ANTARCTIC VIGNETTES VI: LESLIE RUSSELL BLAKE – MAWSON’S FORGOTTEN GEOLOGIST

by Herbert J.G. Dartnall

with four plates


Leslie Russell Blake was a young Australian surveyor and geologist of great talent who made an outstanding contribution to our knowledge of Macquarie Island whilst a member of Douglas Mawson’s Australasian Antarctic Expedition (AAE) during 1911–1914. He was a member of the five-man team that spent nearly two years on Macquarie Island establishing their base at the northern end of the island. Blake spent much of his time away from the base surveying and making geological observations. His topographical map of the island was the standard until modern techniques such as aerial photography, satellite imagery, airborne synthetic aperture radar and GPS technology enabled the island to be mapped in detail. During the First World War Blake served with the Australian Imperial Forces and was awarded a Military Cross for a survey of the front line before the attack at Pozières. His death just days before the end of the First World War meant that he never finished writing up his scientific notes. It says much for the quality of his field reports that Douglas Mawson was eventually able to publish the work. Sadly, the fact that it was not published until 1943, and then only under Mawson’s name, meant that Leslie Russell Blake has been largely forgotten.

Key Words: Leslie Russell Blake, geologist, Macquarie Island, Mawson, surveying, Australasian Antarctic Expedition.

INTRODUCTION

This paper, the sixth in the Antarctic Vignette series (Dartnall, 2008a, b, 2009a, b, 2011), arises from a presentation at a symposium celebrating the centenary of the departure of the Australasian Antarctic Expedition (AAE) in 1911. Douglas Mawson recruited four geologists for the AAE — one for each of the bases he hoped to establish. In the event only two of the three Continental bases were established: Charles Archibald Hoadley and Andrew Dougal Watson doubled up at the Western Base, while Francis Leslie Stilwell was stationed at the Main Base at Cape Denison. While these three men are comparatively well known, and all have entries in the Australian Dictionary of Biography (Lack 1983, Wilcock 1990, Price 2005), Leslie Russell Blake, the man destined for Macquarie Island, has no such entry and is one of the forgotten men of the expedition.

EARLY LIFE

Leslie Russell Blake was born on 28 October 1890 in Hawthorn, Victoria, the sixth and youngest child of Thomas Henry Blake and Maria Louisa Blake née Purdey. Leslie’s father, who was born at Stowmarket in Suffolk, England, in 1851, emigrated to Australia in early 1873. A photographer, he married Leslie’s mother at South Yarra in 1878. She was born in 1857 at Kandy, Ceylon, now Sri Lanka, but died in 1892 of a carcinoma in 1892, aged 35 when Leslie was just 20 months old. Leslie’s father remarried the following year and died of pulmonary tuberculosis in 1897, aged 45.

Following the premature death of both his parents, Leslie and his two younger half sisters were brought up by their aunt Mrs J. Deazeley in Queensland. Leslie was educated locally and at the Brisbane Technical College. He passed the University of Sydney Junior Public Examination, and in 1907 passed the Queensland Public Service Examination. Thereafter he was appointed a Geological Surveyor with the Queensland Department of Mines and spent much of the next three years exploring the Gympie Goldfields and other remote areas of Queensland.

THE AUSTRALASIAN ANTARCTIC EXPEDITION — THE FIRST YEAR

In 1911 Leslie Russell Blake was appointed geologist and surveyor for the Macquarie Island part of the AAE. There he was joined by four other expeditioners — Charles Alfred Sandell, radio mechanic and operator; George Frederick Ainsworth, meteorologist and station leader; Arthur John Sawyer, radio operator; and Harold Hamilton, biologist (pl. 1). They were all young: Ainsworth was the oldest at 33, Hamilton and Sawyer were both 26, Sandell was 25 and Blake just 21.

The Macquarie Island Base was established to relay wireless messages between the Main Base at Cape Denison and mainland Australia. It is worth remembering in light of the subsequent history of the expedition that only these two bases were equipped with both transmitting and receiving sets. The Western Party was supplied with a receiver but it was unserviceable due to missing components, and the S.Y. Aurora only had a receiver fitted for her second Antarctic cruise.

With a complement of five the Macquarie Island party was the smallest scientific party then established in the Antarctic region. While they were not the most harmonious group that ever wintered together this can in part be attributed to the smallness of their party and the nature of their duties which limited their opportunities to bond (Dartnall in press). Sawyer and Sandell, the radio operator and mechanic, operated at night when radio reception was best. Indeed, on the foulest nights after they had completed their schedule they would bed down in the radio hut and engine house...
on Wireless Hill rather than risk the dark descent to the expedition’s hut colloquially known as “the shack”. Blake and Hamilton, spent much of their time down the island on field trips away from “the shack”, which was the preserve of Ainsworth whose meteorological duties restricted him to the north end of the island.

Personal antipathy apart, the achievements of the Macquarie Island Party were outstanding. Ainsworth established a meteorological station on the isthmus and at 0900 hours on 1 January 1912 commenced taking readings that he continued unabated for the best part of two years. Ainsworth’s work was considered important enough for the Bureau of Meteorology to send three men down on the S.Y. *Aurora* to continue it when the AAE men came home. Harold Hamilton made large collections of the flora and fauna that led to a greater understanding of the island’s biota. Sawyer and Sandell soon had the wireless equipment installed and quickly established contact with the outside world. Messages for the Meteorological Bureau in Melbourne were transmitted direct or via Hobart, Sydney or Wellington when reception was poor. Contact was made and messages regularly exchanged with Perth (3716 km distant), Port Moresby (some 5118 km distant) and Suva Station, Fiji (4384 km away). They also communicated with H.M.A.S. *Encounter* at a distance of 3500 km, and with various merchant vessels including the German steamer *Adelaide* when it was 1750 km northwest of Perth and with the S.S. *Mataram* when that ship was north of Port Darwin. On 16 April 1912 Sawyer logged the loss of the *Titanic* just hours after it happened (Sawyer 1911–1913).

The weather at Macquarie Island can be very variable — changing from calm conditions in bright sunshine to blowing a gale, with driving snow and back to sunshine all within the hour. On other occasions foggy conditions may hang around for days, and gales and storms can last for weeks. All the while Blake collected rocks for his geological collection. Unfortunately, the location of many of his rock specimens are tied to the sighting stations he established that cannot now be identified as his field notebooks are missing (Mawson 1943).

**BLAKE’S SURVEYING AND GEOLOGICAL COLLECTION**

During his almost two years on Macquarie Island Blake spent much of his time mapping. On the shore of Garden Cove he established a benchmark, which has since disappeared, and with Harold Hamilton’s help a measured base line 2830.5 feet (862.7 m) long running NNW across the plateau from a rise on the north side of the top of Gadget Gully. According to Mawson, the survey “was executed as a theodolite triangulation from a measured base line. Sighting poles were erected on all the main features of the land, and these were then plotted systematically. From these established stations the minor details and contours were plotted” (Mawson 1943, p. 16). Given the size of the island, 34 km long and up to 5 km wide, this was a gargantuan achievement especially when the weather is taken into consideration. The hardest part was waiting for periods of good clear weather to do the sightings (pl. 2). Blake’s diary entry for 31 October 1912 reads: *climbed Mt. Mawson [now Mt. Hamilton] and when I had done so another low cloud descended; so I returned to the hut. About noon the cloud lifted so I climbed the mountain “again” and struck a fog this time: (this is the seventh time I climbed this mountain and had no luck). I waited on the top this time for 2 hours and then the fog cleared, so I was able to observe angles from this station* (Blake 1911–1914).

Two-way communication with the Main Base was not established during the first winter as the aerials at Cape Denison were blown down and could not be re-erected. When the S.Y. *Aurora* next visited – 13 January to 8 February 1913 (second Antarctic voyage) – the seamen on board, with their greater rigging skills, got the aerials up, and successful communication with Macquarie Island was established.
The Macquarie Island party had only expected to be away for one year and anticipated going home around April 1913 but tragedy changed that. When Douglas Mawson, Belgrave Ninnis and Xavier Mertz failed to return from their sledging trip, Captain John King Davis, Captain of the S.Y. Aurora and second in command of the expedition, made the courageous decision to leave Commonwealth Bay and pick up Wild and the Western party. Captain Davis left six men behind to look for the missing sledgers and thus committed the Macquarie Islanders to a second winter. While it is true that they all volunteered to stay on they really did not have an option (Dartnall in press).

Regular two-way communication between Macquarie Island and the Main Base at Cape Denison was established in February 1913. At first communications were somewhat fragmentary but dramatically improved as the months progressed. Early on Sawyer relayed the story of Mawson’s epic survival following the loss of his two companions to an astounded world. Mawson’s fantastic struggle against all the odds was, however, completely eclipsed and wiped off the newspapers’ headlines a couple of days later by news from New Zealand of the death of Captain Robert Falcon Scott and his four companions on their way back from the South Pole.

The Macquarie Island Party’s second year was not without its problems. Equipped and provisioned for a one-year stay their clothing had to be continually patched and repaired, their equipment had to be modified and improvised but most seriously, they ran out of food. They bartered some food stuffs with the sealers who were on the island, but the sealers were in a worse position than the AAE men. Sawyer became sick and disillusioned and when the S.S. Tutanekei visited in August 1913 Sawyer went with them leaving Sandell to additionally take on the wireless operator’s role.

The S.Y. Aurora left Hobart on 19 November 1913 and arrived at Macquarie Island nine days later when the station was handed over to the three men who had come to continue the meteorological observations. Ainsworth, Blake and Sandell were soon packed and ready to leave and within a week they were on their way to pick up Mawson and the overwintering party at Cape Denison. This was duly accomplished, all the while taking soundings and dredging. The Aurora then tracked its way westward to the Davis Sea and the Shackleton Ice Shelf, where the Western party had been based, before heading north and home, early in February 1914.

The Aurora docked at Port Adelaide on the afternoon of 26 February 1914. Three days later, on 1 March, there was an official reception in the University of Adelaide Hall, attended by families and friends, and local dignitaries. The Governor-General, Lord Denman, came from Melbourne to convey a message of congratulations from King George V (Mawson 1915). The expedition then dispersed. Less than a month later, Blake was back in his old job as a field assistant with the Queensland Geological Survey. Since there were no expedition funds for further study, his writing up had to take second place to earning a living.

World events soon overtook the expeditioners. Archduke Franz Ferdinand, heir to the Austro-Hungarian throne, was assassinated on 28 June 1914 in Sarajevo, and five weeks later, on 4 August, Great Britain declared war on Germany. When Blake heard the news he was inland from Bowen, Queensland engaged in geological work. He immediately set out to enlist
behind a creeping barrage, thereby dramatically reducing
for his survey which enabled the Australian forces to advance
exploits Blake was in due course awarded a Military Cross
preceded by a massive bombardment. As a result of his
took place at 0030 hours on the morning of 23 July,
wounding but it is noted in the unit diary and of course
into no man's land where he came under enemy fire and
barrage. His brief, to survey the actual lines held by allied
Farm – an essential prerequisite for an accurate artillery
detailed survey of the allied lines from Pozières to Mouquet
in the trenches. On 21 July 1916 three divisions of the 1st
his time south seeming to have been good training for life
Sgt Blake received a field commission on 12 March 1916
by which time the Allies had withdrawn from Gallipoli.
fellow recruits. They arrived at Suez just before Christmas
applied for a commission with the Australian Army in the
Ernest or just considered applying. In February 1915 he
it is not clear if he turned down an invitation from Sir
Shackleton's Imperial Trans-Antarctic expedition, though
he ascertained that he would be accepted by the Army if he underwent a
simple operation and there were no complications. This he
duly did and on 4 August 1915 became No. 7306 Gunner
Leslie Russell Blake (pl. 3). He underwent basic training
at the Enoggera Camp in Brisbane, conveniently close to
family and his fiancée. His abilities were quickly recognised
and he was soon a junior NCO (non-commissioned officer)
and drill instructor. He turned down a commission that
would have delayed his departure to the front by at least
four or five months and left for the Middle East with his
were no complications. Frustrated he tried to enlist
in the Artillery some months later. Everything was arranged
and he had been recommended for a commission but was
surprised and bitterly disappointed to fail the medical. News
of the deaths in action at Gallipoli of Bob Bage, who had
been the AAE's Astronomer and Assistant Magnetician,
and John Firman Deazeley (Blake's cousin) some weeks
later, only strengthened his resolve to enlist. He ascertained
that he would be accepted by the Army if he underwent a
similar survey for which he was Mentioned in Sir Douglas
Haig's Despatch of 13 November 1916 “for distinguished
and gallant services and devotion to duty in the field” (LG
29 December 1916).

In August 1917 he met Frank Hurley, recently back from
Shackleton's ill-fated Imperial Trans-Antarctic Expedition
and now serving on the Western Front as an Official
photographer with the Australian Imperial Forces. Hurley
and other war correspondents spent a couple of days in the
vicinity. Blake accompanied Frank Hurley and appears in
a number of official photographs (pl. 4).

Blake was wounded for a second time less than a month
later on 25 September 1917 when a shell fragment some
four centimetres long passed clean through his right forearm
miraculously passing between the radius and ulna without
damaging either bone. He was lucky. Had the piece of
shrapnel had a slightly different trajectory or been spinning
in a different plane it would have taken his arm off. Blake
was sanguine about such matters; he applied a field dressing
to his arm and returned to duty. But the wound was serious
and the following day he was on his way to “Blighty” and
the 3rd London General Hospital at Wandsworth.
Blake rejoined his unit at the beginning of 1918 when the war was becoming more mobile. His abilities were further recognised when he was posted to Headquarters as a Staff Officer but this did not suit him, he missed the camaraderie of his battery and after a while he requested a transfer back to the 105 Howitzer Battery. His luck finally ran out on 2 October 1918. He was supervising the unloading of an ammunition train behind the lines when a stray artillery shell exploded under his horse. The horse was killed and he was grievously wounded – shrapnel wounds to the left leg and thigh, face and skull. He was conveyed to a nearby Casualty Clearing Station where he died the following morning.

CONCLUSION
Captain Leslie Russell Blake’s death just 39 days before peace was declared was a tragedy especially as it appears to have been due to what nowadays we call a “friendly-fire incident” (Dartnall in press). Blake was well aware that he might not survive the war and prior to enlisting had ensured his scientific notes were in safe hands. The Home of the Blizzard (Mawson 1915) carried a small version of Blake’s map and the Admiralty published a chart of the island in 1917 (chart no. 1022) based on Blake’s observations but it was many years before the AAE report appeared. The scientific results of the AAE were published gradually over the following decades and each new report carried an advertisement for Blake and Mawson’s Geology of Macquarie Island. In the event, the work was not published until 1943, 25 years after Blake’s death. It says a lot for both men – the quality of Blake’s notes and Mawson’s ability to interpret them – that the report was finally published though it is hard to understand why Mawson dropped Blake’s name from the authorship (Mawson 1943).

The map that Blake produced of Macquarie Island, and reproduced as a folding map in the back of Macquarie Island its Geography and Geology (Mawson 1943), remains his crowning achievement. While he never linked the northern third of the island, north of Sandy Bay, to that of the southern portion to his own satisfaction, his map remained the standard until very recently when satellite imagery, Airborne Synthetic Aperture Radar (AIRSAR) and the global positioning system revolutionised the cartographer’s task. Indeed, Blake achieved unbelievably accurate results without these modern aids (Dartnall et al. 2001, H. Brolsma pers. comm. 2011).

Blake also collected a large number of geological specimens all of which were correctly identified. However, Blake and Mawson’s interpretation of the island’s geological history no longer holds sway. They were looking for, and believed that they had found, evidence of glaciation, whereas we now know that Macquarie Island is a block of ocean floor material raised from mid-ocean as a result of severe fault movements and earthquakes that has been subsequently shaped by further faulting, sea-level changes, erosion and periglacial events (Varne et al. 2000). Continental drift and the resulting science of plate tectonics that we now use to describe Macquarie Island’s formation was first published by Alfred Lothar Wegener in 1915 so that it is highly unlikely that Blake had ever heard of it. For many years it was a contentious theory and only since the 1960s has it been accepted.

The young men who were part of the AAE were an exceptional group and many went on to achieve great things. Tragically for Leslie Blake, Bob Bage, Archibald McLean and at least five of the Aurora’s crew, the First World War put an end to promising careers (Lucas 2012, Dartnall in press).
ACKNOWLEDGEMENTS

This paper was presented in November 2011 at a symposium organised by The Royal Society of Tasmania and held at the University of Tasmania entitled “Mawson 100 years on: how things have changed” as part of the Antarctic Centennial Year 2011–2012 celebrations (Antarctic Centennial Year 2011). My thanks to Beryl Hazlett, Louis Cook, Diane Williams and other members of the Blake family for their encouragement and help with my researches on LRB’s early life. The photographs reproduced herein are by kind permission of the Mitchell Library, State Library of New South Wales, and the Australian War Memorial, Canberra.

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(accepted 6 November 2012)