

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

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with four plates

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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 Pozzières. 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 Stillwell 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 Australia 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



PLATE 1

*The Macquarie Island Party: (left to right) Charles Alfred Sandell, George Frederick Ainsworth, Arthur John Sawyer, Harold Hamilton and Leslie Russell Blake. Photograph courtesy of the State Library of New South Wales – Home and Away 36150.*

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).

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.

## 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).*

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).



PLATE 2

*Blake taking an observation of the sun near the AAE but on the isthmus. Photograph courtesy of the State Library of New South Wales –Home and Away 36145.*

## THE SECOND YEAR

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. *Tutanekai* 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, Hamilton 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.

## HOME

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.

## THE GREAT WAR

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

and walked 20 miles (32 km) to catch the coach at Bowen only to miss it and then had to trudge the 20 miles back to his camp where he mentally struggled with his duty to the expedition versus his patriotic fervour.

Of the Macquarie Island men only Sandell did not enlist. He was employed doing important work building a new installation in Esperance for Amalgamated Wireless and stayed on afterwards as an operator. Ainsworth became an Intelligence Officer with the Counter Espionage Bureau investigating anti-war groups in Australia. He was promoted to Captain and became Head of the Queensland Branch of the Special Intelligence Bureau, the Australian branch of MI5. Hamilton joined the Royal Navy and became an instructor in the UK. Sawyer joined the Australian Naval and Military Expeditionary Force and served at Rabaul, before enlisting in the Australian Imperial Forces and going on to receive a commission in the Indian Army.

Over the next few months Blake continued to battle with his conscience — weighing his scientific responsibilities versus his patriotism. He contemplated joining Sir Ernest Shackleton's Imperial Trans-Antarctic expedition, though it is not clear if he turned down an invitation from Sir Ernest or just considered applying. In February 1915 he applied for a commission with the Australian Army in the Engineers but heard nothing. 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 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 fellow recruits. They arrived at Suez just before Christmas by which time the Allies had withdrawn from Gallipoli. Sgt Blake received a field commission on 12 March 1916 just 10 days before his unit left for France.

Like many of the AAE men, Blake took to soldiering, his time south seeming to have been good training for life in the trenches. On 21 July 1916 three divisions of the 1st Anzac Corps moved into the front lines opposite the village of Pozières. Blake went with them volunteering to make a detailed survey of the allied lines from Pozières to Mouquet Farm — an essential prerequisite for an accurate artillery barrage. His brief, to survey the actual lines held by allied troops, sounds innocuous enough but involved venturing into no man's land where he came under enemy fire and indeed he was slightly wounded by a sniper.

Interestingly Blake's military record fails to record his wounding but it is noted in the unit diary and of course in his letters home (Blake 1915–1918). The infantry attack took place at 0030 hours on the morning of 23 July, preceded by a massive bombardment. As a result of his exploits Blake was in due course awarded a Military Cross for his survey which enabled the Australian forces to advance behind a creeping barrage, thereby dramatically reducing



PLATE 3

*Studio portrait of 7306 Gunner Leslie Russell Blake, 5th Field Artillery Brigade. Photograph courtesy of the Australian War Memorial, photo P07842.001.*

the number of casualties (London Gazette 25 November 1916). The citation reads: "For conspicuous gallantry in action. He carried out reconnaissances under very heavy fire with great courage and determination, obtaining most valuable information". Later that year Blake carried out 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.



PLATE 4

Near Hill 60. Lieutenant L.R. Blake MC standing on the remains of a German reinforced concrete dugout after it had been hit by a 9.2-inch British shell. Photograph courtesy of the Australian War Memorial, photo E00665.

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).

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## REFERENCES

- Blake, L.R.** 1911–14: Diary. Unpublished manuscript, MS 9551. Melbourne: State Library of Victoria, La Trobe library; Adelaide: Mawson Antarctic Collection, Coach House, Waite Institute, University of Adelaide.
- Blake, L.R.** 1915–18: Letters and Postcards home. Unpublished, 1DRL/0128. Australian War Memorial.
- Dartnall, H.J.G.** 2008a: Antarctic Vignettes 1: Mawson’s Sailmaker – James Forbes. *Papers and Proceedings of the Royal Society of Tasmania*. **142**(2): 45–46.
- Dartnall, H.J.G.** 2008b: Antarctic Vignettes II: The search for S. Tasman, AB on the *Terra Nova*, 1903–04. *Papers and Proceedings of the Royal Society of Tasmania*. **142**(2): 47–48.
- Dartnall, H.J.G.** 2009a: Antarctic Vignettes III: Shackleton’s AB – William Frederick Williams. *Papers and Proceedings of the Royal Society of Tasmania*. **143**(2): 83–86.
- Dartnall, H.J.G.** 2009b: Antarctic Gold: Chief Petty Officer Albert Balson BEM\*, DSM, RN. *The Review, Quarterly Journal of the Naval Historical Collectors and Research Association*. **22**(1): 4–10.
- Dartnall, H.J.G.** 2011: Antarctic Vignettes: Dr. Wilson’s Assistant – Horace Edgar Buckridge. *Journal of the Orders and Medals Research Society*. **50**(1): 42–45.
- Dartnall, H.J.G.** in press: *Lost in the Mists: Leslie Russell Blake – Mawson’s Cartographer, Hero of Pozières*. Australian Scholarly Publishing, Melbourne.
- Dartnall, H.J.G., Ward, N., Selkirk, P.M., Adamson, D.A. & Pharaoh, M.** 2001: The influence of L.R. Blake, pioneering sub-Antarctic geographer and geologist, on the topographic mapping of Macquarie Island. *Polar Record* **37**(201): 143–150.
- Lack, J.** 1983: Hoadley, Charles Archibald Brookes. In: *Australian Dictionary of Biography 1891–1939*. Melbourne University Press, Melbourne **9**: 313–314.
- Lucas, A.** 2012: Mertz in Hobart: impressions of one of Mawson’s men while preparing for Antarctic adventure. *Papers and Proceedings of the Royal Society of Tasmania* **146**: 37–44.
- Mawson, D.** 1915: *The Home of the Blizzard*. 2 Volumes. William Heinemann, London: Vol. 1: 349 pp. and Vol. 2: 338 pp.
- Mawson, D.** 1943: Macquarie Island its Geography and Geology. *Australasian Antarctic Expedition 1911–14 Scientific Reports*, Series A Volume V: 194 pp.
- Price, B.** 2005: Watson, Andrew Dougal. In: *Australian Dictionary of Biography 1580–1980*. Melbourne University Press, Melbourne Supplement: 398.
- Sawyer, A.J.** 1911–13: Diary. Unpublished manuscript, MSS. 383. Sydney: State Library of New South Wales, Mitchell Library.
- Varne, R., Brown, A.V. & Fallon, T.** 2000: Macquarie Island: its geology, structural history and the timing and tectonic setting of its N-MORB to E-MORB magmatism. In Dilek, Y., Moores, E., Elthon, D. & Nicolas, A. (eds): Ophiolites and oceanic crust: new insights from field studies and the Ocean Drilling Programs. *Geological Society of America*. Special Paper **349**: 301–320.
- Wegener, A.L.** 1915: *Die Entstehung der Kontinente und Ozeane*. [The Origin of Continents and Oceans]. Friedrich Vieweg & Sohn Akt. Ges, Braunschweig: 367 pp.
- Wilcock, A.A.** 1990: Stillwell, Francis Leslie. In: *Australian Dictionary of Biography 1891–1939*. Melbourne University Press, Melbourne. **12**: 94–95.

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