *balangut* was built for Independence Day celebrations in Madang. Each year the Hiri Moale Festival is held in Port Moresby and *lagatoi* are re-built in recognition of the ancestors who once went ***Sailing for Survival.***.



Top. Lagatoi *at Kerepuna which is about 120km east of Port Moresby. It has multi-hulls, shelters and crabclaw sails similiar to the Motu.* Neyret, 1976.

Centre. Tami canoe of the Huon Gulf, near Siassi, is almost the same as a Bel canoe. Neyret, 1976.

Left. Motu lagatoi *showing deck, crab claw sails and shelters.* Neyret, 1976.

With permission of Association des Amis des Musees de la Marine, Paris.

These illustrations show the different styles of canoes on the north and south coasts of Papua New Guinea.

Pari dancers on the roof of the shelter, 1995.

Part Five: Pots and Potters

> *Of all the kinds of artifacts which may be found at archaeological sites, ceramics--objects made from fired clay--are surely one of the most useful. Ceramic artifacts are extremely durable, and may last thousands of years virtually unchanged from the date of manufacture. And, ceramic artifacts, unlike stone tools, are completely person-made, shaped of clay and purposely fired. Clay figurines are known from the earliest human occupations; but clay vessels, pottery vessels used for storing, cooking and serving food, and carrying water were first manufactured in China at least 20,000 years ago* (Kris Hart, "The invention of Pottery." Archaeology.com website n.d.).

Archaeological research on the north and south coasts

Pamela Swadling noted that pottery was introduced about 5,000 years ago into north west New Guinea,from Southeast Asia (1996: 53). In a map, Swadling indicated the inter-island trade encompassing Indonesia and the Philippines which led to the introduction of pottery as far east as New Guinea (1996: 271). Then three thousand years ago, Lapita pottery "with elaborately decorated pots suddenly came into existance in the New Guinea Islands Region". (1996: 270). This is also the time that linguists propose Austronesian speakers came to New Guinea.

In the 1980s, Allen and Pye, archaeologists, pointed to the paucity of study into the origins of the *hiri* trade. They analysed the clay deposits where pottery sherds have been found. While agreeing with the accounts gathered about the *hiri* in time of first contact, they argued that these accounts did not explain the origin or the evolution of the trade. Tests on pottery sherds, from a site near Taurama, pointed to dates around 800 AD. This means there was trading in pottery at least 1200 years ago in the Moresby area but may not necessarily have been by the Motu traders (1982). Susan Bulmer, archaeologist, described various styles of pottery sequence in the Port Moresby area: the earliest was dated between 50 BC to 1000 AD, the fourth style was the shell and comb decorated style 1200 to 1650 AD. The latest style was the Taurama incised-punctuate, 1650 to 1870 AD – this last was described as the traditional Motu pottery (Bulmer, 1982: 123). Bulmer also mentioned Boera, "a very large settlement first occupied by at least 725 AD, which, according to oral traditions, began the *hiri* trading in about the 17th century AD" (Bulmer, 1982: 129). This is interesting as the archaeological evidence ties in with the oral traditions of Edai Siabo who supposedly arrived in Boera and began the *hiri*. The legend of Edai belongs essentially to Boera and nearby Lealea Village (see Part 2).

In 1983 and 1984, the ANU Lapita Homeland Project was formulated to study possible Lapita culture centres in the Bismarck Archipelago. Spriggs noted that after this project finished, "the mass of information on the prehistory of Island Melanesia --- has complicated the issues rather than resolved them." Pacific historians are now "divided into two camps, those championing indigenous development of Lapita in the Bismarcks --- and those viewing it as largely but not exclusively an intrusive culture with its major links further west to Island Southeast Asia" (1991: 1).

Some years earlier, in the 1970s, 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). He noted that, "the pottery recovered from these sites is directly ancestral to the modern industries of Yabob and Bilbil" **(**1975: 14). These dates fit in well with the now dated tsunami of 1400 -1450 which hit the coast of Madang with such a force that it sank Yomba Island and caused new islands to emerge along the reef in the harbour (Day, 2012).

The traditional cultural heritage of the Motu and Bel people were similar since they were Austronesian speakers who settled on coastal areas already inhabited by non-Austronesian people. In each case, this meant they were allowed to settle only in unfavourable positions with poor soil, although clay deposits were available. In common with many other Austronesian speaking groups they built canoes and made earthenware pots, which were traded for food and other items. The archaeological finds mentioned above are another step into proving that the Motu and the Bel people had a common ancestry.

In 2009, findings were published from an archaeological dig at Keveoki 1 Village in the Gulf where once the *hiri* traders bartered their pots. This investigation allowed the archaeologists "to characterise the nature and antiquity of ancestral *hiri* trade ceramics around 450-500 cal BP in the recipient Vailala River Kea Kea villages of the Gulf Province of the southern coast of Papua New Guinea". Gradually a picture was being developed of the pottery trade from both ends in the Central Province and the Gulf (David et al, 2010).

Hodu *water pot from a motu village.* MacGregor collection, Queensland Museum.

In 2010, archaeological research has shown the ancient nature of the trade between the Motu trade partners and the Gulf trade partners. Pottery sherds were excavated from the Emo Site (OAC) in the Gulf area which the *hiri* traders frequented on their long voyages. Mention was made of the 704 sherds which were collected although many were very small fragments and weathered. Some were from the Motu *uro* pots. Enough analysis was achieved to indicate that ancestral *hiri* trade relations between sailors of the Central Province and Gulf Province trade partners has an antiquity "dating back to at least 1800 years ago" (David et al, 2010: 46).

About the same time, excavations at Caution Bay by McNiven and team found Lapita pottery nearly 3000 years old. This is evidence that Lapita people had sailed around the coast of New Guinea long ago and continued to make Lapita pottery in the same style as their ancestors had on New Britain.

> Comb dentate-stamped Lapita pottery dates from 2900 cal BP and gives way to sparsely-decorated, shell valve end-impressed curvilinear designs and structurally simple geometric comb dentate-stamped designs below the lip sometime between 2500 and 2250 cal BP, which then give way to shell valve end-impressed dentate designs. Lapita pottery is represented by a range of vessel shapes including low-fired, thick-walled carinated and sometimes collared vessels, but no flat-bottomed vessels are present. Decoration includes comb dentate (including needle point as well as relatively broad-tined) stamping and red-slipping. Incised designs are virtually absent (McNiven at al, 2011).

Pots being loaded onto a lagatoi. Groves, 1957. (PMB43_146).

As already mentioned, extensive radiocarbon dating on the site indicated the material was between 2500 and 2900 years old. McNiven said the designs are identical to those found elsewhere in the Pacific. Professor Glenn Summerhayes said some of the pottery is definitely Lapita. "The pottery we're looking at is a later form of Lapita. [Early Lapita] is quite intricate ... over time the pottery becomes a bit more simplified," explained Summerhayes. "Not all of [the pottery found] looks like new Lapita, but some of it does, which suggests to me that we are witnessing another expansion along the south coast that we had not imagined" (Quoted Weule, 2011).

Specht welcomed the finds by McNiven et al. They have "contributed important new data to the region's prehistory", but he queried the location of the reported sites, suggesting that they were not necessarily originally situated on the New Guinea mainland as claimed, but "at least some were probably on inshore islands" Aspects of the pottery forms and decoration are consistent with the Late Lapita elsewhere, though older Lapita levels may be indicated by some evidence. He warned against "simple unidirectional interpretations of the region's prehistory" (2012: 3-7).

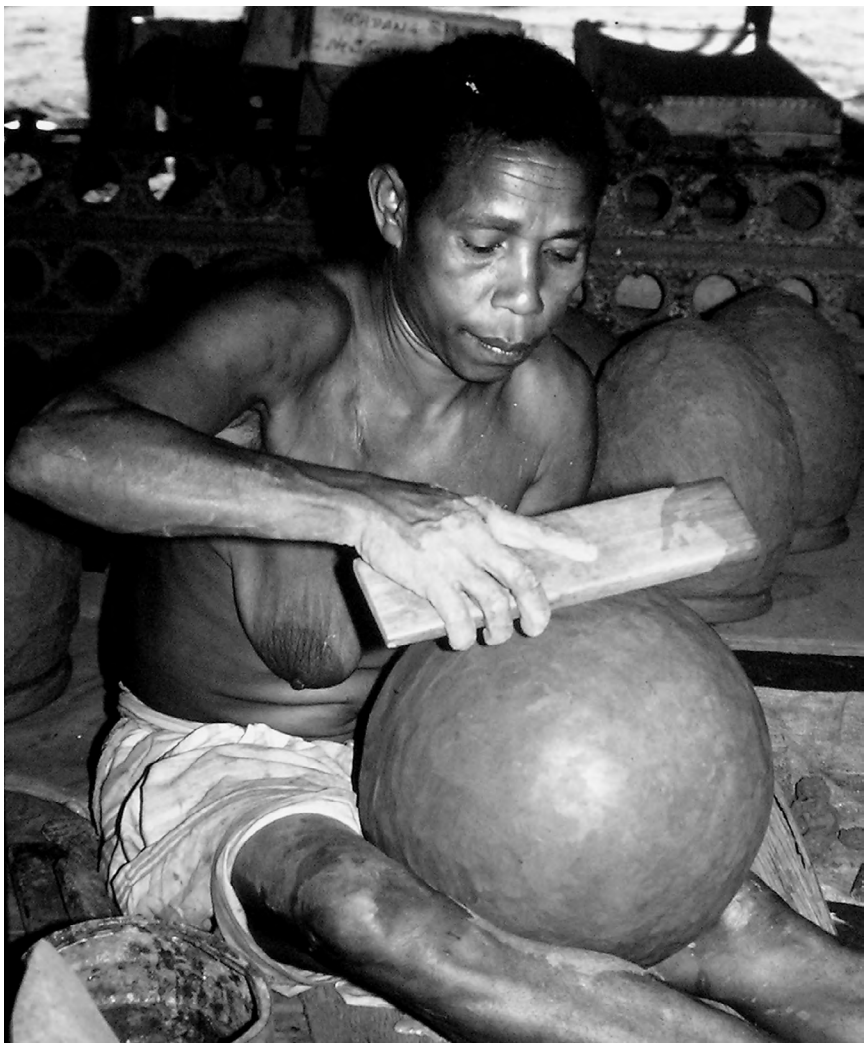
Part of the discussion seemed to revolve around the position of the Caution Bay find in prehistory. Was it on the mainland or was it on an offshore island which later joined on to the mainland? If this were so then the Lapita pottery remains may have been from an island people and not people living on the mainland. How can this be verified one way or the other? As Summerhayes pointed out, Roro traditions reported the "Hall Sound once had islands." Furthermore, Redscar Head, which is today joined to the mainland by a mangrove swamp, was "recorded by the Spaniard Don Diego de Prado in 1606 as being an island." Summerhayes concluded that "a more detailed geomorphological work in the region is needed" particularly about the arrival of Austronesian speakers into the Papuan South Coast. He emphasised the need to study the interactions of the "incumbents and new arrivals in these situations" (Quoted, Weule, 2011).

Two Motu dancers in Mamumanu village.
Groves, 1957. (PMB43_45).

This shows that both areas of this research, the Bel on the north coast and the Motu on the south coast of Papua New Guinea had stories of disappearing islands and changes in the landscape. Being on the Ring of Fire of the Pacific, Papua New Guinea would have experienced many tectonic events with volcanoes erupting, strong earthquakes or tsunamis sweeping over the coasts over the past thousands of years. Some islands sank and others became part of the mainland over time with a silt buildup.

Whether Caution Bay was on an island or on the mainland does not lessen the importance of this discovery which includes a 2600 year old Lapita pot painstakingly reassembled from fragments. As well, "a huge treasure trove of artefacts including thousands of fragments of pottery provides the first evidence that the sea-faring Lapita people settled in mainland Papua New Guinea." All indications on the site are of a maritime people living in several villages in an area over "one square kilometre inland. The excavations also revealed a wealth of implements — stone tools, cutting tools and stone axes made out of volcanic rock — as well as Lapita pottery fragments. --- and scraping tools made of rare obsidian found on West Fergusson Island, 500 kilometres to the east" (Weule, 2011).

It appears that these villages were more sedentary than at first believed with evidence emerging of a continuing presence of pottery makers, back to the time of the Lapita people. Previously when fragments of the Lapita pottery had been found along this coast, archaeologists believed the Lapita people had never really settled but were just passing through. Now however, because these researchers found a great quantity of Lapita pottery, it suggests "the Lapita community was very well established, not just passing traders", McNiven said, "These weren't just people moving out into the Pacific moving further and further east. We now know they came underneath the bottom part of Papua New Guinea and settled on the mainland." (Weule, 2011). The pottery sherds were of the later Lapita type and not as well decorated, but it points to a spread of Lapita-making people in areas never seen before with a great amount of shards.



Sibol, daughter of Maia, of Bilbil, making a large cooking pot, bodi.. *Large pots such as this are a rarity these days.*

This archaeological research again points to a common ancestry for the Austronesian speakers on the north coast of Papua New Guinea and those on the south coast somewhere in the Bismarck Archipelago.

Meanwhile, Lilley quotes Tyrell who hypothesises that the present Madang pottery is manufactured by the "descendants of people who made pots decorated in Lapita-like ways and who moved west from New Britain into the Vitiaz Strait-north New Guinea area *before* Lapita disappeared stylistically, that is, before 2000 or even 2500 BP, and continued making pottery in a broadly 'Lapita style' for another 500-1000 years." This is another argument which weighs in the common ancestry of the Motu and the Bel people.

Type X pottery on North New Guinea Coast

Matthew Spriggs noted that the "spread of pottery use along the North New Guinea coast --- corresponds to the distribution of the North New Guinea Cluster An (Austronesian) languages" (1995:122). Linguist Ross quoted Lilley and Specht that, apparently in the period 300 to 500 AD, there were "fresh settlement in the Vitiaz Strait after a post-Lapita hiatus of 800–1000 years. ----- This marks the beginning of the first Sio pottery phase, which continued until after 1000 AD Type X pottery" which appeared on both sides of the Vitiaz Strait and in the Siassi Islands around 1000 AD and seems to mark the beginning of the Vitiaz Strait trade network described by Harding (1967). (Ross, 2009: 27 n2). Pottery trade had been going on for a long time in the Madang area, mostly by Austronesian speakers.

Type X pottery is "one of five pottery styles on coastal Huon Gulf and the Siassi Islands, Morobe Province, Papua New Guinea that form a discontinuous sequence from Lapita to the modern industries of Sio-Gitua-Sialum and Madang" Dating now places this Type X between about 1000 and 500 cal BP. (Lilley, 2006: 26 - 27). In an earlier article, Lilley noted from his archaeological investigations that, "the ethnographically recorded trading system was only a few hundred years old and was preceded by a discontinuous series of three interaction networks which differed considerably in configurations" (2002: 1-2). Bilbil pottery is reported on Long Island around 1000 AD (Lilley, 1999: 28–29) probably at the time the Ngero-Vitiaz network spread out and the Vitiaz Strait trade network attained something like its ethnographic extent. Ross concluded, "This may indicate that speakers of a language in the Ngero-Vitiaz network were making pottery on Yomba from 1000 to 1600 AD (Ross, 2009: 7).

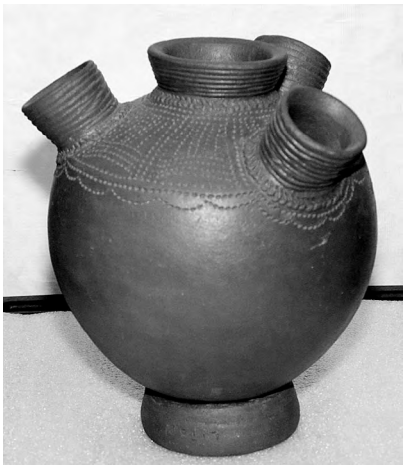
What archaeologists need to find now is some Lapita pottery on the Madang coast of New Guinea to show a definite connection between the ancient Lapita pottery makers of Caution Bay with ancient pottery makers on the north coast. This is what Glenn Summerhayes and his team are hoping to do this year (2014) during an excavation on Bilbil Island. On the beach side, bones an pottery shards were visible on the cliff face in 1994.

Modern Pots and Potters of the Bel and Motu People

This present ethnographic study covers the pottery centres of the Bel on the north coast and the Motu of the south coast in more recent times. The Bel people include the Yabob and Bilbil people together with their canoes and trading but in this section these two villages will be dealt with separately.

Yabob Pottery in 1970s

Yabob is an easy drive from Madang. The village is divided into different locations. Some people live on the two small islands off the coast, a paddle from the mainland. There is Yabob-on-top which looks over the sea. This is probably the favourite spot with the views and the cool breezes; then there is Yabob-down-below near the water on the mainland. Back in the 1960s, a Dane, Jorgen Petersen, built a pottery house in Yabob and set up a training centre for the women introducing modern techniques like throwing pottery on a wheel and firing them in a kiln. The legacy of Honpain was partly laid aside. The pots were popular and sold well but the village men were jealous of the women getting more money than them so they began to oppose the venture (Tuckson, 1982: 167). Once Petersen left in 1974, Willie Ber bought the business and continued selling both pots made on the wheel and traditional Yabob pots. The pottery house was popular with its walls decorated with paintings of pots and fish and nicely laid out benches to show off the pots which were bought for bride prices, for food or for cash. The pottery house was in full swing and tourists were encouraged to go there by Lonely Planet. Willie's aim was to "preserve the traditional art of his people" (*Our News*, June 1977).



Yabob water pot.

In the 1970s, my informant, Ber Nanci, lived at Yabob-on-top and he was a fund of knowledge about the past. He had stories about Yomba Island where many people lived and made pots before it disappeared into the sea. He said, "It once stood where Hankow Reef [Kupain] is now. As it sank many people died but others managed to escape to the mainland". Ber Nanci told of a group of men who survived because they were on the mainland at the time buying pigs for the opening of a big *haus boi* on the island. There were four Big Men each with their 'line'. They made a net to round up the pigs near where the airstrip is now. Some laid the net and others tried to round up the pigs but they ran away. When they wanted to return home, the men climbed up Kalibobo Point and looked out but they could not see their island. It had disappeared. These men then dispersed to different places - they went to Biliau, Kranket, Nobonob and Yabob. They made *mirorog* canoes that are not hulled but they had two sails. Ber said that some people lived at Yabob already at that time, and then the Kakon Clan came from Yomba and brought the knowledge of the pots with them. Perhaps one of them was Honpain who knows? (Mennis, 1981).

The myth of Honpain

> *She came from heaven and married a Yabob man and had one child, a son. Honpain showed them how to make clay pots. One day the Yabob people spoke evil of her son, so she lit a fire and in its column of smoke a rope dropped down from heaven on which she and her son climbed up to her father. Then the rope fell down and broke all the pots that she had set up to be fired (Mager, 1952; 84).*

Ber described the big earthquakes and smoke that occurred when Honpain left or died. It could have been when Arop Island (Long) erupted two generations after Yomba sank. Whatever really happened may never be known but the Honpain legacy continues to live on in the Yabob/Bilbil Villages. She gave the pots a spiritual sanction and the people have put an embargo on potmaking, allowing only the women who live in their villages to make pots. If they leave and marry out, they must never make pots in their new village even if clay is available. If they visited Yabob, then they could make them. The Honpain myth has been the legacy of the Yabob women for hundreds of years.

Yabob Village in 1994

Nearly twenty years later in 1994, I was back doing research in Madang and I met up with David Ber, son of my former informant, Ber Nanci, who sadly had died. David spoke about the old trading days and it was heartening to know that the oral history was being handed on to the next generation. Listening to David Ber was like listening to his

Yabob women showing the clay holes near the village, 1994.

father. He also had vital information to do with trading and their meanings. *Dadeng* is the day for a market when the Bilbils bring their pots and *nelli dadeng*, or *dadeng nelli*, means that you have marked a day to buy things. If the pots are being traded, the name used is *waing deowa*. When they return from trading the time is called *waing debal*. If they wanted to make a trading day they would make five knots in a *tanget* leaf - each day you break off one knot to count the days to the market. They did not have one word like *hiri* to denote the whole process of sailing and trading which is why I settled on *dadeng* as the parallel for the *hiri* although I have also used the term *waing*.

David said that the North Coast people and the Karkar Islanders used to come to Yabob and traded food, wooden plates and pigs for pots. Other times the Yabobs and Bilbils would sail to the north coast as far as Sarang in the *lalong* and *balangut* canoes to trade the pots. The men told the women to get the pots ready and then they would sail off. Sarang was their limit, but the pots sold there were re-traded as far as Bogia to Tangu and other bush places where they made pots with the long base. David Ber said they recently saw these Tangu pots for the first time because the roads have made access easier. In the other direction, the Yabobs exchanged their pots for the conical shaped ones found in the Trans-Gogol, as they were better for cooking *saksak*. There was still a need for the pots. David said, "Our friends in the bush want our pots more than ever to make the big feasts. Other people come and bring pigs and have a feast and buy the pots".

I asked whether they still celebrated the new year with a yam festival at the rising of the Pleiades stars in the pre-dawn sky about June/July. He answered that it was a very important event and a very ancient custom in Papua New Guinea and many Pacific cultures. When the Pleiades stars were about to appear, the *likon* in Yabob waited to see them in the early morning and then it was time to dig up the yams and have a feast.

David said:

> We do not celebrate the Rising of the Pleiades (*Biris*) any more but later, if they want to revive these stories and turn it into a festival that would be good too. Yams were cooked and piled on the plates and the families met together. After the feast, each family cooked again and they called to other family members to come and eat. They built shade houses near the gardens and invited others to come. When the yams were ready, they would be stored in the yam house where there were two sections. The top or attic section, was where the yams to be eaten were stored, and the bottom section, where the yams to be planted were stored. When the shoots come, we plant them but we take the shoots off the yams we will eat. There is big trouble if someone steals our yams because they are our lifeblood. The *bushmen* did not steal our food in the past. Now we have the squatter settlement men around and they don't have work in town and sometimes steal our yams from the gardens and from our yam houses near the settlements (Interview, October 1994).

Kitab (David's wife), spoke of the clay and the pots:

> There are different places to get the clay, but it is hard to get all the rubbish out which the people living nearby put into the holes. We get the red clay and put it under the house then I go and get the black clay and put it with the red clay and mix it and put it in the water. Afterwards we knead it on top of the white sand. Then we try the clay and then see if it strong enough to make the mouth of a pot. I get the white clay from this side here (points). Red clay is called *Dara,* black clay is *saran*, and white clay, k*abaran*. We make big and little pots and water pots and then add the decoration. A slip is applied and the pots are set in the sun to dry. Then I make a little fire and heat the side of each pot. When I have finished a heap of pots I make a fire place and put the firewood all around then I put the pots inside and cover it with kunai grass and the fire burns it. Later when the fire cools I get the pots out with a stick to see if they are ready. Then I can sell them.

Yeyeg of Yabob was taught to make pots by her mother and stored them in her house but it was not easily accessible. One of her daughters, Gabar, made pots and so does one of her cousins, Dik Sabu. The young girls understand how to make the hole at the mouth of the pots, but they cannot finish making the pots, but they could learn. Four of them including herself, Dik Sabu, Gabar, Maturau and Kaning in the Nob Clan still make pots. The women here sell the pots for bride price or give them to their relatives who are getting married. The Yabob people don't sell pots in the market any more, leaving that to the Bilbils. Wistfully, Yeyeg said, "Later I will make a little house to sell the pots and the tourists will come and buy them. There is still a lot of clay for my daughters and grandchildren. We must not let the government build houses on this area. It is our land".

Gabar, Yeyeg's daughter, added her own views:

> My mother taught me how to dig out the clay and pound it and put it in the water. I began to learn this art in primary school. I know the first three stages, but not the last. My father's mother taught us and I could nearly make the finished product but then we went to school at Tusbab. I came back to the village in 1975 and later went to New Ireland. Now I am back in the village and learning again. I have four children. One in each of Grade 8, Grade 5 and Grade 1 and the youngest is at home. If the school wants me to teach the young kids how to make pots I will do that. They have a new subject called practical skills. My mother, Yeyeg, would help them. Our children go to school at the Yomba demonstration school.

One can see the positive attitude of these two women. They were eager to teach the younger generation and keep the old traditional style going. The point about pottery making is that overheads are minimal. The materials cost nothing, the clay comes from the ground and only a few basic tools are needed to form the pots, which are then fired on an open fire.

The pottery house in Yabob had been closed for many years and I was shown the rusting wheel once used to throw pots when Petersen had been there. Now only a few women still make the pots in the traditional way and the people resorted to buying Bilbil pots for bride payments. So the Yabob industry in 1994 was on the verge of collapse

There were many reasons for this:

1. The men who owned the land where the pottery house once stood wanted their land back;

2. Furthermore, since the pottery house has been closed, the tourists no longer come to Yabob but continue on to Bilbil Village where a prominent place has been set aside to sell them and where the Councilors encourage the women to keep making the pots as it attracts the tourists;

3. There was general apathy in Yabob about the pots except among a few of the older women and their daughters;

4. The deep clay holes near the boundary between the village and the settlement were being used by the squatters as rubbish dumps and the clay was now contaminated. The women showed me the holes with the rubbish in them and shook their heads angrily at the defilement of the clay. Ten years later the squatter camps were shifted by a general government policy but by then the clay holes would have been really full of rubbish and contaminated. Sadly the old pottery house has fallen into disrepair and no one uses it.

Yabob pots were bright red and had a geometric design on the angled shoulder. The turned-out rim made for easy handling. Painted with a red slip, the women said that they were like young initiated men painted with red paint. The water-pot, with two openings, has an incised design on its side. There were two styles of pots. The round cooking pots were called *bodi* and the water pots, called *nombu*, used traditionally by the women to get water from the village well on the islands of Yabob

I visited Yabob again a week later. It was a peaceful afternoon and the women were friendly. They expressed sorrow that the young girls are not interested in learning the skills of pottery making from their mothers or mothers-in law. The men talked on and on about the *papa bilong graun*, meaning the family that owns the land was against building a pottery house there as it would then have to be shared by people of different clans. Tourists need a central point where they can come and buy the pots. The tourists have to find the women in their houses where they make and sell the pots. Furthermore, the women receive very little help from the men in their pottery making. The women have to do the gardening as well as potmaking and cooking the evening meal and look after the children. It is almost an impossible task. It was a different story in Bilbil Village where the councillors openly supported and encouraged the women. That was my last

Bilbil pot, bodi.

visit to Yabob Village and I had the feeling that within a few years their pottery industry would decline altogether. My fears were confirmed in an edition of the Lonely Planet in 1998 which said "Yabob was once known for its fine clay pots which were traded far up and down the coast, but unfortunately the villagers have recently stopped making them" (*Papua New Guinea*, Lonely Planet, 1998: 206). In 2004, plans were in progress for the Provincial Government to evict all the squatters in Madang and to remove all their shacks. So the people who had put their rubbish in their clay holes had now left.

When I inquired from a government official why the traditional arts did not attract financial aid I was told that the villagers should be able to support themselves. The Yabob potters were aware of the Binnen Pottery factory in Madang set up with much government assistance where pots are made on a wheel. An English woman started it in 1982 and, when she returned to England, Nomu Rauk of Bilbil Village took over. They sell cups and saucers but not Bilbil or Yabob pots and several village men are employed there throwing the pottery on a wheel.

May and Tuckson have said that the technology of the traditional potmaking in Papua New Guinea is of a simple variety with two techniques being used in most areas. One is the paddle-and-anvil technique and the other is the coiling technique. Pots are all made by hand in these traditional methods as the use of a wheel was unknown (1982).

Bilbil Pottery in the 1970s

Bilbil Village is further out from Madang than Yabob. There is a winding village road through kunai grass and bush passing the village of Od. The Bilbil village is regarded as a tourist village and the people have kept to the old style houses with the *saksak* roofs. Tourist buses park near the middle of the village where pots and other wares are laid out in front of houses. They once had a pottery house but this is now gone too. The women still make the pots in the traditional way but they are smaller and made for the tourist markets with decorations. In 1994, a few small *bodi* pots were still being sold in the Madang market for the tourists. Curiously, a ban on betelnut selling there affected the sale of pots. Because the men could no longer obtain betelnut, they stopped going to the market. Lacking transport and protection, many of the women ceased to sell pots there. Although there may have been a time when the men helped with collecting the clay and removing the grit (Mager, 1952: 341), from my personal experience, the women carried out the whole process of making these pots.

In traditional times, while the women were busy making the pots, the men built the canoes. The women would hurry down to the canoes when they were preparing to leave and the pots would be stored in the pot cage carefully wrapped in leaves ready for trading. Pots are still being made in Bilbil Village for tourists and as part of bride prices and occasionally to be bartered for food. A girl usually learns the art of pottery making from her mother and they seek out the best stones to be used as anvils, Sometimes these stones have been handed down through the generations. Paddles are of three types according to May & Tuckson; "*darib* has a rough naturally ridged surface; *hohoi* is narrow and very smooth; *dardral* is wider, flat and smooth" (1982: 169).

New style of pot ready to be fired at Bilbil village, 1994.

Traditionally, the pots were used for trading and for bride prices. A pot could be traded for a *bilum* full of taro (the *bilum* was not included). As mentioned, pots were also used to purchase canoe hulls by lining the pots along the length of the hulls. In many places they were the local currency and were traded against pigteeth, food, wooden dishes, and bows and arrows. They were made large to hold quantities of food and used for cooking taro, yams and meat. During a feast long lines of these pots would be used to cook enough food for dozens of people.

Pots being fired on the beach at Bilbil village.

These pots, carried in canoes along the coast, were traded for many other trade items both perishable and non-perishable such as drums, mortars and pestles, wooden plates, decorations made from dog-teeth from Karkar Island; grass skirts, barkcloth, bows and arrows, paint, decorations boar's tusks and weapons from the Rai Coast.

One Saturday in 1978, I accompanied the Bilbil women to the clay deposits at Margui, which is quite a distance in the bush behind the village. The women brought their large net bags for the occasion. One or two of them got down in the hole and dug out the clay which was muddy from the recent rain. This clay was rolled into large balls and placed into net bags. When they were full, they were very heavy and I could not lift them off the ground. The women helped each other put the bilum strings around their heads and adjusted the *bilums* of clay balls on their backs. They seemed to compete to take the heaviest *bilum* and cheerfully set off down the track one behind the other to return to the village. Here the balls of clay were stored under a house.

When needed, the clay balls are broken apart and placed on top of sand laid on a large piece of bark. They are then hammered with a stone. These flaky pieces of clay are 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 drying for a few days the mixture is now ready for use (Mennis, 1995). A lump of clay is formed in a ball ready for use and is then rounded at the top with the thumb of one hand while the other hand spins the clay around.

> The lump is skilfully spun around anti-clockwise in the palm of the hand until an opening has been formed. -- The hole widens and the flange of the top of the pot is formed by the extended forefinger running under its edge (May & Tuckson, 1982).

Later the women added the slip and fired the pot in the open. Pots were laid in a cradle of coconut stems and dried coconut leaves were piled on top to add heat. They turned bright red when first fired, but are blackened by use. To cook food at a feast, these pots were lined up, filled with food; then firewood was piled alongside the pots and set alight.

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 at 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. (see page 75).

Women potters of the Gapan Clan, Bilibil Village 1994.

Name	Age	Place of origin	Marital Status	Children	Taught by
Sibol	50s	Dugus Clan	M to Masil		Mama Lik
Lakit	50s	Murpatt Clan	M to Gain	10	?
Minei	Old	Dugus Clan	M to Dob	7	Mina, (one leg)
Sipora	40	Siar Village	M to Setla	8	Mother-in-law
Kiliapain	50s	Mis Village	M to Los	6	Mother-in Law
Dui	50s	Gapan Clan	M to Kamanang	7	Mother, Gobor
Minim	50	Siar Village	M to Asuang	7	Mother-in-law
Blandia	26	Bilbil	M to Yakobus	1	Kaniugi, mother-in-law
Salome	27	Bilbil	M to John	3	Mother
Makis	30		M to Mase	3	
Duwe	old	Bilbil	M to Lalu	6	Mother, Rurub
Bada *	Middle-aged	Gapan Clan	Widow of Sim of Dugus Clan	7	Minei
Merigan*	Middle aged	Gapan Clan	Widowed	2	Minei
Daum	30		Married	1	
Gamoi	40		Married	9	
Asual	young		M to Mike	3	Sipora, mother-in-law

* Married in Dugus but returned to Gapan when widowed

These fifteen women were all keen potmakers. Note that those who married into other clans within the village as in the case of Bada later returned to their clans when their husbands died

Selling the smaller pots at the Madang market.

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.

A Village feast in Bilbil in 1974 – cooking with the pots

It was June 1974 and time for the yam harvest feast which marked the beginning of the traditional year with the rising of the Pleiades. Maia Awak, our friend and leader of the Gapan Clan, had invited our family to an old-style yam feast. We had been told that the piece de resistance was to be flying fox so we decided to bring some chicken as our contribution.

We drove out to the village early, so we could help the women peel the yams which were to be cooked in a line of pots set on the ground. The men brought in the firewood and heaped it around the pots. Long pieces were set lengthways and other pieces were put between each pot. The women then went off with buckets to collect fresh water from the well to fill the pots. Some sea water was added for the salt content. The yams, flying foxes and chicken were put in the pots which were then covered with leaves and weighed down with part of a coconut. Then the fires were lit along the length of pots and it was quite a sight to see them all ablaze at once.

Meanwhile, the taro was cooked separately in a large single pot (*bodi*) over another fire. Hot water was added and the top covered with leaves. When ready, the taro was mashed with a thick carved pestle which looked as if it had served this purpose for many generations, a real museum piece.

The rest of the food cooked merrily in the line of pots. When cooked it was scooped out onto large dishes and wooden bowls placed on mats on a flat stretch of ground between the houses. More mats had been spread around for family groups to sit on. Even though they were all closely related, the people were separated into their smaller units for the feast. We were allotted our corner and sat comfortably in the evening light.

Kobor outside her hexagonal house, Bilbil village.

One or two men seemed to be in charge of the food and began to distribute it from the large dishes and bowls into three or four smaller bowls for each family group. Some of these bowls had rice and others taro and yams. On top was the smoked flying fox – blackened and stiff from smoke before it was put in the pots.

We were asked if we would like flying fox or chicken and opted for the chicken we had brought. However, these had been cooked with the flying foxes in the pots and tasted heavily of flying fox. In fact in the semi-gloom, there were black flecks of flying foxes on the chicken. In spite of this, the meal was very well cooked and the taro was tasty too, with coconut milk added.

After I had eaten a bit, I went to sit with Kobor (Maia's wife) in her section of the mats and we chatted while Brian talked to the men. The feast area was lit by only one or two lamps which gave a cosy glow to the gathering. Sima, Maia's granddaughter, was sitting with her mother, Sibor, and grandmother, Kobor, who chided one of her grandsons. He had sat down with his back to her which is

considered very bad manners. "You eat like a dog" she told him. Actually the real dogs proved to be a nuisance and kept coming around the food. Two or three small boys, armed with sticks were employed full time with chasing them away. They would charge at them with a long stick and there would be a loud yelp as the dog sped off.

After the food had been distributed to each family group, it was divided up again and much of it was eaten. Later children were called to carry off the left-over food to other 'cross relatives' who had not attended the feast. Before long all the food was gone – either to relatives or stored in the houses. The women went off to wash their hands, the babies slept and the children went off to play or sleep. Later the women came back and joined the men. They chewed betel nut and talked until the early hours of the morning.

A full yellow moon rose over the gathering and gave additional light – it was like a powerful lantern hanging in the coconut trees. It was time for Brian and I to go home but it had been a deep experience for us to see how they cooked and ate in the traditional manner. They loved to tell stories of the old times and past happenings hundreds of years ago that had been passed down. Maia had horrific stories of when Long Island erupted many generations ago killing many people and covering the area with ash and darkness. Yet this evening, they sat, enjoying the feast and placidly telling stories of the past aware that it could all happen again.

On the day of the feast Brian, who was also the Civil Defence Signals Officer for Madang, had kept a radio sked with the vulcanologists who were watching the volcanic eruption on Karkar Island. Brian communicated with both the observers on Karkar and the volcanologists in Rabaul, one of them being Robin Cooke, a geophysicist. The monitors could both hear Brian but not each other so he had the important role of go-between and kept skeds twice a day. With these eruptions, it was a reminder that Madang is very much on the Ring of Fire surrounding the Pacific. In March, 1979, our friend, volcanologist Robin Cooke, and his assistant, Elias Ravian, were killed by a volcanic eruption while camped on the caldera overlooking the erupting cone. Personally Robin was a great loss as he was fascinated by oral traditions of eruptions and earthquakes and encouraged all those who collected them (Johnson, 1981).

Bilbil pottery 1994

I was interested to see how the people of Bilbil Village had changed in the fourteen years since we had left Madang and made several over-night trips to the village. Under the trees by the sea, the women were preparing their pots for firing. It is great to see so many of the younger generation learning the skills of potmaking. Many girls from other areas of Papua New Guinea have married into Bilbil Village and are being taught by their mothers-in-law. They obviously see a future in this craft and the presence of tourists buying the pots. Old Minei says she is the only one left who knows how to make the very big pots, the *bodi reambul*, for which the Japanese pay a big price. It seems she is not passing these skills on, which is a pity. She was taught by Minei (same name), who lost her leg to infection.

Informal Pottery and Culture Survey along the North-Coast

Because of time constraints, I was not able to carry out a thorough pottery survey throughout the whole Province, rather, I talked to selected villages and obtained as much information as possible. In studying the position of the pottery industry in 1994, I divided villages into four categories:

Category 1: Bilbil and Yabob Villages and Barum, Mair, and Ouba villages in the Trans-Gogol, where the pots were still being made and the next generation are being trained in the art. Yabob Village was listed in this category in 1994, but, sadly, within a few years, the women ceased to make the pots.

Category 2: Those villages, who made pots until recently but no longer do. The old women/men still have the knowledge but the younger girls/boys are not learning the skills. Korak and Utu Villages would be representative of these.

Category 3: Villages which once used to produce pots but now no longer do so and the knowledge is virtually dead. In this category would be Mindiri, Bosman and Baiteta.

Category 4: Villages that I visited where pots were never made but who knew about the trading system and who once bought pots with trade items. Villages at Malala and near Bogia, and Bogadjim on the Rai Coast still had the oral traditions of the way it used to be and the trade friends they once had.

Rather than count how many pots there were in each village, I was interested in counting the numbers of potters, not only those who still made pots, but also those who have the knowledge to pass it on. These potters once made hundreds of

these pots before a trading expedition, but now they make them at any time for the local Saturday market and for bartering or for visiting tourists. Because the Yabobs and Bilbils were such active traders in the past, stories of the pots and the canoes are found right along the north coast to Bogia and beyond. Although the traders did not travel that far, their pots went far beyond by being traded through other trading zones.

The traditional pottery makers need encouragement to set up cottage industries if the pottery is to continue at all. But then perhaps their demise is the price of progress. Of all pottery making villages visited, Bilbil Village is the only one with an increase in numbers of potters. The results of the Bilbil survey in 1994 showed that 64 women were currently making pots, not counting girls who were learning the art. Of these 64, about 40 were taught by their mothers and 16 by their mothers-in-law and the rest by sisters-in-law, friends etc. The clan leaders encourage the business but do little constructive towards this end. They liked to sit round and discuss issues but because of land disputes they have not built another pottery stall for the women. It may be somewhat of a power struggle since it is the women and not the men who get the attention as the potters. The men might encourage the women verbally as they can see it brings money into the village but the women do all the work of collecting the clay and making the pots as well as caring for the children and cooking. Both men and women do the gardening and the men do the fishing, building the houses and carry on various businesses. In 1994, pottery was sold to the tourists in front of one village house. Here the tourist buses pull up and view the wares exhibited on the ground. In wet weather few sales can be made as there is no covered accommodation.

Bilbil potters at the Warana Festival, Brisbane, 1995.

In 1995, at the Warana Festival in Brisbane I interviewed two Bilbil potters - Miss Birid Rauk and Mrs Marin Gerard both of Bilbil Village, while they were demonstrating how the pots were made using the anvil and paddle method. Each of them dipped her stick in the water to moisten the clay pot, which was rested on her lap. In the next stage, a hole was made in the middle of the circle of clay with the fingers and a stone anvil was placed inside the clay and is pummelled against the clay. Then the stone (*pati*) was held inside as a backstop and the paddle used to beat against it on the outside of the pot, using a paddle and anvil style of manufacture. The top of the pot was formed in a symmetrical circle and was moistened with water from a half coconut

The anvil is usually a river stone specially chosen for its shape and are often handed on from one generation to the next. The tool, *tu*, was made from a sliver of *pitpit, which* is used to incise the designs and to smooth the edge of the top. Marin added her own individual mark, the *kobulgarek.* Various sizes of paddles and mortar lay beside her.

In the next stage, Marin smoothed the red slip, the *mein*, on the outside of the pot with her hands. Once the slip has been painted or smoothed on the outside, the pots were pre-heated on a small fire, and then stacked along with other pots on a prepared trough of firewood. The wood was set facing downward into the middle leaving a cradle for the pots. The pots were covered with coconut leaves and kunai grass, and the fire reached a strong heat.

Describing the Madang pots, May and Tuckson said, “the typical Yabob-Bilbil-pots are distinct from other paddle-and-anvil pots in that they have a sharp corner point at the shoulder, are composite in contour and redder in colour” (1982: 168).

Egloff noted that, “the contemporary pottery of Bilibili - Yabob, just south of Madang, has various sand tempers, including a black volcanic sand, and is finished by beating with a paddle and anvil”. He also identified some archaeological sherds “as being directly ancestral to the modern pottery” with a “gobular/spherical vessel forms with everted or direct rims; incised, punctuated and various relief decorations; commonly a red slip; carved paddle impressions; and a range of rim profiles” Some of the ancestral Madang pottery is identical to styles found on Long Island. More work needs to be done on the Madang coast to identify other pottery sites and date shards found.

In discussing my earlier work on Yomba Island, as mentioned earlier, Egloff said:

> A recent study of oral traditions of the Madang area indicates that the distribution of pottery making centres in the past may not have been the same as today (Mennis, 1978). These oral traditions describe the existence in the past of an island called Yomba westwards from Long Island. The Yomba islanders are said to have made pottery prior to their escape to the mainland at the time that Yomba [sank]. Mennis (1978) argues that the destruction of Yomba took place before the last major eruption of Long Island; her estimate is not too early for some of the Long Island pottery to have originated from Yomba. (1982).

This shows that the story of Yomba is now regarded as a fact and no longer just a myth as it appears to have sunk in the sea in 1450 A.D during a tsunami (Day, 2012). The story of Yomba seems to be partly rewriting the history, archaeology and linguistics of the north coast of New Guinea.

Pots from other Madang Coastal villages

Mindiri village

Mindiri Villagers are Austronesian speakers who trace their ancestry to Yomba Island and who brought the art of pottery making from this Island. Strangely their language has been classified by Ross as Proto Bel and is most like the language that would have originally been spoken on Yomba Island even though Mindiri is furthest from Hankow Reef – the position of the former Yomba Island.

The Mindiri people had a thriving pot trade of their own before the arrival of the Germans. Wangum and Bail of Mindiri Village spoke of the many villages that Mindiri traded with (Mennis, 1981b: 91). The Mindiri range of vessels is almost identical to that of Yabob/Bilbil. According to Derr Mul, the Bilbil people quite liked the Mindiri pots because they were thick and strong. It might take longer to cook in them but the food was sweet. At that stage, in the 1970s, there were only a few women still making pots at Mindiri. May and Tuckson described the pots during their visit to the village and noted that the pots made there are very similar to the Yabob/Bilbil ones. They once made water pots but ceased at the time of the war. They also made the sago cooking pot called *magob*. "The cooking pot called *bornda*, is similar to the *bodi* but generally lacks the sharp-angled shoulder. Characteristics of the *bornda* are the bulges located below the shoulder and running around the widest portion of the vessel" (1982: 182). Interestingly enough they were told that the shape copied the four cornered jungle fruit in design. The ethnographer Biró compared the shape of some artefacts to fruits on the Rai Coast during his visits in the 1890s.

Mindiri pot similiar to the Bilbil pots.
PNG National Museum.

When they built up their trade it threatened the Bilbil/Yabob trade monopoly to such an extent that the Rai Coast villagers told the Bilbil traders they did not want to buy their pots as they could get them from Mindiri village! The Yabobs and Bilbil were so angry they decided to wipe them out. They invited the Mindiri to a feast on Yabob Island and then massacred them. This happened about 1870 and is contained in the oral history of many of the coastal villages including the Yabobs where the massacred Mindiri were buried in an old well. This story is quite fascinating involving as it does monopolies, feasts and treachery.

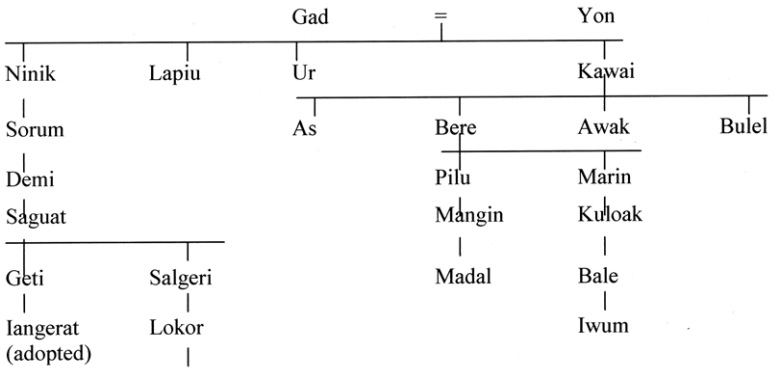
Gogol villages

The Gogol pot-makers are Austronesian speakers, claiming common ancestry with Bilbil Village and before that with Yomba. A genealogical tree has been made showing the ancestor who travelled to Gonua and his links with a Bilbil family (Mennis, 1978). The Gonua 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 Gonua 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 and they were used for bride prices. The Bilbil people bought pots from Gonua, Batik, Atu. On the other hand the Gogol, Gonua and Atu people buy Bilbil pots. Pall of Bilbil said "the Gogol pots take a long time to cook the food, but the Bilbil pots cook quickly" (Mennis, 1981b: 57).

Rosalie Christensen described the making of Gogol pots in 1975:

> The clay is rolled on the *limbum* to make many long thin 'fish lines'. The bottom of the pot is made by coiling one of the fish-lines around and around in the hand. The fingers are then used to smooth the inside. The pot walls are built by continuing to add thin fish-lines of clay, and smoothing the inside surface so the 'coils' are firmly stuck together. - A good, clear day is chosen for the final firing or cooking. A pile of wood is made with enough space in the middle for a pot to fit (1975: 88-89).



Gad's genealogy showing the Gonua line on the left.

Barum pots

The Barum people are Austronesian speakers who live in the low hills between the Gogol and Naru rivers.

Christensen wrote that the Barum women collect their clay near a stream. They remove the stones from the clay which is then formed into a lump. While holding this lump a hole is made in the centre and turned to make a hollow shape. This is the bottom of the pot. More clay is added to shape the pot but the potter does not use a fish-line of clay like the other Gogol potters. When the pot shape is finished, "the design is marked with a piece of bamboo. Each pot must be finished from beginning to end in one working period. Some pots are very large for cooking pigs" (Christensen, 1975: 83).

Extent of the Bel Pottery Trade

As we have noted, the Bel people built large sea-going canoes and used mainly the morning star to navigate by as they travelled as far as Sio, in one direction and Karkar in another, taking part in great trading trips on which they bartered their pots for food, wooden dishes and spears.

Sungai of Siar Island thought the Siar canoes 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). Miklouho-Maclay had this same trouble when trying to persuade Kain of Bilbil to travel past Telyata near Singor on the Rai Coast. 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 further. 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).

Kain refused to go further than Telyata which is just past Singor. Damun of Bilbil said the traders used to go as far as Malalamai many kilometres beyond Singor before turning back (Mennis, 1981b: 20)

On the left, a Gogol pot made using the coiling method. Centre is a Bilbil pot. On the right is a Burum pot.

Karkar Island

The Takia people of the southern part of Karkar are related linguistically and culturally to the Bel group on the coast of Madang, which included the Yabobs and Bilbils. They traded informally with the inland people of the island and also made long trading trips to Manam and the mainland all the way to Bilbil and the Rai Coast. In this way they, became middlemen for Bilbil pots and the Bilbil in turn acquired red, black and white ochres, mortars and pestles, dogs, woven armbands, galips, (*canarium almonds*), betel nut (the nut of the *Areca* palm) wooden plates and drums (McSwain, 1977:18).

Laden Coast to the north

The Madang people called the North Coast area the Laden Coast where the villages of Moro, Malala and Sarang and Korak are found. *Brus* (tobacco) was the main export of the Laden area. It was good *brus* and many people wanted it. In some areas, the men would roll the *brus* in banana leaves and some with *mangas* leaves. The Madang people visited this area infrequently but their pots were traded by middlemen right along this coast and inland and bartered for *brus* or pigteeth. Korak is a non-Austronesian speaking village about halfway between Madang and Bogia opposite Karkar Island. They are linguistically related to the Waskia people on the northern part of Karkar Island. The Korak pots were seen as heavier and took longer to cook the food than the Bilbil pots. Often Korak was the first port-of-call for the Yabob trading canoes when they ventured along the North Coast. After they left, Korak, they went to Dugumur and on to Medibur where they had trading partners. The Yabob pots were more familiar here than those from Bilbil.

Paul Siang of Korak, interviewed in 1994, said that his village used to trade their pots and *brus* tobacco for baskets, galip, and live pigs on sticks with the Karkar people:

> Our people used to go to Karkar to trade. We sailed there in our big sailing canoes in June when the winds weren't too strong. Each clan had its own name for their canoes: Gowa Clan called theirs Kambual; Tome call theirs Saranguel; Korando, Marara. We would exchange our pots and then come home again. Our families had trading friends on Karkar and we still have them, but we have lost contact now. At the time of the ancestors, our people planted brus and exchanged things with the Karkar people. My mother and grandmother used to make pots with the clay from Mount Kunumum and cook taro and bananas in them or used them for presents.

Girls in Korak village with two pots, Korak one on the left and Bilbil one on the right.

Derr of Bilbil said that the Bilbil and Yabob men used to trade with Megiar, which is near Korak and on the coast opposite Karkar Island. The Karkar men would go to Megiar, Sarang and Matuka to buy the dogteeth. The Karkar people did not have the right type of pigs to make the pig tusks and used to get them from Siassi (Mennis, 1981b: 24-25).

Local Trade

There was constant trade between the Bel people and nearby inland villages on informal trading trips**.** The main items were tobacco, pig's teeth and large taro. Pall Tagari, of Bilbil, remembered that many men from Nobanob to Bogati sold tobacco for pots while wood for canoes, vines etc were procured from nearby Hudini and Yagaum. It might be bush vines or logs for the mast and outrigger.

Sometimes they would decide on a day in advance and when everything had been cut and dragged to the beach, they would wait for the Bilbil men to come on that day. Alternatively, the bushmen would light a fire and signal the island. The Bilbils would bring pots over to pay for the wood.

The Rai Coast

On the Rai Coast, the Bel group exchanged pots for possum or dogteeth, from which they made decorations. Bongor and Singor had bird feathers (*kangal*) and from Malalamai, Bongor and Sel came the red feathers of the fowl. Dog's teeth and *kapul* teeth came from Rai Coast. They came from the bush places near Bonga. They sewed them together with *tambu*. As mentioned, the Rai Coast plates are called after the beach where they are bought. If they are bought in Singor they are called *Singor daig,* so if they are bought from Galek, *Galek daig*. Some long plates are bought from Malalamai, Bongor, Mur, places near Saidor and Sel. Galek people make long plates from kwila.

Inland Trade

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. He said that traditionally the Yabobs and Bilbils people did not trade directly with the inland people, but only through the Mindiri (Mennis, 1981b: 88-9).

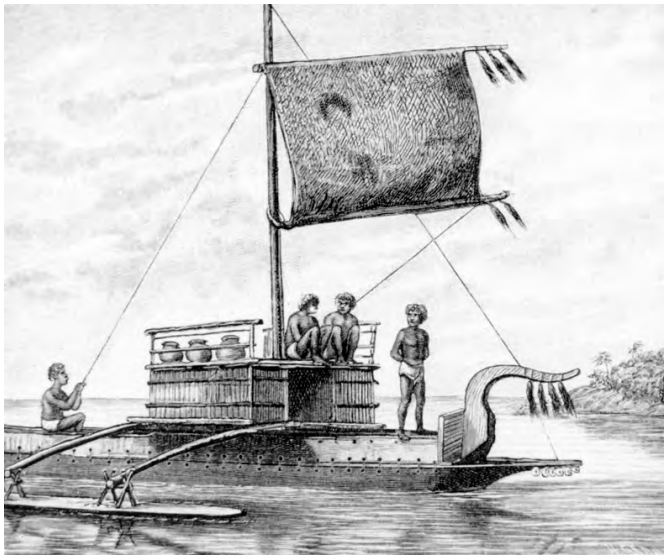
Imso Kau, speaking of the time when he was young, said that the Bilbil pots were always snapped up because they were not always available. They were popular because they cooked food faster than the Mindiri pots, but they broke after a year or two. For this reason, the Mindiri pots being thicker and less 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. 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 Bilbils and Yabobs who would pick them up on their return trip. Orinma people made only 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. (Interview, Mennis, 1981)

Sio Island

The Sio people once lived on tiny Sio Island and were still there in the early 1930's when Groves visited it (1934: 43). After the Second World War, they shifted to the mainland. The old island trade compared well with the Bilbil trade. The inhabitants depended mainly on their pots for a living. In both places, these were made by the women and traded by the men. The Sio were middlemen for all sorts of items from Tami Island, the Rai Coast, Bilbil, and Karkar. They were sedentary traders, depending on Bilbil and Siassi canoe traders to dispose of their goods.

Both islands, Sio and Bilbil, were inhospitable rocky places where gardening was so difficult that the people resorted to growing vegetables on the mainland. Some may argue that this comparison is disparate because it compares the Sio Island, as described by Groves in the 1930s, with Bilbil Island which was deserted in the early 1900's. But, according to Groves, Sio Island had not changed much. So the comparison is still valid. The inhabitants were Austronesian speakers who chose to live on the island, safe from enemy hill tribes and, in the case of Sio, from mosquitoes. Both had trading links to numerous inland and coastal villages but Sio had only indirect trading links with the inland and coastal villages. Although the Sio people produced hundreds of pots they did not build large trading canoes but depended on the Siassi traders to be the middlemen for the pots over the trading sphere. The Sio were the hosts to visiting traders, who stayed for weeks waiting for the winds to turn. It is not known if they felt this burdensome because of the extra food needed for the visitors. The Sio, being agriculturists, produced most of their own food on the mainland, but imported taro, yams, bananas, sago, pigs, Rai coast wooden bowls, Tami wooden bowls, canoes and bilums. They exported fish, coconuts, pigs, pots, *tambu* shell discs, dogs and dog teeth (Harding, 1994: 119)



"Traditional Astrolabe Bay canoe." Finsch, 1888.

Similarly to Bilbil, when Sio women married outside their village, they were banned from making Sio pots in their new village (Harding, 1967: 37).

Siassi Trade

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 Bilbils and Siassi. He remembered seeing one large Siassi canoe in Bilbil when he was young, but this had been blown off course. The Bilbils lost no time in selling them pots before they sailed for home (Mennis, 1981b: 14). Derr, who was much older than Damun, 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 Bilbils 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 Bilbils 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 Bilbils at a later date" (ibid).

Motu Potmaking

As mentioned in Part 1, evidence is now emerging that there were Lapita pottery makers living in the Motu area for an extended time. The new Lapita sites date from 2900 to 2500 cal BP and represent a newly-discovered migratory arm of Lapita expansions that moved westwards along the southern New Guinea coast towards Australia.

The arrival of Lapita colonists 2,900 years ago found the area already occupied by non-Austronesian speakers and land transformed by more than 1000 years of prior human settlement. The archaeologists, of the Caution Bay finds, claim they will transform the history of southern coastal Papua New Guinea. McLaren added, "Lapita people

had sailed around the coast of New Guinea thousands of years ago and continued to make Lapita pottery in the same style as their ancestors had on New Britain" (Weule, 2011). Their descendants are probably the Motu pottery makers of today.

Woman clearing pot clay of twigs, Manumanu village. Groves, 1957. (PMB43_028).

In the 1880s, Lindt, an early explorer, wrote:

> Just now, as I write, the village of Hanuabada is one scene of life - truly animated human nature from the oldest man to the youngest bairn kicking in its net cradle, rocked by an elder brother or sister to still its impetuous nature. Who can sleep amidst the thud, thud, of many native hammers (long sticks) used in ship-building, or the slap, slap, of native trowels used by the women in the manufacture of pottery (1887: 118).

Later he continued his description*:*

> Some women are just returning from the clay pits with heavy burdens of clay of various kinds, black, red, yellow, brown some are spreading the clay out to dry, others are pounding with a stone the dry clay, some are damping kneading it and mixing it with fine sand. Salt water alone is used. Others have a lump of clay, and are beginning to make various kinds of pottery (1887: 122).

Chalmers also saw the pot makers in 1887. "The women making their crockery pots preparing for the men's return from the Gulf with large quantities or sago." He thought the Port Moresby area was "a very unhealthy place" and the nearby villages were surrounded by swamp which "in wet weather is full of water." Usually it was dry "it had a burnt-up barren appearance" (1885: 31). The Motu people were essentially a maritime people, fishing and sailing over hundreds of years. The pots which the women produced in large quantities were like their money and were traded for food nearly every year during the hungry times because the Motu area was too poor to support them.

Captain Barton in his Annual Report of 1906 described various sized pots and dishes taken on the *hiri* expeditions. There were cooking pots, sago storage vessels and water containers. Haddon and Hornell cited Pratt (1906: 72) who described the storage for the pots on board the *lagatoi* as a "floor of split bamboo laid longitudinally across the framework. Openings are left in the floor above each dugout to enable the pottery to be stored in the hulls of the canoes" (1991, ii: 228).

Woman making a pot, Manumanu village. Groves, 1957. (PMB43_028).

Before the *hiri* set sail, the sorcerer was called on to perform his magic to ensure the safety of both the *lagatoi* and its precious cargo of pots which were 'ritually brushed with banana leaves' after they were packed into the hulls of the Lagatoi. In her book *The Hiri* (1961) P. Cochrane described how:

> [The sorcerer, *babalau*] carried a clay pot, a string bag full of fearsome relics, and some banana leaves. The men drew back from their work and the *babalau* prepared his magic. He placed the broken pot on one end of the *lagatoi* and put his string bag beside it. From the mysterious contents of the bag he chose some pieces of cassowary claw, the snouts of several garfish and some very dry pieces of the root and bark of a secret tree. He stirred the mixture well and lit it. A thick black smoke arose and mumbling charms all the time the sorcerer smoked the outside of the *lagatoi*

> all over. To make doubly sure of wind, weather, and tide, the sorcerer now wrapped small bundles of the green leaves of a bush plant in pieces of banana leaf. These small bundles he pushed firmly into the square holes in the bulwarks (Quoted, May and Tuckson, 1982: 62)

Interview with two Motu women about the pots, 11 August 1995

Firing a pot in Manumanu village. Groves, 1957. (PMB43_038).

On Magnetic Island, where the Motu men were building two *lagatoi*, I interviewed Hera Taboro and Miriva Kohor both of Pari Village, who had accompanied their menfolk down from Papua. They told me about the pottery in those villages. Miriva Kohor, who married into the Darina Clan in Pari Village, talked about seeing her grandmother, Lao, making pots in Hanuabada Village. Hera's mother, Bele, also made them. The Boera people and the Porebada village still make pots. To get the clay [*raro*] the women dug the ground one and half metres down near where the gardens are. They carried the clay back to the village, mixed it with sand and put it on a board from an old canoe to dry in the sun. Later they mixed the clay with salt water and shaped it. Later they fired them on an open fire. Some pots had a small mouth to carry water and when they were filled the women carried them on their shoulders back to the house. Some had a wide mouth and were big enough to store the sago. When the men were preparing for a *hiri* expedition, the women made lots of pots ready for the *lagatoi* (Mennis, 1995).

Miriva, herself was not taught to make the pots and she thought the women stopped making the pots because the *hiri* stopped. Veri, a man from Pari Village, spoke about storing the pots on the *lagatoi*:

> They made small rooms in the canoe and put banana leaves to protect the pots and they also stored them inside the hulls. They had plenty of small rooms along the canoe to store the pots. They put the banana leaves around them because the pots break easily. The pots are made for trading and for feasts. They made big pots for cooking food - yams, banana, and pigs (Mennis, 1995).

Veri did not know of the legend of the first pot, but proffered the information that Edai Siabo's sister, Boio Siabo, brought the knowledge of pottery making to Boera Village and from there it spread.

When Veri went on a *hiri* in 1937, the relatives of his wife made the *lagatoi* and their wives made some pots and some came from other villages so that each person had many pots. They sailed to the Gulf to get the sago and they had good weather. There were many pots stored in the *lagatoi* and the exchange rate was one pot for an amount of sago (*rabia*), wrapped up in banana leaves. Back home they stored the sago in very large storage pots. The general consensus of the three Motu informants was that the pots stopped because the *hiri* stopped. This was true to a certain extent, although a few pots continue to be made. The introduction of European style pots affected the production of the earthenware pots. As May and Tuckson wrote, "thousands of pots were made by the Manumanu in the 1950s but, by the 1970s, the future looked bleak. Only Boera and Porebada are still producing a few pots" (ibid: 64).

Newly fired pots. Groves, 1957. (PMB43_039).

May and Tuckson give a detailed account of how the Motu pots are made. The main points being that each woman fetches the clay in string bags and leaves the clay to dry. Impurities like shells and gravel are removed. Seawater is sprinkled onto the clay and sand is added. Using a broken

Left. a Motu uro *cooking pot. Thousaands of these were made for the* Hiri *trade.*

Right. Motu hodu *water pot.* Queensland Museum, QM680.

pot as a turntable, the potmaker plunges her whole hand into the clay and turns it around dragging up the clay. (Unlike the Bilbil pots which are formed with the thumb in the hole to begin the process). Once the outside of the pot has a rough shape then the rim is formed with the thumb in the exact shape desired. It is now beaten and set in the sun to harden a little:

> Next the pot is cradled in the potter's lap and a smooth, round stone is held inside the vessel. With a wooden beater held in her other hand she strikes the wall with both implements. After repeated beating and moving the pot, walls are swelled out and evenly thinned until an almost perfect sphere is formed. A second paddle with a ridged surface is used for further beating and third without ridges is used for the final wet smoothing of the shape. --- Early in the beating, the potter must beat over the hole which has remained in the bottom because the vessel sits on the turntable. Decorations are now added around the rim with a shell before the pots are dried in the sun. The pots are pre-heated with burning coconut fronds. The pots are then fired together on a bed of coconut leaves and stems with more leaves and dry fronds thrown over the top of them. The fire reaches a very great heat quite quickly and, when the pots are still hot, they have a slip of dried mangrove bark soaked in water splashed over them (May and Tuckson, 1982: 69).

This description shows the similarities between the two processes of the Bel and Motu groups. The technological skills of the women in both areas are about at the same level except that the Bilbil pot was probably stronger. It is interesting that the bottom of the Motu pot is added later whereas the Bilbil women formed the bottom as they worked the shape of the pot through continuous beating. The Motu women did not beat the pot for as long and kept adding pieces to the bottom to make the shape.

Manumanu, a Motu village

Chalmers described ten different vessel types amongst the Motu pots, but here only the four main ones are described. In the 1950s, Groves gathered information about potmaking in Manumanu Village listing four kinds of pots: the *uro*, *tohe, hodu*, and *nau.* The first, *uro*, is "a wide-mouthed spherical cooking pots measuring from about ten to sixteen inches in diameter [25 - 41 cm]. The *tohe*, is shaped exactly like the *uro*, but twice as large and used for storage, particularly for sago. The *hodu* is a spherical water pot, and the *nau* is a shallow open dish, circular in shape" (Groves, 1960:11). Of these varieties of pots and dishes, the *uro* was the most prolific as observed by Groves in the 1950s. Sherds of the very large pots, perhaps the antecedent of a *tohe* pot were found in an archeological dig on Motupore Island and dated to about 800 AD (Allen , 982: 103).

Tohe *pot from Porebada village, used to store sago.*AM46418. With thanks to the Auckland Museum, Tamaki Paenga Hira.

> *Uro* are terracotta cooking vessels, shaped from a body-mixture of clay, sand and water by a combination of the hand-moulding and the paddle-and-anvil techniques, then sun-dried and fired. By their appearance it seems likely that *nau* are made from an identical mixture by the same process. *Hodu* are treated on their outer surface to render them impermeable and the treatment gives them a slight lustre; but the method was not observed. *Uro* vastly outnumber the other three varieties of pot manufactured at Manumanu as they are the main trading pot. In three seasons of field work at Manumanu, it was possible to observe in full the manufacture of several hundred *uro*, for in those three seasons many thousands were made; but if any of the other three varieties was made in that time, its manufacture escaped attention (Groves, 1960: 6).

The Manumanu did not have their own clay deposits but fetched their clay from a deposit 15 kilometres away. This clay was then stored inside old canoe hulls under one or two houses until needed. During the 1950s, the women made thousands of pots in preparation for a large *hiri* expedition.

Groves had his own description of making a pot and noted that pieces of clay were broken off by each of the women and stones and grit removed. When this was done, each woman mixed her "own pug of clay, with sand and water, kneading it into spherical lump. She then squashes this sphere into a flatter shape and presses a cavity into its upper surface." The next step was kneading of the clay and then, the pot was shaped on the circular base of a broken pot, which supported it. Hand moulding is the next step which begins while the clay is still wet. The potter draws clay from the central cavity of the pug and places some on the outside of the forming pot. [This is one area where the process differs from the Bel pots which are continually turned in the potters hand with no clay being added to the outside]. The potters work outwards from the mouth in the final shaping, "using the circular rim as a guide to ensure that the rest of the pot is quite spherical". An anvil and stone are then used to give the pot more shape – the same as is done with the Bel pots.

Groves continued:

> Holding the anvil against the wall of the pot on the inside, she pushes gently outwards, at the same time beating the wall against the anvil with her paddle. By moving the anvil around the inside of the pot while beating against it from the outside, she slowly and carefully extends and rounds the walls of the pot. -- When satisfied that the pot is perfectly spherical, she wets another finer paddle liberally and slides it over the outer surface to ensure a smooth finish, dissolving the incised patterns imposed by the coarser paddle (Groves, 1960: 11).

Nau *bowl from the Port Moresby area for dishing up cooked food. These containers were not as common as the* uro *and were mainly used for the domestic market.*

When a number of pots were finished, they would be fired in the cool of the evening on a bed of dry timber and dry coconut fronds with more dry sticks added over the pots. The fire when lit quickly becomes very hot and the women use long poles to add more timber on the fire. The pots that have been successfully fired were now ready for distribution (Groves, 1960: 12). This system of firing is very similar to the Bel people's way and possibly used in many pottery villages throughout Papua New Guinea.

Cooking a Mumu by the Motu people at Nelly Bay.

While they used their pots for cooking, the Motuans also excelled in cooking in earth ovens for a large crowd of people. In August 1995, the Pari and Lealea people prepared a mumu feast for the Nelly Bay community to repay their hospitality while they were building the *lagatoi***.** It was a very traditional way of cooking but required a lot of effort to cook on such a large scale.

Heating the stones: Initially logs of wood were stacked beside a pile of large stones as well as dry coconut fronds and dry leaves for kindling and some green banana leaves to wrap the food. The men dug a pit about two metres wide by two and a half metres long and a metre deep. Some modern material was used like corrugated iron where traditionally banana leaves may have been used. The men placed a few stones around the perimeter of the bottom of the pit and a few

more in the middle. A piece of corrugated iron was put on top of these stones and more stones were piled on top of the iron until it was no longer visible. Then firewood and the dry coconut fronds were set on top of the stones. The men lit the fire and added more fronds and sticks. As the fire got hotter more stones were thrown in and the pit oven was left to heat for about two hours.

While waiting for the stones to heat, the food was prepared. The meat included chicken, chops, pieces of pork and herbs to garnish the meat. Vegetables included potatoes, yams, taro, spinach and apika leaves, coconut milk and fresh coconuts. The vegetables were peeled and placed in small lots with garnishes on green banana leaves which were then wrapped into parcels and tied with string. The spinach was mixed with coconut milk to give it a sweet taste. There were many of these parcels as they were catering for a big feast. The meat was prepared just prior to being cooked and garnished with salt and pepper, sauces and herbs and wrapped in small lots in banana leaves tied with string.

Preparing the mumu at Nelly Bay.

After two hours, the stones were heated enough and about half of them were removed from the oven with long bamboo tongs, and were laid smoking and red hot to one side. The food parcels were then placed on top of the heated stones in the pit and other heated stones were put on top of the food with the tongs. The food now cooked with the heat of the stones. Green banana leaves were placed over the top of the stones and a thick layer of cardboard, added on top, kept in place with large cold stones. This was to keep the steam in and secure the earth oven from roaming dogs. It took about four hours for the food to cook but the overall time for preparation and cooking took all day.

That evening a large group gathered for the feast which was enjoyed by all. Afterwards the Motu people put on a dance for the evening's entertainment, down on the water's edge of Nelly Bay.

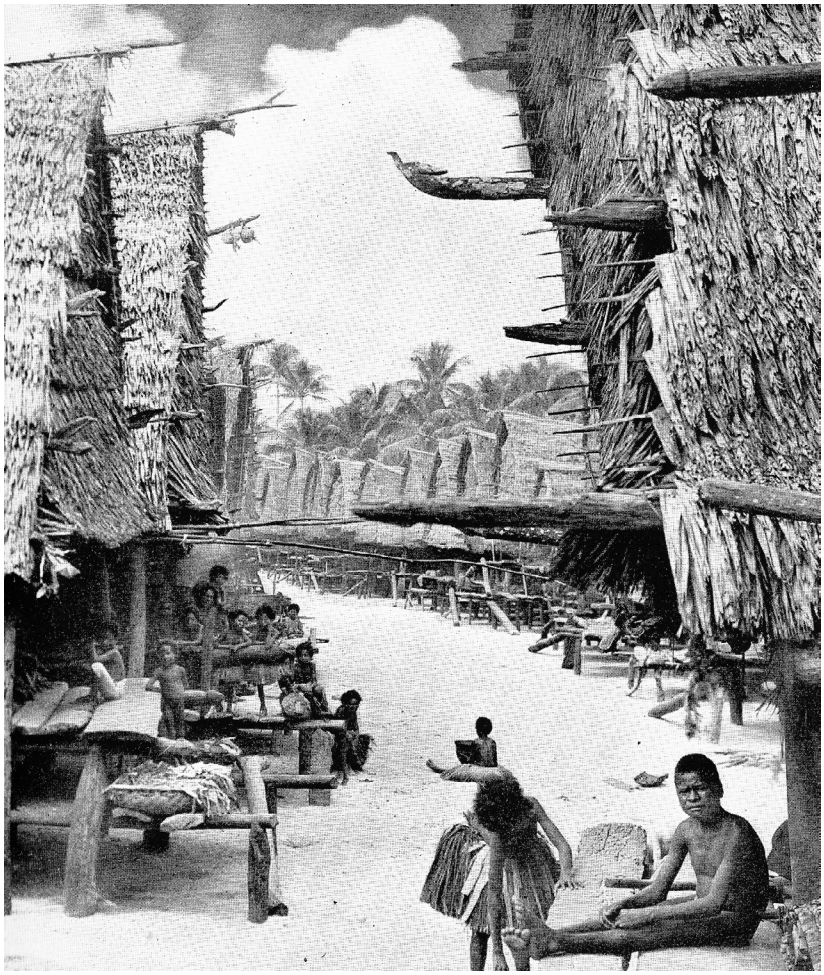
Other Pottery centres in Papuan Coastal Villages

Roro Pottery.

May and Tuckson listed Roro as another important pottery producing group in the traditional society along with the Motu and Mailu. They mentioned that the Roro learnt their pottery skills from the Motu in adjoining villages either by spying on them or intermarriage several generations ago and they set up their own pottery business. In Tseria Village on Yule Island, five women were still making pots in the 1970s, but only one or two pot-makers were seen at Poukama and Delena villages on the mainland (1982: 69).

Geoffrey Irwin in his article the *Prehistory of Coastal Papua and the Massim* wrote about pottery shards found in Motupore which was an ancestral Motu village. "For the Yule Island area, the suggestion has been made that the ethnographic Roro pottery was not a development of the local *urourina* ware, but possibly derivative of Motu" (1991)

Joseph Abia's story on Yule Island (see Part 1) may hold the key to where the Roro pottery originated (Interview, 1980). Two hundred or more years ago the Manumanu attacked the Poukama on Yule Island over the access to the clay deposits. Both these villages were Motu speakers and pot-makers. With the support of the Roro people, the Poukama won the day and the Manumanu escaped back across Hall Sound. Because of their support, the Poukama invited the Roro to come and live with them on Yule Island. However frictions developed over the years. The Roro wanted to have access to the secret of making the pots so they plotted to kill the Motu leader so his wife, Kaia Mea would teach them. The plot was foiled and the Motu people fled back to the mainland to set up Poukama Village with some of the Roro people. When Percy Chatterton lived there pre-war, he found the two groups, Poukama and Delena living peacefully in nearby villages (1974: 55). They were pot makers but spoke the Roro language. So Irwin was correct in saying



Main street of Mailu Village.

Hurley, 1924.

Roro pottery was not a development of the local *urourina* ware, but possibly derivative of Motu. From the above oral traditions it shows that before they joined with the Poukama pot makers, the Roro did not know how to make pots.

While there, Percy Chatterton often woke up to the pat, pat, pat of the women preparing their pots for a fortnightly market with the villages up the nearby river. The men went fishing and smoked their catch while the women patted at their pots. Then in the afternoons they made their fires on the beaches to fire the pots ready for the market day. Keeping the fires stoked at the right temperature required quite an art. The night before the market up the river, the women would pack their canoes with the pots, smoked fish and other items and sail across the sound to the river mouth and wait for dawn when they would paddle up to the rendezvous with the Mekeo women. The Mekeo had been their traditional enemies but now it was peacetime. Chatterton noted that "the bartering was austere. There was little conversation and no chaffering. If an offer was unacceptable, the woman to whom it was made turned away without a word, but with a 'what d'you take me for' look on her face. This attitude is characteristic of Papuans generally. They do not haggle. They set a price on what they want to sell and won't budge from it." (1974: 56). This is an interesting comment from Percy Chatterton and contrasts with the exchanges the people made with trade friends down the Gulf when they often tried to outdo each other in their generosity.

The Roro pottery industry was not as big as the Motu but they had a trade system known as Roro *harima* when they used to take their pots to Kerema in October and November to exchange for the sago. Later, in the 1960s, they used schooners to take their pots there. One common pot the Roro had was the *ororo*, used for cooking but a rare one was the *ra'a* which was a magic pot and "kept by sorcerers and some women to store magic paraphernalia" (May and Tuckson, 1982: 69).

Mailu Pottery

May and Tuckson listed the Mailu potters as being one of three pot producing areas on the south coast, the others were the Motu pottery and that of the Roro pottery. The Mailu on the eastern side of the south coast, made pots for local trade and they also built *lagatoi* type craft to distribute the pottery but nowhere near on the scale of the Motu *hiri* trading scheme where many thousands of pots were carried over very long distances. The Mailu were not forced to sail for survival as their area was fertile enough to supply their needs all year around. However, they still traded their pots for shells, pigs and betelnut (May and Tuckson, 1982: 56 -7).

Mailu people traded their pots in large double canoes with the crab claw sails similar to the Motu ones. Although they are classified as non-Austronesian speakers, the Mailu had many Austronesian words in their vocabulary and many of their customs. Did they adopt Austronesian characteristics along with the Austronesian terms? Irwin noted that the Mailu language [Magi language] had Austronesian language similarities:

> It could be proposed that the non-Austronesian Mailu were 'really Austronesians in (linguistic) disguise': such a theory could be based on the common association ethnographically, of maritime skills and Austronesian languages, and their common lack of association with non-Austronesians ones. However in Melanesian culture this correlation is not perfect and it is true that race, language and culture may vary independently (Irwin, 1978: 412).

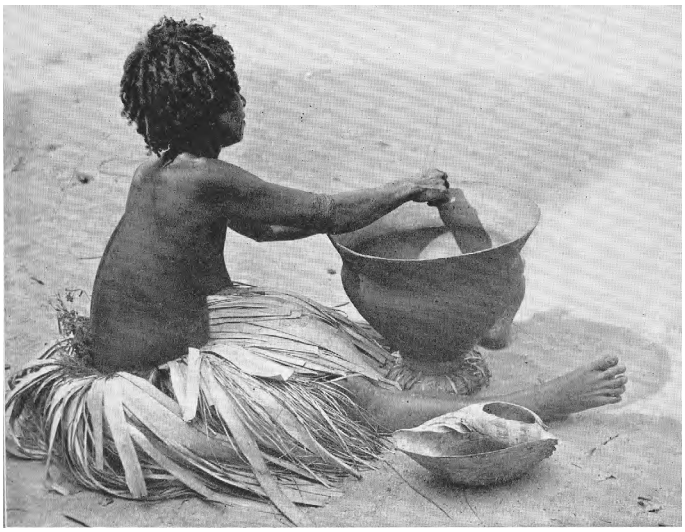
Woman making Mailu pots using the coil method. Hurley, 1924.

Years later genetic testing classified the Mailu as being Austronesian speakers and it appears their language was Austronesian until they changed to the Magi language (Matthew Spriggs, 1991:10). The earliest pottery found in the Mailu area was 2,000 years old but changes occurred about 800 BP to the Mayri style and then the third stage was the modern Mailu (Irwin, 1978: 408).

The only pots they made were cooking pots.

> The clay is moistened with saltwater only -- Between their hand they prepare a number of sausage shaped rolls, 2 cm in diameter and 40 cm long and start coiling with one of these rolls half way up the halved coconut shell. After this, the coconut is placed on the ring-support and subsequent coils, placed almost perpendicularly are added to form a pot which is roughly cylindrical in shape. The rings of clay are smoothed and scraped with the palm of the hand and a shell (May and Tuckson, 1982: 59).

This method is quite different from the Motu style of pottery. The Mailu women do the coil pottery which is usually the men's style like in the Gogol. Even in their trading system they had different customs and were not hampered by the rituals on the *lagatoi*. "Men, women and children used to go each year on several major trading expeditions. The women could make more pots on board the canoes and fired them on the beaches at night" (May and Tuckson, 1982: 57). They were the visitors at most of their ports of call which meant their trade partners did not reciprocate their visits. A few host partners, however, returned the visits for trade. Overall they exported far less than they imported (Harding, 1994: 112). Irwin noted that their trade was limited mainly to the acquisition of pigs "for the great *gove* festival when marriage debts were paid and last funeral rites held" (Irving, 1978: 408). Their canoes were double-hulled outriggers with "reed matting sails distinctively shaped like a crab's claw." But only two or three long voyages were made each year to the west and one to the east" (1978: 407).



Another Mailu potter. Hurley, 1924.

The Extent of the Papuan pottery

Motu pottery was the most prolific of all the pottery industries along the Papuan Coast. Groves noted that Motu pottery found its way, "into almost every village along the shores of the Papuan Gulf and in the immediate hinterland." (1960:2). The Motu traded thousands of pots every year in traditional times.

Murray Groves recorded some details of pots and their worth:

In September and October, 1954, when the people of Manumanu were mainly engaged

Pots ready for sale in Manumanu village. Groves, 1957. (PMB43_24).

> in preparing new gardens, individual women made small quantities of pottery whenever they had time to spare. Some women on foot took their pots, three or four at a time, into Gabadi villages to exchange them for *taitu* (a variety of yam). Other women stored their new pots until they had enough to justify a canoe trip into the Gabadi villages. On 10th October eight double canoes rigged as houseboats, with deck-shelters of *nipa* palm, set out westwards to enter the Aroa River and transport pots upriver to Gabadi villages. Altogether over 90 people went on this excursion, taking with them several hundred pots. Each pot of medium size fetched 50 *taitu*. 1954 was a good year at Manumanu, and food was plentiful; but nevertheless the villagers wished to obtain seed *taitu* from the Gabadi because they consider Gabadi tubers superior to their own (1960: 9-10).

Writing in the 1980s, Lilley discussed Allen's work on Motupore in Papua. (Allen, 1977: 393) "Allen hypothesizes that their specialization allowed them to occupy resource-poor but strategic locations such as Motupore and to rapidly integrate with existing exchange networks, thus bringing a 'higher order complexity' to local socioeconomic systems which accelerated their development". Allen hypothesized that this practise led to a collapse of trade some 200 to 300 years ago following which they moved west and settled in new villages and established the *hiri* trade system (Lilley, 1986: 7).

There seemed to be a few movements of villages in pre-contact time but it is doubtful they would have moved far and the discovery of a large amount of late Lapita style pottery in Caution Bay puts paid to the idea that people moved west to begin new villages. Apparently two Motu villages traditionally did not make pots – Vabukori and Tatana but instead they made, shell beads called "*ageva* which they traded with other Motu villages for pots" (Oram 1982: 13). However, in more recent times the Tatana people did make pots as stated by an informant from Tatana, Agnes English, who watched her mother and grandmother make pots..

Comparison between Bilbil and Motu pots

The earliest comparison of potmaking between the Bilbil and Motu styles was by Otto Finsch in 1884. He had already observed pottery making in Port Moresby when he visited Astrolabe Bay (Madang area) and saw the Bilbil women at work. He noted the similarity between this process and that in Port Moresby and the fact that both were the central pivots of the trading expeditions, which occurred in both places.

Finsch noted that Bilbil people were "excellent boat builders and industrialists":

> [Bilibil] is famous for its pottery 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 south-eastern coast. 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 south-eastern coast of New Guinea, so Bilbili is the same to Astrolabe Bay and even further (Mennis: 1996:28).

Finsch noted three areas of similarity: **Firstly**, the Bilbil pots and the Motu pots were fired in the same way; **secondly** the markings on the pots were like a trade mark of the person who made them; and **thirdly**, they were at the centre of the trade network along the coast. There were also other points of similarity: the fact that the potters were of Austronesian stock; that it was the women who made the pots; and that the finished products looked very similar.

Brian Egloff also witnessed the process of making pots both in Madang [Bel] and Port Moresby [Motu].

> **Madang**: Potting begins with a large ball of clay being balanced in one hand while the thumb of the other is plunged into the top middle of the ball as the ball is rotated. This forms an even, symmetrical and thick rim. The shallow impression is deepened by short, quick, blows with a smooth stone. This stone is used as an anvil inside the pot as the pot is beaten on the exterior with a small paddle. The pot is finished with the application of a fine red slip followed by firing. All pots have a thick heavy rim and are exceptionally robust.
>
> **Motu:** Pots are hand moulded from a spherical lump of clay with a dished upper surface. Clay is taken from this hollow and added to the walls. The mouth of the pot is carefully made with the body initially being cylindrical in shape. Through the application of a paddle and anvil the potter beats the walls into the typical spherical shape. After smoothing, simple incised geometric patterns are cut into the upper body of the rim area of some, but not all pots. After a period of curing the pots are quickly fired in an open kiln. While still hot from firing, the pots may receive a coating of mangrove bark dye, which colours the pot red and is reputed to seal the surface (1977: 42).

In these two descriptions the similarities and differences can be clearly seen. In both instances, the pot is begun with a ball of clay in the potter's hands but the way the pot is shaped is different in the initial stages. Later the paddle and anvil technique is used in both cases. While the red coating or slip is added before the Bilbil pots are fired, this process seems to occur after the pot is fired in the Motu case.

Speaking of the Motu people Oram said:

> The number of pots depended on the industry and skill of the women who made them and those of the men who made the canoes and later added further hulls. The amount of sago was roughly related to the number of pots and valuables brought but also, given an almost unlimited supply of sago palms, to the labour of the Gulf people concerned. The energy expended by the Motu, when the voyage is included, seems to have been considerably greater than that of the Gulf peoples. (Oram, 1982: 25)

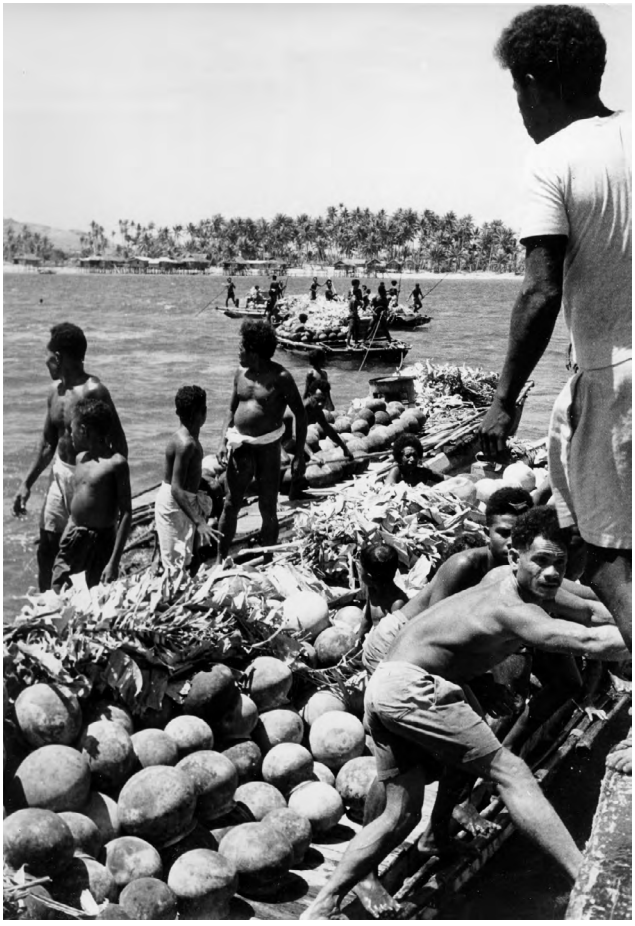
Sometimes when a material like clay to make pots is available, people refrain from using it because of customs limiting its use. This is particularly noticeable with the Yabob/Bilbil people who had a monopoly over the clay pots. So availability of the material and the technical knowledge does not always mean a product will be manufactured in a village. Yabob and Bilbil Villages have their mythical woman, Honpain, who taught them potmaking whereas the Motu people have the sister of Edai Siabo, Boio Siabo, who was said to teach the Motu women how to make their pots. In both instances these mythical women sanctioned their craft in their particular villages and prohibited other people making them. So the Austronesian speakers were protected by these mythical women, Honpain and Boio Siabo, in their industries from competition so their pots were safe when the men went ***Sailing for Survival.***

Part Six: Traditional Material Culture and Trade Items

> *Material culture consists of tools, weapons, utensils, machines, ornaments, art, buildings, monuments, written records, religious images, clothing and any other ponderable objects produced or used by humans* (Quimby and Harrison, 1968: 1054).

For both the Bel and the Motu people, their pots were their prized trade items. Pots were their currency and they were able to build up wide trading spheres, covering hundred of kilometres to villages along the coast to the east, west and many kilometres inland on each side of Papua New Guinea. However, there were many other trade items which were an important part of the trading systems in both the Bel and Motu areas.

There were equivalent amounts of pots against trade items for example to buy a canoe, the hull was measured by lining up large pots one beside the other for the length of the hull. This was an agreed amount and there was no quibbling. Pots were valuable because they enabled people to boil vegetables and meat instead of just roasting on the hot coals or mu-muing in earth ovens. In turn they could be traded on for a variety of artefacts: weapons; musical instruments; items of dress and decorations; and even other pots. Pots were also durable whereas the food they were often traded against was perishable. It meant there could be a space between the actual transaction of selling the pots and procuring the food. So we have the Gulf trade partners accepting the pots and recording with tally sticks the amount of sago that was owed. The gathering of the sago could be delayed as the Motu traders would be in the Gulf for months waiting for the wind to change. While the sago was not really perishable, the closer it was collected to the departure time, the better. The same with the Bel traders, they could drop off their pots on the way down the Rai Coast as far as Sio and then, when the potcage was empty, they could fill up with trade items, including perishables, on the return journey. Notwithstanding the fact that their environment was very poor, the Bel and the Motu people were able, through their pottery, to build up a rich culture and hold a powerful position in their areas. Through diligence and sailing skills, they accessed other cultures, whose people had a wider choice of materials and skills to make artefacts.



Loading pots for the Hiri. Groves, 1957. (PMB43_143).

What were the factors that prevented the people from manufacturing certain artefacts? It was firstly their lack of access to the raw materials they needed and secondly, the lack of technical knowledge. A study of the micro-environment of the area shows that while the large area may have the same temperature and rainfall, the location of just a few kilometres away may have quite different resources, depending on the soil content. For example, some places may have clay deposits; others red ochre; 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. “The biological needs of man, as related to environmental problems (of drought, heat and cold) may be expected to channel thoughts in certain environments” (Spier, 1970: 10).

Roger Neich and Fuli Pereira in their beautiful book *Pacific Jewellery and Adornment* describe the wide diversity of adornments in Papua New Guinea but also point to some ‘basic commonalities’. “The widespread use of dogteeth, pig tusks, other mammal teeth and clam shell” and the ‘large flat and concave white shell discs worn as forehead and breast pendants also ‘traditional small shell discs drilled for stringing’ are found widely” (2004: 84).

A. The material culture and trade items of the Bel people

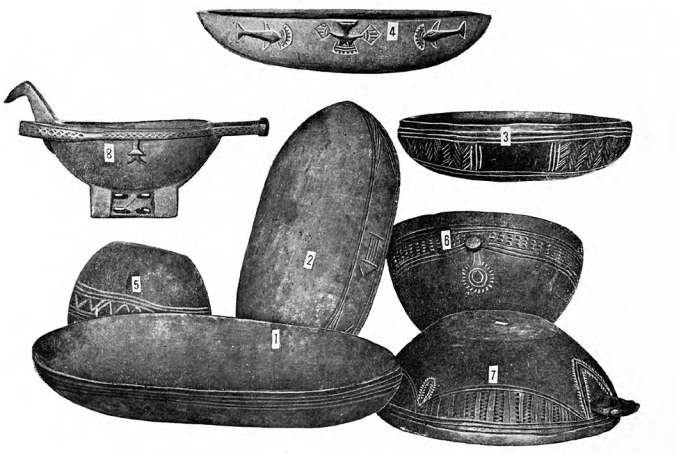
A. 1. Pots for Food

Food was the most important item for the Bel people including large taro and yams, *saksak* (sago), betel nut, *kau kau* (sweet potatoes), galip nuts and meat. The large taro roots from Bogati, Sehan and Nobonob were traded for pots from May until August. January and February was the time for the small taro. Yams came from Siar, Riwo, Kranket, Malamal and Sek Islands in the Madang Harbour area and from Galek, Warai and Singor on the Rai Coast. The Bilbil would store them in their yam houses for the time of the big winds in August, which prevented them from venturing out in the canoes (Mennis, 1981b: 54-56). The Bilbil grew some yams themselves and kept some of those for planting in the following season. Once the German and Australian governments put in new roads this opened up more markets in Amele, Bagasin and many other places. *Saksak* came from places between Gogol and Bogati and inland from Gonua, Atu, Barum, Bur and Didiwala as well from Foran, Silibob and Kauris.

Harding (1967) distinguished food purchased for festival occasions which meant a lot of food was needed for the one occasion as opposed to food that was needed for sustenance over a period of time like the sago the Motuans received from the Gulf and stored in large pots to last over the lean seasons. An example of food chosen mainly for a festive occasion, the Mailu, who were self-sufficient in food, traded for pigs and more pigs for their main festive occasion.

A. 2. Wooden domestic objects

The mortar and pestles from Karkar and wooden bowls from the Rai Coast were needed to mash or pound food or grind nuts to prepare the special dishes in which the Bel people excelled. One such dish, *harong* in Bilbil, consists of a mixture of *canarium* nuts, cooked bananas, and taro pounded together in a mortar. Mager describes the pestle as a club or a bludgeon as well and it may well have had this function: the one word, *saduk*, is used for both (1952: 262).



Wooden bowls and plates used on the trading routes in Astrolabe Bay in the 1890s. The top three are from Tami Island and are more intricate than those from the Rai Coast below. Biro, 1899.

State Library of Queensland.

Wooden bowls are made of hardwood and come in various shapes, oval or round. They can be used to hold taro before it is cooked in the earthenware pots or to carry hot steamed food for the family meal. The Rai Coast produced wooden bowls, which were called after the beach where they were bought. If they were bought in Singor, they are called *Singor daig.* If they were brought down from the bush places behind Singor the pots are still called *Singor daig*. Other long plates came from Malalamai, Bongor, Mur, and places near Saidor and Sel. Galek made long plates from kwila. The Siassi and Tami made a different sort of plate from the Rai Coast ones. They brought them to Bongor and Malalamai and the Bilbil went there to trade the pots (Mennis, 1981b: 57). Mager backs this up with the assertion that, "Tami Island lies over against Cape Cretin. Their wooden bowls are a trade article desired by the Gedaged people" (Mager, 1952: 311). The people also had beautiful spoons carved from coconut shells and other spoons made from mother of pearl (Biró, 1899: 94).

A. 3. Clothing and Ornaments

Miklouho-Maclay, noted that the personal decorations of the village people depended on their place of residence. Those on the Rai Coast, who did not fish much had decorations predominantly of flowers, leaves and seeds, while the people from Bilbil and Karkar, who had more to do with the sea, fishing, trading and sailing, were adorned with "ornaments of shells, fish-bones, tortoise shell" (Sentinella, 1975: 81). Lajos Biró, an Hungarian art collector in the 1890s mentioned that, while people might get dressed up for a feast, their usual clothing was "rather meagre" with the men wearing a *mal* and a women grass skirts. "They also wore plain bunches of leaves which enraptures the wearer not because of their colour or pretty shape but because of their scent" (1899: 28).

Madang dancers wearing grass skirts.

***Mal*:** Many of the items worn by the Bel were obtained through trade. The *mal* was an essential item of clothing for the men. *Mal* were made from tall trees with few branches. After they were cut down, the bark was taken off then beaten, painted, and hung in the wind to dry (Mennis, 1981b: 58). The *mal* was used as a loincloth, as well as a bark-cloth cover or blanket. So eager were the Rai Coast people to obtain the pots that the supply of *mal* kept pace with their availability. *Mal* came from various places on the Rai Coast. The best *mal* and the softest on the skin came from Malalamai, Bongu and Sai. Other places like Galek, Suit, Biliau, Singor traded *mal* too, but they were coarse. The mountain people behind the Rai Coast made the *mal* and sold them to Galek and Suit, Singor, and other villages on the coast who traded them on for pots.

Skirts: The women in Yabob and Bilbil all wore grass skirts which were trade items from Karkar or Kranket Islands. The skirts were layered on the side and knotted at the top in pigtails. The back part of the skirt is always longer than the front. They can be made from fibres from the *woisag* tree, which is found in secondary bush. The Bel people soak the bark in water until rotten so the white fibres can be removed and made into skirts (Mager, 1952: 348 & 213). Pall Tagari said that the Bilbil people also got these skirts as trade items from Malalamai and Bonga (Mennis, 1981b: 59). Even if the Yabob and Bilbil people could make grass skirts, they would have had to import the material because the *woisag* tree grew only in secondary bush. While not common, the skirts could also be made from a type of grass found on the Rai Coast. Mager gave the name for a grass skirt as *nai*: (Mager, 1952: 213). Small girls began wearing skirts as soon as they could walk. Adolescent girls wore skirts to the knees. As age progressed, skirts got longer old women wore skirts down to the ankles. As the women walked their skirts flapped against the back of the knee (Biró, 1899: 5).

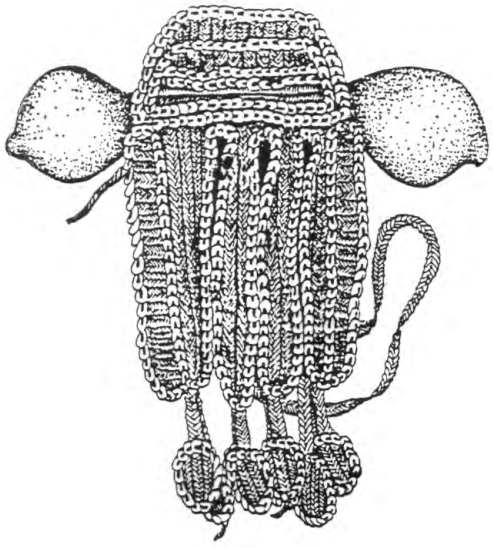
***Bilums*:** *Bilums* (net bags) were an essential part of Bel village life and were a trade item for the Bilbil/Yabob. It is quite a long process to make a *bilum*, which are made by women. Although the material to make the bags is available in coastal areas, it was the bush people behind the Rai Coast, mostly from Malalamai and Bonga who made the *bilums*. The women there made the large ones used for the pots. *Bilum* string is from the *kunai* grass in the Rai Coast (Mennis, 1981b: 59). As well, the string can be made from the fibres of trees or shrubs of the ficus variety, or from the aerial roots of the pandanus (Encyclopaedia of Papua New Guinea, Volume 2, 1972: 732). *Bilums* were worn on the back like an item of clothing and Biró noted that, if a woman did not have a *bilum*, she would feel inadequately dressed. *Bilums* were also used to store things in the home, to carry things or as a hammock for a baby. From personal experience, it is a tedious activity to make a *bilum*. A group of us were the willing students of a Sepik woman in Port Moresby. We extracted fibre from some long leaved bushes, rolling it on our thighs over and over to provide the string. Using strips of a banana leaf to space the rows we then inter-twined the string in figure of eight loops to join one row onto another - after many weeks tedious work, I produced one small *bilum.*

Bali badam. Anton Gideon, Papua New Guinea National Museum.

Bel paspas *armband from Long Island in the 1880s. Finsch, 1888.*

Armbands: the red armbands came from Karkar where the woven material was dyed with red clay; the black armband came from Orinma on the Rai Coast. Although the Bilbil preferred to buy whole armbands from Karkar, they could also make their own from material exchanged for pots. Maia, leader of the Gapan Clan on Bilbil, knew the art and said that the young boys learned how to make them when they were being initiated (Mennis, 1981a: 75). Derr, of the Luan Clan, said the Bilbil were also the middlemen for the armbands and used them as trade items for food (Mennis, 1980b: 65).

Ornaments: Boar tusk ornaments (*paramat)* were chest ornaments made by Bel men as a symbol of manhood. Most *paramat* ornaments were made from two tusks tied together with vine. When the pigs were young, certain teeth were extracted so that the lower teeth grew into tusks. These tusks were a valued trade item in Yabob/ Bilbil from the Rai Coast including Bogadjim. Imitation *bulra*, made from pearl shell, were obtained from Singor on the Rai Coast (Harding, 1967: 48-49). Mager noted that the *paramat* which was closest to being a perfect circle were the most prized of all. They served "as an ornament of honour for the men on festive occasions. They hung down from the neck and lay on the breast. --- They also played an important role in the exchange of gifts to obtain a wife" (Mager, 1952: 247). Dogteeth came for the Gogol area and were made into necklaces or headbands.



Bel Bula *decoration.*
Anton Gideon, Papua New Guinea National Museum.

Mouth decoration: The *bula* decoration was held in the mouth. Made of the same material as the armband, it could be bought whole or in sections and later made by the Bel group. Mager described the *bula* as the name of the white shelled mollusc (*ovula ovum*) which was used as an ornament, "a medium of exchange and in divination" (1952: 46). Otto Finsch found this ornament, used in battle to frighten the enemy, everywhere he travelled (Mennis, 1996: 38). There was also the *bali badam*, a shoulder bag used by men to carry their lime and betel nuts. This was a trade item made from fibre in Kurok Village and decorated with dogteeth, cowries and pigtusks (Christensen, 1975: 109). The *bali kol kol* (Bilbil language), a decoration worn on the back or the front from Efu Village was made predominantly of dogteeth (canine teeth only), fibre and cowries were also added (Mager, 1952: 15).

Feathers: Cassowary feathers; white cockerel feathers, or the red parrot feathers were used (Mennis, 1996: 36). Bird of Paradise plumes (kumul) were traded from the Gogol area to the coast, where they were used in headdresses for singsings (De'Ath, 1978: 70).

Shells: Sek and Riwo had the *tambu* shells which abounded in the harbour and the reefs. Flying fox teeth were also traded and later made into necklaces or headbands.

Breast ornaments made from large dogteeth and napa shells on fibre base, from Kamba village, Madang District.

With thanks to the Auckland Museum, Tamaki Paenga Hira.

A. 4 Weapon and tools.

Lajos Biró noted that, for a *tamol* (local villager in the Astrolabe Bay) not to have a weapon would be unthinkable – without weapons not even a visit would be possible. Furthermore, "if a man only carried his spear he would be regarded as only half-weaponed" (Biró, 1899: 104). Weapons were not necessarily a sign of hostility but more a form of protection as the people were peace loving. They were also used in hunting and fishing, but in the time of war, weapons were a necessary means of protection (ibid).

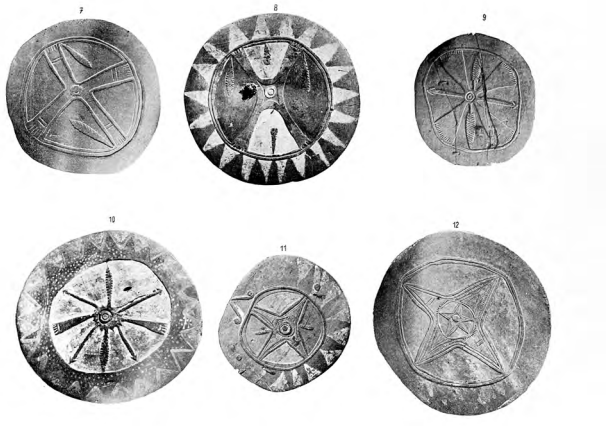
Bel warriors using shields during a fight in the 1880s.
Finsch 1888.

Bows and arrows: Bows were made from palmwood which was not available in the Bel group so it was introduced from the Rai Coast. The wood itself could be traded and made into bows on the islands or else ready made bows could be bought. Bows and arrows were found at Bonga, Malalamai and Sel and would have come down from the bush places (Mennis, 1981b: 59).

Spears: Biró noted that some of the spears were quite different, depending on their purpose: fighting spears were not decorated but fishing or hunting spears had the owners mark on them. In Bogadjim, Biró bought a dancing spear, a *jour*, which was much lighter than a fishing spear with a shaft of bamboo, decorated with bunches of cassowary and *kakadu* feathers underneath the fork (1899: 176). When they were hunting, 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 (1899: 70). Mager wrote 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).

Shields: The Bel men used heavy shields in battle but only on home soil as they were too heavy to carry far. These big round shields had a circle carved in the middle called 'the eye' and a handle carved on the back, called *dimu*. Some of them had a diameter of 90cm and a weight of 10kg and were kept in the meeting houses (Mennis, 1996: 24). Smaller shields were carried in specially made string bags for fighting elsewhere.

Slings: These were traded from Bogadjim and 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. In 1871, Miklouho-Maclay examined the tools carried around by one of his "native visitors." He found sharpened bones, which were used as small knives, longer bones which served as needles and a shell with a serrated edge for scraping coconut (Sentinella, 1975: 86).



Large war shields in the 1890s. Biro, 1899.

State Library of Queensland.

Adzes: The adzes came from the foothills of the Finisterre Ranges, and previously traded down to the coast; the stone, was tied to the adze haft and

used for chopping down trees and hulling canoes. Mager, 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). As soon as Miklouho-Maclay 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).

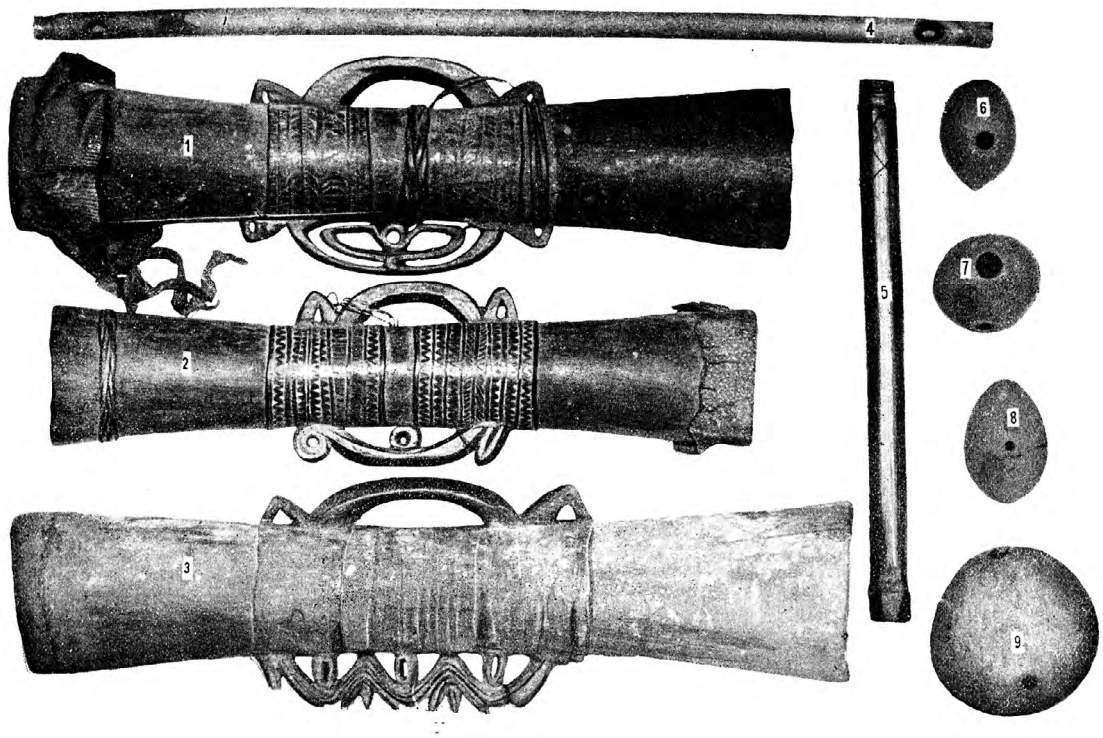
Stones: Even certain stones could be trade items. Again these would be dependent on the environment and only found in certain areas. Pall Tagari said they imported special stones from Karkar or Siassi: “It was hard work to cut the bush vines with these stone axes. They would put the vine on top of a piece of wood and then cut it with the stone axe” (Mennis, 1981b: 58).

A. 5. Musical Instruments

It may be seen that many of the musical instruments needed for the Yabob and Bilbil’s secret *meziab* ceremonies were introduced items - drums and magic flutes made of long bamboo pipes came from Karkar. The *meziab* cult was of paramount importance in their culture and but this custom would not have survived without theses artefacts.

Flutes: The music of the Bel group was basic, as there were not many tones. The flutes, *korsi*, or *kasuzi* with two holes were made from a coconut served as instruments of the *meziab*. These were blown in the *dazem* before the *meziab* ancestral spirit came into the village in order to prepare the way for him and warn the women and children to flee. The women and children were told the sound was the voices of the spirits, particularly those of their dead ancestors.

***Kundu* drums:** Another common musical instrument is the hand-held drum; a snakeskin is tied on with vine at one end. Mager noted that lizard skins were also used and that the skin was glued on with old honey. The tree used for this instrument was called *tezauz* (Mager, 1952: 319). The tool used was made of stone and called *sarur* in the Bilbil language (ibid: 269). Hand drums were mainly bought from Karkar Island and the Rai Coast. Tami and Siassi hand drums were not bought directly but from middlemen at Malalamai and Bongor.



Traditional musical instruments of the Bel *people. On the left, three hand drums. Two reed flutes above and at the side of the drums, and four coconut flutes.* Biro, 1899. State Library of Queensland.

Large garamut *drum from the Bogia area of Madang Province.* By courtesy, Rosalie Christensen.

***Garamut* drums:** Hannemann noted that *garamut* were called after the place where they were made, usually from the local tree called *bon.* If a good tree is found, two sections are cut from it and laid on top of logs to dry. The men who carved the *garamut* must do it in secret or it will not have a good sound. They were often traded from the Rai Coast.

Drums were made out of hollowed logs. The bigger the log, the louder the sound would be made and thus the farther it could be heard. A long slit was cut in one side of the log and hollowed out through the slit, leaving lips (wooden ledges) on each side of the opening. A drum could be tuned to produce a lower note and a higher note. Under ideal conditions, the sound can be heard up to 3 to 7 kilometres away (Wikipedia).

Bais and his *garamut*: Maia could remember a famous clan leader, Bais, who brought a large *garamut*, Kugurus, named after the place the tree was from at Rimba on the Rai Coast. It was as high as a man's waist and 1.8m long. Bais had it transported to Bilbil Island on a *balangut* tied under the platform of the canoe. When it came ashore, some men chewed a special magic bark and spat it on the rope while others pulled the *garamut* up onto the beach. The people also threw rubbish on the backs of the men to give them strength to pull the *garamut* right up to the village. That night a pig was killed and roasted for a big party to celebrate its arrival and the men sat around drinking *koniak* a fermented drink. When this *garamut* was beaten, it was heard at Rimba, Bogati and Bongu on the Rai Coast and in the bush as far as Amele, Oba, Sehan and Gonua in the Gogol Valley. As the sound of the *garamut* travelled, their enemies recognised when a declaration of war had been made and they prepared for battle while their allies joined them. Different drum beats were like a morse code and each man had his own call sign and was expected to recognise the call sounds of everyone in the village. Those who heard the drum knew it was the Bilbil men beating their *garamut* and wondered what it was about. The drum stayed on Bilbil Island until Japanese soldiers broke it up and used it for firewood.

Fishermen with nets at Bongu in the 1890s. Biro, 1899. State Library of Queensland.

A. 6 Leisure items

Tobacco (*Brus*): *Brus* came from inland villages of Nobonob to Bogati, Silibob, Kauris and Amele, Gogol River to Atu and traders went also to Dogea to Bogati and Bongu. Bongu does not grow much *brus* now (Mennis, 1981b: 56). Harding noted that little tobacco is grown in the coastal belt. It appears to grow best in the inland areas and is traded to the coast. (1963: 33). Bashan added that *brus* was also bought in Karkar and Ber speaks of people climbing the mountain behind Yeimas for *brus*. On the North Coast different places were famous for their *brus*. To the south of Bogia, Moro Village was a favourite stopping place for traders who came for their famous tobacco. The *brus* was given initially as a present before the negotiations and then used as a trade item.

Betel nut: The Ramu area of New Guinea had the first known betel nut in the country, introduced some 5,800 years ago from Southeast Asia. Excavated at the Dongan archaeological site it is probably the oldest "Southeast Asian import known in the New Guinea region" (Swadling 1996: 51). For the last thousands of years then, betel nut has been a staple trade item all along the north coast as well as other areas. It is given as a gift to greet newcomers or visitors. Traders were often presented with betel nut before the trade negotiations began and would be chewed as the business was undertaken. Sometimes it was a trade item in itself.

A7. Canoes

Canoes themselves were trade items. The hulls could be purchased from Riwo, Kranket or Kar Kar, even completed canoes could be used as trade items by the Siassi and bought with pots.

Geographical Extent of the Trade Items on the North Coast

The Madang area has a narrow coastal plain backed by foothills, which leads to the high 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 these inland villages meet on the beach. 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 (Harding, 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 far into the mountains. The exact extent of their penetration will probably never be known.

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	

This style of trade contrasted with that in the highlands where the people had few protections against their enemies which curtailed long trading trips (Hughes 1977: 302). Furthermore, in the Highlands, people were self-sufficient in their garden plots and, 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 from the coastal areas for their decorations and *kina* shells for their *moga* exchange ceremonies. These shells were traded 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: salt, stone axes, pottery, shells and pigments were traded over an area exceeding seven thousand square miles. Obsidian from Talasea travelled extremely long distances both along the coast and into the interior. Inter-tribal trade played an important role in the communication system and was the very basis on which many other relationships rested.

Villages and islands to the north-east

The Laden Coast

According to informants from Moro Village, the Laden Coast people, near Bogia, once built large canoes and sailed in fleets of three or four canoes right along the coast as far as Bogia and Manam in one direction and Bilbil in another. If they wanted to go to Karkar, they would sail along the coast as far as Sarang and then head across the sea to Kurum on Karkar. Along this coast, the Yabob pots were more famous than those from Bilbil. (The reverse happens on the Rai Coast). Occasionally the Yabobs sailed to Moro bringing their pots in exchange for *brus*, spears, bows and arrows and wooden plates. At other times, the Karkar Islanders, acting as middlemen, brought Yabob pots to exchange for the *brus*. The Moro people used pots from Suare, Korak and Bilbil/Yabob and traded their *brus* for *kunum* (mortar) from Manam and Karkar; pigteeth for *bilas* and red paint was bought from Karkar. The Malala people were not potters but were traditionally part of the trading network.

Karkar

The Karkar people are divided into the Waskia area on the north and the Takia on the south of the island. The Karkar people traded wooden bowls, mortars and pestles as well as red ochres, dogs, woven armbands, *galips*, (*canarium almond*), betel nut, drums, dogteeth ornament and canoe hulls. The Takia were the middlemen for the Bel pottery, trading the pots further afield to the Waskia people and also to the people living in the bush towards the volcano. The people on the mainland attributed the Karkar people with strong magic because of the power of their volcano.

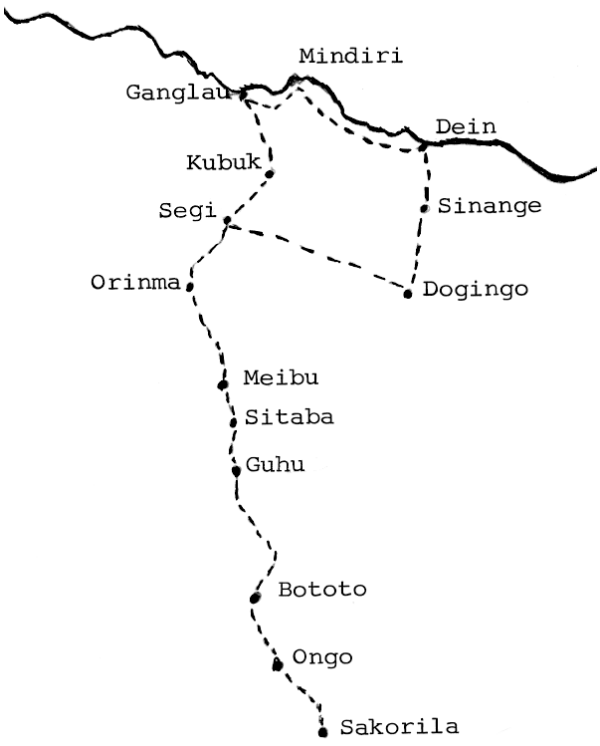
The Yabobs and Bilbils sailed to Kinim to obtain the red ochre traded from Urugen Village and also *kunum* and *kundu* from the inland people. Another point of call was Kavailo on the southern end of the island where they exchanged goods for pots which the Urugen people traded further inland. So the pots would have travelled far and wide around the island even if the traders themselves did not.

Inland Trade

The Ham Group in the Gogol Valley

These inland people made pots for trade but also many other items. Ladles and small soup plates were made from half coconut shells; dog's teeth decoration were made locally and traded to the coastal people in exchange for shells and coconut ornaments. *Mal* were made locally and worn by men as waist bands and genital coverings; *garamut* were traded within the Gogol and were worth between one and two pigs each or exchanged for many Madang pots. "Salt was procured from the coast on dried banana stems soaked in salt water and then burning them down. Vine rope was also burned for salt; or the leaves from ferns. Nearer the coast, the Naru people exported log for canoes" (De'Ath, 1978: 70).

The word for a pot in the Ham group is *mis,* which is borrowed from the local language and is not an Austronesian term. Colin De'Ath listed many of the items



Map of the inland trade routes from Mindiri on the Rai Coast.

of the traditional material culture of the area. There were two types of stone axes, a smaller variety for the women and larger one for the men. Conical clay pots and round ones, wooden platters both round and elongated were produced locally as well as traded from the Rai Coast. Gourds for betel-nut lime were plentiful; *bilums* were made from the bark of the tulip tree. Fire was produced by taking a strip of dry bamboo and pulling it vigorously to and fro around a piece of softwood, "imbedded in scuffed-up banana and other kinds of leaves" (De'Ath, 1978: 70).

Inland Villages

The inland villagers behind Bonga, Malalamai and Sel made bows and arrows. The bush people traded them to the coastal villagers, who were the middlemen buying the cooking pots from Bilbil and Yabob. They made the bows and arrows, and also made *bilums*, which they sold, to the coastal villages. 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 atto 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, following first contact, ventured to the coast for the trade of the Bilbil pots. Before the German government and the missionaries came they were too afraid.

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

Villages to the south-east.

Mindiri Pots

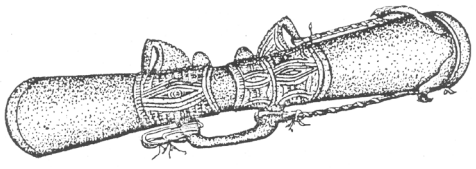
The Yabobs and Bilbils would call into Mindiri, leave some pots there and continue on to Saidor and Sio. The Mindiri would then arrange a market day for the inland people. They would do this either by marking a coconut palm frond or knotting a piece of vine for the number of days. As each day passed 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 (Interview, 7 June 1977, Mennis notebook 2: 190).

Sio Trade

Sio was as far as the Bel traders would visit along the coast, although there is some evidence that they sailed across the strait from there to the Siassi Islands. To go further along the coast could be dangerous as it would be enemy territory and they had no trade friends there to protect them. Harding said the Sio imported 37 objects in their trading system and exported only 8 items. They were sedentary traders waiting for other traders e.g. the Siassi and Bel traders to visit them. The Sio built canoes but did not travel far in them. Harding classed them as an agriculturist centre as opposed to the Siassi who were active traders (1994: 102).

Siassi trade

The Sio relied on the Siassi traders to be middlemen for a large number of trade items. There has been much discussion as to how far the Bilbil traders sailed in the days before outside contact. The



Bel Kundu. Anton Gideon, Papua New Guinea National Museum.

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.

Harding, on the other hand, believed that most of the Madang pots which reached Siassi were traded through intermediaries, particularly Sio and Malalamai on the Rai Coast (1967: 130). His conclusions tally with those of Derr Mul. However, he also adds that 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). Margarete Schurig suggested in her thesis that the "Bilbil people left home and stayed away until, after several months, the south-east winds allowed their return. A place she included on their trading trips was Rooke Island of the Siassi group. The Rooke Islanders often accompanied them on their return journey and stayed for one season on Bilbil where they traded their woven goods" (Schurig, 1930: 60). 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).

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 the Bilbil pots which were taken to New Britain for bride price payments. According to Sidi, the Siassi also sailed with many other canoes in convoy to Sialum, Sio, Finschhafen, Tami, Bukawa and the Rai Coast as far as Bilbil (Mennis, 1981b: 98).

As mentioned, the Yomba Islanders once sailed to Siassi when trading because it was closer to them that the Rai Coast. On the island, they were pot makers and built large canoes to travel to different areas. They were Austronesian speakers who later moved to coastal areas where they continued trading. It seems that they may have continued meeting their trade friends on Siassi from their new settlements.

B. The material culture and trade items of the Motu People

The Motu and Koita are now regarded as one entity and their various developments and problems are classified under Motu/Koita people. The Koita originally inhabited the southern coastal and immediate inland areas of Papua New Guinea, near the present capital Port Moresby and Hood Point along the southeast coast. The Motu arrived afterwards and inhabited the coastal fringe where they fished and made pots. Even though the Motu and Koita are two separate peoples, they have had a lot of cultural exchanges over the centuries. The Motu people are the pottery makers and traders while Koita were the farmers and hunters. They saw the advantages of co-existence and together have a distinct style of dress and enough common customs to be identified as a single entity which distinguishes them from the rest of Papua New Guinea.

The Motu traded mainly with the Gulf people: the complicated trade system and the extensive artifact distribution can be seen in Andrew Goldie's book. In November 1879, Goldie was trading in the Gulf of Papua where he exchanged sixty trade tomahawks for what he described as a 'rather mixed ethnological collection'. He was nervous because three traders had been murdered in Hood Bay three years previously but he met up with a Motu trader who helped with the language and he managed to finish his exchanges without trouble. His choice of iron trade tomahawks, "appears to have been carefully considered, since stone adze blades were an item of customary exchange between the Motu and Gulf people, the Motu procuring them originally from the inland Koiari people" (Davies, 2012: 136). Goldie's collection consisted of bundles of arrows and bows as well as "baskets, bags, mats, body ornaments, pipes, stone adzes and axes," and some shields from Kerepunu, East Cape and Cloudy Bay and some pearl ornaments" (137: 2011). This list gives us some insights into the trade items used by the European traders but also the trade between the local people so we see that the stone adzes blades came originally to the Motu people from the Koiari inland people who probably exchanged them for pots (Seligmann, 1910: 93-94).

Drum from Kerepuna Village, Hood Bay. QME4810, Queensland Museum.

Harding divided places into agriculturalists who were more sedentary and exchanged mainly food and consumables and traders of large canoes who are "weighted toward craft products." This was not really true on the Rai coast where the Bilbil people traded their pots for food, yes, but also for a myriad of craft products which they could not produce in their own poor area. Harding has two tables which set out the number of objects traded in centres including Western Motu and Mailu. The Western Motu imported 30 items and exported 10 whereas the Mailu imported 33 items and exported 9. Mailu and Motu produced mainly pots. He said that what impressed observers was "not the number of objects that Melanesian traded, but the great distances over which particular objects moved." According to his estimates the Motu travelled 800 kilometres on a round trip, Harding also discovered that each of the agricultural zones was connected to a trading community (1994: 102 - 104).

Murray Groves noted that to the Motu canoes, dugong and turtle nets, armshells and pigs were four commodities which required the largest amount of labour in their economy. Usually these items were traded against each other. He explained that there were "two kinds of currency: 'prestige currency', consisting of armshells, pigs, nets and canoes and what we might call 'neutral currency', foodstuffs, grass skirts, string bags, pottery, timber, thatch, betelnut and cash. People holding 'prestige currency' are loath to convert it into routine currency" (2011: 198).

The following three tables chronicle the three interlocking exchange systems along the Papuan Coast. Allen lists two important points from these three systems. "**Firstly**, the three exchange systems delineated here are interlocking and interdependent, as food items, utilitarian goods and valuables all pass through the Motu central exchange; and **Secondly** there is clearly no 'hierarchical' value system, operating, whereby valuables are only exchanged for valuables, food for food and so on" (1977: 438). Allen did not agree with Groves' ideas of 'prestige currency'.

Motu *hiri* villages	Exports to the Gulf.	Imports from the Gulf.
The following ten Motu villages made *hiri* voyages: Hanuabada, Elevala, Porepore, Porebada, Pari, Lealea, Manumanu, Tatana, Vabukori, Boera. (Oram, 1982:3).	Pottery: mostly *uro* pots but also *hodu* water pots and *nau* plates. Net bags, dogs' teeth, salt, rope, *ageva* beads, armshells (*toea*), tusks (*doa*), shell necklaces (*tautau*), fish pearl shell (*mairi*), coconuts, grass skirts.	Sago, canoe hulls (*asi*), pigs, dogs, stone adze blades, tobacco, ginger, vegetables, *govera*, skirts, betel nut, bows and arrows, wooden bowls.
	Durrans 1972: 301	Harding 1994: 122

Villages/ area	Exports	Imports	Middlemen
Western Motu Villages:			
Hanuabada, Porepore, Elevala, Porebada, Pari, Lealea, Boera, Manumanu Vabukori and Tatana. (The last two traditionally did not make pots, but only *ageva* beads.	Pots, plates, bilums, dogs' teeth, fish, salt, rope, shell ornaments, armshells (toea), turtles, pigs, dugong meat, *ageva* shell ornaments.	Coconuts, tobacco skirts, bananas, betel nuts, vegetables, govera, wallaby meat, feathers, stone adzes, plumes, *ageva* shell beads.	Sago, adzes, betel nut, *ageva* shell ornaments, bird of paradise feathers, grass skirts, coconuts.
Eastern Motu villages:			
Gaile, Kaba Kaba, Barakau, Tubusereia	Dogs' teeth, fish, salt, rope, shell ornaments pots, *tautau*, *mairi*.	Same as Western Motu, but they did not go on *hiri* voyages.	Above items which were also traded with the Rigo people
Koita people – close neighbours of the Motu people.			
Koita people.	Coconuts, govera fruit, skirts, feathers, bananas, vegetables, wallaby meat, betel nuts, tapa, bush material, matting.	Pots, *tautau*, *mairi*, fish, crabs, *ageva* beads, armshells (*toea*).	Pots, plumes, feathers, *govera* fruit, bush material for canoes.
Koiari area inland from Port Moresby			
Koiari.	Stone adze blades, bird of paradise plumes, tapa cloth, tobacco, betel nut, ginger, vegetables, lime, grass skirts.	Pots, sago, fish, crabs, salt, armshells, smoked fish.	Pots, sago, salt, smoked fish.

(Allen 1977: 436); (Durrans 1972)

Villages/area	Exports	Imports	Middlemen
Western Motu Villages: Hanuabada, Porepore, Pari, Elevala, Porebada, Lealea, Boera, Manumanu, Vabukori and Tatana.	Pots, plates, *bilums*, armshells, dogs' teeth, fish, rope, shells, armshells *toea*, pigs, crabs, hulls, boars' tusks, *ageva* beads.	Sago (from Rigo), hulls, taro, yams, ginger, feathers, skirts, wooden bowls, shell necklaces, *tapa*, pearl-shell crescents, material for houses.	Sago, *Ageva* beads, axes, dogs' teeth, toea, canoe hulls, bows and arrows.
Eastern Motu villages: Kaba Kaba, Barakau, Gaile, Tubusereia. (Had *lagatoi* but not for the *hiri*).	Shell necklaces (*bagai*), pots and above items. traded locally.	Feathers, vegetables, canoe hulls, sago, and above items.	Pots for inland trade, to the Rigo area. Sago from Rigo to other areas. (Also some of the above trade items)
Hula Village	Smoked fish, coconuts, vegetables, shell beads, *movio* ornaments.	Pots, sago, canoe hulls from the returning *lagatoi*.	coconuts and grass skirts, *toea*, shell beads from Mailu.
Keapura Village	Grass skirts, armshells	Sago, armshells.	Armshells, sago.
Aroma Village	Betel nuts, fish shell ornaments.	Sago, *bilums*, dogs teeth, dogs, spears, Mailu pots.	Pots, *bilums*, pigs, dogs, spears, wooden bowls.
Kalo	Fish, shell fish, shell ornaments.	Feathers, grass armlets, tusks, bamboo, tree trunks for canoes, pots, sago.	Sago, pots, feathers.
Mailu	Shell necklaces, double canoes, Mailu pottery, sago, bamboo, adzes, mats, blacklip shell.	Pigs, tusks, sago, bananas, taro, betel nut, feathers, obsidian, *bilums*, barbed spears	Food, sago, pigs, tusks, obsidian, armshells, dogs' teeth necklaces, greenstone axe blades, pig.
(Harding, 1994: 120 -121).	(Barton, 1910: 114)	(Chalmers, 1887:23)	(Allen, 1977: 436)

B.1. Pots for Food, cooking implements

Sago was the largest amount of food that was traded. Tons of it came from the Gulf and was redistributed further afield. Sometimes there was very little left to bide the Motu over the hungry times. Once the Europeans came, the trade changed as tomahawks, knives, bead, looking glasses and red cloth were all introduced. They returned with many tons of sago, and "during the time they have it, the whole settlement smells of nasty sour sago, as they like it best when it ferments, so keep it dampened in large *uros"* (1887: 123).

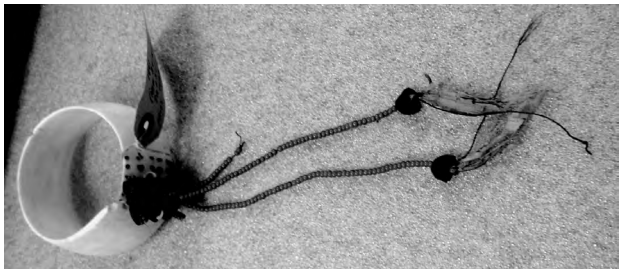
Trading canoes from Waima often arrived in Port Moresby on canoes laden with coconuts, sugarcane, bananas and bows and arrows to be exchanged for shell ornaments.

B.2. Wooden and ceramic domestic Items

The Motuans had wooden mallets and bamboo tools used for tattooing. Wooden dishes were made in Kerepunu or were trade items further inland (Goldie, 2012: 178). These objects were part of the trade item network from Hood Bay to the Port Moresby area. The wooden bowls were to be used for food storage or for meal preparation. Goldie bought a bowl in 1876 and sold it to the Queensland Museum. It was described as an "oval-shaped wooden bowl with pointed handles, the outer rim and top portion of the handles are decorated with incised vertical lines or marks" (2012: 178). Lindt added other kinds of vessels: *Ohuro*, large cup; *Keikei*, small pot; *Ituru*, small cup; *Kebo*, basin; *Kibokibo*, small basin; *Kaeva*, pot with rim; *Tohe*, large open mouthed bowl (Lindt, 1887: 122}.

Murray Groves described the different types of pots in Manumanu Village: the *uro* was the most common; the *tohe* is shaped exactly like the *uro*, but twice as large and used for storage, particularly of sago which could keep for six months; the *hodu* is a spherical water pot; and the *nau* is a shallow open dish, circular in shape. At meal-times, the Motu people put a

Oval shaped wooden dish from Kerepuna, Hood Bay.
QME8241, Queensland Museum.



Left. Motu toea armshell. AM1841. *Right. Pearl shell necklace with spondylus shell discs.* AM15405.2.
With thanks to the Auckland Museum, Tamaki Paenga Hira.

large dish in the middle of the table and everyone took from it with a special spoon made from coconut shell. Barton recorded that Motu women made pots in seven shapes or sizes, each with its own name but, between 1954 and 1959, in the course of three field trips to Manumanu, only the four varieties named above were noted (Groves, 1960: 20).

B.3. Ornaments, Clothing and Decorations

The men wore nasal ornaments up to 20 centremetres long inserted through a hole through the septum. Chalmers described one man having a double frontlet of dog teeth or wallaby teeth. They also wore "a long wooden comb or head- scratcher, stuck in the hair above the middle of the forehead, and surmounted by a white cockatoo feather and valuable pearl-shell 'gorget'" (Chalmers, 1885: 262). Tusk ornaments were also important trade items. Goldie described an interesting mouth ornament (*kepore*) used when fighting. While travelling up the Goldie River, he met a group of Papuans wearing *kepore* made from an oblong piece of tortoise shell "adorned with red seeds and boars tusks – it is held in the mouth when fighting as they think it gives them a fierce appearance" (Mullins, ed, 2012: 83). It was apparently made by the Koita people who shared the villages with the Motu. The Motu did not make them but traded them probably with pots to the Koita (Mullins, ed, 2012: 138). The turtle shell would have come from the Motu and traded with the Koiari so they could make the ornament.

Brow ornament: Goldie bought a brow ornament from the Koiari District inland from Port Moresby. It was a wallaby tooth necklace worn by men and attached to a length of twisted plant fibre it was bought for four shillings by Goldie (Mullins, ed, 2012: 175).

Mouth ornament: It was made from a turtle shell plate and "adorned with eight split boar tusks, red arbus seeds, two circular shell pieces and a hanging attachment consisting of a bark flap with red feathers" (Mullins, ed, 2012: 174).

Armshells (*toea*): Armshells (*toea*) (cone shell, *Conus maculates*) came from a local market at Boera and also from Hood Bay. These were fashioned into armband by the Motu and were one of the most important trade items after

Above. boar tusks, doa*. AM15433.* With thanks to the Auckland Museum, Tamaki Paenga Hira.
Right. Chest ornament made from four boar tusks, Miva Bay. QM E5126, Queensland Museum.

Motu man wearing nose decoration and a necklace of teeth and bird of paradise plumes. Groves, 1957. (PMB43_145).

their pots. These were used as trade items in the Gulf and there was a standard rate of exchange. So many *toea* to buy a canoe hull ready made or even the timber for a hull and so many bundles of sago for one shell armband as well (Allen 1977: 437). Armshells from Aroma village would have been used as trade items to the Motu. Chalmers noted the young Motu girls "were adorned with ear-ornaments, necklaces, armlets, and anklets" (1885: 261).

Other valuable items were pigs' tusks (*doa*) and dogs' teeth necklaces (*dodomo*) used for bride price and for dances (Oram, 1994: 7). Before a man could start to plan a *hiri* voyage he had to collect these *toea* armshells. "He had to have at least one *toea* and other valuables in his box and a canoe hull, before he set about making large gardens so that he could provide the feasts required during the making of a trading canoe (Oram 1994: 7).

Feathers: Dr Pam Swadling wrote: "before 2000 years ago, bird of paradise plumes were found in Chinese chronicles" (Swadling, 1996: 53).

Among the ornaments at the Queensland museum is one with bird of paradise plumes It has 28 feathers "bound into band, ends doubled over" (Goldie, 2012: 174). Chalmers saw birds of paradise in the 1880s, instructing his companions not to shoot them. He observed the female bird sitting on a branch being coquettish as three males tried to gain her attention.

He noted that the hunters snared them with gum smeared over their favourite branches and when trapped they used the feathers of the neck and head, throwing away the tail. These plumes are then traded to the coast for salt, shells and coral ornaments. At Aroma, he saw a headdress "with one mass of plumes, nicely arranged" (1885: 249). Seligmann noted that the Motu obtained feathers from the Koita who had obtained them from Nara and Kabadi in exchange for shell ornaments.

Bark Belt: These were worn by the Elema men. They have clan designs on their side and they may have been a trade item from the Gulf to the Motu people (Mullins et al, 2012: 182).

Neck Ornament: During a time of mourning, the Roro people both men and women wore neck ornaments. These were "plaited from a very tightly woven plant-fibre string" (Mullins et al, 2012: 191). Several were worn at once around the neck as well as arm ornaments for some months of mourning. They could also have been trade items.

Boars' tusks: The Motu obtained boars' tusks from the Koiari people further inland. In their villages, they may have joined them with vines and added a neck band or shells to produce ornaments which they then traded to the Gulf. On the other hand, the Koiari people may have presented the boars' tusks as trade items to the Motu as ready-made ornaments.

Shooting birds of paradise which were a valuable trade, not only for the Motuans, but throughout the world. Chalmers, 1885.

Left. Grass skirt from Freshwater Bay. QM E4825. Right. Pari women wearing similar grass skirts at Nelly Bay. Grass skirts from the Gulf were made of softer material and so were a popular trade item.

Grass skirts: Grass skirts were made from certain wild grass which were boiled and set out to dry before twisting the tops. Often several skirts were worn at once to give the swinging motion so typical of the Motuan dancing.

Bride price: The *toea* were important in bride payments. "Rev. Dr Turner recorded in 1876, that ten armshells was the price of a wife. At the present day, the price is higher. Ahuia Ova paid a bride price for his wife Gali of 43 *toea*, of various sizes and value, three pigs and 100 dog's teeth (enough to make a neck ornament). Another, Rahu, paid 40 *toea*, four hatchets, two bush knives, and 200 dog's teeth for his wife, Henaul" (Seligmann, 1910: 77). Seligmann noted the shell ornament, *tautau*, was made at Hula, and reached the Roro speaking tribes from Port Moresby and the neighbouring settlements (Seligmann,1910: 78).

Girls come to their wedding night heavily decorated:

> On the night of the wedding, the bride is specially decorated on her marriage night. Her hair, in which she may wear scarlet hibiscus blossoms, is dressed with coconut oil and combed out to its fullest extent. In her ears she wears many earrings made of turtle-shell and the ground down top of a small shell of the genus *Connus*. Her face is decorated with lines of red paint, her armlets, *gana*, are reddened, and in them she wears the leaves of an odoriferous plant *segado* --- her thighs are smeared with coconut oil, and she wears a new petticoat. The bridegroom comes to her wearing a head-dress of cassowary feathers, beneath which, worn as a frontlet, are three rows of *tautau*. Behind the head-dress of cassowary feathers are placed white cockatoo feathers. He wears a number of the dried tails of village pigs in his ears and his face is painted with red and yellow streaks (Seligmann, 1910: 78).

Tattoos: Tattoos were made on young Motuan girls to enhance their beauty but also to denote their tribe. The designs varied so a child could be identified by their tattoos which were started when she was only six or seven years old. In the traditional society, unless a girl was tattooed, she would find it difficult to find a husband. More tattoos were added each time the men were away on a *hiri*. By the time several *hiri* had been undertaken, the girl's arms, legs and body had been tattooed all over. The process was quite painful but, after the tattoo had been finished, there would be a special feast when *toea* were presented to the girl.

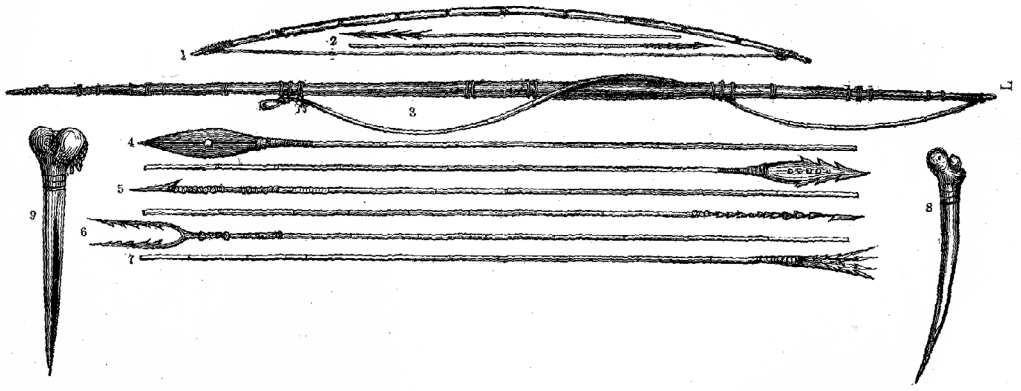
Traditional tattooing was once a source of cultural pride and identity. Some tattoos had special significance, the V-shaped tattoo on the chest showing a woman had reached her marriageable year. "The first-born daughter of a *lagatoi* captain for instance could wear a "tea drop" tattoo below each eye and over the cheek". Other daughters of men who had been on a *hiri* could have tattoos on the lower part of their legs. "There were other tattoos for the daughters of brave warriors, fishermen, or hunters and those who had sponsored a dance series" (Douglas, 1994 :33).

Girls were tattoed while the men were away on the Hiri. Groves, 1957. PMB43_148.

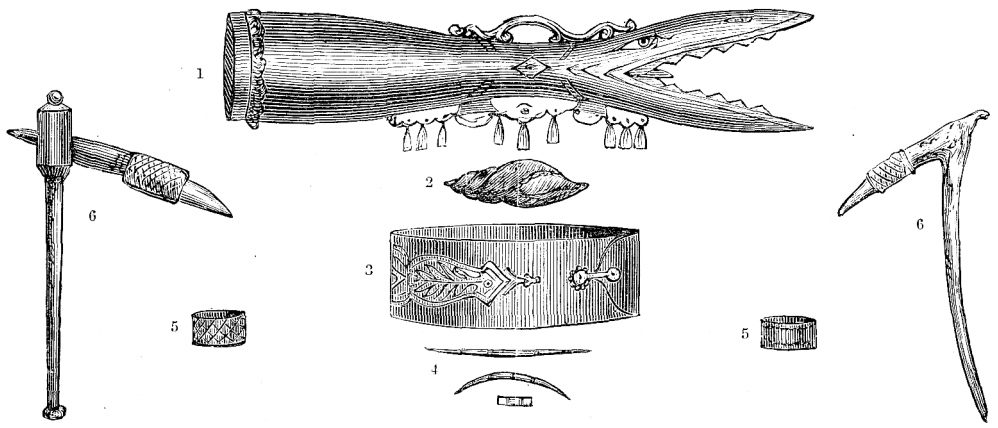
However tattooing these days is rare and usually only the oldest women still have the full body tattoos on them although for special feasts the girls have the designs drawn with a texta pen. Seri Bodibo was asked how many *hiri* he had done, He was not sure but he said "to show how many I have been on, my wife was so tattooed to show my voyages; these tattoos covered the whole of her body including her eyelids. Only the palms or her hands and the soles of her feet have no tattoos" (Gwilliam, 1982: 42). Seligmann noted that the "decorative art of the Motu and kindred tribes is 'geometrical' and the angular character of the figures is especially obvious in their tattooing which is always done by women." He also thought that the designs were based on nature (1910: 38).

Miklouho-Maclay thought tattoos were important to an ethnologist "because certain ornaments are inherited from generation to generation and are characteristic of the given locality; when they re-settle the natives take their tattoos, along with their language and physical traits, to the new habitat (Tumarkin, 1982: 398). Maclay made a drawing of the tattoos he saw on several of the Papuan girls giving each a piece of tobacco stick in payment. He, being the adventurous man he was, wanted to gain first-hand knowledge of the tattooing and subjected himself to being tattooed by a group of women. It was a quite an interesting experience. The pattern was first drawn on his shoulder with the ink being powdered charcoal from a special plant and water. Then the pricking procedure began with a pointed stick called *kini* and a *beau*, 'a kind of mallet'. The woman held the *kini* over the drawing and began to hammer the *kini* two of three millimeters into his skin. It was not as painful as he expected but the blood was trickling out and scraped with a bamboo scrapper. The tattoo on his right shoulder was greatly admired by all. Before he left, he bought the instruments that were used. While in Papua, Maclay met missionary, Mr. Chalmers, who thought the Papuans had come from another race and were not endemic to that area. Maclay made an observation that their language and physique showed Polynesian characteristics. Perhaps the tattooing procedures could be traced to other areas in the Pacific. No doubt, in their conversations, they compared the *lagatoi* which Chalmers had seen with the canoes of the Bel group on the north side which Maclay had described.

With various different traditions in many different countries, tattooing had a totally different meaning depending on the tribe and its culture. Young girls of marriageable age are heavily decorated with the family's wealth during feasts as the parents sees their daughters as an asset bringing potential wealth into the family. "She is loaded down with the family wealth of pearl shells and boars' tusks, dogs' teeth, and beads and whose skin shines with coconut oil and is fragrant with the scent of herbs thrust thought her armlets, while the mother remains unadorned among he cooking pots" (Lett, 1944: 58).



Various weapons made of bamboo, wood, bone and vines. Chalmers, 1885.



1. Drum covered with iguana skin; 2. Conch shell war trumpet; 3. Arrow proof belt of hard bark; 4. Nose ornaments; 5. Cane and hair armlets; 6. Stone tomahawks. Chalmers, 1885.

B. 4. Weapons and tools

Bows and arrows: These were common weapons among the Papuans. Lewis Lett was an early observer in Port Moresby. "Women going to the gardens, or working in them, must be accompanied by one or more armed men whose duty it was to protect them in case of sudden attack. It is the reason why one sees women returning from the gardens, or from a longer journey, loaded down with garden produce or firewood or household gear, while their men stalk behind them burdened by nothing heavier than a bow and a few arrows" (1944: 39). This was also the case with the Bel women when they were over at the mainland at their gardens or collecting clay for their pottery. The men went armed to guard them but did little carrying.

Expecting a fight at any time, the Motuans were all armed with "bows and arrows, spears, clubs and shields" During a fight the women would join in, bearing arms (Mullins, et al, 2012: 89). There was another nasty weapon with a lasso to catch an enemy around the neck and a sharp stick attached to penetrate his neck. (See page 28). Miklouho-Maclay saw one of these at Hula Village in Papua. The name of the weapon was *koro*; "it consists of a short spear to which a loop of *rotang* is attached; both ends of the loop, tied to the spear, form the handle. The pursuer tried to throw the *koro* around the neck of the pursued and to stick the spear in his neck or the back of his head with a sudden thrust; then, dragging the opponent back, he throws him on the ground, finishes him off" (Tumarkin, 1982: 410). Stone blades, club-heads and dancing feathers were made by inland tribes and traded to the coast (Durrans, 1972: 301). Chalmers had illustrations of many different bows in the Gulf and Port Moresby areas: a bow made from bamboo and matching arrows; a long palm-wood bow with bands of pig's skin; arrows used for shooting pigs, fighting arrows with bone tips ; double-headed war arrows; fish arrows; andcassowary bone daggers (1885: 145).

Clubs: In the Port Moresby area, the Koiari made the clubs which they used themselves as weapons or traded. There are several of these clubs in the Queensland Museum. One has a wooden handle and a stone head in the shape of a star. Others have a flat shaped stone sharpened around the circumference fixed to a wooden handle that has a plaited design adorning the handle around the stone.

Two Koiari men with figure eight shaped wooden shields covered with finely woven rattan. Note the mouth ornament, made from turtle shell, on the man on the right, to make him look fierce. Brown, 1908.

Stone adzes: One in the Queensland Museum was from inland from the Round Head area. It has a wooden handle and is woven around the handle (Mullins, et al, 2012: 198). Stone axes also came from the Koiari inland from the Motu area. (Allen, 1977: 437)

Obsidian: In the recent archaeological excavations at Caution Bay, scraping tools made of rare obsidian that had been found were identified as coming from West Fergusson Island, 500 kilometres to the east or else were carried with the Austronesian speakers when they arrived in the area (Green and Bird, 1989). The Motu used flakes and cherts for their tools. Summerhayes mentioned possible sites for obsidian in Papua New Guinea. The nearest site to Papua would be Fergusson Island, the source of the obsidian found in the Caution Bay site. Obsidian flakes can be identified because of their "natural distribution and distinct chemistry, obsidian found in archaeological sites can be matched (or traced) to their geological sources, thus providing archaeologists with important distribution information. By identifying the sources of obsidian from distant sites over select periods of time, the changing nature of distributions can be mapped and social and economic models to account for those changes can be developed and tested" (Summerhayes, 2009: 109)

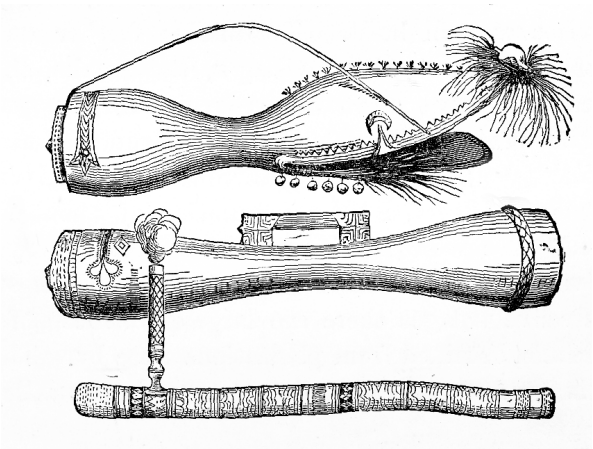
Nets: Fishing nets, drag-nets traps and snares for hunting were also made by the people. Ropes for the canoes were made by the Motu women using material traded from the inland Koiari (Lett, 1944: 57). While visiting Manumanu Village in the early 1960s, Maslyn Williams noted many tools, "The veranda is hung with fishing nets edged with shells which act as sinkers. Fish spears, paddles, cooking pots and baskets complete the décor. Under the house the canoe-sails are kept, rolled around the main masts; the ropes, unfired clay pots, fibres to be dried for skirt-making, or for spinning thread, or twisting into rigging" (1964: 88).

B. 5. Musical instruments and dances

Traditional dances were very important to the Motu people. When the traders returned from their *hiri,* they were welcomed home by the women dancing and singing the *hehona* songs. Men and women wore elaborate face paint and feather headdresses as they followed the intricate steps, accompanied by drumming and singing. The Motu use hand-held, hourglass-shaped drums

Above. Wooden drum from Round Head hinterland with a reptile skin drum head. QM E4817. Queensland Museum.

Below. Drums and flutes. Chalmers, 1885.



Rosenstiel described the Motuan musical instruments. "They possess only a few native instruments: flute, percussion, shell trumpet, drum, hollow seed rattles, but are given to spontaneous songs and their dances have the same geometric precision that is prevalent in the other forms of their art with dancers always in straight lines and steps simple and sharply delineated" (1953: 21). Back in 1876, Andrew Goldie saw some of the traditional dances which were always a big part in the social life of the Motu people: "The dance is a kind of country dance. Two long rows of men and girls face each other, a girl between every man; every man has a drum, with which they beat time, accompanying with their voices, all swinging their bodies to the time of the drums and moving their feet in time. There is nothing obscene in their dances; they have all got their dancing ornaments on, head-dresses of feathers, beads and their faces painted" (Mullins, et al, 2012: 53).

Dancing was discouraged by the LMS Christian missionaries. As a result, many of the traditional ceremonial dances are forgotten and no longer performed. Except that some dances are still performed on important occasions or for tourists who visit Motu villages. Groves noted that in Porepore there were heated arguments for and against dancing. "Intermittently for many years dances were held, but there was always a sign of defiant revival in the attitude of those who danced" (2011: 43).

Dance group in Manumanu village. Groves, 1957. PMB43_149.

To dance or not to dance

The LMS Mission decided that the dancing took too much time from normal duties and also had sexual overtones. The mission introduced the ruling that its members must not participate in traditional dancing and church members who did not abide would be banned from Church participation (Chatterton, 1968: 290).

Ahuia Ova (1877?-1951) of Hanuabada Village was a Papuan court interpreter. At first he adhered to the ban on dancing so he could join the LMS Church. He was told that "the best way for you is to bring out all your dancing ornaments and other adornment things and burn them off," so he brought his headdress and other dancing ornaments and heaped them up on the beach and burnt them. In an article published in the Papua Annual Report for 1923, he condemned traditional dancing which had come under the disapproval of the church, and described how he burned his regalia. Years later, he returned to organizing traditional dances and feasts. He became a Catholic and worked for the Church on Yule Island during the war. Chatterton, an LMS missionary, was not against dancing as such but thought many dances involved religion "They were danced as religious ritual generally as part of the cult of their spirits of the dead who were commemorated by them" (1974: 121). When the Catholic mission was established on Yule Island, the missionaries encouraged the dances and the nearby Mekeos joined the church happily. Their beautiful headdresses and dances are a tribute to them. In recent years, the LMS has become the United Church which allows dancing as part of the Motu culture, but many dances have been forgotten altogether and not passed on to the next generation. In the 1920s, Williams encouraged the people of Porepore to keep their dances "Remember it is one of the things you can do very well … I hope the Papuans will never forget how to beat their drums and dance" (1939).

At one stage, Groves wrote "the crucial issue between Motu and the missionaries has always been the Motu dance" (2011: 40). From the earliest contact with the mission, Lawes insisted that those who joined the LMS must give up the dancing. He said the dancing carried on for months at a time while the people neglected their other activities. At the dances, the young men "keep tally of the girls they had connection with. In its origin the dance was no doubt religious, but it existed for opportunities of sexual intercourse" (2011: 41). In the end Groves thought that the loss

of their dances may also be attributed to the changes in their way of life: "In my view changing economic, political and social circumstances have caused the dances' decline in urban villages. The Motu have become townspeople. They work for wages instead of tending gardens. They shop in the stores instead of voyaging westward to acquire sago" (2011: 44).

Drums: These were essential for both feast and dances. Kerepunu exchanged drums for pots and other trade items and they have hour-glass shape with a handle. The drumming end is covered in lizard or snake skin and the other end is open. (Mullins, et al, 2012: 195).

B. 6. Leisure Items

Tobacco: Tobacco could have been introduced to the Torres Strait Island adjacent New Guinea mainland when the *Sear Laut* visited the area from 1645 to 1790s. It is not known exactly when tobacco arrived in Papua, but if it came into Papua New Guinea via the Fly River, it may have been a trade item before Europeans arrived on the 1880s.

Bamboo tobacco pipe, baubau. QM E55030. Queensland Museum.

Mike Bourke mentioned how it first arrived in Papua New Guinea:

> Another crop of American origin that became important in Papua New Guinea is tobacco. Tobacco was introduced by Europeans to the Moluccas in eastern Indonesia before 1600, from where it spread to New Guinea. It is likely to have come into Papua New Guinea at a number of locations. One of these is the Trans Fly area in the south of Western Province, where Moluccan traders probably introduced tobacco when they came to this area seeking *dammar* between 1645 and 1790. Tobacco diffused through New Guinea over several centuries, but it had not reached south-east New Guinea (Oro, Central and Milne Bay provinces of Papua New Guinea) by the time of first sustained contact with foreigners from the 1870s (2005:15).

Goldie (Mullins, et al, 2012: 26) had a picture of a tobacco pipe and described the way it was incised. The pipe was used to smoke tobacco leaves which were stuffed down the tube. And set alight. "Decorations are burnt into the bamboo with a glowing slice of the sheeting leaf of the coconut kept at almost while heat by the native artist blowing upon it. The end of the glowing ember forms a fine point which, on being slowly moved along the designs lines, leaves indelible tracks" (Mullins, et al, 2012: 188).

Betel nut (*Areca catechu*): The Mekeo of the Papuan Coast grew betel nut of various kinds and sold them as a trade item to the Motu and many others. They identified five different types of Betel nut: *fopa*, *unia*, *fala'a*, *angua* and *fefeina*. The first two were hard and needed strong teeth, older people preferred the *angua*. It was considered a golden nut as it is their best money-spinner and in traditional society was their best trade item, against pots or other items (De'Ath, 1979: 39). Gwilliam described the lime pot carried on the *lagatoi* used "for holding powdered lime". It was needed for the betel nut chewer who conveyed the lime to his mouth by a spatula. Lett, who lived in Port Moresby in the 1940s, often saw men sitting in the village verandas chewing betel nut with their friends in the middle of the day. To those who objected to their lack of work ethic, Lett said "To the Papuan, work for wages was unknown until the coming of civilisation." Lett also said when there is work to be done the village men work hard but they know how to relax and we could learn from them in our hectic lives (1944: 54).

Lime container: There is, in the Queensland Museum, a lime container for chewing betel nut which came from Hula in the Hood Bay area and has burnt designs that are "similar to those found in Kerepunu". (Mullins, et al, 2012: 183).

Other trade items: At the Caution Bay archaeological site, "under 110 tonnes of sediment --- the excavations also revealed a wealth of implements — stone tools, cutting tools and stone axes made out of volcanic rock — as well as lapita pottery fragments. The largest site, known as Bogi 1, contained thousands of fragments of pottery." (Weule, 2011).

Canoes were also trade items. The *asi*, hulls, from the Gulf could be purchased with armshells. Seligmann (1910: 94) said a really good canoe could be worth 3 or 4 *toea*.

Form follows function.

When studying these trade artefacts, it is obvious that form follows function: while net bags need to be of an elastic quality and stretch to carry the load; the pot must be strong enough to be carried, be fire proof and be water tight and stable; the wooden dish should not leak, but is not fire proof and the *tapa* cloth must be pliable and soft as it is used as a garment. Each in their own way fulfils their purpose. In this chapter we have studied many artefacts which were used in the traditional material system of these two peoples. Their culture was enriched by these introduced items which were bought mainly with the cooking pots. They had come to depend on these items to such an extent that many of their customs would not have survive without them. For example, the Bel's religious life in the *meziab* depended on the magic flutes, drums and bamboo pipes all introduced from Karkar. Lindt gave a picture the intricacies of the trade system, "The great supply [of pots] for Kerepunu and Hood Bay came from the Motu tribe. The Hula natives bring coconuts to Pari, Port Moresby, Porebada and Boera, and in exchange load up their canoes with earthenware of various kinds. Pottery is made at Manumanu in Redscar Bay, and Delena in Hall Island" (Lindt, 1980: 124).

Lindt follows the possible journey of a *toea* from the D'Entrecasteaux Group far to the east which might finally makes its way to the Motu in Port Moresby where the armshells are smaller and not as prized. This armshell could have been traded for pottery, "to the Dauni natives, whilst the Dauni natives sell them again to Mailuikolu for sago, dogs, &c., and these to the Aroma natives for pigs, dogs, and canoes. The Aroma natives trade them to the Hood Bay, Kerepunu, Kalo, Hula, Papaka, and Kamari natives for birds' plumes of various kinds, and these again to the Motu natives for sago" (Lindt, 1980: 124). Seligmann had a similar story about all the armshells which are made in the east and find their way to Roro west of Port Moresby and by an indirect route, they are traded to the Motu who take them to the Papuan Gulf to exchange for sago on their annual trading voyage.

Geographic Extent of the Trade Items along the Papuan Coast.

Motu Villages were famous for their pottery which came in a few shapes and sizes from the large pots, *tohe,* for containing sago and the smaller cooking pots, *uro,* which were the basis of the trade to the Gulf villages. When they sailed to the Gulf villages in the annual *hiri,* trade loads of pots were carefully secured in the canoe hulls. The traders also took net bags dog's teeth necklaces, and shell ornaments of many kinds including nose ornaments, armshells and *ageva* beads which came from Vabukori. In exchange they received loads of sago bundles and also canoe hulls to widen the *lagatoi* to carry the heavy parcels of sago home. Back home some of the sago was traded on to pay back debts as in the *siasia* debts to those women who owned the pots that had been traded in the Gulf. Some sago was traded to the Koita and Koiari tribes in exchange for a variety of trade items like stone adzes, bird of paradise plumes and their feathers, vegetables to supplement their fish and sago diet. Allen wrote, "Motu exported pottery; net bags; coconuts; fish; salt; arm-shells; dog's teeth necklaces; shell ornaments; woven rope" (1977: 436). Lindt noted. "The Motu tribe is celebrated all along the coast for skill in the manufacture of pottery, and they carry on a large trade in cooking utensils and water jugs with the tribes living farther to the west (1887:29). As explained, Tatana and Vabukori Villages, although Motuan, traditionally did not make pots but made the *ageva* bead necklaces which they traded for pots from the other Motu villages. These two villages were the only ones who produced the shell discs which were sold separately or threaded as necklaces. They also traded betel nut and fish.

String bag from the Elema area in the Gulf. QM E4855, Queensland Museum.

Villages to the west

The Gulf villages imported Motu pottery of many sizes but predominately the *hodu* pots used for cooking and also armshells, dogs teeth necklaces, *bilums* etc. They were not in a hurry for these items although they could use them to trade on to other areas. The Gulf people also made an annual trading trip to the Port Moresby area to trade more sago, bows and arrows and tobacco with the Motu people in exchange for some pots but were also interested in the armshells (Allen, 1977: 437) The Namau people of the Purari River Delta and the Elema of the

Vailala River, had swamps which provided a plentiful supply of sago palms. Two of the Gulf villages, Toaripi and Lese, are closer to the Motu area and regularly visited there trading sago, *areca* nut, betel pepper, coconuts and a few bananas, and bows and arrows (Barton, 1910: 93-94). In modern times (2013), the Gulf people still make annual visits to the Port Moresby area bringing sago by coastal boats in large plastic containers and trade for money with the Motu who still see the sago as an important food source. (Pers. Comm, Devini Tau, Menzies Librarian). The pottery trade has long ceased so it could be said that the Gulf people have been the winners with their product still being valued.

The Mekeo/Roro trade: Canoes and sago were bought by the Roro from the Toaripi Mekeo area and exchanged for fish and shellfish. Other items by the Roros were "stone blades, club-heads and dancing feathers" obtained form the Mekeo middlemen from further inland (Durrans, 1972: 301). All Roro villages of Bereina, Kevori and Waima obtained smoked wallaby flesh from inland Nara in exchange for coconuts and Roro pots, yams and sago. The Mekeo gave and accepted some of the same trade items e.g. yams and sago (Durrans, 1972: 302).

Yule Island traded west with Port Moresby for shell ornaments, including nose-ornaments (Durrans, 1972: 302). They had their own pottery which may have descended from the Motu pottery when Motu people married into the Roro tribe.

"The suggestion has been made that the ethnographic Roro pottery was not a development of the local Urowine ware but possibly a derivation of Motu". Lapita site locations are predominantly coastal, with most being beach locations (Anderson et al, 2001). Oposisi is located on Yule Island on the highest part of the island at 125 metres elevation. (Summerhayes, 2007: 102).

Inland Villages

The Koita: In traditional times, they traded vegetable food, feathers, ornaments, crabs and dug-out canoes, also "wallaby and pig meat; feathers; matting; netting fibre; bush material for houses, bark cloth; rattan cane and betel nuts" (Allen, 1977: 436). In exchange they received Motu pottery, fish food, *govera* fruit, coconuts, salt and many shell ornaments including toea, *tautau* and *mairi* and quantities of sago freshly arrived form Gulf on board the *lagatoi*.

The Koita were also well-known and feared sorcerers and the Motu people had to pay them in valuable shell discs and necklaces to prevent them making adverse weather when the fleet of *lagatoi* were departing and part of their trade were the leaves and plants needed for their sorcery.

The Koiari exported vegetables, stone axes, bird of paradise plumes, bark cloth, tobacco, betel nut, ginger, lime (Allen, 1977: 436). According to Goldie (Mullins, et al, 2012: 140), the Koiari made hour-glass shields with woven rattan sheaths decorated with feathers. In making these shields they first obtain a piece of board about four feet long and two feet wide, and reduce it to a thickness of about ½ an inch. The shape of the shield is not unlike that of a large bass violin; only both ends are more nearly the same. About the centre a cane handle for holding with one hand is fixed and the whole of the shield except a small part at both ends is neatly covered with a sort of wicker work, woven with great care, and with the greatest uniformity, from native grasses, and fitting close to the wood (Mullins, et al, 2012: 141). (See page 178).

Hula man wearing a hornbill's beak. Chalmers, 1885.

Villages to the east

Gaire Village traded bananas, *tautau* (a kind of yam), and a limited number of *toea* (armshells), obtaining pigs, feathers, *doa* (spiral oar tusks) and obtained *ageva* (shell discs used as beads) in exchange (1910: 93-94)

Hula Village traded coconuts and grass skirts, *toia*, shell beads which come from Mailu Village to the east, also "shell ornament

Two handed wooden dish from Kerepuna. QM E8935, Queensland Museum

called *tautau*", and smoked fish. While the *lagatoi* were away on the *hiri*, the Hula arrived in Port Moresby bringing much needed food and coconuts with them and stayed and fished in the harbour on the reefs "using methods differing from those practised by Koita and Motu (e.g. the seine net) and sold their catch in the neighbouring villages for further trade. In exchange for these items, the Hula take pots and sago. The Hula also made canoes which reached a price of one pound at that time" (Seligmann, 1910: 93-94). The Hula and Motu remained friends because of this trade, but the Hula people were sworn enemies of the Koita people as they raided their villages along the coast. However, the Motu tried to keep the peace between them. "Trade ties with the Hula were sufficiently strong for the Motu to remain on friendly terms with them." When the *lagatoi* returned from the *hiri* the Hula received bundles of sago in return for their help while the men were away before they themselves sailed home to the east (Allen, 1977: 438).

Keapara Village is 126 Kilometers east of Port Moresby. The Keapara trading fleet made reciprocal trading visits to Port Moresby, depending also on the right trade winds. They arrived with grass skirts, armshells (*toea*) to exchange for pots and for sago. They were middlemen for the armshells which had come from further east. They often arrived in Port Moresby at the same time at the Hula people (Allen, 1977: 438).

Kerepunu Village also traded wooden bowls, plates and canoes which were made in their village or traded from further inland. They imported pots and sago from Port Moresby area in exchange for the *ageva* beads.

Water container made from a coconut, Aroma Village. QM E4911, Queensland Museum.

Mailu Village: This village was part of a study by Harding comparing trading village with agricultural societies. Mailu Society seemed to overlap the two areas. While producing a lot of food and being self-sufficient most of the year, they made and traded pots far afield. During the dry season, they sometimes ran short of food and traded their pots for many food items some not available locally. When the demand for their pots increased, the quality of them deteriorated as they had to be mass produced. "As the Mailu acquired the regional monopoly of potmaking and increased and standardized production, the pots became thinner. This speeded production by reducing drying time, saved on clay, and made pots less subject to damage when fired, bit it was a mixed blessing for the consumer" (1994: 106). Irwin described the Mailu as one of the foremost trading groups in New Guinea, travelling up to "150 kms along the coast and inland to the centre of the Owen Stanley Range" (1978: 407). He argued that their trading system was also very much larger, more influential and more functionally specialized than in any other place. However the *hiri* trade carried many more pots and brought home heavier loads than the Mailu and even travelled further. On the north coast, the Bel traders also traversed a very long stretch of coastline from the Laden Coast on the north-west to Sio or Siassi on the east.

The Kula and the vaygu'a Trade Items

It is interesting to compare the rituals and trade items of the hiri with the kula as described by Malinowski. The kula trade goes around in a ring of continuous trading. A map of the Massim area which is adjacent to the Mailu area shows a myriad of small islands within a large circular area. If the islanders wanted to be part of a trade system, it would be in a circular pattern unlike the *hiri* traders who had one long trade route to the Gulf with Yule Island being the only island of any size on the way. The geographic nature of the coast and islands thus influenced the style of the trade network. Furthermore the *kula* ring trade seems to be mainly social with people keeping up connections and gaining prestige and a reputation of generosity from passing on the two main trade items which were ornaments.

The first ornament was the armshell (*conus millepunctatus*) which was made "by breaking off the top and the narrow end of the big cone shaped shell and then polishing up the remaining ring." This is very similar to the armband (*toea*)

popular with the Motu people. Through his friend Seligmann, Malinowski was familiar with these. He also noted that at that time, the Motu highly regarded these *toea* armshells which could be worth up to thirty pounds (1960: 86).

The second ornament was the *soulava* necklaces made from the small discs of red Spondylus shell, which are widely traded as far as the Gulf in Papua (Malinowski 1960: 86). These necklaces consisted of flat, round discs with a hole in the centre and in various colours. The Massim people used them as used as a part of earrings, "made of rings of turtle shell, which are attached to the ear lobe, and from which hang a cluster of the shell discs." Malinowski mentions that these same beads are made by a few villages around Port Moresby probably referring to Tatana Village and Vabukori who make the *ageve* necklaces.

Strangely, most of these Massim armshells were never worn, being either far too small or very large. Malinowski estimated that ninety per cent of them are not worn but kept merely for the trade around the *kula* ring. A few of the largest shell armbands might be worn "once in a decade by a very important man on a very festive day." The strings of shell discs were worn on special festive occasions only. The *vaygu'a*—the Kula valuables are "ceremonial objects in the narrow and correct sense of the word" (1960: 90).

These two trade items were in a class of their own and only traded against each other and not traded for food or pots [similar to the specialty items that the Motu had]. These ornaments travelled around the kula ring, "A partner who has received a *kula* gift is expected to give back fair and full value, that is, to give as good an arm-shell as the necklace he receives, or vice versa. Again, a very fine article must be replaced by one of equivalent value, and not by several minor ones, though intermediate gifts may be given to mark time before the real repayment takes place. If the article given as counter-gift is not equivalent, the recipient will be disappointed and angry, but he has no direct means of redress, no means of coercing his partner, or of putting an end to the whole transaction" (1960: 95).

Malinowski outlined the use of magic in the kula ring. Magic rites were made over the canoe, when it was built in order to make it "swift and steady and safe", and also to make it lucky in the kula. They even made magic over the mind of a trading partner to make him generous (Malinowski, 1960; 103).

Malinowski wrote:

> A *Kula* community consists of a village or a number of villages, who go out together on big overseas expeditions, and who act as a body in the *kula* transactions, perform their magic in common, have common leaders, and have the same outer and inner social sphere, within which they exchange their valuables. --- . The *kula* trade consists of a series of such periodical overseas expeditions, which link together the various island groups, and annually bring over big quantities of *vaygu'a* and of subsidiary trade from one district to another. The trade is used and used up, but the *vaygu'a*—the armshells and necklets—go round and round the ring (Malinowski, 1960:103).

Middlemen trading or trading on

Harding emphasised the importance of the middlemen in the trading. "The prominent development of Melanesian trading as measured by the number of different kinds of objects exchanged, was due in considerable part to middlemen transfers" (1994: 117). Middlemen trading enabled goods to reach over an enormous area in Papua New Guinea. The shell discs so prized in Mt Hagen for the *moga* ceremonies would have been traded and re-traded from coastal areas long before first contact. This "re-trading was associated with a variety of local environments and was more a response to the opportunities created by the demand for a variety of local environments in dispersed networks rather than a development associated with agricultural marginal locations" (1994: 117). In this, Harding would agree that the environment was a factor. For societies like the Bel and the Motu, the poverty of the land meant they were reliant on their trade for they were ***Sailing for Survival.***

The Spirit of Balangut *at the Madang Festival, 2013.* Photograph by Patrick Matbob.

Part Seven: Sailing in the Past and Present

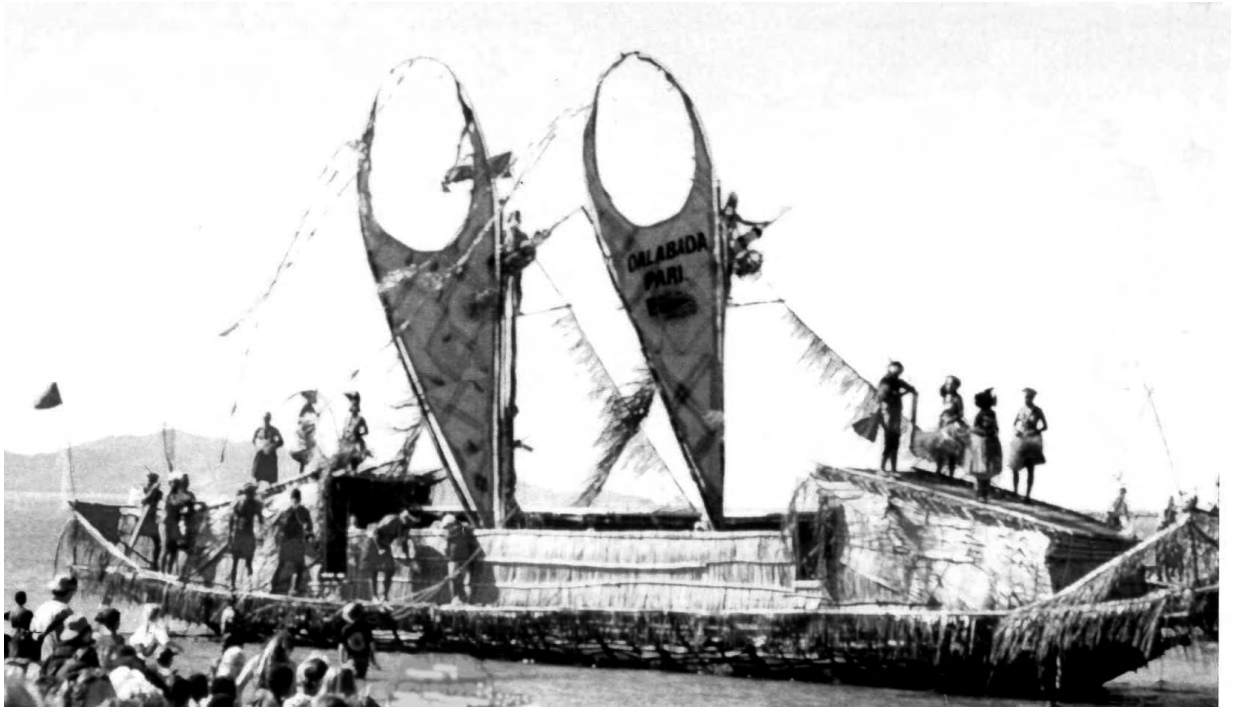
> *One area of our development which I strongly believe we must do our utmost to preserve and pass on to our children and their future generations is our rich culture. It is acknowledged throughout the world that Papua New Guinea inherits one of the most diversified and unique cultures in the world. A lot of our well-known widely practised traditional customs have been destroyed through the influence of Western civilisation. Yet we still enjoy the abundant richness of many that we inherit from our wise ancestors. Since entering politics, I have become conscious of the existence of Papua New Guinea's rich culture. Soon after I became head of the Government, I directed that the Government give priority to the promotion of Papua New Guinea's cultural heritage. This we have done through education at various levels and the National Cultural Council which was set up to promote the preservation of Papua New Guinea's culture --- I ask you all to preserve the culture of your forefathers for you will be persons without identity if you depart from them.* (The Prime Minister of Papua New Guinea, The Right Honourable Michael Somare, 1979)

Comparing the Bel and Motu Maritime Systems

1. Common Origins

The Motu people and the Bel people of Yabob/Bilbil belong to Austronesian language groups and live on opposite sides of Papua New Guinea. There was no contact between them before the arrival of the Europeans, separated as they were by high mountain ranges. However, recent research has shown that these two groups shared common ancestry in the Bismarck Archipelago area. As previously mentioned, Malcolm Ross noted a common origin for the two clusters who originated from the Papuan Tip and North New Guinea Clusters (1989: 137). The linguistic and archaeologist findings point to a common origin of these two peoples. They brought their culture, beliefs and customs with them but adapted them to the new environment and influences. In their response to their environmental conditions and influenced by introduced technological advances, they developed quite different trading vessels: the *lagatoi* of the Motu people and the *lalong* and *the balangut* of the Bel people.

However, there were many similarities in their culture and their response to the environment: both groups belonged to an Austronesian language group; they had similar myths of the first trading trip; similar rituals to protect the canoes; they built large trading canoes and sailed to other villages to trade their pots for food and other necessities;



Pari lagatoi *approaching the Townsville Strand, 1995.*

they both arrived after the non-Austronesians speakers and were reduced to inhospitable territory; and the poverty of the soil forced them to travel elsewhere for their supplies of food using the trade winds. The presence of clay in both areas enabled potmaking to become a major industry. As well as pots, they traded a vast array of other material as middlemen (Mennis, 1998).

2. Trading Systems compared

The *dadeng/waing* trading system of the Yabob/Bilbil and the *hiri* of the Motu people were the basis of a rich material culture in the respective villages: the initial planning to go on a trading trip; the involvement of the village leaders in the project; the ritual and ceremonies that were followed; the protection through magical powers; the prestige gained from going on a trip and the social connections made through visiting other places. Then there were the ceremonies: the singsings of welcome and the feasts for the returning heroes or the grieving for those who had been lost at sea. Oral traditions of past trading trips which were told down through the generations, were linked to the mythology of the first trading trip giving credence and historical meaning to their traditions. There were many factors, environmental, social and economic in each of the trading sphere studied.

The Motu and the Bel were both pro-active trading societies as contrasted to their more sedentary neighbours to the east, west and inland which were more agricultural in nature. Harding studied pre-colonial New Guinea trade in ten societies including the western Motu, Mailu and the Siassi. These three societies were classified as trading societies and the Bel people could also be included in this category. Harding then contrasted these trading societies with some agricultural societies including Sio. In the Port Moresby area, the Koita and the Koiari were the agriculturalists and more sedentary than the Motu traders. Harding concluded that, "all of the agricultural societies were connected, directly or indirectly to trading societies" (1994: 101).

Environmental factors: These played quite a big part in the trading systems of each place. The environment determined the places the traders could visit. The heavy *lagatoi* could not be landed on the coastal beaches in the Gulf area without being dismantled. Villages situated on large rivers were the ideal trading places for them as they could moor their vessels in the water alongside the village. They tended to stay at one place where they were fed by their trading partners over the many weeks or months until the winds changed. On the other hand, the lighter canoes, the *lalong* of the Bel area, could be beached and pulled up on rollers when they went to visit their trading partners along the coast. The economic reasons were the need to trade the pots for food so the people did not starve in the dry months of the year.

Economic: The Bilbil people traded for economic rather than social reasons. Regarded as the patricians of Astrolabe Bay, they also had the monopoly on the pottery trade and kept it through aggressive trading. The Motu too travelled for economic reasons and when the crop was good in the nearby Koita areas, they did not need to venture to the Gulf, as there was no need for the sago (Oram, 1982: 26). Groves said, "A major function of the *hiri*, the Motu themselves insist, was economic. Without it they could not have subsisted – Yet they valued the institution for other reasons" (1972a: 527) These would include the social links with other tribes and the prestige gained from participation in a *hiri* voyage.

Socially: Trade partners were an integral part of the *hiri* as the men were able to meet people in many other villages along the coast. These trade partners were important for both the Bel and the Motu. Because each *lagatoi* visited only one place at the Gulf, their trading partners were found in this one place and were very significant as the success of their stay in this village depended on the generosity of these friends. On the other hand, the Yabob and Bilbil men travelled to a succession of villages and needed to have trade partners in each place. In some ways, the delayed exchange system which was used by the Bilbil and Siassi people was similar to the *kula* ring of the Trobriand Islands where certain items were passed around the ring for social rather than economic reasons.

Technological: In their traditional society, because people had no choice but to use what was available, the environment influenced their tools, style of housing, and canoes. Their tools were made of shell, wood, bone or stone. Their housing was made from *saksak* roofs, bamboo flooring and mat walls. When some better technology became available, they were a practical people and discarded their old tools and techniques and embraced the new. For example, wooden hammers gave way to steel hammers and stone axes to steel axes. The people were no longer tied to the old environment, but were being introduced to outside influences. These items were then adapted to fit the old culture and became part of the material culture of the people. The technological aspect is an important part of the argument against material culture being determined only by the environment. Both Spier (1970: 11) and Hunter (1976: 485) would agree that modern man does not feel limited by his environment and has faith that he can

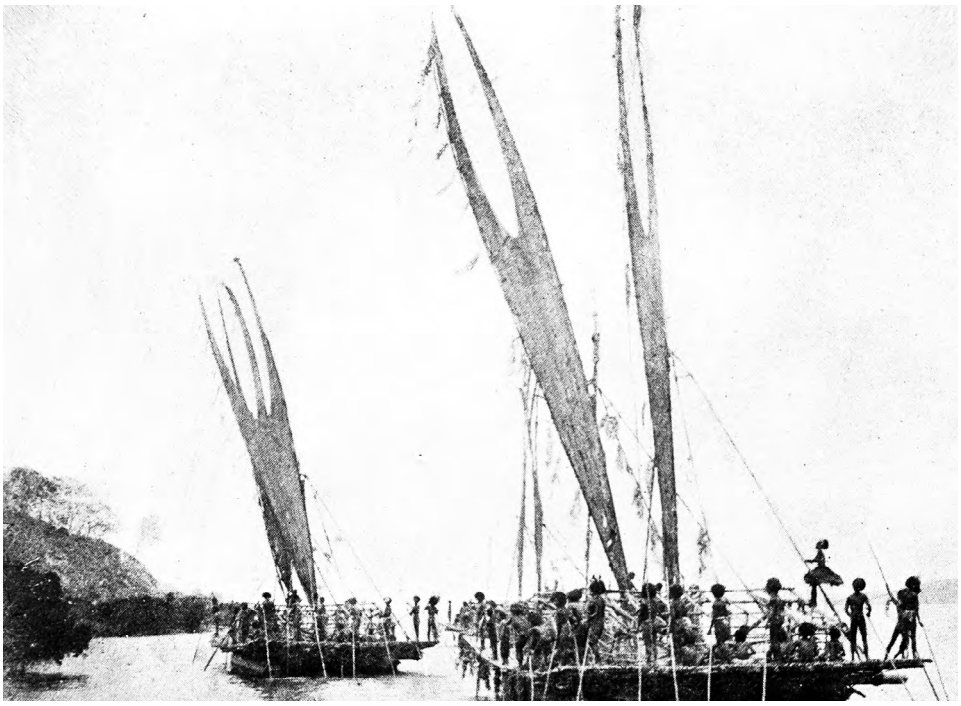
overcome most difficulties because of technological advances. In Madang, as soon as Miklouho-Maclay came with nails and steel axes, the people could see the benefit of these new tools and were able to adapt them to their own culture. Nails were not used as we would use them, but used as drills to make holes for the bindings of the canoe and were re-used many times replacing the pig's bones previously used.

Spiritual: Nigel Oram noted that further research into many trading systems might show that "religious considerations were indeed a major factor stimulating the continuation of the *hiri*, with the sea voyage being necessary for many in their personal discovery of the 'other lands' that lay within the realm of the spirit." The spiritual side of the people's beliefs strengthened peaceful relationships and "satisfied other desires and needs. – moral standards associated with reciprocity were maintained and a high value was placed upon personal skills and courage and the religious beliefs of the people were interwoven within these things" (1982: 14). Now with the trading system on the north side being described in this volume, more comparisons can be made at least with one other trading system. With further comparative analyses of other systems like the *kula* of the Trobriands and the trading system of the Mailu, more general conclusions could be made.

3. Myths and Magic

Magic over the canoes was important for their security and safety while at sea. The Bilbil felt they could no longer go on long trading trips without the help of the *likon* magician; the Motu people traditionally paid sorcerers to protect their *lagatoi*. But each crew member had their own magic to perform over the *lagatoi*. Once they became converted, they gave up the belief in sorcery but had the missionaries of the LMS bless their *lagatoi* before departure to ensure a safe passage. They felt they still needed this protection from whatever source (Chatterton, 1974: 33). Myths explain the ancient origins and deep spiritual nature of the long trading trips. The journey took them to the place of their ancestors in each case. The Motu believed their ancestors were in the Gulf area just as the Bilbil people felt that the Rai Coast was the place their ancestors went to when they died.

The creator beings who began the trading systems had superhuman abilities as they had been instructed by the spirits in the initial trading voyage. Subsequently the traders appealed to them for protection when setting out. So we have the Bel *likons* calling out to Kilibob and Manup in the case of the *dadeng* and the Motu to Edai Siabo on their *lagatoi*. The people of both Bel and Motu areas were animists. In both places special ceremonies and magic rites were made over a new canoe to make it strong and to appease the sea spirits. Weather magicians in both areas made a variety of magic over the sea, the wind and the storms. It was through this magic that the people thought they could have some control over their environment.



Traditional Hiri *voyage in action, with fully laden* lagatois*.* Lambert, 1915.

When discussing their past, the old men in the 1970's had many stories of earthquakes, volcanic eruptions and tsunami - these would have met Spier's classification of environmental problems which "channel thoughts in certain environments" (Spier, 1970). As a result of volcanic eruptions, the Bilbil believed that the people who lived on the island with the highest volcano (Manam Island) had the strongest magic. The volcanic cones on Karkar Island were said to have been inhabited by spirits as well.

4. The Canoes

The process of construction of the *lalong* and the *lagatoi* was similar enough to make a parallel comparison. Both began with hulls on to which a platform was tied. Shelters were added to protect the pots and the sailors on the long sea voyage and a mast was added with sail attached. Various totems and marks gave the canoe identity. However, the outward appearance of the canoes was very different. The Bel canoes were higher and flimsier but easy to pull up on a beach at each of their destinations. The Motu canoe was broader and heavier, lying lower in the water with the hulls loaded with pots which meant they could not be pulled up just anywhere. It has been shown that form follows function in the styles of the canoes built and the pots made. Although their pots were similar in form and function, yet the canoes were so very different. Both the *lalong* and the *lagatoi* were designed to carry hundreds of pots on long trading trips, had to withstand severe weather conditions on occasions and were steered by the stars, winds and landmarks. Given that the environments and needs were similar the differences could point to the availability of materials in each area and the need to store large amounts of sago in the *lagatoi* as opposed to the lighter loads that the *lalong* needed to carry on the return trip. So again we have function of the vessel determining its form. However, it has been argued that the style of canoes depended on the technical knowledge which had been introduced and was therefore diffusionary. The possible influence of the Malaccans (Malaya) and the Indonesians and the 'Papuo-Melanesians' on the canoes of New Guinea on both the south and north coasts has already been mentioned. The designs of the sails are quite different - the crab claw sail of the *lagatoi* contrasts with the large mat sails of the Bel canoes. Closer observations show that the *lagatoi* is really a large barge made of many hulls lashed together for stability. The Bel canoe on the other hand is a large outrigger with a pot cage built across the main part of the canoe.

5. The Pots and other items.

The function of the pots as trade items for bride price payments and ultimately for use as water pots and cooking vessels was nearly identical with both the Bilbil/Yabob pots and the Motu pots. The form of the pots was also very similar as has been shown, although the Bel pots are supposedly of a stronger design than their Motu counterparts. These pots were traded for food as well as a number of trade items, particularly in the Madang area where pig meat, fish, wooden plates, bows and arrows, yams, taro, bark cloth, sago, and wooden plates came from the Rai Coast. The Papuans traded pots and clay dishes and *toea* shells, shell necklaces and bracelets for canoe hulls and sago. There were other pottery centres as well as the Motu. The Roro pottery has its antecedents in the Motu pottery and the Mailu people to the east had its trading pot industry sometimes overlapping with the Motu. Reference to other centres has been covered. I have also referred to the work of archaeologists, linguists and early historians as well as early books describing these to trading systems.

Lapita people apparently lived on the mainland coast of Papua for an extended time and were not merely passing through as previously thought. Recent archaeological research in the Caution Bay near Port Moresby by David, McNiven and their research team has found Lapita pottery which is almost 3,000 years old. (David, McNiven et al, 2011: 576). These finds are one more step in establishing common links between the ancestors of the Motu on the south coast and the Bel on the north coast: both pottery-producing areas and with traders travelling long distances in large canoes. More information is required and this may be obtained when Professor Summerhayes and his team investigate reports of old pottery shards on Bilbil Island. A team of people will be involved and we are all looking forward to it. Will they prove to be Lapita shards? Who knows but, if they do, then another link will be established between the Bel and the Motu ancestry. Writing in *Terra Australia*, McNiven said, "The results of recent excavations at Caution Bay will transform understandings of Port Moresby region archaeology and understanding of the human history of southern coast of Papua New Guinea" (2012: 150). Maybe excavations in the Madang area will re-write the history there as well.

Summary

This comparative study hopefully contributes to our understanding of how people, who shared a common ancestry and became quite isolated, retained so many similar beliefs, customs and magic rites. They made pots that were nearly identical and shared a common technology in potmaking. They also developed similar trading systems. The

big difference was in the large trading canoes which hardly resembled each other in size, construction or form. The trading areas over which these canoes travelled were along hundreds of kilometers of coast and overlapped with other trading systems within a zone. Usually the styles of trade items were contained within the zone and it seems as if the canoe style was also contained in these zones. As a result the large trading canoes are more like other canoes in their own zones than those in other zones. In this study of the *waing/dadeng* and the *hiri*, I have endeavoured to show how the Motu and Bel people adapted in different ways to the local environment, given that they both made earthenware pots which they traded for food and other artefacts. This study helps us understand the extent to which the environment affects culture while at the same time it makes us aware of technical innovations that were diffusionary. The infertile soil and poor rainfall in both the Motu and the Bel areas meant the people depended on their canoes for accessing places where food was available and where the people were anxious to trade their food for the pots.

Speaking of Malinowski, Murdock said "The scientific and the historical approaches seemed to him complementary rather than antithetical. He gave primacy to the former, however, for he felt that historical interpretations, if they are to be more than inspired guesswork, must be constructed within a framework of a sound theory of culture, behavior, and social structure" (Murdock, 1943: 441-451). Malinowski emphasised the need for scientific backing for theory. However once scientific backing is obtained for a theory then the ethnographic work can be used as a referral point by scientists of many areas so it can work both ways.

While holding the theory of *Sailing for Survival*, I have been aware of other theories. Researchers argue about the primary function of the *hiri*. Was it economic, spiritual or social? While the *hiri* had elements of all these facets I believe it was primarily economic. The *hiri* and *dadeng/waing* voyages, while great social occasions and spiritual odysseys, were not undertaken if there were sufficient food supplies in the Motu and Bel areas. The large canoes on both the north and south coasts were built by people living on sparse islands or coastal villages who needed to travel in the 'hungry times' to gather food for their people who might otherwise starve to death. It is doubtful whether these journeys would have been undertaken just for prestige purposes as they were fraught with danger. While the main reason for the existence of both the *hiri* and *dadeng* was economic, it also appears that the main reason for its demise was also economic. Men and women found employment in the burgeoning towns of Port Moresby and Madang and, when the rains did not fall or the crops failed, no longer faced 'hungry times.' With the beginning of a cash economy, they could purchase food at the local trade store. With the continuing low employment rate, people still grow their own food when the weather allows.

However, the Motu continued to crave the sago which had always been a staple food in their diet. So in modern times, the trade in sago continues not for pots but for cash. The Gulf people transport the sago by road or coastal vessels to Moresby where they visit their traditional trade partners, the Motu/ Koita people. Some of their Kerema trade partners have even taken up living near them in the Moresby area. As pots were no longer seen as a form of currency and the *lagatoi* are no longer required to carry them to the Gulf, it was no longer a case of ***Sailing for Survival***.

Changes since traditional times

The traditional trading system may have continued in Papua New Guinea if there had been no outside contact. However, with world-wide explorations, made possible with advances in shipping designs and technology, it was inevitable that Papua New Guinea would be contacted by outsiders. The large water craft of the Motu and Bel had enabled them to sail hundreds of kilometres along the coast with their knowledge of the winds, the sea and landmarks. But, advances in sailing techniques and knowledge of navigation and in ship design in Europe enabled explorers to sail across the oceans. So we have Christopher Columbus sailing across the Pacific in 1492 to the Americas with a fleet of sailing ships using a quarter staff to navigate a course. His ship the *Santa Maria* was a carrack, a forerunner of the great ships of the age of sail and was one of the most influential ship designs in history. "While ships became more specialized, the basic design remained unchanged throughout the Age of Sail" (Wikipaedia). The *Santa Maria* was only 21.5 metres (seventy feet) long, but was the longest of the boats used by Columbus. It had a deck and was used as the flagship for the expedition. When it was wrecked on a reef, its wood was used to build shelters for the crew on the beach. Much the same as the Motu sailors used the materials from their *lagatoi* to make shelters for their crew when they reached the Gulf. These early explorers like Columbus relied on sail power to travel across the seas.

In 1884, the largest *lagatoi* travelling to the Gulf consisted of 14 *asi* and measured 59 by 51 feet (18 metres by 15.5); two smaller ones measured 54 by 37 feet (16.5 by 11.3 metres) (Barton quoted by Haddon and Hornell, 1991, ii:

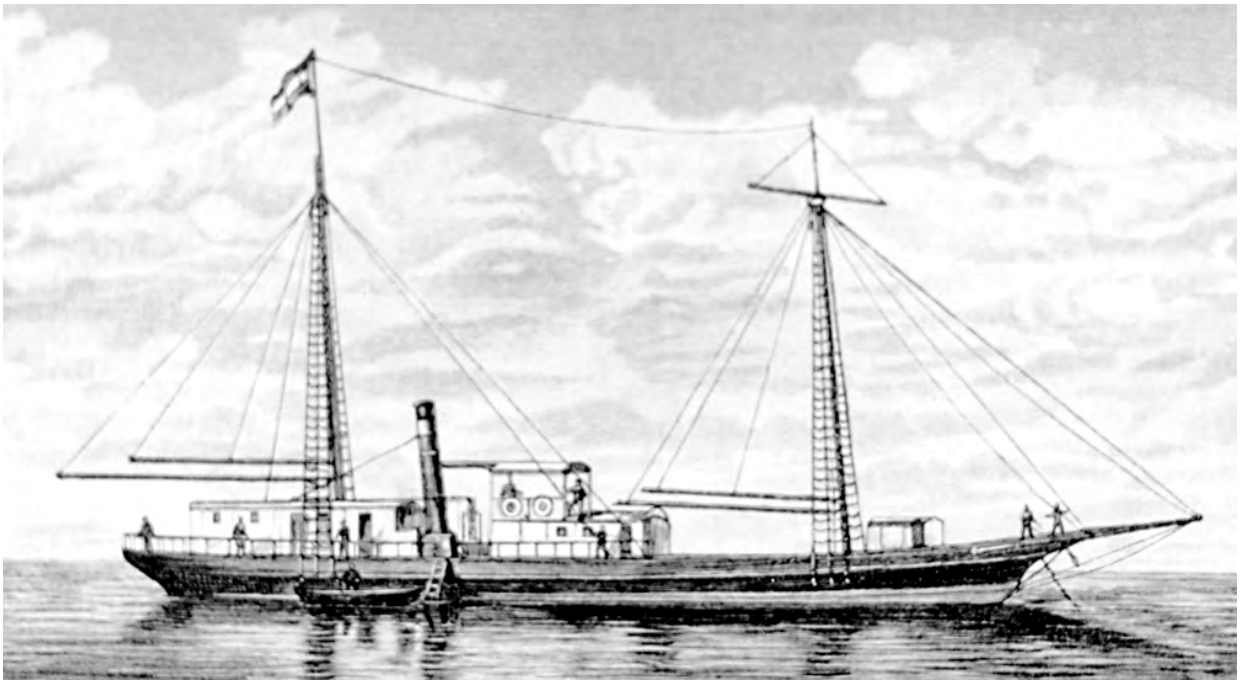
227). The length of the Lealea hulls in 1995 was 16.2 metres although the overall length was slightly lengthened by the platforms which overlapped the hulls. The masts were 7 metres high and the width of the platform was 4.2m (Tapp, 1995). In length and size the *Santa Maria* sailed by Christopher Columbus was hardly much bigger. The two vessels were comparable in size and even capacity of cargo.

When a mission boat called into the Fly River area in the 1890s, it was the first time that such a boat had been seen by the local villagers. Chalmers described how they spent hours looking at the sails and the rigging, overawed at what they saw (Lett, 1902: 191).

While the Motu and Bel traders reached a high standard with their famous craft, the sailors lacked the materials, skills and navigational tools which enabled sailing ships the freedom of the seas. The Motuans had, however, developed an instrument to navigate by the stars. David Lewis described it "a staff with a long whip-like pennant at one end". Called *kino kino* it was lashed to the rigging with its tip aligned with Venus or other stars (Lewis, 1972: 95). Yet in the end whether it was on the high seas, the Gulf of Papua or the Astrolabe Bay of Madang, all sailors faced the might of the waves and the thundering surf and gale-force winds that these local traders had faced for centuries.

Sailors on board a stranded sailing ship in early 19th century were amongst the earliest foreign visitors to the Madang Coast. They left a record of their stay when ebony statues, swords and ship chains were found at Budup near Alexishafen. The story of this large sailing ship was woven into one of the many versions of the Kilibob and Manup myths. The wrecked sailing ship at Budup must have caused a big impression on the people. What large sails! What power! No wonder they incorporated it into their myths (Mennis, 1978).

The next ship recorded was Miklouho-Maclay's ship, the *Vitiaz*, which reached the shores of New Guinea in September 1871 (Sentinella, 1975: 15). When they first saw the Russian ship, the Rai Coast people called it *Anut Wag*, 'god's canoe' and they wanted it to leave. They hit the coconuts on the beach saying magic words to make it telling this strange thing to go away. From the ship, Maclay put quite a different interpretation on the event, thinking that they were offering him the coconuts. Maclay made three visits to the coast between 1871 and 1883 and was picked up each time by a Russian vessel. On the final visit, Maclay encouraged some of the village men to come on board. This they did full of wonder at the power of the vessel. They remained on board as far as Sek and then jumped ship swimming to the shore. This was as far as they dared travel in their canoes - the thought of going over the seas far away from their village was incomprehensible.



The Samoa*, Finsch's ship, 1884.*

When Otto Finsch, a German national, set off for New Guinea on board the *Samoa*, Miklouho-Maclay trusted him to carry out his wishes regarding the people of the Rai Coast. Later, when Maclay heard Germany planned to colonize New Guinea, he tried in vain to stop the venture by appealing to Bismarck in a letter. In spite of Maclay's efforts, the German New Guinea company was established at Friedrich-Wilhelmshafen, later renamed Madang. When German officials arrived to claim the area for Germany, their vessels would have astonished the Madang people with their sailing power. The German flag was raised officially in Madang on 20 November 1884, claiming the area for the Neu Guinea Kompagnie and bringing it under the German tri-colour. After that, many ships called into the Madang harbour which was developed as a shipping centre (Sack & Clark, 1979: 102). Some 250 local labourers were employed around Madang and were "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). Just like in Papua, village men found employment in the towns and plantations and were paid cash. Increasingly, the pots were no longer the currency.

Chinese made boats

The German Colony employed Chinese labourers who eventually set up their own small businesses becoming bakers, fishermen and boat builders. Near Sek Harbour, two Chinese boat builders began their own small shipyard and produced wooden boats about 10 to15 metres long. They had big sails made of canvas. If there was a strong wind, these boats went faster than the *lalong* or *balangut*. Pall's father, Tagari, wanted to buy one as soon as he saw them. He figured it would save the time building the *lalong* or *balangut* canoes. A ready-made boat! But he had no money to pay for it. In the end it was agreed he could pay with pigs and the deal was done. The Chinese made boats became part of the trading fleet which shows that just as the Motu used scows to transport their pots, the Madang people did not mind what vessels they used to take their pots to market. Being practical, they were quite happy to incorporate new types of vessels into their fleets. These Chinese boats had their drawbacks though: they had no shelters against the sun; the men could not cook on them and they had no potcage to carry the cargo.

Demise of the trading canoes.

The Yabobs and Bilbils continued building both the *lalong* and *balangut* canoes until the Pacific War. The fact that people in the Madang area made fewer large canoes was for many reasons: 1. Economic - the people's land had been cleared and a new economy introduced taking the place of the previous pottery currency; 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 like the Chinese made ones; 5. Relegious - the introduction of new religious beliefs that changed the people's outlook on their culture - they joined the Lutheran Church which banned the rituals associated with canoe building and sailing; 6. Finally - the final straw was when the Japanese bombed the large canoes thinking they might be harbouring allied soldiers.

Roads and Railway Tracks

After the German annexation, roads were built in three 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 1907-08 mentions the commencement of the road from Madang to Alexishafen (Sack & Clark, 1979: 183). The road to 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 island people were forced by the Germans to live on the mainland, giving them easy access to their old trade friends in Amele and other places.

The new road network meant that the Bilbils 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 or been their enemies.. 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 & Clark, 1979: 192).

HMS Basilisk*., Captain Moresby's ship, a paddle steamer. 1873.*

Changes amongst the Motu

When Captain Moresby and the early traders arrived, the Motu people must have wondered at and appreciated this new-style of craft never seen by them before and for the trade goods that they carried. They were quick to take advantage of these new trading outlets. Desiring steel axes, glass beads and materials, they were eager for this new trade as well.

Andrew Goldie, a dealer in artefacts, set up a business in Port Moresby in 1880. From the Motu people, he purchased stone blades, *toia* [shell armlets], *doa, tautau* [shell ornaments], *mairi* [pearl-shell ornaments] and *dodoma* (Davies, 2012: 144). From the Hula, he purchased grass skirts, shell ornaments and beads and, from Kerepunu, shields and shell armlets. In exchange for these items he gave "European manufactures, such as glass beads, tobacco, hoop iron, or iron hatchets." He knew the exchange rate of these items in the village trade system and the relative value of them. Elema people from the Gulf also frequented Port Moresby with their supplies of sago and other items. "Armlets and necklaces made from coix seeds originated in the Aroma District on the southeast coast" (Davies, 2012: 144). With the development of Port Moresby, there were jobs in the local coastal vessels and the Motu traders with their great knowledge of the winds, the seas and the coastal landmarks, could form helpful crews.

During the war, Annette Rosenstiel lived in Port Moresby as an Officer of the United States Army. While there, she studied the local culture and noticed the Motu were happy to use introduced tools when constructing *lagatoi*. They still carried out the trading trips but not as frequently nor did they need to rely on them for food during the 'hungry months'. Some of the *lagatoi*, even as early as the 1920s, began to "adopt the European square sail of canvas to replace the traditional crab-claw sail of bark cloth" (1953: 106). During the war, the Motu people were evacuated to safer areas and as a result the *hiri* was disrupted. Hanuabada Village caught fire which spread as there was no-one left to put it out. The whole village was destroyed and then the remains were bombed by the Japanese.

Percy Chatterton gave an interesting picture of Hanuabada in 1942:

> I climbed the hill and stood for a while on the front veranda of the mission house, looking down on the grass thatched, palm leaf walled houses which, mellow in the moonlight, stretched in a huddle from the shore out to Elevala Island. I did not know that I was looking at old Hanuabada for the last time. In a few weeks the church in which I had just worshipped would be a tumbled ruin. In a few months, the village I was looking down on would be a forest of blackened stumps, sticking up out of the sea like betel-nut blackened teeth (1974: 35).

Later, Australian soldiers rebuilt Hanuabada Village using modern tools and materials and the people were able to return to their new-style homes set over the water. After the war, many people got involved in the new economy with jobs and training and education abounding. Percy Chatterton commented on the decline of the *hiri*, admitting that while the church had forbidden the preliminary rituals and the dances associated with it, its decline was more from economic changes (1974: 33). In the end, he was happy to see a revival of some of the colourful Motu dances. The fleet of *lagatoi* were blessed by the Church replacing the rituals and invocation to the spirits in former times. The sailors, now Christians, were happy to sail with this blessing as they felt protected and the church supported the *hiri* idea of trade as Chatterton wrote:

> As a matter of fact, the last *lagatoi* to sail from Hanuabada was captained by a pillar of the church and my very good friend, Frank Rei of Elevala. On this occasion, I was not only called on to conduct

Hanuabada village. Brown, 1910.

> the prayers on board on the eve of the *lagatoi's* departure, but, on its return, was invited to board it at Gemo Island, near the entrance to Port Moresby Harbour and accompany it on the last leg of its voyage back to the village. This experience remains one of the most cherished memories of my years at Hanuabada (1974: 32).

James Chalmers in the 1880s noted with joy those who had become Christian, "Very touching it was to me to gaze upon these men, once noted for murder, robbery, and every heathen vice, but now clothed and in their right mind. Amongst those baptised was Ruako, the pirate of former days - he was once the terror of passing canoes, and indeed all the neighbouring villages" (1883: 263).

Because sorcery was now banned, the Motu no longer feared the black magic of the Koiari people. They were astounded when the sorcerer was forced to show his implements and came up with a broken pot and a few other things. Now the Motu planted crops further along the river where the land was more fertile and obtained "harvests of *maho* and *taitu* (two kinds of yams), bananas, taro, corn, manioc pumpkins and tomatoes" (Rosenstiel, 1953:106). Some of the Motu men who worked for wages in Port Moresby, bought goods in the stores and no longer depended on barter. The men who once went on the *hiri* expeditions had many additional occupations: mechanics, plantation workers, teachers and pastors (1953: 106). The *hiri* trade itself was influenced by outside trade with cloth, tobacco and trade-store beads being part of the barter items as well as the pots. So the *hiri* that began for economic reasons also ended for economic reasons when the pots were no longer the basis of the old currency.

Changes to the *hiri* were gradual and voyages continued until the 1950s. Michael Goddard noted that spiritual changes came with the advent of the new London Missionary Society in the late 1800s. At this time church buildings became architectural centrepieces in a number of Motu villages and Church-related activities replaced many of the traditional practices and changed the social structure of the community. Men found new ways to gain high social standing by becoming church deacons and preachers rather than organising *hiri* voyages as they had done in previous years (2003: 50).

The Motu took their pots to the Gulf on new coastal boats and the exchanges with trading partners continued with a mix of *lagatoi* and scows until the 1950s. [A scow is a flat-bottomed boat with a blunt bow, often used to haul bulk freight]. Over the years, people who had jobs in the towns could buy food at the local grocery stores. It did not, however, end the trade in sago though and even today [2014] the Gulf people bring their supplies of sago in plastic containers to Port Moresby. These days they want cash rather than pots or shell ornaments. The road to Kikori was

Port Moresby, 1994.

opened in the 1960s and later extended to Yoki so the Gulf people can easily access Port Moresby and don't need to travel by canoe, but other factors also spelt the end of the pottery trade on the *hiri* canoes.

Murray Groves noted that, "After the loss at sea of a *hakona*, its entire cargo and the life of an Erema passenger, in December, 1954, the people of Manumanu did not undertake any *hiri* in 1955 or 1956."(Groves, 1960: 10). After this time, it was acceptable to use other types of vessels apart from *lagatoi* to carry the pots to the Gulf. Porebada and Boera chartered scows to take pottery west in 1956 and 1957. Five villages took part that year, but most of the vessels were not the true *lagatoi* at all. The men came from Manumanu, Koita, Lealea, Boera and Porebada. Koita was the only non-Motu village in the group. Manumanu had two *hakona* [small lagatoi] Lealea had two *puapua*, [double canoes without any superstructure] Boera had a scow "carrying 3,200 pots and Porebada also sent a scow". They headed to different Erema Villages including Orokolo where Boera had trade friends, while the Manumanu headed to their friends at Uamai Village. Groves estimated that 10,000 pots were off-loaded at those villages (Groves, 1960: 10). The object of this mission was obviously to carry pots to the Erema villages by whatever vessels were available to trade for sago. The *hiri* crews probably did not follow the rules of the traditional *hiri* voyage especially on board the scows which were quite different from the *lagatoi* with no allotted space for the *baditauna* etc. For a while, the Erema people were happy to continue trading for pots as the food cooked in them tasted sweet and better than if it were cooked in tradestore saucepans. Soon, however, the latter began to replace the pots as they were cheap and lasted longer. The trade was still just barter with no cash involved as they preferred to save their money for other things including head-tax that had been introduced by the new government.

> In December, 1958, Manumanu sent west a true *lagatoi*, built in accordance with all of the traditional ritual requirements. In its four hulls and on deck it carried 1,100 pots, made from clay dug at Rearea [Lealea] by the men of the lagatoi crew. In the same year Porebada and Boera each attempted to charter a scow to transport pottery, but because the shipping company unaccountably doubled the usual charter fee neither village was able to raise a sufficient sum of money to secure the charter. Boera had 3,000 pots in readiness. Up to March, 1959, they had found no satisfactory way for marketing the pots, for which there was no local demand (Groves, 1960: 10).

Mataio Taboro, the leader of the Pari canoe said that, after 1937, the Pari people stopped making the *lagatoi* because some of the men got jobs in Port Moresby which just increased in size and needed more workers.

> The last trading trip was in 1937 when the the *lagatoi* was wrecked because of the wind on the high seas. Two of the men who were crew are amongst the group here at Nelly Bay. One is my father. In the other village, the last trading trip was in the 1950s. It started again when the Local Council in Port Moresby began to revive these ideas. After Independence people were asking a lot about these *lagatoi* and different villages were asked to take part. In 1991, we were asked to build a canoe again. Every year a different village builds their own story of canoes (Mennis interview, 1995).

Cultural Revival in Madang and Port Moresby

With Independence, the need arose for Papua New Guineans to preserve and celebrate their culture. As a result, the Hiri Moale Festival was started coinciding with the national Independence Day celebrations, and featuring traditional dances, the Hiri Queen contest (a beauty pageant), the arrival of the *lagatoi*, canoe racing, musical presentations and an arts and crafts exhibition. In recent years, there has been some controversy about Hiri Moale being held in Port Moresby, rather than at nearby Boera, traditionally regarded as the birthplace of Edai Siabo. Oram wrote once that the Edai Siabo myth "describes and validates the establishing of an economic order based on the sea, fishing and trade." Then he compares that to the modern era when the *hiri* is "an element in the their past in which all Motu take pride, is commemorated in a number of ways including the naming after it of a festival, a road, and a language however remotely connected. Perhaps the most potent reminder of past glories is the legend of Edai Siabo" (Oram, 1993: 533).

In September 1979 Madang had an active Provincial Cultural Council with Kaki Angi as president and Paul Bodi the provincial community development officer. The council members were busy with the new building of the Cultural Centre for the Province with its design based on a Manam *haus tambaran*. Through their work they tried to foster, encourage and assist in the preservation of the local indigenous culture. How much culture was left in a province like Madang? There was still a wealth of oral traditions in the form of singsings, music, songs, legends and myths. But time had played havoc with the material culture with many items no longer being made including the shields, carved house posts, carved statues, large traditional canoes, fishing baskets, weapons and sacred flutes. Many of the artifacts had died out completely. Wooden bowls were still carved on the Rai coast and used as part of bride price. The potters in Bilbil village still continued to made pots and the tourist buses turned up on a regular basis to buy the small pots now made for the tourist market. Interest in the culture was fostered in schools and village craftsmen and women were invited to come and teach traditional arts to the children. Culture days were held with the children wearing traditional dress. The Maborasa Festival, which is held each year, also stimulated interest in the culture with its colourful singsings and feasts (Mennis, article *Post* Courier, 1979).

Madang, 1980s.

Madang - building the *lalong* in 1978

The people in Madang have a culture which is just as colourful as the Motuans. The women once gathered on the beach to welcome the men returning from their trading trips on their *balangut* which were the beautiful two-mast canoes originally described by Miklouho-Maclay in 1871. There were also many *lalong*, one-mast canoes, which were shorter and easier to handle.

When we moved to Madang in 1971, it was a century since Miklouhu-Maclay had lived in the area and his work on the Rai Coast people was publicized in the newspapers of the time. Visiting Bilbil Village over the next few years and, after the leader of the Gapan Clan made a made a model of the original trading canoes, I became interested in the idea of constructing a full scale *lalong*.

In September 1977, some Bilbil men were approached about building a *lalong* canoe. Maia was very happy with the idea and encouraged the rest of the men to be part of the project. The Madang Area Authority (the fore-runner of the Madang Provincial Government) donated K700 towards the project. This was all the money we received for the eight months it took to build the canoe. We used it to hire trucks to collect materials, and to buy food for the workers and pay for the hulling of the log on Kranket Island. The workers were paid with a meal at the end of each day's work which was the accepted traditional payment for work done.

The lalong *sailing in Astrolabe Bay, 1979.*

The canoe was 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. It 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 to remove bad spirits; the women brought pots to load into the canoe; Derr played a traditional flute. There was a feeling of expectation with everyone 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.

Our family left Madang soon afterwards for Port Moresby and then we returned to Australia in 1982. Years later in 1994, I visited Madang again and found that Pall Tagari was the only one of the old canoe builders left and he had lost his memory. I was glad then that I had recorded the process of building the canoe in photographs, diaries and notes.

Derr Mul had died some years earlier but I met up again with his son, Nalon Derr. Nalon in a style characteristic of some of his people mentioned his father, grandfather and even his great grandfather to name the important figures amongst his ancestors from whom his knowledge was derived. Nalon said, "My father, Derr Mul, was a man of character and keen about the traditions of his village. My grandfather was Mul, one of the great canoe builders in Bilbil Village. My great grandfather was Kalong, a great leader of his people before the Europeans came. So through

them I know many of the traditions of my people. However, when my father died, I regretted not spending more time with him." (Mennis Interview). His father, Derr Mul had always believed Nalon would do well. Nalon Derr became the Secretary of the Department of Madang, a position he held until 1989. He spoke optimistically about the future of Madang, "so long as there was good leadership and financial management the whole country will progress with political stability".

Maborasa Festivals in Madang

The name, Maborasa, was coined from the first two letters of the main areas in the province, Madang, Bogia, Rai Coast and Saidor. Tabah Silau was one of the executives on the Committee of the Festival and it was a great success between the years 1983 and 1987. He noted that the Festival was of international standing, and the hotels were booked out by tourists attracted by the *singsing* groups from all over the Province and the exhibitions of culture as well as agricultural and industrial displays. Madang became quite a tourist centre in Papua New Guinea with its lush scenery, and deep lagoons that flow in from the harbour. However, things changed.

In 1994, Tabah said the Maborasa Festival was no longer seen as a priority and there was no festival that year because of a lack of funding and organisation. Furthermore, no Maborasa Festivals had been held between 1988 and 1992 and only a small Festival was held in 1993. Tabah expressed eagerness that the Maborasa Festival be revived with an emphasis on the traditional culture, artefacts, canoes and pottery on the same lines as the Port Moresby Hiri Moale held annually in September. There could be canoe races on the lagoons and ceremonial sailing of the large colourful trading canoes which could still be built. The sailing of the large canoes was at that time only a dream because the last of the canoe builders had died or had lost their memories. Who would help the next generation with the knowledge of canoe building?

Younger women are still interested in learning pottery skills in Bilbil Village.

Traditionally, women of the Bel group held a powerful economic position as makers of earthenware pots, *bilums*, grass skirts and baskets all of which were used as trade items around Astrolabe Bay. Without their traditional skills, there would have been no exchanges for food so desperately needed for survival. With the menfolk, they also gardened, growing the fruit and vegetables needed for the local subsistence economy, which is still the backbone of village life. Now, with education, they get employment with the government as teachers, nurses and secretaries and are very capable. But many women still live a peaceful village life carrying on the subsistence economy. However, give them a chance to enjoy a dance or cook for a feast and they are eager to participate. That was why there was quite a stirring in the villages when it was announced that there would be a beauty contest as part of the Maborasa festival one year. The women love to dress up in their traditional grass skirts and finery of shell necklaces and dance to the beat of the drums

In 1994, I received a letter from Mrs Janetta Douglas who had been working on a project to regenerate the *Hiri* friendship of the trading people along the south coast of Papua New Guinea. She wrote, "I believe Madang should create a similar festival along the Madang/Morobe Coast involving traditional trading partners and friends even up into the Highland area through the Gogol traders. It would be nice to think that your study had an ongoing effect in the lives of the people rather than just recording a lifestyle that can never be reactivated." The Madang people could develop a Festival involving the old trading friends of their families. Getting to know the descendants of these clans/families would foster a wide friendship network in Madang and would not cost much financially and would encourage young people to understand and learn more about their past. Furthermore the festival could encourage tourism to Madang.

As regards improving Madang tourist industry, Sir Peter Barter wrote:

> It would be easy to blame crime for the decrease in tourist arrivals, and I have no doubt it could be a contributing factor, but it probably has more to do with the fact that Papua New Guinea does not have

Cruise ship, Silver Whisper*, in Madang Harbour behind the* balangut*, 2014.* Sir Peter Barter.

a tourist image. We are just one of numerous small countries fighting for the tourists and most other destinations have been working on it consistently for many years. Australia is our nearest market and certainly the one with the most potential, yet we fail miserably in attracting any volume of bona fide tourists (*Una Voce*: 1999).

Madang Dancers.

One of Sir Peter's initiatives is the Melanesian Foundation that was established by the Melanesian Tourist Services for the purpose of providing assistance to the village people where tourists visit. For ten years, the Foundation has been supplying and delivering around 1,000 school desks a year. In 1999, the Foundation constructed ten medical aid posts and reintroduced the National Health Radio Network in Madang and some other Provinces. Over the years, the people of Papua New Guinea were appreciative of the work Sir Peter did for Madang and for Papua New Guinea as a whole.

Madang could be one of the major tourist areas in Papua New Guinea. Its

beautiful location around the deep harbour dotted with islands make it a holiday-makers' paradise for both local and overseas tourists. Many other features make this possible: its roads to the Highlands and along the coast; its excellent hotels; cruises up the Sepik River; and diving facilities on the reefs. There is village-style accommodation on the islands in the harbour, particularly on Siar and Kranket Islands, both Bel group villages. One favourite occupation is diving in the reefs and around the wrecks, doing a harbour cruise or just swimming and taking in the beautiful scenery. Teptep Village in the Finisterre Ranges offers accommodation and from there many walks can be undertaken. Usino Village also has village-style accommodation and many walks to the nearby Ramu River. The large volcanic Islands of Karkar, Long, Bagabag and Manam can be visited and walks up to the caldera on Karkar can be undertaken with local guides, although some caution needs to be taken. Manam Island, however, grows more dangerous with eruptions and many people have been evacuated. There is great fishing on the reefs around these islands and Long Island has some interesting lakes.

There were no Maborasa Festivals held for six years after 1997. Then, in 2003, a four-day festival was organised from 13 to 16 September. A Post Courier journalist described the scene including traditional songs, *kundus*, the police band, and of course the greasy pole where people compete to climb a pole daubed in thick engine grease. Prizes ranging from electronic goods to household goods and money strung above (September, 2003).

The Hiri Moale Festivals in Port Moresby.

The *hiri* voyages to the Gulf of Papua continued, except for the war years, until the late 1950s, when a heavily laden and storm-damaged *lagatoi* foundered off Boera village on its return voyage with heavy loss of life. Further voyages were forbidden by the colonial authorities. In 1969, another *lagatoi* was built when the South Pacific Games were held in Port Moresby with competitors arriving from many Pacific Islands. They all had their own styles of canoes and pots and dancing as well as sporting achievements. To show off the Papuan culture a group of Motu men from Elevala built a *lagatoi* canoe for display during the games. It did not sail but remained on display for many years near the Sir Hubert Murray Stadium.

In 1971, the Papuan Tourist Association organised a Festival to revive interest in the rich culture of the Motu/ Koita people. Many of the old practices had fallen into disuse but there was hope they might be revived. At first there was not much interest as some were ashamed of their 'pagan heritage,' because of the London Missionary Society's attitude to their traditional dress, dances and rituals. However several leaders saw the significance of the idea. Among them were Mayor of Port Moresby, Oala Oala Rurua, and Sogo Sebea. Planning went ahead and it was a resounding success.

Five festivals were held during the 1970s. Since 1987 the Hiri Moale Festival was taken over by the National Capital District Commission who took up the major sponsorship and it has been held annually each year (Douglas, 1994: 11). Each year more events were added and more traditional ceremonies took place and by 1994, the Festival was the biggest and best festival ever. One of the most interesting features is the re-building of the *lagatoi* once so much a part of the *hiri* voyages to the Gulf.

When the idea of the Hiri Moale Festival was first mooted with *lagatoi* sailing into Ela Beach there was opposition from a few quarters. Some village leaders thought that it would take the *lagatoi* out of its traditional setting as a carrier of pots. Circumstance may have changed, but as a part of a cultural revival many people enjoy the colour and pageantry of the *lagatoi* arriving at Ela Beach rather than being viewed on a pedestal in a museum. When these canoes arrive, the crowds gather, and the sailors are welcomed as in the old days, with young men blowing the flutes as the people sing their song of welcome and the girls twirl their grass skirts, wearing their best finery. The day's festivities begin just as they had for the previous

Hiri Moale dancers on Ela Beach, 1994.

Awaiting arrival of lagatoi *at Ela Beach.*

centuries when the men returned from their long *hiri* trips to the Gulf of Papua. There is no need now to load up a *lagatoi* with pots and head off for the Gulf Villages but the canoes themselves can be seen as part of their historic culture. As a symbol of the local culture the *lagatoi* give the visual impact of the homecoming of the *hiri* travellers after their long voyages to the Gulf to obtain sago for the hungry times of the year.

Every year, the people of Port Moresby have celebrated their culture, with the Hiri Moale Festival coinciding with the Independence Day celebrations. It features traditional dances, the Hiri Queen Contest (a beauty pageant), the arrival of the *lagatoi*, canoe racing, musical presentations, and an arts and crafts exhibition.

Motu trading partners of the Gulf area are encouraged to take part in the celebrations. In 1993, three *lagatoi* were commissioned from different villages: two from Manumanu and Boera Villages in the Port Moresby area and one from Meii Village in the Erema area of the Gulf Province. It was built near the river at Meii village in the Gulf and launched in August 1993. Called *Kevaubada*, it was supposed to arrive in Port Moresby in the middle of September in time to sail to Ela Beach with the other two *lagatoi*. However, bad weather prevented the *lagatoi* from leaving for days. Then Captain Tube, of the Steamships tug boat *Ok Tarim* went to Erema and after a few false starts eventually managed to tow the *Kevaubada* into Ela Beach just in time to catch up with the other two *lagatoi*. The crowd cheered happily, aware of the dangers the crew had faced (Douglas, 1994: 25)

In September 1994**,** three *lagatoi* were launched as part of the Independence Day celebrations and attracted many tourists, parliamentarians, and foreign diplomats. The building of the *lagatoi* was a project initiated by the National Capital District and given to different villages before Independence Day There was something magical about this re-enactment of the traditional *hiri* welcoming ceremony. The celebrations began in the morning when thousands of people excitedly gathered on Ela Beach to watch the three *lagatoi,* with their large crab claw sails, come towards us. On the beach, Papuan women with long grass skirts swirling waited to welcome the men. As they approached, the roar of the crowd expressed delight in the colour and the pageantry of the occasion. Later the celebrations of the Hiri Moale Festival continued at the Hubert Murray Stadium (The Times, 15 September, 1994).

Three lagatoi *arrive at Ela Beach, 1994.*

Vabukori Village built a *lagatoi* in 1994

The Vabukori village elder, Rabura Aiga, was very proud and excited to have been chosen to build the *lagatoi* in 1994, because the last time they had built a *lagatoi* was in 1935. It wasn't easy because the materials for it were difficult to find. Once they had these materials it took three months to build the large vessel which he described as being as big as a house. It was 20 metres in length and could carry many people. "People build their houses on the *lagatoi* to store their trading goods as well as to cook and sleep in during the journey to Kerema for trading and back."

Rabura Aiga said that Vabukori Village had close ties with the Kerema people of the Gulf going back hundreds of years. They have not forgotten the help received from their Kerema friends who still come to visit them and celebrate their friendship. Some of these Kerema people moved to Port Moresby to live with their old trade friends and their children still live on these lands at Vabukori, Kaugere, Kila Kila and Horse Camp (Douglas, 1994).

Traditionally there were three names to choose from for a *lagatoi*: *Bogebada*, *Oalabada* and *Kevaubada*, except in the case of the village of Vabukori which uses *Vaigabada*, *Moubada* or *Buabada* (Seligmann 1910: 104). In 1994 the Vabukori *lagatoi*, following tradition was called *Buabada*.

However, not everyone was happy. The Times of 15 September 1994 reported a Moveave Elder opposed the Gulf presentation at the Moale Festival saying that, "We do not want our cultural heritage and customs manipulated to suit outsiders." Mr. Haiveta Erekofa added "Much of what is projected at the Hiri Moale Festival is a distorted version of what was the *hiri* trade." Moreover it is said that the beauty contest is taking over from the *lagatoi* arrival and the dancing (Douglas, 1994).

In that same year Mataio Taboro, Chairman of the Hiri Moale Festival Committee made some interesting comments about the Festival which that year coincided with the *Year of the Family.* He described how his ancestors braved the bad seas and strong winds while travelling to the Gulf to get sago "in order to feed our forefathers and mothers. We (the Motu Koitabuans) are the results of this brave people's struggles in order for us to survive. It was truly the period of *Survival of the Fittest*. I, on behalf of the Motu Koitabu Council, ask each and everyone of you to salute our forefathers and mothers for making this time and age a fruitful and plentiful one for our well being" (Douglas, 1994).

Liquid Natural Gas project in Port Moresby

Many industries have been developed in Port Moresby and in the Madang area but here only two of them will be mentioned: the LNG project in Port Moresby and the Ramu Nickel mine in Madang. In the Port Moresby area, thousands of landowners from a variety of groups are set to profit from the LNG project, which will pump gas "starting in 2014 from Southern Highlands Province to the plant site near Port Moresby 600km away, before shipping it to mainly Asian buyers for an estimated 30 years. Landowners spent weeks cutting a deal with the Papua New Guinea government, but some parties believe they missed out or were excluded from the talks" (Sydney Morning Herald, February 2010).

Porebada, Boera, Papa, and Lealea Villages which are adjacent to the project have lost some of their land. In the initial stages there was a dispute between Porebada and Boera Villages which sounded like a re-play of a very old dispute in 1870. That year Captain Barton said the Porebada men were fishing near Boera when the latter insulted them. An argument developed and the Boera using sticks attacked the Porebada men and war was declared. That was one hundred and forty years ago, so there was a long history of disputes between them. Only this time, in 2010, it was not sticks that were used but guns. The LNG said this dispute had nothing to do with them but it did affect progress for some time.

According to the Sydney Morning Herald:

> The clash was between two rival coastal villages near Port Moresby in an area where ExxonMobil is to build a plant to liquefy, store and load gas for shipment overseas. The incident has forced the shutdown of road building works being undertaken by Curtain Bros, an Australian construction firm, to the planned plant site. The fight erupted on Saturday afternoon after drunken Boera village youths threw stones at Porebada villagers as they were gardening in the area, half an hour's drive west from Port Moresby. Porebada villagers went to Boera village later that day to resolve the dispute, but four of them were shot dead. P.N.G's National newspaper reported the fight was linked to ongoing tensions regarding land ownership and LNG leases. Porebada clansmen vowed to close down the nearby LNG-related activities until the dispute was settled (February, 2010).

Excavations by the LNG Company began to uncover many ancient artefacts and soon a team of archaeologists unearthed the Lapita pottery finds. The Environment Impact Assessment document (2009) reported: "The most extensive archaeological site within the LNG Facility near the security fence contained pottery, stone artefacts and shell middens material." It was these mining explorations that led to the discovery of the Lapita pottery in the Caution Bay area. So we have an excavation for modern industrial needs, uncovering relics and information about past history of the Papuan people. Until this Lapita pottery was unearthed, archaeologists had found few sherds of Lapita pottery on mainland Papua New Guinea. David and McNiven say of their finds in Caution Bay "we present new evidence that Lapita peoples did in fact travel southwest-ward along the southern New Guinea coast and establish settlements close to the present city of Port Moresby (2011: 577).

The Ramu nickel mine in the Madang Province.

In the Madang area, the Ramu nickel ore body was first discovered by the Australian Bureau of Mineral Resources in 1962 and investigations proved reserves of 143 million tonnes of ore. Highlands Pacific became involved in 1997 after acquiring a stake in the original company. In 2004, a deal was negotiated with the Chinese government and the state-owned Chinese Metallurgical Construction Company to establish the K2b Ramu Nickel Project. The Chinese want the nickel as part of their requirements for their vast steel production. There will be a two-year construction period before mining commences and, at a rate of 232,000 tonnes of ore per year, the mine life is expected to be 40 years.

Opposition to the proposed nickel mine came from the churches, university experts, international environmental experts and even some Papua New Guinea government agencies such as the National Fisheries Authority. The latter feared contamination of Astrolabe Bay waters, which were described as the pristine Vitiaz Basin. They added that it might affect the tuna fishing industry in Madang Harbour, which was the biggest in Papua New Guinea. Despite the opposition, the Papua New Guinea Government was satisfied with the Environmental Plan presented. By 2005, many of the local landowners in the Ramu Valley approved of the mine as they could see the financial benefits of such a project. However concerns have been raised amongst village people downstream of pollution from the mining operation, and along the coast villagers where mine wastes are dumped, there is the risk of unknown toxins in the seawater. The risks to the flora and fauna in Astrolabe Bay cannot be accurately predicted.

This Ramu Nickel Mine is located on the Rai Coast in Astrolabe Bay where Bel sailors once traded their pots. Now the mine harvests ore from deep within the earth's surface at a price well beyond what those traditional traders ever dreamt of. This local product could be the basis of the future development of the Madang Province.

An old Rai Coast man warned that the cargo mentality may even be reborn in the aftermath of the mine if people expect large amounts of material goods to appear, without any effort on their part: "We had the first church, mission school and station in 1886 and we were the first to see white man and other happenings recorded in the history of Papua New Guinea. On the Rai Coast, there is not much but we have a history of cargo cults, too, to preserve our environment and hope for goods and services to come from the sky or from our ancestors."

Ancestors were important to the Bel group as they provided them with identity and behavioural norms from previous generations. Ancestors were thought to be actively present in the village life and the people maintain the good life by keeping appropriate relationships with people whether alive or dead. Considering the changes that have taken place in Madang in all areas of society, politics, economics and spiritual dimensions, the ancestors of the Bel people would be justly proud of their descendants who have adapted well and continue to value their common ancestry, traditions and culture of their past which they will pass on to future generations.

Spectacular *lagatoi* launch Pacific Feast, in Townsville 1995.

So ran a headline in the Townsville bulletin on 14 August 1995. It was VP50 day and part of *Australia Remembers* Celebrations 1945 – 1995: fifty years since the end of the Pacific War. As part of the celebrations, two *lagatoi* sailed into the Townsville Strand area on Sunday, 13 August 1995. Months before, the Mayor of Townsville, Tony Mooney, had approached the Port Moresby City Council with the idea that two traditional *lagatoi* be built on Magnetic Island to be sailed into the Strand on the day of the celebrations. It would be in recognition of the help the Papuans had given to the Australian troops, especially in carrying out the wounded during the war in Papua New Guinea particularly on the Kokoda Trail when these Papuan villages had helped the Australian soldiers.

Pari women dance around their lagatoi*, 1995.*

Many celebrations were held in Australia in 1995 for the fifty year jubilee to honour and remember those who served Australia during World War II. There were marches in every capital city in Australia. During an *Australia Remembers* function, Prime Minister Paul Keating gave a speech on 14 August at Townsville recognizing the vital link that Townsville had in the chain of Australia's northern defence in Papua New Guinea. He mentioned that, during the war, Townsville was a major embarkation point for troops and supplies to Papua New Guinea against the Japanese invaders. It was also noted that without the help of the Papuan villagers, victory on the Kokoda Trail would have been difficult.

In Townsville, celebrations were centred on Anzac Park on the Townsville Strand Foreshore where there are memorials to the fallen of many battles including the Great War and the Battle of the Coral Sea. The most recent was the Porton Memorial - unveiled during the VP50 celebrations to honour the soldiers who died or were wounded during the assault landing at Porton, North Bougainville. The Mayor of Townsville mentioned the significance of the VP50 celebrations for Townsville describing them as "a triumph of that spirit which gained national recognition when Townsville was named Community of the Year by the national Australia Day Council" (1995, Annual Report of the Townsville City Council).

Significance of the Nelly Bay project August 1995

Port Moresby and Townsville are sister cities dating back to 1983. Since that time, significant economic development has occurred between the two centres with some $500 million in two-way trade now flowing between them. This was one of the reasons for organising the two *lagatoi* to sail into the strand at Townsville for the VP50 celebrations. The *lagatoi* were a gift from the Port Moresby City Council as a reminder of the close connection between Australia and New Guinea both during the war and since then.

In July 1995, the material for the two *lagatoi,* including the hulls, was shipped down to Townsville, in July ready to be joined together to form the 'raft' base of the *lagatoi*. On 18 July 1995, the Townsville Bulletin carried a photograph of Jeff Ogomeni, the PNG liaison and Biri Guba, a craftsman with a canoe hull to be used on the base of the *lagatoi*.

While at Nelly Bay, Mataio Taboro told me:

> We are very proud to share our ideas for development and integrity. When the Lord Mayor asked us to come he wanted us to add colour to his celebrations. Normally this is kept to family celebrations. Some things you have heard we have never shared before. *Lagatoi* are done to honour men's ability to support his family. The trade in Port Moresby originated many generations ago. The *lagatoi* came about because of one man, Edai Siabo who was trapped in a cave and learned about the *hiri* trade. It has continued for centuries. Only the Motu people traded in the *lagatoi* then the Koita joined with us to

> get the trade items. Now is the first time that the Motuan tribe has brought the *lagatoi* to the Australian tribe. It has been cold down here and we do not have betel nut but it has been a good experience. Each clan has its own style. The Lealea canoe has small decorations which make a difference. We are teaching the next generation, but *lagatoi* are built now only for special occasions - the dancing and singing have been maintained over the years.
>
> I think some of the young people are pretending to be interested. I have just left the City Council where I have been for 17 years. It takes a long time to cut a tree down and hollow it. There is a lot of fasting to prepare for the journey. We have to stay away from our wives and face the seas. People want to revive the culture and use it for commercial purposes - corporate bodies have been supporting the council so now we have *lagatoi* everywhere. This is bad unless we can modify the canoes for the present generation. These things have died and the only way we can revive them is to reverse 100 years to the way it used to be. We have finished [making these two *lagatoi*] now and we are asking the winds to take us to Townsville. The women are arriving on Wednesday to do the welcome on the Strand and the *lagatoi* will sail with the girls who will dance. When it is finished we will be free to shop etc. Their families compare it with the commercial life today - we cannot go to get the sago again. (Interview Mennis, 7 August 1995).

Another Papuan mentioned the importance of singing when trading. "When the men are out they sing. It is part of their relationship with the sea. We will sing and dance when we touch the Strand." To set the scene on the Strand, Motu villages, Vabukori and Gidobada had constructed two small houses to welcome the sailors from Magnetic Island and the girls in their long grass skirts whirled to the beat of the bamboo drums. (Townsville Bulletin, August 1995).

The Pari and Lealea lagatoi *arrive at the Strand in Townsville, August 1995.*

Ten postgraduate students from James Cook University studied these two *lagatoi* while they were being built at Nelly Bay. It was my task to interview the craftsmen about the history of trading and the myths of the *hiri*. This enabled me to learn about the background of these beautiful craft as items of material culture set in the village culture. Keith Tapp and Megan Croese were set the task of studying the construction of the *lagatoi* and illustrated the steps. I was able to see part of the construction, the making of the sails and the attachment of the mast to the *lagatoi*. I was also shown its construction on several occasions. This enabled me to contrast the construction and materials used with that of the *lalong* canoe in Madang. Of course there were some lighter moments. One interviewee looked over the shoulder of one of the students and said "Oh we are up to question twenty and have five more to go."

When we arrived at Nelly Bay on 5 August 1995, the two *lagatoi* were nearly completed after work over the previous weeks, although I would have preferred to have seen the step by step construction as I had of the *lalong* in Madang. Seeing the two *lagatoi* sail into the Strand made us aware of how privileged we had been to be welcomed by these Motuan experts, many of whom had sailed in similar *lagatoi* all the way to the Gulf in their younger days and were happy to share their experiences with us. Nearly 150 Papua New Guinea Nationals took part in the ceremony with dancing on the strand. As well there were forty people in each *lagatoi* sailing from Magnetic Island to the Tobruk Memorial Pool on the strand.

On the following day, a headline in the Townsville Bulletin read:

History comes to life as *lagatoi* land on our Strand

> The first *lagatoi* landing outside Papua New Guinea almost didn't happen yesterday [Sunday 13 August] because of adverse weather conditions. Winds of up to 30 knots prompted discussion about postponing the event, but the Papua New Guinea craftsmen who built the two *lagatoi* insisted it go ahead. However, the *lagatoi* did not sail from Magnetic Island to the Strand as planned. Instead they were towed to the breakwater and sailed the remaining short distance to the southern end of The Strand. VP 50 executive coordinator John Aitken confirmed there had been rumours about the event being postponed. But he said that would only have happened if the safety of the boat builders was under threat. "The decision to go ahead was ultimately the decision of the skippers," he said. "We consulted the water police and the boating patrol and they helped in the decision making process. But the craftsmen were very confident all along. They've seen worse conditions than that and they wanted to see the landing happen" (Townsville Bulletin, 14 August 1995: 1).

I was on the Strand the morning when the two *lagatoi* sailed in through the breakers. There was great excitement amongst the large crowd. The sails of the *Kevaubada* of Lealea with the crab claw were outlined against the sky. The sails were different in design with the *Kevaubada* not meeting at the top. The *Oalabada* sails had colourful tassels to help indicate wind direction like the telltales of the *lalong* in Madang. The *pepe* decoration on each canoe has a different length and was one of the identification marks. The *pepe* of the Lealea canoe was the longest and fluttered down touching the water.

The crewmen wore bright red laplaps and beat their drums and the girls had their long skirts whirling in the breeze under their feathered headdresses as they stood on top of the shelters on either end of the *lagatoi*. The Pari canoe had their sails crab claw caught at the top in the Pari distinct style and the name *Oalabada* painted across them. The Pari canoe had a spy man platform beside the top of the sail and a man was up there that morning hanging on in the strong wind. These were the people who had so patiently answered our questions over the past ten days or so. The crew beat their bamboo drums as they stood proudly on the roof of the shelters as the two *lagatoi* sailed together over the breakwater. The Lealea canoe was also decked with bunting with its name *Kevaubada* on one of the sails. The crab claw style sails were in the traditional matting material and design.

There was no doubt that the *lagatoi* would come to the Strand that day. Having listened to the people's stories of long ago when the oldest of them had braved terrible weather on the way to the Gulf, I knew a few wind gusts would not deter them especially as they did not want to disappoint the spectators. But they were not foolhardy and accepted the help of the patrol boats which towed them across the bay. The way these Motuans came down to Townsville and worked on the *lagatoi* was quite unique. Many had not been out of Papua New Guinea before and it is something they will remember all their lives and be talked about down through the generations.

We should be aware that, just as the informants told us stories about the myths and of their own experiences; they will now be telling the stories of Nelly Bay as if it were a modern legend. We, as a group, might also feature in these stories. Just as Edai Siabo taught his Boera people how to make a *lagatoi* so did the Pari and Lealea villagers teach us about their two *lagatoi*. We learnt about their methods of construction; of the decorations on the *lagatoi*; of the history, myths and legends of the *hiri*; of their way of sailing; and of the function of the crew. Their knowledge was important to us and we showed them that people in Australia are interested in their customs, myths and legends. The legend of Nelly Bay may become quite well known when it is told and re-told around the fires at night back in Papua New Guinea.

Sailing into the Future – Revival of canoes

The Madang Festival 2013:

The Madang Show replaced the Maborasa Festival in 2012 and the following year the Festival was held in September to coincide with the Independence Celebrations. According to the Post Courier article, the Madang Show attracted a large amount of funding from the government and Siegfried Beschel, who headed the show committee, said with this generous funding they would "strive to ensure the event was a spectacular and memorable one" (Post Courier, September, 2013).

Spirit of Balangut*, Bilbil Village, 2014.* Sir Peter Barter.

Earlier in the year, the Governor of Madang, Jim Kas, asked the Bilbil men to build a large canoe for the festival and they were happy to comply. After my book, *Mariners of Madang*, was published by Queensland University in 2011, I sent copies to the Governor and to the Bilbil Village people. Now they had a copy of the knowledge from their grandfathers, all now deceased, because the manual details the process the old mariners used to build the *lalong* in 1978. The men went to the bush as their forefathers had done to collect the materials, hulled a log, built up the sides, and put a large potcage across to the outrigger. Then they built the shelters and added two masts to carry thee mat sails. It took months of hard work but they were happy with the result: a splendid canoe, named the *Spirit of Balangut*.

That September, the *Spirit of Balangut* sailed towards Bilbil Village, with its colourful bunting tied to the mast stays and painted sides and prow. Miklouho-Maclay had described a similar canoe built by their ancestors in 1871. "On the canoe there stood a whole little house -- in which there were six or seven natives, protected by a roof from the hot rays of the sun. There were two masts, one of which was inclined forward and the other backwards" (Sentinella, 1975: 40). In September 2013, the men on board the new *balangut* were descendants of those men, now carrying out the same manoeuvers as their forebears had done. This was the first *balangut* canoe built since the 1940s. However, it is noted that that two masts were not as far off the vertical as in earlier descriptions and illustrations.

As it approached the shore, the spectators were amazed at its colour, size and colourful appearances. Designs were painted along its side and prow just like in traditional times. The ten men on board wore *mal* and the *bulra* chest ornaments and blew on conch shells as they approached the village. On shore some men beat the *kundu* drums and dancing girls swayed to the beat in their grass skirts, beaded necklaces and feathered headdress Excitement grew at the sight of this canoe of their past culture. The Governor of Madang welcomed everyone to the launching of the *balangut* and thanked the people of Bilbil Village for building another canoe, the first for 34 years "We must keep up this knowledge now and pass on the culture to our children" (Post Courier, Rosalyn Albaniel-Evara, 2013).

Siegfried Beschel, the coordinator, thanked the Madang government and its leaders for the support, in making the event so spectacular and memorable. Siegfried also extended his thanks and appreciation to the people of Bilbil for their enthusiasm and commitment in getting the *balangut* built and launched in such a short time for the festival. It was worth all the preparations to re-enact those days and get a feeling for the old culture. Colourful ribbons crossed the path to the *balangut* canoe and Jim Kas cut the ribbons and as he and the officials made their way to the canoe water was splashed over them in the traditional way of opening the door or *opim dua* of the canoe.

The balangut *showing the outrigger side.* Sir Peter Barter.

According to the Post Courier article, "The canoe was built with funding from the Madang Show committee and launched to set the pace for this upcoming event which is expected to draw thousands. Mr Kas, even the Governor General, Sir Michael Ogio, who had been approached to be the guest at the event, has since accepted."

Hiri Moale in Port Moresby 2012 - 2013

Every year the *Hiri Moale* Festival still takes place at Ela Beach at the time of Independence. The Festival is a celebration of the traditional times when the Motu/Koitabu people travelled west in *lagatoi* to trade pots for sago with the people of Kerema and other Gulf places. The stories of these voyages undertaken by their ancestors are considered very significant, and young people today like to watch the *lagatoi* arrive at Ela Beach greeted by the dancing girls in their grass skirts and the beating of the drums. Yes, the pageantry of the moment continues. The festival also features traditional dances, the Hiri Queen Hiri Hanenamo Contest, canoe racing, musical presentations, and an arts and crafts exhibition. Each year the winner of the Hiri Hanenamo is given a trip to Townsville. The connections with the two sister cities, Townsville and Port Moresby continue.

In 2012

In 2012 the NCDC withdrew its usual K500,500 support for the Hiri Moale Festival and so the Motu-Koita Assembly had to exclude some events. However, it still included the arrival of the *lagatoi*, the Hiri Queen pageant, canoe racing, and traditional sing-sings and dancing.

There was an interesting documentary, *A Girl's Life, Papua New Guinea* of Rhonda Tiana, a young woman who took part in a Hiri Moale Hanenamo contest in 2012. The story followed her to her village where she helped her mother gather tapioca from the garden for the market and showed her fishing in a small double-hulled canoe off shore. She had attended primary and high school and prepared for the contest by learning about her culture: the history of the *lagatoi*; the *hiri*; the tattoos and their significance; the clay pots that the women used to make; the dancing and the rejoicing when the men returned from the *hiri* voyages; also the decorations the girls wore when they danced. She mentioned the special tattoos and leg ornament she could wear if her father had been the captain of a *hiri* expedition. She made her grass skirts from wild grasses which had to be boiled and then laid out in the sun to dry. It was important to layer several skirts at once so they swayed nicely in the breeze. It is an uplifting story of the positive attitude this young girl has towards her people's culture and the future of her country, Papua New Guinea.

The story also covered the *lagatoi* being built at Lealea village. It had two masts and the other, from Kappa Kappa, village had just one mast. It was now up to the young men to hull the canoes because the old expert canoes builders had all passed away. Each of the twelve Motu/Koita villages chose one girl as their contestant for the Hiri Hanenamo Queen contest and the *lagatoi* sailed from village to village to pick up these girls. As the *lagatoi* approached, a crowd on the beach called out the name of the *lagatoi.* Then the chosen girl climbed on board and the canoe sailed on to the next village to pick up more of the girls before sailing into Ela Beach. It was a magical time for Rhonda with the beating of the drums ad the swirling of all the girls' skirts as they stood on the deck and the shelters of the *lagatoi.*

The Hiri Hanenamo is a major event of the Hiri Moale Festival. It is not a beauty contest in the modern sense but "based on an ancient Hiri tradition whereby the daughters of the *baditauna* had to stay inside while their fathers were away on a *hiri*." They were not allowed to wash or cut their hair, but had to sit with their mothers beside the fire eating only food like tapioca, bananas and root food and having the tattoos done on their skin. Over the months of the *hiri* absence the girls' skin became very fair from being out of the sun and showed off their new tattoos when they were led outside to welcome the men home. Now they could wash and adorn themselves with shell necklaces and wear new grass skirts. Happy in the knowledge that their sacrifices had helped to make the *hiri* a success (Douglas, 1994:33). This no longer happens, of course.

Before the judging of the Hiri Hanenamo contest, all the contestants lined up on Ela Beach to dance and welcome the *lagatoi* as it arrived. There was also a crowd of spectators, tourists, dancers and government authorities there to greet the *lagatoi*. The men, dressed in their bight laplaps and feathered headdresses, beat their drums and step in time on the sands of the beach. As the *lagatoi* neared the beach the girls on board, stood on the deck and the roof of the two shelters with their feathered headdresses fluttering in the wind as they swirled their skirts in time of the beating of the drums. They are all reliving the days when their ancestors went ***Sailing for Survival.***

Four Motu/Koitapu girls on Ela Beach for a Hiri Moale Festival.

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Glossary

Tok pisin (TP); Motu (M); and Bel (B)

Adiu axe for hulling *lagatoi.* (M).
Ageva Motu beads made from *spondylus* shell discs. (M).
Alassi Mangrove sticks on the platform. (M).
Anut Bel ancestral spirit. Some said *Anut* was their name for God. (B).
Atat T shaped stanchion to support the platform on *lalong. (B)*.
Au Mangrove. (M).
Autubua Mast. (M).

Badi Tree root. (M).
Baditauna owner of the *lagatoi.* (M).
Bai planks or strakes tied to the *tilau* of the canoe. (B).
Balangut two-mast trading canoe used on the *waing*. (B).
Bara paddles. (M)
Bel stomach, spirit of unity. (TP).
Bevaia Gulf canoes. (M).
Bilas decoration especially for *singsings*. (TP).
Bilum netbag used by the women. (TP).
Biris stars the Pleiades or seven sister cluster of stars. (B).
Bodi pots. (B).
Bogebada name of a *lagatoi.*
Boi morning star. (B).
Brus tobacco. (TP).
Buai betelnut, fruit of the *Areca catechu*. (TP).
Bulra chest ornament made up of pigs' tusks. (B).

Dadau the northwest wind. (B).
Dadeng market day for selling pots. Sailing to sell pots. (B).
Daig a *singsing* that was bought as a trade item. (B).
Daiva a short trading trip. (M).
Damdam breakwater at front of the canoe. (B).
Darem men's house; house *tambaran* where the *meziab* took place. (B).
Dim putty putty made by scraping the bark of the dim tree. (B).
Dim sol tool made from a pig's bone for inserting putty into the cracks. (B).
Dinau a debt or obligation, delayed payment. (TP).
Doa Necklace with pigs' tusks. (M).
Dodomo dogs' teeth necklace. (M).
Dom the wooden connectives joining the crossbeams to the float. (B).
Dolo yawarti name for a wind. (B).

Ese Platform. (M).

Gagaren the pot cage on the canoe. (B).
Garabud Leaves used to make the sail. (B).
Garamut large drum, slit gong. (TP).
Gau one type of canoe tree. (B).
Gimagim the boards for the crew to walk on. (B).
Gorgor a type of ginger (*Alpinia*) whose roots are used in sorcery. (TP).
Gorugoru largest bundle of sago. (M).
Guhi Shelter, (M).
Gungun posts used to support the shelter on the canoe. (B).

Haus boi men's ceremonial house. (TP).
Haus win garden house to catch the breeze. (TP).

Helage	sacred or holy. (M).
Hiri	the voyages taken by the Motu to the Gulf of Papua. (M).
Hodu	water pot. (M).
Iduhi	descent among the Motu. (M).
Ilava	Mangrove strut. (M).
Irutahuna	place between the *lagatoi* masts. (M).
Kadal tamol	a sorcerer, a magician. (B)
Kae	tally sticks in pots in the Gulf (M)
Kairgat	the kina shells used the scrap the *dim* putty.(B).
Kalagi	shelters built in the Gulf. (M)
Kambung	lime chewed with betelnut to give the red colouring. (TP).
Kangal	feathers. (TP).
Karag	angry man or fierce south-east wind. (B).
Kevaubada	name of a *lagatoi* means a rainbow.
Kilibob	brother of Manup. The two brothers were creator beings. (B).
Kina	large shell; also money. (TP).
Kino kino	instrument to steer by the stars. (M).
Kognac	intoxicating drink made from fermented fruit. (TP).
Kris	a Malaysian dagger or sword.
Kula ring	trade cycle in the Trobriand Islands.
Kulau	green coconut used for the juice. (TP).
Kundu	hand-held drum. (TP).
Kunda	strong vine. (TP).
Kunum	mortar used with pestle to grind food. (B).
Lagatoi	large canoe, used by the Motu people in the Hiri trade by the Motu people. (M).
Lahara	north-west wind. (M).
Lalong	one-mast canoe used on the *waing*. (B).
Lapita	a type of pottery.
Lapun	old person. (TP).
Laurabada	south-east wind. (M).
Leta	Coconut tree. (M).
Likon	weather man who used magic over the wind and seas. (B).
Limbum	flattened out bark of a palm tree. (TP).
Lo	law, custom, rule. (TP).
Luluai	Village or tribal chief appointed by the government. (TP).
Mabud	*a liana* vine used for lashing. (B).
Mal	a bark loin covering, traditional clothing for men. (B).
Manup	Kilibob's brother. (B).
Mairi	Motu pearl-shell ornaments. (M).
Masalai	spirits thought to inhabit streams, trees. Some are good and others evil. (TP).
Mawarden	compartment on the outrigger side of the canoe. (B).
Meziab	the ancestor spirits which were called up in the *darem*. (B).
Mirigini	wind on the south coast. (M).
Moga	exchange ceremony in the Highlands.
Morata	thatch for the house made from sago palm leaves. (TP).
Muruk	cassowary, large flightless bird. (TP).
Nai	short skirt. (B).
Nau	shallow dish. (M).
no	small pugnacious fish. (B).
nomu	water pot with two openings. (B).
Nuru	leaves for the sail. (M).

Oalabada	name of a *lagatoi*.
Opim dua	ceremony. (TP).
Palai	Sail. (M).
Pangal	the stalk of the sago palm. (TP).
Panudaimon	clan. (B).
Pati	stone. (B).
Pei	side of the compartment on a canoe. (B).
Pepe	decoration on *lagatoi* mast. (M).
Piriar	mast. (B).
Puarang	support for the mast. (B).
Purpur	grass skirt. (TP).
Puapua	small canoe. (M).
Saksak	sago palm. (TP).
Sam	float or outrigger. (TP).
Sinasin	the moon sign used as part of a totem. (B).
Soabul	dance given by a man to obtain power and prestige. (M).
Tabuna	ancestor. (TP).
Taitai	seeds. (M).
Tapa	material made from bark. (TP).
Tautau	shell ornaments. (M).
Toea	armshell. (M).
Talio	wind. (TP).
Tamol	man in the Astrolabe Bay villages. (B).
Tanget	leaf used especially for magic. (TP).
Teteb	nautilus shell. (B).
Tibud	spirits of the ancestors. (TP).
Tilau	elbow joint used to support the upper canoe. (B).
Thon	bullroarer used in *meziab* ritual.(B).
Ubene	fishing net. (B).
Ulum	rudder. (B).
Uro	cooking pot. (M).
Vagani	Canoe. (M).
Vang	also called wag, means a canoe. Maclay called the canoes vang. (B).
Waing	to go sailing on a trading trip. (B).
Waremer	poisonous vine used to stun fish. (B).
Yand	crossbeams or booms to the outrigger.(B).
Yawarti	also know as the *talio* northwest wind or that season.(B).
Yoyou	the little house found on the *lalong and balangut*. (B).

Notes on Index:

Names:

European names are indexed surname first then given initial.

Papua New Guinea names are indexed given name first then surname/adopted family name.

There is a problem with the word for a *Hiri* canoe. Modern practice seems to use *lagatoi* while *lakatoi* seemed to be used in the past. In the text, the modern *lagatoi* has been used, but the older version was maintained for quoted text. Both *lagatoi* and *lakatoi* are noted in the index.

This is somewhat similar to *palangut* and *balangut*, although the latter has been used in this book.

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