

**ICEDIVE 84**

**ARCTIC UNDERWATER OPERATIONS; MEDICAL AND OPERATIONAL ASPECTS OF DIVING ACTIVITIES IN ARCTIC CONDITIONS.** Rey, L. (editor). 1985. London, Graham and Trotman. 355 p, illustrated, hard cover. ISBN 0 860 10 6314. £40.00.

*Arctic Underwater Operations* is about technology. It is not, as in many such publications, a symposium proceedings with a large number of scientific papers discussing recent research. Even less is it a text which sits on the bookshelf and occasionally provides the answer to obscure scientific questions. It is a book to be browsed or to be read from cover to cover; it is a book of value to the expert diver, but one which will also hold the interest of the less well-informed. Moreover, since 'Icedive 84' took place only months ago, the editor (Prof Louis Rey) and publishers have achieved a remarkable feat in producing a timely symposium proceedings. In a field where technology advances so rapidly, this has ensured that *Arctic Underwater Operations* will remain up-to-date for several years. The book is in three sections: Part I, dealing with the medical and physical problems associated with diving, and especially with diving in cold water; Part II, which considers the operational management side; and Part III, which discusses operational aspects of the actual diving process. Each part is then divided into a number of chapters written by authors and based on papers read at 'Icedive 84'.

I enjoyed reading Part I most, probably because I learned so much from it. Of special mention are a series of papers which discuss slowing of heartbeat (bradycardia) due to diving. Does it really occur or were early conclusions drawn from involuntary submersion of ducks incorrect? Chapter by Kanwisher and Gabrielsen I found excellent, especially in its discussion of this problem, and in its explanation of aerobic and anaerobic energy pathways in relation to differences between man and the cetaceans. My only real caveat in reading Part I was a series of 'Plague Dog' live-animal experiments which, although probably extremely informative and valuable, should carry PG certificates. In dealing with managerial aspects of diving, including the complex issue of equipment assessment, Part II was of least interest to me personally. However, this section was also the most specialised, so that I am not the best judge of its value. I did find myself becoming slightly annoyed with authors who were out to sell a product rather than inform an audience. The chapter by Sveinsson on the history of diving in Iceland makes good reading, as do papers on avoidance of hypothermia, equipment design and performance under cold conditions, etc. There is much to be had for the experts in Part II. 'Hands-on-experience' is what Part III is all about. In this section we find papers discussing hydrocarbon engineering work in the Arctic, sea ice characteristics and behaviour, remotely operated underwater vehicles, the operation of mini- and full size submarines in Arctic waters, and finally, a paper which describes various submarine freighter designs for Arctic transportation.

*Arctic Underwater Operations* is strongly recommended to expert and novice alike, and I conclude by emphasizing the diversity of the book by a quotation from chapter 8; 'When one is chased by an alligator the first 100 m are the most dangerous'. (Vernon A. Squire, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER.)

**CANADIAN ARCTIC WHALING**

**AN ARCTIC WHALING DIARY: THE JOURNAL OF CAPTAIN GEORGE COMER IN HUDSON BAY 1903-1905.** Ross, W. Gillies (editor). 1984. Toronto, University of Toronto Press. 271 p, illustrated, hard cover. ISBN 0-8020-5618-0. £25.00, Can\$35.00.

Captain George Comer, probably the best known of the Arctic whaling masters, made his first voyage to Hudson Bay in 1875, on the bark *Nile* from New London, Connecticut. This was followed by elephant sealing voyages to South Georgia and Kerguelen between 1879–1889, with a subsequent return to Arctic waters in 1889 as mate of the whaler *Era*. During his voyages, Comer kept records which, unlike those of many of his contemporaries, were not simply brief descriptions of ice and weather conditions, but detailed social commentaries, which he had the foresight to recognize would eventually be valuable as historical documents. For a whaler, he was unusually interested in natural phenomena and native culture, interests which he cultivated during periods of overwintering. The meticulous manner in which he records daily events, and collected artifacts and cultural information, made him a reliable field worker for scientific institutions, notably the American Museum of Natural History. By 1909, he had collected for them some sixty sound recordings, the first ever made amongst North American Eskimo, and, by 1917, had made some two to three hundred facial plaster casts.

His 1903–1905 'Journal' of a voyage as master of the *Era* describes operations at the start of the last decade of Hudson Bay bowhead whaling. Especially interesting is his description of ice-edge cruising, pursuing the whales in small boats over 100 miles or more for their whalebone, and camping at nights in covered boats on the floes. Particularly good descriptions are given of the mutually beneficial socio-economic relationships which developed between the whaling crews and the Eskimos who provided labour and skin clothing for the whalers, in return for ammunition and food. Comer appears to have encouraged such relationships with a degree of sympathy probably rare in whaling masters.

Early Canadian Arctic sovereignty issues are examined, since at this time the Canadian Government began to regulate the activities of American whaling crews, being particularly alarmed by their depletions of both the bowhead whale and musk-oxen stocks. This introduction of sovereign authority was accomplished by sending the *Neptune* expedition to Hudson Bay, including a detachment of Royal North-West Mounted Police, under the command of Major Moodie, appointed Acting Commissioner of 'the unorganized Northeastern Territories'. The despatching of the *Neptune* was resented by the New England whaling companies, whose vessels had been whaling in Hudson Bay for forty years, and who saw it as an intrusion into their Arctic activities and an attempt to drive them from the region. Comer became friendly with the crew and scientific staff of the *Neptune* during her overwintering adjacent to the *Era*, but took frequent exception to the high handed manner apparently used by Moodie to enforce the newly introduced regulations, such that medication had to be prescribed by the doctor of the *Neptune* to calm him down!

Comer's 'Journal' has been edited by W. Gillies Ross to produce a highly readable account of Hudson Bay whaling, and the prevailing interactions between the crews and native peoples. The introduction, appendices and extensive footnotes contain a wealth of explanatory and background information, thus making the book of particular value to those with a general interest in all aspects of polar regions. Minor personal criticisms concern the use of 'Newfie' (eg 'Newfie Fog'), a sometimes derogatory abbreviation for 'Newfoundland' often used by 'come-from-aways from upalong' (ie mainland Canadians!), and the misspelling of St John's as Saint John's (unless taken directly as that from the original sources) leading to confusion with the city of Saint John, New Brunswick. Nonetheless, Ross has produced a most interesting account of activities and relationships in the Canadian Arctic at the turn of this century. (A. B. Dickinson, Department of Biology, Memorial University of Newfoundland, St John's, Newfoundland, Canada A1B 3X9.)