The very first known piece of recorded information about Macquarie Island was written in chalk on the under side of a table in a house in Sydney on evening of 6th September, 1810. It is said that Captain Hasselburgh, the island’s discoverer, was persuaded to part with the “secret” location of Macquarie Island to settle a bet!

The first chart of the island was made by a member of the crew of either the Vostok or Mirnyi; ships under the command of Captain Thaddeus Bellingshausen on a voyage of discovery to the Southern Ocean and South Pacific for Emperor Alexander I of Russia. The ships sighted Macquarie Island on 28th November 1820. Captain Bellingshausen traded rum and food with the sealers on the island for samples of animal skins and birds. After two days the weather thickened and a squall blow up from the west preventing Bellingshausen from continuing his survey of the island so the two ships continued their voyage southwards. Bellingshausen fixed the middle of the island at latitude 54º 38’ 40” S, longitude 158º 40’ 50” E.

In 1822, Captain William Langdon R. N., visited Macquarie Island in the sailing ship Lusitania on its way from Sydney to England. The ship brought supplies for the sealing gangs on the island and loaded 30 tons of elephant seal oil. On the ship’s return to England, Lieutenant Langdon handed in a plan of the island to the Hydrographic Department of the British Admiralty entitled “Plan of Macquarie Island”. This plan shows details of soundings and suitable anchorages and place names, some of which are quite different from the ones now in use. It has been suggested that the Admiralty did not use this plan to update its Chart 1022, which covers this area of the Southern Ocean, until 1917 when Langdon’s sketch was acknowledge on the chart as an information source. By that time the Hydrographer had received Blake’s map of Macquarie Island.

Major sealing activities on Macquarie Island ceased around 1834. Reports in the Sydney Herald of 5 January 1835 state that the brig Bee, Captain Robertson, called at Macquarie Island. A gang working there for seven months had only secured one cask of oil. On its next trip between 3rd January
and 26 February 1835 the brig picked up the remaining 12 members of a sealing gang but no oil or skins at all. Clearly interest in the island and therefore its charts had for the time being disappeared.

Apart from a number of isolated visits, including that of the Countess of Minto which was wrecked on the island in 1850 while looking for guano, there was little interest in Macquarie Island. About 1872 Joseph Hatch of Invercargill, New Zealand, started looking for fur seal skins to fulfill a clothing order from London and sent ships to the island. But there is no evidence available of any of the ship's captains making any charts. Even J. S. I. Thomson, who was on board the Bencleugh when it was wrecked on the island in 1877, when writing his book Voyages and Wanderings in Far-off Seas and Lands made no reference to any charts.

Captain Sinclair, who kept a very detailed journal of his three month’s stay on the island from November 1877 to February 1878, does not refer to any maps or sketches of the island. The Jessie Niccol made 13 trips to the island for Hatch from 1877 to 1891 but again there are no references to any charts.

It was not until the Gratitude started making regular visits to Macquarie Island for Hatch from 1891 that interest in producing a chart or map was renewed. Captain Macdonald took the Gratitude to the island on 11 of its 23 visits. During this time it is believed that he drew up his own chart of the area. A copy of this plan was given to Captain Post of the New Zealand steamer Tutanekai and it was printed in June 1899 at the Head Office of the Department of Lands and Survey, Wellington, New Zealand.

This chart begins to put together valuable nautical information, including a reliable latitude and longitude and a bearing to the Judge & Clerk Islands. The land was sketched from a seafarer's point of view but some clear indications were given of the topography of the island particularly towards the northern end.
It is interesting to compare the “Admiralty Chart of Macquarie Island of 1887 - corrected to 1911”, as published by Mawson in his AAE Reports, with the Macdonald Chart as printed in New Zealand. The similarities are too close to be coincidental. The hills, creeks, lakes and coastline of the island are practically identical.

Shortly after the Macdonald chart was available in New Zealand, another smaller chart appeared in Launceston, Tasmania in 1901, prepared by H Gunderson. Gunderson supplied a copy to the Harbour Master of Launceston, Captain John Bradley, and said that his drawing came from information supplied by Hatch and Fisher.

It was not until the arrival of the Mawson’s Australasian Antarctic Expedition in 1911 that the first attempt at a land survey of the island was made. Leslie Russell Blake, geologist and cartographer, was a member of the AAE party that spent two years on Macquarie Island from 1911-13. During that time Blake, assisted by H Hamilton, measured a survey baseline on the northern plateau and erected siting poles on all the prominent topographical features so he could carry out a topographic triangulation of the island. He then surveyed the topographic features and 50 foot contours over the northern half of the island above Sandy Bay but only 200 foot contours over the southern part. Shortly after returning to Australia, Blake left to serve in the Armed Forces in the First World War and was unfortunately killed in 1918. Under the circumstances prevailing in 1911-14, Blake’s map-making achievements are remarkable. They are even more remarkable considering the many attempts made to improve on his excellent work in the last 85 years.

Blake’s topographical maps and the geological and cartographic report on the island were left with Sir Douglas Mawson. He published the finished maps in the
AAE Report; Series A, Part V which were printed by the NSW Government Printer in
1943. Blake's map of Macquarie Island was also included in Home of the Blizzard,
Mawson's book on his 1911-14 Antarctic Expedition, published by William
Heineman in 1915.

Although a BANZAR Expedition spent some time on Macquarie Island in 1930,
ANARE established a permanent station on the Isthmus in 1948 and a survey team
established the positions of the aurora observatories in 1951, there is no indication
of any further efforts to map the island until November 1971. A map at a scale of
1:50,000 was published by the Division of National Mapping, Canberra, Australia,
based upon available information. Checks suggest that a lot of the detail and the
elevations are based on Blake’s original 1911-14 survey. However the 1971 map
contains a number of errors.

US Thematic Mapper (TM) satellite imagery has been available since 1975 but
none of it was found suitable for map making. Accurate survey positional data
suitable for normal aerial photography was obtained on the island in 1982 and
1986 in the hope that aerial photography would be obtained shortly after. This
proved impossible.

In 1989 there was some success when one cloud free SPOT satellite image,
viewing the Island from the east, was recorded. If a second cloud free satellite
image, viewing the island from the west, could also be recorded then a precision
topographical map could be made. In 1992-3 further survey control points were
measured to identify the ground features visible on SPOT satellite imagery. No
other cloud free SPOT satellite imagery has been recorded of the island by January
2000.

A detailed geological survey of Macquarie Island was carried out in 1994-96 by Dr
B. D. Goscombe and J. L. Everard of Mineral Resources Tasmania. This latest
geological information was published on topographic base maps compiled from
the Division of National Mapping’s 1:50,000 map, SPOT satellite imagery and
available GPS position data.

Finally, there is news that a special airborne research laboratory belonging to
NASA-JPL will be in Australia in May 2000. It is planned that this four engined DC8
aircraft will fly over Macquarie Island measuring it with special side-looking
synthetic aperture radar equipment which creates three different data sets of the
ground below, even though the ground may be completely invisible due to cloud.
Special computer software can then use these datasets to create topographic
maps of the surface of the island, determine the ocean currents around the island
and assist with the geological and tectonic interpretation of the island’s structure.

By using this multi-million dollar “flying laboratory” and its sophisticated airborne
scanning equipment it may be possible to improve upon what a single man
achieved virtually by himself in 1911-13.

Glyn Roberts
April 2000
References:


Mawson D., 1943, “Macquarie Island - Geography”; Scientific Reports Series A; Government Printers Office, Sydney, NSW.

