MAWSON'S LAST SURVIVOR – THE STORY OF DR ALF HOWARD AM. Anna Bemrose. 2011. Brisbane: Boolarong Press. xiv + 250 p, illustrated, soft cover. ISBN 978-1-921920–18-9. A\$32.95.

Sir Douglas Mawson is the great Australian hero of Antarctic exploration. In recent years we have had a number of volumes that have provided both biographical details on Mawson himself but also a great deal more about the members of his expeditions. The British-Australian-New Zealand Antarctic Research Expedition (BANZARE) is probably his least known and yet, from a political point of view, proved very significant. It was on the land claims made during these voyages and the earlier Australasian Antarctic Expedition 1911–1914 that the declaration of Australian Antarctic Territory was based in 1933. In addition it published 13 volumes of scientific data over the following 38 years.

This book came to be written by chance when the author happened to come across Alf Howard, at the age of 84, still teaching at the University of Queensland. Howard was originally qualified as a chemist and recruited by Mawson for the BANZARE voyages, 1929–1931, on board RRS *Discovery* as the hydrologist. The book is based on interviews with Howard linked together using extracts from the unpublished diaries of others on the voyages, especially those of Simmers, Douglas, Hurley, Moyes, and Campbell, as well as the published diaries of Mawson, Davis, and Fletcher.

The first 150 pages is devoted to the two BANZARE voyages and provides an easy to read account of their adventures with suitable digressions on the parties, the food, and the science. The landings to make the proclamations of sovereignty are described and include the detail that on one occasion Mawson had to rely on his memory as the written text had already been buried in the cairn! Whilst there is new information about life on board in this volume most of it comes not from Howard's recollections but from the other diaries the author has so assiduously mined. But there is little of any major historical substance to add to the accounts published by Fletcher (1984) and Price (1962).

Although it is not stated, it appears that Howard had no written diary, only a few notes on the voyages. The author

has very skilfully made use of all the mentions of Howard in other diaries to weave a story of his contribution, spiced up with his memories. He was clearly a talented and enthusiastic young scientist who put all his energy into his role in measuring water chemistry, despite the difficulties of working both in the laboratory and in the bows of a heavily rolling ship when taking the samples. There is very little in the way of personal comments about individuals although the captain John King Davis is noted more than once as 'grumpy' and the general tenor of the book is that there were few disagreements and everyone had a good time. Whilst this might seem unduly uncritical it does appear that Mawson managed to recruit an excellent crew for BANZARE who got on very well together.

The latter part of the book describes Howard's later career first at CSIRO working on food chemistry and then, after he retired in 1971, at the University of Queensland. He developed an interest in computers and that allied to his abilities in statistics proved a valuable combination. Having been awarded an arts degree in 1980 he joined the research and lecturing staff first of the Department of Psychology and then the Human Movement Studies group. He went on helping students until 2003 when he was 98 years old and, throughout the period from BANZARE onwards, he continued to talk to schoolchildren around Australia about the Antarctic. He revisited Antarctica in the 1990s on tour ships and the decade culminated in the award of the Order of Australia in 1998 for his services to science. A remarkable man and the book is all the better for providing details of his later career.

Bemrose has provided not only the published and unpublished sources but detailed chapter notes for all of the quotes and for many background details. Illustrated throughout with black and white photos it has a nice period flavour that suits its subject. There are very few misprints (for example Rüsser should be Riiser, brinkers should be bunkers) and the layout is simple and attractive. She has brought to life what was really the last of the old-style 'Heroic Age' voyages in a much more personal way than the official accounts based on Mawson's papers. (David W.H. Walton, British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 0ET. (dwhw@bas.ac.uk))