The Argan stone arrangement complex, Badu: Initial results from Torres Strait

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Abstract
The Argan stone arrangement complex of the island of Badu is a series of mainly geometrically shaped stone formations that together extend for 1 km along an isolated ridge-top in Western Torres Strait. Here we report on archaeological excavations at this ritual site in a first attempt to historicise Badulgal spiritiscapes.

Introduction
Badu is the third-largest island in Torres Strait (Figs 1 and 2). Situated amongst the Western group of islands, Badu has held complex and shifting relations of friendship and enmity with neighbouring Islanders and Australian and Papuan mainlanders since at least the early 1800s during the period of sustained European seafaring across the Strait (cf. McNiven 1998). For example, direct contacts with the Kaurareg of Murarag (Prince of Wales) and neighbouring islands were documented in some detail by Barbara Thompson during the 1840s. Thompson was shipwrecked and subsequently adopted by the Kaurareg and during her five-year stay amongst the Islanders observed on numerous occasions large fleets of up to 16 canoes, each carrying large numbers of Badulgal (Badu Islanders) visiting the Kaurareg for trade (Moore 1979). There are also rich oral traditions of close kin relations and political alliances with Mabuiag Islanders to the north, and of raiding parties from Badu to Mua in the east (e.g. Haddon 1935). It thus comes as no surprise to learn that during ethnographic times these Western Islanders shared in common many cultural beliefs and practices, such as ceremonial activities involving turtleshell masks and turtle hunting magic – singular Torres Strait Islander cultural practices that Anthony Barham (2000) has come to call the Torres Strait Cultural Complex.

Part of this regionally distinctive cultural complex relates to how people have come to understand the world of the living, of the dead and of the spiritual and how these various realms are commemorated, reconciled and propitiated in rituals that have material, and therefore archaeologically visible, dimensions.

Stone arrangements in Torres Strait
There are many special ritual sites dating to ancient times in Western Torres Strait, a number of which remain physically ‘intact’ today. Most of these are materially evident as shell arrangements or bone mounds, but there are also considerable numbers of geometric stone alignments and figurative stone effigies. The stone arrangements in particular are enigmatic in their antiquity and function(s): while many details of Islander culture are well known from

Figure 1 Torres Strait.

Figure 2 Badu and neighbouring islands, showing the location of Argan.
early ethnographic sources and from community members themselves, some of the most sacred sites were not seen by outsiders during the period of their use and their locations and meanings were not passed down in any detail to today’s generations by the ancestors who used them. Thus while some stone arrangements are well understood by Islanders, such as turtle lookout and hunting magic sites, the precise magico-religious roles of other arrangements generally known to have been associated with puri-puri (sorcery/magic) remain a mystery today.

Stone arrangements of various kinds are found in Torres Strait. Animal effigies, in particular turtle-shaped arrangements overlooking coastal areas, occur on many permanently occupied and uninhabited islands and some at least were used in hunting magic (e.g. Barham and Harris 1987: 19, 27, 32). Turtle lookouts are also well known and often incorporate rock cairns associated with magical-ritual practices (Kubin Community Council et al. 2001; Moore 1979). Aspects of the spiritual logic behind these kinds of sites is still well understood by Elders on many islands, along with the associated rituals. Lawrie (1970:236-37) documents four stone dugongs (carvings) on Boigu, at least one of these being associated with dugong hunting magic (Boigu Island Community Council 1991:35-6; Laade 1971:107; McNiven & Feldman 2003; Teske 1986:36-7).

Other animal effigies in the shape of clan totemic designs (e.g. crocodiles) are also known, again from the Western Islands (Barham and Harris 1987:27, 32; Teske 1986a:32-3). Stone-lined ‘trackways’ are associated with some village sites in the Western Islands (Barham and Harris 1987:27, 29-30; Harris et al. 1985-48; Vanderwal 1973:178). Inter-tidal stone fishtraps are found along coastlines and some islands are almost entirely surrounded by such formations (Barham 2000). Also found are cooking facilities (in particular cobble-filled earth ovens known as anau), graves (e.g. Haddon 1904a), house foundations (Fitzpatrick et al. 1998), and field boundaries (Barham and Harris 1987:28; Neale 1989; Raven-Hart 1949:12; Wilkin 1908:167). Rob Neal (1989) recorded a complex of ‘linear, curvilinear, circular and semicircular stone arrangements, and stone cairns’ on a granitic ridge on lama in the Centrlllslands. He interprets most of these as garden plot boundary markers and pathways and in one case a ‘drainage channel’. Such is the scale of these sites that Neal (1989:29) speculates that stone arrangements may cover ‘50-80% of the island’. A stone located next to the well at lama was associated with the well’s productivity (Teske 1987a:50-1). Haddon (1935:136, 168-71) also notes that most families on Mer had ‘at least one stone of power or a shrine to make gardens fruitful or to render certain fruit trees productive’. Such places and objects are generally referred to as urogo (sacred) sites (Haddon 1935:357) and are most common in the Central and Eastern Islands (e.g. Barrett 1954:11; Haddon 1904b:334-45, PI 21.2; Raven-Hart 1949: 158; Teske 1987b). Raven-Hart (1949: 104-5) relates how the old monowoo (headman) of Masig or Kailag could call up a storm by a ceremony that involved a clam shell and a stone. On Masig, Lawrie (1970: 245) also recorded a stone monolith site at Pedig called Ikan which was used for ‘calling up’ the wind, and Barrett (1954:32) observed stone bird figures and ‘upright stone slabs ... used in rainmaking by puri-puri’ on Mer. Yet while geometric stone arrangements (circles, linear features, cairns, standing stones) relating to puri-puri are known from the Western Islands in particular (e.g. Barham and Harris 1987:32; Coleman 1991; Haddon 1908a:56, PI 4.3, 5.4; Haddon 1908b:217, PI 1.1; King 1827, I.385; Lawrie 1970:325), in places often not immediately accessible from villages but overlooking nearby village or rock painting sites, they are poorly documented and their precise functions often remain unknown. This is the situation we are faced with at the Argan stone arrangement complex, one of the largest set of anthropogenic stone formations known from anywhere in Australia.

The Argan stone arrangement

The Argan stone arrangement is located towards the northern end of the beach at Argan, near the west coast of Badu (Figs 3, 4 and 5). It consists of many dozens of individual piles of rocks and stone alignments—their precise numbers and range of forms remain to be determined—of a combined length extending 1km along a ridge-top that overlooks the sea in the west and stretches inland in the east. The nearby beaches to the south and to the north are not permanently inhabited today, although a few houses occupied ephemerally are present.

The discovery was reported to William Bowie, the Chairman of
forthcoming archaeological research on the island. Preliminary recordings of the site and of some of the individual stone arrangements were made in November 2002, and plans were initiated to undertake a detailed recording the following year. Members of the local Badulgal (Torres Strait Islanders) Corporation, who in turn asked BD to further investigate the site during November 2002 for one oval enclosure, the Mura Badulgal (Torres Strait Islanders) Corporation Committee was shown the entire site complex. Accumulated sediments abutting one stone arrangement were subsequently excavated to obtain chronological information and oyster shells were collected for radiocarbon dating at the only shell midden in the site complex (see below).

Given the geographic context of the Argan stone arrangement complex (low stone formations on granite pavement on a hilltop away from habitation) and the shapes of the individual arrangements (cairns, upright stones, circles, ovals, arcs, linear alignments), their use as house foundations, garden boundaries, figurative animal effigies used for hunting magic, fishtraps and cooking facilities can be ruled out. Furthermore, a near-total absence of any shell or remains of other subsistence activities indicates that this site was not a focus of everyday domestic practices. However, thousands of tiny quartz flakes (>200 flakes/m² in some cases) riddle the ground surface inside and around many, but not all, stone arrangements.

We must also take into account the site’s location, on a steep-sided ridge-top 1km or so from the old village of Argan to the south. Geographically segregated from the village and situated in a well-defined but domestically out-of-reach location along an exposed ridge-top, and almost devoid of evidence for domestic activity, we suggest that the Argan stone arrangement complex was located in a liminal space beyond the reach of everyday occupation. Today Torres Strait Islanders speak of such stone arrangements as associated with ‘medicine men’ and the province of medicine or sorcery men. The Argan stone arrangement complex is reminiscent of a morphologically similar sacred ground at the tip of Cape York, a neighbouring region where ‘medicine men’ and religious rituals should be found from Badu to the tip of Cape York is therefore not surprising.

Historicising the Argan stone arrangement complex: archaeological excavations

A series of granite pavements on the hill to the north of Argan outcrop along the most elevated areas, creating ‘islands’ relatively bare of vegetation dotted along the ridge-top, each hosting a collection of stone arrangements. Individual stone arrangements are located on the flat ridge-top granite bedrock pavement. Granite pavements surrounded by loose boulders and cobbles, small termite mounds and patches of shallow soil provide the setting for many dozens of individual stone arrangements. The vegetation is very sparse, dominated by shrubs less than 2m in height. A few individual stone formations, in particular arced, circular or oval-shaped stone-walled arrangements, show evidence of soft sediment build-up against the internal faces of their well-defined stone walls. This sedimentation gives us an opportunity to archaeologically investigate in some cases the antiquity of abandonment, and in some cases the antiquity of construction of the stone walls themselves. Such an archaeological endeavour was attempted in November 2002 for one oval enclosure, referred to as Feature 1.

Feature 1 is located at Grid Reference 0621303 8884430, near the central-western part of the site complex.
The Argoll S,one: ArigW18('I//(!Jlf (Figs 6 and 7). It is 5.6m long (east-west) by 2.5m wide (north-south) in inner dimension, and in plan view forms an oval with an opening at the slightly more elevated end, with walls typically 50cm high and 60cm wide. While much of the ground floor is flat granite bedrock pavement, and Feature 1’s wall sits immediately on this bedrock, a floor area of 1.3 x 3.8m inside the feature consists of fine aeolian sediments sitting immediately on the bedrock abutting the inner, concave edge of the wall. The presence of an opening or ‘entrance’ towards the feature’s upslope end allows for fine sediments to enter the feature and be trapped against the inner wall face at the downslope end. The lack of larger particle sizes within the excavated sediments implies that sedimentation is aeolian, rather than a result of water runoff and colluvial action.

A 50 x 50 cm square (L10) was excavated immediately against the wall of the stone arrangement, in a part of the feature where sediment build-up against the internal (concave) arc of the rock wall appeared deepest, based on surface clues. Excavation proceeded in maximum 5.5 litre bucket-excavation units (Figs 7-8). The stones of the rock wall were not removed; rather, the aim was to excavate to bedrock, and to obtain charcoal down the stratigraphic sequence to determine the timing of wall building.

Surface sediments are a thin (1 cm thick) layer of loose Acacia leaves and dark grayish brown aeolian dust very much like the more compact sediments beneath. These surface sediments abruptly give way to a compact surface of consolidated fine aeolian sediments below. These underlying sediments are homogeneous throughout and sit immediately above the bedrock pavement towards the northeastern part of the square, and on the pavement and above and amongst the granite rocks of the wall towards the southwestern part of the square. Four small roots, approximately 1cm in diameter, grow in the lowermost sediments following the pavement. The higher levels in the excavation square are devoid of roots. The granite rocks of the wall exposed by the excavation are closely packed and show no evidence of lichen growth, whereas those exposed above the present sediment build-up are covered with lichen.

No cultural items apart from the faces of the rock walls themselves were exposed during the excavation. Excavation proceeded to bedrock located 14.4cm below the ground surface. The basal rocks of the rock wall were determined to have been dry-built immediately onto the natural rock pavement. There is no evidence of sediment build-up beyond the convex side of the oval rock formation, that is, rainfall constantly washes away any soft sediments on the pavement outside the feature, whereas inside sediments have become trapped against the feature’s rock wall. Because of this, the presence of basal charcoal in the interstitial spaces against (but not underneath) the basal rocks allows us to determine in this case not the age of abandonment, but the age of when sediments began to get trapped against the rock wall – that is, the age of creation of the rock wall itself, assuming that sediments began to be trapped soon after construction.

Charcoal was present in the basal excavation unit only (Table 1), indicating that initial construction of Feature 1 likely was associated with considerable burning and, possibly, partial but extensive de-wooding of the ridge-top. An AMS radiocarbon determination on charcoal from this basal excavation unit gave a date of 604 ± 36 years BP, indicating that the Feature was most likely built sometime between AD 1300 and 1400 (Table 2).

An isolated, small concentration of Round Oyster shells (Chama sp.) and a single akol (Polymesoda erosa) valve were recorded at the Badu stone arrangement complex, some 100m from Feature 1. The shells cover an area 10 x 5m on the boundary of a small patch of woodland. Some localised, shallow pig rooting reveals that the shells, averaging <1 valve/m² across the midden area, are a surface...
deposit. The small size of the midden and its well-delimited extent indicate that it is likely to represent a single depositional event by a small group of people. A small number of oyster shells were collected for radiocarbon dating; results reveal that they were probably deposited sometime after AD 1846, and likely to be more recent (Table 2).

It is likely that the Argan stone arrangement stopped being used soon after missionaries arrived in the 1870s. In the early 1880s missionaries were advised by the Argan villagers to set up Badu’s first Christian mission at Kotheid, on the eastern coastline of the island. Much of the island soon became missionised and along with missionisation came further shifts in settlement, culminating with settlement in a single village, at the site of the present Badu Village, on the opposite side of the island to Argan. It is to this early mission period just prior to the end of the Argan village that we suggest the oyster midden at the Argan stone arrangement complex relates. It is also during this time that the Argan stone arrangement complex itself likely ceased to be used. Thus, the oyster midden at the Argan complex signals a change in site use and a shift in attitude towards the once sacred hilltop to the north of the village, from a liminal ritual space where sacred rituals were performed and where foods were not consumed, to one of increasingly domestic space, and finally to abandonment associated with a shift in Islander spiritual practice with the establishment of Christianity.

Conclusion

It is unusual to find a stone arrangement in Australia the construction of which can be dated radiometrically. More commonly, although even here the opportunities are scarce, the accumulation of sediments over walls and other stone features indicate the commencement of soft sediment accumulation following site abandonment. The Argan stone arrangement complex thus offers a rare opportunity to historicise an indigenous religious installation in Australia. Feature 1 at Argan is testimony to pre-Christian religious beliefs and practices and to the antiquity of Badu Islander ritual practices that we have come to know from ethnography and from Elders themselves (e.g. see Haddon 1904a, 1935 for further details). It signals in situ historical roots of at least 600 to 700 years for ethnographically documented Islander ritual practices and magico-religious beliefs in such sites usually associated with a calling of the spirits and ancestors, propitiation of key marine fauna (in particular turtle and dugong), clan identification, and education of young men that Islanders today know as part-pair. It also presents us with evidence that while the rituals may have ceased, the special places where they took place, in some cases until the establishment of missionary activity on the island, remain largely intact. This in turn allows the possibility of further research into the history of Badulgal spiritualities, while an awareness of their presence in secluded places alerts us also of the need for their careful management in the face of active developments on the islands. It is towards such aims that ongoing research at the Argan stone arrangement complex and at other, similar sites on Badu are now directed.

Acknowledgements

The archaeologists and Mura Badulgal (Torres Strait Islanders) Corporation Committee, representing the indigenous people of Badu, thank the Australian Institute of Aboriginal and Torres Strait Islander Studies and the ARC for a Discovery grant for funding, and for helping Badu Islanders try to get our history puzzle together. The Mura Badulgal (Torres Strait Islanders) Corporation Committee note that our older generations passed cultural information by word; now we want to try to put the pieces of our deep history back together for identity and culture. The archaeologists thank in particular William Bowie, Manuel Nomoa and the Mura Badulgal (Torres Strait Islanders) Corporation Committee; the School of Geography and Environmental Science at Monash University for generous support of this research; and John Stanisic and Thora Whitehead (Queensland Museum) for helping identify the Chama sp. shell remains. Most dearly we thank the people of Badu for their support, friendship and company during the course of this work.

Table 1 Feature 1 excavation unit characteristics, square L10.

<table>
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<tr>
<th>XU</th>
<th>Mean thickness of XU (cm)</th>
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<td>2.8</td>
<td>6</td>
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Table 2 Radiocarbon determinations, Argan stone arrangement complex (calibrations using OxCal v3.5).

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<th>Modern</th>
<th>Radiocarbon date (years BP)</th>
<th>Calibrated age (68.2% probability)</th>
<th>Calibrated age (95.4% probability)</th>
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<td>Charcoal (Feature 1, XU5) Wk-11949</td>
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<td>92.8 ± 0.4</td>
<td>604 ± 36</td>
<td>1300-1335 AD</td>
<td>1290-1410 AD</td>
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<td>Oyster shell (midden) Wk-11948</td>
<td>2.4 ± 0.2</td>
<td>94.0 ± 0.5</td>
<td>497 ± 44</td>
<td>after 1846 AD</td>
<td>1720-1790 AD</td>
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