

the scope of the symposium covered most of the general topics discussed in the three previous symposia, though in some respects there has been a marked change in emphasis over the years.

The contents list of this book is quite overwhelming; one immediately begins to wonder whether it would ever be possible to read it from cover to cover, especially with the microscopic type size, or whether it will only be used as a reference work by the more specialized earth scientists. Nevertheless, one quickly becomes aware of the nice mix of geology and geophysics, and the well-judged application of modern techniques to some of the long-identified problems. Clearly, this book is a veritable mine of information for those entering the Antarctic field for the first time. Critical evaluation of individual papers is not the task of the reviewer but that of the specialist scientist. The comprehensive author/subject index is indeed a valuable aid to finding one's way through the 680 pages of text.

It is not at all surprising to find a wealth of papers dealing with the most important problem of Antarctic geology—the boundary between East and West Antarctica, and its relationship to the Ross Orogen. Some of these papers are quite specific and deal with matters of detail, whereas others take the 'broad-brush' approach to excite the imagination. Equally important is the section devoted to the crustal structure of Antarctica. Here, the geophysicists have come into their own by providing so much useful information on which the geologists can build.

The section on the Scotia Arc and the Antarctic Peninsula adequately reflects the vast amount of field work in that region in recent years, and the coordination of effort between geologists and geophysicists of several countries.

One might have expected to find more papers directed towards Antarctic mineral resources, especially since the media seem to be giving the layman the impression that Antarctica is an Eldorado awaiting development. Equally disappointing is the coverage of plate tectonics and Antarctic-orientated problems of Gondwana.

In many places in the text one can detect the helpful hand of the referees; woolly statements made at the symposium have been tightened up in the final papers and some of the papers themselves have been shortened materially. Congratulations are due to the editors of this volume for undertaking a task of such enormity with speed and accuracy.

Perhaps this is the time to reflect upon the state of the art *vis-a-vis* Antarctic earth sciences. Both the 1963 and 1970 symposia provided the opportunity for existing reconnaissance geological and geophysical data to be coordinated and reviewed in the light of post-World War II scientific thinking. In contrast the 1977 and 1982 symposia allowed Antarctic scientists techniques to develop the problem-solving approach against the background of earlier knowledge, and to present the results of 'theory-testing' in the field. All in all, these four symposia have set the broad scene for Antarctic earth scientists, and maybe the time has come to consider focussing future symposia on fewer but narrower fields of research. (R. J. Adie, British Antarctic Survey, Madingley Road, Cambridge CB3 0ET.)

A COLLECTIVE FARM IN SIBERIA

KARL MARX COLLECTIVE: ECONOMY, SOCIETY AND RELIGION IN A SIBERIAN COLLECTIVE FARM. (Cambridge Studies in Social Anthropology 40). 1983. Humphrey, C. Cambridge, Cambridge University Press, and Paris, Editions de la Maison des Sciences de l'Homme. 522p, illustrated, soft cover. ISBN 0 521 27401X. £10.95.

Although the country of the Buryat Mongols lies outside the area of direct interest to students of the Arctic and Subarctic, Dr Humphrey's study of 'economy, society and

religion in a Siberian collective farm' is important for all students of the native peoples of the Soviet Union. Based on a visit to Buryatiya in May and June, 1967, when she visited the Karl Marx collective farm in Selenga, as well as a second spell of field work in 1974–75 in a similarly named kolkhoz in Barguzin, east of Lake Baykal, Dr Humphrey has supplemented her direct observations with an extraordinarily thorough analysis of published material relating to the Buryats, as well as statistical material she has obtained locally.

What might, therefore, have been a rather 'thin' book based on a few weeks' stay has been converted into a very complete and important pioneer analysis of the economic and social bases of farm collectives in the region. Not all her material may be extended to other areas of Russia, but she does show us all how much data on the Soviet Union is to be discovered in print if one searches lengthily, as she has done.

At times she is a little ill at ease with the 'official' Soviet theoretical discussion of a sociological nature, but generally she distances herself from this by the skilful use of single inverted commas. The book is dedicated to Sir Edmund Leach, and one encounters traces of his theoretical views in her discussion of Buryat religion.

Dr Humphrey is to be warmly congratulated on the appearance of a work of scholarship that will not quickly date, and which runs little chance of being superseded. Her very full bibliography will be especially useful. (Ian Whitaker, Simon Fraser University, Burnaby, BC, Canada V5A 1S6.)

ADÉLIE PENGUINS; A LONG TERM BANDING STUDY

BREEDING BIOLOGY OF THE ADÉLIE PENGUIN. Ainley, D. G., Le Resche, R. and Sladen, W. J. L. 1984. Berkeley, University of California Press. 240 p, illustrated, hardback. ISBN 0-520-04838-5. £22.00.

This is the long-awaited synthesis of a banding study of Adélie penguins at Cape Crozier, Ross Island, Antarctica between 1960 and 1975. The study was organized by William Sladen, whose involvement with the species began several years earlier in the maritime Antarctic, and for 15 years engaged a team of American biologists, financed and supported by the United States Antarctic Research Program (USARP). As the authors point out in their introduction, the success of the operation owes much to the diligence of Robert C. Wood, who spent ten successive summers at Cape Crozier organizing the banding and recovery. Chapter headings show the scope and detail of the work: Methods and definitions; Occupation of the rookery; Activities of prebreeders; Breeding behaviour; Initial pairing and breeding; Activities of breeding with respect to age and experience; Factors other than age and experience that affect productivity; Demography of the Crozier population; Age at first breeding and the balance among demographic variables.

To those who have been following the American work over the years, a deal of this will be familiar, for the book is a summary of much that has already been published in research papers and reports. It is none the less welcome for bringing the work together and drawing conclusions. The authors write clearly and on the whole non-technically, though this is by no means a popular account of the species. Conclusions on population structure, demography and such important issues as deferred maturity are relevant to many other species for which fewer data are available, and will interest population biologists greatly. This study of Adélie penguins stands alongside Richdale's classic work on Yellow-eyed penguins of New Zealand, and recent Australian studies on Little Blues. The insights it reveals fully justify, if justification is still needed, further long term,