

international scientific background (contributed by Walton himself), five on marine and terrestrial biology (I. Everson), four on ice and rocks (C. S. M. Doakes), four on climate and atmosphere (J. A. Dudeney), and the last chapter is a round-up of science under the Antarctic Treaty, current and future (R. M. Laws).

The scientific work is well and clearly described; Inigo Everson's contributions are a particularly masterly summary of a complex field, but they are all written and illustrated up to the best *Scientific American* standard. I would have been glad to see the sources of many of the diagrams recorded more fully, so that readers could turn up the originals if they wanted to. Well-described too is the international scientific organization, with its awful acronyms familiar to readers of *SCAR Bulletin*, and the Antarctic Treaty Organization, now maturing to solemn middle-age. There is an excellent selection of photographs, both colour and black-and-white. This is a well thought-out, well produced book. The price is daunting for a popular book, but the text is right for school, college and university libraries, for polar and non-polar scientists, for readers of *Polar Record*, favourite nephews and nieces, and for anyone with even a remote interest in what goes on in Antarctica. (Bernard Stonehouse, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER).

SAFETY IN SEA ICE

ICE SEAMANSHIP. G. Q. Parnell. 1986. London, Nautical Institute. 87 p, illustrated, soft cover. ISBN 1-870077-01-6. £17.00.

This monograph of 78 pages is divided into two parts. Part I, 'Ice', describes different types of floating ice, the formation of ice and its changing appearance to help identification. Internationally-accepted ice terminology is explained and well illustrated. Part I concludes with an Ice Summary that warns of the not-readily-apparent perils associated with ice navigation. Part II, 'Ice Seamanship', lists seven Basic General Safety Rules, which form the heart of the treatise. They are elaborated with illustrations, and their prudence is aptly emphasized by reminding the reader of the *Titanic* disaster.

In one of many welcome touches of humour the author suggests that every ship in ice might benefit from a statement, in gold letters on the bridge, of the simple law of physics—that impact varies with the square of speed. Using illustrations, the basic principles of negotiating pack ice unaided and under ice breaker escort are explained. Dangerous situations arising from anchoring and mooring in drift ice, lack of understanding in the use of charts with scanty information, incorrect assumptions on radar targets, are all dealt with. If asked to find fault I would have only two comments. Firstly, in Part II under the sub-heading 'Avoiding and negotiating ice', I would reiterate the warning given in the Ice Summary of Part I, that a major danger of becoming beset is that drifting ice may take the ship toward such unwelcome dangers as the

shore, reefs, or grounded bergs. This is a very real hazard when working pack ice off Antarctic Peninsula. Secondly, where the author deals with radar interpretation, I would add that bergs and bergy bits in pack ice are often most readily identified on radar by the shadow sector they cause.

I strongly recommend this excellent publication to all masters and officers who operate ships where ice is or may be encountered. To shore-side ship managers and superintendents who have authority over ships that may meet these hazards, I recommend that copies be made available on all their ships, and that its reading be backed by Standing Orders. Yachtsmen also who venture to high latitudes would find its advice and knowledge very applicable. The book is simple in style, makes precise statements, is economic in words, uses illustrations admirably, and misses nothing. Humour makes it readable and—most importantly—memorable. It is now on the bridge of my ship, to be read in conjunction with my other Standing Orders, and I have indented for the appropriate law in gold lettering, to be supplied of course at owners' expense. (Capt C. R. Elliott, RRS *John Biscoe*, British Antarctic Survey, Madingley Road, Cambridge CB3 0ET.)

THE ANTARCTIC TREATY SYSTEM

THE ANTARCTIC TREATY SYSTEM: LAW, POLITICS AND DEMOCRACY. Myrhe, J. D. 1986. Boulder, Westview Press. 162 p, soft cover. ISBN 0-8133-7286-0. £17.50.

THE ANTARCTIC TREATY REGIME: LAW, ENVIRONMENT AND RESOURCES. Triggs, G. D. (editor). 1987. Cambridge, Cambridge University Press. 239 p, illustrated, hard cover. ISBN 0-521-32766-0. £30.00, US\$54.00.

These are very different additions to the extensive literature on Antarctica; the first adds to one narrow aspect, the second provides a comprehensive, up-to-date overview of all the issues deriving from the Antarctic Treaty and its related instruments.

Myrhe is a newcomer to this field, now a freelance writer. His slim volume (40 pages consist of documents, etc) is based on his PhD thesis, which made use of the records of the first three months of the Antarctic Treaty Consultation Parties, which have only recently been made available, though explanatory background and a chapter on the current minerals negotiations are included. The issues and positions remain surprisingly familiar and it is interesting to read Myrhe's account of their first appearance. Antarctica watchers will want to acquire this book because it is the first to use this material, but that said, it is not otherwise an outstanding work. The background is merely sketched in. The analysis is superficial, Myrhe has not fully overcome the problem many students find of handling accounts of meetings in a thematic rather than an episodic descriptive manner, and there are several gram-