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Trading valuables to foreigners in south-east New Guinea in the nineteenth century: The case of *Conus* armshells

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Abstract

This chapter examines why and how 170 valuable *Conus* armshells collected from two areas of Papua New Guinea during the nineteenth century were traded to foreigners. The different histories of European contact on the eastern Papuan South Coast and the Massim region, particularly with respect to the introduction of iron in the former area and services in the latter, had a major impact on the acquisition of these artefacts into museum collections. Armshells remain important valuables for the people of south-east New Guinea. To recognise this continued significance, Papua New Guinea gave a regional armshell name to one of its currency denominations.

Introduction

Rings made from *Conus* shell and worn on the arm, commonly called armshells, are important valuables for the villagers living on the Papuan South Coast as well as in the islands to the south-east of the New Guinea mainland, known as the Massim region, and especially communities involved in the *Kula* network (see Figures 11.1 and 11.2).

The modern state of Papua New Guinea recognises their significance by using *Toea*, a regional name for a *Conus* armshell, for a modern currency denomination (Mira 1986:29). Currently, information about these artefacts is not readily available. For instance, the Bank of Papua New Guinea's currency website (Anon. 2020) has no information about how most *Toea* were made on Mailu Island or in the Massim and then traded to the Port Moresby area. The first inaugural Mailu Island *Toea* armshell festival was held in 2016. Deveni Temu (pers. comm. 2021) reported that the festival's organisers are interested in obtaining more information about the history of armshell production. Helping to provide this information is the prime aim of this chapter.

This study is based on 170 armshells, most of which are currently held in 12 institutions, although some were lost during World War II. Around 40 of these armshells have information about where they were collected. This general lack of provenance is overcome by examining when the armshells were acquired, foreign activities at the time and what is known about the activities of the collectors.

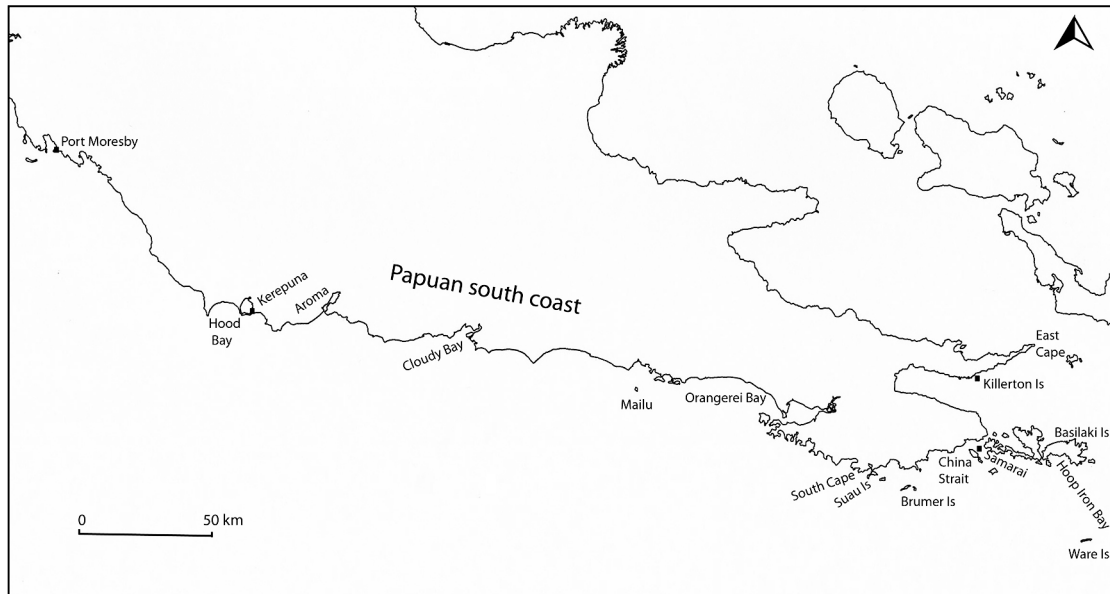


Figure 11.1: Papuan South Coast, showing places mentioned in the text.

Source: Drawn by author.

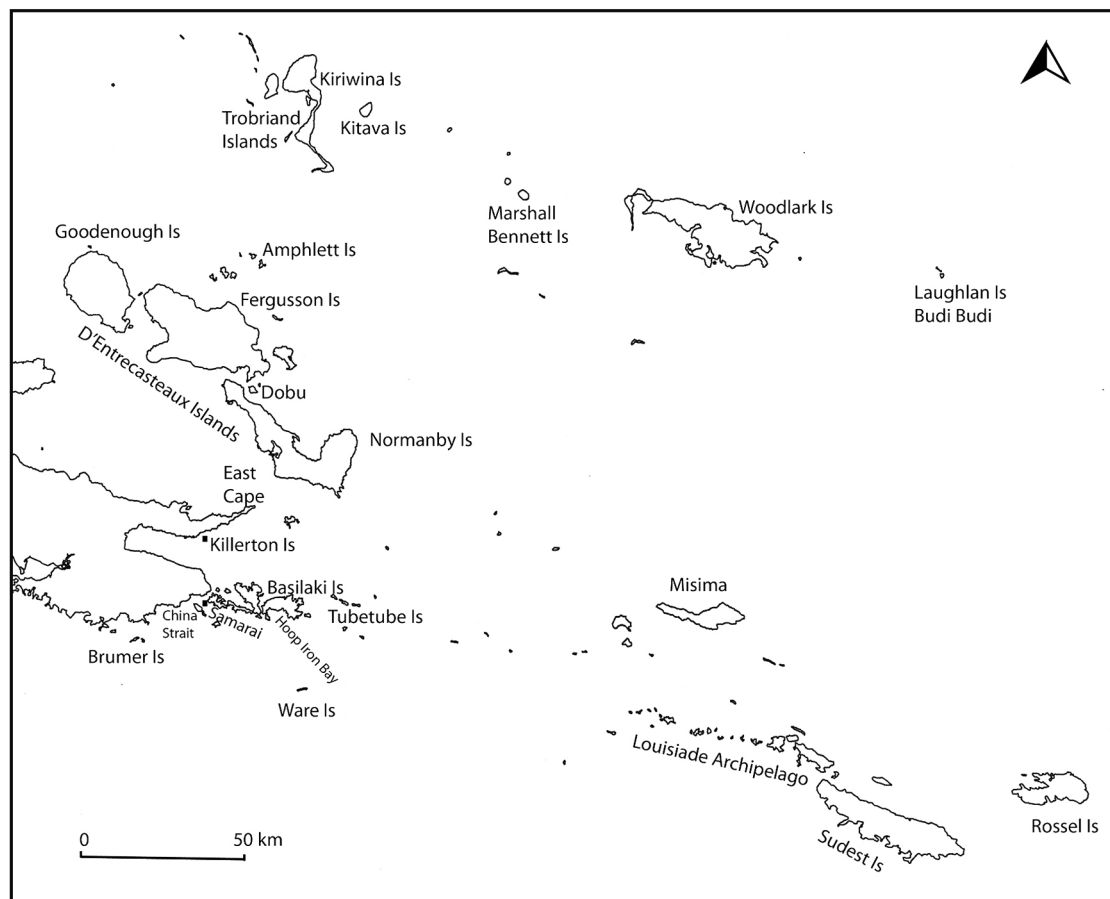


Figure 11.2: The Massim, showing places mentioned in the text.

Source: Drawn by author.

Most armshells from the eastern Papuan South Coast were collected between 1876 and 1884. By contrast, most of the armshells from the Massim were acquired during the 1890s. Although regular foreign visits to the Massim by Europeans and Americans began in the 1820s, interaction with local communities on the Papuan South Coast did not take place until the 1870s. Most of the early visitors to the Massim were searching for natural resources, such as whale oil or *bêche-de-mer*. They did not specifically seek artefacts but did bring iron to trade for provisions. By contrast, when foreigners began visiting the eastern Papuan South Coast in the 1870s, collectors and museums had become interested in acquiring curios. Again, as in the Massim, iron was the product most eagerly sought during the initial trade exchanges with foreigners on the Papuan South Coast.

Before discussing the trade in armshells to foreigners, some background information needs to be presented about the morphology, sources, variation in decoration, size and value of the armshells themselves. This information is presented in Part 1 of this chapter. Part 2 covers differences in the different contact histories experienced by villagers in the Massim compared to those on the eastern Papuan South Coast, with an emphasis on the importance of iron in these exchanges. Part 3 examines the collectors who procured the armshells that are now in museum collections. Part 4 considers the different acquisition agencies, including ships' crews, traders, scientists, missionaries and government officers. Part 5 then looks at the geographical variation in armshell decoration in south-east New Guinea. The conclusion considers what can be learned from armshell collections about Papuan social connections and their interactions with foreigners.

Part 1: Morphology, sources, variation in decoration, sizes and value

Conus armshells are made from the wider upper body of the shell of *Conus leopardus* and *C. litteratus* shells. The World Register of Marine Species gives a maximum length of 220 mm for *C. leopardus* and 170 mm for *C. litteratus*, though some *C. leopardus* shells have been reported up to 250 mm in length (Cernohorsky 1978:129). There are two types of armshells: most are made from a complete ring of *Conus* shell, whereas some are made by joined segments of *Conus* shell.

Ring armshells

Armshells made from the outer whorl of large cone shells are illustrated in Figure 11.3. In the Port Moresby region on the Papuan South Coast, these armshells are known as *Toea* and are a required component in Motuan brideprice payments. In 1876 such a payment was 10 armshells, but by the early 1900s the number required was up to 40 (Seligman 1910:77; Turner 1878:479). In their annual trading expedition to the Papuan Gulf, armshells were also one of the products the Motu took with them to pay for sago and canoe hulls. In 1885, one trading canoe (*Lakatoi*) is recorded as taking 57 *Toea* (Barton 1910:114). If Barton's number of 57 is representative of those taken on one *Lakatoi*, the four *Lakatoi* that went to the Papuan Gulf in 1885 could have been carrying some 230 *Toea* altogether. Clearly armshells were a very important cultural asset. In 1902, Barton (1904) reports, Motuans were willing to pay two pounds sterling for a large armshell. This was a lot of money, as the annual salary at that time for a village constable was only one pound. Some 15 years later, armshells in Port Moresby were attaining prices of up to 30 pounds, far more than what was paid for the same artefact amongst the Massim (Malinowski 1922:86).

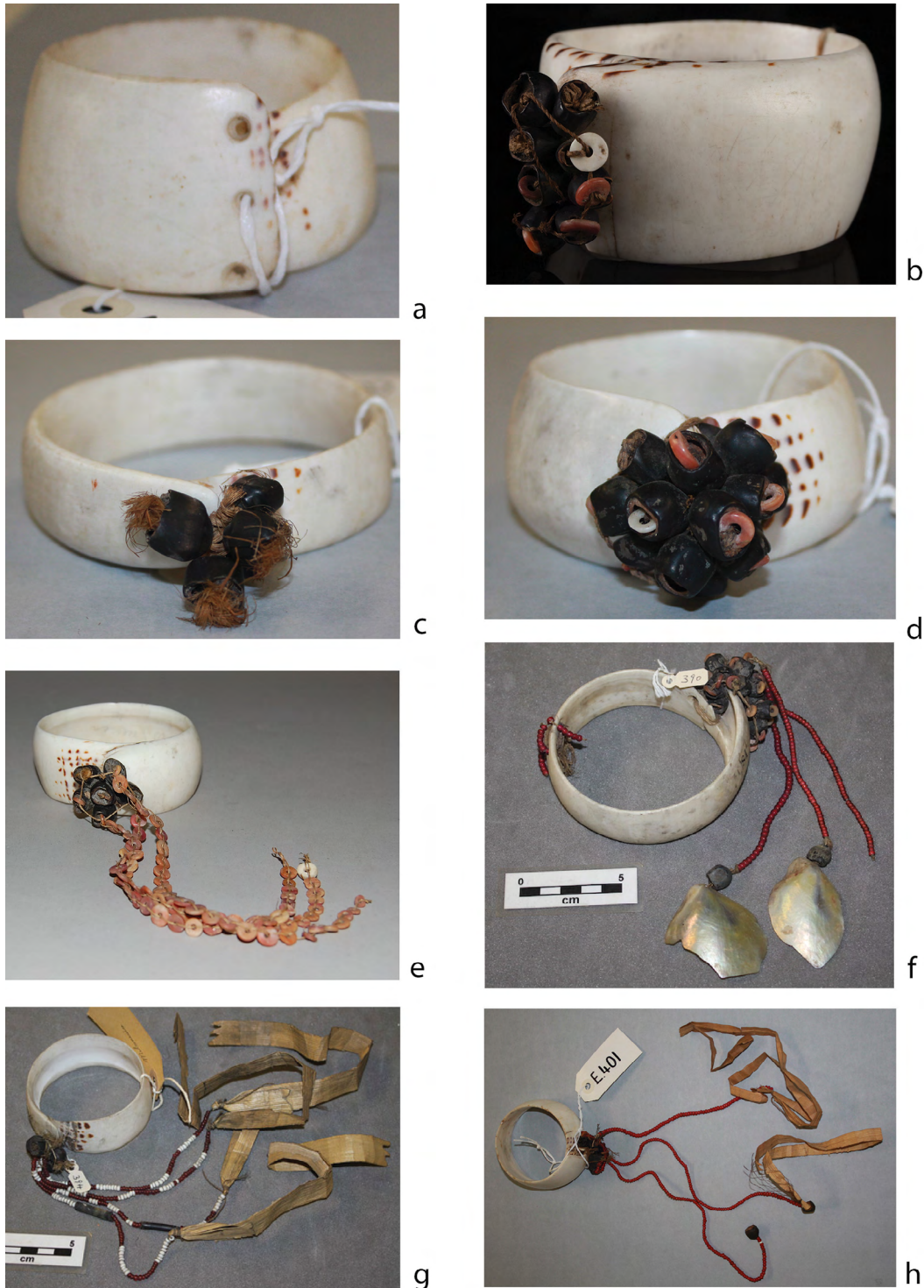


Figure 11.3: Ring armshells.

Notes: (a) A15906-2, Australian Museum, 1883, Mason Brothers artefact dealers in Sydney, max. diameter 81 mm, internal diameter 65 mm, decoration 3 holes; (b) 11421, Auckland War Memorial Museum, 1879, collected by Andrew Goldie at Pure (?Pari) in Port Moresby, Toea, max. external diameter 80 mm, decoration rosette of banana seeds, some with inserted shell beads; (c) A15913, Australian Museum, 1883, Mason Brothers artefact dealers in Sydney, max. external diameter 85 mm, internal diameter 66 mm, decoration 4 banana seeds with red fibre inserts; (d) A15903, Australian Museum, 1883, Mason Brothers artefact dealers in Sydney, max. external diameter 85 mm,

internal diameter 65 mm, decoration rosette of banana seeds with inserted shell beads; (e) Oc1980, Q.226, British Museum, 1876, Rev. S. MacFarlane, max. external diameter 80 mm, decoration rosette of banana seeds with inserted shell beads, 3 strings of shell beads; (f) ABDUA 390, University of Aberdeen Museums, 1898, Sir William MacGregor collection, max. external diameter 99 mm, internal diameter 85 mm, 2 joins one at lip, the other on circumference, decoration rosette of banana seeds with inserted shell beads, 3 strings of glass trade beads, pendants: 2 banana seeds and 2 pearl shells; (g) ABDUA 394, University of Aberdeen Museums, 1898, Sir William MacGregor collection, max. external diameter 74 mm, internal diameter 67 mm, decoration rosette of 3 banana seeds, no inserts, 4 strings of glass trade beads, including 2 black organic tubular beads and pandanus streamers; (h) E401, Australian Museum, 1887, Rev. W. Wyatt Gill, max. external diameter 87 mm, internal diameter 68 mm, rosette of banana seeds with some shell bead inserts, 3 strings of glass trade beads, pendants: 2 banana seeds, 2 pandanus streamers.

Sources: (a) Copyright: The Australian Museum, photo Robin Torrence; (b) Copyright: The Auckland War Memorial Museum; (c–d) Copyright: The Australian Museum, photo Robin Torrence; (e) Copyright: The Trustees of the British Museum; (f–g) Copyright: University of Aberdeen Museums, photo Robin Torrence; (h) Copyright: The Australian Museum, photo Robin Torrence. These photographs are shared under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) licence.



Figure 11.4: Brumer Islanders dancing on the deck of HMS Rattlesnake on 28 August 1849. *Conus* armshells are worn above the elbows of some of the dancers.

Source: Scene by marine artist Oswald Brierly, held by the Mitchell Library, State Library of New South Wales.

In the Massim, ring armshells were among the valuables used in peacemaking, marriage, mortuary and other payments (Macintyre 1983a; Weiner 1988). In some areas they were often worn as an arm ornament (see Figure 11.4). In the *Kula* exchange network, armshells (*Mwali*) were once secondary in value to *Doga* (circular boar's tusk pendants). In the late nineteenth and early twentieth centuries armshells came to replace circular boar's tusks as the primary valuable, being exchanged for necklaces (*Soulava*) in the *Kula* (Malinowski 1922; Swadling and Bence 2016). Malinowski used the Kiriwina names for these valuables in his book *Argonauts of the Western Pacific*, but other terms are used elsewhere in the *Kula* ring. For ease of discussion, the term *Mwali* is also used here to refer to a *Kula* armshell valuable.

Multi-segmented armshells

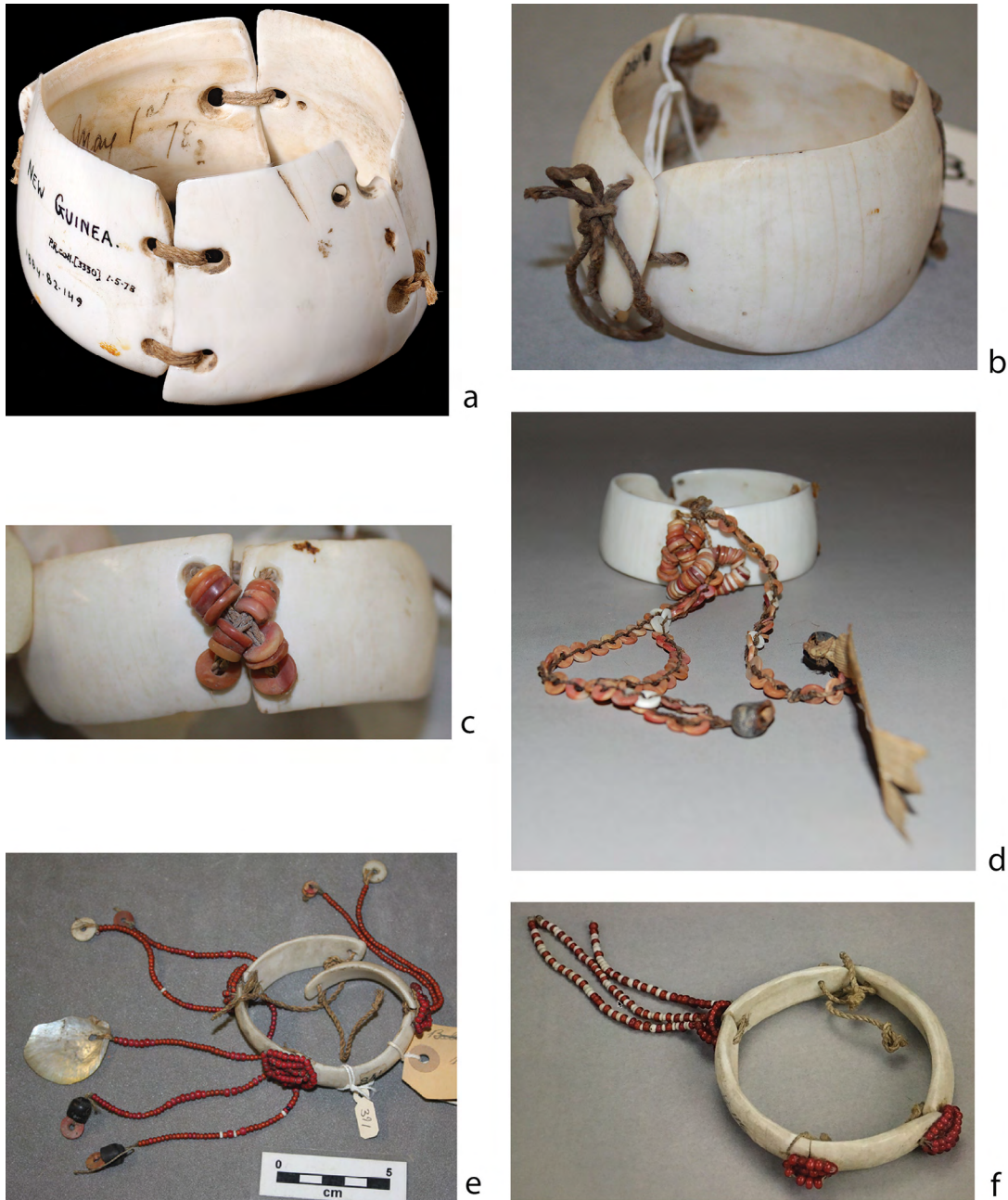


Figure 11.5: Multiple segmented armshells.

Notes: (a) 1884.82.149, Pitt Rivers Museum, prior to 1878, max. external diameter 70 mm, 4 segments; (b) B1907, Australian Museum, 1884, H.I. Renwick, max external diameter 73 mm, internal diameter 60 mm, 3 segments; (c) B1910, Australian Museum, 1884, H.I. Renwick, max. external diameter 67 mm, internal diameter 64 mm, 3 segments, decoration cross of red shell beads on one join, banana seed off a cord on another; (d) Oc1886, 1016.13, British Museum, 1886, Captain W.H. Henderson, max. external diameter 80 mm, decoration rosette of shell beads, 3 strings of shell beads, pendants: 2 banana seeds, one pandanus streamer; (e) ABDUA 391, University of Aberdeen Museums, 1898, Sir William MacGregor collection, max. external diameter 82 mm, 4 segments, rosettes of glass trade beads at joins, 7 glass trade bead strings, pendants: 2 banana seeds, 6 shell beads, 1 pearl shell; (f) H0136442, National Museum of Ethnology, Osaka, Rev. George Brown, from Budi Budi, Laughlan Islands, max. external diameter 79 mm, 4 segments, rosettes of glass trade beads at 3 joins, 3 strings of glass trade beads from 1 rosette.

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These are less common and are usually made of three to four, or occasionally more, segments (see Figure 11.5). Almost all examples have been collected in the Massim. Broad multi-segmented arm ornaments seem to be restricted to the southern Massim, and to early collections. The large examples include those deposited at Pitt Rivers Museum by an unknown collector, by H.J. Renwick at the Australian Museum and by an ethnographic example on Rossel Island (Armstrong 1928). Other examples are narrower. Malinowski collected multi-segmented armshells in the Trobriands, and his collection notes record that the local name is *Nuripuapua* (Norick 1976). Some are configured as *Mwali*, but Malinowski makes no mention of them in his 1922 ethnography *Argonauts of the Western Pacific*. In terms of numbers, most examples of multi-segmented armshells in museum collections come from Budi Budi (Laughlan Islands) and the Trobriand Islands.

Despite being more difficult and time-consuming to make, multi-segmented armshells are not as valuable as ring armshells. C. Salerio, an Italian missionary on Woodlark Island from 1852 to 1855, found those made from segments were of less value and on this island were used by women (Affleck 1981). It is currently not known whether there is a link between the multi-segmented armshells of the Massim and those that are considered markers for Lapita (Langley et al. 2019). It is possible that there may be some continuity as Late Lapita sites have been found in the Massim (Shaw et al. 2020).

Source areas for *Conus* shells in south-east New Guinea and the location of manufacturing communities

In the northern Massim, *Conus* shells are obtained from the reefs off western Kiriwina in the Trobriand Islands and off south-east Woodlark Island. To the south they are obtained from reefs in the Louisiade Archipelago, as well as from the barrier reef system that extends from near Sudest eastwards along the Papuan South Coast as far as Aroma. There was limited *Conus* fishing in the Port Moresby region.

In the Massim, ring armshells are produced in the Trobriand and Woodlark islands, on Ware and elsewhere in the Louisiades. In the Trobriands some villages specialise in the fishing and making of armshells. Both the Kavataria and Kaileuna (Kayleula) communities in the Trobriands fished for cone shells to make armshells prior to the commencement of the pearling industry in 1892. By 1915 the Kavataria community was completely absorbed by the pearling industry and had ceased to produce armshells. On Woodlark, armshells are made from *Conus* specimens found when carrying out other activities. Armshells from the Louisiade Archipelago were traded via Ware islanders to Tubetube and Misima, thence onto Woodlark (Belshaw 1955:25; Damon 1980:284; Lepowsky 1983:474–475; Malinowski 1922:502–504; Malinowski 1988; Seligman 1910; Shaw and Langley 2017; Swadling and Bence 2016).

On the Papuan South Coast, ring armshells are made by the Mailu, who trade them to the Aroma to their west, as well as other armshells that originate from the *Kula* network. The armshells then move through exchange relationships down the line, by which means they reach Port Moresby and subsequently the Papuan Gulf (Malinowski 1988; Saville 1926; Seligman 1910). The supply from Mailu and the *Kula* region was supplemented by limited manufacture at Boera, a Motu village west of Port Moresby (Oram 1982:13). Malinowski (1922:481) observed that multi-segmented armshells are imported into the Trobriands via Kitava from the smaller islands.

Armshell decoration in the late nineteenth and early twentieth centuries

Armshells are not always decorated. Museum collections made in the late nineteenth century, from both the Massim and the Papuan South Coast, indicate that many armshells were traded without being decorated.

The decorating of armshells with rosettes of banana seeds with inserted shell beads was formerly done both in the Massim and at Mailu. An armshell decorated in this way is illustrated on the two-kina banknote. The armshell shown came from Milne Bay Province (Mira 1986:145).

In 1914 when the Mailu produced an armshell, they also bored holes and attached a banana seed rosette with shell bead inserts (Malinowski 1988:165). In the Trobriands, *Conus* were fished and made into armshells, but not decorated. Decoration was applied when the armshells reached Dobu. The Dobuans received new *Conus* armshells as *Kula* gifts, either directly from the Trobriands or through the Amphletts. Once received, the Dobuans bored holes in the armshell's lip. This allowed wild, black banana seeds with inserted shell beads to be attached (Malinowski 1922:503).

In the late nineteenth and early twentieth centuries, *Kula* exchange valuables (*Mwali*) not only had rosettes of banana seeds with inserted beads but also other decorations to make them more enticing. These additions included strings of beads, shell pendants and pandanus streamers. Other less common configurations included rosettes made solely with shell beads or strings of beads.

Both the nature of artefact assemblages as well as comments by observers from the 1870s indicate that Port Moresby's shell bead industry was in decline. Octavius Stone, who arrived there in 1875 and stayed for some months, reports that some men and women wore short strings of shell beads as ear decoration, but double and treble string red shell bead (*Ageva*) necklaces were very rare. The brideprice paid for the daughter on one of the principal chiefs at (Tanapata) Hanuabada did not include such a necklace (Stone 1879:8–10).

Stone, Otto Finsch and members of the Cooke Daniels Expedition were only able to acquire a few beads when they visited Tatana, the renowned shell bead-making village, between 1875 and 1903 (Swadling and Bence 2016). The diminished shell bead supply impacted on the decoration applied to shell armshells in the Port Moresby region (see Tables 11.2 and 11.3, later in the chapter). The two armshells that Andrew Goldie collected from 'Pure' (perhaps Pari?) in Port Moresby in 1879, are decorated with eight banana seeds, with four red and one white inserted shell beads (see Figure 11.3b). Other unprovenanced armshells collected in the 1870s and early 1880s from the South Coast, probably from the Port Moresby region, have rosettes of banana seeds, but the seeds lack shell bead inserts. One provenanced example is the armshell that Otto Finsch acquired at Ihli, Hood Bay in the Port Moresby region in 1882 (Finsch 1887). It has an external diameter of 80 mm, eight banana seeds, but no shell bead inserts. Another armshell now in the Australian Museum collection has red fibre inserted in the banana seeds presumably as a replacement for shell beads (see Figure 11.3c).

Armshell sizes and value

An armshell's size can be assessed by using either its maximum external diameter, or preferably, the internal diameter that fits over the arm. The Mailu increased the internal diameter by further grinding away the inside of armshells (Malinowski 1988:264–265, Plate 28; Saville 1926:154–155). Both diameters have been used by museum catalogues and reported in the literature. A useful way to compare these measurements is to plot them as shown in Figure 11.6.

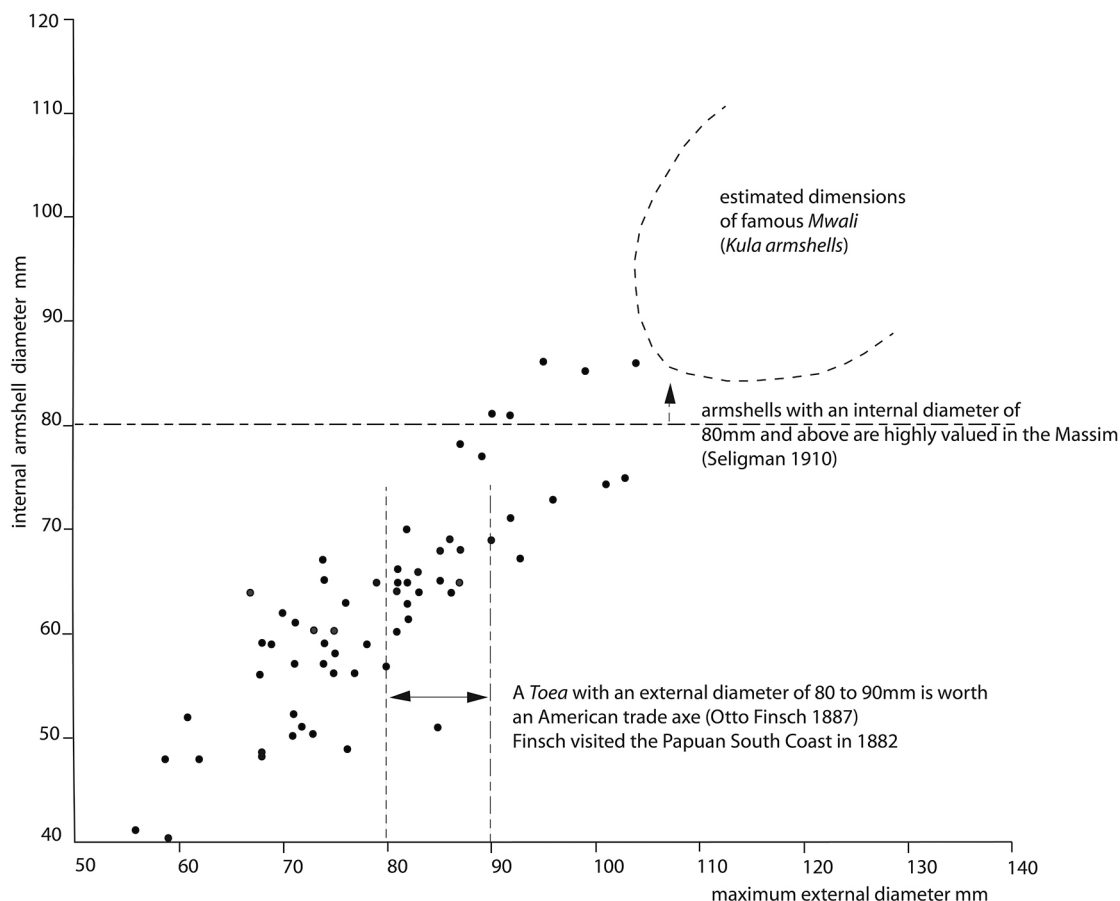


Figure 11.6: The cultural valuation of armshells differed between the Massim and the Papuan South Coast.

Notes: This reflects the predominant use of the larger *Conus leopardus* in the northern Massim and the smaller *C. litteratus* in the southern Massim and on the Papuan South Coast.

Source: Drawn by author.

Naturally larger *Conus leopardus* have the potential to produce wider diameters than those of the smaller species, *C. litteratus*. In the Massim, armshells with an internal diameter of 80 mm are highly valued (Seligman 1910:513–514), whereas smaller armshells are found in the Louisiades and on the Papuan South Coast. In 1882 Otto Finsch found that highly valued armshells on the South Coast had an external diameter of 80 to 90 mm (Finsch 1887:154–155). The difference between the external and internal diameters is evident in Figure 11.6.

In the *Kula* region of the Massim, armshells large enough to fit over the upper arm are considered the most valuable. Famous *Mwali* have a personal name and history. Documented examples include *Nimoa*, which has an external diameter of 140 mm, seen at Tubetube (Macintyre 1983a:112) and *Nimov* with an external diameter of 113 mm, recorded at Woodlark (Bickler 1998:355). At the other end of the *Mwali* size range are very small arm shells which are used by young men entering *Kula* relationships. They provide something to *Kula* especially when larger armshells are scarce (Campbell 1983:237–240). Museum collections indicate that the internal diameters of these smaller armshells range from 45 to 65 mm (see Figure 11.6).

Part 2: The impact of iron on contact histories

The Massim

Iron was introduced to the northern Massim by whalers from the late 1820s. During their voyages of six months or more, whalers required enough firewood to boil whale blubber down into oil. They also needed water and fresh provisions. An account of a shore visit by whalers to an island in the Bismarck Archipelago mentions that the boats had to return to their ship when all the iron supplies ran out (Gray 1989:54). Supplying tomahawks would have sped up the provision of firewood, and in the case of Kiriwina and Woodlark Island iron would also have been traded for yams.

The *Woodlark*, captained by George Grimes, is the first whaler recorded in the northern Massim. Grimes named Woodlark Island during his ca 1826 to 11 June 1827 voyage out of Sydney. The *Woodlark*, as well as other whalers such as the *Marshall Bennett*, made subsequent visits to the northern Massim. *The Shipping Gazette* and *Sydney General Trade List of 1851* note that the deep water off the north coast of Woodlark Island gave whalers a safe anchorage for acquiring wood and fresh provisions. Another favoured location was Cape Dennis at the northern tip of Kiriwina. It was known in London and the United States that whalers could trade hoop iron for plenty of yams at Cape Dennis. In October 1836, Captain R.L. Hunter of the *Marshall Bennett* reported that Trobrianders there waded out to their whaleboats with baskets of yams to exchange for hoop iron. Clearly, the islanders were confident and familiar with these kinds of interactions (Hunter 1939). Visits by whalers started to decline in the 1860s and only a few, such as the *Avola*, came in the 1870s (Anon. 1839, 1851:231, 1966; Gray 1989; Laracy 2010; Moore 2003:118).

The Catholic Mission on Woodlark Island (1847–56), passing ships, including those on Admiralty surveys, and wrecked ships provided other sources of iron. *Mnoumnou* (iron) was the first Muruan word missionaries heard on their arrival at Woodlark (Moore 2003:119, 123). The missionaries on Woodlark found that villagers were more interested in acquiring material goods than spiritual teaching (Laracy 2010:143; Salerio et al. 1983).

Iron was salvaged from wrecked ships including the Sydney whaler *Mary*, wrecked in 1841 in the Laughlan group (Budi Budi); the island trader *Gazelle* at the entrance to Guasopa Harbour at Woodlark Island in 1855 and the *Saint Paul* on the north coast of Rossel Island in 1858. Iron from these wrecked ships, as well as the trade iron from whalers, missionaries and other foreign visitors resulted in traditional stone tools being replaced by iron ones. By 1870 the production of stone blades at Suloga on Woodlark Island had ceased (Affleck 1971:25; Bickler and Turner 2002:40; Damon 1983:55; Laracy 2010:142; Liep 2009:85; Liep and Affleck 1983:121; Seligman 1910:33).

In 1849 the crew of the British Admiralty survey ship HMS *Rattlesnake* found that the villagers of the Louisiade Archipelago were familiar with iron. Macgillivray mentions that villagers from Sudest, and nearby Piron and Brierly Islands, sought hoop iron to haft their axe shafts. They were also keen to acquire iron axes. The people of Brumer (Brummer) Island, on the South Coast near the eastern tip of New Guinea, were also observed to be familiar with hoop iron. As in the Louisiades, hoop iron was the article the villagers most prized (Macgillivray 1852).

By 1873 Captain Moresby found that the islanders at East Cape were receiving iron from the Louisiade Archipelago, whereas by this date those living at the eastern tip of New Guinea had little apart from some sharpened bolts and spike nails. Moresby found the demand for hoop iron so keen near the tip of New Guinea that he gave the name Hoop Island Bay to a favoured anchorage on Basilaki (Moresby) Island (Moresby 1875:29, 1876:187).

In the 1870s the new foreign industry of *bêche-de-mer* fishing bought iron to south-eastern New Guinea. Its commencement occurred after Captain John Moresby had undertaken his three maritime surveys in 1873–4. Moresby's first voyage was from Torres Strait to Fairfax Harbour (later Port Moresby) and back to Cape York. The second was from Cape York to the China Strait, Louisiade Archipelago and Milne Bay to Sydney. In January 1874 he returned to England via Port Moresby, China Strait, East Cape, the D'Entrecasteaux Islands and up the north coast of New Guinea (Moresby 1876). No *bêche-de-mer* traders were observed by Moresby, but it is likely that his voyages made potential traders aware of the extensive reefs off the eastern tip of New Guinea.

These traders brought iron to the Massim during the 1870s and 1880s, but their small boats and focus on obtaining *bêche-de-mer* meant they had no interest in collecting curios such as armshells. The Australian traders seeking *bêche-de-mer* mostly lived on their boats and paid locals with tobacco pipes, knives and tobacco. For example, one of the first boats seeking *bêche-de-mer* was a brig, the *Rita* from Sydney. It was observed by the missionary Samuel MacFarlane in 1876 at anchor on the north side of Mekinley Island in the China Strait. The crew were on shore cutting wood, where a tent was erected. The captain said they were fishing for *bêche-de-mer* and had been out 10 months, and had been stationed at Mekinley Island for 10 days and were about to leave (MacFarlane 1877:360).

In 1877 the *Torres Strait Fisheries Act* was passed, regulating *bêche-de-mer* fishing in Torres Strait (Moore 1991:422). To avoid the restrictions imposed by this Act traders began to focus their activity on the uncontrolled reefs of the Louisiade Archipelago. It quickly became the main industry in British New Guinea protectorate until gold was discovered on Sudest Island in 1887. Gold then became the primary export (Figure 11.7).

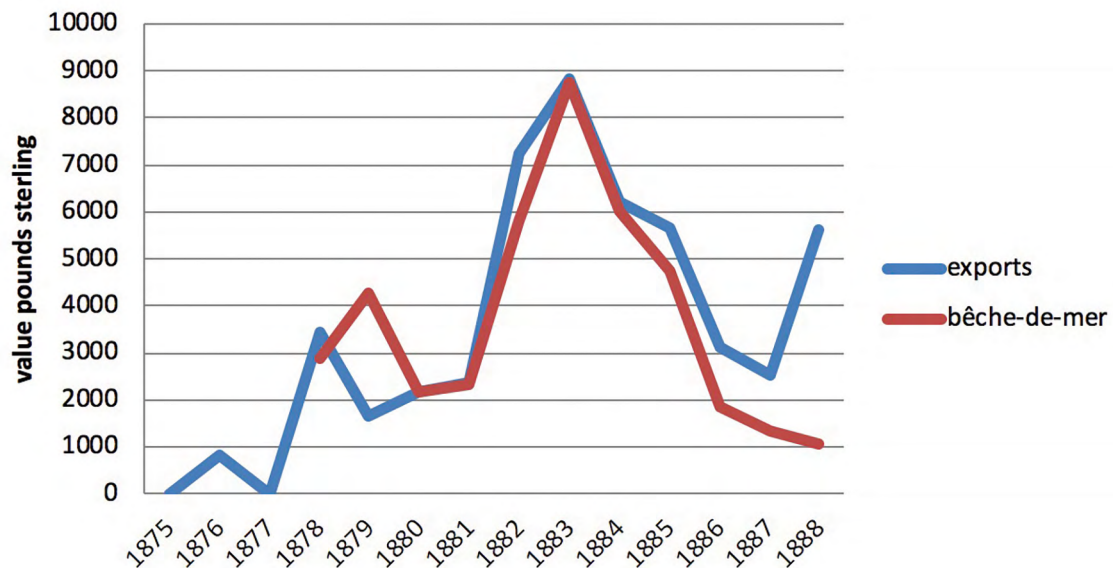


Figure 11.7: Bêche-de-mer fishing was the main economic activity in British New Guinea until alluvial gold was discovered on Sudest in 1887.

Source: Musgrave (1889:22, 36).

Many bêche-de-mer traders had violent deaths at the hands of the local people. In 1878 William Ingham and six of his crew were killed on Brooker (Utian) Island in the Calvados chain of the Louisiade Archipelago (Moore 1991:414). Bêche-de-mer trading also brought Nikolai Miklouho-Maclay, the Russian anthropologist, to the Trobriands in late November 1879. He was travelling on the *Sadie F. Caller*, an American schooner that traded for this product (Webster 1984:234). In 1885 Lindt (1887:84) observed a trader called Kissack living on Teste (Ware Island), who made a living by entrusting trade items, including knives, tobacco pipes and tobacco, to Ware men, who bartered them in the Louisiade Archipelago for bêche-de-mer and coconuts. Lindt thought that this trading activity, which they undertook for bêche-de-mer traders, was how the Ware became the central link and source of influence within the Louisiade Archipelago, but they were only doing what they had long done as the principal agents in the southern *Kula* (Lepowsky 1983:476).

The eastern Papuan South Coast

Unlike its early introduction in the Massim, iron was not obtained by villagers on the eastern Papuan South Coast until the 1870s when ships began visiting. Both Captain Moresby and D'Alburtis visited in 1873. When the corvette D'Alburtis was travelling on was anchored off Orangerie Bay in 1873, he was able to acquire some bird of paradise plumes there (D'Alburtis 1877:38–39). Some iron had been introduced to villagers at Redscar Bay, some 60 km west of Port Moresby, by London Missionary Society missionaries. In 1873 Moresby found the mission was staffed by South Sea Islanders and was poorly provisioned. In November 1874, the missionary G.W. Lawes settled in what became Port Moresby township (Beale 1974; Lacey 1972; Gibbney 1974a). Consequently, there was an increasing availability of foreign trade goods in the region.

In the 1870s iron quickly became the most desired foreign trade item on the Papuan South Coast to the east of Port Moresby. In April 1876 two missionaries, Lawes and MacFarlane, left Port Moresby to visit the Papuan South Coast as far as China Strait. They had previously travelled as far as Hood Bay. In 1876 MacFarlane, when at Kerepuna, was impressed by the adjustability and durability of stone axes, but what the villagers wanted to acquire from the missionaries was hoop iron. MacFarlane (1877) mentions that hoop iron was sought at Dedele (Cloudy Bay), Toulon Island (Mailu Island), past Dufaure Island (Mugula Island in Orangerie Bay–Mullins Harbour), a bay between Eagle Point and Roux Islands, Leocardie Island (to the east of South Cape), Mekinley Island (a small island in the northern part of China Strait) and Heath Island (Rogeia, an island in the China Straits).

At Leocardie Island for example, some 45 canoes came out to the mission ship, with their occupants clamouring for hoop iron. By then the missionaries' supply of hoop iron was running out and to meet their demands some old metal plates on the *Ellangowan* were cut up. MacFarlane and Lawes concluded that hoop iron was the article in demand and they realised there was no point extending their voyage without it. They recommended anyone wishing to visit these parts should bring a good supply of hoop iron with them as it would allow them to obtain vegetables and also valuable curiosities. They returned to Port Moresby on 22 April 1876 (MacFarlane 1877).

In the 1870s and early 1880s missionaries on the Papuan South Coast soon realised that the only practical way of gaining a foothold was to buy their way in via hoop iron, tomahawks, glass beads and tobacco (Jones 1974:90). As the missionary James Chalmers stated in 1886, 'The gospel of the New Guineans is red beads, tobacco, tomahawks and hoop iron' (Anon. 1886:1). This was the time when villagers were willing to part with prized valuables if they could acquire tomahawks and hoop iron. In the early 1880s a tomahawk/American axe was a prize worth a *Conus* armshell (Finsch 1887:154–155).

Part 3: Who collected the armshells now in museum collections?

Many individuals, including ships' crews, traders, missionaries, visitors, a scientist and government officers made armshells collections in the late nineteenth century, as shown in Table 11.1. This selection includes most of the large collections and covers the period from 1849 to 1900. Information about the places where armshells were collected is known for only a small number of armshells. To find out more about where in Papua New Guinea the objects could have been acquired, it is essential to examine data about collectors, their museum acquisition dates and, if available, when they were collected, together with information about geographic changes in the extent of government control, as well as missionary, commercial and scientific visits to south-east New Guinea. The armshells with known collection locations are listed in Table 11.2.

Table 11.1: *Conus* collections made before 1900 and location.

Collector/dealer/year	Collected/deposited	Location	Number
1840s			
Captain Owen Stanley	1849/1851	British Museum	2
1850s			
Father C. Salerio	1852–1855	Civic Museum, Milan	7
1870s			
Captain John Moresby	1875	British Museum	2
Anon.	1878	Pitt Rivers Museum	6
Rev. Samuel MacFarlane	1876–1886	British Museum	3
Rev. James Chalmers	1876–1886	British Museum	4
Andrew Goldie	1879	Auckland War Memorial Museum	2
1880s			
Rev. William Wyatt Gill	1882	British Museum	2
Otto Finsch	1882	American Museum of Natural History	2
Mason Brothers	1883	Australian Museum	22
H.J. Renwick	1884	Australian Museum	4
Otto Finsch	1885	American Museum of Natural History	2
Captain Hillel F. Liljeblad	1885	Australian Museum	2
Hugh Romilly	1886	British Museum	17
Captain William H. Henderson	1886	British Museum	1
Rev. William Wyatt Gill	1887	Australian Museum	7
Lord and Lady Brassey	<1889	Hastings Museum	3
1890s			
Andrew Goldie	<1890	Cumbræ Museum, Scotland	1
Sir William MacGregor	1892–1897	Queensland Museum	6
Sir William MacGregor	1892–1897	PNG National Museum and Art Gallery (repatriation from Queensland Museum)	1
Rev. George Brown	1891–1905	National Museum of Ethnology (Minpaku), Japan	39
Sir William MacGregor	<1898	University of Aberdeen Museum	27
Rev. Samuel B. Fellows	<1900	National Gallery of Australia	8
Total armshells			170

Source: Authors' summary.

Table 11.2: Provenanced nineteenth-century armshells.

Collector	Location	Armshell	Decoration
	MASSIM		
Captain O. Stanley	Louisiade Archipelago	2 segments	One with shell beads
Father C. Salerio	Woodlark Is	Ring	Holes, shell beads
Father C. Salerio	Woodlark Is	4 rings	None
Father C. Salerio	Woodlark Is	2 segments	None
Otto Finsch	Dinner Is., Samarai	Ring	Holes, banana seed rosette, shell bead inserts, red glass trade beads
Otto Finsch	Duau, Normanby Is.	Ring	Holes, 4 banana seeds, shell bead inserts
Otto Finsch	Teste (Ware) Is.	Ring	Hole
Sir W. MacGregor	Goodenough Is.	2 rings	None
Sir W. MacGregor	Goodenough Is.	Ring	Holes, banana seed rosette, shell bead inserts
George Brown	Dobu Is.	Ring	3 holes
George Brown	Dobu Is.	Ring	Holes, banana seed rosette, shell bead inserts
George Brown	Dobu Is.	Ring	Holes, banana seed rosette, shell bead inserts, 2 strings glass trade beads
George Brown	Dobu Is.	Ring	Holes, banana seed rosette, shell bead inserts, 3 strings glass trade beads, shell pendant
George Brown	Dobu Is.	Ring	Holes, banana seed rosette, shell bead inserts, 7 strings glass trade beads, 2 shell pendants, pandanus streamers
George Brown	Laughlin Is. (Budi Budi)	Segment	Glass trade bead rosette, 3 strings glass trade beads
George Brown	Laughlin Is. (Budi Budi)	Segment	2 glass trade bead rosettes
	PAPUAN SOUTH COAST		
Andrew Goldie	Pure (?Pari), Pt. Moresby	2 rings	Holes, rosette of 8 banana seeds with some shell bead inserts
Otto Finsch	Ihli, Hood Bay	Ring	Holes, rosette of 8 banana seeds
Otto Finsch	Maupa, Aroma	Ring	2 holes
Lord and Lady Brassey	Toulon (Mailu) Is.	Ring	Holes, rosette of banana seeds, shell bead inserts
Sir W. MacGregor	Milport Harbour	Segment	Cross rosette of glass trade beads
Sir W. MacGregor	Milport Harbour	Segment	None
	ORO		
Sir W. MacGregor	Holnicote Bay	2 segments	None

Source: Authors' summary.

Although whalers were active in the Massim from the 1820s to 1870s and are known to have frequently visited Kiriwina and Woodlark Islands (Gray 1989, 1999), we were unable to locate any *Conus* armshells that they collected. The same is true of the later bêche-de-mer traders. Some armshells originally held at the Norwich Castle Museum but transferred to Liverpool in 1965 to replace artefacts destroyed by bombing in 1941 were once thought to predate 1851. Although this date is given in the Norwich object list, it is not correct as Captain T.H. Foster did not deposit his collection at Norwich until 1919 (Macintyre 1983b:82; Marion Servat-Fredericq pers. comm. 2019). Tables 11.3 and 11.4 list the ring and multi-segmented armshells within five time periods, where possible: the 1840s, 1850s, 1870s to 1884, 1885–89 and the 1890s.

Table 11.3: Ring armshells collected in the nineteenth century.

Object	Date range																			
	1850s	1870s–84										1885–9				1890s				
		Collector																		
		Salerio	Moresby	Anon. Pitt Rivers	MacFarlane	Chalmers	Goldie	Gill	Finsch	Mason Brothers	Renwick	Finsch	Liljeblad	Romilly	Gill	Brassey	MacGregor O	MacGregor A	Brown	Fellows
no holes	4	-	1	-	-	-	-	-	3	-	-	-	6	-	-	-	8	16	2	
1 hole	-	-	-	-	-	-	-	-	3	-	1	-	1	-	-	-	-	4	-	
2 holes	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	3	-	1	
3 holes	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	-	2	1	
5 holes	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
broken lateral lip	-	1	-	-	1	-	-	1	1	-	-	-	6	-	-	-	2	8	4	
1 short string shell beads	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
rosette 3–8 banana seeds	-	-	-	-	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	
rosette 4 banana seeds fibre inserts	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
rosette 3–4 banana seeds shell bead inserts	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	1	1	-	
rosette banana seeds shell bead inserts	-	1	1	-	2	2	-	-	3	-	1	1	2	1	1	1	2	2	3	
rosette banana seeds shell bead inserts,1 string shell beads	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
rosette banana seeds shell bead inserts,2 strings shell beads, pendants pearl shell cowrie or <i>Tridacna</i> ring	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	
rosette banana seeds shell bead inserts, 3 shell bead strings	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
rosette banana seeds shell bead inserts, 3 shell bead strings, pendants banana seed pearl shell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
rosette shell beads, 3 shell bead strings, pendant banana seeds	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BELOW: GLASS TRADE BEADS PRESENT																				
rosette banana seeds, shell beads and glass red trade beads	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
rosette banana seeds, 1 string red glass trade beads, pendant banana seeds	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
rosette banana seeds, 1 string glass trade beads	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
rosette banana seeds shell bead inserts, 1 string glass trade beads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	

Object	Date range																			
	1850s	1870s–84										1885–9					1890s			
	Collector																			
	Salerio	Moresby	Anon. Pitt Rivers	MacFarlane	Chalmers	Goldie	Gill	Finsch	Mason Brothers	Renwick	Finsch	Liljeblad	Romilly	Gill	Brassey	MacGregor O	MacGregor A	Brown	Fellows	
rosette banana seeds, shell bead inserts, 1 string shell beads, 1 string red glass trade beads, pendants cowrie or <i>Tridacna</i> ring	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
rosette banana seeds, 2 strings glass trade beads, pandanus streamer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	
rosette banana seed shell bead inserts, 2 strings glass trade beads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
rosette banana seed shell inserts, 3 strings glass trade beads, pendants pearl shell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
rosette banana seeds, shell bead inserts, red trade beads, 3 strings red glass trade beads, pendants banana seeds, pandanus streamer	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	
rosette banana seeds, 4 strings glass trade beads, pendant banana seeds and/or pandanus streamer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	
rosette banana seeds shell bead inserts, 4 strings glass trade beads, pendants 3 shells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
rosette banana seeds shell bead inserts, 5 strings glass trade beads, pendants 3 shells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
rosette banana seeds shell bead inserts, 7 strings glass trade beads, pendants 2 shells, pandanus streamer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
rosette banana seeds and trade beads, 8 strings glass trade beads, pendants pearl shell, pandanus steamers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
1 string red glass trade beads, pendants banana seeds, pandanus streamer	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	

Source: Authors' summary.

Table 11.4: Multi-segment armshells collected in the nineteenth century.

Object	1840s	1850s	1870–84	1870–84	1885–90	1885–90	1890s		
	Stanley	Salerio	Anon. (Pitt Rivers)	Renwick	Henderson	Romilly	MacGregor O	MacGregor P	Brown
3–4 segments	2	2	3	1	–	–	3	–	–
3 segments, cross rosette, shell beads, banana seed	–	–	–	2	–	–	–	–	–
3 segments, rosette shell bead, 3 shell bead strings, pendants, banana seeds, pandanus	–	–	–	–	1	–	–	–	–
BELOW: GLASS TRADE BEADS PRESENT	–	–	–	–	–	–	–	–	–
3 segments, rosettes red glass trade beads, 4 strings trade beads	–	–	–	–	–	–	–	–	2
4 segments, rosettes red glass trade beads, 3 strings glass trade beads	–	–	–	–	–	–	–	–	1
4 segments, 7 strings glass trade beads, pendants, shell, banana seeds with inserted shell beads	–	–	–	–	–	–	–	1	–
2 segments, 1 string red and blue glass trade beads	–	–	–	–	–	1	–	–	–
2 segments, cross rosette blue glass trade beads	–	–	–	–	–	–	1	–	–

Source: Authors' summary.

Part 4: Acquisition agencies

Conus armbands were mainly acquired on the Papuan South Coast in exchange for highly desirable iron objects prior to 1884; whereas in the Massim iron was initially important, but most large armshell collections were obtained there after 1891 in return for some service (Swadling et al. 2022). It is now useful to look more carefully at the people who obtained the artefacts and deposited them in museums.

Ships' crews

In 1849, on 28 August, men and women from Brumer Island came onboard HMS *Rattlesnake* wearing *Conus* armshells. Brumer Island is located just east of Suau Island near the eastern tip of New Guinea (Macgillivray 1852). The villagers danced for the crew. Oswald Brierly, the marine artist on board, recorded the scene (Figure 11.4). On this voyage, two small three-segment armshells were collected in the Louisiade Archipelago, one of which is decorated with some shell beads. They were donated to the British Museum by Captain Owen Stanley in 1851.

Two armshells were collected by Captain Moresby during his Admiralty surveys in south-east New Guinea in 1873–4. During his 1873 voyage, Moresby sought to find a safe passage to China via the eastern tip. Finding a safe passage would mean that ships would no longer have to sail to the east of Rossel Island to avoid the Barrier Reef (Beale 1974). Moresby did not record where he collected the two armshells, but one likely place is at the anchorage he called Hoop Iron Bay on Basilaki, or Moresby Island, one of the islands off the eastern tip of New Guinea. Armshells in the Pitt Rivers Museum collection deposited before 1885 were probably collected by crew during early Admiralty voyages to eastern New Guinea.

Theodore Bevan, who was a bêche-de-mer trader on the south-east coast from 1884 to 1888, observed that naval officers bought curios and also allowed their crews to barter for curios (Bevan 1890:95, 132). Captains W.H. Henderson, H.F. Liljeblad and J.T. Bebrouth deposited armshells in museums. Henderson RN was the Commander of HMS *Nelson* and was in New Guinea for about five weeks during the proclamation of the British New Guinea protectorate in 1884 (Chalmers 1887:81). The *Nelson* was the flagship carrying Commodore Erskine who was responsible for the proclamation. In this task he was assisted by the missionary James Chalmers. The proclamation in the Massim was declared at the London Missionary Society Stations, located at Diner Island (Samarai), Teste (Ware Island) and the Killerton Islands near East Cape (Lyne 1885).

It is likely that Henderson collected the *Mwali* he deposited at the British Museum at the Killerton Islands as the people at East Cape participated in such exchanges. Although Malinowski (1922:82) considered Samarai (one of the East End Islands) and Ware to be within the *Kula* ring, we have been unable to find any *Conus* armshells from these localities configured as *Mwali*. Their characteristic decoration consists of rosettes made of banana seeds with shell bead inserts. Captain Liljeblad is reported as having been familiar with the Papuan coast (Edelfeld 1887:127). He deposited two *Conus* armshells in the Australian Museum in 1885. Both armshells are decorated with banana seeds with shell bead inserts and have maximum external diameters of 81 and 83 mm respectively. Captain J.T. Bebrouth worked for Burns Philp and deposited a Massim-style armshell at the Queensland Museum in ca 1887. It has not been located in the collection (Susan Davies pers. comm. 2019) and is therefore not listed in Table 11.1.

Ships' crews probably acquired curios to earn extra income, once sold to artefact dealers in ports such as Sydney and Brisbane. The oldest material from New Guinea at the Queensland Museum consists of a Papuan tomahawk, as well as an axe, bow and paddle donated by Edmund Connor, a naval officer, in April 1874 (Susan Davies pers. comm. 2019). H.J. Renwick, who may have been a naval officer, deposited four armshells at the Australian Museum in 1884. In 1881 A. and H.J. Renwick donated other artefacts from the Papuan South Coast and other South Sea Islands to the Australian Museum. In 1885, when Lindt visited KapaKapa village, east of Port Moresby, he observed that villagers wanted a good tomahawk in exchange for their stone axe or club. The value of curios on the Papuan South Coast had been enhanced by the high demand resulting from the large number of Admiralty vessels visiting during the 1884 proclamation of British New Guinea. When ships were in sight prices inflated, and declined once they had departed (Lindt 1887:60, 68).

Traders

Lyne (1885:198) observed in his account of the 1884 proclamation of British New Guinea that there was currently little interaction between the people of the Massim and Europeans. His observation suggests that the armshells collected by traders prior to 1885 probably came from the Papuan South Coast and no further into the Massim than East Cape and Ware Island. Andrew Goldie, a major trader based in Port Moresby, had not extended his activities to East Cape until 1879 (Davies 2012:136). In 1886 the shipping company Burns Philp began running a monthly steamer service from Thursday Island to Port Moresby and would go along the Papuan South Coast, and if required went as far as East Cape (Douglas and Burns 1887:12).

Mason Brothers were artefact dealers in Sydney, and in 1883 the Australian Museum purchased a collection of 22 armshells from them. These artefacts would have been purchased from ships' crews, travellers and missionaries, as well as traders, including Andrew Goldie. The Mason Brothers collection of 22 armshells has seven armshells with rosettes of banana seeds and shell bead inserts.

The large armshell with the broken lip and those with single strings of red beads are likely to have been obtained or to have originated from the Massim, whether this was by traditional trade or through foreign collectors is not known. Table 11.5 has the maximum external diameters for this collection.

Table 11.5: The Mason Brothers collection acquired by the Australian Museum in 1883 (measurement external diameter).

mm	70–74	75–79	80–84	85–89	90–94	95–99	100+
no holes	2	–	1	–	–	–	–
1 hole	2	1	–	–	–	–	–
2 holes	–	–	1	–	1	–	–
3 holes	–	1	2	–	–	–	–
broken lateral lip	–	–	–	–	–	–	1
4 banana seeds with fibre inserts	–	–	1	1	–	–	–
5 banana seeds	1	–	–	–	–	–	–
3 banana seeds shell bead inserts	–	1	1	–	–	–	–
rosette banana seeds shell bead inserts	–	–	2	1	–	–	–
rosette banana seeds shell bead inserts, 1 string shell beads	–	–	–	–	–	2	–

Source: Authors' summary.

The trader Andrew Goldie arrived in Port Moresby in 1876, and it is likely that six of the eight armshells he acquired in 1878–79 were *Toea* as he notes that these were used by locals for purchasing their wives. Goldie's museum and exhibition consignments were all made by 1880, apart from one armshell in his personal collection that he took to Scotland (Table 11.6). While Mason Brothers were Goldie's agents, there is no evidence that the collection purchased by the Australian Museum was Goldie's 1880 offer to the museum (Davies 2012:148). Four wrist ornaments from Aroma were initially thought to be armshells but are likely to be coix-seed armlets and are not included in Table 11.6 (Davies 2012:157–161; Susan Davies pers. com. 2020). The Auckland War Memorial Museum has two armshells from Port Moresby. They feature in the museum's online catalogue, Nos. 11420 and 11421; see Figure 11.3b for 11421. This armshell was acquired by Andrew Goldie at Pure (possibly 'Pari'), Port Moresby in 1879. It is decorated with eight banana seeds, with one white and four red shell bead inserts, and has an external diameter of 80 mm.

Table 11.6: The armshell consignments made by Andrew Goldie to museums and to the organisers of the Sydney International Exhibition.

Museum	date	number	offered	acquired	shown
Australian	1878	2	–	x	–
Auckland War Memorial	1879	2	–	x	–
Sydney International Exhibition	1879	4	–	–	x
Australian (January)	1880	36	x	–	–
Australian (August)	1880	6*	x	–	–
Australian (August)	1880	9*	x	–	–
Australian (August)	1880	9*	x	–	–
Queensland	1880	1	–	x	–
Cumraes, Millport, Scotland (pers. coll.)	before 1890	1	–	x	–

* may be from different areas as listed separately in the same consignment.

Source: Authors' summary.

When Goldie returned to Scotland in 1890, he took back a collection of artefacts which his descendants later deposited at the Cumbraes Museum in Millport. These were all good examples with one exception, an armshell with a broken lip (Davies 2012:163). His consignment records and inability to acquire a better example to take to Scotland suggests that these artefacts ceased to be easily acquired after 1880 in the Port Moresby region. The two armshells (*Toea*) held in the Auckland War Memorial Museum are the only nineteenth-century armshells clearly provenanced to Port Moresby. Otto Finsch's example was acquired in Hood Bay in 1882. The Hood Bay armshell with its rosette of eight banana seeds was considered by Finsch to be an exceptionally good *Toea*. Similar examples with rosettes of three to five banana seeds were collected by the missionaries Chalmers and Gill and there is also an example in the Mason Brothers collection (see Table 11.3). The inserting of red fibre into an armshell, which is decorated with four banana seeds, may have substituted for the shortage in shell beads (Figure 11.3c).

Lord and Lady Brassey made a round-the-world trip in their yacht and were in the Cape York–Torres Strait area in August 1887, but did not sail along the Papuan South Coast. It is not known where they acquired the two armshells labelled from Toulon Island (Mailu) and a *Mwali*-configured armshell, now held in the Hastings Museum (Sarah French pers. comm. 2019). One of the armshells from Mailu is damaged, in that there is a lot of fine cord extending from the rosette of banana seeds. This may indicate that the shell beads that had once been inserted have been removed. This armshell has not been included in Table 11.5.

Scientists

Otto Finsch was interested in ethnology and ornithology. When travelling along the Papuan South Coast in 1882 he collected two armshells in what is now Central Province. One was obtained in Hood Bay and the other at Maupa in Aroma. Both are held at the American Museum of Natural History. In 1884 Finsch was involved in reconnaissance voyages on the steamer *Samoa*. These led to the declaration of northeast New Guinea and the Bismarck Archipelago as a German protectorate in November 1884 (Howes 2018). On a voyage on the *Samoa* in 1885, Finsch visited parts of British New Guinea. These included the Trobriands, Normanby, Fergusson and Killerton (East Cape) islands, Milne Bay, Diner (Samarai) and Teste (Ware) islands, as well as East Cape to the German border. Finsch collected two armshells from the Massim, which are now in the American Museum of Natural History. One is from Dinner Island (Samarai) and the other is from Duau (Normanby Island) (Finsch 1888). Another armshell from Teste/Tschas (Ware Island) is mentioned in his collection notes, held by the American Museum of Natural History.

Missionaries

The Italian missionaries, who replaced the French Marists on Woodlark Island in 1852, made a small collection of armshells (Table 11.7). After the mission was abandoned in 1855 these armshells and other artefacts were deposited at the Civic Museum in Milan. They were displayed in 1863, but unfortunately were destroyed in 1943 during World War II (Affleck 1981; Salerio et al. 1983).

Table 11.7: List of armshells collected on Woodlark by the Italian missionaries.

Cat. No.	Description
198	Bracelet of white shell, highly valued for its size and for being adorned with red rings made from shell. Used in trade exchange, Woodlark, etc.
199	2 small armshells of less value on account of being composed of various pieces. Used by women of Woodlark. (One sent to Pigorini in exchange for reptiles 5/1880.)
209	2 white bracelets used in Woodlark and on the islands to the west.
210	2 others, similar but smaller.

Source: Authors' summary.

MacFarlane and James Chalmers, both members of the London Missionary Society, visited south-eastern New Guinea in 1876. MacFarlane landed two Loyalty Islands teachers at Teste (Ware) Island and others at East Cape. Chalmers arrived on the south-east mainland near Suau Island with two Rarotongan teachers (Wetherell 1988). These visits and subsequent follow-up visits would have provided both men with opportunities to acquire armshells. Those acquired by MacFarlane are decorated with banana seeds with inserted shell beads and strings of shell beads, with some of the strings having pendants, whereas those collected by Chalmers are not elaborate *Kula* artefacts but consist of two armshells with banana seeds that have inserted shell beads, an armshell with just banana seeds and another with the notches of drill holes on its broken front edge. MacFarlane's sale of his armshells in London in 1886 is explained by his retiring from mission work in New Guinea that year (Gibbney 1974b). The collection made by Chalmers is also likely to predate 1886 as by this time he had shifted his missionary activities to areas west of Port Moresby (Lacey 1972:151).

Another missionary, W. Wyatt Gill, who travelled with Chalmers to Suau in 1882, had acquired similar armshells. One has banana seeds with inserted shell beads and the other has drilled holes but no decoration. The difference in decoration between the armshells collected by MacFarlane compared to those of Chalmers and Gill is because East Cape is within the *Kula* exchange network, whereas Suau on the Papuan South Coast lies outside it. In the 1880s missionary activity expanded on the Papuan South Coast, but it was not until 1891, through the auspices of Sir William MacGregor, that George Brown, as the General Secretary of the Methodist Australasian Missions, was able to establish Dobu and the other Methodist missions in the Massim. Based in Sydney, Brown made five visits to the Massim. The first was a reconnaissance trip in 1890 to select the first mission site, the second in 1891 to establish the founding mission station at Dobu under W.E. Bromilow. Brown's third visit was in 1897; two others followed, the last in 1905 (Brown 1908; MacGregor 1893).

The only provenanced armshells in Brown's large collection come from Dobu and the Laughlan Islands (Budi Budi). The only time he visited the Laughlan Islands was on his first reconnaissance trip. It is likely that most of the armshells in his collection were acquired by mission staff on his behalf and were given by villagers in payment for some service. Brown's collection is now held at the National Museum of Ethnography in Osaka. Fellows established the first mission in the Trobriands at Kiriwina in 1894. The large collection he made demonstrates both an interest in artefacts, as well as the strong personal ties that he had with his parishioners. It is recorded that Fellows was gifted armshells as a service payment for his role in peacemaking. A comprehensive part of his collection was gifted to his friend Sir William MacGregor, who deposited it at the University of Aberdeen Museum in 1899 (see Swadling et al. 2022). When he retired, Fellows took the remainder of his collection to Australia where it was later deposited at the National Gallery of Australia.

Government officers

Hugh Hastings Romilly came to the western Pacific as a British roving Deputy Commissioner and made his first cruise to New Guinea in 1881. At various times between 1884 and 1886 he held the post of Administrator of British New Guinea. In 1886 when on sick leave he supervised the New Guinea exhibits for the Colonial and Indian Exhibition in London (Langdon 1976). Sir William MacGregor was in British New Guinea from 1888 to 1898, initially as Administrator and later as Lieutenant-Governor. During his tenure, MacGregor formed strong relationships with other Europeans in British New Guinea. The largest armshell in MacGregor's official collection was obtained through a government officer, C.A.W. Monckton, who had established a friendship with a prestigious leader (*bigman*) on Goodenough Island (Monckton 1921:36–37). MacGregor acquired

some lower-grade armshells during his official travel. As noted above, the comprehensive collection of armshells he deposited at Aberdeen was a gift to MacGregor from Fellows, the first missionary in the Trobriand Islands (Swadling et al. 2022).

Part 5: Geographic variation in armshell decoration

The demise of shell bead production in the Port Moresby region impacted armshell decoration (Swadling and Bence 2016). In 1879 Goldie collected two armshells that are decorated with banana seed rosettes, but only some of the seeds have shell bead inserts. The armshell Finsch collected in 1882 only has a banana seed rosette but lacks shell bead inserts. Other unprovenanced armshells collected in the 1870s and early 1880s also have banana seeds rosettes which lack shell bead inserts.

The armshell from Toulon (Mailu) Island in the Brassey collection shows that armshells made there in the nineteenth century were decorated with rosettes of banana seeds with shell bead inserts. The same decoration was documented in the 1920s by Malinowski (1988) and Saville (1926). The same decoration of a rosette of banana seeds with shell bead inserts is also found in the *Kula* region, and is also part of a *Mwali*, see Table 11.3. Although Ware and the islands of Samarai to Basilaki, off the eastern tip of New Guinea, were recognised by Malinowski (1922) to be in the *Kula* network, these islands have not yielded armshells configured as *Mwali*, either in publications or museum collections. Instead, they are comparable to those at Mailu.

The oldest *Mwali* in museum collections are likely to have been acquired from East Cape where they would have been exchanged with villagers from Duau (southern and Eastern Normanby) and Tubetube (Figure 11.5d). These ring and multi-segment armshells lack banana seeds and instead are decorated with shell bead rosettes. Many of the shell bead rosettes are arranged in a cross formation. Shell beads would have been plentiful in the East Cape, Duau and Tubetube area as Ware islanders brought *Bagi* (shell beads) from the Louisiades to this region (Lepowsky 1983:474–475). Banana seeds are imports in some parts of the Massim. In the early twentieth century, Amphlett Islanders obtained them on Fergusson Island and traded them to the Trobriands (Malinowski 1922:287).

Conus shells were fished by people in the Kayleula (Keileuna) and Kavataria districts in the Trobriands and made into finished armshells elsewhere. Those from Kavataria were polished before they were taken to Dobu, whereas the Kayleula gave two shaped but unpolished shells as a *Kula* gift to the Amphlett Islanders. There they were polished and taken as *Kula* gifts to Dobu. The Dobuan recipients of armshells from the Trobriands and Amphletts then bored the holes for attaching banana seeds and shell beads, and thus the *Kula* valuables were configured as *Mwali*. (Malinowski 1922:502–503). When the pearl boom began in the Trobriand Islands in 1892, large quantities of glass trade beads became available to decorate *Mwali* (Swadling et al. 2022). Tables 11.3 and 11.4 indicate that it was not until the mid-1880s that glass trade beads were first used to decorate armshells, and by the 1890s they were widely used. The earliest use of glass trade beads is the armshell Finsch collected at Samarai in 1885, which has a rosette of banana seeds with inserted shell beads, with red glass trade beads strung across the rosette.

Conclusion: Trading armshells to foreigners and Papuan social connections

Foreign economic activity began in the Massim in the 1820s but large armshell collections were not made until Methodist missionaries did so in the 1890s. These armshells were not acquired in return for iron implements, but as payment for providing some service. Prior to that period, only small numbers had been collected by a Catholic missionary on Woodlark Island in the 1850s, the crew of British Admiralty ships in 1849 and by 1875, by London Missionary Society missionaries at East Cape and Ware Island in the 1870s, and a scientist in the 1880s.

By contrast, on the Papuan South Coast trading armshells to foreigners began with the arrival of missionaries and traders in the 1870s. In due course these agencies expanded their activities along the coast. By 1884 London Missionary society missionaries had established a bridgehead in the Massim as far as East Cape and Ware Island. They brought iron, which was keenly sought by villagers who were initially willing to trade their armshell valuables for this new commodity. Within a decade the cultural value of armshells increased, especially for those Papuans who lived far from where most *Conus literatus* and *C. leopardus* are fished and produced into armshells. When increasing numbers of armshells were required for economic and social activities in the early 1880s, the Motu ceased to trade armshells for foreign commodities. For them the cultural value of armshells had become higher than any foreign trade good.

The people living in the Massim and on the Papuan South Coast share a related cultural heritage. This is evident not only from the pottery styles they share, such as between Mailu on the Papuan South Coast and Tubetube Island in the Massim (Shaw et al. 2021), but also by the comparable armshell decoration that was used in the late nineteenth and early twentieth centuries along much of the eastern Papuan South Coast and in the Massim. This shared heritage was recognised by the government of Papua New Guinea when a currency denomination was named after a Papuan South Coast *Conus* armshell (the *Toea*) and the drawing of a Massim armshell was placed on the two-kina banknote.

Acknowledgements

We wish to thank Jim Allen, Chris Ballard, Faye Belsey; Harry Beran; Lissant Bolton, Hannah Clarke; Susan Davies; Sarah French; Emma Gray; Robin Hide; Crispen Howarth; Peter Matthews; Christopher Morton; Fuli Pereira; Zoë Richardson, Marion Servat-Fredericq; Ben Shaw, Jim Specht; Glenn Summerhayes, Deveni Temu and Peter White for useful comments and information. We also thank Martha Macintyre and Ian McNiven for their constructive review comments.

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This text is taken from *Forty Years in the South Seas: Archaeological Perspectives on the Human History of Papua New Guinea and the Western Pacific Region*, edited by Anne Ford, Ben Shaw and Dylan Gaffney, published 2024 by ANU Press, The Australian National University, Canberra, Australia.

doi.org/10.22459/TA57.2024.11