

EARLY HISTORICAL SOURCES FOR THE TOP WESTERN ISLANDS IN THE WESTERN TORRES STRAIT EXCHANGE NETWORK

RON VANDERWAL

Vanderwal R. 2004 06 21: Early historical sources for the top western islands in the western Torres Strait exchange network. *Memoirs of the Queensland Museum, Cultural Heritage Series* 3(1): 257-270. Brisbane. ISSN 1440-4788.

The Northern, or Top Western, Torres Strait Islanders live on the 3 islands of Saibai, Boigu and Dauan adjacent to the Papuan coast. These people collectively refer to themselves as the Sabaygal and speak dialects of Kala Lagaw Ya. This paper examines aspects of 19th Century material culture through an investigation of the exchange system whereby Papuan goods were filtered through to the more southern islands, and in return Torres Strait products travelled to the Papuan mainland. Three categories of exchange are identified: 1) exchanges involved in the canoe trade, 2) reciprocal exchanges between trading partners and 3) gifts, particularly to middlemen in any exchange situation. This model is used to develop contexts for exchange in the Western Torres Strait Islands. □ *Exchange, Haddon, Landtman, material culture, Torres Strait.*

Ron Vanderwal, Museum Victoria, GPO Box 666E, Melbourne 3001 (e-mail: rvander@museum.vic.gov.au); received 10 October 2001.

The circumnavigation voyage of Flinders (1814) between Australia and Papua in 1802 opened the tides of change in the Torres Strait. Commerce through the Strait inevitably resulted in the introduction of European goods into the region, forever altering the traditional culture. European iron, mostly in the form of barrel hoops was in great demand (King, 1837) and quickly replaced the raw material of Torres Strait technology for the production of fish spears, Dugong harpoons (Vanderwal, 1973: 166) and even ceremonial items (Moore 1984: items 83 and 416) (see also McNiven, 2001). Steel axes were eagerly sought and readily exchanged for victims of shipwreck (King, 1837). In 1871, the missionaries moved in (Gill, 1876; McFarlane, 1888), and the pacification program carried out in Papua under Australian administration resulted in a major cultural alteration, the destruction of warfare. Jiear (1905: 69), a district administrator and one of the agents of pacification, noted that trade in bows and arrows had virtually stopped because of their comparative uselessness for the traditional purpose of warfare.

It is within the record of this change that we obtain our glimpses into the lives of the Islanders, but these are confined to only a few sources in the early exploration of Torres Strait. The earliest of any substance is King's (1837) report on his search for survivors of the wreck of the *Charles Eaton* of some 3 years earlier, but his remarks refer mostly to the Eastern Islands of Murray (Mer) and Darnley (Erub). Jukes (1847) and

Sweatman (Allen & Corris, 1977) were contemporary observers on Captain F. P. Blackwood's voyage on the *Fly* and the *Bramble*, while MacGillivray (1852) recorded the activities of the *Bramble* and the *Rattlesnake*. The accounts in these volumes provide some considerable detail, including the activities of the Western Islanders who are the central focus of this paper. The most detailed document is arguably Brierly's journal (Moore, 1979) written aboard the *Rattlesnake*, which includes the observations of the castaway Barbara Thompson. T.H. Huxley (1935), also aboard the *Rattlesnake*, left a detailed manuscript, though little is said of the Islanders' exchanges in material culture. The earliest detailed drawing of the means by which the Islander's moved around the Strait is provided by Melville (1849) in his book of sketches, where he illustrated the characteristic double outrigger canoe (Fig. 1) whose presence by exchange in the Strait from Papua is of paramount interest to my paper.

However important the records of these early chroniclers, for the details of life in the Torres Strait islands and adjoining Papuan mainland the scholar must inevitably turn to the systematic investigations carried out by Alfred Haddon in 1888-89, by Haddon and his colleagues in 1898, and by Gunnar Landtman during 1910-12. Even so, Haddon, Landtman and others of their time seldom witnessed the dynamics of the cultural systems they were recording, as most data were obtained through informants who had not fully participated in such systems involving the



FIG. 1. Canoe and men on Erub, eastern Torres Strait 1845 (from Melville, 1849, pl. 19).

traditional material culture of the area for the past 50 years or more.

TOP WESTERN ISLANDS

PHYSICAL ENVIRONMENT. Saibai and Boigu were built up from effluvia carried by rivers draining the PNG mainland. Like the landmass that gave them birth, these islands are flat and swampy, bordered by ubiquitous nipa palm and mangrove forests. The surrounding waters are shallow and grassy with remnant reefs in widely separated localities. Slightly further south is the third in the northern group, Dauan, a high island at 242m above sea level consisting of granites weathered into large boulders. Like the high Western Islands further to the south, Dauan is surrounded by reefs supporting a more diverse fauna than that found in the muddier waters of Saibai and Boigu (Harris, 1977: 445).

Some general observations may be made about the climatic regime of the Top Western Islands. It is less variable than that seen further to the south and more closely approaches that of the PNG mainland. Although there is the same seasonal variation in the windy (dominant SE) but dry

months June-November and the wet but calmer NW season, the Top Western Islands are somewhat wetter for a longer period of time. The rains contribute to the freshwater inland swamps, particularly Saibai where a large biota is supported, and to the more lush slopes and valleys of Dauan (Harris, 1979: 76).

The Torres Strait Islanders grouped themselves into alliances that certainly were the result of historical events, but these alliances also allowed a balanced subsistence economy based on the environmental potential of each island in the alliance. Thus, as Harris (1979: 99) pointed out, the gardens of Dauan complemented foods of the swampy low islands, particularly aquatic resources. But of equal economic importance was the movement of goods through the Torres Strait islands in a widespread exchange network, and it is to this that I now turn.

EXCHANGE AND MATERIAL CULTURE. The material culture of the Top Western Islands is poorly documented, and the number of artefacts recorded from the area small. Moore (1984: 58-60) for instance, referred to only 39 such

artefacts from the 1,900 items that form the Torres Strait collections of Haddon.

However these Top Western Islands were the nexus of the exchange network that existed between the Torres Strait islands and adjacent PNG in which raw materials and manufactured goods moved back and forth in a manner whose conventions are ill-defined in the anthropological literature. The immediate beneficiaries of these activities were both the Islanders of the western Torres Strait and adjacent Papuans as far E as the Fly River and N to the Oriomo Plateau.

More wide-ranging effects of this and similar coastal exchange networks were the results of multiple dispersals of some of these goods, such as shell valuables to the PNG Highlands (Hughes, 1977a: 184-198; 1977b: 32; Sillitoe, 1979: 142-146; Strathern, 1971: 235-236) and to the Australian continent (McCarthy, 1939: 416-422; Mulvaney, 1976: 80-83). While somewhat equivocal, there also appears to have been a limited and somewhat tortuous network between the Western and Eastern Torres Strait Island Groups (Haddon, 1908: 24; Moore, 1979: 302; Vanderwal, 1973: 187). The Eastern Islanders maintained their own routes to PNG (King, 1837: 16; Haddon, 1908: 24).

THE WESTERN TORRES STRAIT EXCHANGE NETWORK

The Western Torres Strait Islanders are considered to be those who live on the western side of Torres Strait; in more traditional terms, this includes the Top Western Islanders, Western Islanders and the People of the Murulag (Prince of Wales) group in the SW Strait. The title of this section refers to the flow of goods within and between the Western Torres Strait Islands and adjacent PNG. The objective is to describe what is known of the various goods that crossed the Torres Strait frontier, particularly at Saibai — clearly identified by Haddon (1890: 389) as being the home of the middlemen in this system — and their probable rôles in the exchange network around the middle of the 19th Century. The attention of those who recorded such exchanges was understandably attracted to what was considered important by informants and by the more spectacular objects such as canoes, shell valuables, ceremonial items and the more obvious subsistence equipment. Little has been recorded about the less obvious items associated with the exchange network.

The most comprehensive recent work on exchange in Torres Strait is Lawrence (1994, 1998)

who documented references to customary movement of goods across the entirety of Torres Strait. He accomplished this through documentary sources, oral literature and museum collections. Lawrence challenged the view that there were formalised trade routes. I agree that the literature does not support this view, but largely due to the incomplete nature of this record. Since specific exchange contexts were generally not recorded in the relevant Torres Strait literature, my analysis concentrates on the movement of goods. Other Melanesian exchange systems, however, are often characterised by a wealth of exchange situations ranging from reciprocal gift giving to elaborate ceremonial presentations (Allen, 1982). While it is not possible to reconstruct specific dynamics of the Torres Strait exchange system, it is probable that major exchanges took place between established trading partners (Matthew, 1991: 102; Gibuma, 1991: 109). These exchanges, unstable though they might be, involved most or all men in the communities, forming links through the network and transcending cultural and political differences for the purpose.

In attempting to formalise the kinds of transactions that may have been involved, 3 distinct categories have been identified: canoe traffic, reciprocations and gifts. A fourth way that goods were moved from place to place, though not considered here, was through warfare, or looting (Haddon, 1912: 191).

CANOE TRAFFIC. 'Canoe traffic' is a term used by Landtman (1927: 213). Due to the importance of the canoe to the water-faring people of coastal PNG and the Torres Strait islands (Barham, 2000), quantities of valuables were in constant movement as payment for canoes. Exchange equivalents appear to have been clearest within the canoe traffic itself.

RECIPROCATIONS. Reciprocations are delayed exchanges of goods and valuables. Exchange values in a reciprocation must have been worked out in some detail by the principals involved, and many items must have had clearly understood values, but exchange equivalents in general seem to have been less clearly defined than in the canoe traffic. Delays involved in reciprocity as well as, probably, gifts exchanged over the interval, would have tended to obscure such information, a situation exacerbated by translation through informants to the largely 19th Century documents on which this study is based.

GIFTS. Gifts seem not to have been normally reciprocated, especially in the canoe traffic where their functions were probably to lubricate exchanges and particularly where middlemen moved goods between the principals in an exchange agreement.

Notwithstanding problems in exchange equivalents, it does seem clear that some products and raw materials were more valuable than others. What follows is an attempt to construct a hierarchy of objects from most valuable to least valuable. Such a progression may well be highly accurate for canoes (unequivocally the most valuable), shell valuables (but not all shells), some teeth and certain hunting implements, but the lack of information on other items renders their values and importance unknown. For example, stone products were almost certainly used in the exchange network but soon after European contact they were replaced by metal and so were little remembered by informants. Many ceremonial items also utilised elements (such as feathers, turtleshell) that formed part of the exchange system but their exchange values are unknown.

Artefacts are inferred to have been involved in the exchange network, either because they are specifically mentioned in the literature as exchange items or because they were in common use outside their areas of origin (Table 1).

GOODS IN THE WESTERN TORRES STRAIT EXCHANGE NETWORK

CANOES. 'Without doubt, the most important form of native trading is that of buying and selling canoes' wrote the administrator Jear in 1905 (1905: 69) at a time when most of the other traditional exchange system components had disappeared. Jear noted in the same passage that calico and various metal items had replaced traditional exchange items as payment for canoes (MacGregor, 1893: 35).

Dugout hulls were made at a variety of coastal locations around the mouth of the Fly River, particularly Kiwai and Waboda Islands (Landtman, 1927: 208). However, it was acknowledged that superior canoes came from Dibiri, the coastal area east of the Fly River (Haddon, 1914: 613; Landtman, 1927: 208). These trade canoes, like other canoes made in the Fly River area, were fitted with a simple outrigger and used exclusively over more than 100 km up the Fly River (Haddon, 1914: 613 referring to Landtman). When obtained by the Torres Strait Islanders, modifications were made. These included the addition of a wash-

strake (boards added to increase the height of the sides) and a second opposing outrigger (Haddon, 1912: 207; 1914: 609; 1937: 193-194). Haddon (1937: 193-194) described the construction of these in detail and recorded the nomenclature associated with the objects (Haddon, 1912: 207-210).

Oral tradition among the Kiwai explained the introduction of dugout canoes to the Torres Strait people and described the alterations. According to this tradition, during a ceremony at Daru a model single outrigger canoe escaped and was blown to Yam Island (Central Strait) where a mythical figure traced it back to Daru (Landtman, 1927: 208). The alterations occurred when 2 Saibai men each bought a single outrigger canoe from Mawata on the Papuan coast. On the return voyage they joined the 2 canoes together. At Saibai they were met by 2 Mabuig men (Western Strait) who were on a solid log with double outriggers, said to be the original kind of Torres Strait craft. The Mabuig men took 1 of the dugouts back home where they added the wash-stake and second outrigger (Landtman, 1927: 211). The Badu and Mua (Moa) people, upon seeing the craft, wanted 1 also, so the Mabuig people went back to Saibai and the canoe trade began. There is no record of a similar story among Torres Strait Islanders.

The routes of the canoe traffic are said to follow that of the legend: canoes have ever since been traded from Mawata to Saibai and thence south to other Western Islands in Torres Strait while the payment for the canoes travelled in the opposite direction (Landtman, 1927: 211). Haddon (1904: 296) illustrated the process of ordering a canoe: a Murulag man seeking the help of a Mua relative in asking a Badu friend to go to Mabuig from whence a request would be placed at Saibai, and thus along the coast until a canoe could be supplied. He also summarised a 'maximum points' route as consisting of Murulag, Badu, Mabuig, Dauan, Saibai, Mawata, Tureture, Saguane, Kiwai and finally to Wabad (Waboda Island) and Dibi (Dibiri) (Haddon, 1904: 297).

The Saibai people appear to have been the middlemen or intermediaries between the Papuan mainland and a major route to the Western Islands, as well as a lesser one through the Central Islands (Haddon, 1904: 295-296). Although all canoes seem to have passed through Saibai hands, many other intermediaries were involved, 'paid for their services by "charging on" ... or they might be recompensed for their

troubles by presents from the purchaser' (Haddon, 1904: 296; Landtman, 1927: 214).

The dynamics of payment through a number of intermediaries are unclear but on 3 aspects of the traffic there is specific information: 1) sellers were always under an obligation to supply food for their visitors' return journey, as were the intermediaries (Jiear, 1905: 70; Landtman, 1927: 215); 2) payments were made, through the intermediaries, as long as the canoe was useful (Haddon, 1904: 296; Landtman, 1927: 214); and 3) when the canoe broke up because of age or by accident, a final payment was accompanied by a piece of the canoe (Haddon, 1904: 296; Landtman, 1927: 214).

A legend about the hero cult figure Kwoiam speaks of the amount paid for a canoe: a Dugong harpoon, a shell armband and chest pendant, an olive shell necklace and a baler shell (Haddon, 1904: 76).

The following discussion about other objects involved in the exchange network includes informants' statements to Haddon and Landtman about rates applicable to various transactions. A great deal of this information is indistinct, which is understandable since the network was no longer fully functional at the time it was investigated. With reference to the canoe traffic, for example, it is likely that rates given by informants may at times have referred to a full price and at others only to first payments or instalments, and the debt for a canoe may not be cleared for several years (Beaver, 1920: 76).

SHELLS. Just as canoes were the major source of wealth for Papuans, so too were manufactured shell objects for the Torres Strait Islanders. The shell valuables listed below were key elements in the canoe traffic, in reciprocations and in gifts. Language names are as cited in the literature.

Armbands (Waiwi). Made from the central portion of a cone shell (Haddon, 1904: 294; McFarlane, 1888: 122; Beaver, 1920: 75). Large armbands were made only in the Eastern Islands, though it is probable that smaller, less valuable, ones were made in the Western Islands (Wilkin in Haddon, 1904: 294). Some of the larger armbands in museum collections are from *Conus betulinus*. Most however, are made from *C. litteratus* or *C. leopardus = millepunctatus* (Walls, 1979: 639).

Necklaces (Uraz or Waraz). Made from strings of olive shells (*Oliva carneola*) (Haddon, 1908: 185; 1912: 41).

Chest Crescents (Danga Mari). Made from pearl oyster (*Pinctada maxima*) (Allen & Corris, 1977: 31; Haddon, 1908: 185; 1912: 43). Some smaller crescents may have been made from *P. margaritifera*.

Necklaces (Kaura Dan). Made from pearl shell (*P. maxima*) cut into rectangular pieces (Haddon, 1912: 36) and strung.

Circular Chest Pendants (Dibidibi). Made from the base of cone shells (probably *Conus litteratus*) (Allen & Corris, 1977: 31; Haddon, 1908: 185; 1912: 44).

Pendants. Made from the elongated body of *C. litteratus* (Haddon, 1912: 47) and other unidentified shells (Haddon, 1912: 41-43).

Groin Shields (Alidan). Made from the outer whorl of the baler shell (*Melo* sp.) (Allen & Corris, 1977: 31; Haddon, 1912: 201).

Signal Trumpets (Bu). Made from Trumpet shell (*Syrinx aruanus*) (cf. *Fusus maber*) and occasionally a large triton (*Charonia tritonis*) shell (Haddon, 1912: 283; Hedley, 1922: 164; Landtman, 1927: 47; Vanderwal, 1973: 177).

Nose Ornaments (Gub). Made from the giant clam shell (*Tridacna gigas*) (Haddon, 1908: 185; 1912: 39-40; Lee, 1920: 180).

Axes (Aga). Made from the giant clam shell (*T. gigas*) (Haddon, 1912: 125-126; 1935: 302).

Hoes (Wedere Maua). Made from the baler shell (*M. diadema*) (Haddon, 1901: 109-110; 1912: 144; Beaver, 1920: 74).

Other shells were used for domestic purposes and some of them were reported as exchange items. The bivalves *Tellina* sp. and *Cyreno* sp. were used for scraping and cutting (Haddon, 1912: 123-124; Landtman, 1927: 35) and larger shells such as the *Fusus*, helmet, triton, giant clam and baler were used for storing water and cooking (Flinders, 1814, II: 115; Haddon, 1912: 122, 151; Hedley, 1922: 164; Jiear, 1905: 71; Moore, 1979: 172; Macgillivray, 1852, II: 23).

Some of these shell goods were used explicitly in canoe traffic and reciprocations, others almost certainly as gifts to intermediaries in the canoe traffic.

The most valued ornament was the cone shell armband (Landtman, 1933: 43) for which 'there is an unlimited demand and a short supply' (Jiear, 1905: 71). Haddon (1912: 56) stated 'even small specimens were of value, but one large enough to go on the arm was the highest unit of exchange in Torres Straits'. The precise value of such armbands cannot be ascertained, though various equivalents

TABLE 1. Artefacts involved in the Western Torres Strait exchange network, their names in four languages, and their sources of illustrations.

English	Kalal Lagaw Ya	Meriam	Kiwaian/?	References to Illustrations (Those in parentheses are later duplicates)
Canoes	<i>gul</i>	<i>nar</i>	<i>motomoto</i>	Allen & Corris, 1977: pls 2 & 4; Haddon, 1912: pl. XXIV; Jukes, 1847, I: 169; Landtman, 1927: fig. 74 (1933: fig. 22); Lee, 1920: 184; Moore, 1979: pls 2, 4, 6, 9 & 10.12
Arrows	<i>taiak</i>	<i>sarik</i>	<i>tere</i>	Haddon, 1912: figs 180-92, pls XXX-XXXII; Landtman, 1927: figs 32-3; 1933: pls XVII-XXI; Moore, 1984: Items 700-2 & 704
Bones, Cassowary				
Coconut scrapers	<i>sok</i>	<i>sok</i>	<i>soke; wagi</i>	Haddon, 1912: fig. 163; Landtman, 1933: pl. 23; Moore, 1984: Item 243
Daggers	?	?	<i>soke; wage</i>	Allen & Corris, 1977: fig. 3.2; Landtman, 1927: fig. 34a; 1933: pl. XXII
Drums				
hourglass	<i>warup</i>	<i>warup</i>	<i>warupa</i>	Edge-Partington, 1890: 332.1; Haddon, 1904: fig. 13; 1912: fig. 239; 1912: pls XII.2 & XXVII.2 (Moore, 1984: Item 155); Jukes, 1847, I: 176; Landtman, 1927: fig. 46a; 1933: pl. XXVIII
cylindrical	<i>buruburu</i>	<i>boroboro</i>	<i>buruburu</i>	D'Albertis, 1881, II: 269 (Haddon, 1912: fig. 243); Haddon, 1904: fig. 18 (1912: fig. 240); Landtman, 1927: figs 46b & 48 (1933: pl. 64); 1933: pl. XXVIII; Moore, 1984: 154
Feathers, Bird of Paradise				
head-dresses	<i>dagam</i>	<i>degem</i>	<i>amura</i>	Haddon, 1912: pl. VII.2; Landtman, 1927: fig. 19d; 1933: pl. 7
Feathers, Cassowary				
head-dresses	<i>dagui; samara</i>	<i>dagui?; sam</i>	<i>daguri</i>	Allen & Corris, 1977: figs 3 & 9; Haddon, 1912: pls VII.1 & VIII; Landtman, 1927: figs 11, 19c, 22 & 23; Landtman, 1933: pl. VII; Moore, 1984: Items 74, 380, 381 & 682
dance ornaments	<i>titui-titui gud</i>	<i>gud?</i>	-	Haddon, 1912: fig. 46 (Moore, 1984: Item 77); Moore, 1984: Items 83 & 416
canoe ornaments	<i>dogai</i>	-	-	Moore, 1984: Items 192-3
Feathers, Heron				
head-dresses	<i>deri; dri</i>	<i>dari</i>	<i>dori</i>	Edge-Partington, 1890: 133.1 (Haddon, 1912: pl. VI.1); Haddon, 1912: pl. VII; Moore, 1984: Items 370-5, 378 & 683; Landtman, 1927: fig. 20 (1933: fig. 47); 1933: pl. VIII
Harpoons				
shafts	<i>wap</i>	<i>wap</i>	<i>wapo</i>	Haddon, 1912: figs 177 & 364-9, pl. XXIII; Landtman, 1933: pl. VIII
heads	<i>kiwuru</i>	<i>kwir</i>	<i>kiwura, variations</i>	Allen & Corris, 1977: figs 3 & 5; Haddon, 1912: pl. XXIII.2 (Moore, 1984: Item 638); Landtman, 1933: pl. II; Moore, 1984: Item 14
Shell, Domestic				
axes	<i>aga</i>	<i>tulik</i>	-	Edge-Partington, 1890: 346.5; Haddon, 1912: figs 159-60; 1935: fig. 29; Moore 1984: Item 25
Hoes	<i>Wedere maua</i>	<i>panigob</i>	<i>Wedere emoa</i>	Edge-Partington, 1890: 346.6; Landtman, 1927: fig. 51d (1933: pl. II); Moore, 1984: Items 178 & 227
knives/scrapers	<i>akul</i>	<i>kaip</i>	<i>Ipikaka kaisakako</i>	Edge-Partington, 1890: 323.9, 336.6; Haddon, 1912: fig. 82; Landtman, 1927: fig. 42 (1933: fig. 63); Moore, 1984: Item 18
water/food shells	<i>bu. alup</i>	<i>maber, as, ezer</i>	<i>wedere</i>	Haddon, 1912: figs 150-2; Landtman, 1933: pl. xxiv; Moore, 1984: Items 235-6 & 639
Trumpets	<i>bu</i>	<i>maber?</i>	<i>tuture</i>	Haddon, 1912: fig. 248; Moore, 1984: Item 690
Shell, Dress				
pearl shell crescents	<i>danga mai; danga mari</i>	<i>kemer mai; pek mai</i>	<i>Nese; miri</i>	Haddon, 1912: pls I.6, VIII & IX.20-2; Landtman, 1927: fig. 13 (1933: fig. 38); Moore, 1984: Items 54, 403 & 404
nose ornaments	<i>gub</i>	<i>kirkub</i>	<i>wodemuti; ini</i>	Edge-Partington, 1890: 341.9-12; Haddon, 1912: pls VIII & IX.6-12; Landtman, 1933: pl. X; Moore, 1984: Item 46
groin shields	<i>alidan; loda</i>	<i>alida; ebeneop</i>	<i>wedere ere</i>	Edge-Partington, 1895: 204-4; Haddon, 1912: fig. 204; Landtman, 1927: fig. 11 (1933: fig. 40), 13 (1933: 38) & 66; Moore, 1984: Item 628, pls VIII & IX.6-12
Shell Ornaments				
conus shell armllets	<i>waiwi</i>	<i>wauri</i>	<i>mabuo</i>	Edge-Partington, 1890: 306.5; Haddon, 1912: figs 76 & 225; Landtman, 1927: fig. 25 (1933: fig. 52); Moore, 1984: Item 340
olive shell necklaces	<i>uraz; waraz</i>	<i>waraz</i>	-	Edge-Partington, 1890: 329.7; Haddon, 1912: pl. IX.18; Moore, 1984: Item 665
pearl shell necklaces	<i>kaura dan</i>	<i>piau mat lager</i>	-	Edge-Partington, 1890: 335.15; Haddon, 1912: fig. 49; Moore, 1984: Item 40

conus shell chest pendants	<i>dibidibi</i>	<i>dibidibi</i>	<i>bidibidi</i>	Edge-Partington, 1890: 340.7 (Haddon, 1912: fig. 67; Moore, 1984: Item 305), 344.6; Haddon, 1912: fig. 61, pls VIII & IX.19; Landtman, 1933: pl. XI; Moore, 1984: Items 53, 134 & 310-1
conus shell pendants	-	<i>o; wauri o</i>	<i>wedere ere</i>	Haddon, 1912: fig. 64 (Moore, 1984: Item 308); Moore, 1984: Item 327
shell pendants	-	-	-	Haddon, 1912: figs 59-60, pl. IX.23
Stone				
disc clubs	<i>gaba-gaba</i>	<i>gaba-gaba</i>	<i>gaba-gaba</i>	Allen & Corris, 1977: pl. 2; Edge-Partington, 1890: 436.1-2; Haddon, 1912: fig. 193 (Moore, 1984: Item 171); Landtman, 1927: fig. 34e; 1933: pls XV & XXII; Moore, 1984: Items 121 & 614-5; Allen & Corris, 1977: pl. 2
rayed clubs	<i>gaba-gaba</i>	<i>gaba-gaba</i>	<i>gaba-gaba</i>	Haddon, 1912: fig. 193 (Moore, 1984: Item 173), pls XII.2 & XIX.3-4
axes/adzes	<i>aga?</i>	<i>tulik</i>	<i>emoa; emoa-iobo</i>	Haddon, 1912: fig. 161; Landtman, 1927: fig. 36; 1933: pl. 15
Teeth Ornaments				
dog teeth	<i>umaidanga</i>	<i>susueri; seserig</i>	<i>genao; gesa</i>	Edge-Partington, 1890: 339.10; Haddon, 1912: pl. IX.4 (Moore, 1984: Item 75), pl. IX.18 (Moore, 1984: Item 300); Landtman, 1933: pl. XI; Moore, 1984: Items 51 & 388
wallaby teeth	<i>pik uru</i>	-	<i>uramol?</i>	Edge-Partington, 1890: 339.11; Haddon, 1912: pl. IX.5; Landtman, 1927: figs 11 & 19f, pl. XI
boar tusks	<i>gi; gidang</i>	<i>gir pul; suaud</i>	<i>giri; boromo-kok ai</i>	Edge-Partington, 1890: 339.3 & 340.4-6; Haddon, 1912: figs 68-9, 71, 75 & 206-7, pls VII.5 & XII.4; Landtman, 1933: pl. 12; Moore, 1984: Items 147-8, 389, 400 & 448
Turtle Shell				
masks	<i>buk</i>	-	<i>karara</i>	Edge-Partington, 1890: 327 (Haddon, 1904: pl. XVIII.2; Landtman, 1927: fig. 100), 329.1; Haddon, 1912: pl. XXXIV (Landtman, 1927: fig. 99; Moore, 1984: Item 139), pl. XXXV.1 (Moore, 1984: Item 140), pl. XXXVIII.1-2; Moore, 1984: Items 141-2 & 186

have been recorded: 'one large size armband being the price of a full equipped canoe' (McFarlane, 1888: 122); 'one of these ornaments forms a considerable part of the price of a bride or a canoe' (Landtman, 1927: 26); Jiear (1905: 70) says that a large canoe could be purchased with two large armbands. When a canoe broke up, an armband was often sent to the seller along with a piece of the canoe (see Teeth & Bone below), as the conventional last instalment (Landtman, 1927: 214).

Haddon stated that a shell necklace was equal in value to a canoe (1912: 41) and elsewhere noted that one was of equivalent value to a cone shell armband and either could have bought a wife. He stated that chest pendants were often exchange media (1904: 293) and 'even more than most ornaments except the waiwi ... served also as a kind of currency' and 'ten or twelve dibidibi of fair size would be equal to a large shell armband, ... to a canoe, to a dugong harpoon, or to a wife' (1912: 44). Landtman (1933: 41) recorded their widespread use as ornaments amongst the Kiwai.

The only other shell ornament commonly used was the pearl shell chest crescent (*danga mari*), but it appears not to have figured greatly in the canoe traffic, and was noted only once in relation to myth (Haddon, 1904: 296). Nevertheless, it seems to have been in great demand with Landtman (1927: 25; 1933: 40) describing it as 'characteristic' amongst the Kiwai and eastwards

as far as the Purari delta in the Papuan Gulf. These ornaments were also exchanged for canoes in the delta of the Bamu River (Jiear, 1905: 70). Furthermore, Brierly (Moore, 1979: 210-211) described the exchange of chest pendants by the Badu people for particularly large pearl oyster shells (*mari*), (from which the chest crescents were made), from the Murulag group. In the absence of specific information on exchange value, and their widespread use particularly in Papua, it is considered that chest crescents might have formed one of the gifts accompanying the canoe traffic, or perhaps were used in reciprocations.

Baler shell (*alup*) 'basins' figured in the formal canoe traffic network. In a transaction between Mabuig and Saibai, Wilkin (cited in Haddon, 1904: 297) noted that 2 of these 'basins' accompanied the initial instalment for a canoe, and in a Badu-Saibai exchange 20 were paid for a canoe. This transaction also included a trumpet shell, an olive shell necklace and a Dugong harpoon (*wap*).

Although the literature does not mention the shell groin shield as an item of exchange, its importance in both Torres Strait and PNG suggests that it may well have been part of the exchange system. In Torres Strait it was part of a warrior's attire (Haddon, 1904: 304) and was worn by Kiwai males after puberty (Landtman, 1927: 237; 1933: 33). Like chest crescents, groin shields may have accompanied other exchange agreements as gifts.

Nose ornaments were mentioned by Haddon (1904: 295) as one of the main Torres Strait exports to PNG, although not necessarily connected with canoe traffic. Landtman (1927: 214) made no specific mention but included them by noting that 'all kinds of shell' were imported from the Torres Strait islands. They may also have been gift items.

It is likely that a variety of shell objects was used in exchanges outside the canoe traffic, though evidence is sparse. Jear (1905: 70) noted that in a Kiwai expedition to Mawata a large pandanus mat and woman's grass skirt could be exchanged for a baler shell basin or a trumpet shell.

HARPOONS. According to Landtman (1927: 215), harpoons (*wap*) used in hunting Dugong or turtle 'constituted one of the principle [sic] articles delivered by the Torres Straits islanders' to coastal Papuans (see also Beaver, 1920: 20). Murulag was especially noted for these shafts, although they were also made on Mua, Badu and Mabuia (Haddon, 1890: 339; 1904: 294).

One or more Dugong harpoons appear to have accompanied most canoe traffic transactions (Haddon, 1904: 297; Landtman, 1927: 211) and four were sufficient for the finest canoe (Haddon, 1904: 297). Middlemen (intermediaries) usually appropriated harpoons as gifts before reaching the people on the Fly, as Mawata appears to have been the eastern-most limit of their use (Landtman, 1927: 126, 215).

TEETH AND BONE. Boar tusks and dog and wallaby teeth crossed Torres Strait as part of the trade at Saibai. Boar tusks (*ge*) were certainly known in the Western and Top Western Islands, including Saibai (Haddon, 1912: 203), but do not appear to have been in general use nor were they a valued ornament as in the Eastern Islands (Haddon, 1935: 296).

Necklaces of dog teeth (*umaidanga*) (Haddon, 1904: 230) were a Papuan product (Haddon, 1912: 35; 1935: 296; but see Beaver, 1920: 75 who says there is a small trade from the Torres Strait) and were among the most highly prized ornaments in both PNG and the Strait (Haddon, 1904: 293). They could 'form a considerable part of the price of a canoe or of the gifts given in exchange for a bride' (Landtman, 1933: 41). Jear (1905: 70) mentioned that a *Melo* shell and a dog teeth necklace were sufficient for a small canoe and Haddon (1904: 293) included them among the items of highest value, along with an olive

shell necklace, a cone shell armlet, a Dugong harpoon and a canoe, all of which were also equivalent in value to a wife. Like shell armlets, a necklace of dog teeth was included in the final payment for a canoe (Landtman, 1927: 214).

Other less valued teeth were also items of exchange. These included wallaby teeth necklaces made in PNG (Haddon, 1912: 35; Landtman, 1927: 26) and tiger shark teeth arranged as a fighting sword (Haddon, 1935: 79; Landtman, 1927: 33; 1933: 57). It is unclear whether the latter were made in the Western Islands (Landtman, 1927: 33).

The only bone known to reach the islands from PNG was the lower leg bone of the cassowary, split longitudinally, shaped like a spatula (*sok*) and used primarily to scrape coconuts or, sharply pointed, used as a dagger (Haddon, 1912: 127; Landtman, 1927: 33; 1933: 57). The source(s) of other bone artefacts is unknown. These include harpoon heads (Macgillivray, 1852, II: 24), arrow points (Haddon, 1912: 182) and ear (Stokes, 1846: 257) and nose ornaments (Lee, 1920: 180). These objects are not mentioned in any exchange contexts but quite probably accompanied exchanges within canoe traffic and reciprocations.

STONE. The stone artefacts associated with trade were axes and clubs. Landtman (1927: 33-34) considered that such artefacts all came from the islands (see also Haddon, 1890: 334; 1912: 191). At Mawata, Landtman was told that the Islanders dived for the stone, which would be feasible as the appropriate geological resources are present. Haddon was equivocal about a Torres Strait island source. In reporting Wilkins' testimony that Dauan was a major source, he noted parenthetically that he thought all ground stone artefacts came from PNG (1904: 294). However, he later admitted 'there may have been a factory on Dauan' (1912: 191). Ground stone artefacts recovered archaeologically from Mabuia and Dauan Islands, and from the Oriomo Plateau, provide petrographic evidence for a Torres Strait island origin. The identification of a quarry sites on Dauan makes it a likely source (Vanderwal, 1973: 182; McNiven & von Gnielinski, this volume; McNiven, von Gnielinski & Quinnell, this volume).

Equivocation in the literature, compounded by the archaeological evidence, may be explained by what McNiven calls the '*gabagaba* paradox' (McNiven, 1998: 107). He convincingly shows that clubs were locally produced from local material, and then asks why they are so often

described as coming from PNG. As McNiven suggests, and consistent with the scheme presented in this paper, clubs could have functioned as gifts lubricating other exchange situations and therefore observed to be travelling both north and south. This explanation has great merit, though an adze made from exotic stone of a type commonly found in New Guinea east of the Gulf of Papua was recovered from Gebar (Two Brothers Island) in the Central Strait. This find suggests a more complex scenario in which some stone tools, from different sources, flowed both ways across the Strait (Vanderwal, 1973: 178-82).

Clubs (*gabagaba*) were represented mostly by two types, the most common being 'perforated disc of hard stone, finely polished and brought to a sharp edge, which is mounted usually on a short length of rattan' (Haddon, 1901: 115; see also Landtman, 1927: 31; 1933: 47; Macgillivray, 1852, II: 19). The second type was a polished star-shaped or rayed club, similarly hafted (Haddon, 1901: 115; Landtman, 1927: 31). Clubs were extremely valuable, being the equivalent of a Dugong harpoon or shell armet (Haddon, 1904: 294). The value attached to these weapons suggests that they would have been important items in the canoe traffic, though this is nowhere stated explicitly, perhaps due to the *gabagaba* paradox referred to above. The distribution of clubs has been plotted for large parts of Papua New Guinea (Haddon, 1900; 1935: 76).

During Haddon's time, stone axes were unknown (Haddon, 1912: 125-126) and any memory of them had disappeared (Landtman, 1933: 45). Yet the archaeological evidence from Dauan and Gebar Islands clearly points to both manufacture and exchange in the past. Landtman (1927: 34; 1933: 46) was able to acquire a number of stone blades from the Kiwai, including large ones over 50cm long, 'a single one forming a considerable part of the price of a bride or a canoe' (Landtman, 1927: 34). The smaller ones were hafted so as to enable the blade to be turned for use as an axe or an adze (Landtman, 1933: 45; McNiven, von Gnielinski & Quinnell, this volume).

DRUMS. Two types of drum were known in Torres Strait, both of which were made in PNG and exported to the islands (Haddon, 1894: 39). Both Haddon (1935: 314) and Landtman (1933: 68) identified the *warup* as the older and more original, in tradition said to have originated on Saibai. This drum is hourglass shaped, without a handle and the open end represents a gaping

mouth (Moore, 1979: 101; Haddon, 1894: 40; 1912: 78; Landtman, 1927: 47).

In the time of Haddon and Landtman only the second type, *buruburu*, was made in Mawata. The *buruburu* was said to have originated in Budji and was 'more cylindrical than the *warup*, both ends are circular, and it is provided with a handle cut out of the same piece of wood' (Landtman, 1933: 68). Similar *buruburu* style drums were made and used widely along the coast as far as Merauke in West Papua.

Drums appear to have been valued items, with particularly fine ones being given names (Landtman, 1927: 46) and exchanged for similarly valuable products, but nowhere are exchange values mentioned. Haddon (1912: 27-28; 1904: 295) noted that all but the poorest drums were imported from PNG. The hourglass drum was mentioned several times by Brierly (Moore, 1979: 233) and he referred once to its exchange by Torres Strait Islanders. Drums were also exchanged within PNG. Landtman mentioned that the Mawata people removed the decoration from the cylindrical drums and applied their own (1933: 68).

ARROWS. All arrows used by Torres Strait Islanders were stated to have been PNG imports (Haddon, 1890: 330; 1894: 46; 1912: 175; Beaver, 1920: 75) but the bows appear to have been locally made (Allen & Corris, 1977: 33; Jukes, 1847, I: 179; Macgillivray, 1852, II: 17; but see also Haddon, 1904: 295).

Both Haddon (1912: 175-190) and Landtman (1927: 28-32; 1933: 50-5) devoted considerable attention to the description and classification of arrows; suffice it to say that there are arrows with wooden, bamboo, bone and cassowary claw points (Landtman, 1927: 28). Arrows of similar types occurred in the Trans-Fly area (Landtman, 1933: 49) suggesting active use as reciprocations and/or gifts. Landtman made the comment:

In very few instances only, articles seem to be manufactured for the purpose of trading. This seems to be the case for instance of the beautifully painted arrows typical of Budji ... One finds at Budji great numbers of new arrows of the local type kept for barter in large bundles (1933: 10).

Arrows are not recorded as important items in canoe traffic, but there is no doubt they were much sought after for hunting and warfare (Haddon, 1904: 295; 1912: 173). It is, therefore, highly likely that their distribution was effected either through reciprocations or as gifts in the exchange of valuables. The Badu people, for example, are recorded as exchanging bows and

arrows with people on Murulag (Moore, 1979: 204).

CEREMONIAL. Many of the ceremonial activities in Torres Strait and PNG required the use of masks and headdresses, some of the components of which are known to have crossed into Torres Strait via Saibai. The most elaborate were masks (*buk*) used in a ceremony variously known as *horiomo* in PNG (Landtman, 1927: 327) and *waiitutu* in the Strait (Haddon, 1904: 342). Their shape combined a representation of elements of a crocodile and a fish (Haddon, 1904: 324-41; Landtman, 1927: 339). They were often made entirely of turtleshell and decorated with cassowary feathers (Landtman, 1927: 339; Haddon, 1901: 113; 1912: 303). The ceremony was said to have originated at Daru and spread through the Torres Strait islands as well as along the coast of PNG. Haddon (1904: 342) witnessed such a ceremony on Thursday Island. The turtleshell required was locally available but the cassowary feathers must have come from PNG (Haddon, 1904: 295) and of course, vice versa for masks made in PNG. Other Torres Strait decorations, dance and ceremonial items often featured cassowary or bird of paradise feathers (Haddon, 1904: 295; 1912: 34, 36-37). Still another type of dance headdress (*deri*) [*dheri/dari*] made of a species of rattan and combining cassowary, bird of paradise, heron or other feathers (Moore, 1979: 204) was thought by Haddon (1912: 39; see also Landtman, 1933: 38) to have been made in PNG and brought to the islands.

TROPHY HEADS. Headhunting was an important activity in both the Torres Strait and PNG (Haddon, 1904: 298; 1912: 199; Landtman, 1927: 148). Many of the trophy heads crossing the Torres Strait did so still dressed in flesh and came particularly from inland PNG (Gill, 1876: 207), that is from areas outside the exchange network. Once prepared (Haddon, 1901: 107; Wilkin in Haddon, 1904: 305), however, the skulls could be exchanged within the network (Gill, 1876: 207). It was necessary for a young man to have skulls for marriage and Haddon (1901: 108) was told that to buy 1 would cost one canoe.

DISCUSSION AND CONCLUSIONS

The exchanges noted by various writers (Table 2) allows certain assertions to be made about the exchange network operating between PNG and the Torres Strait islands. It is important to

recognise that transactions also occurred between mainland groups on the one hand and island groups on the other.

Goods circulating in the canoe traffic, in addition to canoes, included shell armlets and necklaces, dog teeth necklaces, shell chest pendants, signal trumpets, water shells, Dugong harpoons, stone axes and trophy heads. It is obvious that the major source of wealth for the islands lay in their shell products. Of these, we have seen that armlets and necklaces were the most valuable, particularly the former that traditionally are said to have formed the final instalment for a canoe. Chest pendants, signal trumpets and water shells, though less valuable, seem generally to have accompanied the canoe traffic and may have served as gifts to intermediaries. Similarly, Dugong harpoons were presented as gifts to intermediaries if payment in other valuables was going beyond Mawata; for shorter distances these may have been primary items in the canoe traffic.

Stone artefacts, whose origins lie in both the Torres Strait and various places in inland Papua New Guinea, may have been primary goods, though the literature is ambiguous regarding this issue. Large ceremonial stone axes are known to have been involved in canoe traffic; stone clubs had value in both shell armlet and Dugong harpoon exchanges. That their involvement in canoe traffic is vague is probably explained by the replacement of the stone axe by iron hatchets and the interruption in warfare, and hence unclear recollections by informants.

Finally, there is the enigma of dog teeth necklaces, whose presence on the islands is confirmed by Torres Strait provenance museum specimens and literature references. These are said to have been made only in PNG, and they were seen as of equal value to shell armlets in the sense that both might accompany a piece of the canoe hull in final instalment. These necklaces are, however, nowhere mentioned as reciprocation valuables, which would be the logical way for them to find their way into the islands. On this basis, there is a serious temptation to provisionally include these necklaces as reciprocation objects, perhaps for shell valuables (see below).

It is noteworthy, though not directly relevant to the Western Torres Strait exchange network, that the most valuable canoe traffic goods were also used in bride wealth exchanges: shell armlets and necklaces, dog teeth necklaces, shell chest ornaments and ceremonial stone axes. These

TABLE 2. Summary of transactions within the Torres Strait exchange network. ●, ○, Double sided matrix identifies objects ● involved in specific transactions for other objects ○, referred to directly in the literature. ■, Transactions involving objects mentioned in the literature but no direct exchanges for other objects have been recorded. □, These objects are commonly found outside their area of origin but no information has been recorded on how they got there.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1 Canoes	●	○	○		○		○				○	○	○			○								○	
Shell																									
2 armlets	○	●	○		○						○						○							○	
3 necklaces	○	○	●																						
4 chest crescents				■																					
5 chest pendants	○	○			●						○											○			
6 groin shields						□																			
7 trumpets	○						●																		
8 nose ornaments								□																	
9 axes									●															○	
10 hoes										□															
11 water shells	○										●														
12 Harpoons	○	○			○							●						○						○	
Teeth necklaces																									
13 dog	○												●											○	
14 wallaby														■											
15 Boar tusks															■										
Stone																									
16 axes	○																●							○	
17 clubs		○										○						●							
18 Drums																			■						
19 Arrows																				■					
Cassowary																									
20 feathers																						■			
21 bones																						□			
22 Turtle shell																							■		
23 Bridal payments		○	○		○								○	○			○	○						●	○
24 Trophy heads	○																							○	●

exchanges, however, were most restricted and operated within cultural groups (e.g., Landtman, 1927: 244-245; Rivers, 1904).

Goods involved in reciprocations were also sometimes those of the canoe traffic, such as shell armlets in exchange for ceremonial stone axes and shell chest pendants; pendants for shell chest crescents and Dugong harpoons; shell armlets for shell necklaces; and clubs for Dugong harpoons and shell armlets.

Among the shell valuables, chest pendants are mentioned in the literature as the main item in general currency. This is perhaps shown by the single reference to their exchange for pearl oyster shells, which were the raw materials for chest crescents, important items of dress but, like groin shields, not important in their own right as exchange valuables. The only other reciprocations mentioned relate to domestic products: trumpet and water shells for mats and skirts.

There is finally a range of items that are mentioned in the context of reciprocations but for which values are not given: boar tusks, cassowary bone daggers, cassowary bone coconut scrapers, cassowary feathers, drums and arrows. Some of these, such as tusks (but perhaps not ornaments), cassowary bone and feathers and arrows (as well as shell ornaments), may perhaps be more appropriately seen as gifts.

The status of the remaining goods (Table 2) must remain uncertain. Wallaby teeth ornaments, made in PNG and present in the Torres Strait, do not appear to have been important, either as valuables in themselves or as items of dress. Shell hoes and axes, and the problematic shark teeth (not included in Table 2) may have been displaced long enough ago in the past that informants' memories were unable to provide significant information.

While many of the specific transactions dealt with in this paper are conjectural, the general

outline has been defined (Table 3). Most of these transactions took place as part of the canoe traffic and involved valuables as the primary media, accompanied by utilitarian items as gifts to intermediaries. Reciprocations are more nebulous; valuables formed an important part and may also have been accompanied by gifts.

This analysis provides the basis for further studies on the Western Torres Strait exchange network as more data are accumulated. Harris (1979: 104-106) hypothesised that certain islands, such as Mabuiaig and Dauan, might have developed a horticultural base in augmenting their strategic positions within the exchange network (cf., Barham, 2000). A crucial first step, however, is to understand how the various communities, mainland as well as island, articulated their goods in the network. There are hints in the literature that the best armlets came from Tudu (Warrior Island) (Haddon, 1904: 294) and pearl oyster shells from Murulag were especially sought. This kind of information may possibly only be derived from archaeological data. Studies of exchange in prehistoric context (e.g., Earle, 1982; Specht & White, 1978) if carried out in the Torres Strait would permit hypotheses concerning distribution and movement to be tested (McNiven, von Gnielinski & Quinnell, this volume). It might also be possible to obtain the time depth of the exchange network and to observe any changes occurring through time.

ACKNOWLEDGEMENTS

Acknowledgment is made to Anita Herle whose exhibition on the centenary of Haddon's major expedition to the Torres Strait I was able to see in Cambridge (Herle & Rouse, 1998). The Australian Institute of Aboriginal and Torres Strait Islander Studies funded the fieldwork for an archaeological survey whose results were reported largely in terms of the traditional material culture of the Strait. It is with great interest that several recent additions to the Torres Strait literature attest to a growing attention to Torres Strait (Bomford & Caughley, 1996; Mosby, 1998; Sharp, 1993 and Wilson, 1993). Thanks finally to Ian McNiven who asked me to contribute to this volume, and to my referee who provided useful suggestions.

LITERATURE CITED

ALLEN, J. 1982. Pre-contact trade in Papua New Guinea. Pp. 193-205. In May, R.J. & Nelson, H. (eds) *Melanesia: beyond diversity*. (Australian National University Press: Canberra).

TABLE 3. Canoe traffic, reciprocations and gifts in the Western Torres Strait exchange network.

	Canoe Traffic	Reciprocations	Gifts
Canoes	yes		
Brides	yes		
Trophy heads	yes		
Armlets	yes	yes	
Necklaces	yes	yes	
Chest pendants	yes	yes	
Trumpets	yes	yes	
Watershells	yes	yes	
Stone axes	yes	yes	
Stone clubs	yes	yes	
Dog teeth necklaces	yes	?	
Dugong harpoons	yes	yes	yes
Wallaby teeth necklaces		?	
Drums		?	
Boar tusks		?	?
Cassowary products		?	?
Arrows		?	?
Oyster pearl shells		?	?
Pearl shells as chest pendants		?	?
Groin shields			?
Nose ornaments			?
Shell axes			?
Shell hoes			?

ALLEN, J. & CORRIS, P. (eds) 1977. *The journal of John Sweatman*. (University of Queensland Press: St Lucia).

BARHAM, A.J. 2000. Late Holocene maritime societies in the Torres Strait Islands, northern Australia – cultural arrival or cultural emergence? Pp. 223-314. In O'Connor, S. & Veth, P. (eds) *East of Wallace's Line: studies of past and present maritime cultures of the Indo-Pacific region*. *Modern Quaternary Research in Southeast Asia* Vol. 16. (A.A. Balkema: Rotterdam).

BEAVER, W.H. 1920. *Unexplored New Guinea* (with an introduction by A.C. Haddon): a record of the travels, adventures, and experiences of a resident magistrate amongst the head-hunting savages and cannibals of the unexplored interior of New Guinea. (Seely Service: London).

BOMFORD, M. & CAUGHLEY, J. (eds) 1996. *Sustainable use of wildlife by Aboriginal peoples and Torres Strait Islanders*. (Australian Government Publishing Service: Canberra).

D'ALBERTIS, L.M. 1881. *New Guinea: what I did and what I saw*. 2 vols (2nd edition). (Sampson Low, Marsten, Searle & Rivington: London).

EARLE, T.K. 1982. Prehistoric economics and the archaeology of exchange. Pp. 1-12. In Ericson,

- J.E. & Earle, K.T. (eds) Contexts for prehistoric exchange. (Academic Press: New York).
- EDGE-PARTINGTON, J. 1890. An album of the weapons, tools, ornaments, articles of dress of the natives of the Pacific Islands. 4 vols. (J. Edge-Partington & C. Heape: Manchester).
- FLINDERS, M. 1814. A voyage to Terra Australis ... in the years 1801, 1802 and 1803 in His Majesty's Ship the Investigator. (G. & W. Nicol: London).
- GIBUMA, C. 1991. Trading friend at Mari. P. 109. In Boigu: our history and culture. (Aboriginal Studies Press: Canberra).
- GILL, W.W. 1876. Life in the Southern Isles. (Religious Tract Society: London).
- HADDON, A.C. 1890. The ethnography of the western tribes of Torres Straits. *Journal of the Anthropological Institute of Great Britain and Ireland* 19: 297-446.
1894. The decorative art of British New Guinea: a study in Papuan ethnography. *Cunningham Memoirs* 10. (Academy House: Dublin).
1900. A classification of the stone clubs of British New Guinea. *Journal of the Anthropological Institute of Great Britain and Ireland* 30: 221-250.
1901. *Headhunters: black, white and brown.* (Methuen: London).
- 1904 (ed.). Reports of the Cambridge Anthropological Expedition to Torres Straits. Vol. 5 *Sociology, magic and religion of the Western Islanders.* (Cambridge University Press: Cambridge).
- 1908 (ed.). Reports of the Cambridge Anthropological Expedition to Torres Straits. Vol. 6 *Sociology, magic and religion of the Eastern Islanders.* (Cambridge University Press: Cambridge).
- 1912 (ed.). Reports of the Cambridge Anthropological Expedition to Torres Straits. Vol. 4 *Arts and crafts.* (Cambridge University Press: Cambridge).
1914. The outrigger canoes of Torres Straits and North Queensland. Pp. 609-634. In Quiggin, E.C. (ed.) *Essays and studies presented to William Ridgeway on his 60th Birthday, 6th August 1913.* (Cambridge University Press: Cambridge).
1935. Reports of the Cambridge Anthropological Expedition to Torres Straits. Vol. 1 *General ethnography.* (Cambridge University Press: Cambridge).
1937. The canoes of Melanesia, Queensland and New Guinea. In Haddon, A.C. & Hornell, J. *Canoes of Oceania.* Vol 2. Bernice P. Bishop Museum Special Publication 28.
- HARRIS, D.R. 1977. Subsistence strategies across Torres Strait. Pp. 421-463. In Allen, J., Golson, J. & Jones, R. (eds) *Sunda and Sahul: prehistoric studies in southeast Asia, Melanesia and Australia.* (Academic Press: London).
1979. Foragers and farmers in Western Torres Strait Islands. Pp. 75-109. In Burham, P.C. & Ellen, R.F. (eds) *Social and ecological systems.* (Academic Press: London).
- HEDLEY, C. 1922. How savages use the sea shells. *Australian Museum Magazine* 1(6): 163-167.
- HERLE, A. & ROUSE, S. (eds) 1998. *Cambridge and the Torres Strait: centenary essays on the 1898 Anthropological Expedition.* (Cambridge University Press: Cambridge).
- HUGHES, I. 1977a. New Guinea stone age trade. *Terra Australis* 3. (Australian National University: Canberra).
- 1977b. The use of resources in traditional Melanesia. Pp. 28-34. In Winslow, J.H. (ed.) *The Melanesian environment.* (Australian National University Press: Canberra).
- HUXLEY, T.H. 1935. T.H. Huxley's diary of the voyage of the H.M.S. Rattlesnake. Edited from the unpublished MS. by Julian Huxley. (Chatto & Windus: London).
- JIEAR, A.H. 1905. Addendum to annual report of resident magistrate, Western Division 1904/05. *Annual Report on British New Guinea, Appendix S:* 69-71.
- JUKES, J.B. 1847. Narrative of the surveying voyage of H.M.S. Fly commanded by Captain F.P. Blackwood, R.N., in Torres Strait, New Guinea and other islands of the Eastern Archipelago during the years 1842-1846. 2 vols. (T. & W. Boone: London).
- KING, P.P. 1837. A voyage to Torres Strait in search of the survivors of the ship Charles Eaton, which was wrecked upon the Barrier Reefs, in the month of August, 1834, in his Majesty's Colonial Schooner Isabella, C.M. Lewis, commander / arranged from journal and log book of the commander by authority of His Excellency Major-General Sir Richard Bourke K.C.B., Governor of New South Wales, etc., etc., etc., by Phillip P. King. (E. H. Statham: Sydney).
- LANDTMAN, G. 1927. *The Kiwai Papuans of British New Guinea.* (Macmillan & Co: London).
1933. *Ethnographical collection from the Kiwai District of British New Guinea.* (Commission of the Antell Collection: Helsingfors).
- LAWRENCE, D. 1994. Customary exchange across Torres Strait. *Memoirs of the Queensland Museum* 34(2): 241-446.
1998. Customary exchange in the Torres Strait. *Australian Aboriginal Studies* 2: 13-25.
- LEE, I. 1920. *Captain Bligh's second voyage to the South Seas.* (Longmans Green & Co: London).
- MACGILLIVRAY, J. 1852. Narrative of the voyage of H.M.S. Rattlesnake, commanded by the late Captain Owen Staley, during the years 1846-1850: including discoveries and surveys in New Guinea, the Louisiade Archipelago, etc; to which is added the account of Mr. E.B. Kennedy's exploration of Cape York Peninsula. 2 vols. (T & W. Boone: London).
- MACGREGOR, W. 1893. Despatch reporting visit of inspection to the Western District of the possession. *British New Guinea Annual Report for 1891-92, pp. 34-38 (Appendices I & J).*
- MCCARTHY, F.D. 1939. 'Trade' in Aboriginal Australia and 'trade' relationships with Torres

- Straits, New Guinea and Malaya. *Oceania* 9: 405-438.
- MCFARLANE, S. 1888. Among the cannibals of New Guinea: being the story of the New Guinea Mission of the London Missionary Society. (Presbyterian Board of Publication and Sabbath-School Work: Philadelphia).
- MCNIVEN, I.J. 1998. Enmity and amity: reconsidering stone-headed club (*gabagaba*) procurement and trade in Torres Strait. *Oceania* 68: 94-115.
2001. Torres Strait Islanders and the maritime frontier in early colonial Australia. Pp. 175-195. In Russell, L. (ed.) *Colonial frontiers: Indigenous-European encounters in settler societies*. Studies in Imperialism Series. (Manchester University Press: Manchester).
- MATTHEW, J. 1991. Trading friends. Pp. 102-103. In *Boigu: our history and culture*. (Aboriginal Studies Press: Canberra).
- MELVILLE, H.S. n.d. [1849]. Sketches in Australia and the adjacent islands, selected from a number taken during the surveying voyage of H.M.S. 'Fly' and 'Bramble' under the command of Capt. F.P. Blackwood, R.N. during the years 1842-46. (Dickinson & Co: London).
- MOORE, D.R. 1979. Islanders and Aborigines at Cape York: an ethnographic reconstruction based on the 1848-1850 'Rattlesnake' journals of O.W. Brierly and information he obtained from Barbara Thompson. (Australian Institute of Aboriginal Studies: Canberra).
1984. The Torres Strait collections of A.C. Haddon: a descriptive catalogue. (British Museum: London).
- MOSBY, T. & ROBINSON, B. 1998. *Ilan Pasin: Torres Strait art (This is our way)*. (Cairns Regional Gallery: Cairns).
- MULVANEY, D.J. 1976. 'The chain of connection': the material evidence. Pp. 72-94. In N. Peterson (ed.) *Tribes and boundaries in Australia*. (Australian Institute of Aboriginal Studies: Canberra).
- RIVERS, W.H.R. 1904. The regulation of marriage. Pp. 233-247. In Haddon, A.C. (ed.) *Reports of the Cambridge Anthropological Expedition to Torres Strait*. Vol. V. (Cambridge University Press: Cambridge).
- SHARP, N. 1993. *Stars of Tagai: The Torres Strait Islanders*. (Aboriginal Studies Press: Canberra).
- SILLITOE, P. 1979. *Give and take: exchange in Wola Society*. (Australian National University Press: Canberra).
- SPECHT, J. & WHITE, J.P. (eds) 1978. Trade and exchange in Oceania and Australia. Special issue of *Mankind* 11(3).
- STOKES, J.L. 1846. *Discoveries in Australia: with an account of the coasts and rivers explored and surveyed during the voyage of H.M.S. Beagle in the years 1837-38-39-40-41-42-43*. (T. & W. Boone: London).
- STRATHERN, A. 1971. The rope of Moka: big men and ceremonial exchange in Mount Hagen, New Guinea. *Cambridge Studies in Social Anthropology* 4.
- VANDERWAL, R.L. 1973. The Torres Strait: protohistory and beyond. *Anthropology Museum, University of Queensland, Occasional Papers in Anthropology* 2: 157-194.
- WALLS, J.G. 1979. *Cone shells: synopsis of the living Conidae*. (TFH Publications: Hong Kong).
- WILSON, L. 1993. *Kerkar Lu: contemporary artefacts of the Torres Strait Islanders*. (Department of Education: Queensland).