

AN ASSESSMENT OF SELECTED SHIPWRECKS IN TORRES STRAIT AND FAR NORTH GREAT BARRIER REEF

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In the context of Queensland's rich and diverse maritime history one of the most strategic and historically significant areas is the Torres Strait. Its importance was of course paramount not only to Torres Strait Islanders, but to transient seafarers and to those who ventured into these waters to exploit their rich marine resources. Such application has left its traces, particularly during the last 200 years of European occupation of Australia. This paper presents the outcome of 2 maritime archaeological survey expeditions to Torres Strait and the far northern Great Barrier Reef. Wreck reports were initially compiled from written records and from verbal accounts by local residents. Based on this information, as well as on familiarity with local operational conditions and constraints, 23 wreck sites were selected for investigation and assessment. Where wreckage was located, its position was accurately determined using the differential global positioning system (DGPS). The site was then inspected and recorded to determine the nature and identity of the wreck, to record surface artefacts and to make a video baseline record for future monitoring. This study demonstrates the constructive relationship that can exist between a local community and an organisation such as the Queensland Museum which is tasked with responsibilities under the *Historic Shipwrecks Act 1976*. However, this work also emphasises the inaccuracies inherent in some anecdotal written and oral reports and the importance of thorough archaeological field assessment. □ *Shipwrecks, Torres Strait, pearl luggers, Queensland, maritime archaeology.*

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The maritime history of Torres Strait lies at the heart of northern Australia's cultural evolution. The indigenous inhabitants' association with the Torres Strait is thought to span at least 2500 years; however, there is no conclusive evidence about an earlier age of human occupation of this region (Barham, 2000). Whether in its present form as an archipelago or as the land bridge between Australia and New Guinea 10,000 years ago, human survival in this region called for an intimate relationship with the marine environment. Documented imagery of traditional seafaring craft is available from the late 18th and 19th Centuries (e.g., Moore, 1984; Mullins, 1995). However, location of a wrecked canoe for archaeological study is extremely unlikely due to their biodegradable nature and the absence of documentary evidence. Nevertheless these craft are known to have developed over a long period to handle the characteristic wind and tidal patterns that prevail in Torres Strait and similar craft are still in use along coastal Papua New Guinea (PNG) today. Although some tools and accessories used to build them have been

replaced by modern alternatives, the basic construction process remains unchanged.

European explorers and seafarers knew that Torres Strait was a passage between Australia and New Guinea as early as 1606, when Luis Vaez de Torres in the *San Pedrico* became the first known European to navigate this labyrinth without incident (Badger, 1996: 34-35; McNiven, 2001; Mullins, 1995; Nicholson, 1996). However, the fact that in 1819 most of the vessels sailing for China and India from Sydney and Van Diemen's Land were still using the route around eastern New Guinea, attests that its safe navigation was more or less unknown and probably largely perceived as dangerous and difficult (Hordern, 1997: 156-157, 159). In that year, Philip Parker King produced a complete chart of the Great Barrier Reef, including the most difficult 360 miles of the northern section; thereby filling in details that both James Cook and Matthew Flinders had omitted. King was a committed advocate for the so-called 'inner route' to China and India via the Torres Strait, which in his opinion would cut 1500 miles and

several weeks off the voyage from Sydney (Hordern, 1997: 156-159). The extensive hydrographical survey by King eventually led to the opening of this passage as a regular route for shipping. From ca. 1830 onwards Torres Strait became an important gateway between the Indian and the Pacific Ocean for international traders and a lifeline between early colonial settlements in northern Australia and the established colonies in the south.

Unlike the Islanders' canoes that evolved with experience of the shallow waters, strong currents and trade winds, European ships often proved unsuited to the local hazards. Under sail with deep draft and crews inexperienced in Torres Strait conditions, they were prone to shipwreck. Indeed, the Museum of Tropical Queensland's (MTQ) shipwreck data base (SDB) has entries for over 120 wrecking events up until 1920 in Torres Strait. This list of wrecks reads like an inventory of seafaring nations of the period. Most of these records contain general wreck details and approximate positions. The physical wrecks are yet to be located and investigated before a more comprehensive appreciation can be made about their potential to contribute new knowledge of the maritime history of Torres Strait.

By the mid 19th Century, large stocks of a variety of lucrative marine resources were discovered in Torres Strait and the area began to be regarded by 'outsiders' as more than just an important sea passage. Of particular note is the pearling industry, which soon became Australia's most valued marine product (Ganter, 1994: 2; Hulsbergen, 1976: 10). This industry saw the emergence of many settlements to service its needs; these were occupied by nationals of diverse origins and included Japanese, South Sea Islanders, Malays and Europeans as well as Torres Strait Islanders and Aboriginal people (Ganter, 1994: 14, 28-31). For the first time, non-indigenous inhabitants were forced to live and work with the natural marine elements of the area and a unique and customised vessel evolved to facilitate marine operations — the Torres Strait pearling lugger (Wells, 1962: 7-9).

Despite the fact that these activities were carried out in the comparatively recent past, records and plans documenting them are limited. However, many representative sites are thought to exist in relatively intact condition. Archaeological investigation of these complexes is therefore essential if the material context of this

TABLE 1. Details of locations and sites examined.

Location	Site	Details
Far Northern Great Barrier Reef	North Ledge Reef	1 unidentified wreck
	Bird Island	2 magnetic anomalies
	Cockburn reef	1 wreck (HMAS <i>Warrnambool</i>) Anomaly #7 (<i>Druid</i> or <i>Lady Sale</i> ?) 11 magnetic anomalies
Mabuiag Island area, Torres Strait	Panai	1 lugger wreck
	Jervis Reef	1 wreck (<i>Pauline et Victoire</i> ?)
Thursday Island area, Torres Strait	North West Reef, Prince of Wales Channel	1 wreck (<i>Volga</i>)
	Ipili Reef, Prince of Wales Channel	2 wrecks (<i>Mecca</i> and <i>Phoenix</i>)
	Goods Island	1. wreck (<i>C.H. Watjin</i>) 2. unidentified timber wreck 3. unidentified iron wreck 4. wreck (<i>William Fairburn</i>)
	Wai Weer Island	1 lugger wreck
	Thursday Island	1. army barge wrecks 2. Pap's beach lugger wreck 3. Ibis slip lugger wreck 4. Saraban lugger wreck 5. Seagull lugger wreck 6. barge wrecks
	Collis Beach, Prince of Wales Island	1 unidentified composite wreck
	Country Women's Beach, Prince of Wales Island	1 lugger wreck
	Wednesday Island	1 unidentified iron wreck
	Scott Rock, Flinders Passage	1 wreck (<i>Two Sisters</i>)

important part of Australia's maritime history is to be fully understood.

Torres Strait residents continue to live from the sea, through both subsistence fishing and a vibrant commercial fishing industry. Divers in the cray-fishing industry frequently spend up to 8 hours per day on the Torres Strait seabed (Shepherd, pers. comm., 2000) and trawler men routinely map the sea floor with their electronic aids, meticulously recording hook-ups (occasionally shipwreck remains) to avoid expensive net damage. Locals also hold a wealth of oral history, either from their own experience or passed down from older generations. In light of the paucity of the historical record of maritime activities, the intangible heritage held by the local communities is therefore an invaluable resource.

The surveys aimed to combine available written records with local knowledge to select and examine a short list of important shipwreck sites in the Torres Strait. These sites have now been accurately positioned and documented; this is considered a prerequisite for future site

management. The surveys have provided the foundation for a future program of more extensive investigation into the maritime history of this strategically important region.

LOCATIONS AND METHODS

The shipwrecks chosen for this survey were grouped according to location (Table 1). The survey had 2 fieldwork components. The first was to the far northern Great Barrier Reef aboard (PI) the *MV Kangaroo Explorer* 11-16 March 2000 with a magnetometer deployed as the primary search tool. The second component (PI, CD), 19 April - 15 May 2000 to Mabuig Island (5 days) and Thursday Island (18 days) (Fig. 1), was timed to take advantage of expected favourable weather before the SE trade winds begin in late May and of a period of neap tides so as to avoid strong currents.

During the second trip the team operated out of a 19-foot open boat equipped with surface supplied breathing apparatus for diving activities. Accommodation was shore based either at the Mabuig Island school flat, or a camp on Wai Weer Island. Permission to undertake this work was obtained where appropriate from the Torres Strait Regional Authority, the Mabuig Island Council and the Kaurareg Tribal Council.

SITE SELECTION. Sites were selected for inclusion in this survey because of: the availability of archival and published sources; local Torres Strait residents knowledge; and, local logistical conditions. The major source of unpublished archival information was the shipwreck database held by the Maritime Archaeology Section (MAS) at MTQ. In addition, Peter Illidge had acquired substantial local knowledge and contacts while residing in Torres Strait from 1987 to 1994.

Efforts were also made to communicate more widely with the Torres Strait community. A brief information folder about the purpose of the survey was compiled and distributed; members

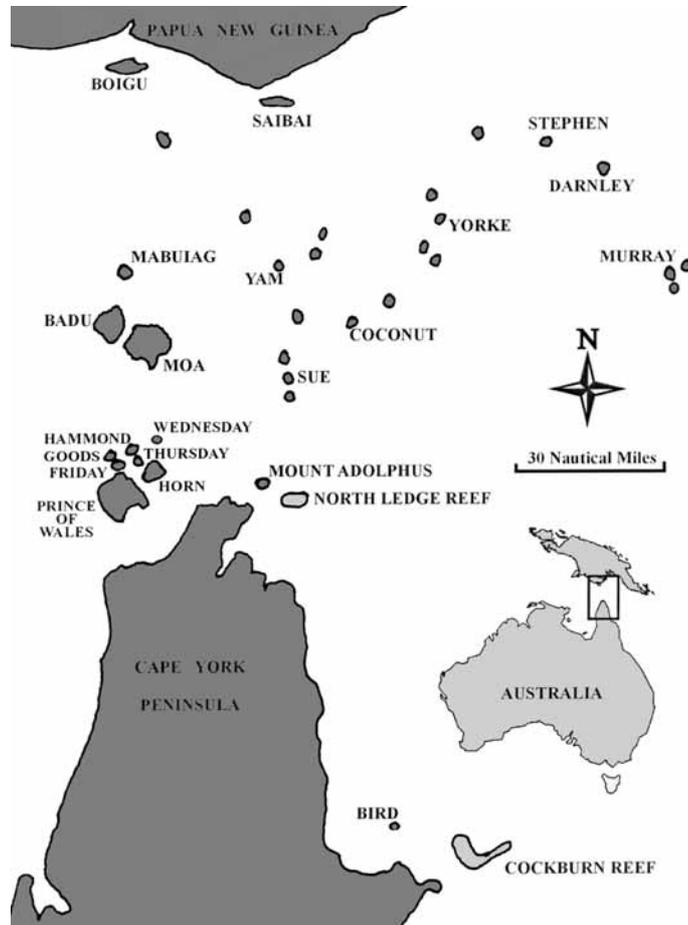


FIG. 1. Torres Strait.

of the survey team took part in live to air and local newspaper interviews with the Torres Strait Islander Media Association and Torres News. These media platforms were used to promote to local communities the cultural significance of wrecks and especially of the pearling industry as a critical and defining aspect of contemporary Torres Strait culture and heritage.

SITE SURVEY. All investigated wreck positions were recorded using the Differential Global Positioning System (DGPS) and World Geodetic System 1984 (WGS 84) chart datum. Where conditions allowed sites were recorded using a digital video camera. Cardinal features were mapped accurately with respect to a marked datum to provide a baseline for comparison with future

assessments. Detailed qualitative descriptions were also made of major features.

TIMBER ANALYSIS. Selected timber samples were collected in situ and sent to Gary Hopewell at the Queensland Department of Primary Industries, Salisbury Research Centre, Brisbane. Timber species were determined through microscopic examination and comparison with the timber identification database held by the Salisbury Research Centre.

RESULTS AND DISCUSSION

The following sections summarise the results of both the site inspections and the magnetometer surveys. These are set out by region, then in the order of completion. For each site visited, there is a description of prior evidence of wrecking, location of position, background archival research, a description and discussion of extant remains and management recommendations.

FAR NORTHERN GREAT BARRIER REEF.

North Ledge Reef. Local fisherman Leon Gamble reported a wreck to the MTQ in 1999. Gamble provided an accurate sketch map of the site that enabled rapid relocation of wreckage at 10°41.779'S, 142°45.446'E (Fig. 2). Historical research has failed to find records of any vessel wrecking on North Ledge Reef, although this could have been originally reported under the broad heading of 'Wrecked in Torres Strait'. During the early development of colonial Australia this term referred to the very broad area, extending from Cockburn Reef in the south to Papua New Guinea (PNG) in the north; about 2000 square nautical miles.

The wreck site is situated on top of the SE end of the reef, partly exposed at lowest astronomical tides. The SE trade winds and seas from the north persistently pound this area. There is a solitary, large, prominent groove in the reef platform that runs in for 60m from the N edge of the SE tip of the reef. This is the marker for the position of this wreck, which is situated on the reef top at the inner end of this groove system.

Given its location just north of South Ledge Reef, North Ledge Reef's position would have presented a trap to mariners. The main S edge of North Ledge Reef was partially sheltered to the SE by South Ledge Reef, therefore the usual tell-tale line of breakers would not have been as pronounced. Approaching from the south, mariners could have cleared South Ledge Reef and, not observing breakers to their north, may

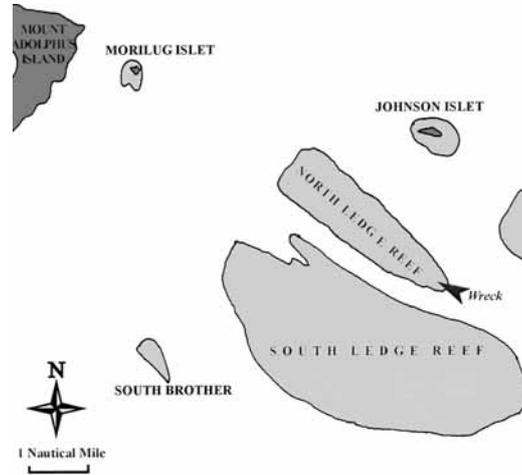


FIG. 2. North Ledge Reef.

have presumed they were free from danger and able to head towards Mount Adolphus Island and on through Prince of Wales Channel. Once in this predicament, strong SE trade winds would have restricted a sailing vessel's sea room and perhaps pushed it onto North Ledge Reef.

While the debris field is scattered over a large area, the majority is concentrated in approximately 70 × 20m. A central pile of ballast stones overlays iron ballast pigs that are concreted together. The smooth stone ballast suggests that the vessel was not loaded down with cargo, but rather was travelling in ballast. It was common practice for trading ships to take on readily available local ballast (often smooth stones) after unloading a cargo and being unable to secure backload cargo. A 4 pound cannon is deeply imbedded in the reef substrate to the west of the main ballast pile. It is partially covered with iron pieces and is difficult to distinguish from the rest of the concretions.

According to Leon Gamble (pers. comm., 2000), there is also a ship's water tank or similar object, which protrudes at low water approximately 50m W of the main ballast pile; this item was not located by the team. There were no anchors visible on this visit but they may protrude from the reef top at a lower tide, as may other wreckage. No timbers or any other form of hull structure are visible though timber and other organic remains may exist under the ballast pile.

The aspect of this wreck, on the most exposed face of the reef, suggests that any unsecured artefacts would have been destroyed or scattered

across the reef top and reworked out to sea. The heavy stone and iron ballast pile, the cannon and the clusters of heavier objects are probably all that remain.

The significance of this wreck lies in its potential to provide closure to one of the many known unfinished journeys through these waterways. It also holds potential information regarding the earlier days of sail when cannon were an integral part of the inventory of any vessel transiting the hostile waters of the world. The remaining heavy artefacts are vulnerable to pilfering, but as recreational divers rarely visit North Ledge Reef, further management measures are not deemed a priority at this time. However, further work on site assessment and archival research to identify the age and origin of this wreck is recommended. It is likely that further work will reveal an age of over 75 years in which case it should be marked on the relevant charts as an historic wreck.

Bird Island. This site was visited in response to anecdotal reports from a variety of sources, mainly commercial trawler fishermen, that large earthenware urns (>50cm high) had been trawled from a wreck at or near Bird Island (Fig. 3). With less than 4 hours available to the search team it was decided to search the most definable and likely area for a vessel to wreck; the fringing reef of Bird Island. A magnetometer search of the reef edge revealed 2 anomalies at the following positions:

Strike 1: 11°46.232'S, 143°05.866'E

Strike 2: 11°45.922'S, 143°04.775'E

Strike 1, at 23m, on the southern side of the island, was inspected but no evidence of wreckage was found. This may be due to the prolific coral growth in this area covering any artefacts. Weather conditions and time limitations prohibited any investigation of Strike 2.

Cockburn Reef: HMAS Warrnambool. The *Warrnambool* was an Australian naval corvette built in Sydney in 1941 with a displacement of 950 tons, carrying a complement of 78 officers and men. On 13th September 1947 during mine sweeping operations, after surviving WW2 unscathed, the vessel ran onto a mine it had previously laid. Killing 2 of her crew, the mine is reported to have struck on the starboard side near the mess area and the vessel sank soon after being taken in tow (Loney, 1987: 18-19; Nicholson, 1996: 340). Salvage operations were carried out in 1948 to recover some items of a confidential nature (Commonwealth of Australia, Tender

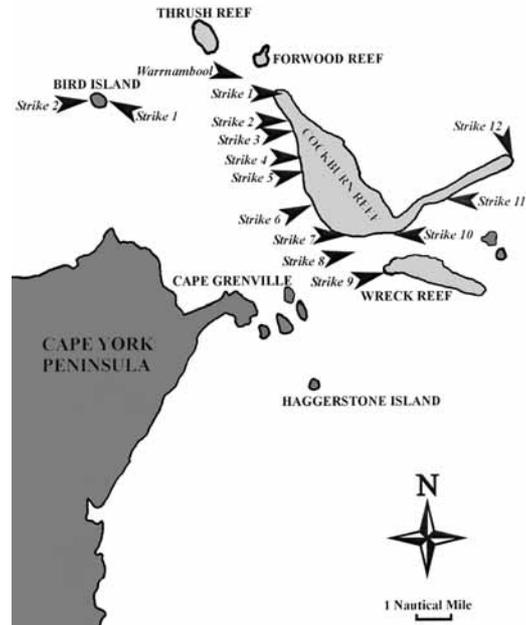


FIG. 3. Cockburn Reef, Bird Island and Wreck Reef.

documents, 1972), possibly a cryptographic machine.

This site was targeted by the survey team because the position of *HMAS Warrnambool* was only known approximately, and it had been proposed by Kevin Smith of the *Kangaroo Explorer* for inclusion on a recreational wreck diving trail. It was therefore necessary to accurately fix the position and assess suitability and management implications of regular diver visitation.

After a magnetometer search of the approximate position, a strike was investigated midway between Thrush Reef and Cockburn Reef and wreckage was located at 28m at 11°45.455'S, 143°14.389'E (Fig. 3). Alistair Cole, a RAN veteran who served on corvettes, later viewed the video footage and positively identified the ship as a corvette (pers. comm., 2000).

The *Warrnambool* lies on her starboard side, amidst prolific fauna and flora. The port side anchor is still in its hawse pipe, but the propellers have been removed. The iron hull of the vessel is in good condition, although there is a hole in the port side deck amidships, about 3m across. This does not correspond with Loney's account that the mine hit the starboard side (Loney, 1987: 18-19). As the wreck lies on its starboard side,

this claim could not be verified. To create the hole observed in the port side, explosives may have been used in the 1948 salvage operations or when the propellers were removed by unknown salvors.

The intact nature of the wreck and its WW2 service record, coupled with prolific marine life makes the site a highly desirable dive location for inclusion on the proposed wreck trail. While there is no evidence of anchor damage, there is evidence of fishing line across the wreck. Increased use of the wreck for fishing and diving could potentially lead to anchor and other 'user' damage. The site's significance as a vessel with a WW2 service record and its good condition, in addition to the proposed recreational use, justifies official protection under Section 7 of the *Historic Shipwrecks Act 1976*. The isolated position of this wreck will make enforcement and surveillance difficult. However, initiation of a permit system and consultation with users, promises to promote a spirit of ownership and custodianship amongst users. Given the proposed increased use of this site, the *Warrnambool* is a high priority candidate for future monitoring to assess the impact of this use.

Other Cockburn Reef Sites. Archival research results compiled from the MAS's wreck database revealed that Cockburn Reef claimed numerous vessels during the 19th Century (Table 2). Over 2 days, a magnetometer survey was conducted along the W and S edges of Cockburn Reef revealing 12 anomalies (Fig. 3).

Strike 1: 11°45.010'S, 143°16.120'E *

Strike 2: 11°48.376'S, 143°16.615'E

Strike 3: 11°48.770'S, 143°16.670'E

Strike 4: 11°54.180'S, 143°20.620'E

Strike 5: 11°51.140'S, 143°17.350'E

Strike 6: 11°52.616'S, 143°13.083'E

Strike 7: 11°54.261'S, 143°20.605'E

Strike 8: 11°54.690'S, 143°20.506'E

Strike 9: 11°56.171'S, 143°21.680'E

Strike 10: 11°54.110'S, 143°22.290'E *

Strike 11: 11°51.379'S, 143°26.852'E

Strike 12: 11°50.056'S, 143°28.618'E *

The team investigated the Strikes with asterisks (*) without locating any wreckage. However, all 3 sites hosted prolific coral growth that may have masked any remains, so this survey did not exclude the presence of wreckage. It is interesting to note that a wreck reported to the MAS in 2002 corresponds with the position of Strike 1 at the northern end of Cockburn Reef. Strike 7 corresponds to the position of a wreck inspection (Cockburn Reef Unidentified No. 1) carried out by the MAS in April 1989. This wreck site is

TABLE 2. Historically recorded 19th Century shipwrecks on Cockburn Reef.

Vessel	Wrecked	Rig	Tonnage	Heading
<i>Agnes</i>	1832	Brig	272	North
<i>Richard Bell</i>	1833	Brig	–	North
<i>William</i>	1838	–	–	North
<i>Sir Archibald Campbell</i>	1844	–	–	North
<i>Pioneer</i>	1851	Brig	148	North
<i>Lady Sale</i>	1852	–	–	North
<i>Annie</i>	1853	–	–	North
<i>Victoria</i>	1853	–	–	North
<i>Druid</i>	1853	–	–	North
<i>Amelia Breillat</i>	1861	Brig	162	North
<i>Undaunted</i>	1863	–	–	North
<i>Ganges</i>	1800s	–	–	–
<i>Florinda</i>	1887	Sch.	105	South

believed to be either the barque *Druid* or the ship *Lady Sale*, both built during the 1840's in Europe (Gesner, 1990). The site report for this wreck is presented in Fig. 11 as an example of the type of information usually recorded for wreck sites. It is likely that strikes close together (within 200m) will be part of the same wreck.

TORRES STRAIT MABUIAG ISLAND AREA. Mabuiag Island lies in Western Torres Strait and supports a population of approximately 200 people. An important source of income for this community comes from commercial fishing, particularly cray-fishing. Three local commercial cray-fishermen (Jimmy Luffman, 'Wonai' & Amos Joe) who were known to the project team agreed to act as guides.

Panai Lugger Wreck. Panai is the local name for a northern bay on Mabuiag Island, approximately 800m from the main village and adjacent to the main anchorage for the island. It is the site of an old pearl shelling station and, for the last decade, has been a barge and small boat landing facility complete with small jetty and dredged channel.

This wreck had been inspected in 1988 by Peter Illidge and at that time, its timber ribs were exposed and only the lower bilge section of the hull remained, containing smooth ovoid stone ballast. There was no evidence of a motor or any engine mounts suggesting a vessel in use earlier in the 20th Century, if not earlier. An iron 3 legged cooking pot with a capacity of about 20l, protruded from the substrate. This surface evidence was consistent with an assumption that the wreck was a lugger lost in the late 19th or

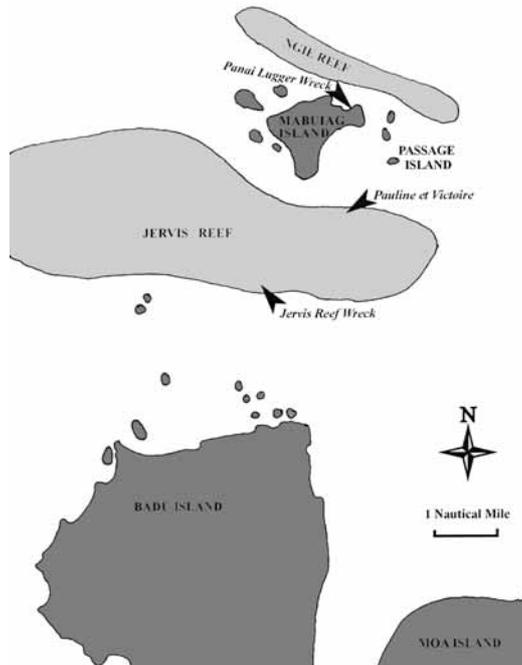
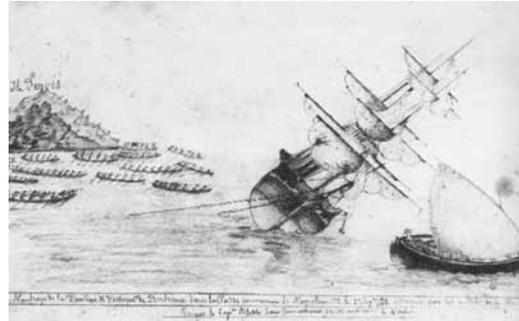


FIG. 4. Mabuiag and Jervis Reef.

early 20th Century. It was estimated to lie approximately 10m off the seaward end of the rock groyne at Panai (Fig. 4) in about 6m of water.

An extensive visual search of the area, assisted by Amos Joe, failed to relocate the wreck. Two ballast stones and a William Hamilton (bomb bottle) patent bottle (Arnold, 1997: 47) were found in the general area. These may have come from the wreck, but they may also have been jettisoned from an unrelated vessel. By the time this project arrived to relocate the wreck; the area had been dredged for the barge facility. It is possible that this process either covered the wreck with sand and silt or actually dredged through and destroyed it. The possible loss of this lugger from the archaeological record is an important reminder of the importance of cultural heritage surveys prior to destructive work such as dredging (McNiven, Fitzpatrick & Cordell, this volume).

Jervis Reef Wreck. Badu Island resident Levi Baira reported a wreck on Jervis Reef to the MTQ in 1999. He estimated its position as 10°0.162'S, 142°12.435'E, on the S side of Jervis Reef (Fig. 4). Baira's report stated that a pile of stone and an anchor chain were visible on the surface.

FIG. 5. Sketch of *Pauline et Victoire* on Jervis Reef (Private collection Xaviere Desparment Fitzgerald).

Archival research suggests that this wreckage is not that of the *Pauline et Victoire*, as this French vessel was wrecked in September 1858, most likely on the north side of Jervis Reef (MAS/SDB) (Fig. 5).

An extensive visual search failed to locate the remains. The search was conducted over an area of approximately 2 hectares, with the help of Jimmy Luffman and Wonai, who were also familiar with the site. Although dive conditions were ideal, thick *Sargassum* spp. covered the entire area, probably obscuring the site. *Sargassum* is seasonal brown algae, which all but disappears during winter (Cribb & Cribb, ca.1985: 44-45). Future opportunities to inspect the site during colder months may be more fruitful when visibility is better. Magnetometer searches of the area around the reported position were conducted, but were ineffective due to equipment malfunction.

THURSDAY ISLAND AREA. Since its official settlement by European Australians in 1878, Thursday Island has been a major administrative and economic centre for maritime activities in Torres Strait (Hulsbergen, 1976: 5). It is thus not surprising that the area also contains the greatest concentration of historic maritime sites in the region. Twenty-two wrecks were assessed during this project. Locals were approached with good results, with another 7 wreck locations being reported in the general area. Unfortunately, the onset of strong spring tidal currents made diving conditions unsuitable. Consequently, 5 of the new reports could not be investigated.

North West Reef Site. This site is the remains of the iron ship *Volga*, which sank here in 1890 after clipping Beresford Shoals off Double Island to the east (Loney, 1993: 92). The site is well known locally and was approximately marked on chart

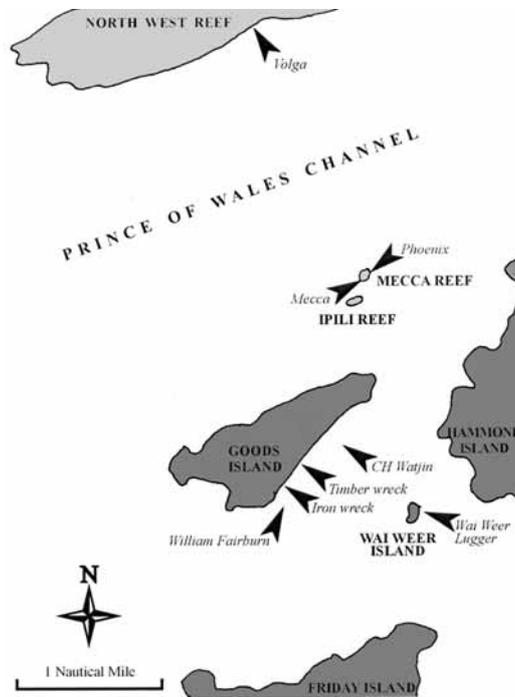


FIG. 6. Northwest Reef, Mecca Reef, Goods Island and Wai Weer Island.

AUS 293. The project team located the site and accurately fixed its position at $10^{\circ}30.920'S$, $142^{\circ}08.964'E$. The wreck lies at a depth of 9m on the S edge of North West Reef, known locally as 'No 1 Reef' (Fig. 6). The ship originally had 3 masts (Fig. 7). The hull lies E-W and roughly parallel to the reef edge. It is still intact, complete with portholes and other fittings, with coal and other artefacts visible in its holds. The stub of an iron mast protrudes at low tide. This wreck is potentially significant for examination as part of the wider colonial economy and trade patterns. The wreck was also salvaged soon after the incident, which could lead to an examination of salvage techniques and behaviours. At this preliminary stage of the project, the vessel is not a high priority for further investigative work. Any work that could be accomplished using this vessel would require a larger catchment of sites for comparison and statistical analysis. It may however be considered as a location for recreational diving.

Mecca Reef wrecks. Mecca Reef (a.k.a Mecca Rock) lies in Prince of Wales Channel and is the known location of the wrecks of the paddle



FIG. 7. *Volga*.

steamer *Phoenix* (1855) and the *SS Mecca* (1878) — $10^{\circ}32.515'S$, $142^{\circ}10.244'E$ (Fig. 6). The *Phoenix*, a timber paddle wheel steamer, struck Mecca Reef in July 1855, becoming a total wreck. Passengers were taken off the wreck and transported to Batavia by the *Mail* (Loney, 1993: 56-57). The *SS Mecca*'s captain claims to have hit the boilers of the *Phoenix* (Loney, 1993: 77). This may be true, but either way he was off-course.

Among the prominent features of the reef are the paddle wheels and boilers from the *Phoenix*, as well as iron plating from the *Mecca*. There is considerable scrambling of wreckage from both wrecks making it a difficult task to decipher the remains. Both wrecks are in shallow water, subject to strong currents and heavy wave action.

Both wrecks are significant in terms of maritime history and the historical themes that are the focus of the MTQ's maritime heritage program. The *Phoenix* represents trade links between colonial outposts. The steamer has special links with Townsville, as it is believed to have belonged to Robert Towns, one of the founders of the city. The *Mecca* has the potential to address the MTQ's priority sub-themes of labour trade and immigration. In particular, it is significant for archaeological investigation of Chinese immigration in the late 19th Century as it was carrying 379 Chinese labourers recruited from Southern China by the Australian Steam Navigation Company to break a strike on the wharves at Newcastle. While site conditions would not normally be considered conducive to preservation of artefacts, the Museum has in its possession a number of interesting and fragile items recovered from the *Mecca*. These include over a thousand Chinese coins, various brass objects and intact ceramics (McPhee, 1997: 34). Further archaeological investigation is justified as it would provide material evidence to elucidate

one of the priority themes identified by the MTQ's maritime heritage program.

'*C.H. Watjin*' Wreck, Goods Island. This wreck is an obvious feature of the E coast of Goods Island, being the most northerly of 2 prominent iron hulks protruding from the sea surface. It was accurately fixed at 10°33.744'S, 142°10.121'E (Fig. 6). The identity of this vessel is well known. It was a coal hulk of 1823 tons, deliberately scuttled in 1914 (Hocking, pers comm., 2000. MAS SDB). The iron hull remains, but all timber decking and superstructure has deteriorated significantly. No surface artefacts were evident. Although the age of this wreck qualifies it for protection under the *Historic Shipwrecks Act*, its value to the archaeological record is limited and no further survey work is recommended.

Un-identified Timber Wreck, Goods Island. While assessing the remains of the local pearling station, the project team came across the remains of a wreck in the intertidal zone, lying parallel to the beach and 5m N of the rock groyne on Goods Island. This wreckage was fixed at 10°33.950'S, 142°09.756'E (Fig. 6). This vessel is believed to be a lifeboat purchased from a naval vessel (Jones, pers. comm., 2000). While it has a SE aspect, it is well protected from the trade winds by the jetty. The team recorded the stem and stern posts, some ribbing and hull planking plus what looks to be a diesel engine. The hull planking was analysed by the Queensland Forestry Research Institute and found to be hoop pine (*Araucaria cunninghamii*) (Table 3). As the historic or archaeological value of this wreck is limited, it does not warrant further investigation.

Un-identified Iron Vessel, Goods Island. This wreck was spotted by the project team and accurately fixed at 10°34.079'S, 142°09.671'E (Fig. 6). It appears to be a very recent wreck; probably a commercial fishing vessel as its freezer is still in place. It is beached just below the high water mark. The steel hull remains intact and the superstructure is broken up. This wreck is of negligible archaeological significance.

'*William Fairburn*' Wreck, Goods Island. Like the *C.H. Watjin*, this wreck is well known locally and a prominent feature of the E coast of Goods Island. It protrudes from the sea surface and was accurately fixed at 10°34.191'S, 142°09.662'E (Fig. 6). Originally a ship of 1294 tons, built in 1856 and named the *P.F. Webster*, the *William Fairburn* spent her last days in Torres Strait as a coal hulk, finally being scuttled in 1903 (May, 1988: 26). The iron hull is mostly broken up, with

TABLE 3. Timber identifications for shipwreck samples (Data from Timber Identification Certificate No. 021 – Queensland Government, Department of Primary Industries, Forest Products Program).

Register No.	Illidge No.	Botanical Name	Standard Trade Name	Notes
11	1	<i>Melaleuca</i> spp.	tea-tree	lugger rib, Wai Weer Is.
12	2	<i>Pseudotsuga</i> sp.	douglas fir	plank from lugger, Wai Weer Is.
13	3	<i>Syncarpia glomulifera</i>	turpentine	keel piece, same lugger
14	4	<i>Corymbia tessellaris</i>	carbeen	sleepers under slip rail c1870
15	5	<i>Corymbia intermedia</i>	red bloodwood	building pole, 1920s shed
16	6	<i>Araucaria cunninghamii</i>	hoop pine	planking, wreck on Friday Is.
17	7	<i>Larix</i> spp.	larch	rudder pintle, wreck Torres Strait, 1850

only the bow section immediately recognisable. A section of bow above the water line, including a relatively intact bowsprit, has sheared off and now lies to one side of the main bow section. The rest of the hull has splayed open and lies relatively flat over an area of about 1000m². Although the age of this wreck qualifies it for protection under the *Historic Shipwrecks Act*, its archaeological value is limited and no further survey work is recommended.

Wai Weer Lugger Site. A wreck was discovered by the project team just above the low water mark at 10°34.183'S, 142°10.696'E (Fig. 6). The wreck was a wooden lugger and was probably associated with the pearl shelling station when it operated on Wai Weer. Remaining surface wreckage includes ribs and keel, anchor winch, plus a ballast stone. There are also pieces of concrete adjacent to the wreckage, which are in the form of the spaces between the ribs. The anchor winch is of the same type found on Thursday Island luggers (Peddel, pers. comm., 2000), the concrete is consistent with the common practice of pouring concrete ballast in luggers over the keel in the spaces between the ribs (Drummond & Peddel, pers. comm., 2000). The following timber samples were identified by Gary Hopewell of the Queensland Forestry Research Institute Salisbury Research Centre: ribs – sawn (grown) *Melaleuca* (Tea Tree); keel – *Syncarpia glomulifera* (Turpentine); planking – *Pseudotsuga menziesii* (Douglas fir, Oregon) (Table 3). These timbers are consistent with the wreck being a lugger (Peddel & Watkins, pers. comm., 2000; Wells,

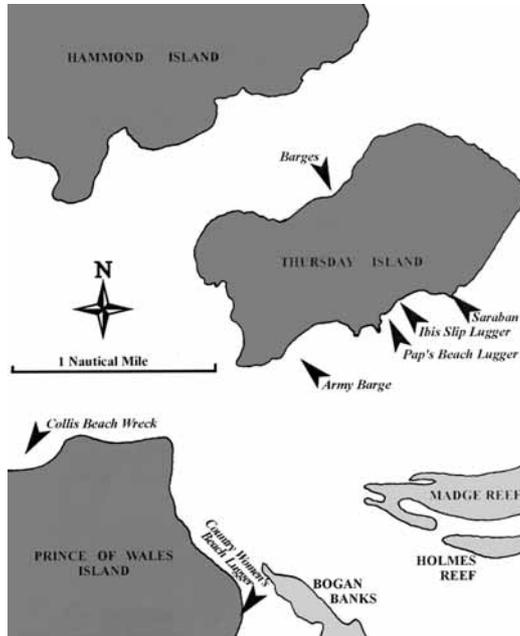


FIG. 8. Thursday Island and Prince of Wales Island.

1962: 9-13). While further investigation of this site could be carried out together with future archaeological surveys of the land-based pearl shelling site, other lugger wrecks in the area (described below) present better prospects for archaeological investigation.

Army Barge, Thursday Island. This wreck was relocated with the help of local Thursday Islander Geoff Hirn, and fixed at $10^{\circ}35.316'S$, $142^{\circ}12.950'E$ (Fig. 8). It lies directly off the football field in six metres of water. It is an intact, steel landing barge, with a Blitz truck on deck. It was probably sunk during World War II, possibly deliberately. It is currently a popular fishing and recreational diving site. No further investigative work is warranted.

Paps Beach Luger Wreck, Thursday Island. It was located and fixed at $10^{\circ}35.101'S$, $142^{\circ}13.397'E$ (Fig. 8), out from the old slipways on Thursday Island, which was a favourite place for careening, cleaning and repairing luggers. The flat, soft bottom here remains ideal for this purpose (Fig. 9). The wreck site is about 100m from the Engineers Wharf (towards the Caltex Wharf) just in from the drop off into the main harbour. The site extends over an area of 18×6 m and protrudes from a soft mud substrate by nearly 1m. There is a large diesel engine still standing

upright in the middle of the wreck, possibly a Gardner, which is straddled by 2 air storage receivers or 'pigs' common to pearl luggers (Wells, 1962: 25-28). The vessel lies bow into the beach with most of its woodwork gone except for the lower frames and floors. Twelve-millimetre diameter bronze keel bolts extend from the remaining woodwork. Round stone ballast can still be seen but no concrete was visible below this level (although the keel is well buried in silt). A short length of divers hose is lying coiled towards the stern of the vessel. This piece was not disturbed unduly but was cleaned sufficiently to reveal the words 'Divers Hose'. A pearl shell, *Pinctada maxima*, (identified using Shirai, 1994: 9) was sitting amongst the wreckage but it is not contiguous with the wreck. Given the association with the old slipways and the nature of the sediment appearing favourable for artefact preservation, this wreck holds great promise as a valuable archaeological record of an authentic Torres Strait pearling lugger of the latter part of the industry. Further archaeological investigation is highly recommended.

IBIS Slip Luger Wreck, Thursday Island. This wreck was observed while examining the old slipways on Thursday Island at low tide. The site was fixed at $10^{\circ}35.025'S$, $142^{\circ}13.462'E$ (Fig. 8). The wreck appears to be a lugger, with typical features such as grown frames and stone ballast. Other visible features include a motor, anchor winch and copper fastenings. The site extends for about 20m. While further material probably exists in context in the soft sediment underneath the visible wreckage, we suggest that more information can be obtained through further archaeological investigation of the lugger wrecks at Pap's Beach and Country Women's Beach. A second brief visit to this site in 2001 revealed that the make up of this vessel is considerably heavier than first thought. This indicates a vessel of greater length and tonnage. Further time needs to be committed to this site to determine the wreck's origins.

'Saraban' Luger Wreck, Thursday Island. This wreck was spotted from the surface while obtaining fuel from the Caltex (or 'Rebel Marine') wharf. It was fixed at $10^{\circ}35.011'S$, $142^{\circ}13.650'E$ (Fig. 8). Jimmy Peddel later identified this wreck as the *Saraban*, a lugger owned by Grayson and Linley, pearlery operators in the area between c.1900 and 1970. The keel (with keel bolts), frames and ballast stone were observed, but no concrete between the frames and floors. While more of this hull probably exists in the soft



FIG. 9. Luggers on Paps Beach, Thursday Island.

sediment underneath the visible wreckage, it is suggested that archaeological investigation of the wrecks at Pap's Beach and Country Women's Beach would be easier and more likely to reveal useful information about Torres Strait luggers.

Barge Wrecks, Thursday Island. This multi-wreck site was known to one of the team (PI) prior to this survey. The location was fixed in the intertidal zone of Aplin Pass at 10°32.515'S, 142°10.244'E (Fig. 8). Aplin Pass is a waterway between Hammond and Thursday Islands; it is narrow and subject to a fierce tidal current. The wreckage is from 3 small flat-bottomed steel landing crafts. They are badly broken up with wreckage scattered over an area of about 200m². These wrecks are associated with army activities during World War II, when Thursday Island was a major military base (Ball, 1996: xii). These wrecks are of little significance and do not warrant further investigation.

Collis Beach Site, Prince of Wales Island. The team also had prior knowledge of this site. Its approximate location was shown on chart AUS 299; it was fixed at 10°35.722'S, 142°11.583'E (Fig. 8). The wreck is partly exposed at low water with portions of the wreck scattered down the reef slope to about 6m. Based on anecdotal evidence, it is thought to be a coal hulk abandoned in the early 20th Century. It is of composite construction with extensive ironwork and little remaining timber. Stone ballast is evident throughout the hull area, with an iron mast protruding from the wreck towards Collis Beach. Despite anecdotal evidence for the site being a hulk, the extant mast is unusual and may indicate a working vessel with greater potential heritage significance. As such, the site warrants further archival investigation.

Country Women's Beach lugger site, Prince of Wales Island. This wreck was first inspected in 1991 by Peter Illidge and local cray diver (the late) Geoff Pauling of Prince of Wales Island. The wreck was re-located at 10°36.556'S, 142°12.631'E at 7m depth off Country Women's Beach, Prince of Wales Island (Fig. 8). The vessel is lying bow up towards the reef edge at about 25° to horizontal, with a substantial amount of hull structure still in situ. Several indicative lugger artefacts are present including a

hand driven anchor winch, air receivers, divers hose, rudder and ovoid ballast stones. There is possibly a wheel from a diver's air pump but due to adverse conditions and equipment problems, only a brief survey was conducted. The position of this wreck, on a very silty bottom open to strong currents and strong SE trade winds, makes diving difficult. The significance of this wreck as an archaeological record of a working pearling vessel cannot be overstated. Its comparatively good condition and high silt environment lends itself to further survey work and even excavation and recovery of artefacts. It was the most promising lugger wreck examined during this project. No video recording was made of the wreck.

Unidentified Iron Wreck, Wednesday Island. Brad Jones (pers. comm., 2000) of Thursday Island reported this wreck to the project team. He led the team to the site on the N side of the island and the wreckage was located in 7m of water and fixed at 10°30.751'S, 142°19.015'E (Fig. 10). The 12-ton iron ketch *Gertrude* became a total wreck on Wednesday Island in 1911, but the site investigated did not fit the features of this iron wreck. The bow of the wreck protrudes from the water at extreme low tides. Surface features include an anchor still attached to an intact bow, plus a conglomeration of iron sheeting and other structural pieces strewn over the area, variously concreted into the reef slope. The age, identity and potential significance of this wreck could not be estimated based on this survey. Further opportunities to investigate the site should be pursued.

'Two Sisters' Wreck Site, Horn Island. Hubert Hofer reported this wreck to the MAS in 1986. It is situated at 10°33.464'S, 142°18.452'E at 8m depth off Scott Rock (Fig. 10). The semi-

submerged Scott Rock is 0.78 nautical miles N of King Point on Horn Island (midway between Horn and Wednesday Islands) in Flinders Passage and is a perfect trap for unsuspecting ships' captains. The barque *Two Sisters* was a vessel of 75' (22.7m) length, built in 1837 by Alexander McKenzie on River John, Nova Scotia, Canada. It was a 401 ton, wooden vessel of carvel construction; copper sheathed and iron fastened. Timbers used in the construction were beech, black spruce, pine and hackmatack (MAS Database).

The captain of the Spanish brig *Nueva Bilbao* was reported in the Sydney Morning Herald as having sighted a barque in Torres Strait at 10°33'S, 142°18'E with Wednesday Island bearing NNW, distance 4 miles. The barque had apparently struck a sharp rock that was observable astern of her. The wreck was sitting upright, giving the impression of a vessel at anchor. The *Two Sisters* had sunk up to her lower yards, with the majority of her rigging protruding from the sea (Sydney Morning Herald, 1842). No lives were lost in this wrecking with all hands being taken off by other vessels (Loney, 1993: 40). It is likely that the wreck investigated by the team is the remains of the *Two Sisters*.

The project team had a difficult dive with strong currents but fair visibility. Due to the extreme currents, no video footage was taken. The site was easily located using the instructions given by the original finder. The majority of remains are scattered to the W of the base of Scott Rock. They consist of what appears to be heavily concreted pieces of iron, possibly ballast pigs, and an anchor chain. The chain runs from the main wreck site towards the S. The chain extends for about 60m from the wreck but no anchor was located. It was reported to the team that cray divers regularly see a large anchor to the S of the rock; this could be the *Two Sisters* anchor. No timbers were seen and no hull outline was discernable.

This wreck is significant through its association with early settlement and whaling and so deserves further investigation and management.

CONCLUDING REMARKS

This work in Torres Strait has involved the location and baseline survey of over 20 wrecks and produced 7 new reports on wrecks that require further investigation. In particular, there exists an opportunity to conduct significant archaeological investigations of pearling in Torres Strait, both underwater and on land.



FIG. 10. Wednesday Island and Scott Rock.

Pearling was a major extractive industry that was the cornerstone of the Torres Strait Islands and north Queensland's economy between ca. 1870 and 1940. The lugger wrecks off Prince of Wales, Thursday and Wai Weer Islands, in conjunction with the examination of the remains of shelling stations such as those on Wai Weer Island (McPhee, this volume), hold great potential for furnishing new and important information and material culture relating to the colonial and cross-cultural history of north Queensland.

The Torres Strait is a diverse and exciting area with a rich maritime history that is poorly understood (cf. McNiven, 2001; MCPhee, this volume; Mullins, 1995; Nicholson, 1996). During the course of this survey, the project team developed close relationships with local groups, residents and government departments. The success of the program hinged in no small part on community involvement and it became clear that the survey team has only scratched the surface of the rich oral history and 'folklore' held by this community. Future work needs to build on these relationships, with a special effort placed on recording oral histories from the fast disappearing older generation.

Queensland Museum Maritime Archaeology Section	
Item 8: Comments	<p>An analysis of the raised materials - elm treenails and planking and white oak treenails - indicates that the vessel is the wreck of a British/European built vessel; the dimensions of the treenails are an indication of a vessel of between 350-450 tons; this is also attested by the diameter of one of the copper alloy fastening bolts as well as by the dimensions of the floors.</p> <p>From the positions of anchors 1 & 2, it seems that they were placed to prevent the vessel from being pushed further onto the reef top. It is possible that keel anchors may have been set in deeper water to the south or southeast of the site. These have not yet been located.</p> <p>Of the 9 known 19th century shipwrecks on Cockburn Reef, 2 wrecks fall within the indicated tonnage range:</p> <ul style="list-style-type: none"> the barque 'Druid' (343 tons) built in Greenock in 1841, wrecked at Cockburn Reef, in 1853 on a voyage Hobart to Singapore. see attached
Item 9: Cultural significance	<p>Assuming that the wreck is either the 'Lady Sale' or the 'Druid', the site has the potential to provide archaeological information on the social and economic aspects of Australasian shipping in the 1850's and on wooden ship-building techniques - particularly the construction of medium size British vessels built during the early 1840's in NE England and Scotland.</p> <p>The site's archaeological potential is enhanced by the preservation of what appears to be a substantial portion of the vessel's sides and keel/keelson. From the excavated area (see attachment 1) in the NW site quadrant, it is evident that more of the hull remains will be preserved in a radius of ca 10-12 metres to the east of the excavated area (refer site plan: item 5).</p> <p>In another respect the site's archaeological potential is enhanced by its ability to provide data for research in underwater environmental science (eco-archaeometric) i.e. studies aimed at measuring the degree of correlation between the extent and quality of material remains and a number of relevant environmental attributes (see: Muckleroy, 1978: 160-665).</p>

Item 8: Comments Cont'd

the barque 'Lady Sale' (388 tons) built in Newcastle/Tyne in 1843, wrecked on Cockburn Reef in 1852 on a voyage from Sydney to Ceylon.

FIG. 11 (cont.). Cockburn Reef Unidentified site #1 report (Gesner, 1990).

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