

By the Old Hydrographer

A number of largely British settlements had been established in New Zealand by the early 1840s, where natural harbours had been found. The general Admiralty chart of New Zealand, published in 1836 and resulting chiefly from Captain Cook's surveys became inadequate for the navigation of inshore waters by vessels supporting the growing communities.

To remedy this situation, the Hydrographer of the Navy Admiral Beaufort, selected HMS Acheron, a barque-rigged paddle wheel steamship of 700 tons, to be fitted out for hydrographic work. To command her he chose Captain Lort Stokes, hydrographer of long experience. The ship sailed from Plymouth, England, for New Zealand in January 1848 for four years surveying.

Lort Stokes had spent eighteen years in the surveying ship Beagle, firstly in Magellan's Strait and during the world voyage under Captain Fitzroy with Charles Darwin, and then in north-west and northern Australia, where he finally commanded the ship. He had been speared by an aboriginal in Western Australia, which troubled him for the rest of his life.

In New Zealand waters Stokes came under the command of Captain Erskine, C. in C. of the NZ Division of the East Indies Station, in his Sydney-based flagship Havannah. Stokes got on well with Sir George Gray, the Governor of New Zealand, from their first meeting so that in addition to completing 4,300 miles of coastal survey he was able to assist the colonial administration in many ways.

His constant desire to see the Colony developing economically was the driving force behind Stokes' surveys of the east coast of the North Island, Cook Strait, the harbours on the east coast of the South Island, Foveaux Strait and the waters around Stewart Island. The latter he described as 'a successful though boisterous and hazardous exploration'.

There were several experienced hydrographic surveyors onboard, including second in command Captain George Richards and the Master, Mr Frederick Evans, both of whom were in due course to fill the post of Hydrographer of the Navy.

After arriving in Auckland, Stokes detached Richards in a small schooner provided by the Governor from October 1848 until September 1849 to survey the east coast from Auckland to North Cape and the south-east coast of the North Island from Waikanae to Taranaki. Evans, meanwhile on detachment, prepared detailed sailing directions for entering and using the burgeoning port of New Plymouth, beautifully illustrated with a coastal recognition view, for Evans was a competent artist.

In 1965, when I was working on the first edition of 'The Admiralty Chart', I received from the Alexander Turnbull Library in Wellington two reels of microfilm of what was purported to be 'Stoke's Diary of the Acheron voyage' which has proved very useful in preparing this column.

The bulk of the diary is neatly written by hand in copper-plate, apparently by the Captain's civilian clerk G.A. Hansard. From time to time, particularly when expeditions to the interior were led by a Mr Hamilton, entered onboard by the New Zealand Company to explore possible settlement sites or by Dr Lyall, the surgeon naturalist in search of zoological or botanical specimens, the writing of the diary becomes more confused. It is as if less practised hands take up the quill pen.

To illustrate this very brief account of a major survey of New Zealand waters, I will show how a harbour survey was made of the Port of Lyttleton. This was to give access to Christchurch on the Avon River, two miles to the north of where Hydro 2003 is to be staged next month.

The Diary tells us that "The projected Colony of New Canterbury, after due deliberation has chosen to locate itself on the great plains of Banks Peninsula & to the extensive pastoral district to the north-west. Captain Stokes will sail to-morrow for Port Cooper intending to examine and report upon the fitness as a harbour for the new settlement...

"The entrance to the port is very broad and exposed to the swell of the Pacific, the ship maintains an incessant roll night and day - no interval of rest - for many weeks - the officers who sleep in cabins have been exposed to horrible oscillation."

Despite these conditions, a baseline was measured, probably by measuring the time between the sighting of the puff of a distant cannon shot and the arrival of the sound. A triangulation was extended, the coastline sketched in, sounding marks set up and then the whole area sounded by lead and line, using the ship and her boats. Eventually, some shelter was found on the north side of Cooper Bay to which Stokes gave the name 'Erskine Bay', in reverence to his distant C. in C.

All the tracings of the survey, together with geographical coordinates obtained from celestial observations near the well in Erskine Bay, were forwarded to the Admiralty in 1849, enabling the chart to be engraved on copper, printed and published the following year; a portion is illustrated here. It may be seen that Stokes was at pains whenever possible to use what he termed the correct Maori names.

A quote from the Diary about a year after the survey had been made records a satisfying revisit by Captain Stokes to Erskine Bay. "After dark, we anchored in Cooper's Bay off its newly arisen port town, where a few lights and the hum of human voices broke the solitude and silence that formerly marked the spot. The morning light showed a good size village of wooded dwellings had sprung up in the short interval since our former visit & the nucleus of the future Lyttleton."

In March 1851 a heavy blow fell upon Captain Stokes and his fellow surveying officers onboard Acheron. The Hydrographer of the Navy, whose budget had been cut by £10,000, had

decided reluctantly that the ship must be laid up at Sydney and her crew returned to England.

Stokes had failed in his constant search for workable seams of coal in New Zealand and perhaps it was the continual expense of shipping coals from New South Wales that sealed Acheron's fate. This despite Stokes having frequently informed the Hydrographer of the great advantages of steam, in that sounding could continue both in calm weather and when the wind blew from the wrong quarter.

The last cruise included a passage up the west coast of the South Island, when visits were paid to Dusky and Milford sounds, those remote and wildly magnificent fjords which Cook had explored.

The final Diary entry reads: "So as all nature looked gay and smiling everybody seemed to recover his wonted cheerfulness. The cruise was over, and we should be in Wellington before sun down. Even the dogs rejoiced in the approaching change - they leaped, frisked, and rolled about beneath every bodie's feet - in every bodie's way.

Found the Fly at anchor, the Governor General in Wellington.

News quickly reached us that the Acheron was ordered to Sydney - Orders to return to England forthwith -
Finis"

The crew were ecstatic at the thought of an early return home; only the surveying officers, and particularly Captain Stokes, were dismayed at the outcome, the latter expressing his feelings at this time in a draft of a proposed letter to the Hydrographer. "Every exertion has been used to carry on the two great principles of economy and dispatch, in reference to the service which I left England to conduct, with a full understanding ... that I should be allowed to complete it. Under these circumstances, I may be allowed to express my annoyance & mortification at being suddenly suspended from my command and, together with my officers, turned out of my ship at a moment's notice." However, Stokes was a sober minded officer and it seems unlikely that this missive was ever sent.

The survey of New Zealand waters was to be continued with a 400 ton sailing brig, HMS Pandora, under the command of Captain Byron Drury, largely of the dangerous bar harbours of Kaipara, Manukau and Kawhia on the west coast of the North Island.

Further Reading

Knight, R.J.B., 'John Lort Stokes and the New Zealand Survey, 1848-1851 - Pacific Empires Ed. Alan Frost and Jane Samson pp87-99. Melbourne University Press (1999)

Natusch, Sheila, 'The Cruise of the Acheron'. Whitcouls Publishers Christchurch (1978).

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