In Chapter 1, the author briskly launches his treatise with an etymological history of the common name (halibut) and a review of the scientific evidence underlying the currently accepted scientific name (*Hippoglossus stenolepis*); and concludes with an account of the campaigns he and others waged to prevent the name halibut from being used for other flatfish species (*Rheinardtius* and *Paralichthys*) of inferior quality. The tone of this book is set by the author's evident challenge to "all comers" who would disagree with him on any of these three subjects.

Six chapters are devoted to the fishing operations, and include a history of methods, ports of landing, origin of catches (by national fleet); and special chapters on the incompatibility of net and line fisheries, and the sport fishery.

Four chapters deal with processing and marketing, and consider such unusual subjects as "industry organization" and "fleet programs for orderly marketing", as well as the more conventional history of processing methods and economic history of the industry as a whole.

As a background to the initial agreement in 1923 which created the current International Pacific Halibut Commission, the author begins with fishery aspects of the 1783 Treaty of Paris, which ended the Revolutionary War, and traces the history of Canada-U.S. fisheries problems to the 1953 Halibut Convention. Of interest was the near-break between Canada and Great Britain over who should sign the 1923 Convention on behalf of Canada, at that time not a sovereign nation.

Two chapters deal with research and management, and discuss incidental halibut catches in other fisheries, enforcement of regulations, biology, and stock assessment. Interestingly, the author deems predator-prey, diet, and parasite studies to be of little or no importance to management of the halibut resource.

One chapter is devoted to an "overview" consisting of interesting anecdotes arranged geographically throughout the halibut's range in the eastern (but not the western) Pacific, from 10 miles north of the U.S.-Mexico border (southern limit of halibut's geographical range at 32° 45′ N lat.) to the East Bering Sea at St. Matthew Island (60° 30′ N lat.), the northern limit at which a "full fare" (180 700 lb in 10 days fishing) of halibut has been recorded.

The final chapter provides brief sketches of some notable individuals from the public, private, and scientific sectors whom the author has singled out for acknowledgement of their contributions to the "development and management of the Pacific halibut resource during the past 85 years". Of some interest is the inclusion of IPHC's first two Directors of Investigations in the public sector, W.F. Thompson and H.A. Dunlop, respectively. The scientific sector consisted of F.I. Baranov (U.S.S.R.), W.E. Ricker (Canada), and M. and G.O. Sars (Norway).

The author spent virtually his entire professional career with halibut, and its unique setline fishery. Not surprisingly, he has acquired a few biases "down through the years". His book provides pleasant and interesting reading, but the reader should be forewarned that, as the Preface states, all is not told. Errors of omission and commission occur which reflect biases acquired over a long and dedicated career.

Major examples of omissions are accounts (and literature citations) of the major and long-term scientific controversies dealing with: (1) the relative importance of fishing and environment on the long-term fluctuations in abundance of Pacific halibut in the eastern Pacific Ocean; and (2) economic/social problems raised by the near-exclusive right of exploitation of the halibut resource possesed by a setline fleet. Lesser omissions include the lack of acknowledgement by literature citations of the substantial achievements of Canadian scientists with respect to preservation techniques in fishing vessels and rail cars; and effects of price controls in Canada during World War II. Vague and infrequent references to the major omissions appear intermittently, and probably will puzzle any reader unfamiliar with the history and activities of IPHC.

Major errors of commission are the rather firm, but undocumented statements of "fact" on quite controversial subjects. Among these might be cited: trawling as the primary cause of the recent decline in stocks; and estimates of incidental halibut catch by foreign vessels. On the lighter side, the two-masted schooner *JENNIE F. DECKER* is incorrectly labelled a sloop in Figure 7.

In summary, the book is well worth the modest price ($23.95 in soft cover; $29.95 in deluxe hard cover), and F. Heward Bell is to be commended for a noble effort.

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HANDBOOK OF SNOW: PRINCIPLES, PROCESSES, MANAGEMENT & USE. Edited by D.M. GRAY and D.H. MALE. Toronto: Pergamon Press, 1981. 776 p., illus. $28.30 softcover, $85.00 hardcover.

"Snow is a pervasive element that may, at times, paralyze communities and stagger economies throughout the world. Appreciated for its beauty and for its usefulness to winter sports enthusiasts, snow more often than not is considered an undesirable and costly nuisance. Surprisingly, the adverse aspects of snow are accepted with relative complacency as a fact of the human environment, and there is little appreciation of either the magnitude of snow's impact on modern life or its immense value as a natural resource."

So begins this diverse compendium, which could be subtitled "Almost Everything You Wanted to Know About Any Possible Practical Aspect of Snow". The book, engineered by a committee of the National Research Council of Canada, consists of a series of individual chapters written by a wide variety of authors and will tell you which gases absorb onto snow crystals, how snow ridging will influence your crop yield, how to keep your railroad switches clear, how long the studs on your snow tires will last, and the composition of your cross-country klister wax (did you know that early recipes for ski wax included bacon rind, old bicycle tires, and gramophone records?). According to the preface, this book was designed to meet the need for an introductory text for those dealing with or interested in practical aspects of snow management. Assuming that there is in fact such a need, I would say the book does rise to the occasion.

The diversity of subject matter is best chronicled by a review of the table of contents. Part I (Snow and the Environment) deals with ecological considerations (plants, animals, and humans), effects on agriculture, and influence of snow on the air above and the ground below. Part II (Snowfall and Snowcover) considers meteorology and properties of snow, distribution, measurement, ablation and runoff, lake ice and snow, and avalanches. Part III (Snow and Engineering) deals mainly with aspects of control and removal and contains an interesting chapter on travel over snow. Part IV (Snow and Recreation) consists of two short chapters which are quite interesting, if somewhat out of place: Skiing and Mechanics of Skis. One wonders why snowmobiles, toboggans, and saucers were shortchanged.

The chapters are on the whole well-written and illustrations are adequate. Some hard-core readers may find treatment of particular subjects overly brief; this book could be considered a series of introductions to an assortment of topics. However, such readers may refer to the excellent bibliographies appended to each chapter. For many readers (such as your reviewer) the depth of treatment of many subjects is quite appropriate. For example, I particularly appreciate P. Schaerer's fairly comprehensive but concise discussion of avalanche genesis and control.

This book should be useful to a wide variety of people, although skiers, farmers, roof designers, and so forth each may find that only small portions of the book are relevant to their particular interests. The organizers, editors, and authors involved in the project are to be commended.

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THE 1806 LOG BOOK CONCERNING THE ARCTIC VOYAGE OF CAPTAIN WILLIAM SCORESBY. Kept by WILLIAM SCORESBY, JUNIOR. Whitby: Caedmon of Whitby Press (9 John Street, Whitby, Yorks., England Y021 3ET), 1981. ISBN 0-905355-24-5. 40 p. £12.50.

In his list of log books in the United Kingdom from the whale fishery, Mr. S.G. Brown gives the names of rather over a hundred ships. They are all that remain from the thousands of voyages over a couple of centuries or so. Over sixty years ago, the Explorers Club of America published in facsimile a number of log books of William Scoresby, senior, the whaling captain of Whitby who had a great name in that trade. Now the Whitby Literary and Philosophical Society has published in facsimile the log book kept by his son when mate of the *Resolution* in 1806, and it has been produced well. Up to now, all that has been available about this voyage has been the entry in *Lloyds List* for the return of the ship at the end of the season — the departure and catch were passed over — and the comments by William Scoresby, junior, in his *Arctic Regions* in 1820.

What does this facsimile tell us? It gives the catch, 24 whales (from 3′ to 11′3″ bone), two seals (the sealing at Jan Mayen was spoiled by gales), two seahorses, two bears and one unicorn, enough to provide a satisfactory reward for master, crew and owner. This raises an unanswered question — why were some masters consistently better than the rest? Mr. S.G. Brown suggests they were the men who took careful note of the habits of the fish and their feeding grounds. A generation after the Scoresbys, Captain Robert Martin achieved a like pre-eminence. It also depended much on the harpooners; in this voyage, one man was about twice as successful as the other three men.

This log book also recounts the routine of a voyage, with a start to fitting out in January, departure from Whitby towards the end of March, a week in Shetland which produced only eight men to augment the crew, coiling down lines and getting out the boats on the passage north. Guns were put away just before the Arctic Circle, Scoresby being unaware of a French squadron sent out to attack British whaling ships; he was lucky in seeing none of them.

The whaling voyage began at Jan Mayen. As the ice was dispersed, the *Resolution* sailed northwards, to Bear Island and then beyond the 80th parallel to the north of Spitsbergen, where most of the fish were taken.

The log shows the reliability of Scoresby's dead reckoning on the outward and homeward passages; merchant-service masters of that day are often underrated as navigators and surveyors. When in the ice or fishing, masters were willing to take an occasional sight for latitude, but were generally content to determine position by rule of thumb or experience. If the Greenland or Spitsbergen coast came into sight, they had ample warning for safety. On this voyage, Scoresby got his longitude from another ship which had sighted Jan Mayen. His position for Bear Island was accurate. This log book was kept in sea time, from noon to noon, with the next day starting 12 hours before civil time.

William Scoresby, junior, illustrated this log with two views, Balta Sound and Bear Island, both good enough for recognition. He added an illustrated appendix on making a jury rudder. Prayers at the beginning and end of the voyage bring out the piety of the future Revd. William Scoresby, D.D., and his father.

There are a number of reports of whaling ships advancing beyond W.E. Parry's farthest north of lat. 82°45′N in 1827, but as their log books were destroyed a century or more ago they cannot be authenticated. On this voyage, the *Resolution* was for a fortnight north of the 80th parallel, in open water and loose ice, with good weather. The highest latitude was 81°30′N, in about 19°E, on the line of Parry's approach to the Pole. The water sky showed that there was no ice south of 82°N, and that any land must lie beyond the 83rd parallel. From what we know of variations in the pack ice between one season and another, it seems likely that on occasions some ships in search of fish may well have reached 83°N and beyond; but they thought little of it.

There are other points to be drawn from this facsimile, but the remarks above will indicate its value. It could perhaps have been helped by an informed introduction by one of the authorities on whales and whaling. Nevertheless, it is good to have this reproduction.

If the Scoresbys were to return today, they would not know the "country". So far as can be gathered, the Greenland Sea has been fished out so completely that whale stocks have not been regenerated in a hundred years. Perhaps a lesson for the Antarctic?

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ARCTIC FLYING. By B.M. BUCK, R.W. CORELL, R.G. DICKERSON, A. HANSON, A. HEIBERG, R.K. MCGREGOR, J. PORTER, J.F. SCHINDLER and R.A. RAUCH (ed.). Publication supported in part by The Office of Naval Research Arctic Programs, 1979. 200 pp. incl. photographs and bibliography.

Having done a little arctic flying, including some out of Barrow and Prudhoe Bay, I read, with appreciation, *Arctic Flying*. As with any book put together by multiple authors, there is a little redundancy, but when one considers the scope of the subject involved, it isn't surprising. *Arctic Flying* contains all the information that any pilot should have access to before he/she puts his/her aircraft nose north. If Dick Dickerson had written his chapter some years ago, he could have saved a lot of time and patience spent with the likes of me. Matter of fact, for anyone about to take part in any research in the north, the chapter on Safety and Survival holds true and it is all spelled out. For those, and there are still many, who contemplate doing research on the ice-pack — or even just in a remote location — the information about setting up camps is valuable, as are the comments on how to man them. Technology will continue to make the arctic researcher's life easier, but the basic problems will always be there. *Arctic Flying* is a tribute to those who worked long and diligently to help expand our ability to do research safely and competently in an extremely hostile environment.

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