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Heirlooming and shell money beads in the Solomon Islands

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Abstract

Strings of shell money made up of hundreds, if not thousands, of intensively worked shell beads have featured in the accounts of anthropologists of Melanesia for over a century, and large collections of these strings are to be found in major museum collections around the world. In the Solomon Islands, the tradition of their production continues to this day. Despite new strings still entering circulation, within villages in and around Malaita there are also older strings, either held communally or under tabu. Local wisdom states that some of these are around two hundred years old. The historical and anthropological literature also makes mention of heirloom shell money strings, although how long such strings may be curated and remain active in cultural life has never been quantified. Here, we investigate two large, complex shell money strings from the Solomon Islands, held in the collections of the Museum of Archaeology and Anthropology, University of Cambridge: one from Makira and the other from Nggela. Through direct accelerator mass spectrometry (AMS) radiocarbon dating of individual beads, we establish the restringing and combining of strings of different ages into new strings, as well as the maintenance in use of individual beads for up to two to three hundred years. This demonstrable case of the heirlooming of shell beads has repercussions for archaeology, and the potential cultural longevity of shell valuables such as these should be a consideration in interpretations.

Shell money in museums and on the landscape

Western Island Melanesian shell money and shell valuables are mainstays of both the anthropological literature and ethnographic museum collections. Studies of their production, use and circulation have been used as a window to explore diverse but core facets of anthropological enquiry such as exchange and obligation relationships, alliance formation, peacemaking and prestige acquisition (e.g. Dalton 1965; Graeber 1996; Malinowski 1922; Munn 1986). Their centrality to social affairs was well noted by early European travellers, collectors and residents, with lengthy discussions of the variety of types of shell money produced and circulated and their relative rankings against both each other and different sorts of commodities (e.g. Danks 1888; Petri 1936; Schneider 1905). This almost taxonomic approach to the collection, cataloguing and description of shell money types lent itself

well to a museum context, and thus it is no surprise that museums holding early colonial collections from Papua New Guinea and the Solomon Islands have large collections of shell money (e.g. Burt 2009; Lewis 1929; Szabó 2019).

The very structured approach to the European collection and discussion of shell money seems to have given rise to the 'didactic collection' (Szabó 2018): instructive capsule collections of the different stages of production of a variety of shell money types established in the literature, and held in various large museum collections. So focused was the literature on key, formal types of shell money that strands which looked like shell money, and utilised the same types of beads without conforming comfortably to known types, caused consternation. Alison Hingston-Quiggin, author of *A survey of primitive money: The beginnings of currency* (1949:158) protested that:

> The difficulties of identifying shell-money in New Ireland are increased by the custom of stringing several different kinds together, and mixed strings are a special characteristic, the meaning of which is unexplained.

The very sorts of strings to which Hingston-Quiggin was referring are within the collections of the Museum of Archaeology and Anthropology, University of Cambridge, where she volunteered and worked over a number of years in the early twentieth century. Rather than fitting into the rigid formulations of herself and earlier authors, these align much more closely to what would now be recognised as heirloom strings.

Heirlooming and shell money

Heirloom shell money strings have received less attention in the literature than circulating types but Wagner's (2014) discussion of circulating (new) and non-circulating (heirloom) types of shell money (*mangin*) within Barok society in central New Ireland provides a useful starting point. He describes the *mangin* used in transactions in customary contexts, such as the purchase of pigs for *kastom* feasts, as 'circulating *mangin*'. These he contrasts with 'heirloom *mangin*', which are old, polished and often strung in antiquated forms. Although sometimes displayed, these are described as being priceless and without exchange value (Wagner 2014). A similar distinction was made by the Siuai of Bougainville between *pure* shell money, which could be utilised as currency and *tomui* shell money, which could never be used as such and was considered a clan heirloom (Oliver 1955 in Connell 1977:85). Eves (2000) also contrasts circulating and heirloom, clan-held money for the Lelet of central New Ireland. It should be noted that despite titling his well-known article 'Changes in heirloom jewellery in the Central Solomons', the prestige trade valuables Belshaw (1950) discusses do not necessarily fit into either the category of 'jewellery' or 'heirloom'.

Although the findings of Wagner, Oliver and Eves cannot be simply extended to surrounding cultural contexts, the principal findings were mirrored in KS's fieldwork in Malaita, Solomon Islands. The contemporary and historical production of shell money in Malaita is widely known and still supports entire communities (Goto 1996; Ivens 1927; Woodford 1908). However, not as visible in daily life are heirloom shell money strings. These strings were admired for their smoothness and fineness, communally held and displayed at special events (see Figure 19.1). Alternatively, such as in Langalanga Lagoon, they were considered *tambu* ('taboo') by senior men and only accompanied males could look upon them (see Figure 19.2 for key locations mentioned in the text). Although orally recounted histories suggested a time depth for heirloom strands of generations, it was difficult to quantify in calendar years. Local elders consistently suggested around two hundred years, but reinforced that this was a calculated suggestion rather than an assertion. Thus, how long such artefacts can remain in active cultural use is largely unknown.

Figure 19.1: Community-held heirloom shell money being displayed by the priest of Outau Village, south of Lau Lagoon, eastern Malaita, May 2016.

Source: Photograph by K. Szabó.

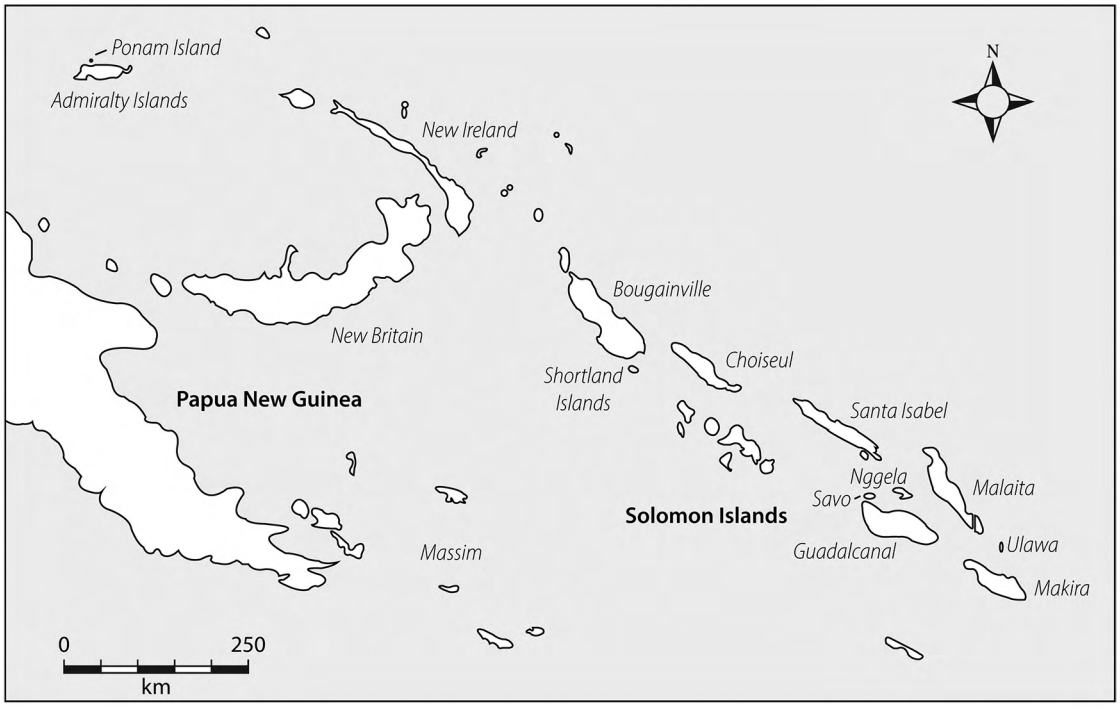

Figure 19.2: Map of the Solomon Islands, showing key locations mentioned in the text.
Source: Original drawing by K. Szabó.

A number of large and often complex shell money strings from the Solomon Islands held in the collections of the Museum of Archaeology and Anthropology (MAA), University of Cambridge, were studied in 2017 by KS. Such strings did not comfortably fit the descriptions of standardised forms of shell money described by those such as Lewis (1929) and were each unique in their construction and use of different bead types. The beads were generally well worn and accorded individually with types typically used in the strings of circulating money. Given commentary on heirloom shell money by Malaitan informants to KS as well as sources such as Wagner (2014), it was hypothesised that these were heirloom shell money strands. The secure places and dates of collection provided a robust starting point from which to investigate: (1) how long individual beads had been in circulation; and (2) whether beads from the same string were contemporaneous. This chapter presents these results.

Two complex shell money strands from the Solomon Islands

Over research visits from 2016 to 2018, 156 western Melanesian shell valuables in the MAA collections were studied in detail by KS. In all instances analysis involved the identification of raw materials, working and use traces, and any curation episodes including refashioning, restringing and recombining components. This analysis was done with the aid of a Dinolite AM4815 Edge series digital microscope. The identification of raw materials utilised two lines of enquiry: (1) the assessment of surface features including colouration, patterning, texture and features indicative of the original shell morphology such as remnant gastropod whorls; and (2) assessment of the microstructural composition and layering in cross-section. The latter drew on a tailor-made reference and image library, collating images and information on the cross-sections of a wide range of molluscan raw

materials. This facilitated the identification of numerous ground beads, where surface details had been abraded away. The identification and recording of evidence for manufacture, use and modification followed prior studies undertaken by KS (e.g. Szabó 2018, 2019; Szabó and Koppel 2015; Weston et al. 2017).

The two shell money strings from the Solomon Islands reported on here were both large and complex and had beads which were noted to have come adrift during routine conservation. As there was no way of knowing how these beads had originally been strung, they had been bagged and labelled alongside each string, thereby opening up the possibility of radiocarbon dating with the permission of the MAA Museum Committee.

It should be noted that although the strings studied were termed 'shell money' for museum cataloguing purposes, there seems to be no *a priori* reason to assume they were circulating currency at their time of collection, or indeed that the strings were understood in that manner locally. There may be further information in the MAA archives, but Covid-19 closures means this could not be checked and the archives are as yet undigitised.

String Z10604/E1902.190

MAA Z10604/E1902.190 was collected in the central Solomon Islands chain by the Anglican Melanesian Mission minister David Ruddock. When not at the Melanesian Mission base in Norfolk Island, Ruddock was primarily stationed in Savo, off the north-west coast of Guadalcanal in the central Solomons, from 1880 to 1884, so we can assume the string was collected during this period. The collection location is noted as the 'Florida Islands' (now Nggela), which are just to the east of Savo, and the various mentions of Ruddock as a traveller on Mission journeys around the central Solomon Islands provide plenty of opportunity for an Nggela collection point (see Armstrong 1900; Hilliard 1978). The MAA accession number indicates an accession date into the museum's collections of 1902.

MAA Z10604/E1902.190 is a large, delicate and complex multi-stranded bead string composed of 18 individual strands (Figure 19.3). Given the fragility of the artefact it was not lifted from its packaging for analysis but was studied in situ. Particular attention was paid to raw material identification, condition and usewear assessment of individual beads, and patterns of stringing.

Figure 19.3: Shell money string MAA Z10604/E1902.190 from the collections of the Museum of Archaeology and Anthropology, University of Cambridge.

Source: Photograph by Josh Murfitt.

Figure 19.4: Detail of *Chama* sp. red beads and white beads mainly manufactured from *Anadara antiquata* and *Tegillarca granosa* from Z10604/E1902.190 at 35× magnification.
Source: Photograph by K. Szabó.

Figure 19.5: Alternating white Arcidae and darker palm endocarp and plant stem beads from Z10604/E1902.190 at 35× magnification.
Source: Photograph by K. Szabó.

The dominant bead type was a disc bead of a reddish hue, manufactured from a species of *Chama* jewel box oyster (Chamidae) (Figure 19.4). These are analogous to the red *Chama* beads still manufactured today in Malaita for shell money (e.g. Woodford 1908; KS pers. obs.). Intermixed either singly or in groups are beads of other types and materials, most notably white beads mostly produced from *Anadara* and *Tegillarca* (Arcidae) valves (Figures 19.4 and 19.5), small, pierced palm endocarps of a dark brown colour and dark tubular beads manufactured from a plant stem (Figure 19.5). Groups of strands are fastened together at different points by large, hewn discs of *Nautilus* shell. Most strands are comprised of disc beads threaded face to face, but there are occasional long stretches where very worn white *Anadara* and *Tegillarca* beads are threaded at angles in a herringbone pattern (see Paravicini 1942–45:168 for a schematic of this type of stringing). Beads in these stretches, as well as elsewhere on other strands, are of variable diameter and the degree of wear in adjacent beads is sometimes highly dissimilar. There are two free ends which dangle separately from the rest of the string, and these terminate in nut shells and red fabric. These two free ends have a greater variety of bead types, including some not seen elsewhere on the main strands (e.g. *Conus* spire beads). There is also less regularity in the pattern of stringing than the strands which form the main body of the artefact.

A number of beads of different types had come adrift from their original strands over the course of time. As there was no way of determining from which strand and location they originated, the Museum Committee of the MAA gave permission for six to be destructively sampled to provide accelerator mass spectrometry (AMS) radiocarbon determinations.

The six beads selected for AMS radiocarbon dating attempted to cover a range of both raw materials and degrees of wear. In all, two red *Chama* sp. beads, two white *Tegillarca granosa* beads and two pierced palm endocarps were selected.

String Z10855

String Z10855 was also collected by a minister of the Melanesian Mission: Reverend Frederick Drew. Described by Hilliard (1978:144) as 'a bank clerk son of an Eton science master', Drew was stationed on Makira (then San Cristobal) off the southern tip of Malaita for two terms (1904–1909 and 1913–1915†). No date of collection is recorded in the MAA catalogue but it is assumed to have been during one of these two residencies. He died on Makira in 1915, so if the string is from the second residency it would have had to have been taken to England and MAA via another person; and Stanley (1994:33) suggests this may have been the prolific collector and dealer Beasley.

Again, this is a multi-stranded bead string, comprising four individual strands secured together (see Figure 19.6). The beads are dominantly white discs manufactured from *Tegillarca granosa* and *Anadara antiquata*, although occasional gastropod spires (especially *Imbricariopsis punctata*) are mixed in irregularly (Figure 19.7). At the centre of each strand is a zone of red disc beads made from *Chama* sp. jewel box oyster shells, and occasional *Chama* sp. beads are interspersed among white beads elsewhere on the strands. There is a long zone on one strand comprised of fawn-coloured beads, and these are most likely made from *Beguina semiorbiculata* shells, which are still used in the production of this colour bead today in Malaita. Mead (1973:36) itemised various items of 'costume' noted for Makira, and among these he described *sau* shell money which was both worn and used as an exchange item. It is described as having 'four strings of white shell-money with a short strip of red shell-money at the bottom centre' which, in terms of stringing and configuration, broadly matches Z10855. Indeed, another two strings of south-eastern Solomon Islands shell money held in the MAA collections, acquired by the Templeton Crocker Expedition from either Santa Ana or Santa Catalina islands in 1933, are labelled as *sau* on their accession tags (accession numbers 1934.279 and 1934.280). Both match Mead's description of *sau* and their accession tags further state that the area of production for *sau* was 'Makira Harbour' (see Szabó 2019:123–124).

Figure 19.6: Shell money string Z10855 from the collection of the Museum of Archaeology and Anthropology, University of Cambridge.

Source: Photograph by Lucie Carreau.

Figure 19.7: White beads of various diameters and degrees of wear manufactured from a mix of *Anadara antiquata*, *Tegillarca granosa* and *Imbricariopsis punctata* from Z10855 at 30× magnification.

Notes: The arrow indicates an *I. punctata* bead where the traces of the body whorl, with characteristic fine, punctate concentric grooves, can be seen. When the faces of the other beads are visible, the distinctive radial patterning of the microstructure of *Anadara*/*Tegillarca* indicating the surface ribbing can be seen.

Source: Photograph by K. Szabó.

Diameters and wear patterns of the individual beads vary widely, indicating that beads from a variety of other sources and strings have been mixed during at least one episode of restringing. As with string MAA Z10604/E1902.190, several beads had come loose, and the MAA Museum Committee gave permission for radiocarbon dating four of these. The four beads selected for AMS radiocarbon dating attempted to cover a range of degrees of wear. Three white *Tegillarca granosa* beads and one *Imbricariopsis punctata* spire bead were chosen.

Radiocarbon dating results

The results of radiocarbon dating are shown in Table 19.1.

Table 19.1: Radiocarbon determinations from bead samples from Z10604/E1902.190 and Z10855.

^{14}C lab number	Acc. no.	Identifier	Material	^{14}C age BP[b]	Modelled Cal. AD 68% prob. range[a]	Modelled Cal. AD 95% prob. range[a]
Wk-47249	Z10604/E1902.190	Bead a	*Tegillarca granosa*	564±18	1690–1850	1650–1920
Wk-47250	Z10604/E1902.190	Bead b	*Tegillarca granosa*	562±17	1690–1850	1650–1920
Wk-47251	Z10604/E1902.190	Bead c	*Chama* sp.	560±19	1700–1850	1660–1920
Wk-47252	Z10604/E1902.190	Bead d	*Chama* sp.	532±17	1730–1890	1680–1920
Wk-48253	Z10604/E1902.190	Bead e	Palm endocarp	Sample abandoned – insufficient carbon		
Wk-47254	Z10604/E1902.190	Bead f	Palm endocarp	115±22	1690–1920	1680–1920
Wk-47255	Z10855	Bead a	*Tegillarca granosa* or *Anadara antiquata*	688±17	1550–1720	1500–1820
Wk-47256	Z10855	Bead b	*Tegillarca granosa* or *Anadara antiquata*	484±17	1800–1920	1710–1920
Wk-47257	Z10855	Bead c	*Imbricariopsis punctata*	702±33	1530–1700	1480–1810
Wk-47258	Z10855	Bead d	*Tegillarca granosa* or *Anadara antiquata*	483±18	1800–1920	1710–1920

[a] All results were calibrated using OxCal v. 4.4 (Bronk Ramsey 2020) and the IntCal20 (Reimer et al. 2020) for terrestrial samples and Marine20 (Heaton et al. 2020) for marine shell. A ΔR value of –116±39 ^{14}C years was applied to account for the regional reservoir offset.

[b] Corrected for isotopic fractionation. δ^{13}C value not reported.

Source: See sources in notes.

To refine the dating of samples, we used Bayesian Sequence Analysis in OxCal v. 4.4 and the *terminus ante quem* ('before') constraint in OxCal, which sets a date before which the calibrated age range must occur, in this case before AD 1915 for Z10855 and AD 1884 for Z10604/E1902.190 (see Figure 19.8). This *prior* historical information is incorporated in a Bayesian statistical model, resulting in more precise calendar results (Bronk Ramsey 2009). All radiocarbon dates were calibrated using the IntCal20 (Reimer et al. 2020) and Marine20 (Heaton et al. 2020) calibration curves. To adjust for regional oceanic variation in ^{14}C, we have applied a location-specific reservoir correction (ΔR) of –116±39 ^{14}C years for non-deposit-feeding shellfish and corals. This value of –116±39 ^{14}C years was derived from modern, pre-AD 1950 shells collected from the Solomon Islands (Guilderson et al. 2004; Petchey et al. 2004) combined using the online tool found at calib.org/marine/ (Reimer and Reimer 2001). This reservoir offset is in keeping with the temporal variation identified across the South Pacific for the last 200 years (Allen et al. 2021; Petchey 2020; Petchey and Schmid 2020).

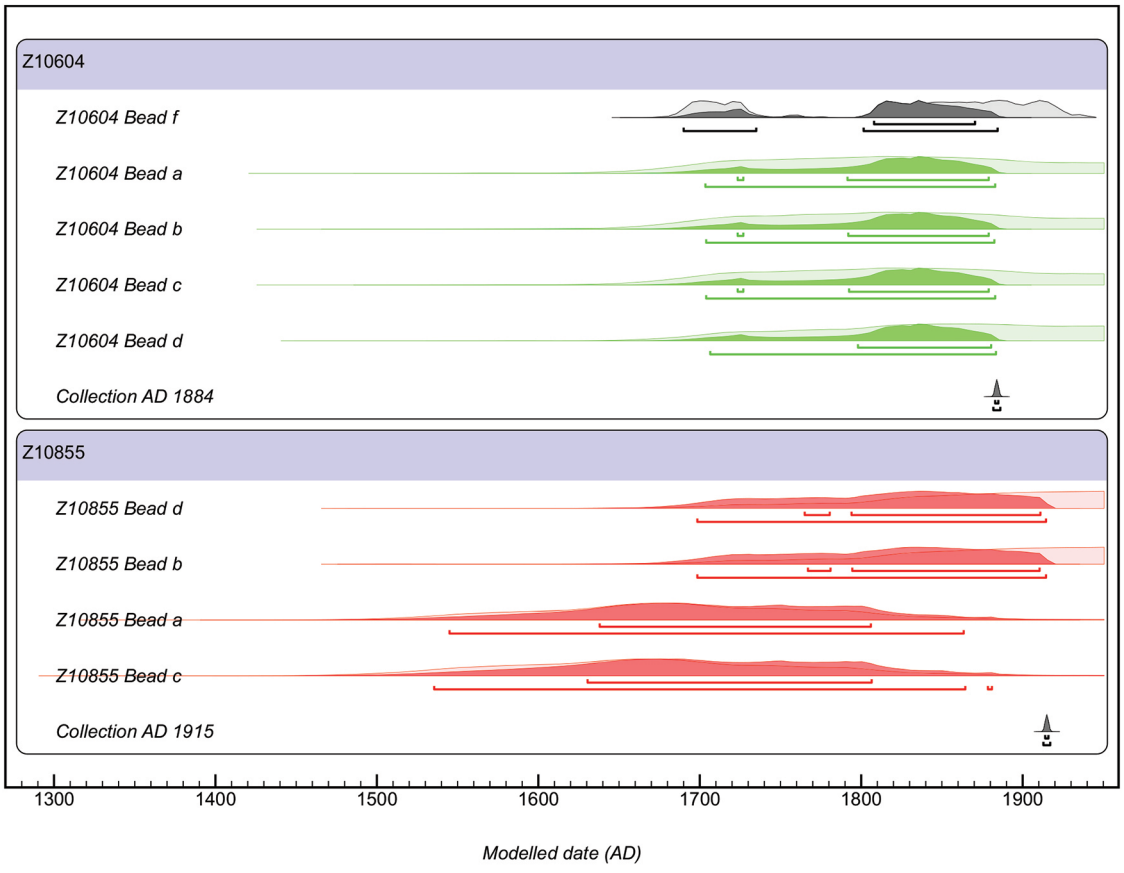

Figure 19.8: Bayesian modelling of calibrated radiocarbon determinations from beads from Z10604/E1902.190 and Z10855.

Source: Figure generated with OxCal v4.4.4 (Bronk Ramsey 2021:r5).

Discussion—Heirlooming qualified and quantified

The AMS radiocarbon dating of individual beads has provided a new window onto the extent and nature of heirlooming in the two shell money strings, although the two strings offer different insights. Given that, they will initially be discussed individually.

MAA Z10604/E1902.190

Of the six beads sampled, five returned determinations, with one of the palm endocarp beads having insufficient carbon. All five dates are in accordance with each other, indicating a broadly contemporaneous period of raw material collection and bead manufacture. The Bayesian modelling (Figure 19.8) suggests that the shell beads were manufactured in the eighteenth, or first half of the nineteenth, century. A later date more synchronous with the date of the string's collection (1880–1884) is possible, but the high degree of variability observed in the shell bead wear patterns and diameters shows that the beads have been restrung from earlier strands making a very late production date unlikely. Regional shell beads are typically ground together in strings resulting in uniform diameters and wear (e.g. Goto 1996; Liep 1981). The bead made of plant material revealed two possible periods of collection: either the early 1700s or the mid-nineteenth century. The later of the two dates is considered most likely here given the nature of the material and the likelihood of degradation under normal tropical conditions.

Together, the dates suggest that the shell beads could have been in circulation for over a century prior to their collection as part of MAA Z10604/E1902.190. If a later production date for the endocarp bead is accepted this would also reinforce that the string, as collected, was not in its original formation. The *Tegillarca granosa* white beads do not seem to be of a radically different date of manufacture to the *Chama* sp. beads, indicating the consistency of both red and white bead production through the early colonial period.

Z10855

The four radiocarbon determinations from Z10855 are intriguing and surprising, with two clear and distinct groupings of dates. Two of the white beads, manufactured from either *Tegillarca granosa* or *Anadara antiquata*, most probably date to sometime in the 1800s (see Figure 19.8). The other two white beads, one of either *Tegillarca granosa* or *Anadara antiquata* and the other made from the small gastropod *Imbricariopsis punctata*, date from substantially earlier. They are likely to have been produced in the 1700s, if not the 1600s (see Figure 19.8). While elsewhere in the Solomon Islands shell valuables are known to be regularly produced from subfossil shell (e.g. see Bogesi 1948), this is restricted to *Tridacna* artefacts. There is no analogue for this tradition relating to either Arcidae bivalves or diminutive species of Mitridae such as *I. punctata*, and the surfaces bear no diagnostic traces of post-mortem raw material collection and working. In short, there appears to be no reason to believe that the radiocarbon dates do not accurately date the production of the beads.

As with MAA Z10604/E1902.190, the irregular dimensions and wear traces on the beads denotes restringing, and the incongruity between the various radiocarbon dates for Z10855 also clearly demonstrate that the beads derive from different original strings. Moreover, the individual original strings are separated in time by up to three, or more likely two, centuries and stretch back beyond the ethnohistoric period of collection into the pre-colonial era.

The presence of beads in *Imbricariopsis punctata* provides evidence of further complexity, as there is seemingly no recorded tradition of bead manufacture in this species in the Malaita/Makira region. *I. punctata*, also mentioned in the literature under its synonyms *Pterygia punctata, Conohelix punctata* and *Imbricaria punctata*, is not a standard raw material for bead manufacture across the western Island Melanesian region, but it *is* the dominant raw material during the main period of ethnographic collecting (c. 1880–1935) in some discrete locales. Although confused with small species of *Conus* by some authors (e.g. Schneider 1905:58, 67), it is correctly identified by Ribbe (1903:135–137) for the Shortland Islands, where locally made and used strings of *I. punctata* are termed *perasali* and contrast with another local type (*mauwai*) produced from small *Conus* shells[1] and traded with Bougainville for pigs. It is also identified as the primary material for shell money production on Ponam, north of Manus in the Admiralty Islands (Carrier and Carrier 1989:33, 66, 102–103, again incorrectly identified as small *Conus* for Ponam by Eichhorn 1916). That the species used extensively on the Admiralties for shell money and decorating dance aprons and other items of adornment is indeed *I. punctata* is confirmed by KS's cross-checking of the extensive physical holdings of Admiralties material in the Ethnological Museum, Dresden, Germany.

Although the two known and confirmed centres of production for *I. punctata* beads are the northern Admiralty Islands and the Shortland Islands, shell money strands in museum collections with a recorded provenance of Choiseul also dominantly use this species as a raw material. This was consistently the case across major museum collections in Köln, Dresden, Berlin and Cambridge (Szabó 2019 *passim*). Whether there is local production is unclear, but museum collection evidence suggests that Choiseul—at least at the period of ethnographic collection—consumes and circulates shell money comprised largely of *I. punctata* beads. Short stretches of longer strands and odd, interspersed *I. punctata* beads were also observed in a range of ethnographic shell money strands collected from across New Ireland (Szabó 2019 *passim*).

There are certainly traditions of using small gastropods to produce white shell money in the Malaita/south-eastern Solomon Islands area, and where identifications are given the usual term is 'coneshell' (e.g. Burt 2009 *passim*). This includes the *kofu* money of the Kwaio of Malaita (e.g. Akin 1999), and further north, 'belts of highly-polished cone-shell beads' from Isabel (Burt 2009:54). The white bead manufacturing reported by Ivens (1927:390) for Ulawa and Sa'a, lying in between Makira and Malaita, is stated to use 'an arca' (i.e. Arcidae) termed *huresoso*. Other white shells are referred to as being less frequently used but there is no indication of what these shells might be in terms of Linnean nomenclature. Likewise, Fox (1919:164–165) mentions two types of white shell beads produced in Makira: a fine type (*ngisi*) and a coarse type (termed *h'a machui* in Arosi and *hura toto* in Bauro). There is no further description that would allow us to get a grasp on raw materials, although perhaps we could assume that *hura toto* of Fox in Makira is the *huresoso* of Ivens, produced in ark shell in Ulawa and Sa'a. This would mean *ngisi* remains unidentified.

It would appear that *I. punctata* bead production and circulation forms a tradition which has largely been invisible in (at least the English-language) literature, and although it was possibly used in the south-eastern Solomon Islands, after studying many thousands of shell beads from these islands in museum collections, a vanishingly small number were identified by KS as being made from *I. punctata*. The overwhelming majority of white beads (and indeed beads of all colours) are produced from bivalve shell. It is also worth pointing out that *I. punctata* has not been identified

1 Original German text: 'Die Herstellung des Perasali is die gleiche, doch wird viel grössere Sorgfalt auf seine Anfertigung verwendet, auch werden nicht Conusscheiben, sondern solche aus einer Imbricaria verwendet. Perasali ist hauptsächlich auf den Shortlands-Inseln im Verkehr, wohingegen Mauwai [*Conus* money] von den Leuten nach Bougainville zum Einkauf der Schweine mitgenommen wird.' Ribbe 1903:136–137, translated in text KS.

from archaeological deposits as a raw material for bead production anywhere in the Island Melanesia region. On current evidence it seems unlikely that the *I. punctata* bead radiocarbon dated from MAA Z10855 was produced in or around Makira, and it probably entered the region from a location to the north/north-west via the movement of goods and/or people. At what time this movement took place is not possible to discern.

Across the colonial/pre-colonial divide

The impact of European presence in the Solomon Islands on patterns of trade, access to and distribution of wealth, and the production and circulation of goods is well documented. Impacts were felt directly via traders (Belshaw 1950; Burt 2009:39), whalers (Bennett 1987), ethnographic collectors and dealers (Stanley 1994) and missionaries (Kwa'ioloa 2014), but also more broadly through the effects of colonial policies centred on pacification (Bennett 1987:Chapter 5) and currency systems (Connell 1977). All of these intertwining factors, and the complexity in relations between Europeans and indigenous Solomon Islanders, are considered in nuanced detail by Aswani and Sheppard (2003) for the Western Province of the Solomon Islands. That there was expanded traffic in shell valuables and shell money in colonial times in the Solomon Islands is also well attested. For example, Bennett (1987:84) describes European traders procuring red shell money from Langalanga to trade in Vanatinai (also known as Tagula or Sudest Island) in Milne Bay, New Guinea, while gold-lipped pearl oysters (*Pinctada maxima*) were supplied back into the south-eastern Solomons, where they were increasingly in demand for producing *tema* pendants. Aswani and Sheppard (2003:S62) map the shifting centrality of shell rings produced in Roviana, New Georgia, to local exchange systems, through their adoption and redistribution by European traders, to their fall in status in the late nineteenth century. During the course of the twentieth century, a growing curio market supplying foreign visitors spurred local production of shell arts and crafts at the same time as local consumption and use was falling—due at least partially to Christianisation (Burt 2009:50–52, see also Sheppard and Walter 2014 for an analogous rise of arts and crafts production in the Western Province of the Solomon Islands). These transformations doubtless impacted upon the character of museum collections as well as the production and trade of Solomons shell money recorded by anthropologists and observers.

Although it is difficult to know what the prevalence, spread and role of shell money may have been at contact and in the centuries before based on current evidence, the two earlier beads from MAA Z10855 tell us two things: (1) that small shell beads consistent with those produced for shell money strings were produced from very early or pre-colonial times over a period of two to three hundred years; and (2) they remained in circulation in various forms, and thus held their relevance, over this span. This affirms the suspicions of Langalanga elders that shell money can be heirloomed over some hundreds of years, and indeed exceeds their estimates. The fact that such small individual components could survive and pass through many hands for centuries is testimony to their value and the care invested in their maintenance and curation.

These findings also offer insights of a more theoretical nature for archaeologists. Heirlooming, as a general human practice, has the potential to confound archaeological chronologies if undetected: the date of the production of an artefact may not match the chronostratigraphic context in which it is found resulting either in an overestimate of the age of that context or, alternatively, a dismissal of an heirloomed artefact as simply out of context as its date does not match those of surrounding artefacts. If MAA Z10855 had been recovered archaeologically, and its beads dated as here, interpretation would doubtless have been fraught and contested.

Although different areas have distinct shell money traditions and zones of circulation, the geographic spread of these across Papua New Guinea, the Solomon Islands and beyond would in itself imply a degree of time depth. A robust case has been made for specialised shell bead production at Motupore Island on New Guinea's south coast around eight hundred years ago (Allen 2017), however the raw materials being transformed remain unclear, thus limiting our ability to connect beads from elsewhere or contrast traditions (see discussion in Szabó in press). There is surely much to learn about the shifting patterns of connectedness linking specialised shell bead producers and consumers through time, but in order to access these histories, rigour in shell provenance, taxonomic identification and analysis will be required by both archaeologists and anthropologists.

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