STILL NO MAWSON. FRANK STILLWELL'S ANTARCTIC DIARIES 1911–13. Edited by Bernadette Hince. 2012. Canberra: Australian Academy of Science. viii + 240 p, soft cover. ISBN 978-0-85847-330-0.

With so much focus over the last few years, at least in the UK, on the centenary of Scott's last expedition, it is easy to forget that we are also in the midst of the centenary of Douglas Mawson's Australasian Antarctic Expedition of 1911–1914. With no interest in being part of Scott's expedition with its distractions of getting to the South Pole, Mawson put together his own, strictly scientific, expedition to what he called the Australian quadrant of the Antarctic continent, the region to the west of Cape Adare.

The story of the Australasian Antarctic Expedition with its tragic loss of Ninnis and Mertz and the remarkable tale of Mawson's survival is well told elsewhere, not least in Mawson's own account, *The home of the blizzard*. It was an ambitious expedition, with plans to establish four shore bases, including one on subantarctic Macquarie Island. This required a large team of scientists; the 32 men of the shore parties included three meteorologists, three biologists, three 'magneticians', three medics, four wireless operators and five geologists including Mawson himself. One of the five geologists was a young Melbourne University graduate, Frank Leslie Stillwell (1888–1963).

Considered the 'doyen of Australian ore mineralogists', Stillwell had a distinguished post-expedition career as a petrologist, initially at the universities of Adelaide and Melbourne, and later at the Council for Scientific and Industrial Research in Melbourne from 1929 until retirement in 1953. He made significant contributions to our understanding of the geology of the Australian goldfields, and to the development of ore microscopy in Australia. His work on rocks collected on the Australasian Antarctic Expedition led, in 1918, to Stillwell defining the concept of metamorphic differentiation, the process whereby a mineralogically homogenous rock develops a lamination through a segregation of different minerals due to highgrade metamorphism. The foliation of a schist, for example, is formed by this process. His thesis on the metamorphic rocks of Adélie Land led to the award of his D.Sc. Stillwell published over 50 scientific papers and authored over 500 petrological reports for mining companies during his career. In 1955, a rare earth boroslicate mineral, stillwellite, was named after him. Since 1966, the Geological Society of Australia has awarded the F.L. Stillwell medal annually for the best paper published in the Australian Journal of Earth Science. The recipient of many honours and awards, Stillwell was appointed an Officer of the Order of the British Empire in 1954 and in the same year elected a Fellow of the Australian Academy of Science. It was to this academy that his papers were donated after his death in 1963.

Edited by Bernadette Hince, Frank Stillwell's Antarctic diaries are now published for the first time by the Australian Academy of Science with funding from Geoscience Australia and the Geological Society of Australia. An introduction includes a short biography of Stillwell and a summary of the

expedition as well as some notes on the editing of the text of the diaries, and a list of the expedition personnel and the nicknames by which Stillwell refers to them in his diary entries.

The diaries begin with Stillwell's departure from Hobart on the *Toroa* on 7 December 1911 and continue through until 19 March 1913 when he reached Melbourne on the *Aurora*. Stillwell seems to have been a conscientious diarist, with entries for most days of the fifteen months he was away, but as might be expected, some days have more substantial entries than others. The diary seems not to have been his confidant: the content is largely factual and there is little expression of his feelings or emotions apart from a few entries where he is clearly irritated by Mawson or by his colleagues. But the diaries do give us more detail about Stillwell's sledging journeys to complement the brief account given in *The home of the blizzard*, and give a different perspective on life at the expedition's main base at Cape Denison on Commonwealth Bay.

Two themes feature strongly in Stillwell's diaries: food and wind (of the meteorological, not gastroenterological, sort). On board the Aurora, he thought little of the cook's baking: he found the bread uneatable and the cake, he noted, as only a geologist would, 'usually has a higher specific gravity than the bread'. At the main base hut, it became clear that in addition to the scientists he had appointed, Mawson really ought to have brought along someone who could cook. The men took turns as cook and messman, with varying degrees of success: on one occasion the bread baked by the storeman and the doctor lacked a vital ingredient, resulting in a brick which 'was carved with a saw into the shape of a cross, mounted with ribbon and an aluminium plate stamped with AAE and presented to them'. On another, Ninnis made kedgeree, but misread Mrs Beeton's recipe and added 2oz of pepper; 'the result was rather warm', notes Stillwell.

The wind becomes a regular entry in Stillwell's diary from 9 January 1912, just one day after reaching Commonwealth Bay, when unloading is delayed by a gale. Such a dominant element of their lives does the wind become that their perception of its strength is distorted and they regard a wind of 30mph as calm. The wind, of course, restricted outside work, and on several occasions caused damage to their equipment, and to the wireless masts in particular which required almost continuous repair when they were finally erected. Even heavy bags of rocks could be blown away.

The persistent wind made the interior of the hut cold, and there are many references in the diaries to attempts to caulk the walls to keep out the wind and spindrift. They had problems keeping the hut warm at night, especially in winter, and Stillwell describes how he had to use a blowlamp to remove his frozen clothing from a shelf in the hut. 'This place is either delightful or abominable', he observes.

In addition to a record of the domestic life in the hut, the diaries give us a sense of the irritations and tensions which built up when their plans to be out sledging, surveying or laying depots were frustrated by the weather. The diaries show that there was some friction between Stillwell and Mawson, whose personalities were clearly opposites, and although not stated outright, Stillwell seems not to have had a high opinion of his

leader. Mawson comes across as impatient and irascible, and when Mawson finally gets away on a depot-laying journey on 9 August 1912 to the relief of the men at the hut, Stillwell records the 'marked improvement in the cheeriness of the camp'. When Mawson returns six days later, Stillwell remarks that 'the joyful period of hilarity and much work is probably at an end' but recognises that Mawson 'seems a good deal better for the outing'.

During his time at the main base, Stillwell was industrious. In addition to duties in and around the main base, he was particularly involved in helping with the geomagnetic observations as well as mapping and examining the local geology. By late August 1912, Stillwell had made and packed at least 27 cases of specimens from the vicinity of the hut.

With the arrival of spring, the main exploratory work of the expedition got under way. Stillwell left on his first sledging trip on 7 September 1912, returning nine days later after reaching over eleven miles inland, and travelling in conditions producing a wind chill of  $-61^{\circ}$ F. He was out again on 8 November 1912, as a member of the 'eastern supporting party', which saw him and his companions stuck for four and a half days in their tent by a blizzard. They met up with Mawson, Ninnis and Mertz on 16 November, transferring food and fuel to Mawson's party, leaving them the next day, and returning to the hut on 27 November after ten days of exploration and mapping. On 9 December, Stillwell led the eastern coastal sledging journey, which came close to tragedy after just one day when Stillwell and his two companions nearly died from carbon monoxide poisoning in their snow cave.

On this last journey, of nearly a month, the thoughts of Stillwell and his companions turned to the arrival of the ship, mail and home, and by the time they returned to the main base on 5 January 1913, it is clear from his diaries that Stillwell had had his fill of sledging, and of his two companions, Close and Laseron.

By 18 January, the *Aurora* has arrived and all field parties are back at main base, bar one: Mawson, Ninnis and Mertz have yet to return. Stillwell first expresses the increasing concern for Mawson's party in his diary on 20 January, and 'Still no Mawson' becomes a regular start to Stillwell's diary entries.

Meanwhile, the *Aurora* is struggling against the wind, losing three cables and three anchors in two weeks. By 8 February there is still no sign of Mawson, Stillwell is back on board the *Aurora* and the ship has sailed to pick up the expedition's western party. Then comes the wireless message that Mawson has returned, and Mertz and Ninnis are dead. 'My God what terrific suffering there has been! The ship has put about and we are steaming fast back into Commonwealth Bay'. But on 9 February, unable to reach the shore, the captain decides they must leave, a decision described and supported by Stillwell in his diary.

Surprisingly, there is no further mention of Mawson or how the news was discussed with Wild's western party whom the ship collected on 23 February. In fact, Stillwell's diary entries now become shorter and shorter, at times down to a single line. Even hearing of the deaths of Scott's polar party is simply recorded as "'Scott' news received'.

The book concludes with a list of sources used in its production and an appendix that is the text of a letter written by Stillwell on board the *Aurora* on the journey south, which adds more detail to some of Stillwell's diary entries for that period.

Still no Mawson. Frank Stillwell's Antarctic diaries 1911–13 have been transcribed and edited with care – I found only a single typo ('aoelian' in a note on page 86) – and with a quality publication in mind. It is a lovely book to handle, and is printed on a heavy, good quality paper. The format (seven inches square) of the book has been well chosen. Wide outer page margins on each page of diary entries allow for notes on the text adjacent to the relevant entry, so much more convenient to use than numbered footnotes or endnotes. The design and layout are beautifully done, with a good range of illustrations. If I had some criticism to make, it would be the lack of a good, simple map of the sledging journeys in addition to the photograph of Alfred Hodgeman's map of Cape Denison on page 25, and the lack of an index which can make a book so much easier to use for reference. But these are minor.

Frank Leslie Stillwell has the Stillwell Hills and Stillwell Island named after him in Antarctica; this book is another fitting memorial to a great Antarctic geologist, and is a welcome, worthy and useful addition to the polar library. (Tom Sharpe, Curator (Palaeontology and Archives), Department of Geology, National Museum of Wales, Cardiff CF10 3NP.)