We find the missing Mermaid

In January a team led by this museum, and sponsored by the Silentworld Foundation, solved a 180-year-old mystery by locating the wreck site of HMCS Mermaid, lost on a coral reef off the Queensland coast in 1829. Team leader, curator and maritime archaeologist, Kieran Hosty, describes this significant find and its place in our nation's history.

ON NEW YEAR’S DAY 2009, a team of maritime archaeologists, divers, scientists, technicians – plus two high-school students and their teacher – set out from Cairns on board two charter dive boats, Spoilsport and Nimrod Silentworld, and sailed into the maze of the Great Barrier Reef in search of a mermaid.

The one we were seeking was the little ship Mermaid commanded by Lieutenant Phillip Parker King RN during a series of important surveys of uncharted stretches of the Australian coast that took him right around the continent in the years 1817–22. King’s outstanding hydrographical achievements included charting a passage inside the Great Barrier Reef, a route that has proved vital to the safety and efficiency of Australian shipping ever since.

By an intriguing irony at the end of the same decade, the little ex-survey vessel Mermaid – refitted and under a new command – was shipwrecked on an uncharted reef south of Cairns in June 1829, when her master ignored instructions to take the safer inshore passage through the Great Barrier Reef that King had discovered on board Mermaid.

Benefiting from further research work in archives in Australia and overseas, with a well-equipped, well-staffed expedition thanks to our generous project sponsor the Silentworld Foundation – and with a little bit of good fortune thrown in – the Australian National Maritime Museum’s HMCS Mermaid 1829 Project located the wreck site that we were seeking in just four days!

King undertook a series of remarkable voyages around Australia in Mermaid and charted vast areas of the coast

A number of sightings of the wreck were reported in the 19th century, leading to more recent attempts to locate the remains of this significant early colonial survey vessel. They were unsuccessful, but their findings helped us to define our own search locations when our expedition set out in January.

Phillip Parker King and the cutter Mermaid

Phillip Parker King (1791–1856) is considered one of Australia’s greatest maritime surveyors, although his achievements have been overshadowed by the fame of earlier navigators such as James Cook and Matthew Flinders. Born on Norfolk Island in December 1791, he was the son of its commandant Philip Gidley King. The family returned to England in 1796, where young Phillip Parker King continued his education after his father sailed back to the colony of New South Wales to take up the position of Governor from 1800 to 1806.
is one of the better-documented Mermaid reproduced here, other views of library of New South Wales. With the two in his command. Mitchell library, State distribution of stores dated 1817, early the cutter's accommodation and Mermaid above: Sketch by Phillip Parker King of more easily managed. The cutter rig would call for prudent seamanship, Mitchell library, State library of New South 1819, watercolour by Phillip Parker King. Opposite: Mermaid at anchor, Endeavour River 1819, watercolour by Phillip Parker King, Mitchell Library, State Library of New South Wales. With the two other views of Mermaid reproduced here, Mermaid is one of the better-documented ships of Australian exploration.

King the younger entered the Portsmouth Naval Academy as a child in 1802, and later the Royal Navy, rising from midshipman to master’s mate and to lieutenant in 1814. By this time his skills as a surveyor had been noted by Captain Thomas Hurd, Hydrographer to the Admiralty, from whom he received training in cartography and surveying. After the Napoleonic Wars, the British government proclaimed that ‘consequent upon the restoration of Peace …' [is]

The survivors were transferred to the wooden brig Swiftsure – and were promptly wrecked again, just 18 hours later!

most important to explore, with as little delay as possible, that part of the coast of New Holland … not surveyed or examined by the late Captain Flinders' Lieutenant King was ordered to return to the Australian colonies to complete this task. From 1817 to 1822, King undertook a series of remarkable voyages and charted vast areas of the coast stretching from Arnhem Land to Cape Leeuwin, and Van Diemen's Land to the Great Barrier Reef, and Van Diemen’s Land to the Torres Strait.

To undertake these hydrographical surveys King had two vessels specially modified: HMS Mermaid in 1817 and Barharst in 1820. Mermaid was to prove the mainstay of the first three expeditions. Built of Indian teak in Calcutta in 1816 and purchased by Governor Lachlan Macquarie in 1817, this single-masted, copper-sheathed, iron-fastened cutter was a tiny craft for such an undertaking at just 18 metres long, with a beam 5.48 metres wide and measuring 84 gross register tons. When King returned from his third expedition in 1820, Mermaid’s strained and worm-riddled timbers were considered too weak to support another surveying voyage and he completed his fourth expedition in the much larger Bathurst, of 170 tons. In 1821 Mermaid was taken over by the colonial government of New South Wales and after a refit was commanded by explorer John Oxley on surveys of Moreton Bay, Brisbane and the Tweed Rivers. The cutter was used to supply penal colonies and Van Diemen’s Land to the Torres Strait.

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The wreck of the Mermaid
His Majesty's Colonial Schooner Mermaid sailed from Sydney on 10 May 1829 under Captain Samuel Nolbrow, carrying despatches and stores that included munitions, wine and tobacco. He was bound first for the isolated settlement of Fort Wellington at Port Raffles on the Cobourg Peninsula (Northern Territory), and thence for Albany in King George Sound, Western Australia.

Disregarding his strict instructions to follow the safer, but longer, inshore passage to the Torres Strait that had been discovered by Phillip Parker King during one of the earlier Mermaid voyages, Captain Nolbrow decided to risk the Great Barrier Reef which was – and still is – incompletely surveyed.

During the evening of 12 June 1829, when Mermaid was at least eight nautical miles offshore from Double Point, south-east of present-day Innisfail, chief officer John Hastings suggested to the captain that, given their proximity to the reef, they should heave to (helm and sails trimmed to make no headway) until daylight. Nolbrow disagreed and instructed the watch to keep the fore topsail full so that the vessel made between two and three knots. At about 0545 hours the vessel struck a low-lying coral reef. The crew attempted to drive the vessel over the reef, but after going forward only a short distance the Mermaid held fast and began to strike the ground heavily.

Daylight found Mermaid on the weather side of a reef extending for miles, with shoal water on most sides but some six fathoms (12 metres) astern. Despite attempts to kedge the vessel off using one of the anchors, Mermaid held fast and the crew began jettisoning cargo to lighten the schooner. At this stage Captain Nolbrow – possibly under the influence of alcohol – drew a pistol on chief officer Hastings and some of the crew and threatened to shoot them if anything else was discharged.

That afternoon at 1730, during another attempt to drive the vessel over the reef, Mermaid rolled over onto her beam ends and within a few minutes the hull was breached. At 2000 hours the crew abandoned ship and took to the boats. On 24 June 1829, after 11 days in the open boats, the crew were rescued by the small schooner Admiral Gifford. On account of overcrowding, the survivors were transferred to the much larger wooden brig Swiftsure on 3 July – and on board this vessel they were promptly wrecked again off Cape Sidmouth, just 18 hours later! According to The Sydney Gazette of 26 November 1829, the crew of the Mermaid was to endure two further shipwrecks (on Governor Ready and
Looking for Mermaid

As one of the most significant early colonial surveying vessels lost in Australian waters, there have been a number of attempts to locate the wreck of the Mermaid based on this estimated position.

This information was used in the government auction notice for the remains of the Mermaid that appeared in the Sydney Gazette and New South Wales Advertiser on 20 February 1830, which stated that the wreck lay on a reef at latitude 17 degrees 7 minutes south and longitude 146 degrees 10 minutes east. This same information was used in the 20th century to protect the as-yet-unlocated wreck under the Australian Government’s Historic Shipwrecks Act 1976, which gave its tentative location as Scott Reef, approximately 20 nautical miles south of Cairns and slightly east of Cape Grafton.

High seas and swells build up on all but the most sheltered reefs, making diving conditions extremely difficult from an altitude taken at noon the latitude of the vessel was 17.7 degrees South, distant of the mainland at least six or seven leagues [18–21 nautical miles], and Cape Grafton to the northward and westward of us distance about 25 or 30 miles …

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In 2008, the Australian National Maritime Museum entered discussions with the Silentworld Foundation, part of Silentworld Ltd, an Australian-based shipping company, regarding possible collaborative maritime archaeological projects in Australia. The decision was taken to carry out additional archival research into the loss of Mermaid, and if feasible, to conduct a search for the vessel’s remains.

A search of both Australian and overseas archives and collections turned up additional information that would help us.

In July 1830, HMS Crocodile, while escorting a convoy of ships through the inner route of the Great Barrier Reef, reported sighting the remains of HMCS Mermaid on a reef east of Frankland Reef (present-day Franklin Islands). A further sighting was reported by Charles James Card, who landed on No. 4 Frankland Island with the crew of HMS Rattlesnake in June 1848. In his journal, Card stated that he observed the fore part of a wreck, reported to be from the Mermaid, on one of the island’s beaches.

Dr Nigel Erskine, curator at this museum, located an 1845 chart during research at Britain’s National Maritime Museum, Greenwich, annotated with the remark ‘supposed position of the wreck of Mermaid, south of Lat. 17°S and 8–9 nautical miles east of the Frankland Islands near the location of present-day Flora Reef’. A copy of an 1847 chart, Detailed Map of Dr Ludwig Leichhardt’s Route in Australia … by John Arrowsmith (State Library of New South Wales), showed the position of Mermaid in a similar location 8–9 miles east of the Frankland Islands.

Ongoing archival research, including an examination of the original logbooks of HMS Crocodile held in Mitchell Library, NSW, further strengthened the hypothesis that when Mermaid was wrecked on 13 June 1829 the vessel became stranded on one of a series of large coral reefs, possibly Flora or Maori Reef, offshore from the Frankland Islands. Crocodile’s Remarks Book states: ‘On the morning of the 18 July … we observed the wreck of the Colonial Schooner Mermaid on a reef nearly dry 6½ to 7 miles eastward of Frankland Reef … The weather was hazy and the land obscured so it was impossible to … satisfactorily position other than by the log account …’
The HMCS Mermaid 1829 Project (1–16 January 2009)

In mid-2008 the Australian National Maritime Museum began assembling a team of maritime archaeologists, technical officers, scientists and volunteer divers to search for the remains of HMCS Mermaid in January 2009. They were drawn from ANMM staff, the Museum of Tropical Queensland, James Cook University, Oceania Maritime, the Silentworld Foundation, the Department of Environment, Water, Heritage and the Arts, and the Maritime Archaeological Association of Queensland.

Searching for a shipwreck in tropical northern Australia during the cyclone season may appear at first glance to be sheer lunacy, but there is a method in our apparent madness!

HMCS Mermaid was reported lost on the southern or weather side of a reef during the annual south-easterly trades. As these strong winds blow for almost eight months of the year, high seas and swells build up on the southern side of all but the most sheltered reefs, making diving conditions extremely difficult. During the northern wet or cyclone season the winds swing around to the north and moderate, the swell and seas drop, and diving conditions improve radically, providing almost ideal conditions to work the southern edge of the reef.

Sailing east from Cairns, our two expedition vessels headed south along the Queensland coast, taking the inner route first pioneered by Phillip Parker King on the Mermaid in 1817–18. Passing Scott Reef they sailed a further 10 nautical miles south before rounding the western side of Flora Reef and anchoring off its south-eastern side. Conditions were perfect – the seas were calm, the skies clear and the weather forecasts predicted perfect weather for the coming week.

Flora Reef covers an area of more than eight square kilometres. It would be almost impossible for snorkellers and scuba-divers to visually scan each square metre of it, looking for archaeological clues. To help us search this huge area we had brought along several magnetometers – towed submersible electronic devices that measure changes in the earth’s magnetic fields caused by the presence of iron-based objects, such as the tons of iron kentledge (ballast) carried by Mermaid, or one of its iron cannon.

Although highly sensitive instruments, magnetometers only provide a general geographical position for a magnetic anomaly or “hit”. To pinpoint these more accurately, snorkellers and divers equipped with hand-held underwater metal detectors are then deployed to “ground truth” any anomalies detected by the magnetometer. After only an hour or so, the magnetometer teams were reporting a run of magnetic hits from the south-eastern edge of Flora Reef towards its centre. Within minutes, small dive boats were being sent off to investigate the shallow reef. Among the rush were Megan Blacker, Alice Lafferty and Megan Cozens – two students and a teacher from Bega High School who had won first prize in a national competition to spend a week on board Spoilsport participating in the Mermaid Project. They would post regular blogs about their experience on the museum website (www.anmm.wordpress.com).

Joining them was expedition medical officer Lloyd Fletcher (borrowed from the Australian Antarctic Division), John and Jacqui Mullen from the Silentworld Foundation, Peter Illidge from Ocean Maritime, Warren Delaney from the Maritime Archaeology Association of Queensland, and a host of other divers from many different countries.

As unlikely as it sounds to those familiar with the painstaking nature of archaeology, within minutes of the first divers entering the water, shipwreck finds were being reported. Divers had located what appeared to be a shipwreck smear – a scattering of loose copper-alloy artefacts across the shallow reef platform. Although no iron artefacts had been sighted on the surface, it was obvious from the magnetometer signal that a scattering of iron lay buried underneath the coral growth and sand pockets.

As Flora Reef is part of the Great Barrier Reef Marine Park, our permit only allowed us to recover surface artefacts. Of Environment, Water, Heritage and the Arts, and the Maritime Archaeological Association of Queensland.

The Australian National Maritime Museum’s HMCS Mermaid 1829 Project located the wreck site in just four days!

Left: This pulley sheave bearing the broad arrow on its upper edge, found on Flora Reef, helped archaeologists to identify the shipwreck as HMCS Mermaid.

Right: Compass gimbal ring from HMCS Mermaid.

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Charles Goodyear until 1851, and was not in common production until after 1860. A closer examination of the bilge pump in common production until after 1860. A closer examination of the bilge pump in common production until after 1860. A closer examination of the bilge pump in common production until after 1860. A closer examination of the bilge pump in common production until after 1860.