

The Subsistence Economy of the Kiwai-speaking People of the Southwest Coast of Papua New Guinea

David Lawrence, Torres Strait Baseline Study
Great Barrier Reef Marine Park Authority

Abstract

The Coastal Kiwai-speaking people of the southwest coast of Papua New Guinea live on a narrow strip of sandy foreshore between the sea and the coastal swamps and savannah lands of the coastal plain. The Kiwai have limited access to good gardening lands but have unrestricted access to the waters of the Torres Strait. For this reason they have remained predominantly subsistence fishermen.

Linguistic evidence indicates that the Kiwai may have migrated down the Fly River and settled in the Fly estuary region. Oral history states that the Kiwai originated from a central area on Kiwai Island and moved out from there. Villages were later established on the northern and eastern banks of the Fly estuary. Later people moved along the southwest coast as far as Mabudawan village. These movements follow the legendary travels of Sido, whose adventures form the principal origin myth of the Kiwai-speaking people.

Oral history, particularly the stories of Bidedu, Gamea and Kuke, also state that the Kiwai were taught fishing and hunting skills by the Torres Strait Islanders and that the methods for planking the sides of canoe hulls and for converting canoes into large double outrigger canoes were taught to them by the Saibai Islanders.

The coastal Kiwai established themselves as trading people who were able to exploit the customary exchange system which had been established by the Torres Strait Islanders and the people who lived inland from the coast. Ecological disadvantages have motivated them to adopt the outrigger canoe to their advantage and they have been able to manipulate exchange by their eventual dominance of maritime and fishing technology.

Dependence on subsistence, and limited commercial fishing activity, also means that the Kiwai are economically and culturally vulnerable to any adverse changes to the marine environment. With limited access to government support, and living in one of the least developed parts of Papua New Guinea their future depends on maintenance of the quality of both the fish they catch and the reefs upon which they fish.

Description

In contrast to the other parts of Papua New Guinea, most of the Western Province is a vast lowland region with mountains only in the north and north-west. The longest river in Papua New Guinea, the Fly River, and the largest lake, Lake Murray, are in this Province. The Fly River effectively divides the Province in two. South of the Fly River is the Oriomo Plateau, a generally featureless undulating ridge bordered in the north by the lower Fly River and in the south by a narrow coastal plain, the most prominent feature of which is the hill at Mabudawan which rises to a height of only 59 metres above sea level. This narrow plain is intersected by widely spaced, slow moving, muddy rivers such as the Oriomo, the Binaturi and the Pahoturi, as well as the Morehead and the Bensbach Rivers to the west. The coastal plain is subject to seasonal flooding and the shallow inshore waters are also muddy, with numerous reefs, mudbanks and shifting sandbars. The coastal region of the Western Province is a zone of low muddy shores, often mangrove-covered, and fringed with littoral woodlands interspersed with patches of coconut trees, gardens and small villages (Figures 1 and 2).

The coastal plain is, in places, only about three kilometres wide, and only three metres above sea level. Along the plain, from Parama Island to the tidal inlets of Mai Kussa and Wassi Kussa, are the villages of the Kiwai, Gidra, Bine, Gizra and Agob-speaking peoples. These peoples combine swidden horticulture with gathering bush foods, sago making, hunting and fishing. The soils of the Oriomo Plateau and the narrow coastal plain are mostly poorly drained clay soils. However, some good gardening soil exists behind the narrow beach ridges and inland from the coast along rivers and swamps.

Language

Dialects of the coastal Kiwai language are spoken in the villages of Mabudawan, Mawatta, Tureture, Kadawa, Katatai and Parama; Gidra is spoken in the coastal village of Dorogori; Bine is spoken at Masingara and Kunini; Gidra at Waidoro and Kulalai; and Agob at Buji, Ber and Sigabaduru. The most commonly spoken language on the island of Daru, the administrative centre of the Western Province, is also Kiwai as many of the people from coastal Kiwai villages have established communities, known as 'corners', on Daru.

The Kiwai family of languages consists of approximately seven distinct languages with 15 different dialects. The Kiwai-speaking people live on the coastal, near-coastal and insular areas of the Western Province extending from Mabudawan across the islands of the Fly estuary as far as the eastern bank of Era Bay. According to linguists (Wurm 1973:252 -255) the Kiwai languages show strong links with the languages located in the upper Fly River headwaters.

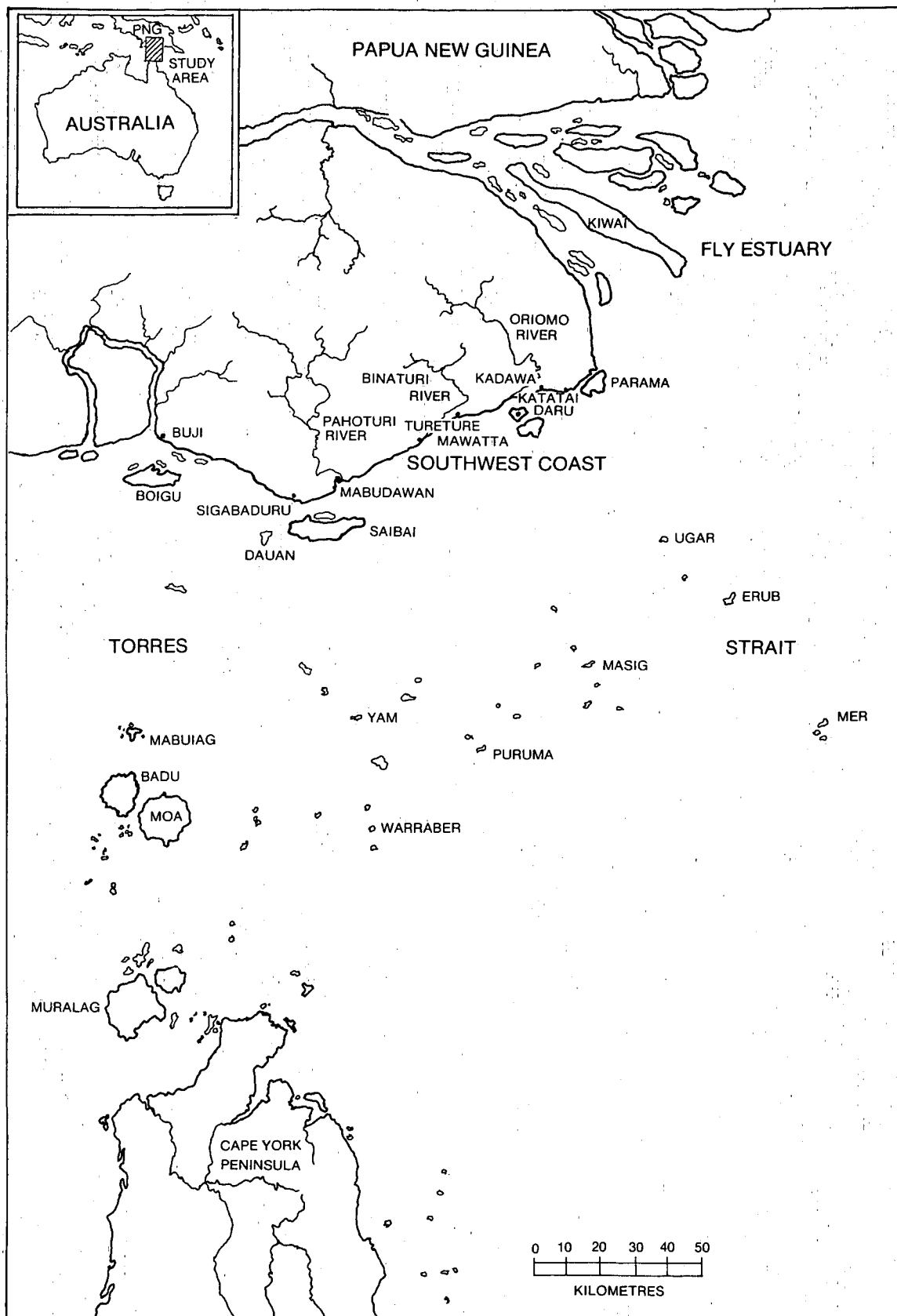


Figure 1. Torres Strait, Southwest Coast and Fly Estuary Region

This suggests that the original Kiwai speakers travelled down the Fly River in a series of migrations. They then moved from the estuary region east and north to the Bamu and south to the coastal lands bordering the Torres Strait. These coastal migrations have been tentatively dated to about 3000 to 4000 years ago (Wurm 1973: 255). This southward Papuan linguistic influence, supported by oral evidence for the movements of the Kiwai people along the coast and into the Torres Strait region, commenced with the journeys of the culture heroes and ancestors such as told in the legend of Sido, the principal origin myth of the Kiwai people, and continues with the travels and adventures of village leaders and the people themselves.

Oral History

In small-scale societies without a written history the traditions of migrations and village movements are important to people's heritage. This knowledge is transmitted through the generations in legend, song and dance and constitutes the basis of legal, political, social and economic relations. On the basis of these myths and legends the rights and obligations of lineages are defined, and access to and the use of specific resources and territories are defended. To a people who are basically subsistence fishermen, these also include sea territories.

The oral accounts of the coastal Kiwai, particularly the stories of the adventures of important ancestor heroes such as Bidedu, Gamea and Kuke, document the movements of the Kiwai people from the Fly estuary along the southwest coast. As they went along the coast, the Kiwai obtained knowledge of gardening from the people of the bush and learnt the techniques for hunting dugong and turtle, fishing and adapting canoes from the Torres Strait Islanders. According to oral accounts, it was the Saibai Islanders who developed the first version of the double outrigger canoe. They in turn taught the coastal Kiwai the method for adapting the single outrigger into the large double outrigger form and it was the Kiwai who, in turn, taught the people living in the Oriomo, Binaturi and Pahoturi Rivers their methods of canoe making and sailing. Following the establishment of the coastal villages, and later the missions stations, such as at Mawatta and Mabudawan, the Kiwai began to explore the reefs and islands of the Torres Strait and established a complex network of trading and intermarriage connections between themselves, the Torres Strait Islanders and other Kiwai people of the Fly estuary (Lawrence 1989b).

Subsistence Economy

The people of the coastal Kiwai-speaking villages live on the narrow strip of sandy foreshore between the sea and the coastal swamps and savannah grasslands. The coastal swamplands contain nipa palm, mangroves and some sago palms bordered by dense woodlands. The people who live further inland from the coast such as the Bine and Gizra speaking people live along the rivers and the interconnecting streams. Access to the widely spaced villages can be effected by walking through the bush and swamps as well as by small canoes. The Kiwai, living in a region of variable wet and dry climate, with limited access to good gardening land but unrestricted access to the waters of the Torres Strait, have remained predominantly subsistence fishermen.

A broad range of subsistence patterns existed across the Torres Strait prior to sustained European contact. Within this broad spectrum of subsistence patterns, regional and local variation also occurred. In the Torres Strait, the Islanders exploited a wide variety of marine resources and this has been documented in some detail in the papers presented by Judith Fitzpatrick and Jeremy Beckett (this volume). Dugong and turtle, for example, played an important role in social and ceremonial life of the Islander people. This is also true for the Kiwai people of the southwest coast. The techniques used for hunting dugong were learned from the Islanders.

The first method was harpooning from a platform called a *narato* which was constructed over the seagrass beds on inshore reefs. The hunter waited on the platform with a harpoon (*wap*). A long eight-ply rope made from vines was used, as this rope was bouyant and easily recovered by canoe. This method of hunting was dangerous however, and there are many stories of hunters being drowned after becoming entangled in the rope and pulled along by the dugong. Use of the fixed platform declined after the Second World War. The second method, which is still used along the coast today, involved harpooning dugongs from the platform of a large canoe. The *motomoto* was ideal for this purpose as it could be sailed silently over reefs and shallow seagrass beds. It required a large crew of at least eight to ten men which meant that there was safety in numbers and assistance with manhandling the dugong or turtle, onto the canoe. The *motomoto* contained sufficient storage space for holding both dugongs and turtles captured on the one voyage.

Knowledge of dugong movements and the magic required to call dugongs was also handed down through the generations. Success at hunting was a sign of status in Kiwai communities and old hunters were well respected. The film 'The Kiwai: dugong hunters of Daru' showed some of the skills required by hunters. It was filmed along the southwest coast mostly in the village of Tureture. This film was also used to some effect in the educational programme designed to prohibit the sale of dugong meat in the Daru market (Hudson 1986:77-79).

Both the coastal Papuan and the Torres Strait Islander communities, in the period prior to European contact, were small-scale acephalous societies, often separated by water barriers. Such societies were characterized by the creation of interdependencies linked by rituals and customary exchange which drew groups into intermittent co-operation where otherwise only interrupted warfare and hostilities would have occurred. Trade, warfare and marital exchange provided the occasions for interaction (Beckett 1972:319-320).

Administrative control over the people of the Fly estuary and the southwest coast was extended from the permanent colonial administrative post established at Daru in 1895. The first government residency was in fact established near Mabudawan in 1891. This was later closed and Daru became the harbour, the fuel and stores depot and a base for trade and commercial exploitation of the Fly River and northern Torres Strait. Contact with police and colonial authority resulted in the suppression of warfare and raiding, and the eventual pacification of the peoples of the coastal area.

Commercial activity in the region was only partially successful. Plantations were established at Mibu Island in the estuary, at Madiri in the lower Fly and Dirimi on the Binaturi River. Commercially the region did not develop to any great extent.

Transportation and communications between villages has always been difficult in this region of the Western Province. The Western Province has remained economically depressed supporting only small villages with low population. Commercial agricultural developments continue to be unsuccessful, particularly along the southwest coast. It is not difficult to understand why mining developments, such as Ok Tedi, are seen as 'pots of gold' by the people of the Western Province. The economic spinoffs of mining developments have, however, had little impact in the south. Village development schemes such as that being developed by Ok Tedi Mining Limited for the middle Fly River, and now extended to the Fly estuary, will have little effect on the economic, social or health conditions of the villagers along the southwest coast. Because of this coastal villagers have continued to be involved in subsistence economic activities. The subsistence economy is supplemented by small scale cash cropping, seasonal commercial fishing and by remittances from kin, usually young males, working away from home, often on the commercial fishing boats operating in the Torres Strait and Gulf of Papua.

Largely for economic reasons, the people of the southwest coast still rely on sailing canoes for transportation of goods and people to and from Daru and out into the Torres Strait. It is not uncommon to see canoe hulls in various states of repair and construction on the beachfronts of coastal Kiwai villages. The complex skills required for planking the sides of canoe-hulls and adding the sailing platforms have not been totally discarded in favour of modern Western technology. Canoes are also seaworthy in the sometimes dangerous waters of the Torres Strait. The coastal villagers of Mabudawan, Tureture, Mawatta and Kadawa, in particular, still sail in large double outrigger canoes such as the two masted *motomoto* or the single masted *puputu* into the Torres Strait to hunt turtle and dugong, and to fish the Warrior, Wapa, and Gimini Reefs, as well as the Potomaza, Otamabu, Auwamaza, and Kokope reef complexes, and to travel to the islands of the Torres Strait on visiting and trading expeditions.

The position of Kiwai villages at the mouths of the Binaturi and Pahoturi Rivers enabled the Kiwai, over the past 100 years, to act as intermediaries in the customary exchange systems which had been established between the Torres Strait Islanders and the people living inland from the coast. The Kiwai were able to dominate the principal lines of interaction which went from the coast to the central islands of the Torres Strait, and from the coast to the nearby islands of Saibai, Dauan and Boigu, and then to the western Torres Strait Islands. The use of large, seaworthy canoes also facilitated access to the fertile eastern Torres Strait islands from the communities of Kadawa, Katatai and Parama, located near the Fly estuary (Lawrence 1989a).

The Kiwai established themselves as a 'trading' people who, for ecological and cultural reasons, formed a nexus between the insular dwelling Torres Strait Islanders and the inland 'bush' people. The Kiwai have been able to exploit the opportunities for 'trade' afforded to them by their position as littoral dwelling entrepreneurs while ecological disadvantages such as limited gardening land, have motivated them to adopt the outrigger canoe to their advantage (Lawrence 1989a).

The coastal Kiwai were able to exploit the fish-for-garden foods exchange system and they were able to manipulate exchange by their eventual dominance of maritime and fishing technology. European colonial settlements along the coast further strengthened

the position of the coastal Kiwai. Kiwai men were often employed in the tradestores and police posts which were established at Mawatta, Mabudawan and Daru. With the growth of commercial activity in the Torres Strait, such as pearling, beche-de-mer fishing, trochus collecting and later commercial fishing, young men from the coastal Kiwai villages were in a favoured position to move into wage labour on the boats. The establishment of schools in coastal villages enabled Kiwai children to obtain an early understanding of basic English. Kiwai also became the language of the missions and remains the language commonly used in churches.

Contemporary Situation

In the latter part of the post-contact period, until the establishment of the independent state of Papua New Guinea in 1975, the dominance of European technology, the introduction of wage labour, the exchange of goods and services for cash rather than kind, and the introduction of European administration and law, were all instrumental in effecting permanent changes to the fabric of intersocietal exchange in the Torres Strait and Fly estuary region. The establishment of a border in the late 19th century between Australia and the territory of British New Guinea, which was renamed Papua in 1907, and the clarification of a formally established border between Australia and Papua New Guinea following independence in 1975, served to threaten and weaken the customary ties between the coastal Kiwai and the Torres Strait Islanders. The economic and social conditions of the Torres Strait Islanders were more profoundly changed by European and Pacific Islander, economic, social and cultural intervention than the peoples of the southwestern coast of Papua New Guinea.

The ratification of the Torres Strait Treaty in 1985, which recognized 'traditional' rights of free movement of both Torres Strait Islanders and Papuans within the Torres Strait Protected Zone has also served to acknowledge the importance of customary exchange at a time when it has ceased to be a mechanism for the distribution of scarce subsistence items across a region of different ecological zones. However, the survival of customary exchange into the present is indicative of the fundamental importance of inter-group contact in the face of colonial and inter-governmental intervention, though now it serves mainly as a linkage among people united by kinship and fictive kin ties. Maintenance of this linkage, largely through Papuan need for access to medical services, schools, casual employment and well stocked island stores, is still a question of survival to the Papuan people in the face of declining economic conditions in Papua New Guinea.

Islanders and Papuans operate within a range of multiple enterprise subsistence economies, similar to those described by Dr Chris Anderson for the Cape York Aboriginal communities (Anderson 1980). Wage labour on fishing and lobster boats is combined with tradestore purchases, fishing, hunting and gathering wild and semi-domesticated plants. However, on the Torres Strait Islands government income supplements provide a permanent income basis not available to coastal Papuans.

Sustainable Development for Traditional Inhabitants

Preservation of the marine environment in the Torres Strait and the Fly estuary is essential for the economic survival of the subsistence fishermen such as the coastal

Kiwai people. The coastal Kiwai are in a particularly vulnerable position. With little access to economic benefits from mining and other industrial developments, such as the Kutubu oil field development, they also live in an area of economic underdevelopment. Unlike their Torres Strait neighbours, they have little access to government sponsored economic development schemes, nor do they have the infrastructure to develop marine industries to their advantage. The small-scale commercial barramundi fishing activities of the Kadawa and Katatai villages, and the villages of the Dudi coast in the Fly estuary, are seasonal and labour intensive. Environmental damage in the Fly River and the estuary region would ruin this enterprise. Ecologically sustainable development, as stated by Mr Kelleher in his keynote address (Kelleher, this volume), means using, conserving and enhancing community resources so that the ecological process, on which life depends, and the quality of life of the traditional inhabitants of the Torres Strait region, can be enhanced.

Mechanisms for the protection of customary practices and livelihood of the Torres Strait Islanders and coastal Papuan people have, to a large extent, been implemented with the establishment of the Torres Strait Protected Zone under the Torres Strait Treaty which was formally ratified in 1985.

In small scale societies such as those of the Torres Strait region, resource management practices have been developed by coastal and islander populations over long periods of time. They therefore formed part of the foundations of the social and economic stability of these societies. The establishment of resource strategies and management plans, such as those instituted by the Torres Strait Treaty and the proposed management plan for Western Papua and the Torres Strait, tend, by their very nature, to widen the gap between the 'traditional diverse resource utilization strategies and what becomes sectoral development designed to increase the economic well-being of a depressed region' (Burbridge 1982: 377). The difficulty has been the maintenance of the functional integrity of the customary, the so-called 'traditional', economic base while managing for broad-scale economic and social development.

The coastal Papuans remain in an economically disadvantaged position. Physical isolation in a difficult environment, poor land, limited access to education beyond basic primary levels, inadequate medical care and the lack of government supported income assistance continue to keep the standard of living of coastal Papuans below that of the Torres Strait Islanders. In recent years some Papuans have resettled on Torres Strait islands but, despite some economic advantages and better access to medical and educational facilities, their social and cultural status remains undefined.

Economic advantage, and possibly a relief from the boredom of village life, was the primary reason why young Papuan men left their villages and sought work in the Torres Strait fishing and pearling industries. To some extent the indentured work experience served as a new initiation process for young men and, like initiation, the enforced separation from women and the village, the struggle for status and the return, laden with valuables, appears to have been incorporated into another cultural experience. This experience still forms a large part of the stories recounted by older men in the coastal Papuan villages.

Conclusion

The full economic and social impact of the Torres Strait Treaty which sets out to protect the customary way of life of the Torres Strait Islander and coastal Papuan peoples has still to be fully appreciated. Under article 13 of the Treaty, both Australia and Papua New Guinea are required to take legislative and other measures to protect and preserve the marine environment in, and within the vicinity of, the Protected Zone. Both parties are also required to cooperate on measures for ensuring the long-term protection of the marine environment and to minimise, to the fullest practical extent, the release of any toxic, harmful or noxious substances from land-based sources.

The Torres Strait Baseline Study is another step towards the objective of maintaining the quality of the marine environment of the Torres Strait for the sustained use of the living resources of the sea, particularly by traditional inhabitants from both the Torres Strait Islands and from the villages of coastal Papua who together share access to this ecologically and culturally diverse region.

To date, village development schemes and resettlement programmes have been directed towards those peoples living in the vicinity of the mining operations and along the middle and upper Fly River areas. The needs of the people of the coastal region, and in the Fly estuary, have largely been overlooked. Yet, if environmental damage to the water of the Fly River does occur then the livelihood of the coastal Kiwai will be seriously affected. These people have no government sponsored support systems and only limited political power. It is the responsibility of environmental programmes, such as the Torres Strait Baseline Study, to ensure that the marine environment of this region is protected for present and future generations and that this protection is sustained.

Bibliography

- Anderson, C. (1980), 'Multiple enterprise: contemporary Aboriginal subsistence strategy in southeast Cape York Peninsula', In N.C. Stevens and A. Bailey (eds.), *Contemporary Cape York Peninsula*, Royal Society of Queensland, Brisbane, pp77-81.
- Beckett, Jeremy R. (1972), 'The Torres Strait Islanders', In D. Walker (ed.), *Bridge and Barrier*, A.N.U., Canberra, 307-326.
- Bodley, John H (ed.) (1988), *Tribal Peoples and Development Issues*, Mayfield, Mountain View.
- Burbridge, Peter R. (1982), 'Problems and issues of coastal zone management', In C.H. Soysa, Chia Lin Sien and W. Collier (eds.), *Man, Land and Sea*, Agricultural Development Council, Bangkok, 309-320.
- Hudson, B.E.T. (1986), 'The hunting of dugong at Daru, Papua New Guinea, during 1978-1982: community management and education initiatives', In A.K.Haines, G.C. Williams and D. Coates (eds) *Torres Strait Fisheries Seminar (Proceedings, 1985)*, A.G.P.S., Canberra, 77-94.
- Kelleher, Graeme (1990), 'Sustainable development for Traditional Inhabitants of the Torres Strait Region: keynote address', (this volume), Great Barrier Reef Marine Park Authority, Townsville.
- Lawrence, David R. (1989a), 'The material culture of customary exchange in the Torres Strait and Fly estuary region. Unpublished PhD thesis, James Cook University of North Queensland, Townsville.
- Lawrence, David R. (1989b), 'From the other side: recently collected oral evidence of contacts between the Torres Strait Islanders and the Papuan peoples of the south-western coast', *Aboriginal History*, 13(1/2), 95-123.
- Lipset, David M. (1985), 'Seafaring Sepiks: ecology, warfare, and prestige in Murik trade', *Research in Economic Anthropology*, 7, 67-94.
- Olewale, Ebias and Sedu, Duba (1982), 'Momoro (the dugong) in the Western Province', In L. Mourata, J. Pernetta and W. Heaney (eds.), *Traditional Conservation in Papua New Guinea: implications for today*, Institute of Applied Social and Economic Research, Boroko, 251-255.
- Wurm, S.A. (1973), 'The Kiwaian language family', In K. Franklin (ed.), *The Linguistic Situation in the Gulf District and Adjacent Areas, Papua New Guinea*, A.N.U., Canberra, 216-260.

