The Australian National Maritime Museum has completed a second successful collaborative project with the Silentworld Foundation – an archaeological expedition in tropical waters to learn more about the site of Matthew Flinders’ dramatic shipwreck during his historic survey of the Australian continent. This account comes from expedition leader and museum curator and maritime archaeologist Kieran Hosty.

On 17 August 1803 the great navigator and charter of the Australian continent, Captain Matthew Flinders RN, was shipwrecked on an isolated, uncharted coral reef off Australia’s east coast, while returning to England with the precious, as yet unpublished charts, journals and manuscripts of his epic Australian voyages. Wreck Reefs, which gained their name from the loss of the ship that was carrying Flinders – HMS Porpoise, and an accompanying merchant ship Cato – are a group of low-lying coral reefs and sand cays 18 nautical miles (25 kilometres) long and lying 230 nautical miles (450 kilometres) east of Gladstone, Queensland. Flinders had not yet fully completed the survey of Australian coasts that had been entrusted to him by the Lords of the Admiralty. His previous ship HMS Investigator – on which he had circumnavigated the continent and done masterful survey work – had become perilously rotten and was unfit for further voyaging. No suitable replacement was available in the colony, so he was returning to England to seek another expedition ship. To get there, Governor King had assigned him HMS Porpoise, a 308-ton Spanish-built vessel captured by the Royal Navy in 1799 and commissioned as a 10-gun sloop. Her master was Lt Robert Fowler. His orders were to allow Flinders whatever time he needed to chart Torres Strait, and then to carry him to England by Flinders’ preferred route. On 10 August 1803 Porpoise left Sydney in company with two other ships. The 430-ton, English armed merchant ship Cato, John Park master, was bound for Batavia in the Dutch East Indies. With them sailed a 750-ton, 32-gun East India Company Extra Ship Bridgewater, master E H Palmer, bound for Calcutta. Taking the outer route around the Great Barrier Reef, the three vessels travelled in convoy.

On the evening of 17 August the convoy was under reduced sail after sighting some reefs and a sandy cay in uncharted waters that afternoon. Porpoise was in the lead, Cato on its port stern quarter and Bridgewater on the starboard. The watch on Porpoise sighted breakers but the ship, unable to come around under reefed topsails, struck the southern edge of a reef and was driven up onto its platform by the prevailing weather. In about a minute, the ship was carried amongst the breakers; and striking upon a coral head, took a fearful heel over onto her larboard beam ends, her head being north-eastward. When the surfs permitted us to look to windward the Bridgewater and the Cato were perceived at not more than a cable’s length distance; and approaching each other so closely, that their running abord seemed to us inevitable...

Matthew Flinders, A Voyage to Terra Australis, London 1814

Cato’s Captain Park, seeing Porpoise go up onto the reef, had tacked to the east at the same time Bridgewater tacked to the west, putting both vessels on a collision course. Park ordered Cato to come off the wind, but while this averted collision it resulted in further disaster, as Flinders relates:...the Cato struck upon the reef about two cables length from the Porpoise, we saw her fall over her broad side and the masts almost instantly disappeared...

Porpoise lay with its hull facing towards the wind and seas, protecting the decks and offering shelter to the crew and passengers on board. The Cato, however, turned side-on to the surf and rolled into the direction of the prevailing wind, exposing the decks to the pounding waves. The vessel quickly began to break...
up and by morning had almost disappeared, with just the bow and foremost chains exposed above the surf. Three crew had drowned.

The East India Company ship Bridgewater missed the reefs and Captain Palmer made what some would call a half-hearted attempt to work back to windward to the reefs, to determine the fate of the wrecked ships and their people. Instead of coming to their aid Palmer continued to his destination India, where some of the crew left the ship in protest over his actions. But fate had not finished with Palmer; Bridgewater disappeared with the captain and his remaining crew on its very next voyage, somewhere in the Indian Ocean.

Back on Wreck Reefs, 18 August dawned with slightly more hope than the preceding desperate night. In the words of Flinders, who was the senior naval officer and quickly took charge of the survivors:

... with the daylight appeared a dry sand bank, not more than half a mile distant, sufficiently large to receive us all with what provisions might be got out of the ship ... At low water, which happened about two o'clock, the reef was dry very near to Porpoise, and both officers and men were assiduously employed in getting upon it provisions and their clothes ... before dark, five hogsheads of water, some four of salt meat, rice and spirits were landed, with such of the pigs and sheep as had escaped drowning ...

Of equal or greater concern to Flinders were the precious charts, journals and notes from his surveys in HMS Investigator, most of which he salvaged though some were water-damaged. Most of the Australian botanical specimens he was carrying back although some were water-damaged. It carried three short, demountable masts and a dozen sailors – enough to provide two watches to man the six oars and lugsails. With him were Captain Park and a dozen sailors – enough to provide two watches to man the six oars and lugsails.

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On Friday 26 August, leaving his Australian survey charts stowed in boxes on Porpoise Cay, Flinders set sail for Port Jackson in the largest of the surviving ship’s cutters, which they renamed Hope. It carried three short, demountable masts and hogsails. With him were Captain Park of Cato and a dozen sailors – enough to provide two watches to man the six oars when the wind failed or was adverse – plus three weeks’ provisions and two half hogsheads of water. Under Flinders’ command they made the 762 nautical mile journey in 12½ days, another of those amazing open-boat ocean passages that the resourceful sailors of those days seemed to undertake quite routinely, when the necessity arose!

For six weeks the rest of the survivors, under the command of Porpoise’s Fowler, subsisted on Porpoise Cay. With them was Flinders’ brother Samuel, a capable navigator who had accompanied the explorer to Australia, and who spent some of his time accurately plotting the location of Wreck Reefs. Naval discipline prevailed and the men salvaged what they could from the two wrecks and began work constructing two small, ‘rakish schooners’ from timbers salvaged from the wrecks. They completed one, which they named Resource, and used it to visit Bird Isle, the easternmost cay in the group and a rich dietary source of sea-birds and eggs.

Fortunately for the survivors it was not the cyclone season, since a strong tropical cyclone would have swept them from the low sand cay. Instead, on 7 October, they used their salvaged cannonades to fire a salute to Flinders who had returned to rescue them with not one but three ships – the merchant ship Rolla and two colonial schooners, Francis and Cumberland. Flinders called this triumphal return ‘one of the happiest moments of my life’. In Port Jackson the resourceful Flinders had secured the help of Governor King to contract the visiting merchant ship Rolla, bound for Canton, to sail via Wreck Reefs and rescue some of the shipwrecked men. Others would return to Port Jackson on the Francis, a small schooner that was one of the first sea-going ships built in the colony. The third rescue vessel was the government schooner Cumberland, launched in Port Jackson in 1801. Flinders had obtained Cumberland to continue his voyage through Torres Strait to England.

The officers and crew of Porpoise and Cato were distributed among the Botella. Rolla sailed on to China, Francis and the ‘rakish schooner’ Resource built on Porpoise Cay by the survivors returned to Port Jackson, while Cumberland sailed for England under the command of Matthews Flinders, carrying most of his Australian survey materials. But unfortunately for him war had broken out between France and England and when Flinders arrived in Mauritius in December 1814 he was detained as a spy by the island’s commander General Charles de Caen for seven long years – until June 1820!
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Further visits to Wreck Reefs are of HMS Mermaid, on an uncharted reef south of Cairns in 1829. In December 2009 the museum and the Silentworld Foundation came together once again in another collaborative expedition – this time to locate and survey the remains of HMS Porpoise and the merchantman Cato, which played such an important role in the dramatic story of Flinders’ encounter with Wreck Reefs.

Since much archaeological work had already been conducted there; our primary aims were to survey several areas not previously examined, attempt to pin down the location of Cato, survey the gunzo workings and associated shipwrecks at Bird Islet, and try to solve other interesting and puzzling maritime riddle that Flinders had recorded on that very first night cast up amid the breakers of Wreck Reefs.

In searching for something wherewith to make a fire on the first night of our landing a spar and a piece of timber, worn eaten and almost rotten, were found and burnt

Wreck Reefs after Flinders

Following Flinders’ departure Wreck Reefs were visited infrequently by beche-de-mer fishermen from the colony, until May 1853 when the reefs claimed another ship, the 250-ton Muhuico. The position of the reefs – lying across the main outer shipping route from Sydney to China – along with growing traffic and increasing activity in the South Seas whale fishery led to further shipwrecks in 1856, 1861, 1870, 1879, 1884 and 1886.

Bird Islet at the eastern end of Wreck Reefs was occupied from the mid-1860s to the early 1900s by the Tasmanian-based Anglo-Australian Guano Company. It quarried the metre-thick deposits of sea bird excrement known as guano, and exported thousands of tons of the dried and bagged fertiliser to Melbourne, Sydney, Launceston and Hobart where it fetched £3 a ton.

From the early 1900s the reefs and cays were largely undisturbed until the early 1960s when a growing interest in Australia’s maritime past, together with the development of recreational scuba diving, saw a series of private expeditions visit the site. For the remains of shipwrecks. Scuba diving pioneers led by Ben Cropp visited in 1965 and quickly found the remains of HMS Porpoise on the reef top in shallow water directly east of Porpoise Cay.

The divers also located another wreck approximately 270 metres to the west of HMS Porpoise, which they took to be Cato. Further visits to Wreck Reefs are recorded in 1966, 1967 and again in 1983 when divers from the Maritime Archaeological Association of Queensland relocated the two wrecks near Porpoise Cay, along with a third wreck found at Bird Islet that was tentatively identified as the 151-ton brigantine Harp wrecked in 1861.

Divers from the Queensland Museum and the Maritime Archaeological Association of Queensland visited Wreck Reefs and the site of HMS Porpoise in May 1973 and again in May 1988. A bronze bell – unfortunately lacking a name – was raised. It was during these visits that the earliest identification of the second shipwreck site as that of Cato was questioned, since the presence of copper sheathing and the style of anchor at the site indicated a vessel of a much later date than 1803. It was hypothesised that Cato lay further towards the east.

In 1990 crew from the dive charter vessel Boomerang reported a cluster of shipwreck material consisting of a single iron cannon, Spanish coins and cassowary leg approximately 400 metres east of the Porpoise site. This suggested an association with Cato, which was carrying a cargo of Australian timber. The cannon was raised in 1991 by a team from the Queensland Museum. It was later identified from the trunnion marks as having been manufactured by the Carron Iron Foundry at Falkirk in Scotland between 1770 and 1780.

The Silentworld–Australian National Maritime Museum expedition

In 2008 the Australian National Maritime Museum began a fruitful collaboration in Australian maritime archaeological projects with the Silentworld Foundation, part of the Australian-based shipping company Silentworld Ltd. Our first joint expedition that year located the wreck of Lieutenant Phillip Parker King’s survey vessel, HMS’s Mermaid, lost on an uncharted reef south of Cairns in 1829. In December 2009 the museum and the Silentworld Foundation came together once again in another collaborative expedition – this time to locate and survey the remains of HMS Porpoise and the merchantman Cato, which played such an important role in the dramatic story of Flinders’ encounter with Wreck Reefs.

Left to right: Silentworld Foundation dive supervisor Kate Thompson with Silver-green Sea Snake, Bird Islet Reef.

Shawn Arnold from Flinders University, SA, recording artefacts retrieved from Porpoise Cay. Silentworld Foundation volunteer Andrew Turner in the surf break near the Cato Guttor.
our guns and carriages we got from the Wreck and placed them in a half moon form close to our flagstaff... on the 4th of October was launched and gave her the name Resource, on the 7th we loaded her with wood in order to take it over to the Island... to make charcoal, for our smith to make the iron work for our next boat... Journal of Samuel Smith, HMS Porpoise

Referring to the original drawings of William Westall, the artist with Flinders’ expedition, it would appear that time, cyclones and winter storms, the prevailing wind and the actions of nest-building seabirds and turtles have altered the shape and size of Porpoise Cay considerably, it is now about 50 metres shorter, and further to the west, than it was in Flinders’ time. Nonetheless, the survey team immediately started to find numerous artefacts associated with the survivors’ camp. The concreted remains of cannon balls were located on the eastern end of the cay along with furniture fittings, a uniform button, the eye-piece of a navigational instrument and ship’s fastenings. At the south western end were found a lens of burnt material and fragments of coal, possibly associated with the signal fire and forge that had been erected downwind from the survivors’ tents.

Without the large towed magnetometers, the dive teams searching for indications of these two wrecks by several hand-held metal detectors, a hand-held magnetometer, supplemented with wood in order to take it over to the Island... to make charcoal, for our smith to make the iron work for our next boat... Journal of Samuel Smith, HMS Porpoise

...and the pre-1803 shipwreck used a less powerful magnetometers, the dive teams searching for indications of these two wrecks by several hand-held metal detectors, a hand-held magnetometer, supplemented with wood in order to take it over to the Island... to make charcoal, for our smith to make the iron work for our next boat... Journal of Samuel Smith, HMS Porpoise

...and the pre-1803 mystery shipwreck has eluded us this time, others employed in getting anything serviceable from the Wreck.

Hands are employed, some about our new boat whose keel is laid down 32 feet, others working inshore from the Wreck and placed them in a half moon form close to our flagstaff... on the 4th of October was launched and gave her the name Resource, on the 7th we loaded her with wood in order to take it over to the Island... to make charcoal, for our smith to make the iron work for our next boat... Journal of Samuel Smith, HMS Porpoise

The Wreck Reefs Project would not have been possible without the contribution of our sponsor and collaborative partner the Silentworld Foundation, and the valuable assistance of Oceania Maritime, The Maritime Archaeological Association of Queensland, James Cook University, Flinders University, the Sydney Institute of Marine Science, the crew of HMNZS Silverworld and Silverworld II, and all our enthusiastic divers and snorkellers from Victoria, New South Wales, Queensland, ACT and the USA.

ANMM senior curator Dr Nigel Enkene with the gudgeon (rudder hinge fitting) probably from the merchantman Cala. Expedition photographer Carole Rivett

The archaeological, historical and environmental information obtained from the Wreck Reefs Project will be used by the museum, in consultation with the Department of Environment, Water, Heritage and the Arts and National Marine Parks, to develop conservation management plans which will assist in planning future research, interpretation, public access and management on the Porpoise and Cala shipwreck sites along with wrecks and sites associated with guano settlement on Bird Islet.

The participation of two marine biologists from the Sydney Institute of Marine Science also provided valuable information on the health of the marine environment of the Wreck Reefs, one of Australia’s most remote coral reef systems. This work is most important, since coral reefs are early indicators of global warming. Although analysis of their data is still ongoing, some of their initial observations – particularly in relation to the low population density of certain fish species – is surprising given the area’s remoteness. It highlights the need to conduct further work in this area.

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