

interactions, and conservation and exploitation. A historical introduction provides an interesting basis for understanding the progress of development of scientific knowledge about the region, and the several exploitative industries which have already had severe effects in it, notably sealing, whaling, and a comparatively small penguin oil industry. Present industries, mainly fishing and krill and squid catching, are assessed with discussion of future development and strategies necessary for effective conservation of these resources. A section similarly deals with the possibilities and problems of future mineral extraction. The editorial style is generally good in dealing with such matters as place-names and Linnean names, but there are notable differences in the amount of detail provided in the monographs. Each included extensive bibliographies, and the general index is comprehensive. A good and varied set of monochrome plates with many maps and diagrams greatly contribute to the work. This book has been published at a very appropriate time, as there is currently a need for an accurate modern account of Antarctic conservation matters. (R. K. Headland, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER.)

### SCAR BIOLOGY SYMPOSIUM, SEPTEMBER 1983

ANTARCTIC NUTRIENT CYCLES AND FOOD WEBS. Siegfried, W. R., Condy, P. R. and Laws, R. M. 1985. Heidelberg, Springer-Verlag. 700 p, illustrated, hard cover. ISBN 3-540-13417-4. DM168.

This volume includes 92 of the 107 papers delivered to the Fourth SCAR Symposium on Antarctic Biology, held at Wilderness, South Africa on 12–16 September 1983. It makes a massive and considerable book. Antarctic biology has grown and moved on since the third SCAR biology symposium of 1974, which attempted to cover the whole spectrum of Antarctic research. SCAR biologists resolved that the next meeting should be narrowed in focus, and a theme of nutrient cycles and food webs was selected. As these are the basic preoccupations of most Antarctic biologists, the fourth meeting still managed to encompass a great deal of what is currently being discovered, and the volume of proceedings is no less encyclopaedic than before.

After an introduction by R. M. Laws, the book falls into five sections covering marine nutrient cycles, terrestrial and freshwater nutrient cycles, marine food webs, terrestrial food webs, and interactions between marine, freshwater and terrestrial ecosystems. Not surprisingly the marine sections predominate; marine papers outnumber terrestrial and freshwater papers by about three to one. Among marine papers it is interesting to see a healthy emphasis on microbial and micro-algal studies, especially in relation to sea ice, and a strong BIOMASS influence—euphausid, fish and bird studies are well represented. Terrestrial papers include a spate of new work on soils, with emphasis on decomposition studies and the role of guano in nutrient cycles. Terrestrial food webs are relatively neglected, mustering only six papers. There are five interesting papers on the chemistry and productivity of freshwater lakes, but food webs in fresh water are poorly represented. As a biologist trying hard to keep up with a fast-moving field I have found something new and interesting in almost every paper. There is a high standard of editing and production throughout. The papers by O. Holm-Hansen on marine nutrient cycles, R. I. Lewis Smith on nutrient cycles and productivity ashore, and G. Hempel on marine food webs are particularly informative guides to their sections, and A. Clark's contribution on energy flow in the Southern Ocean is refreshing reminder that there is still work to be done. The summing-up by Laws provides an overview of what work is being done, by whom and where.

If the main purpose of international symposia is for scientists to tell each other what they have been up to, this was clearly a successful symposium, and to have the proceedings published in just over a year is no mean feat. Despite the swingeing price, every academic and institutional library will need this volume on its shelves. Every polar ecologist will need to keep it handy, and a sabbatical six months or a long sea voyage to absorb it. (Bernard Stonehouse, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER.)

### BRIEF REVIEWS

**GEOLOGICAL STRUCTURE OF MAC.ROBERTSON LAND (EAST ANT-ARCTICA).** Ravich, M. G., Solov'ev, D. S. and Federov, L. V. 1985. Rotterdam, Balkema. (Russian Translations Series 24). 247 p, illustrated, hard cover. ISBN 90 6191 439 6. £20.75.

Translated from *Geologicheskoye Stroyeniye Zemli Mak-Robertsona (Vostochnaya Antarktida)*, published in Leningrad in 1978, this summarizes studies by Soviet geologists from 1971 to 1974 in Mac.Robertson and Princess Elizabeth Lands, which form part of the East Antarctic craton. 'Besides the Archean crystalline basements geologists were able to identify thick Proterozoic fold formations in the narrow troughs of the craton and Permian coal-bearing deposits in the grabens. The tectonic structure of this region allows us to separate a continental rift zone possibly filled with Meso-Cenozoic rocks. The book also provides data on metamorphic and igneous rocks [and] analyses of all the facies of regional metamorphism and a scheme of development of intrusive complexes.'

**SMEERENBURG.** Hacquebord, L. 1984. Groningen, Hacquebord. 311 p + plans, illustrated, soft cover. ISBN 90-70319-08-3.

In Dutch, with an extended summary in English, this is an account of 17th century Dutch whalers on Spitsbergen, especially at the settlement of Smeerenburg, Amsterdam Island. It examines the effects of early arctic whaling on the Arctic ecosystem, and living and working conditions in the seasonal whaling settlements at a time when climate and oceanic conditions were changing radically. Conclusions based on data from excavations are compared with information from written sources.

**TO KEEP THE PAST ALIVE: THE POINT LAY CULTURAL RESOURCE SITE SURVEY.** Neakok, W., Neakok, D., Bodfish, W., Libbey, D., Hall, E. S. and the Point Lay Elders. 1985. 111 p + plans, illustrated, soft cover. \$10.00.

As part of a scheme to document Native subsistence and cultural activities, North Slope Borough of Alaska has for some years '... been gathering information from its communities detailing the ways that their areas are used. These studies include cultural/historical associations the communities have with the coast. Reports based on this information are used as resource documents for the Borough's land management programs to assure that local needs and concerns are not overlooked in the planning effort.' This report is available from the North Slope Borough Planning Department, PO Box 69, Barrow, Alaska 99723.

**YUKON WILDLIFE: A SOCIAL HISTORY.** McCandless, R. G. 1985. Edmonton, University of Alberta Press. 200 p, illustrated, soft cover. ISBN 0-88864-093-5. Can\$14.95.

This book examines the social development of the Yukon Territory from the Gold Rush to the 1950s, with particular reference to the wildlife laws that governed market hunting,