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## **Excavating MacGregor: reconnecting a nineteenth century collection from Papua New Guinea**

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# War and peace: two radically different encounters with the Marind-Anim

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Early in Sir William MacGregor's tenure in British New Guinea, he was alerted by groups in the Western Division of seasonal raids of Marind-Anim engaged in headhunting. Determination to pacify the regions led him to take action. Several expeditions were aimed at discouraging the warriors from crossing the border and inflicting further damage. During two face to face interactions with people known as the 'Tugeri' in 1890 and 1896, peaceful and violent respectively, MacGregor acquired a substantial number of cultural objects for the Official collection. As a precise moment in the lives and practices of these Marind-Anim warriors, analysis of the extensive 1896 assemblage is particularly important for revealing aspects of private and ritual life not recorded in extant historic or ethnographic accounts. A comparison of the two assemblages illustrates how radically different cross-cultural encounters can influence the composition of ethnographic museum collections. The study helps identify attributes of material in museum collections that might also have been obtained from violent engagements.

□ William MacGregor, British New Guinea, Tugeri, Marind-Anim, punitive expedition, ethnographic collection

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## IN PURSUIT OF MARIND-ANIM INTRUDERS

In an effort to protect people in the Western Division and achieve peace in the region, on 13 May 1896 William MacGregor (Lieutenant Governor of British New Guinea), with four of his officers, and around twenty Armed Native Constabulary, set off by boat from the mouth of the Wassi Kussa River to confront the intruders from Dutch New Guinea (Figure 1). His aim was clearly punitive. 'The object in view was not simply to drive them out of the district, but to do that while inflicting on them such punishment as would prevent them from returning, and as would impress them with the superior strength of this Government' (MacGregor 1897a:53). The mission was highly successful. When the Armed Native Constabulary led by their commander Archibald

Butterworth, together with volunteers Johnson<sup>1</sup> and Amadeo Giulianetti, attacked and killed three men, including the leader of the Marind-Anim<sup>2</sup> group, the rest fled, leaving behind their canoes and 'all their camp gear and food, as well as the greater part of their arms, which they threw away in the rout' (MacGregor 1897b:xxi-xx). MacGregor describes how the warriors 'fled across the grassy plateau in wild rout, throwing away bows and arrows, water bottles, bundles of sago, or whatever else they had been trying to save' (MacGregor 1897a:53).

Two days later, after transporting 48 confiscated canoes to Mata Kawa Island<sup>3</sup>, MacGregor and his party returned to examine the area where the confrontation had occurred (Figure 1). They surveyed a camp and the site of the violent encounter. On closer inspection, the area where the rout took place was found to be 'covered by

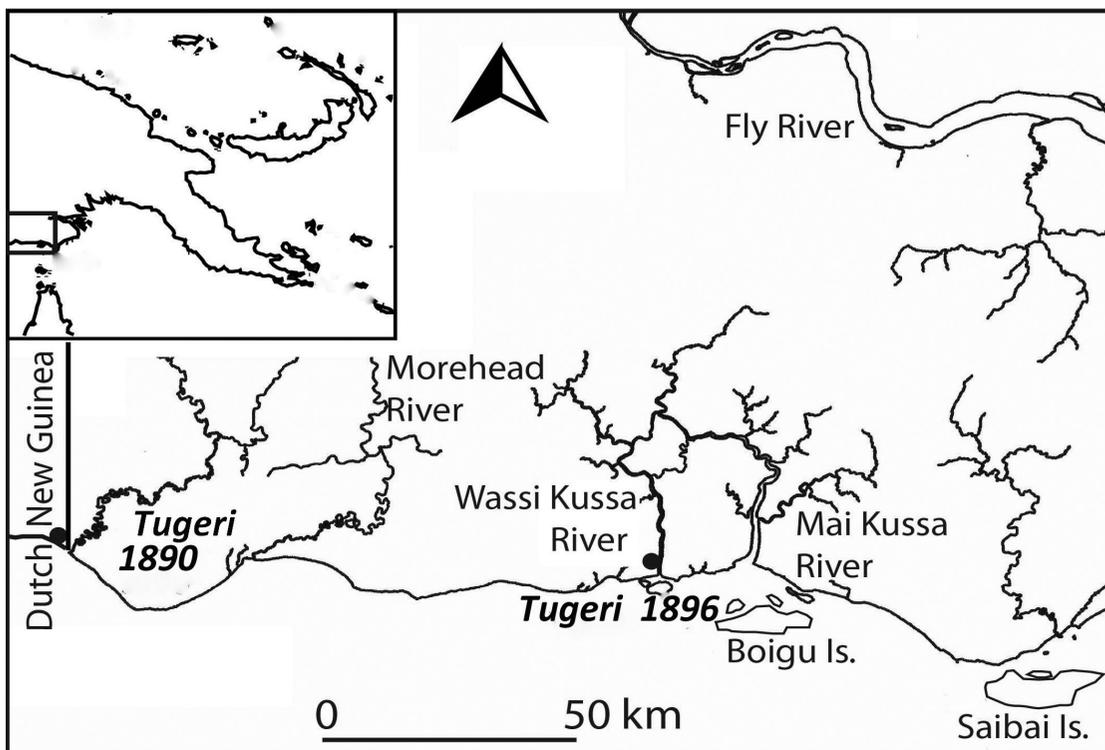


FIG. 1. Map showing the general locality where MacGregor had encounters with Marind-Anim people known locally as the 'Tugeri' in 1890 just over the border in Dutch New Guinea and in 1896 on the west bank of the Wassi Kussa River, four kilometres north from the mouth of the river. Drawing by Pamela Swadling.

bows and arrows, water bottles, bundles of sago, coconuts, bundles of clay, hundreds of sheets of ti-tree bark, large numbers of handbags, and numerous other things' (MacGregor 1897a:54). MacGregor wrote that 'many of the articles captured from this people will be of much ethnological interest, well worthy of the attention they will no doubt receive when they reach the British New Guinea collection in the Queensland Museum'. He then made special note of 'a cape made of mat' (Figure 2) which extended the length of the body and which had only been observed previously

by people who resided some distance up the Fly River. Also mentioned were 'armlets of boars' tusks' which he notes consisted only of a 'half a circle,' and 'many crossbelts or girdles of plaited or matt work' (MacGregor 1897a:55) (Figure 3).

A comparison of the Marind-Anim assemblage of items which MacGregor describes as 'articles captured from this people' (MacGregor 1897a:55) with those obtained at a prior peaceful encounter in 1890 offers the potential to better understand differences in the character of ethnographic collections obtained in



FIG. 2. Finely woven cape (ER15211 (MAC6130)) acquired from the Marind-Anim raiders' camp fits MacGregor's (1897a: 52) description of first sighting the men. 'As we came nearer they could be seen all standing upright in their canoes, powerful men, each with a cape of mat extending from the top of the head to the loins' (see Anon. 1900: Pl. 10, Fig. 18): a. full cape; b. closeup of the hood showing fine weave; c. back of the hood showing decorations. Queensland Museum Photography, Peter Waddington.

radically different social contexts. The Marind-Anim raiders' collection also provides invaluable insights into the kinds of objects that people transported with them while they travelled into foreign territories for trade and headhunting raids (van Baal 1966:716, Knauff 1993:155–59), although this particular assemblage relates to a group of males. Although van Baal (1966:713–714) reports that men, women and children joined Marind-Anim headhunting expeditions, MacGregor's (1897a;1897b) accounts only mention males. Representing a precise moment in time, the group of salvaged material included items not normally brokered within peaceful inter-cultural exchanges but deliberately withheld from circulation under normal circumstances. As their contents were still intact when the assemblage was registered, the woven 'handbags' referred to in MacGregor's report provide an especially tantalising glimpse into the lives of these men. Not only do these personal effects open a unique window into masculine components of Marind-Anim culture and rituals associated with headhunting, but through comparison with material collected in peaceful encounters, they indicate the types of objects that enter ethnographic collections when material has been obtained through force rather than gift or barter.

### **SITUATING THE 'TUGERI'**

The name 'Tugeri' was used by local people in western British New Guinea (including the Gulf region) and across the Torres Strait to refer to diverse groups of Marind-Anim speakers who travelled from both the coastal and inland regions of Dutch New Guinea to conduct violent headhunting raids across the border as far east as the Fly River (e.g. van Baal 1966:677, 696–699; Hitchcock 2009; McNiven 2010; Wirz 1933; Williams 1936:43). Van Baal (1966:676) writes that, despite the risks involved, the Marind-Anim deliberately situated their raids at great distances from their own villages to prevent reprisals by their victims. The groups that MacGregor met are likely to have belonged to the putative inland group associated with the Imo secret sect (McNiven 2010; Fig. 1; Wirz 1933:116–17).

The first documented report by Europeans of the Marind-Anim raids and the identification of these people as 'Tugeri' was probably in 1875 when Rev. Samuel MacFarlane noted that people on Boigu Island were in fear of tribes located to the west (Hitchcock 2009:89) (Figure 1). However, the earliest recorded encounter with the British was on the Wassi Kussa River on May 24, 1884, when a group of 20–30 canoes each reported to carry 30 men attacked Captain John Strachan's steamboat, later forcing the party to beach their craft and retreat on foot (Strachan 1888:44–48). Subsequently, there were increasingly frequent reports of raids in the region to the west of the Fly River by people to whom the name 'Tugeri' was given (e.g. van Baal 1966:696). During the early period, a peaceful meeting facilitating trade between the Tugeri and Saibai Islanders in 1887 is recounted by Haddon (1891) based on an article that Rev. E. B. Savage wrote for *The Chronicle of the London Missionary Society* (Sept. 1887). On this occasion the two parties exchanged gifts. Savage's next meeting off Boigu Island in April 1889, however, ended in violence (Haddon 1891:179). MacGregor first met the Tugeri face to face in March 1890 and later conducted a punitive mission in May 1896, which he hoped would stop their headhunting, but raids by bands of Marind-Anim continued until after the turn of the century (van Baal 1966:698).<sup>4</sup>

### **A PEACEFUL OVERTURE**

The 1896 attack on the Marind-Anim headhunters described above was not MacGregor's first experience of people from this cultural group. On an inspection tour of the western region in 1890, MacGregor pursued 'Tugere pirates' along the coast. Through his actions, he was following 'instructions to protect the natives of this territory to the best of my ability' (MacGregor 1892:xv). The objects which MacGregor acquired on his first encounter with the Marind-Anim in their own territory (Figure 1)<sup>5</sup> establish an important baseline against which to contrast the assemblage gained through violent confrontations six years later.

After several days travel, on March 3, 1890 MacGregor encountered a group of men. They lay down their bows and arrows before approaching MacGregor in a show of peace.

we soon opened a trade, I laying down something on a sandy spot, and they coming to pick it up and leave something for me in exchange. The leading man would then come within thirty or forty yards of me, but if I went nearer he fell back ... One or two of the new arrivals were so anxious to obtain a plane-iron that they were less coy and approached close to me, but still preferred to pick off the ground to receiving them from my hand. A good understanding was soon established when they lost timidity from increase of their number, and arms were laid aside. When the contents of the trade had been expended, I returned to the launch, and in a short time a number of natives walked out to us there without arms. At one time eighty men were counted on the foreshore near us. . . They were desirous of exchanging anything or everything they had for knives, plane irons, etc. (MacGregor 1890:71).

The next day another small party approached MacGregor’s boat offering several women and a blind man for exchange, but this proposal was not accepted. MacGregor then began to interact with the group with the intention of persuading them to return to their villages to the west and stop harassing people in British New Guinea, but when he was informed that his party had accidentally crossed over to the Dutch side of the border, he was forced to retreat. It was six years before he encountered Marind-Anim warriors again. By this time, their frequent raids had become intolerable. Since diplomatic attempts to force the Dutch to control the population were unsuccessful, MacGregor no longer attempted to have peaceful social intercourse with them (Joyce 1971: 139–140).

The kinds of objects collected in this first peaceful meeting demonstrate the singularity

of the material won after the subsequent violent encounter. Since MacGregor’s description of the peaceful exchange process in 1890 suggests bargaining was not involved, it can be assumed that the Marind-Anim men willingly offered up personal belongings to obtain highly prized iron tools. There is also no suggestion that MacGregor demanded additional payment for any of the objects he put down, although he was probably eager to participate in the exchanges to acquire unusual objects. Items the men were presumably wearing at the time (belts, ear, neck, arm and breast ornaments and wrist guards), comprise 77 per cent of the 53 objects in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889–1910) from Transfer 46 (1892) identified as from this meeting (Table 1) (Figure 3). Since many of the men wore multiples of these objects, their loss weighed against valuable iron may not have represented a great hardship, but of course that is only an assumption. Two items thought to be whistles were described by MacGregor as ‘a small cocoanut suspended round the neck with a hole at one end and three holes at the side; this they use as a sort of whistle call’ (Figure 4). In addition, the four pieces of string made from pigskin (categorised as tools in Table 1) may also have been part of everyday attire and perhaps were also relatively easy to replace.

TABLE. 1. Contents of the 1890 Marind-Anim assemblage

Artefact	Number
Bag	2
Belt	19
Club	1
Drum	2
Fishing net	1
Musical instrument	2
Ornament	1
Ornament arm	2
Ornament breast	1
Ornament ear	4
Ornament neck	9
Tool	4
Wrist guard	5
<b>Total</b>	<b>53</b>



FIG. 3. Belts decorated with coix (Job's tears) seeds, as in this example, were among the body ornaments Marind-Anim men offered MacGregor in exchange for iron in 1890: ER9493 (AM E.006303). These kinds of belts were so numerous in the collection that some were chosen as 'duplicates' (Torrence and Davies, Chapter 13 this volume). This example has a label in MacGregor's handwriting: 'Tugari 3.3.90'. Scale bar: 5cm. Queensland Museum Photography, Gary Cranich ©Australian Museum.

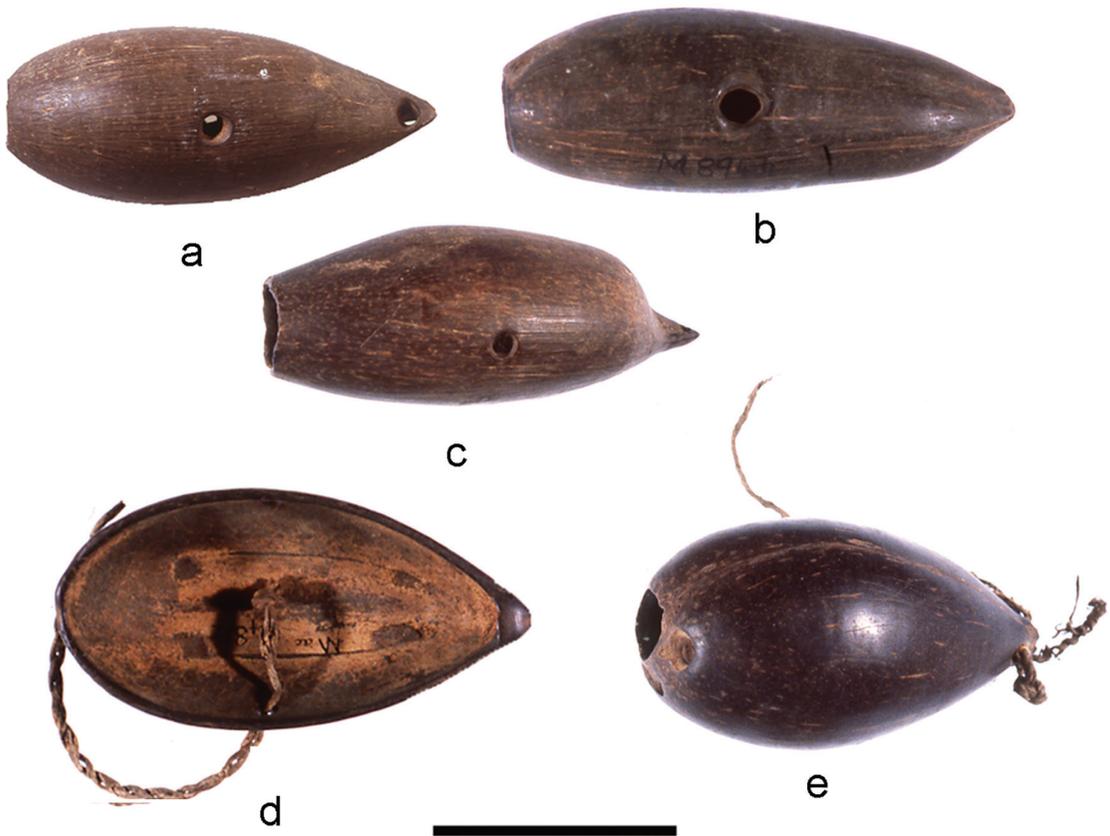


FIG. 4. Identical whistles made by piercing a young coconut were acquired from both 1890 (a, d) and 1896 (b, c, e) meetings with the Marind-Anim: a. ER9536 (MAC651); b. ER15663e (MAC8944); c. ER15247 (MAC3270, PNGNMAG); d. ER9536 (MAC651); e. ER15288 (MAC3327). Scale bar: 1cm. Queensland Museum Photography.

The presence in the assemblage of a disc club with a 'feather plume tassel' (ER9278 (MAC3905, PNGNMAG)) and two drums (ER10811 (MAC3379, PNGNMAG)) and (ER10812 (MAC3423, PNGNMAG))<sup>6</sup> (Figure 5) implies that once the trade was proceeding successfully, some men specially brought out these objects from the nearby camp. Did they know that certain kinds of

artefacts were especially attractive to westerners? It is possible they had learned about what the new foreigners desired from trade with groups in the Trans-Fly region. It seems more likely that since the Marind-Anim acquired their stone clubs and drums through exchange, these items were considered as appropriate trade items in their dealings with



FIG. 5. The variety in the shapes and decorations of the drums obtained by MacGregor following a punitive raid in 1896 (a, b) or through exchange in 1890 (c, d) may indicate that they had originally been obtained from other groups via exchange or through raiding: a. ER15763 (MAC3396, PNGNMAG); b. ER15761 (MAC3412); c. ER10811 (MAC3379, PNGNMAG); d. ER10812 (MAC3423, PNGNMAG). Scale bar: 10 cm. Queensland Museum Photography.

any group of outsiders. For example, Tugeri men and Rev. Edwin Savage engaged in 'shaking hands and exchanging presents' when they met in 1887 at Saibai Island in the Torres Strait (Haddon 1891:178). A similar trading expedition or a raid on a community could explain why one of the drums (ER10812 (MAC3423, PNGNMAG)) has decorations in the form of a canoe and headdresses as well as the distinctive hourglass shape typical of those used in the islands of the Torres Strait (Figure 5d).

MacGregor's 1890 encounter with people he called 'Tugeri' well illustrates the social context in which a significant proportion of the Official collection was also obtained in many other areas of British New Guinea (e.g. Philp, Chapter 3 this volume; Davies, Chapter 4 this volume; Torrence, Chapter 6 this volume): i.e. friendly exchange with local communities which had had little prior contact with westerners. Three observations are particularly notable. First, from the perspective of the indigenous group, the meeting was unexpected and unplanned, but would have provided an opportunity for learning about these foreigners. Consequently, offerings were dominated by materials close at hand. Typically, these included items that people had on their person at the time and that were not essential to daily life and/or were things that normally circulated through exchange with other groups. Secondly, in circumstances where the participants were totally unknown to each other, barter did not take place. Instead, each participant simply accepted what was offered, with the British initiating the event. Thirdly, once it was clear that highly desirable trade goods were on offer (e.g. red cloth, metal), the local groups might attempt to prolong the interchange by bringing out more highly valued items (e.g. stone clubs) as a strategy to maximise their takings.

## MARIND-ANIM RAIDERS' ASSEMBLAGE

The assemblage of items resulting from MacGregor's very different second encounter with the Marind-Anim in 1896 is important because it contains objects that were not usually made available for trade between locals and British men in British New Guinea during the early colonial period. From an

analytical perspective, however, identification of the material derived from the second incident with the Marind-Anim is neither simple nor straightforward, because the material was not carefully curated in British New Guinea. The articles salvaged by MacGregor and his officers after the raid are assumed to have been included in Transfer 60 to the Queensland Museum (March 1, 1897), but only four spears, two bamboo knives and a head carrier appear to have been labelled. The locality for the spears is recorded in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889–1910) as 'Bugari 5/96'.

Taking a deliberately cautious approach, Quinnell (2000:87) tentatively assigned 1563 items from Transfer 60 to the Tugeri punitive expedition based on MacGregor's description of artefacts (MacGregor 1897a:52–56), items depicted in eleven plates published in the *British New Guinea Annual Report 1898–1899* (Anon. 1900) and similarities to other collections from the same region (see BOX 8.1) (Table 2). The arrows were considered in terms of their similarity to the illustrated examples and their consecutive ordering in the register. The assumption made was that bundles of arrows were unpacked and registered together. More recently, Torrence and Davies have rechecked Quinnell's list and corrected minor inconsistencies. A key component of the assemblage is a group of 19 woven bags retaining their original contents. These bags had 33 items attached to the outside and contained a further 507 objects, a significant contribution to the 1566 items we propose were acquired following the 1896 rout of the Marind-Anim warriors (Table 2). Given the difficulty of identifying the arrows with complete certainty and the poor condition of the bows leading to their disposal before the *Register of the 'MacGregor' Collection of New Guinea Ethnology* (Queensland Museum (1915–2001)) was made, the numbers are likely to be a minimum estimate. Despite the problems with this assemblage, it provides a very rare opportunity to gain some understanding of the material culture associated with Marind-Anim men on a headhunting expedition and by inference of the kinds of activities in which they were engaged.

TABLE. 2. Contents of the 1896 Marind-Anim assemblage

Artefact type	Category	Number	Bag attachment	Bag content	Grand Total
Adze metal	Attractor	1			1
Arrow	Attractor/Exchange	565			565
Arrow head	Attractor/Exchange	31			31
Arrow shafts bundle	Attractor/Exchange	1			1
Axe metal	Attractor	3			3
Bag	Exchange/Social	29			29
Beheading knife	Attractor/Magic	2			2
Belt	Social/Exchange	8		3	11
Belt coix	Mourning	2			2
Bow	Attractor	75			75
Bowl coconut	Utilitarian	6	3	18	27
Bowstring	Attractor		2		2
Canoe ornament	Made for Sale	1			1
Canoe paddle	Utilitarian	4			4
Charm	Magic/Sorcery			5	5
Charm?	Magic/Sorcery			33	33
Clothing cape	Social	5			4
Club	Attractor	7			7
Club iron head	Attractor	4			4
Container bamboo	Utilitarian	5		6	11
Container lime	Social	36	1		37
Container needles	Utilitarian	1			1
Container pigment	Utilitarian	1		1	2
Container spines	Utilitarian			2	2
Container water	Utilitarian	1			1
Cordage	Utilitarian	7	6	12	25
Dagger	Magic/Sorcery				
Drill equipment	Utilitarian	1			1
Drum	Social/Exchange	3			3
Fire making equipment	Utilitarian	2			2
Fishing net	Utilitarian	2			2
Head carrier	Magic/Sorcery	1			1
Human tooth	Magic/Sorcery	7			7
Hunting animal	Utilitarian	14			14
Knife	Utilitarian	14	4	16	34
Mortar	Social	3			3
Musical instrument (misc.)	Social	5		2	7
Awl	Utilitarian	18		14	32
Ornament	Social	8		8	16
Ornament arm	Social	2	1	10	13
Ornament ear	Social			1	1
Ornament forehead	Social	7	1	3	11

TABLE 2. cont. Contents of the 1896 Marind-Anim assemblage

Artefact type	Category	Number	Bag attachment	Bag content	Grand Total
Ornament head	Social	24		1	25
Ornament neck	Social	1			1
Ornament neck coix	Social	1		3	4
Ornament neck shell	Social			1	1
Ornament neck teeth	Social	4			4
Ornament nose	Social			2	2
Pestle	Social	7			7
Raw Material animal	Raw Material	6		70	76
Raw Material glass	Raw Material			3	3
Raw Material human hair	Raw Material			2	2
Raw Material metal	Raw Material	1		12	13
Raw material mineral	Raw Material			6	6
Raw Material pigment	Raw Material			8	8
Raw Material plant	Raw Material	8		102	110
Raw Material shell	Raw Material			122	122
Spatula lime	Made for sale/Social	18	1	14	33
Spear	Attractor	4			4
Tobacco pipe	Made for sale	26			26
Tobacco pipe bowl	Social	4		6	10
Tongs	Utilitarian	5	12	3	20
Tool	Utilitarian	27	2	17	46
Wrist guard	Utilitarian	8		1	9
<b>Grand Total</b>		<b>1026</b>	<b>33</b>	<b>507</b>	<b>1566</b>

Although the objects collected by MacGregor offer a tantalising glimpse into the private lives of the Marind-Anim in their eastward expeditions, they cannot be assumed to be a full range of the material culture the men carried with them to battle. To begin with, it is impossible to reconstruct the choices made by the members of MacGregor's patrol who gathered up the discarded objects. How much direction did MacGregor give the men about what to collect? How much of the assemblage was picked up by the members of the Armed Native Constabulary? What did each person think was valuable enough to be salvaged and what was left behind? Secondly, it is unlikely that the Marind-Anim left all their possessions behind. For example, many body ornaments would have travelled with their wearers when they fled. The men probably discarded what they considered unnecessary for

survival and especially things that could impede their rapid escape from danger. Abandoned objects are likely to have been awkward to transport: e.g. excess bundles of arrows; heavy equipment; extra or backup equipment; spare parts; etc. Although answers to questions about the representative nature of the sample of personal gear in the Marind-Anim assemblage must remain hypothetical, the group of objects resulting from the confrontation with MacGregor enables a very rare sample of men's personal belongings from a single cultural group at a specific time. In addition, this assemblage provides an important contrast to the bulk of the Official collection that we assume was obtained largely through peaceful cross-cultural negotiations, as in the case of MacGregor's meeting with a Marind-Anim group six years previously.

Arrows were not acquired in the 1890 peaceful meeting because the Marind-Anim men deliberately put down their weapons to show they had friendly intentions, in the same manner that Haddon (1891:177–178) reported. Although MacGregor obtained arrows through exchange on other occasions (see Philp, Chapter 3 this volume), it was not unusual for men to leave them behind when trading. Given the aggressive social context of the meeting between MacGregor and the Marind-Anim in 1896, it is perhaps not surprising that the largest component of the Tugeri collection are arrows (576), none of which are recorded in the register as consisting of a bundle (see Anon. 1900:Plate 9, Fig. 17). The arrows in the assemblage were possibly deliberately collected and removed by the MacGregor party to prevent further use. At the same time, MacGregor was very impressed by the arrows which he notes 'offer great variety as to size and make' (MacGregor 1897a:55) (see Philp, Chapter 12 this volume). In addition, it is also possible that arrows were particularly attractive to the Constabulary who assisted in collecting materials from the battlefield, the majority of whom were from places nearby in the Western Division that had previously suffered from raids by the Marind-Anim (Butterworth 1896:26).

As noted above, the number of arrows in the Official collection that could be positively identified to the 1896 encounter (565) is likely to be a minimum of those collected at the time. Since 1500 arrows in Transfer 60 were not included in the hypothetical Tugeri assemblage, because the information in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889–1910) was ambiguous, the numbers acquired from this incident could have been much higher. A 'ballpark' estimation of the size of the raiders' group can be made based on the number of boats involved. MacGregor records that 48 canoes were captured by the British after the raid, although Captain Butterworth (1896:74) notes that 'we met them in large numbers camped as a war party, and totally routed their force, capturing sixty canoes and a large quantity of their arms'. The difference in numbers may relate to some canoes that had been

encountered and embargoed the day before the main conflict. Given that Strachan (1888) had previously observed as many as 30 Tugeri men in a canoe, the maximum number involved in the punitive incident could have been as high as 1800, but perhaps a more realistic approximation might be in the order of 1000 (20 men per canoe). If this is the case, then 2000 arrows (the positively identified set and the unknowns) seems a realistic estimate of what might have been recovered by the Constabulary. A systematic study of the technological and stylistic attributes of the arrows and working from known to unknown could help clarify this problem. One can conclude, however, that the number of arrows is not especially large given the likely number of men involved, since each person would have been well supplied in preparation for raiding. In contrast to the arrows and bows made with great care to fit a single man's form were highly personal objects, often buried with a man on his death (van Baal 1966:196, 771; see Philp, Chapter 12 this volume). The presence of these objects in the articles left behind is perhaps the clearest signal of the panic in which they left.

In contrast to the large quantity of arrows, only seven stone clubs were abandoned (Figure 6; Anon. 1900:Pl. 6, Fig. 11); . Perhaps MacGregor and his officers acquired some for their own collections. The most likely explanation for the scarcity of these artefacts is that since stone was a scarce raw material in the swamp environment where the Marind-Anim resided, the men carried their clubs with them when they fled. As noted above, the Marind-Anim whom MacGregor met in 1890 had been extremely eager to trade for metal objects. Van Baal (1966:737, 739–740) reports that Marind-Anim men normally owned very few metal clubs, so the four metal axes, four club heads and the bundle of plane iron acquired from those left behind (Figure 7; Anon. 1900:Pl. 24, Fig. 41) must have represented a significant loss to their owners. Of the 13 metal clubs and axes in the Official collection collected from across British New Guinea, eight were obtained from this violent incident, providing strong evidence that metal objects were not normally available for exchange with MacGregor and his associates.

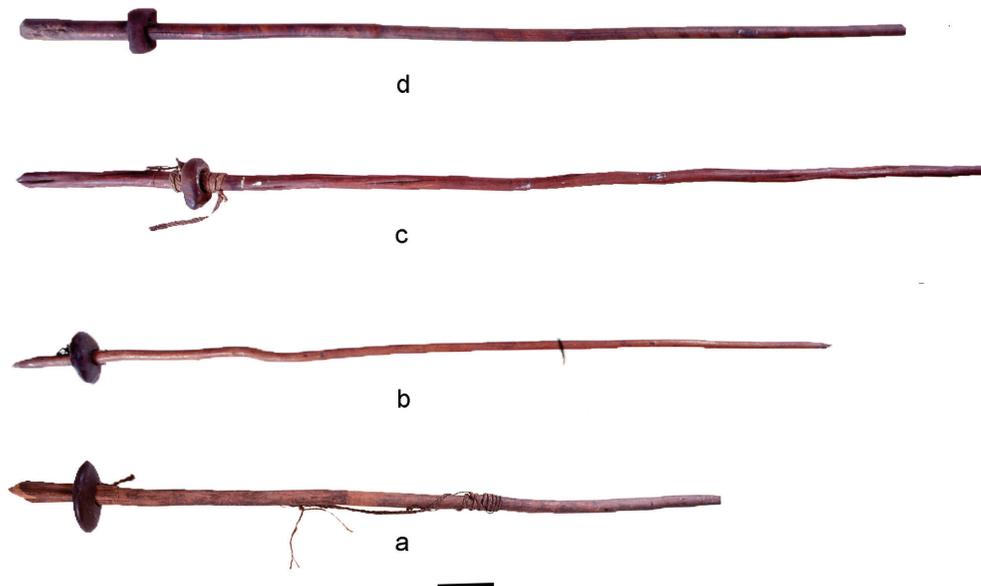


FIG. 6. Clubs salvaged from the Marin-Anim camp in 1896 with heads made from stone (a, b) and metal (c, d): a. ER16449 (MAC3641); b. ER16450 (MAC3638, PNGNMAG); c. ER16454 (MAC5438, PNGNMAG) d. ER16453 (MAC5578, PNGNMAG). Scale bar: 10 cm. Queensland Museum Photography.



FIG. 7. These axes with metal blades (probably hoop iron) acquired at the Marind-Anim camp in 1896 were originally published in the British New Guinea Annual Report (Anon. 1900: Pl. 24, Figure 41): a. ER15291 (MAC4123); b. ER15292 (MAC4124, PNGNMAG); c. ER15290 (MAC4057); d. ER15293 (MAC4474, PNGNMAG). Scale bar: 10 cm. Queensland Museum Photography.

Some of the most highly significant artefacts in the Tugeri assemblage are those directly associated with rituals performed in conjunction with headhunting. For example, two long, thin, spear-like objects with a sharp pointed tip are referred to as *pahui* in the Marind-Anim language (Anon. 1900: Pl. 10, Figs. 18, 19) (Figures 8, 9). These objects played a central role in the ritual of headhunting, as described in detail by van Baal (1966: 725–743). A *pahui* was supposedly broken over the head of the victim before the death blow was inflicted. This distinctive spear, characterized by a rectangular area of carved fret work, has a variety of forms. The concentric circles that dominate the fretwork in these examples may be related to boar’s tusks and/or symbolically linked to male and female relationships. A stone disc may be added to the shaft, just above the carved area, but this was only applied to *pahui* used on ceremonial occasions. Given the value and rarity of stone, a perforated disc is very unlikely to have been taken on a headhunting expedition (van Baal 1966: 737; 739–740).



FIG. 8. Spear-like objects with a sharp pointed tip and elaborate carved decoration were referred to as *pahui* in the Marind-Anim language (a, b). These played an important role in rituals associated with headhunting (see Anon. 1900: Pl. 6, Fig. 11; Pl. 10, Fig. 19). These three objects were among the four spears listed in the *Ethnology Register (New Guinea)* (Queensland Museum c. 1889-1910) with the locality given as 'Bugari 5/96': a. ER16368 (MAC7477); b. ER16369 (MAC8906); c. ER16366 (MAC7418). Scale bar: 5 cm. Queensland Museum Photography, Peter Waddington.



FIG. 9. Detail of the ornate carving on both sides of the two *pahui* spears from the Marind-Anim raiders' camp (see Anon. 1900: Pl. 10, Fig. 19): a. ER16368 (MAC7477); b. ER16369 (MAC8906). For scale see FIG. 8. Queensland Museum Photography, Peter Waddington.

Twenty-four headdresses and seven forehead ornaments were included among the things that the Tugeri men carried with them during the raiding. These items had key metaphorical and social associations and also helped make the wearer look fierce and intimidate the intended victims (Figure 10) (see Anon. 1900: Pl. 9, Fig. 16). It is difficult to discern whether these important objects had fallen off in the skirmish or had been stored in the camp. The majority are constructed with cassowary feathers, which is appropriate for warriors since this large bird is venerated by many Papuan groups for its strength and prowess in fighting. Interestingly, when Rev. Savage met another Marind-Anim group in a peaceful context in 1887, their headdresses were constructed with bird of paradise feathers (Haddon 1891:178) which clearly was sending a different message. It is significant that, except for belts, MacGregor was not offered body ornaments in his 1890 peaceful meeting with the Marind-Anim.

The three drums and three other musical instruments retrieved from the abandoned objects were also used as part of the ritual associated with the raids.<sup>7</sup>

These included a bundle of short bamboo tubes that MacGregor identified as pan pipes (Anon. 1900: Pl. 16, Fig. 12) (see Wirz 1922: Tafel 25, 2) and two possible rattles that might have originally been attached to the drums so they shook when the drum was struck (one made from nuts and one from crab claws (Figure 11). In addition, there were three whistles, consisting of a coconut with holes and suspension cord which MacGregor (1897a:56) described as ‘cocoanut shell fashioned like an ocarina’ (see also Anon. 1900: Pl. 16, Fig. 12; Wirz 1922: Tafel 25, 3, 4). Whistles of this type were common in the Western Division, as described

by Williams (1936:439); two very similar items had been obtained through exchange with the Marind-Anim in 1890 (Figure 4).

The rituals associated with headhunting are also referenced by another rather enigmatic class of artefact, perhaps because it is very rare in museum collections. A group of 16 decorated objects made from bamboo are described by de Vis in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889–1910) as a ‘piece of bamboo, bifid on one side of node, ornate on other, outside removed further and cavity plugged with bark’ (e.g. ER15194-

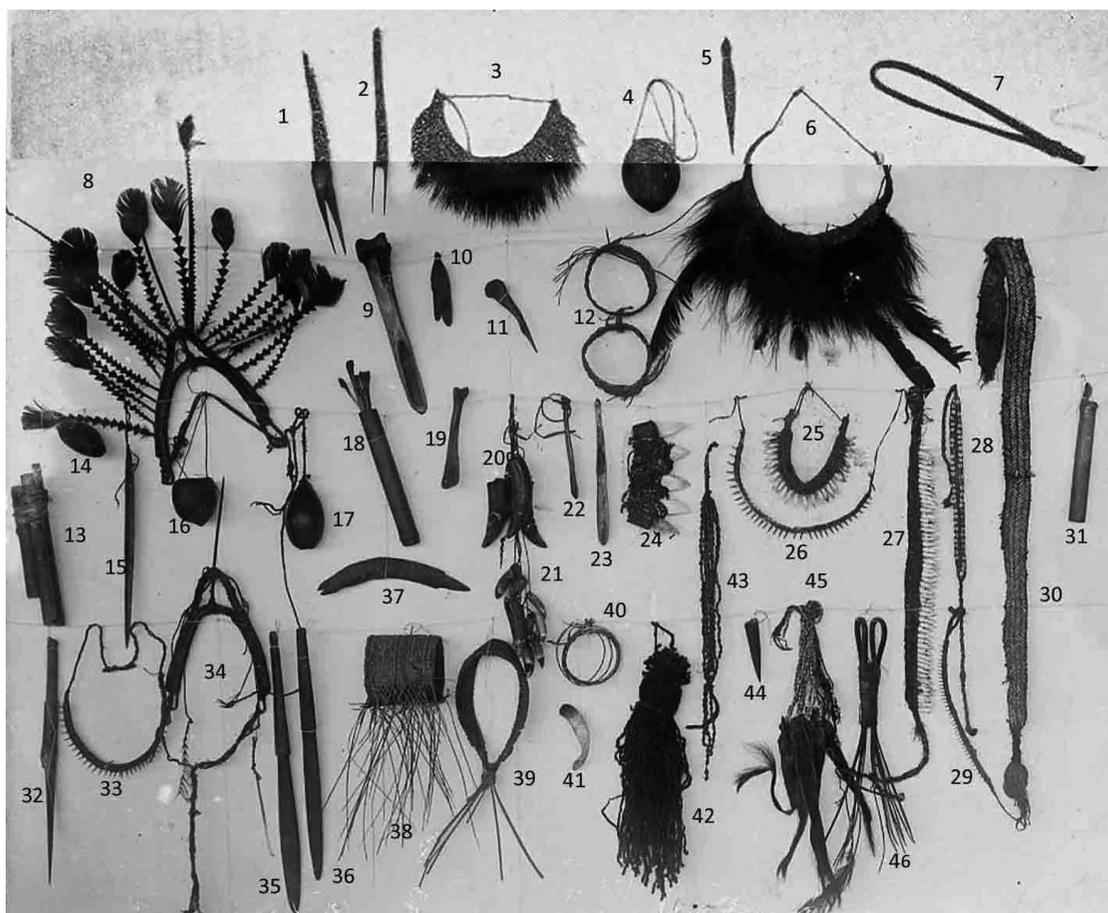


FIG. 10. Marind-Anim ornaments and implements recovered after the punitive event in 1896. A reconstruction of Plate 9, Figure 16 (Anon. 1900) made by combining a British Museum print (Oc,B20.24) ©Trustees of the British Museum, with the missing section from a scan of the published plate. See discussion in BOX 8.1 for a list of the objects and registration numbers that have been identified.

15207) (Anon. 1900:Pl. 9, Fig. 16, on the left-hand end of the top row) (Figure 10, Nos 1, 2; Figure 12). Many of these were ornamented by the removal of a long, thin piece of the outer skin of the bamboo, thereby creating a design with a contrasting colour; occasionally, engraved patterns were also added. Given they were decorated, it is possible that each one was associated with the man who carried it. The small pieces of bark inside the objects (ER15196, AM E.007069) and ER15194, BM Oc,MCG.80) (Figure 12) may have been used to store dry tinder for starting a fire, an essential requirement for men travelling in a damp environment. These unusual objects may also have had a role in headhunting ritual. For example, Seligman (1910:172) notes that among people living in the region around Port Moresby, bark derived from the Papuan Gulf area was highly prized for its magical properties. These values may have been widely shared across the region.

It is very likely that the primary role of the pronged artefacts was ritual. Wirtz (1922, Part IV:Plate 53) illustrates an object resembling them that was incorporated into a headdress worn during ceremonies in which various spirits called *dema* are portrayed. In addition, two very similar items currently housed in the National Museum of Ethnology in Leiden are described in the museum records as 'stick of *dema* decoration' and 'magic object' (RV-3651-3i, RV-3651-3j). Hondius van Herwerden's notes about them state that a very similar forked bamboo object currently held in the Wereldmuseum, Rotterdam was called a 'Gingirake' and, was used as a charm that was attached to a rope and thrown at the intended victim. It is also noted as 'very rare'.

Intriguingly, the shape of the bamboo artefact with the two characteristic long points strongly resembles the *kui-ahat*, a pronged piece of bamboo used for exhibiting heads brought back from raids. The objects that MacGregor collected are very similar in overall configuration to the smaller *kui-ahat* kept inside the feast house (*kui-aha*) built for the rituals associated with a headhunting expedition (van Baal 1966:474; 722; Pl. XXI, fig. 4; Corbey 2010:80–81). What the exact function of the forked objects was in the context of a headhunter's camp is unclear, but



FIG. 11. For the Marind-Anim the crab represented an important spirit (*dema*) called Hoyom that was also the totem of the Wakabu-rek clan. The presence of these crab claws, which may have been a rattle or a decoration on a bag, may indicate that members of this clan were present among the Tugeri men attacked by MacGregor's party: ER18656 (MAC2791, PNGNMAG). Scale bar: 1 cm. Queensland Museum Photography.



FIG. 12. Fourteen enigmatic bamboo objects with two prongs at one end may have had ritual uses. Some still contain small pieces of disintegrated bark or other plant material. The most common decoration was the removal of a strip of the outer layer of the bamboo revealing a darker colour underneath as illustrated in these two examples: a. ER15194 (BM Oc,MCG.80) (©Trustees of the British Museum); b. ER15196 (AM E.007069). Queensland Museum Photography, Gary Cranich ©Australian Museum. Scale bar: 3 cm.

it is plausible that this type of artefact had special meaning and perhaps its use was restricted. These artefacts are very rare in extant museum collections. The examples in the Official collection caught the eye of the well-known collector and volunteer at the British Museum, James Edge-Partington, who included a sketch of one in *An Album of the Weapons, Tools, Ornaments* (Edge-Partington & Heape 1898: Pl. 91. No. 2) (Torrence et al. 2020: 118).

A third artefact type that may also have had a symbolic role relating to headhunting is represented by seven oblong shaped stone objects glossed as ‘pestles’ in the register (Anon. 1900: Pl. 26, Fig. 46) (Figure 13; BOX 8.2, this chapter). They are a unique object class within the Official collection. Since red stains were observed on the end of some examples, they might have been used for making powder from red ochre, presumably to be used for paint, perhaps in ceremonial contexts. Since stone was a very scarce and highly valued material among the Marind-Anim, it seems unlikely that these relatively large artefacts were used only for a utilitarian task. In his dispatch, MacGregor (1897a:56) commented on ‘one fancy pounding stone made in such a manner as to display a fossil shell in one end of it’. Van Baal (1966: 412–414) discusses a particular stone

tool that has a ritual function among the Marind-Anim. The *imbassum* was part of a spear-thrower and was used in initiation rites. His illustration of this artefact, however, shows that they were much smaller than the Tugeri stone objects, were curved at one end and had a series of grooves for hafting it to the spear-thrower. In contrast, the large stones that MacGregor collected would be difficult to tie onto a spear and their relatively large weight would make the implement very difficult to use.

Why would a tool made from a precious raw material be taken on a headhunting expedition? One hypothesis is that the phallic shape of the stones reflected the painted poles set up inside the *kui-aha*, or feast-house built in the village prior to a headhunting expedition (see van Baal 1966:722; Pl. XX, XXI). Although the existence of the wooden poles is documented, there is no further information about their specific role in rituals, but van Baal (1966:740–741) does stress the importance of phallic symbolism in the shape and decoration of objects associated with headhunting. Possibly the ‘pestles’ with red decoration were substitutes for the larger wooden poles left in the village and were taken along because they had magical powers that would provide assistance to or increase the efficacy of the small *kui-aha* models brought on the expedition. Another possibility is that the pronged tubes and the pestles were set up in the raiders’ camp to specifically reference the *kui-aha* in the village.



FIG. 13. Stone pestle (ER18668 (MAC1694) is one of seven nearly identical objects recovered by MacGregor’s party from the Marind-Anim camp in 1896. The function of the objects is unknown, although the presence of ochre, as seen here on the upper surface of the top image, and other markings suggests they were possibly used to crush some unknown materials. See BOX 8.1. Scale bar: 3 cm. Queensland Museum Photography, Peter Waddington.

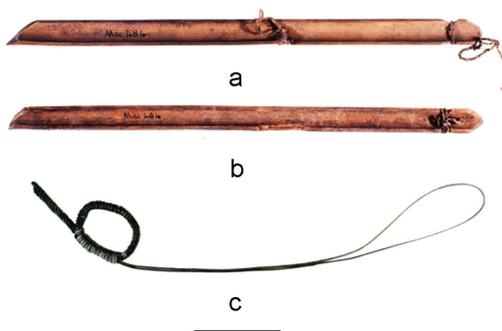


FIG. 14. Objects related to the historic practice of headhunting. Bamboo knives: a., b. ER16282 (MAC484.1, MAC484.2, PNGNMAG); c. head carrier ER16282 (MAC485, PNGNMAG). Scale bar: 1 cm. Queensland Museum Photography.

In terms of objects associated with headhunting (see Haddon 1891:178), the Tugeri assemblage also contains nearly half the nine bamboo knives in the entire Official collection (Anon. 1900: Fig 16.2) and one of the two objects used to display war trophies in the form of human heads (often referred to as ‘head carriers’ and popular items for western collectors) (Figure 14c). MacGregor had obtained three decorated items known as ‘beheading knives’ previously from Wabuda Island in the Fly River Delta (MacGregor 1894:23), (Figure 14a, b).

Another key aspect that highlights the uniqueness of the Marind-Anim raiders’ assemblage compared to the other material in the Official collection is the presence of a relatively large number of items with unique markings or decorations that link the object to a specific individual. For instance, a significantly large group is comprised of objects often used in leisure activities: lime containers (36); lime spatulas (18) and bamboo tobacco pipes (26). It is notable that those from this group make up a very large proportion of these object classes within the entire Official collection: e.g. 40 per cent of the total number of lime containers and 44 per cent of the bamboo tobacco pipes (Figure 15). Possibly only a small number of the total discarded lime spatulas were collected since MacGregor (1897a:56) describes them as ‘crudely ornamented’ (Figure 16). In addition, nearly all the examples of tubes or bowls used in conjunction with bamboo tobacco pipes (e.g. Williams 1936:424–425) represented in the Official collection were also obtained at this time. As decorated items, these kinds of objects were probably attractive to MacGregor and others of the group who retrieved the material from the Marind-Anim camp. In contrast, when compared to what MacGregor amassed over a period of ten years, the large number of highly personal items obtained from the 1896 incident strongly suggests that in more normal cross-cultural social contexts, objects with a strong association to a specific individual, such as smoking pipes or betel chewing implements, were rarely offered for exchange to MacGregor, except in circumstances where they had been made explicitly for sale to westerners (Torrence & Clarke 2016).



FIG. 15. The Marind-Anim used tobacco pipes made from a large, hollow bamboo stalk into which the tobacco was placed. A smaller tube (c, d, e), often called the ‘cigarette-holder’, was inserted into a hole in the tobacco pipe and used to draw smoke. (Williams 1936: 424–5): a. ER15387 (MAC574); b. ER15388 (MAC581, PNGNMAG); c. 15376 (MAC636, PNGNMAG); d. ER15374 (MAC 634); e. ER15383 (MAC 633). Scale bar: 3 cm. Queensland Museum Photography.

Apart from the headhunting paraphernalia, the associated ritual material, and the personalized artefacts, the composition of the overall Marind-Anim assemblage is weighted in favour of objects that might normally be considered as practical, although the men might not have made such a distinction. It is perhaps not surprising that large and bulky practical items would have been forsaken by men fleeing conflict, but what is especially important about these objects is that they are very rare in the remainder of the Official collection. MacGregor had not observed these kinds of objects when he encountered the Marind-Anim group in 1890. The heavy woven capes in the Tugeri assemblage are a unique artefact type in the Official collection (Anon. 1900:Pl. 10, Fig. 18) (Figure 2). The so-called pig catchers (Anon. 1900:Pl. 26, Fig. 47) (Figure 17) are also a key element of this assemblage because they



FIG. 16. Lime spatulas found among the contents of personal bags at the Marind-Anim raiders camp: a. ER15560f (MAC1687); b. ER115560d (MAC279); c. ER15560 (MAC288, PNGNMAG); d. ER156631 (MAC285); e. ER15587 (MAC283, PNGNMAG). Scale bar: 2 cm. Queensland Museum Photography.



FIG. 17. Pig catchers taken from the Marind-Anim camp bear a striking resemblance to what were often termed ‘mancatchers’ by westerners in other parts of British New Guinea: a. ER16394 (MAC5289, PNGNMAG); b. ER116407 (MAC4832, PNGNMAG). Scale bar: 10 cm. Queensland Museum Photography. The temporary stretcher described by MacGregor (1987d: 56) is not present.

comprise 66 per cent of the total number of this kind of hunting tool in the full Official collection (23 of 35), indicating that these were valued implements that were not normally given away to MacGregor, possibly because they played an important role for people walking in the bush. MacGregor was clearly quite interested in these objects, perhaps because previously in a talk to the Royal Geographical Society in London in February 1895, he had expressed skepticism that ‘man-catchers’ were legitimate weapons (MacGregor 1897d: 61).

One peculiar and interesting article is a utensil that might either on occasion be used as a man-catcher or a pig-catcher. It consists of a piece of cane about an inch in diameter, and, say, 10 feet long. This is doubled and the two halves are bound together from the free ends to within about 18 inches of the bent end. This is left to form an egg-shaped loop. A stretcher is put inside the loop to distend and separate the two sides. If this were hit over the head of a man, or if a pig ran into it, the stretcher would be knocked out and the two sides would instantly contract on the neck, and would constrict the more the harder the victim pulled away from his captor (MacGregor 1897d: 56).

Williams (1936: 418) calls these implements ‘pig-fenders’ and reports that they were used as defensive weapons against charges by wild boars which were encountered relatively frequently. Wirz (1922: 113) notes that the pig catchers required great skill to be used effectively. Hitchcock (2004: 168) recorded the historical relevance of these objects in building the prestige of hunters on the Bula plains near the border with Dutch New Guinea.

Although the canoes MacGregor seized were taken to Boigu immediately after the violent encounter with the Tugeri (MacGregor 1897a: 55), a carved wooden object assumed to be a canoe ornament ‘curved and roughly ornamented’ (ER15353 (MAC467) was retained by him. Apparently only six canoe paddles were collected (Anon: Pl. 10, Fig. 18), although only four have been identified among the

Transfer 60 group. There must have been a much larger number available for MacGregor since all the Tugeri boats were abandoned when the men fled on foot, but the paddles were probably given to the villagers at Boigu who also received the canoes.

Object classes unique to the Tugeri assemblage or more abundant than in the Official collection provide important examples of everyday utilitarian material culture that have rarely been obtained in other cultural contexts in British New Guinea. Moving over long distances, the warriors may not have had time to acquire raw materials and replace broken or worn-out tools, so they carried extras with them. Examples in the assemblage include a large number of bamboo arrow points (31) and bamboo tongs (21) as well as 80 percent of sharp pointed artefacts glossed as ‘needles’ (28) (Figure 18). As practical tools or spare parts, these items would have fitted in with the personal equipment of a group that moved camp frequently. As some of tips have been charred, many of the tongs appear to have been used in cooking. Based on Sillitoe’s (1988: 191) description of material culture among the Wola, tongs are likely to have had a short use-life, which might explain why the Tugeri carried extras with them. As disposable items, tongs may have been overlooked by MacGregor and his associates in other cultural contexts.

Objects referred to as ‘needles’ in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889–1910) generally consist of a thicker end, which would serve as a handle, and a point on the opposite end. It is more likely that these were used as awls, e.g. for piercing holes or for pushing in the threads to make the very tight weave necessary for the binding in arrows or the knots on bows (Figure 18b). The three wooden double pointed objects in this category might have functioned as pins to secure head ornaments in place or as shuttles when weaving armbands (see Sillitoe 1988: 67, 421). The Marind-Amin men carried their tool kits with them when travelling to ensure they could keep their weapons in good repair. The ‘needles’ were often stored in special bamboo containers along with unworked bones that could be converted into needles or sharpened as awls when replacements were required (Figure 18d). For example, bamboo



FIG. 18. The contents of the personal bags retrieved from the Marind-Anim camp included many useful implements and raw materials as well as valued items: a. personal ornament or charm made from pigs' tails and coix seeds, ER15603s (MAC1377); b. bird bone needle, ER15603t (MAC327); c. bamboo tongs, ER15603a (MAC6114A); d. decorated bamboo container, ER15603m (MAC1733); e. hoop iron, ER15603l (MAC1818); f. bundle of bark fibre, ER15482k (MAC1835, PNGNMAG). Scale bar: 1 cm. Queensland Museum Photography.

case ER15356 (MAC267, PNGNMAG) held eight bone needles, two sting ray spines and seven human teeth, ensuring that the items retained their sharp points until needed (Anon. 1900:Pl. 9, Fig. 16, no. 18). The rarity of these kinds of items in the rest of the Official collection suggests that people highly valued their personal tool kits and would be unlikely to offer them up for exchange.

Additional tools with a putative practical function include items described as ‘bamboo with tongue at one end,’ which the entry in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889–1910) termed a ‘polishing stick’; three ‘cane lariats with loop of bamboo’<sup>8</sup>; and a ‘piece of wood forked at one end tapering at the other’ (see Anon. 1900:Pl. 9, Fig. 16). Although the function of these tools is unknown, it is likely that they were used in procuring and processing food or in repairing equipment while the men were travelling.

An important component in the material acquired from the violent confrontation with the Marind-Anim which is very scarce in the larger Official collection are metal trade items that have been repurposed by mounting them on traditional hafts. Four axes and four clubs all with iron heads were retrieved by MacGregor’s party (Anon. 1900:Pl. 6, Fig. 11, Pl. 24, Fig. 41) (Figure 6). There are only two other metal tomahawk blades in the entire Official collection and, as discussed in Torrence and Davies (Chapter 9 this volume), one of these was also acquired following a violent encounter in the Northern Division at Goromani village on the Mambare River. In addition, all the fragments of metal and glass in the Official collection left behind by the Marind-Anim raiders had been stored in personal bags. These included fragments of hoop iron as well as nails, bolts and part of a metal dish (Figure 18). One can draw an inference from the assemblage that under normal circumstances Papuans kept their highly valued metal objects hidden away and carefully guarded.

Overall, the 1896 Tugeri assemblage comprises a group of objects that provides a rare window into the kinds of activities that headhunters engaged in while on raids. Some objects were directly associated

with anticipated conflicts (e.g. weapons, ritual items, and costumes), whereas others were necessary for survival while they were on the move (e.g. fire lighting, hunting tools, spare parts). The objects associated with tobacco smoking (pipes and bowls) and betel nut chewing (lime spatulas) may indicate the importance of stimulants for men engaged in risky and violent activities. Along with the body ornaments and feathered headdresses, these items, might also have been important within the social and ritual part of the activities at the camps.

## CAREFULLY CURATED PERSONAL EQUIPMENT

A particularly intimate view of Marind-Anim masculinity can be gained from an intriguing set of 19 woven objects that contained an array of material (Table 2). Since MacGregor observed that ‘each man carried a bag pouch, made of knitted work,’ the group of woven bags or baskets registered at the QM probably represent only a sample of the total number owned by the raiding party since a great many more men were present than the 19 items suggest. As described by MacGregor, large crab claws were tied onto many of the bags, but these were removed at some point subsequently, since they were not present when the bags were registered. Possibly an example is an object described in the *MacGregor Register* (Queensland Museum 1915–2001) as ‘Rattle: 3 large crab claws and 1 small piece’ (ER 18656 (MAC 2791, PNGNMAG)) (Figure 11). The natural world experienced by the Marind-Anim was imbued with spirits called ‘*dema*’ (Corbey 2010:12–16) who were represented by people wearing elaborate costumes in the numerous ceremonies where aspects of the complex mythology were re-enacted. The crab *dema*, called ‘Hoyom’, is the totem of the Wakabu-rek clan and is a potent symbol in the *imo* initiation rites (van Baal 1966:365, 350, 373, 858; Corbey 2010:62–63). The presence of crab claws may indicate that men from this clan were among the participants of the raiding party.

MacGregor also notes that the bags ‘contain boars’ tusks, bits of bark, pieces of stone, spicules of bone, arrow points, bowstrings, feathers, clay &c.’



FIG. 19. Bags found at the Marind-Anim camp with their contents intact were made from palm leaves or twine and varied in size: a. palm leaves, loose weave, ER15543 (MAC1829, PNGNMAG); b. palm leaves, loose weave with lime gourd attached, ER15530 (MAC6104); c. twine, fine weave, ER15454 (MAC6115, PNGNMAG); d. twine, fine weave, ER15587 (MAC6108). Scale bar: 1 cm. Queensland Museum Photography.

(MacGregor 1897a:56). The assemblage of over 500 artefacts retrieved from inside these containers is significant because it comprises over a third of the total collection from the 1896 incident, but, more importantly, the items provide an intimate picture of activities conducted by a raiding party. Ten additional bags were empty when registered but may not have simply lost their contents. For instance, the size range of the empty bags (length x width) is more variable than those housing objects: sizes range from 218–307 mm<sup>2</sup> versus 103–127 mm<sup>2</sup> for the bags with contents. Four of the empty bags are described as having a conical shape with an open network and several have an ‘oblong’ shape. This configuration implies a specialised use, perhaps as a fish trap or net. Unfortunately, these objects are no longer extant in the collection.

TABLE 3. Sizes and weave types for Marind-Anim (1896) bags with contents.

Weave	Large	Medium	Unknown	Total
Coarse	5	6	1	12
Fine	3	3		6
Unknown			1	1
<b>Total</b>	<b>8</b>	<b>9</b>	<b>2</b>	<b>19</b>

TABLE 4. Attachments on Marind-Anim (1896) bags with contents.

Artefact	Number
Bowl coconut	3
Bowstring	2
Container lime	1
Cordage	6
Knife	4
Ornament head	1
Ornament arm	1
Spatula lime	1
Tongs	12
Tools	2
<b>Total</b>	<b>33</b>

The bags that still preserve their contents fall into two distinct groups distinguished by the raw material used in their manufacture and the tightness of the weave (Figure 19). One set of coarsely plaited bags was constructed from palm leaves, whereas in the other type, thinner strands composed of grass or bark were used to achieve a finer and tighter weave, often with distinctive patterns (see Wirz 1922: Tafel 39; Williams 1936: 432–433, Plate XVII). Interestingly, within each group there is an even split between two discrete size ranges (glossed here as ‘medium’ and ‘large’) in terms of the coarse and fine weaves (Table 3). Nearly two thirds of the bags (33) have additional objects attached on their exterior (Table 4). As noted previously, MacGregor described crab claws as decorating the bags, but the majority of the attachments still present when the objects were registered are cane tongs (12), which comprise over half the examples of this tool type in the total Marind-Anim raiders’ assemblage. Like most of the other appended items (e.g. coconut bowls, headdress, gourd lime container, knives), the tongs are large objects that might have been more efficiently and safely transported on the exterior rather than the inside of the bags (Figure 20). Two of the attachments were extra handles that could be applied when a bag was especially heavy: e.g. for carrying the heavy



FIG. 20. Tongs and other large items that would not fit comfortably inside a bag were frequently attached to the outside: ER15603 (MAC6114). Scale bar: 5 cm. Queensland Museum Photography.

bundles of sago the men had stowed in their canoes. They resemble handles still widely used today (Grace Vele, personal communication). All the small rolls of string (cordage) collected by MacGregor’s party were secured on the outside of bag ER15441 (MAC6116, PNGNMAG), perhaps so they could be accessed easily or to avoid them getting tangled up.

Based on their contents (Table 5), the bags were primarily used for storing and transporting items related to the manufacture and repair of equipment or for food processing, although there are a few personal items and some materials that resemble

items known to be used in magic and sorcery in other parts of British New Guinea (e.g. Seligman (1910: 173–176; 282–288). Following usage in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889–1910), this latter group have been classified here as ‘charms’. Neither the quantity nor the nature of the contents stored in a bag is correlated with either the type of weave or size, suggesting style was a personal rather than a functional decision. There is, however, a strong relationship such that the greater the number of objects included in a bag, the more diverse the contents. Three bags are unusual because they only contained one object: ER15234.1

TABLE 5. Marind-Anim (1896) bag contents.

ER	Bag type	Bag Size	Attachments	Bowl coconut	Charm	Container	Cordage	Knife	Musical instrument (misc.)	Awl	Body Ornament	Raw material: animal	Raw material: metal/glass	Raw material: mineral/pigment	Raw material: plant	Raw material: shell	Spatula and Tobacco pipe	Tool and Tongs	Total Bag Contents
15234	Large	coarse									0	1							1
15441	Medium	fine	9	2	3	1				2	1				3	8	1	1	22
15454	Medium	fine	1	2	1					3	0	2			1	3		1	13
15463	Medium	coarse	2	2		2		1		1	2	5		1	7	3		1	25
15482	Large	coarse	3	1	2	2	1	2	1	2	0	11		4	12	20	3	1	62
15509	Medium	coarse			1	1	1	1		1	2	14	2	1	7	5	1	1	38
15530	Medium	coarse	3		4	1		4			1	9			3	7	1	1	31
15543	unknown	coarse		1						1	0			6					8
15548	Large	coarse		2	4			1			8	2	2			4		1	24
15560	Large	fine					3	3			3	2	1	1	3	5	5	2	28
15581	Large	coarse	2								1								1
15584	Medium	coarse	1								1								1
15587	Large	fine	2	3	1		1	1			1	4	1		7	18	1		38
15603	Large	coarse	2	1	5	1		1		1	4	2	2	1	38	8	2	2	68
15625	Medium	coarse	2		1	1					1	3	2		1	11			20
15638	Large	fine	4		2		3			2	3	5	3		2	9	1	2	33
15659	Medium	coarse			7						0				7	4			18
15663	unknown	unknown		2	3				1		2	6	2		11	9	4	1	41
15686	Medium	coarse	2	2	4		3	2		1	2	6				8	1	6	35
			33	18	38	9	12	16	2	14	33	72	15	14	102	122	20	20	507

(MAC2922.2, PNGNMAG) ('bundle of human hair tied with twine'); ER15581 (MAC1713) (bone ornament); and ER15584 (MAC3099, PNGNMAG) (belt made from plaited bark fibre). As these items relate to personal ornamentation and only take up a small amount of space in the bag in which they were found, it is possible that other material normally stored in these containers had been deliberately removed and possibly adorned the owner during the confrontation with MacGregor's party.

Among the single objects in the bags is an ornament normally worn hooked over the upper arm band. Carved from bone, the shape and engraved features reference the black-necked stork (*Ephippiorhynchus asiaticus*), a bird which had an important place in Marind-Anim cosmology and was the totem for a particular clan (van Baal 1966:301–307) (Figure 21). This object is probably the *pin*d or *pur* described by van Baal (1966:129, 151). He reports that it was used to scrape the meat out of a coconut and was given by a girl to her intended husband. In contrast, writing about a similar object now in the Wereldmuseum, Rotterdam (WM-13265), the collector Hondius van Herwerden records that it was called a *poerke* by the 'Kaya-kaya' Marind group and was used by a boy to 'propose' to a girl. Given the presence of crab claws on many of the bags, the depiction of a stork may be significant since van Baal (1966:427) records that 'Womatai, the stork is married to Hoyom, the Zahé *déma*' (crab).



FIG. 21. Found inside a personal bag, this rare personal ornament was carved using a bone from the black necked stork, which was an important symbol for the Marind-Anim and which the artefact is meant to represent: ER15581 (MAC1713). Scale bar: 1 cm. Queensland Museum Photography, Peter Waddington.

This kind of ornament is very rare in museum collections, possibly because in ordinary circumstances such treasured personal items would not be given away to foreigners. It seems likely that MacGregor never closely examined the contents of the bags, because if he had been aware of this unique decorated item, he would probably have recognised it as something unusual and special. A similar elaborately engraved armband hook, kept for MacGregor's personal use rather than included in the Official collection, was collected on the Morehead River (based on a label written in black ink) in January 1895 not far from the location of the 1896 incident.<sup>9</sup> These two objects highlight the similarity in some aspects of material culture and connections between cultural groups on both sides of the international border.

Turning to the 16 bags housing multiple objects, the kinds of things most widely shared among them are natural raw materials composed of shell, plant, and animal parts (Figures 19f, 23). These resemble the typical men's personal bags described by Williams (1936:434) as containing 'a queer variety of odds and ends—shells, small bone implements, charms and medicines, buttons, and inevitably some dry leaves of tobacco'. It seems likely most of the shells and animal elements were used for making and maintaining weapons as well as other tools needed to acquire food while the group was travelling. The most common shells in the bags were probably employed for cutting and scraping (*Geloina coaxans* (mud mussel) and *Dosinia* sp. (surf clam)) or smoothing and polishing (*Placuna placenta* (window shell)) during the manufacture and repair of wooden or bamboo tools (Table 6). For example, Williams (1936:432) notes the use of shells from bivalves for scraping out coconut meat. Multiple shells might be required in a tool kit because the edges become chipped or dulled through use. Baler shell, *Melo amphora*, was often a raw material for ornaments, such as phallicrypts (i.e. pubic covers) (Williams 1936:396), but broken pieces were also very sharp and would make excellent knives. The less numerous types, such as the nautilus, chiton and cowrie (*ovula*) may also have been raw materials for tools, but another possibility is that they were keepsakes or played a part in ritual, sorcery or magic.

TABLE 6. Marind-Anim (1896) bag contents: shells identified in the *Ethnology Register (New Guinea)* (Queensland Museum (c.1889-1910). The nomenclature has been updated.

Type	Number
<i>Geloina coaxans</i>	36
<i>Placuna placenta</i>	20
<i>Monoplex pilearis</i>	12
<i>Nerita balteata</i>	12
<i>Dosinia</i> sp.	9
<i>Amorena undula</i>	4
<i>Melo amphora</i>	4
<i>Barbarofusus</i> sp.	1
<i>Chiton</i>	1
<i>Conuber incei</i>	1
<i>Nautilus pompilius</i>	1
<i>Ovula</i> sp.	1
Unidentified	19
<b>Total</b>	<b>122</b>

TABLE 7. Marind-Anim (1896) bag contents: animal raw materials.

Type	Number
Boar's tusks	19
Stingray spines	15
Teeth, misc	9
Boar's testicles	7
Bird bones	6
Animal jaws	6
Bones, misc.	3
Cassowary quills	2
Crab claws	2
Catfish spine	1
<b>Total</b>	<b>70</b>

TABLE 8. Marind-Anim (1896) bag contents: plant raw materials.

Plant raw material	Number
Candle nut	52
Nut (type unknown)	16
Root	10
Bark	7
Fungus	4
Bundle of bark fibre	2
Native tobacco	3
Vegetable matter/fibre	5
Gum	2
Pieces of root tied together with plaited rush	1
<b>Total</b>	<b>102</b>

The animal parts, including boars' tusks, stingray spines, teeth, various bones, boar's testicles and cassowary quills (Table 7) could be used with very little additional modification. All were symbolically potent for Marind-Amin. Van Baal (1966:66, Figures 5c, 9, 15b) notes that boars' tusks were closely related to headhunting in myth and as regalia. They were also arm ornaments worn by men, as described by MacGregor (1897a:55) and depicted in historic photos by Paul Wirz from the early twentieth century (Corbey 2010:38, 97). Haddon (1891:177, Plate XV), quoting from Rev. Savage's report of his 1887 encounter with Tugeri, notes that that boars' tusks were also worn as nose ornaments. In other areas of Papua New Guinea, many of these items have been observed to make excellent tools: boars' tusks as scrapers and polishers; teeth from smaller animals for piercing and engraving (especially if still retained in the jaw because it forms a convenient handle), stingray and catfish spines for piercing and cutting, etc. (e.g. Williams 1936:430-432). The larger bones described as 'bird' in the register are more likely derived from bats. Their shape was ideal for use as awls: the thick end would form the handle and the thin distal segment could be sharpened to a point. The cassowary quills could be used for piercing, but since they are hollow, can be folded into themselves to form a ring, for example to support an ear ornament (Sillitoe 1988:353, 374-377) or as a support for feathers in a headdress (Williams 1936:405-406). Possibly the unmodified tough and strong material of the dried boar's testicles had a secular role, but they might also have been a talisman or used in magic or sorcery associated with headhunting. Describing people living nearby on the Morehead River, MacGregor states that the genitals of wild boar were used as arm ornaments (MacGregor 1897c:43).

The plant materials stored in the bags (Table 8) are dominated by nuts, with candle nut (*Aleurites moluccana*) identified most frequently in the register (Figure 22d). Although they are recorded as commonly roasted and eaten by people in the region where the Marind-Anim live at present, raw candle nuts can also induce vomiting as a cure for certain ailments (see Burke 2010:86; *Tok Pisin English Dictionary* 2015). Van Baal (1966:146; 529-530) describes charred candle nuts (*payum*) mixed with coconut oil as a black body paint in

ceremonies. The other major components of the plant raw material are roots and bark which might have been raw material or spare parts for repairing tools such as bags, fishnets, etc. or used along with the fungus for their medicinal properties or within magic or sorcery. Seligman (1910:172, 179) notes the importance of certain types of bark and occasionally pieces of root in magic used in hunting and warfare. Perhaps the men collected wild plants locally as they travelled. 'Native tobacco' is surprisingly rare in the assemblage, especially given the large number of tobacco pipes.

The last type of raw materials includes one piece of red ochre and five balls of white, grey or yellow clay wrapped in bark or leaves (Figure 22a). These mineral products could have been used for body decoration as a way of enhancing performance or keeping the

wearer safe during the raid. They might also have had medicinal properties. MacGregor notes that

In all the canoes and all over the camp were numerous bundles of freshly kneaded clay. It was carefully wrapped up in coverings of green leaves. One use of it was apparent. Wherever there was a defect in a canoe it was caulked with this clay. It is also probably used for painting the person, perhaps also for eating. There was such a quantity of this clay in their baggage, and it was so carefully wrapped up that it is manifest they put much value on Wassi Kussa clay (MacGregor 1897a:55).

Another interesting object in the general Tugeri assemblage, along with 38 others stored in the



FIG. 22. Useful raw materials, tools, and charm stones were the most common contents of the personal bags left behind when the Tugeri men fled their campsite: a. yellow clay wrapped in leaves, ER15482i (MAC1748, PNGNMAG); b. *Placuna placenta* shells that would have been useful replacements for worn out tools, ER15482f (MAC1777, PNGNMAG); c. small rounded pebbles may have been used in magic and ritual, ER15603l (MAC7666); d. *Aleurites moluccana* (candlenuts) probably had many uses as food, medicines and body paint, ER15482 (MAC8988.4, PNGNMAG). Scale bar: 1 cm. Queensland Museum Photography.

bags, are classified as 'charms,' (Table 5). These attributions made by de Vis or Rowland Illidge, who compiled the later *MacGregor Register* (Queensland Museum 1915–2001), are not based on detailed knowledge of Marind-Anim cultural practices. It seems plausible that they used the term 'charm' as a descriptor in cases where it was difficult to imagine a use for unusual items composed of simple raw materials. Lacking information from local knowledge holders, it is not possible to be certain of the role these items played in this society. Future collaborative research with descendants might significantly alter the interpretations about how these materials were used.

Seligman (1910:173) proposes that so-called 'charms' comprised of animal parts are often derived from species whose properties are admired, as, for example, crocodiles or cassowaries who are considered as 'big and strong'. Two plaited rushes with tufts on either end (ER15686 (MAC438.1)) and a 'plaited rush with palm seeds' (ER15625i (MAC472, PNGNMAG)) have been assigned to the charms category, noting that charms could also be worn as parts of body ornaments, such as a necklace or arm band. Finally, described in the *MacGregor Register* (Queensland Museum 1915–2001) as a 'bundle of hair tied with a twine' (ER15234.2 (MAC2922.2, PNGNMAG)), this item has been grouped with 'raw material animal' here, but it could also have been carried by the bag's owner as part of the important hair enhancements used by the Marind-Anim and/or for potential magical properties. The single example of a potential charm not stored inside a bag is a pendant with two fish jaws and one crab claw (ER15218 (MAC2790)).

Most of the items classified as charms consist of small, irregular, water-rolled pebbles made from grey volcanic stone (33) (Figure 22c). These were given the label 'yam stones' in the *MacGregor Register* (Queensland Museum 1915–2001), presumably based on usage of similar items in other parts of British New Guinea (e.g. Seligman 1910:172–177; 282–284). It seems highly unlikely, however, that the members of a raiding party would carry stones appropriate for garden magic. It is more plausible that the stones had other magical properties. Since

sources of hard rock are scarce in the swampy and coastal regions inhabited by the Marind-Anim, pebbles like these would have been relatively scarce and difficult to obtain. As such, their rarity might make them appropriate choices for use in magic or sorcery. Re-visiting the area two years after the violent encounter with the Marind-Anim warriors, at Walarter Point, about 45 km west of the Wassi Kussa River, MacGregor (1899:39) observed stones on the foreshore, that were very similar to those 'found so plentifully at the Tugeri camp'. He speculated that

To obtain these stones may probably be one of the reasons for the incursion of these tribes along the coast eastward. This particular kind of stone has not been seen at any other spot in the west. There are specimens of it in the museum collection (MacGregor 1899:39).

Van Baal (1966) records how the medicine men or *messav* used *dema*-stones in their magic. He describes them as 'a petrification of some sort formed in an animal's stomach, or a peculiar pebble lying about somewhere in this stoneless country' (van Baal 1966:894). Stones were also included in rain-making rituals (van Baal 1966:880–81). Van Baal (1966:420) also makes strong connections between headhunting and thunder, because the timing of the raids coincides with the change of the season with large thunderclouds and storms. The use of charm stones to encourage rain might have been used to ensure a successful raid. As the pebbles were distributed among 10 different bags, the knowledge about how to use them was distributed across the group rather than limited to a single ritual specialist.

## A RISK AVERSE TECHNOLOGY

The Marind-Anim men whom MacGregor confronted were in the process of undertaking a highly risky activity that had lethal consequences if they failed. The personal belongings they left behind when they fled comprise the kinds of equipment that would provide solid and consistent support for a

highly mobile group of warriors engaged in violent activities like raiding and headhunting. Although some of their weapons probably travelled with the men when they escaped, what was left behind demonstrates foresight in ensuring all their equipment was prepared in advance and well maintained so it could be used with little prior notice and would not fail when needed. The ornaments, musical instruments and magical charms would have been essential components for ensuring success in the dangerous situations the raiding party expected to encounter.

Theory developed in engineering and archaeology predicts that in situations such as warfare, where failure has extreme negative consequences, equipment with the properties of reliability and maintainability are essential (e.g. Bleed 1986; Torrence 2001). Reliable tools designed and constructed to be robust and fail-proof are generally constructed of multiple specialised parts. In addition, maintainability incorporates adaptations that ensure the weapons are always up and running in good working order. This is normally achieved first, by having multiple copies of the tools on hand and, second, by the inclusion of a specialist tool kit for repairs as well as an adequate supply of spare parts.

The Tugeri assemblage is an excellent example of a technology that effectively combines aspects of both reliability and maintainability to cope with a situation where the consequences of equipment failure are extremely serious. To begin with, the raiders carried large numbers of arrows so that they were never without weapons. In addition, the arrows were made using multiple components carefully fitted together to ensure long-lasting strength and reliability (see Philp, Chapter 12 this volume). Finally, the raiders brought with them spare parts (arrow points and bow strings), tool-kits composed of knives, awls, scrapers, polishers, piercers, etc. as well as useful raw material in the form of cordage, clay, pigments and other plant parts that could be used to keep the bows and arrows in good shape, quickly repair broken weapons, or manufacture new components, although the last strategy would be avoided if possible.

Another essential component of the material brought by the Marind-Anim men were ritual items that both provided inspiration and protection during the headhunting as well as the body decorations used in the ceremonies essential for a successful expedition. The *pahui* together with the putative models of *kui-ahat* and ceremonial poles from the *kui-aha* recovered by MacGregor are rarely found in museum collections. Clearly, these were not normally considered as appropriate for exchange with westerners.

In addition to the precious ceremonial items usually kept out of sight, the 1896 Marind-Anim assemblage provides a rare opportunity to witness some of the seemingly ordinary elements that contributed 'behind the scenes' to the specialised activity of raiding. Under normal circumstances, many of the objects left behind or stored in the bags were rarely, if ever, available for exchange in other communities that MacGregor visited elsewhere in British New Guinea. Many of these items were too precious to offer to an outsider because they were personal effects used in ritual or in daily life. An additional set of rare objects in the bags were simple tools or raw materials, objects that would be unlikely to attract the attention of the British visitors. The presence of these types of things in other collections might signify they had also been obtained as the consequence of a violent interaction.

## SIGNIFICANT IN THEIR ABSENCE

The Marind-Anim raiders' assemblage is invaluable for characterizing variations in cross-cultural social relations during the early period of British New Guinea. Compared to the material obtained during MacGregor's 'peaceful' meeting with the 'Tugeri' in 1890, the largely mundane items salvaged by MacGregor after the violent encounter six years later demonstrate that a wide range of ordinary components of material culture were not normally made available within the context of the 'trade'. In parts of the colony where people had had little experience of outsiders, social meetings frequently occurred in very restricted social contexts and in conditions when both the British and the Papuans

were on edge and wary of each other, as in the case of MacGregor's first encounter on the shore away from the settlement. In these situations, objects close at hand – largely body ornaments – or materials often exchanged with other groups (e.g. drums) comprised the bulk of the rather limited repertoire offered to outsiders.

In contrast, the 1896 Tugeri assemblage contains a significant proportion of the collection of personal objects generally kept out of sight of western observers. For example, the contents of the personal bags include a mix of very simple, but useful tools and spare parts, a few highly valued objects, such as the decorated shoulder ornament, and objects used in personal rituals or magic. The rarity of these kinds of things in museum collections from British New Guinea dating to this time period suggests that social intercourse between residents and colonisers was generally brief and did not entail the creation of close and enduring social bonds. Another key aspect of the 1896 Marind-Anim assemblage is the presence of objects we have suggested may have had spiritual value and, specifically, items relating to headhunting. These could only have been acquired through violence. Using the Tugeri assemblage as a model, the presence of these types of ritually charged objects in other ethnographic collections may suggest they had not been given freely but were obtained in contexts where there was an imbalance in power. However, further research is required to examine these ideas further since items considered by indigenous groups in British New Guinea as having potent magic powers were clearly gifted to outsiders in some social settings (Torrence, Chapter 6 this volume).

The two Marind-Anim assemblages analysed in this paper enable an invaluable comparison of the kinds of museum collections obtained through peaceful as opposed to violent engagements with people from the same cultural group. Since it is difficult to discern how far results based on

two short encounters can be generalized, in the next chapter an additional assemblage of material plundered by MacGregor and his party following a punitive raid in 1897 at Goromani village is analysed (Torrence & Davies, Chapter 9 this volume). Hopefully, when taken together, these quite well documented assemblages will stimulate further research and discussions about the possibility of looking more deeply into how assemblage composition and structure can help illuminate the varied social contexts in which poorly documented ethnographic museum collections were obtained.

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## □ ENDNOTES

1. His full name is not given in this report, but he may have been W.F. Johnson, second steward on the Government steamer, *SS Merrie England*. See Hunt (1904).
2. In this paper we refer to the people as 'Marind-Anim', although the name 'Tugeri' also occurs in contexts where it was used by colonial officers.
3. Fourteen of the canoes were left on Mata Kawa for use by people from Boigu Island and the rest were later taken to Boigu Island itself, where they were distributed to the heads of families from British New Guinea who were sheltering there as 'compensation for the infinite injury they have so long suffered at the hands of the Tugeri' (MacGregor 1897a: 55).
4. In reporting a return visit to the region between 1-5 March 1897, MacGregor (1898: 24) notes he was told 'that the Tugeri, after their defeat on the Wassi Kussa last year, did not stop at the Morehead on their return journey. The Morehead people knew of the reverses of the Tugeri from seeing some of their skeletons on their road.'
5. Garrick Hitchcock (2009: 95, fn28) postulated that the encounter took place at Kondo, the most easterly Marind-Anim coastal settlement.
6. These are museum registration numbers for the objects. See Davies (Chapter 2 this volume) for details on the history of registration systems and numbers at the Queensland Museum. Both the original (ER) and later (MAC) registration numbers are provided. If no museum is listed, then the object is currently housed in the Queensland Museum. If it is elsewhere, the museum will be named as follows: PNGNMAG is the Papua New Guinea National Museum and Art Gallery; AM is the Australian Museum; BM is the British Museum.
7. See van Baal (1966: 229, 368) for examples of the different ways the sound from drums and other musical instruments were integrated within mythical and social aspects of Marind-Anim life.
8. This may have been an animal trap.
9. Later MacGregor donated the carved bone object to the University of Cambridge Museum of Archaeology and Anthropology (Cambridge Z8169) (see Torrence & Philp, Chapter 14 this volume).
10. Three items described as '2 bamboo knives & head carrier' in the *Ethnology Register (New Guinea)* (Queensland Museum c.1889-1910) (see Figure 14) were entered as 'Tugeri' and two pages later in the same register four items described as 'spears' (ER16366 to ER16369) (Figs. 10, 11), were incorrectly transcribed by de Vis as 'Bugeri 5/96'.
11. Two *pahui* 'spears' (ER16368, ER16369) appear twice in separate plates/figures.
12. BM Oc,B20.24 is a gelatin silver print on paper.

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## BOX 8.1

# FINDING THE MARIND-ANIM RAIDERS IN THE OFFICIAL COLLECTION

Michael QUINNELL

This chapter has outlined the analytical difficulties encountered due to the almost complete lack of field labels for the large component of the British New Guinea Official collection salvaged on 15 May 1896 from the site of MacGregor's punitive action against a group of Marind-Anim raiders on the Wassi Kussa River in western British New Guinea. It appears that immediately after the event very little attempt was made to label or document this extremely large and diverse representation of Marind-Anim material culture, with the exception of seven items related to headhunting and its associated rituals.<sup>10</sup> Fortunately, during the eight and a half months prior to the collection's deposition at the Queensland Museum within Transfer 60, on March 1, 1897, MacGregor had the foresight to have photographs taken of elements of the Marind-Anim collection. He also ensured that eleven of these were reproduced the following year in his final *British New Guinea Annual Report 1897-1898* (Anon. 1900). In all, 124 items identified as 'Tugeri' appear in the Plates and Figures.<sup>11</sup> Despite the poor resolution of the plates, they have been extremely useful in the reconstruction of the Marind-Anim assemblage. They also confirm six of the seven head hunting related items noted in the register as from the 'Tugeri'.

Figure 10, a photograph now held in the British Museum<sup>12</sup> and identical to Plate 9, Figure 16 (Anon. 1900), except for a missing section along the top, was captioned 'Tugeri ornaments and instruments'. As a higher resolution image than in the official publication, it enables a closer examination of the 46 items depicted. The additional clarity also brings out the horizontal string from which many of the objects were hung, showing that a great deal of care and effort was placed into choosing the items and arranging them for display. To aid recognition of the items, the print and the plate have been digitally combined and a numerical key has been added. To date 29 items have been matched with extant objects in the Official collection (Table 9). As an example of the value of finding matches between the photograph/plate and the collection, Figure 23 shows a recent image of the headdress (ER15238 MAC1507) which appears as no. 8 in Plate 9, Figure 16 (Anon. 1900). Without the illustration it would not have been possible to positively identify this object as derived from the Marind-Anim punitive incident because, like most of the objects from the battle, it was not labelled in British New Guinea.

TABLE. 9. Identification of Marind-Anim objects shown in the official British New Guinea report (Anon. 1900: Plate 9, Figure 16) and British Museum print Oc,B20.24 (see Figure 10)

Plate Object Key	QM ER	QM MAC	Object Description	Current Museum Location*
1	15200	MAC233	Implement-bamboo	PNGNMAG
2	15201	MAC2061	Forked implement-bamboo	QM
3	15242	MAC1655	Forehead ornament-cassowary plume	QM
4	15252	MAC3273	Container-coconut with suspension cord	QM
5	15367	MAC460	Spatula-palmwood	QM
6	15240	MAC1611	Head ornament-cassowary plume	QM
7	15802	MAC6139	Tongs-bamboo	QM
8	15238	MAC1507	Head ornament-feather	QM
9			Spatula-bone	
10	15355	MAC444	Ornament-wood	PNGNMAG
11	15333	MAC316	Awl/needle-bone	PNGNMAG
12			Arm ornament-plaited fibre, pair	
13			Tubes-bamboo, bundle	
14	15248	MAC3271	Container-coconut	QM
15			Jews harp-bamboo	
16	15250	MAC1920	Container-coconut with suspension cord	QM
17	15288	MAC3327	Whistle, young-coconut with suspension cord	QM
18	15356	MAC267	Awl/needle case-bamboo with awls/needles bone	PNGNMAG
19			Implement-bone	
20	15307	MAC2788	Neck ornament-3 crocodile teeth	PNGNMAG
21	15308	MAC2789	Neck ornament-crocodile teeth	QM
22			Implement-wood	
23			Implement-wood	
24	15215	MAC2863	Ornament-shell, plaited fibre, coix seed	PNGNMAG
25	15243	MAC2286	Neck ornament-wallaby incisors	PNGNMAG
26	15245	MAC3024	Neck-ornament-fish spines	PNGNMAG
27	15244	MAC3011	Neck ornament-wallaby incisors	QM
28	15305	MAC2261	Forehead ornament-2 rows pearl shell sections on plaited fibre	QM
29			Neck ornament-fish spines	
30			Belt-coix seed	
31			Tube/case-bamboo	
32	15202	MAC510	Implement-bamboo	PNGNMAG
33	15246	MAC2285	Neck ornament-fish spines	QM
34	15239	MAC2496	Head ornament-plaited fibre, cassowary quill spine	PNGNMAG
35	15335	MAC802	Lime spatula-wood	QM
36	15337	MAC914	Lime-spatula wood	PNGNMAG
37	15353	MAC467	Canoe ornament-wood	QM

TABLE. 9. cont. Identification of Marind-Anim objects shown in the official British New Guinea report (Anon. 1900: Plate 9, Figure 16) and British Museum print Oc,B20.24 (see Figure 10)

Plate Object Key	QM ER	QM MAC	Object Description	Current Museum Location*
38	15424	MAC2693	Arm ornament-plaited fibre	QM
39	15354	MAC2783	Forehead ornament-plaited fibre	QM
40			Arm ornament-plaited fibre, multiple	
41			Ornament-boars tusk	
42			Body ornament-plaited fibre bundle	
43			Body ornament-threaded seed	
44			Spear tip-cassowary claw	
45			Body ornament	

\*QM is Queensland Museum and PNGMAG is the Papua New Guinea National Museum and Art Gallery.



FIG. 23. Feather headdress (ER15238 (MAC1507)) depicted in Plate 9, Figure 16 (Anon. 1900) and matched as no. 8 in Fig. 10. Photography, Peter Waddington, Queensland Museum.

## BOX 8.2

## PESTLES, MUSICAL INSTRUMENTS OR RITUAL OBJECTS? ENIGMATIC TUGERI STONE OBJECTS

Robin TORRENCE and Nina KONONENKO

Among the most enigmatic objects in the Official collection are seven stone artefacts acquired in 1896, after a group of Marind-Anim headhunters fled a violent confrontation with Sir William MacGregor's party, leaving most of their belongings behind. Although MacGregor described many objects collected after the raid, these rather ordinary looking, unmodified, water-rolled stones are omitted from his detailed reports (MacGregor 1897a; 1897b). In the *Ethnology Register (New Guinea)* (Queensland Museum c.1889-1910), they are described as stone pestles (ER 18663-8), but in the official report (Anon. 1900: Pl. 26, Fig. 46) they are arranged on a table with one placed inside a wooden mortar in a photo labelled 'Tugeri Musical Instruments'. Since stone raw material is scarce in the swampy lands occupied by the Marind-Anim, these water-rolled stones must have been obtained by exchange and, consequently, were probably highly valued. How were these unmodified stones used? Why were the stones carried around by the Marind-Anim on their raids? Were these tools used as pestles, as musical instruments, or did they have other functions?

To answer these questions, we studied the surface damage preserved on one of the stones now housed in the Australian Museum (ER18665; AM E.007144, Figure 24). Some of the marks on the tool surface, such as a fresh scratch through the weathered surface (see #1 in Figure 24a), may have been acquired during transport from British New Guinea or, more recently, from contact with other stone items in the museum storeroom, but much evidence for their past use is still well preserved. The long, thin, nearly cylindrical shape of the natural water-rolled stone is certainly appropriate for a pestle,

especially because the thicker end has a relatively flat surface that would be useful for pounding and grinding and there are some black stains that might indicate use in this way (#6 in Figure 24a). Near the opposite end of the artefact, at the locations labelled #2 in Figure 24a, another patch of black residue is also visible (see closeup in Figure 25f). In addition, we observed a series of irregular pits (see #4 in Figure 24a) together with some incisions on one face and both edges (Figures 25a, b). The patch of incised lines forms a rough criss-cross design that wraps around one edge of the tool. Perhaps this pattern was made to identify the tool or its owner since it does not occur on the other five stone objects.

To get a closer look at the wear traces, we used a microscope with magnifications ranging from  $\times 15$  to  $\times 500$ . Starting at the larger, butt end of the tool, we took a more detailed look at the fragmented charred plant material that had become embedded into a modified smooth surface which was also marked by relatively dense, shallow striations around its edges (Figure 25a-d). The combination of the residues and the diagnostic, microscopic use wear indicate the tool was used as a pestle. The large end with a very slightly convex surface was twisted in a circular motion to grind a carbonised substance, perhaps to prepare medicines or to make paint for decorating the elaborate Marind-Anim arrows or the men themselves. The Marind-Anim men carried candlenuts (*Aleurites moluccana*) in their personal bags (Figure 22). These could have been burned to create light and/or then ground up for pigment. Further microscopic and perhaps chemical studies of the residues might enable more specific identification of the residue.



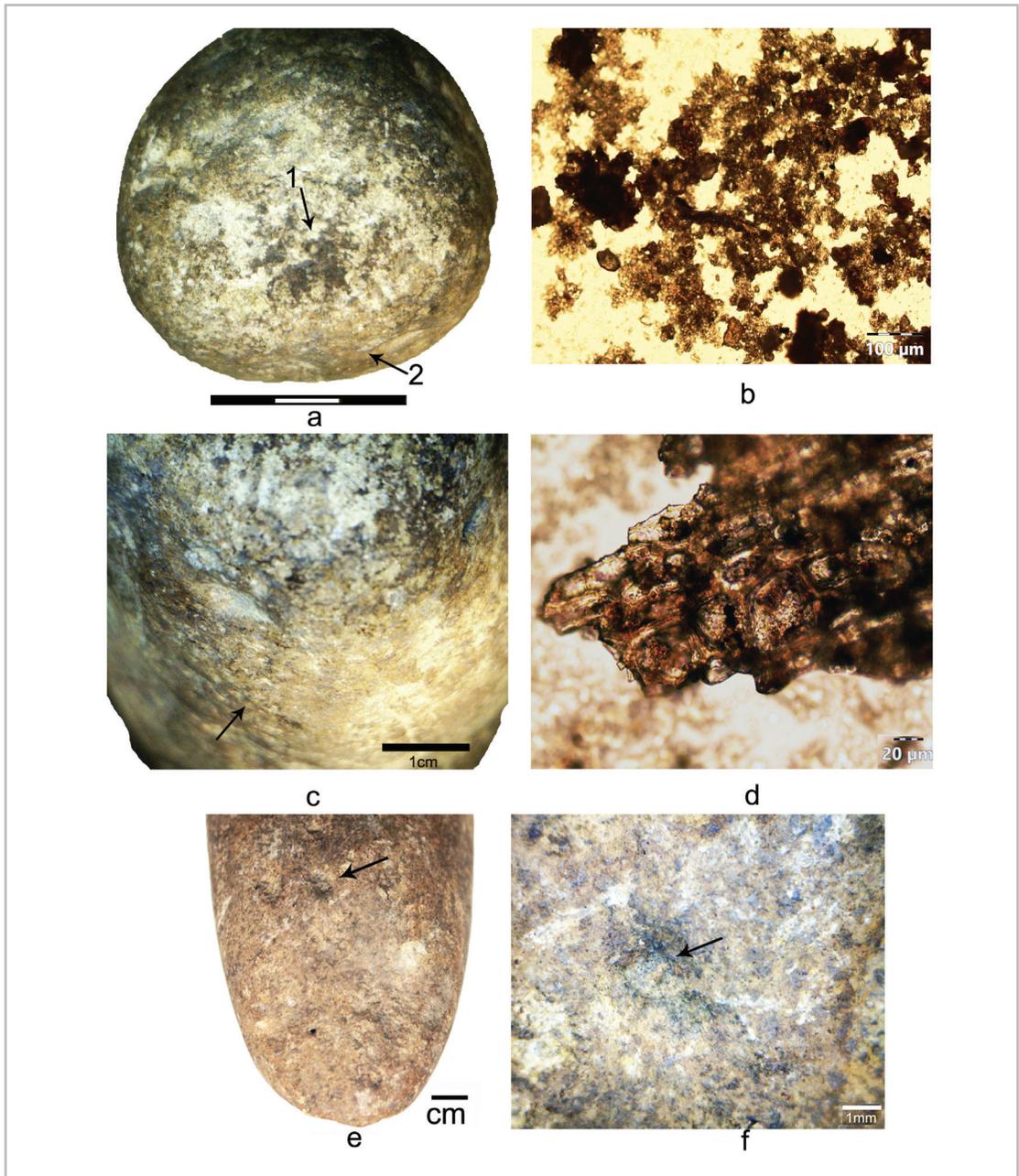


FIG. 25. Plant residues and use wear features on the Marind-Anim stone cylinder ER18655 (AM E007144): a. closeup of the butt shown at #6 in Figure 24 with location of black residues at point 1 and striations at point 2; b. fragments of charred plant residues removed from point #1 in Figure 25a; c. dense shallow striations around the tip of the butt at point #2 in Figure 25a; d. plant fibre with bordered pits removed from #2 in Figure 25a; e-f. arrows indicate deliberately made sub-rounded pits at location #5 in Figure 24a. Scale is 1 cm. Photos by Nina Kononenko ©Australian Museum.

Moving down the sides of the tool, an uneven distribution of amorphous pitted depressions is overlain by deep impact marks (see #4 in Figure 24a). The interiors of these pits have a rough surface characterised by crushed and fractured rock grains (Figure 24c). This type of surface damage commonly results from a strong percussive force by a stone (e.g. Attenbrow and Kononenko 2019: 32). These marks could result from hitting one stone against another, for instance, as in musical instruments such as claves or clapsticks. This action would have created a loud ringing sound appropriate for accompanying chanting, song and dance. Perhaps this property had been recognised by whomever titled the photograph in the official report where the stones are described as musical instruments (Anon. 1900: Fig. 26, Pl. 26). The stones may also have been used by ritual specialists to make rain. Van Baal (1966: 881) notes that one method involves 'the use of big stones which are rolled up and down a miniature canoe, imitating the sound of thunder,' although the edge damage observed on these tools is not consistent with these actions.

The tapered end of the tool would have been the most suitable as a handle for the pestle. It was probably wrapped with plant material to increase the precision of the grip and the comfort of using the tool. Amorphous

fragmented plant material as well as plant fibre with bordered pits were observed when small samples removed from the black patch at #2 in Figure 24a were mounted on glass slides and observed under magnification (Figure 25d). The handles must have been temporary because they were not present when the tools were collected. A series of three deliberately made, sub-rounded pits were also observed on the opposite face from the residues (#5 in Figure 25a). Since no use wear features were associated with these, their function is unknown. Possibly, like the criss-cross patterns, these markings had meanings perhaps related to the magic or rituals in which they were used.

The physical damage and residues preserved on one Marind-Anim stone cylinder reveal some of their past uses as multi-functional tools for making paints or herbal substances and creating distinctive sounds, possibly within a ceremonial context. The incised patterns and row of pits that cannot be directly linked to specific activities suggest these objects had multiple, overlapping uses that may have combined utilitarian and ritual roles. Together the physical traces on these stone objects confirm that they had long and complex histories confirming that they were highly valued by the Marind-Anim.