## **Book reviews**

The Falkland Islands, South Georgia and the South Sandwich Islands. World Bibliographical Series Vol. 184. Alan Day Clio Press, Oxford, UK (1996). 233 pages. £40.50 ISBN 1 85109 236 6.

This series aims eventually to cover every country with a selective bibliography which expresses "its culture, its place in the world and the qualities and backgrounds that make it unique". Previous volumes have already covered the Atlantic Ocean (vol 61) and the Antarctic (vol. 171). The total literature available for the three groups of islands covered in this volume is not very extensive and existing bibliographies for all three areas(Laver for the Falklands and the Antarctic Bibliography for South Georgia and the South Sandwich Islands) must have made the compilation of this volume fairly straight forward. Yet there seem to me to be some remarkable omissions which it is difficult to justify on the grounds of selectivity.

First the Falklands. Whilst I agree with the compiler's rigorous approach to the selection of material on the 1982 war I am less happy about some other areas. There is no crossreference in ornithology to the monograph on the Upland Goose under Agriculture (surprisingly, only an unpublished report is cited rather than the book published in 1993). There is no mention of the recent reprint (1984) of Burn Murdoch, surely much more accessible than the 1894 original. The section on the 1982 War lacks balance with only two out of 41 citations relating to the Argentine view or publications. Indeed, the insistence on avoiding publications in languages other than English as much as possible has resulted in gross under-representation of Argentine publications in several sections. In the section on The Press the Falkland Islands Review is missing, and whilst item 539 records that two volumes of the early issues of the Falkland Islands Journal have been reprinted no mention is made of the third volume published in 1988 covering the period 1977-1981. Astonishingly, item 405 is an unpublished manuscript, listed without any indication of where it might be found. Since the author (Sidney Miller) died some time ago the reader has even less chance of finding it. Other significant small items are missing from various sections including Cobb on wildlife, Whitley on hydatid cysts, the reprint of Dr Johnson's pamphlet etc.

More disturbingly South Georgia is very inadequately treated. Again, exclusion of non-English publications means that some important yachting narratives such as Jerome Poncet's are missing from the Expedition section, as is Frank Wild's "Shackleton's Last Voyage". The Natural History section fails to include any of L H Matthews three books on penguins, elephant seals or wandering albatrosses, nor does

it mention any of the more recent publications on the vegetation (for example alien species) or a single paper on invertebrates. Only six publications, the most recent of which is 1987, are listed for birds despite there being a literature of hundreds of papers. Equally, with only three publications on seals the reader might imagine no research has been undertaken on this group since 1973! The major industry on the island used to be whaling and sealing yet the section on this of 20 items misses many important books in English including R C Murphy "A dead whale or a stove boat", F K Pease "To the ends of the earth", R B Robertson "Of whales and men", H R Lillie "A path through penguin city", J Coleman-Cooke "Discovery II in the Antarctic" etc. Amazingly, LH Matthews' important book "Great Waters" is simply listed in a footnote because of its appendix on the Discovery Reports rather than dealt with as a substantive item in its own right! Unusually for an island the bibliography suggests that there is no marine life other than whales around the island and the long established fishing industry regulated by CCAMLR apparently passed the compiler by completely!

Finally, there is no mention of the Antarctic Bibliography, which includes almost all the South Georgian and South Sandwich publications since 1951, and if the compiler chooses to include the catalogues of one bookseller (Miles Apart) he ought to have included the others who cover the region (P.J. Walcot, Bluntisham Books and High Latitude Books).

Bibliographies are never perfect but this one is seriously deficient in several areas. In my view the compiler should have sought more extensive comments on his draft before rushing into print. Verdict - not as good as the Antarctic volume, so use this volume with caution!

D W H WALTON

## Biogeochemistry of seasonally snow-covered catchments

Edited by Kathy A. Tonnessen, Mark A. Williams & Martyn Tranter

IAHS Press, Wallingford, UK (1995). 465 pages. \$80.00. ISBN 0 947571 44 2.

There are large areas of the world where hydrology is dominated by runoff from seasonal snowpacks and glaciers. In such regions, water supplies to human populations, and the structure and health of ecosystems, are dependent on the quantity and chemical quality of snowmelt. In these areas, the effects of global and regional changes in climate and precipitation chemistry on snowpacks are of great concern.

For this reason, the editors of this volume convened a symposium (with the title of this book) at the XXI General Assembly of the International Union of Geodesy and Geophysics in Boulder, Colorado, USA on 12-13 July 1995. The symposium was intended to provide a forum for the

discussion of the dynamics of snowpacks, and of the development of models of physical, chemical and biological processes in snow-covered catchments. The meeting consisted of two days of talks, and a poster session; this volume is the proceedings of the meeting.

The book consists of 48 papers divided into four sections. The first section contains nine papers on transfers between the atmosphere and the snow, and five papers about processes within the snowpack itself. The second section, on snow hydrology and hydrochemistry, has seven papers. The section on snowmelt runoff and biogeochemical processes has 16 papers, while the final section (glacier hydrology and hydrochemistry) consists of 11 papers.

The difficulty with symposium proceedings is that the editors often have little control over the balance of the book. Although other regions are represented, there is, as is to be expected from a meeting held in Colorado, a very strong North American bias in the papers. Additionally, there are about a dozen papers here that, despite the title of the volume, have no hint of chemical content. Nonetheless, the editors must be congratulated on producing a volume, containing most of the papers presented at Boulder, very rapidly after the meeting. For practitioners of this subject, the book will be a useful source of data and ideas for approaching future work. It does not contain any papers that bring together data from different geographical locations, or that summarise the field, and so is less valuable to those seeking the flavour of a topic outside their immediate interest.

Readers of Antarctic Science will want to know the relevance of this volume to them. Although they began in parallel, the fields of polar ice chemistry and seasonal snow chemistry have diverged considerably in the questions they ask and the methods they use. Most of the papers in this volume concern to some extent the liquid phase. In the polar regions, the main focus of snow and ice chemistry is on ice cores, where the liquid phase is of little importance, while transfers at the air/ snow interface, poorly represented in this volume, are crucial. For this reason, among polar scientists, only workers in some quite specialised areas, for example where runoff to lakes may be important for ecosystems, are likely to find this book of interest.

ERIC W. WOLFF

## The Penguins

T.D. Williams With Illustrations by J.N. Davies & J. Busby Oxford University Press, Oxford (1995). 295 pages. £35.00. ISBN 0 19 854667 x.

This book is the second in the series, Bird Families of the World, and focuses on the 17 recognized species of penguins. It combines a clear, concise and detailed text with a superb mix of recent and historical literature in a volume that represents one of the most complete and current works available on the Spheniscidae. Anyone interested in birds will find this book highly readable.

Researchers in particular will find that its organization, subject matter and bibliography provide valuable tools for undertaking current reviews and addressing more specialized topics. Congratulations are due the author, editors and publishers for incorporating so much current and, in some cases, unpublished information in a single volume and getting it into print in such a timely manner.

The book is divided into two parts. Part I includes eight chapters, each of which provides a detailed synthesis of a particular topic relevant to penguin biology and ecology. Part II includes the 'Species Accounts', and describes all six genera and 17 species (including subspecies where appropriate) in detail. The illustrations of J. Busby complement the text primarily in Part I; eight colour plates by J. Davies showing all species as adults, immatures and chicks provide a transition between Parts I and II.

The topics addressed in Part I, after a general introduction to the penguins, include origins and evolution, breeding biology and moult, demography, behaviour, foraging ecology, physiology and conservation. The emphasis in this part of the book is on the comparative approach, which gives the reader an excellent overview of where research on the penguins has been directed and where further work is necessary. In the interest of making this section more readable, the author has purposely minimized the number of references cited. This has been skillfully done, there being no real loss of context for readers interested in following up on the original studies that form the basis for each topic. Part I concludes by addressing the important issue of conservation and emphasizes the relative roles that degradation of the marine and terrestrial environments have in threatening penguin populations. Noteworthy, is that the last pages of this section provide an excellent discussion of the potential role of penguins as bio-indicators of change in the marine environment, thus linking the functions of basic and applied research on these seabirds. This is an important message in an environment where economic considerations threaten to diminish effective monitoring and research on penguins in areas where it is critically needed, and at a time when the effects of climate change and human activity are becoming more apparent.

Part II of the volume is logically linked to Part I through subheadings that complement the general chapters, but provide comprehensive detail at the species level. It is in Part II that the depth and scope of the volume is fully realized and the relative ease with which comparative data can be accessed appreciated. This link between Parts I and II is one of the book's best features, and the one most likely to make it an indispensable reference for anyone interested in the ecology of seabirds in general and penguins in particular.

W.R. FRASER