

HISTORICAL NOTE ON THE HYDROGRAPHIC SERVICE OF THE ROYAL AUSTRALIAN NAVY

The Surveying Service of the Royal Australian Navy was established in 1921. Up till then, and from the early days of the first settlements, all hydrographic surveys in Australian waters had been conducted by the British Admiralty; in 1921, however, the Admiralty recommended that the Australian Commonwealth Naval Board establish its own service. Accordingly H.M.A.S. *Geranium* was commissioned as a surveying ship and made a number of minor surveys in Tasmania, North-West Australia and, finally, in Cumberland Channel, Great Barrier Reef. However, the Service was not considered properly established until the arrival in 1925 of H.M.A.S. *Moresby* under the command of Captain John Edgell, R.N. (now Vice-Admiral Sir John Edgell, K.B.E., F.R.S., R.N. (retired) who was Hydrographer of the Royal Navy from 1932 to 1945).

For several years these two vessels worked in conjunction on the survey of the Great Barrier Reef until, in 1927, the *Geranium* was paid off, to be followed two years later by *Moresby*.

During his two years on the Australia Station, Admiral Edgell undertook the task of instructing officers and crew in the science of hydrographic surveying, work which had hitherto been untouched by the Royal Australian Navy; he introduced the principles and methods used by the Hydrographic Office of the Admiralty and from that date the Australian service has been modelled on the senior office.

From 1929 until 1933, as the result of stringent economy measures, the surveying service was practically disbanded although small detached parties undertook various harbour surveys using motor-boats. In 1933 *Moresby* was re-commissioned principally for strategic surveys in connection with the plan to make Darwin the fleet base for Northern waters.

On the outbreak of hostilities, *Moresby* was converted from surveying to escort vessel, but at intervals resumed her old duties and carried out important surveys which included the S.-E. approaches to Adolphus channel, the Great North-East channel of Torres strait, certain Great Barrier reef openings and a survey of Blanche bay and Rabaul harbour in New Britain.

With the commencement of operations in the South-West Pacific, the Allies possessed very poor chart and map coverage of strategic areas. Hydrographic information regarding the Solomons, New Guinea and North Australia, available to the Allied Fleets and to Allied shipping in combat and strategic areas fell far short of operational requirements: not only had large areas remained unsurveyed but the state of the charts and sailing directions covering the remaining areas left much to be desired. In the South and South-West Pacific it was realised that rapid hydrographic surveys were imperative to render these reef-strewn waters safe for Allied vessels of war. These important surveying tasks were entrusted to various hydrographic and topographic units. In the South Pacific area the surveying ships of the U. S. Naval Hydrographic Service modernised the survey of many islands, notably those in the Solomons region. In the South-West Pacific the duty of surveying New Guinea was undertaken by the Surveying Services of the Royal Australian Navy working directly under the operational control of the Commander of the South-West Pacific Naval Forces. At all times both naval surveying services worked in close and successful cooperation.

By virtue of the fact that the Philippines lay within the limits of the South-West Pacific command, Australian surveying vessels modernised many former surveys when landings were made in that region and the way in which they acquitted themselves of this special duty merited the confidence that had been placed in them.

1942 SURVEYS

The year 1942 was one of makeshifts, of desperate measures to make do with what was available: the requirements of Australia's naval defence and escorts for convoys had scattered the units and personnel of its Surveying Service. A 60-foot inter-island trading motor launch,

the *Kwato*, was fitted out as a sounding boat and the survey of New Guinea was begun in July-August, 1942 with the examination of the anchorage of the western end of Milne bay. A dubious piece of wharfage permitted the streaming-in of war-supplies which proved sufficiently ample to shatter the invasion forces on the occasion of a Japanese landing.

In the next three months small Australian-built tenders and corvettes arrived in the area, having been allocated for the survey and accordingly provided with the necessary sonic sounding and searching apparatus. These preliminary surveys by H.M.A.S. *Whyalla*, *Stella* and *Polaris* at Cape Nelson, Porlock harbour and Port Harvey were of inestimable value during the first stages of the Buna (New Guinea) campaign and the first convoys were able to make Oro bay without loss from navigational causes. In addition, by making the route within the coral reefs safe navigationally, the convoys also received protection against submarine attack.

Boat parties made a survey of Galley reach, New Guinea; approaches to Port Noumea, New Caledonia; Graciosa bay, Santa Cruz islands; Nandi waters, Fiji islands; Queen Charlotte sound, New Zealand.

1943 SURVEYS

As the Allied armies advanced, the survey of New Guinea coastline progressed. The Buna campaign and the battle of Salamaua-Lae were followed by the Finschhafen-Satelberg campaign towards the end of the year; and the surveys were extended and completed, thus enabling the sea to be used under safe navigational conditions, first by the combat forces, then by supply-ships. In addition the New Guinea coastline was provided with complete facilities for navigational aids.

In early 1943, the surveying vessels of the R.A.N. were formed into Task Group 70.5, part of the U. S. Seventh Fleet, and the Officer-in-Charge, Hydrographic Branch, was delegated the charting authority for Allied Naval Forces in the South-West Pacific.

The following detailed surveys were made by H.M.A.S. *Whyalla*, *Stella*, *Polaris*, *Shepparton*, etc.; in New Guinea: Naomai bay, Discovery bay, Waga-Waga, Gili-Gili, Killerton, channels in the Goschen strait, Sewa bay, Malauna bay, from Malauna bay to Kiriwina, Cape Nelson, from Spear island to Mitre rock, Buna, Morobe, from Mitre rock to Finschhafen, Mort harbour, Natter bay, Markham bay, Dreger harbour, Finschhafen; in *New Britain*: Siassi island; in *Dutch New Guinea*: approaches to Merauke river.

1944 SURVEYS

During 1944 the Australian surveying vessels were used for a number of daring exploits and usually formed part, as well, of the forces taking part in the initial operations preceding the landings. Thus in January, H.M.A.S. *Shepparton* was despatched on a special mission to survey and mark a channel through the Japanese-controlled Dampier strait on the western end of New Britain, prior to the landing at Cape Gloucester. With the occupation of Admiralty islands, H.M.A.S. *Benalla* accompanied the invasion force and commenced the survey of Seadler harbour while part of it was still in enemy hands. With all succeeding landing operations the surveying vessels formed part of the minesweeping flotillas, and marked the cleared channels as well as making preliminary surveys.

Moresby surveyed Milne bay and Goschen strait and the coast of S.-E. New Guinea from Oro bay to Buna and from Madang to Alexishafen, while *Benalla* surveyed the Vitiaz strait and the western coast of Umboi island. The other ships carried out operations in Torres strait.

By 1945, the strength of the Surveying Service of the Royal Australian Navy had reached the following proportions: 2 sloops, 1 frigate, 5 corvettes, 3 trawler-type vessels, 2 lighthouse tenders, 3 harbour-defence motor launches.

In addition, from 1942 to 1945 the following vessels also carried out surveying duties for varied periods:—

H. M. Surveying Ship *Challenger* in Torres Strait; U.S.A. Surveying Ship *Sumner* south of Shortland reef, New Guinea; U.S.A. Surveying Ship *Pathfinder* in Seadler harbour (wire-drag); H.M.A.S. *Gascoyne* (frigate) in Philippines; H.M.A.S. *Bungaree* (min-layer) in Torres strait; H.M.A.S. *Whyalla* (corvette) around Cape Nelson; Trawlers *Samuel Benbow*, *Goolgwai* and *Durraveen* sweeping duties in Torres strait.

1945 SURVEYS

At the conclusion of the New Guinea campaign and prior to the invasion of the Philippines, Task Group 70.5 was divided into three units to undertake important surveys in three widely-separated areas in the South-West Pacific command. The principal unit remained working with the Seventh Fleet and took part in the landings at Morotai, Leyte gulf, Lingayen gulf, Subic bay, Zamboanga, Mindanao, Tarakan, Brunei bay and Balikpapan. Another unit (*Moresby, Shepparton, Benalla*) conducted the survey across the northern waters of Australia, through the Timor and Arafura seas — through waters practically unsurveyed since the days of the early navigators — and provided a swept navigational route for the use of battleships should they have to proceed from the Indian ocean to the Pacific, north of Australia. The last unit carried out sweeping operations and re-surveyed the route in the intricate waters of Torres strait as well as providing navigational aids in order that battleships could use that route night or day with safety.

At the initial landing at Leyte gulf, H.M.A.S. *Gascoyne* and U. S. Coast Guard cutter *Buttonwood* formed part of the fast mine-sweeper force.

The survey of Leyte gulf and Guiuan commenced immediately after, it being urgent to bring the existing charts up-to-date, especially those for Guiuan where numerous coral pinnacles were discovered. As fast as these were discovered by the surveyors, the *Sea Bees* (U.S. Naval Construction Battalion) came out and blasted the dangers away with many tons of dynamite (the local Filipinos soon learnt of the splendid opportunities in collecting stunned fish and followed the blasting boats everywhere).

Both *Warrego* and *Gascoyne* took part in the landing at Lingayen gulf. Also during the Philippine operations, H.M.A.S. *Lachlan* which was converted during construction for surveying duties, replaced *Gascoyne* and was in time to take part in the landings at Mindanao, Tarakan and Brunei bay, making surveys in those areas.

As a result of wartime experience, with the adoption of speedier methods of conducting surveys and using three surveying vessels, it is estimated that the surveys could be modernised within a period of 25 years. The post-war R.A.N. Surveying Service which during 1946 commenced the first part of the programme, consists of three vessels: 1 sloop, H.M.A.S. *Warrego* and 2 frigates, H.M.A.S. *Lachlan* and H.M.A.S. *Barcoo*, as well as three tenders of the general purpose vessel type: *Jabiru, Brolga* and *Tallarook*.

Moresby, Shepparton and *Benalla* were paid off early in 1946 after having completed sounding operations in Western Australia, namely in the approaches to Fremantle. *Warrego* operated in Bass strait from Table cape to Rocky cape and from Low head to Mersey bluff and surveyed in Queensland: approaches to Gladstone and Gladstone harbour. In South Australia, *Lachlan* made a survey of Kingston area and the approaches to Whyalla and Port Pirie. Meanwhile the boat party examined the approaches to Adelaide. In Western Australia, the *Lachlan* examined: approaches to Fremantle and to Derby: King sound and Port Osborne. In New Guinea, H.M.A.S. *Barcoo* surveyed the South cape area, Dreger harbour and from Delami island to Guna island with soundings on sunken barrier.

The above achievements, together with the wide list of surveys itemised in the *Report of Work, Royal Australian Navy Surveying Service, 1939-1946*, published by the Hydrographic Branch of the Department of the Navy, Sydney, were made possible by a sufficiency of personnel and ships controlled by a set and comprehensive policy. On 4th June, 1946, an agendum containing recommendations on the future policy of hydrographic surveys of Australian coasts and adjacent areas, was placed before the Cabinet by the Minister for the Navy. Cabinet approved of these recommendations which proposed that the Royal Australian Navy should continue to be the charting authority in connection with hydrographic surveys of Australian waters and in Australian spheres of influence in the Pacific; and that it should undertake a 25-year programme for this purpose. Recommendations were also approved to modernise the charts of these areas, by the issue of new Australian charts, based on the modern surveys, and prepared in and published by the Hydrographic Branch.

