INTRODUCTION

The northern shores and people of Australia were part of a complex long-distance trade in trepang, also called beche de mer or sea cucumber, linking northern Australia to Southeast Asia and China and involving Indonesian fishermen from Makassar, Bugis, and Sama Bajo as well as people from Aru, Timor, Java and Papua New Guinea (Figure 1) (Ganter 2006:4; Macknight 1972:283). They are collectively called ‘Macassans’ as they mainly operated out of the port of Makassar in Sulawesi. The earliest direct date relating to Macassan voyaging comes from a rock art panel in Arnhem Land dated to before 1664 (Taçon et al. 2010:6). Macassan trepanging in northern Australia ended in 1906 due to government restrictions (Macknight 1976:125).

Typical Macassan archaeological site features include tamarind trees, pottery, stone lines, smoke houses, burials, glass, metal and coins (Macknight 1976:48).

The historical and archaeological evidence for Macassan voyaging to northern Australia has been comprehensively reviewed by Macknight (1969, 1972, 1976, 1981, 2013), McIntosh (1996, 1999, 2006) and Mitchell (1995a, 1995b, 1996). Macassan interactions with Aboriginal people have been associated with changes in economy as well as social activities and material culture (Clarke 2000; Clarke and Frederick 2006; Mitchell 1995a; Rosendahl et al. 2014). Archaeological evidence for Macassan presence has been recorded from Cape Leveque in the west to the Sir Edward Pellew Group in the east (Baker 1984; Macknight 1969; Sim and Wallis 2008). Specific archaeological studies on Macassan sites focus on the central geographic locations of the Cobourg Peninsula to northeast Arnhem Land and Groote Eylandt rather than the sites on the eastern and western peripheries.

At the margins: archaeological evidence for Macassan activities in the South Wellesley Islands, Gulf of Carpentaria

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Archaeological, anthropological, historical, linguistic and genetic studies of Macassans and their activities in northern Australia have focused on the extensive industrial trepang processing site complexes of the Cobourg Peninsula and northeast Arnhem Land. Less attention has been given to sites at the geographical peripheries of Macassan industrial activities. Archaeological studies show that the eastern extremity of Macassan activities extended to the Sir Edward Pellew Group. However, ethnographic and historical accounts show that Macassan presence extended to the South Wellesley Islands, over 200 km further east, in the south east Gulf of Carpentaria. Recent archaeological fieldwork reveals new evidence for Macassan activities at the eastern margin. This paper reports preliminary data from five Macassan sites in the South Wellesley Islands.

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Figure 1: Macassan voyaging routes from Sulawesi to northern Australia, showing locations mentioned in text (after Bulbeck and Rowley 2001:56).

Historical records (Cense 1952; Chimmo 1857; Earle 1842; Macknight 1969; Stokes 1846) place the eastern periphery of Macassan activities in the South Wellesley Islands (there is no evidence for Macassan voyaging further east in the Torres Strait, see Grave and McNiven 2013), however, until recently no archaeological evidence has been documented. Five Macassan archaeological sites from the South Wellesley Islands are reported and discussed in this paper.

The South Wellesley Islands

The South Wellesley Islands are located in the southeast Gulf of Carpentaria. Ten islands make up the South Wellesley Archipelago with the three largest being Bentinck, Sweers and Fowler Islands (Figure 2). Archaeological evidence suggests permanent occupation of the South Wellesley Islands in the last 1000 years (Ulm et al. 2010) with more ephemeral occupation prior to that time. Bentinck Island was permanently occupied by Kaaidit people until their removal by European missionaries in 1948 (Memmott 1982; Memmott et al. 2006:42). Prior to the fieldwork reported here, there had been no archaeological studies of Macassan visitation to these islands. However some limited historic accounts of Macassans
in this region exist (Chimmo 1857; Boyd 1896; Dymcock 1973; Earle 1842; Flinders 1814; Macknight 1969; Pennefather 1880; Stokes 1846). Pieces of decorated pottery collected from a Fowler Island Macassan site (Thawalda) was sent to Mulvaney (2002) and shown to Daryl Wesley (Australian National University, pers. comm., 2012) who both identified them as Macassan in origin.

**Historical evidence for Macassans in the South Wellesley Islands**

There are historical and ethnographic accounts of Macassan presence in the South Wellesley Islands from both European and Macassan sources (see Macknight 1969, 1976; Memmott 1982). In 1802, Flinders (1814:147) observed the stumps of 20 trees felled by an axe or iron tool and broken remains of an earthenware jar on Bentinck Island, which he related to Macassan activities, along with a timber piece from a ship’s deck, seven human skulls and many bones on Sweers Island. Dymcock (1973:4) reported a shipwreck of a prau, reportedly owned by the Rajah of Boni of the Sulawesi Islands, on Sweers Island, near Inspection Hill, in 1801. Earle (1842:141) recounts that numerous praus were driven past the Wellesley Islands by a strong wind and found water so fresh water casks could be filled alongside the praus; the sea to the east of the Wellesley Islands was called ‘Eyer tawar’ or ‘freshwater’. Stokes (1846:356) stated that Macassan voyagers went as far as the ‘Wellesley Islands, named by them Pulo Tiga, or the three islands; this is the usual southern limit of their voyage’.

The wreck of a prau was found on the west side of Sweers Island by Lieutenant Chimmo in 1856 (Chimmo 1857:434) and reports of tamarind trees (presumably introduced by Macassans) on Fowler Island were made by Pennefather (1880) and Boyd (1896:56). Cense (1952:264, cited in Macknight 1969) recorded the experiences of a Macasserese trepanger named Daeg Sarro who remembered a channel three days sailing eastward from the Sir Edward Pellew Islands. Its name was Je’ne Tattungenga or ‘upside down water’. Macknight’s informant, Mangngellai, said ‘that three islands lay at the furthest extreme of Macassan voyaging’ (Macknight 1969:197). He knew the names for them as Tuesday/Disappointment Island and the Three Islands. He also remembered another name in the vicinity, which translated as the ‘Narrow strait’ or ‘Anchorage’ (Macknight 1969:197), which may correspond with the narrow deep trench between Sweers and Bentinck Islands.

**Archaeological evidence for Macassans in the South Wellesley Islands**

Macassan features and artefacts have been recorded at five locations (Figure 2) in the South Wellesley Islands (Thawalda, Thungaldurndurnda, Wardilmiru, Berkundaku and Kalinda). Topographic and cultural features at Thawalda and Kalinda were mapped using a real time kinematic global positioning system (RTK-GPS) device. Kalinda was subject to limited excavations in 2013. A total of 18 earthenware pottery sherds have been documented from the South Wellesley Islands at four different locations (Table 1). All sherds were individually examined and

**Table 1: Attributes of Macassan pottery assemblage from the South Wellesley Islands.**

<table>
<thead>
<tr>
<th>FS#</th>
<th>Site</th>
<th>Weight (g)</th>
<th>Inclusions</th>
<th>Core Colour</th>
<th>Margin Colour</th>
<th>Surface Colour</th>
<th>Decoration</th>
<th>Length (mm)</th>
<th>Width (mm)</th>
<th>Thickness (mm)</th>
<th>Body Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Berkundaku</td>
<td>42.89</td>
<td>O,S</td>
<td>Black</td>
<td>Black</td>
<td>Red</td>
<td>Red/Orange</td>
<td>None</td>
<td>85.19</td>
<td>41.57</td>
<td>29.62</td>
</tr>
<tr>
<td>2</td>
<td>Berkundaku</td>
<td>61.07</td>
<td>O,S</td>
<td>Black</td>
<td>Black/Grey</td>
<td>Red</td>
<td>Red/Orange</td>
<td>None</td>
<td>134.99</td>
<td>54.76</td>
<td>35.18</td>
</tr>
<tr>
<td>3</td>
<td>Thawalda</td>
<td>18</td>
<td>O,P,S</td>
<td>Grey</td>
<td>Red/Brown</td>
<td>Red/Brown</td>
<td>Red/Orange</td>
<td>None</td>
<td>66.2</td>
<td>41.6</td>
<td>3.9</td>
</tr>
<tr>
<td>4</td>
<td>Thawalda</td>
<td>18.8</td>
<td>O</td>
<td>Grey</td>
<td>Cream/Grey</td>
<td>Cream</td>
<td>Red/Orange</td>
<td>Colour</td>
<td>48.6</td>
<td>52.6</td>
<td>7.5</td>
</tr>
<tr>
<td>5</td>
<td>Thawalda</td>
<td>6.1</td>
<td>O</td>
<td>Grey</td>
<td>Cream/Pink</td>
<td>Cream</td>
<td>Red</td>
<td>Colour</td>
<td>43.1</td>
<td>24.4</td>
<td>5.4</td>
</tr>
<tr>
<td>6</td>
<td>Thawalda</td>
<td>2.5</td>
<td>O,S</td>
<td>Grey</td>
<td>Brown</td>
<td>Red/Brown</td>
<td>Red/Orange</td>
<td>None</td>
<td>34.6</td>
<td>25</td>
<td>2.7</td>
</tr>
<tr>
<td>7</td>
<td>Thawalda</td>
<td>20.4</td>
<td>O</td>
<td>Grey</td>
<td>Orange/Orange</td>
<td>Orange/Red</td>
<td>Cream/Grey</td>
<td>Red</td>
<td>70.6</td>
<td>53.9</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Thawalda</td>
<td>10.1</td>
<td>O,S</td>
<td>Black/Grey</td>
<td>Grey/Grey</td>
<td>Grey/Grey</td>
<td>Red/Brown</td>
<td>Red/Brown</td>
<td>54</td>
<td>37.8</td>
<td>3.9</td>
</tr>
<tr>
<td>10</td>
<td>Thawalda</td>
<td>7.8</td>
<td>P</td>
<td>Grey</td>
<td>Cream/Pink</td>
<td>Pink/Red</td>
<td>Cream/Grey</td>
<td>Red</td>
<td>33.3</td>
<td>27.7</td>
<td>6.1</td>
</tr>
<tr>
<td>11</td>
<td>Thawalda</td>
<td>2</td>
<td>O</td>
<td>Grey</td>
<td>Cream/Pink</td>
<td>Cream/Pink</td>
<td>Orange/Red</td>
<td>Colour</td>
<td>22.5</td>
<td>14.8</td>
<td>6.5</td>
</tr>
<tr>
<td>12</td>
<td>Thawalda</td>
<td>14.7</td>
<td>Q,P</td>
<td>Dark Grey</td>
<td>Cream</td>
<td>Cream/Pink</td>
<td>Cream/Grey</td>
<td>Red/Orange</td>
<td>50.3</td>
<td>37.6</td>
<td>7.2</td>
</tr>
<tr>
<td>13</td>
<td>Thawalda</td>
<td>11.4</td>
<td>Q,P</td>
<td>Grey</td>
<td>Red/Orange</td>
<td>Red/Orange</td>
<td>Cream/Grey</td>
<td>Red</td>
<td>51.1</td>
<td>33.3</td>
<td>6.3</td>
</tr>
<tr>
<td>14</td>
<td>Thawalda</td>
<td>74.4</td>
<td>Q</td>
<td>Grey</td>
<td>Pink/Grey</td>
<td>Pink/Red</td>
<td>Cream</td>
<td>Colour</td>
<td>98.6</td>
<td>87.9</td>
<td>6.9</td>
</tr>
<tr>
<td>15</td>
<td>Thawalda</td>
<td>27.5</td>
<td>Q</td>
<td>Grey</td>
<td>Pink/White</td>
<td>Pink/White</td>
<td>Cream</td>
<td>Red/Orange</td>
<td>60.1</td>
<td>54.7</td>
<td>6.8</td>
</tr>
<tr>
<td>16</td>
<td>Wardilmiru</td>
<td>93</td>
<td>P,Q</td>
<td>Red/Brown</td>
<td>Red/Brown</td>
<td>Red/Brown</td>
<td>Red</td>
<td>Red</td>
<td>92.8</td>
<td>108.6</td>
<td>28.1</td>
</tr>
<tr>
<td>17</td>
<td>Thungaldurnda</td>
<td>500</td>
<td>S,P</td>
<td>Grey</td>
<td>Brown/Brown</td>
<td>Brown/Brown</td>
<td>Brown/Brown</td>
<td>Grey</td>
<td>20.8</td>
<td>15.1</td>
<td>1.3</td>
</tr>
<tr>
<td>18</td>
<td>Thungaldurnda</td>
<td>408</td>
<td>P</td>
<td>Red/Orange</td>
<td>Red/Orange</td>
<td>Red/Orange</td>
<td>Red/Orange</td>
<td>None</td>
<td>24.7</td>
<td>14.1</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Inclusions: Q – Quartz; S – Sand; P – Pizolith; O – Organic Material
recorded using a standardised data-recording sheet. With the exception of the two sherds collected from Thungaldurndurnda, the pottery sherds were collected from the surface of sites by members of the public (Tex Battle, Carl Oberdorf and John Barton) therefore the particular context and location of individual sherds was limited to the general site location and corresponding Macassan features.

**Thawalda, Fowler Island**

Fowler Island is one of the smaller islands in the South Wellesley Island group, containing a permanent swamp at its centre. The site of Thawalda is located at the northwest tip of the island adjacent to the beach (Figure 3). The substrate is a natural shell ridge. A group of at least four tamarind trees cover an area of c.10 m² (Figure 4). Evidence of recent Kaiadilt occupation is present at this site, in the form of cement blocks and star pickets (metal posts). Stonewall fish traps, typical of Kaiadilt traps constructed elsewhere, are located in the intertidal zone to the east and in a small mangrove margin along the west shoreline. Thawalda is one of a few safe-landing points on Fowler Island due to the island’s fringing mangrove forests, extensive mudflats and broad rocky shores. It is also the closest point to Bentinck Island with a submerged sandbank connecting the two islands during extreme low tides.

**Pottery sherds (n=13)** were collected from the surface at Thawalda by Tex Battle (Sweers Island Resort) during successive visits in the 1990s and early 2000s. Additional sherds were reportedly collected by other visitors to the site (Tex Battle, pers. comm., 2012). Six of the 13 sherds (Field Specimen (FS#) 4, 10, 11, 12, 14 and 15) found at Thawalda have decoration in the form of white paint (selected sherds shown in Figure 5). This is an unusual feature as decoration is uncommon in Macassan earthenware apart from triangle-like incisions or lines (Macknight 1976:52ff). Based on similar firing, colour and temper, three of the sherds (FS# 5, 7, 13) appear to derive from the same decorated vessel as the six sherds with white paint. Each of these sherds has a red outer surface slip and a cream/pink coarse inner surface (Figure 6). They also contain a grey or dark grey core, quartz and pizolith inclusions and thicknesses ranging from 5.4–7.5 mm. Colouring of the core, margins and surfaces of the sherds show incomplete firing. The inner surfaces of a number of these sherds show marks of paddle and anvil manufacture while the outer surfaces are smooth. The remaining sherds appear to derive from the same plain red/brown vessel with thin walls and marks of paddle and anvil manufacture (FS#3, 6, 8, 9). Based on thickness, colour, and curvature, this vessel was either a pot or bowl.

**Thungaldurndurnda, Fowler Island**

Two large sherds (Figure 7) were found on the north coast of Fowler Island, in the mangrove margin. The thicker piece (FS#17) was found on the west edge of the margin while the thinner piece (FS#18) was found further east along the mangrove margin. Each of the sherds belongs to different vessels. FS#17 appears to have paddle and anvil manufacture with both outer and inner surfaces smoothed. This sherd may
be stoneware based on colour and visible temper, however further investigation is needed to be certain. FS#18 is heavily weathered and appears to made by coiling. This sherd has a consistent orange/red colour throughout. The shape and curvature of these sherds indicate that both vessels were storage pots/jars.

**Wardilmiru, Fowler Island**

A piece of Macassan pottery was found at Wardilmiru by John Barton (island caretaker employed by Kaiadilt Aboriginal Corporation) in the vicinity of a well dug into the base of a sandy ridge. Whether or not the well is of Macassan origin or use is unclear. The base sherd (FS#16) appears to be a fragment from a plate based on the angle, thickness and the texture/colour of the inner and outer surfaces (Figure 8). The consistent red colouring of the core, margins and surface shows this plate had a complete firing during manufacture. Three circular lines on the inner surface may indicate coiling or a form of decoration.

**Berkandaku, Bentinck Island**

Two rim sherds were found by Carl Oberdorf (Kaiadilt Aboriginal Corporation) during road construction on the south coast of Bentinck Island in the 1980s (FS#1-2). The exact location is unknown however an approximate location is indicated in Figure 2. Analysis and reconstructions of the two rim sherds show that they are from two different vessels (Figure 9). The sherd FS#1 has a larger rim diameter and a
slightly larger neck diameter than FS#2 (Table 2). Morpho-

gical reconstruction indicates a large body and small
opening/aperture for each of these vessels suggesting they
were used as storage pots.

Table 2: Berkundaku Macassan pottery rim sherd measurements.

<table>
<thead>
<tr>
<th></th>
<th>Rim Thickness (mm)</th>
<th>Rim Length (mm)</th>
<th>Rim Height (mm)</th>
<th>Rim Neck Diameter (mm)</th>
<th>Rim Outer Neck Diameter (mm)</th>
<th>Rim Neck Surface Angle (°)</th>
<th>Rim Neck Circumference (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS#1</td>
<td>6.8</td>
<td>73</td>
<td>28.4</td>
<td>180</td>
<td>210</td>
<td>82°</td>
<td>565</td>
</tr>
<tr>
<td>FS#2</td>
<td>7.0</td>
<td>105</td>
<td>30</td>
<td>170</td>
<td>190</td>
<td>100°</td>
<td>534</td>
</tr>
</tbody>
</table>

Kalinda, Bentinck Island

Kalinda is located near the mouth of the Kalint River (Figure 2) on northeast Bentinck Island. The site comprises tamarind trees and six stone features (Figure 10). Kalinda is surrounded by mangroves on the west, south and partially on its eastern margin. A grove of tamarind trees is located on a rise on the western edge of the site bordering the mangrove fringe.

The three best-preserved stone features (labelled 2, 3, and 4) were measured and drawn to scale. These stone lines run parallel to each other and are approximately the same length and width and are all oriented north-northeast (Figure 11). The stone formations are made up of beach rock, laterite, coral and ironstone. A part of Stone Line 2 has a distinct circular form. Some rocks from Stone Line 4 are covered in oysters (indicating that the rocks were collected from the intertidal zone) and there are also scatters of Telescopium telescopium (mud whelk) in close proximity. The size and shape of the stones vary with some of the larger stones brick-like in shape.

Two smaller concentrations of stone are located near these three main features (labelled 1 and 5) with a sixth stone feature (6) located less than 3m from the tamarind trees (Figure 12) which has been partially eroded by tidal action. Natural shell deposits beside Stone Feature 6 and the adjoining bank are evidence of this tidal influence on the site. A depression is located between Stone Lines 1–5 and the tamarind trees, which also appear to be the result of wind and water erosion. Small shrubs grow in this depression along with spinifex grass, which is present throughout the site.

A limited excavation (1 m x 50 cm) of Stone Line 2 revealed a dark humic layer with shell grit inclusions and containing a piece of charcoal less than 5 mm in size under the rocks, of which some were sub-rectangular in shape and size. Excavation also revealed a small dip (approximately 5–10 cm) that contained stones below the surface that were mainly large, rectangular, and flat (Figure 13). The stones then continue above the surface approximately peaking at 15 cm with smaller (2–3 cm) stones scattered on the surface.

There was a lack of any clear charcoal deposit from Stone Line 2; however the sample excavated was only 1 m x 50 cm and cannot be assumed to indicate the nature of the entire stone line or those nearby. Although no Macassan artefacts, such as ceramic or glass, were found at Kalinda there is evidence of tidal impacts, which could have scoured the site.
and removed surface artefacts. The sub-circular formations in some of the stone lines are similar to bays that held pots to boil trepang recorded at Macassan trepang processing sites (Macknight 1976; Mitchell 1995b; Morwood and Hobbs 1997). Stone Lines 2, 3 and 4 are also 4–5 m in length (the usual length of Macassan stone lines), which would most likely accommodate 4–5 bays (Macknight 1976:30). The spacing between these stone lines and their right-angle direction towards the mangrove fringe also correspond to typical Macassan trepanging sites. The mixture of rocks (ironstone, laterite, beach rock and coral) that form these stone lines are similar to recorded stone lines in northern Australia where Macassans used available resources in the local environment to build stone lines and smoke houses. The stone lines on Bentinck Island have therefore been interpreted as being of Macassan origin.
DISCUSSION

The morphology, temper, colour, decoration and inclusions recorded from the 18 Macassan pottery sherds recovered from the South Wellesley Islands indicate that there is a minimum of seven individual vessels in the ceramic assemblage. The unusual decoration of white painted lines on six of the sherds is undocumented in Macassan pottery assemblages of northern Australia. The closest documented similarity is from a single sherd with a white slip from Wonggarayi on the Kimberley coast (Morwood and Hobbs 1997:202). The two rim sherds (FS#1-2) were found in the general location where Flinders (1814) recorded felled trees and ceramics on Bentinck Island in 1802. The sandbank and close distance between Fowler Island and Bentinck Island could have linked these two locations (Thawalda and Berkundaku) for either Macassan or Kaiadilt people. These isolated finds of pottery may reflect Aboriginal possession and movement of Macassan artefacts or alternatively concentrated localities of Macassan activities.

Whether Kalinda was a single-use trepang industrial site or if the site was repeatedly used is unclear. The test excavation at Kalinda indicates that the stone lines were built as a single event. However, the small area excavated provides little evidence to determine specific site, duration and intensity of activities. Further investigation, such as geophysical surveys, of this site may reveal additional insights and benefit any future plans of excavation.

Macassan engagement with both the coastal Australian environment and its indigenous people has resulted in significant change occurring over a relatively short period of time. Changes in Aboriginal hunting and gathering practices, exchange networks, art and language are some of the recorded impacts of Macassan activities, indicating active responses to Macassan contact (Faulkner 2013:5). These changes are particularly evident at frequently visited regions such as Napier Broome Bay, Cobourg Peninsula and Arnhem Land (Baker 1984; Macknight 1976; 2008:140; Mitchell 1995b). The South Wellesley Islands however show no direct association or interaction between Macassans and the Aboriginal Kaiadilt people despite the archaeological and historical evidence of Macassan presence in the region. Unlike core Macassan areas there are no Macassan loan words in Kaiadilt (Evans 1992). There is no current evidence for cross-cultural interaction between Macassans and Kaiadilt people, and it is clear that Macassan trepanging in the South Wellesley Islands was low-intensity and most likely sporadic. Even at the margin of Macassan activities, the South Wellesley Islands show the continual presence of common site elements: tamarind trees, pottery sherds and stone lines.

CONCLUSION

This paper has presented the first Macassan archaeological evidence from the South Wellesley Islands, adding to previous ethnographic and historical accounts denoting this region as the eastern periphery of Macassan activities in northern Australia. The archaeological evidence of tamarind trees, pottery sherds and stone lines has enabled further understandings of Macassan history and activities in northern Australia. As the eastern periphery of Macassan trepanging activities, the South Wellesley Islands illustrate the basic elements present at a Macassan site and show the importance of identifying these elements in potential Macassan trepanging sites in northern Australia.

ACKNOWLEDGEMENTS

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