

tory text in English and French. The area covered by the plates is roughly 68° to 71°N, 128° to 140°W. The atlas is plastic-spiral bound, which allows each page to lie flat.

Early geologic events represented in the atlas are as old as the beginning of the Paleozoic, although the beginning of the Tertiary Period, about 65 million years ago, is more important from the standpoint of economic potential. It was then that structural and stratigraphic traps developed in reservoir rocks that became sites for deposits of natural hydrocarbons migrating from nearby source beds. More emphasis is thus placed in the atlas on this period of geologic time, although Phanerozoic geology is also shown on a series of plates for completeness. The older geology is known as a result of drilling activities by the Canadian petroleum industry on land-based platforms, marine-based artificial islands and drillships. In this part of the world, north of the northern limit of active permafrost, the depth to the base of permafrost offshore is 700 m below the seafloor, and 740 m on land. Distribution of thinner permafrost zones bears some relationship to the limits of Wisconsinan glaciation, as shown on one of the plates. Permafrost is just one of the concerns confronting development of hydrocarbons in this harsh environment.

'This atlas is designed to serve resource developers, exploration companies, scientific communities, government agencies, schools, and the public. It is also organized to provide background and baseline information for safe environmental and engineering designs.' (from the preface). The Canadian government has done a great service in providing this series of atlas plates which, in some respects, is also an environmental atlas and a manual for safe development of resources in the Beaufort Sea. (John Spletstoeser, Minnesota Geological Survey, University of Minnesota, St. Paul, Minnesota, U.S.A.)

BRIEF REVIEWS

NORTHERN ENVIRONMENTAL DISTURBANCES. Kershaw, P. (editor). 1988. Edmonton, Boreal Institute for Northern Studies (Occasional Publication 24). 70 p, illustrated, soft cover. ISBN 0-919058-69-8. Can\$15.00 inc postage.

A volume including five of the eight papers presented at a workshop in Edmonton, November 1986, on the theme 'Northern environmental disturbances: mitigation and reclamation'. The papers report on long-term experimental work relevant to site reclamation, including surface drainage control and re-establishment of plant cover.

RESEARCH AND MONITORING IN CIRCUMPOLAR BIOSPHERE RESERVES. Simmons, N., Freeman, M. and Inglis, J. (editors). 1987. Edmonton, Boreal Institute for Northern Studies (Occasional Publication 20). 75 p, illustrated, soft cover. ISBN 0-919058-65-5. Can\$15.00 inc postage.

Proceedings of an international symposium held in August 1987 at Waterton Lake, Alberta; the report is pub-

lished jointly by UNESCO-MAB Northern Science Network and the Boreal Institute. Topics covered include resource development in arctic biosphere reserves, integrated global background monitoring networks, public participation in reserve research and management, planning the creation of new arctic reserves, and Soviet contributions on the principles of distribution of reserves and global monitoring networks in the subarctic, and environmental education in biosphere reserves.

SMALL-TYPE COASTAL WHALING IN JAPAN. Freeman, M. M. R. (convenor). 1988. Edmonton, Boreal Institute for Northern Studies (Occasional Publication 27). 116 p, illustrated, soft cover. ISBN 0-919058-75-2. Proceedings of a workshop involving a dozen participants from Australia, Canada, Japan, Norway, UK, and USA, convened in April 1988 to discuss 'small-type coastal whaling'—the excruciating title of a regulated Japanese fishery involving mainly minke, pilot and Baird's beaked whales. This report includes chapters on the history, sociology and current status of Japanese coastal whaling, the distribution and uses of whale meat, appendices and a bibliography.

ICEBOUND: THE JEANETTE EXPEDITION'S QUEST FOR THE NORTH POLE. Guttridge, L. F. 1987. London, Airlife Publishing. 357 p, illustrated, hard cover. ISBN 1-85310-006-4. £13.95.

An account of an ill-starred US naval expedition, led by Lt George De Long, to explore the north polar basin from the Bering Strait. *Jeanette* was caught in the ice, carried past Wrangel Island and finally crushed; De Long and his crew took to the boats, the survivors ending up in the Lena delta. A well-researched and well-told story; this is the UK edition of a book published in 1987 by the US Naval Institute.

THE LIVING TUNDRA. Chernov, YU.I. 1988. Cambridge, Cambridge University Press (Studies in Polar Research). 213 p, illustrated, soft cover. ISBN 0-521-35754-3. £12.95, \$17.95.

Doris Löve's translation of a tundra biology classic, now in soft cover at an acceptable price: the original edition (1905) was reviewed by R. E. Longton in *Polar Record* 22(140): 541 (1985).

OCEANUS 31(2):THE ANTARCTIC. Ryan, P. R. (editor). 1988. Woods Hole, Woods Hole Oceanographic Institution. 112 p, illustrated, soft cover. ISSN 0029-8182/83. US\$2.00 + .05.

Special Antarctic issue of *Oceanus, the International Magazine of Marine Science and Policy*, with timely articles on the Treaty system, the ozone hole, the circumpolar current, the southern ocean and global climate, marine living resources, oil and natural gas, the Soviet Antarctic program, logistics, Antarctica and the Law of the Sea and other contemporary concerns.