

Reviews

GEOGRAPHICAL NAMES OF THE ELLESMERE ISLAND NATIONAL PARK RESERVE AND VICINITY. Geoffrey Hattersley-Smith. 1998. Calgary: The Arctic Institute of North America. x + 89 p, illustrated, soft cover. ISBN 0-919034-96-9.

Geoffrey Hattersley-Smith is one of the world's foremost experts on polar place-names, and his previous works, *The history of place-names in the British Antarctic Territory* and *The history of place-names in the Falkland Islands Dependencies*, are recognised as classics in their field. Hattersley-Smith's most recent book, which deals with the 382 officially accepted geographical names in northeastern Ellesmere Island, makes a threesome of extremely valuable works of outstanding scholarship.

As did Hattersley-Smith's previous publications on place-names, this slim volume is packed full of virtually all imaginable information about the area in question. The book starts with the historical background for, and a review of the principles of, the Canadian Permanent Committee on Geographical Names, the body that, under various titles, has, since 1897, had the overall authority for the adoption of names. A brief history follows, examining the development of the names, not only via expeditions and voyages for discovery and science, but through the field-work of various Canadian government departments.

Most of the book is the actual detailed examination of the names themselves, listed alphabetically, with each entry giving the longitude and latitude of the feature; its locality in relation to neighbouring features; the chronological details of its discovery, mapping, and naming; and references to the first publication of that name and to the most recent Canadian government map. Cross-references are provided linking the more than 100 synonyms to the entries, including those Pan-Canadian names that are officially approved in both English and French.

There are also two appendices. The first lists the place-names chronologically by the naming expedition, starting with Ellesmere Island itself, the southeast coast of which was initially charted by Edward Inglefield in September 1852 and was named after Francis Egerton, First Earl of Ellesmere, a statesman and president of the Royal Geographical Society. The second appendix lists the historic sites within the book's area, in chronological order of the expedition involved. The book also has a series of excellent full-colour pictures and a detailed map of Ellesmere Island.

Although this is not a book that one would normally read from cover to cover, it does make fascinating browsing, and one can receive a history lesson on virtually any page of it. For on or adjoining northern Ellesmere one can find features named for exploring heroes, such as M'Clintock Inlet or Kennedy Channel; for imperial lead-

ers, such as Disraeli Glacier or Mount Gladstone; for far-away areas of the world, such as Mount Oxford; or for natural aspects of the area, such as Mount Timmia (for the moss genus *Timmia*, represented by three species in the area) or Taconite Inlet (for the cherty iron formation exposed in the cliffs). Perhaps most interesting are those names later rescinded for lack of positive identification, because they seem frequently to relate to individuals not normally associated with the Arctic (such as Mount Frere for Sir Henry Bartle Frere, well-known governor first of Bombay and then of the Cape of Good Hope, and Mount Rawlinson, named for the one-time president of the Royal Geographical Society, who was known for his verbal battles with Henry Morton Stanley).

Like his earlier works on place-names, Hattersley-Smith has again produced a book that will be an essential reference work. It should be valued both by libraries and by anyone travelling to or interested in the Canadian high Arctic. (Beau Riffenburgh, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

GEOLOGY AND SEISMIC STRATIGRAPHY OF THE ANTARCTIC MARGIN, 2. Peter F. Barker and Alan K. Cooper (Editors). 1997. Washington, DC: American Geophysical Union (Antarctic Research Series 71). xv + 187 p, illustrated, hard cover. ISBN 0-87590-884-5. \$US 57.00.

This is the second volume dealing with the results of ANTOSTRAT (the Antarctic Offshore Stratigraphy Project), an international programme organised under the auspices of SCAR. The two books are designed primarily to combine and interpret large seismic reflection data sets from the Antarctic continental margin, and interpret them particularly in terms of the long-term glacial history of the Antarctic ice sheet.

The first volume (reviewed in *Polar Record* 33 (185): 160–161, 1997) is a fine compilation of the seismic and marine record, but focuses heavily on the Antarctic Peninsula region and the Ross Sea. This new volume fills in some of the gaps, and the 10 papers therein are complementary to those of the first.

Four more papers describe the continental shelf and rise of the Antarctic Peninsula, and the adjacent basins on the basis of seismic stratigraphy. Improved resolution has given scope for interpreting depositional processes west of the Antarctic Peninsula in a paper by Larter and others, although the glaciological models presented are simplistic and disregard much recent sedimentological work undertaken at modern ice margins. Glacial as well as tectonic history is addressed in an account by Rebesco and others of sediment drifts, bodies of sediment that occur at the foot

of the continental rise, and which are a characteristic feature of glaciated margins. Next, Elliot reviews the tectonic evolution of the northern part of the Peninsula utilising a vast range of geophysical and geological data, and developing links between uplift, climatic change, and the development of the ice cover. A paper by King and others on the crustal structure of the Powell Basin follows; this is a small ocean basin northeast of the tip of the Peninsula that is of considerable significance in deciphering plate tectonic movements associated with the development of the Scotia Arc.

Two new areas next feature in this volume, one dealing with the seismic expression of glacial sequences in the Bellingshausen and Amundsen seas (Nitsche and others), and the other concerned with the record of glaciation in Prydz Bay since the last glacial maximum (O'Brien and Leitchenkov), the latter being supported by short-core data.

Two papers deal with the Victoria Land area in the western Ross Sea. One is a radar survey of the sub-ice topography on land, which documents the degree of glacial erosion in the area (Deslisle). The other paper is a detailed description of a single 3 m long core from the Drygalski Basin, which dates from the last glacial maximum (Brambati and others), although the broader significance of this work is unclear.

Two useful general papers follow. The first, by Quilty, assesses Neogene biostratigraphy in Antarctica, pointing to the lack of diversity of biostratigraphic schemes and the need to study other fossil groups apart from that of diatoms, which does provide a workable scheme. Lastly, a process-orientated paper by Powell and Alley describes glacier grounding-line systems, and discusses the glaciological and stratigraphic inferences that can be drawn from them. This paper counterbalances the simplistic models derived from seismic data alone, and highlights the concept that glaciological conditions in Antarctica were once quite different.

The book is well-presented overall, except for a handful of typographical errors. The line drawings and seismic profiles are clear, whilst a couple of colour photographs liven up the contents. The absence of an index, as in the previous volume, however, is disappointing. Nevertheless, these minor quibbles aside, the book represents a major contribution to understanding the long-term history of glaciated continental margins. (M.J. Hambrey, Centre for Glaciology, Institute of Geography and Earth Sciences, University of Wales, Aberystwyth SY23 3DB.)

PHILLIPLAW: THE ANTARCTIC EXPLORATION YEARS, 1954–66. Kathleen Ralston. 1998. Canberra: AusInfo. xvii + 278 p, illustrated, soft cover. ISBN 0-644-38318-6. \$Aus 39.95.

Australia's proud record of Antarctic exploration and research immediately calls to mind the names of Sir Douglas Mawson before World War II and Dr Phillip Law since that war. In her previous book, Kathleen Ralston covered the first half of Law's life, up to 1954. In her new

book, the author ably describes Law's achievements during the next 12 'exploration years' for, like his illustrious predecessor, Law was an explorer in the true sense of that much misused word — one of the last on the surface of the Earth. He made 28 voyages to the Antarctic and sub-Antarctic, and under his direction more than 4000 miles of Australian Antarctic Territory (AAT) coast were accurately charted, and nearly 500,000 square miles of the inland area were mapped for the first time, before the advent of widespread air and satellite mapping. The author has had full access to Law's diaries and papers to provide lively and revealing detail on the day-to-day expedition work and on the frustrations imposed by climate and administrative problems.

In 1949 Law had succeeded Group Captain Stuart Campbell, RAAF, as director of the Antarctic Division, Australian Department of External Affairs, and as leader of the Australian National Antarctic Expeditions (ANARE). By 1953 he was setting his sights on extending the ANARE effort beyond its stations on Heard Island and Macquarie Island to the Antarctic mainland. From Knud Lauritzen, Danish shipowner and pioneer in the use of ice-strengthened ships in the Arctic, he chartered MV *Kista Dan* for the 1953–54 season. After sailing from Melbourne aboard *Kista Dan* in January 1954, Law found an ideal site for a mainland station on a rock outcrop at longitude 63°E in Mac.Robertson Land. On 13 February 1954, with construction almost completed, Law opened Australia's first permanent Antarctic station, naming it in honour of Sir Douglas Mawson. The ship then sailed east to explore the coast of Princess Elizabeth Land, thus setting the pattern for Law's future voyages on which, after resupply of stations, surveys of the AAT's long coastline were continued.

In ensuing years, very successful surveys were made far inland from Mawson Station. However, Law foresaw that, if Australia were to play her full part in the International Geophysical Year (IGY), 1957–58, a second permanent station on the continent was needed, and he decided to establish it in the extensive ice-free area at longitude 78°E on the coast of Princess Elizabeth Land. In the 1956–57 season, men and materials for the new station were taken south in *Kista Dan* on her annual resupply voyage and, on 13 January 1957, Law opened Davis Station, named in honour of Captain John King Davis, who had been ice-master to both Sir Ernest Shackleton and Mawson.

In the following season, the new and larger Lauritzen ship MV *Thala Dan* was chartered instead of *Kista Dan* for the resupply of stations and for coastal surveys of Oates Land and Enderby Land. In February 1958, Law tested the feasibility of landing by sea at the Larsemann Hills, 50 miles to the east of Davis Station and already reconnoitred the previous August by a party from the station, landed by ski-aircraft. His hardest task in this project was to persuade the ship's master to move inshore in uncharted, ice-infested waters. He later wrote of the master's 'remarkable timidity,' when as leader he faced the same problem as