

As in any undertaking of this nature there are bound to be criticisms and the major one is the apparent random inclusion of topics that are clearly not Antarctic (even by the definitions applied in this tome). Definitions of what constitutes the Antarctic have varied over the years but having set out a definition the book goes on to include entries that are out of scope. There are entries on sub-Antarctic groups and regions but these are not comprehensive and it is not clear why some regions have been omitted (e.g. Antipodes Islands) yet others that are more northerly (e.g. Gough, Amsterdam and Crozet) are included. Evaluating each entry is beyond the scope for any one reviewer however, an examination of entries in fields I am familiar with revealed some omissions and factual errors. This did make me wonder about the quality of the reviewing process that accompanied each entry, and more particularly the quality of the information for those entries I was less familiar. Nevertheless the Encyclopaedia represents a quantum leap forward compared to past attempts that either lacked depth or are riddled with errors.

The amount of repetition is minimal and a testament to the editorial process and the definition of each topic. One of the great successes of the book, and indeed this is especially important for reference works, is the attention to detail for indexing. All entries are cross-referenced to related topics at the end of each entry and the volume is supported by an extensive index. Creating an effective index is time consuming and requires careful consideration and the index in this book is one of the best that I have seen.

The length of entries sometimes perplexed me and I often wondered why so many pages had been devoted to one topic when another seemingly more important to me had so few. This no doubt reflects the publishing constraints, and the competing needs within the space limitations, but it does not unduly detract from what is an excellent volume. Indeed the editorial and production team should be congratulated I was unable to locate a single typographical error. On the other hand the figures often fall short of the high standard applied to the text. The variation in typeface used, lettering sizes, and quality is variable and the lack of colour for some figures makes them difficult to visually comprehend. This is most evident in the maps at the end of volume 2 where the map showing the various tracks of the expeditions looks like a bowl of spaghetti and it is difficult to follow. The production values also leave something to be desired. No doubt, in an effort to keep costs down, some corners have been cut. The paper is of good quality but the quality of the binding for such a large volume is poor. After reading and rereading several passages during the review process the binding is showing signs of wear and I suspect will not stand the test of time.

The Encyclopaedia retails for £285 and although expensive at this price you get good value for money. This is the first authoritative reference point for the Antarctic and provides the reader with a comprehensive range of

subjects all laid out clearly and with excellent cross-referencing.

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## **Below Freezing: the Antarctic Dive Guide**

*Lisa Eareckson Trotter*  
Wild Guides, Old Basing, 2006.  
ISBN 1-903657-10-5, 116 pp, £19.95.

Over the last decade diving in Antarctica has become a tourist activity and so it is not surprising that a book has now surfaced on this subject. Its intention is to introduce the general public/Antarctic tourist to recreational diving in Antarctica and to describe potential sites for diving activities. It gives an overview of the history of diving in Antarctica, the ways a tourist can approach Antarctic diving, information on guidelines to Antarctica for visitors and it describes 25 dive sites with illustrations and maps. That this information can also be useful for scientific diving was shown when we used her site descriptions to evaluate which sites were of scientific interest for our scientific cruise to Antarctica in 2006.

The book is organized in two major sections - 'Diving in Antarctica' and 'The site guide' - which are split into smaller chapters on 'How to get there', 'The Diving', special notes about leopard seals, underwater imaging systems and individual dives site descriptions. The illustrations, maps and underwater colour photographs are well chosen and presented, but the figure legends describing the underwater life are not always correct.

The section describing the history of diving in Antarctica is brief and, although interesting, could have been more so if the author had referenced the scientific dive programmes undertaken by several nations for decades. I see scientific diving as an important part of the history of diving in the Southern Ocean, not only in terms of the changes in diving equipment used but also with respect to safe operating procedures for diving in such cold water. In general the advice given in regard to Health and Safety aspects of diving and the consequences of potential dive accidents could have been more precise - a dive accident during an Antarctic cruise will have a major impact on the trip for everybody else on board.

Lisa Trotter gives a sound account of the different travel options for tourists with an interest in diving and discusses the pros and cons of different sized vessels for diving expeditions. Her descriptions of the dive sites, 19 along the Antarctic Peninsula and six on South Georgia, are the highlight of the book. They give potential divers and interested readers a short introduction to the history of each site and describe conditions that can be experienced within

the dive. An internationally known icon key provides a quick summary of the characteristics of each site. The depth of the dive is given as well as comments on potential ice conditions and lists of the marine flora and fauna which might be encountered. 'Special note' boxes are given for dive sites where possible dangers like leopard seals or small boat traffic might occur. Unfortunately some of the boxes (e.g. on p. 50) end with an unfinished sentence.

For me the book has two negative features; one is the description of the dive sites in the relation to safety and the other is the biological information provided.

In her introduction Trotter refers to the special conditions for diving in Antarctica and the non-availability of hyperbaric chambers. She writes that diving is often limited to a depth of 18 m, which I see as a sensible statement. Unfortunately nine dive sites, including Aitcho Island and Paradise Harbour, are described down to 40 m, a depth not recommended for either the Antarctic or indeed anywhere for sports diver. These descriptions could encourage the recreational diver to break depth limits and explore to these depths. I cannot agree with her statement 'that most companies limit diving to profiles where decompression problems won't be an issue' (p. 18). Decompression sickness (DCS) can be an issue also on shallow dives, especially where they are repeated, and the readers should be made aware that increased circulation and movement during dives in Antarctica, e.g. to keep the body temperature high, can increase the risk of gas bubble formation in the diver's blood which is the first stage to DCS. Research has been carried out in on the formation of microbubbles in Antarctic divers and I would recommend that any edition of this book includes a section on this.

The author describes the Antarctic marine flora and fauna using common names and provides a glossary for scientific names. Unfortunately not all the information is correct, and I do not refer just to the misspellings in particular scientific names. For example, information given about Antarctic octopus (p. 73) is wrong - currently there are 36 species known from Antarctica. The animal group called 'Chitins' are chitons, also called Polyplacophora or 'Coat of mail shells'. Chitin is a polysaccharide found in the skeleton of invertebrates. I was disappointed to see a photo of a diver's hand holding a sea spider (p. 79), encouraging recreational divers to touch or pick up animals during their dives. Marine animals or plants should not be touched by recreational divers, either in the Antarctic or anywhere else.

Overall the book has many interesting features and is well worth consulting, even if some of the details are not correct. The book is at present the first and only dive guide to Antarctic waters and will be read by scientists and tourists.

The main market for the book will be divers and tourists to Antarctica.

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### **South of sixty: life on an Antarctic base**

*M. Warr*

Antarctic Memories Publishing, Prince George, Canada, 2006.

ISBN 13 978-0-9738504-0-6, 188 pp, CA\$24.95.

Perhaps the ease with which a book can be published is one of the major reasons for the sudden flowering of Antarctic memoirs in various countries. In the UK this has a respectable history, starting with Kevin Walton's account of life at Stonington Island in 1947 published in 1955. Since then we have had accounts of life at Maudheim (Swithinbank), Hope Bay (James and Herbert), Halley (MacDowell), Fossil Bluff (Pearce), Argentine Islands (Airey), Fuchs' account of the early adventures at all the British stations and now in this book on Deception Island and Adelaide Island. The fact that many were self-published indicates that commercial publishers feel the market is either too small to be worth the effort or the quality of the manuscript is not high enough. Of course, the way in which the British stations have been run has changed over the last 50 years, as has the science, but what does this book tell us that makes it worth reading? Michael Warr was recruited in 1963 with minimal qualifications to work for two years as a meteorologist. He travelled down and back on BAS ships, and his experiences at Deception and Adelaide did not include any major dramas. What is clear is that the experience proved to be both enduring and to some extent life shaping for him. In his final chapters he visits the sites again as a tourist aboard the *Polar Star* and comments on how different the life at Rothera now seems from his experience with no dogs, instantaneous communications, central heating and no snow-blocking. He does however understand that although his "golden years" cannot be recreated for those going there now their experience is unique for them. His story tells us little new but epitomises an earlier age when Antarctic science was seen as interesting but not important, when the Antarctic Treaty was just finding its feet, and when the lack of communications meant a greater reliance on initiative and a greater community spirit in the remote stations than is possible these days.

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