is out of print and some of its concepts, set down some twenty years ago, need revision, so that some more modern record of terminology seems desirable. This is to some extent covered in the *International Snow Classification* of the International Commission on Snow and Ice.

Foreign terminology has been reduced to a minimum and is only used where there is no equivalent in English. "In case English (or British) usage differs from the American-Canadian, the latter is preferred." This is, of course, natural in an American publication. It is rather unfortunate that in some cases, luckily few, British and Western Hemisphere terms have drifted apart, as, for instance, "sleet" and the unfortunate new use of "tongue". It seems that the reviewer has himself transgressed in this direction. In adopting the term "ice apron" for the snow and ice above the bergschrund he had overlooked the fact that Wright and Priestley in their classic *Glaciology* had used the word for a somewhat different phenomenon. This slip has been brought to light by the work under review, but the reviewer believes that Wright and Priestley's meaning of the word has fallen into disuse, and it is not evident whether the compilers of the glossary had good reasons for reviving it. There seem to be a few other redundancies.

The 110 illustrations are excellent, although in the reviewer's copy some are rather faint and do scant justice to the excellent photographs. Some with due acknowledgement have been borrowed from Wright and Priestley's book, and much of the land ice definitions, added in this edition, have followed their lead.

The key to the glossary is divided into sections: I. Sea Ice, II. Land Ice, III. Lake Ice, IV. River Ice. Most of these are subdivided and subdivided again so that in all there are 57 different headings with references to the photographs at the end of the book. In the glossary itself well over 400 items are listed and defined, and after each there is a reference back to the particular section under which the item comes.

In so comprehensive a work it is not difficult to be critical. It is probable that if ten specialists in ten different branches of glaciology were to review it each would have criticisms and suggestions to make. Yet a very valuable piece of work has been accomplished.

G. SELIGMAN

OBITUARY

WALTER RAVENHILL BROWN BATTLE

" BEN " BATTLE was born in 1919 and educated at Leeds and Cambridge Universities. While still reading for his honours degree in Geography he led the Leeds University Expedition to East Greenland in 1948, where he worked on the Pasterze Glacier. In 1949 he continued this field work on neighbouring Clavering Ø. He therefore came to the Geography Department at Cambridge in 1949 as a research student with considerable field experience. His Greenland work demonstrated the erratic movement of the Pasterze Glacier, and he concerned himself particularly with temperature and other conditions in bergschrunds, where his ability as a climber and his determination as a research worker enabled him to gain valuable information under the most arduous conditions. While at Cambridge he worked in Jotunheimen in 1950 and 1951, and in the Jungfraujoch area in the easter and summer vacations of 1951. His results showed that temperatures in bergschrunds changed far less than had been widely suggested; they rarely, if ever, rose above 0° C. and rarely fell more than a very few degrees below it. In the laboratory he subjected various rock samples repeatedly to those changes of temperature which he had found to occur in nature, and even his careful " beam " tests showed that the rock specimens suffered little or no damage. It can be confidently stated that his work alone would have gone far to discredit the earlier bergschrund hypothesis of cirque erosion, which assumed that rises and falls of temperature across the freezing point led to the disintegration of bedrock. It did much to limit my own

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enthusiasm for the melt-water variant of this hypothesis, and in doing so encouraged us to look elsewhere for an explanation of erosion deep beneath a glacier.

In addition to his five published papers an important contribution is ready for publication in the Royal Geographical Society's research monograph *Investigation on Norwegian Glaciers 1951–52*; much besides of his Ph.D. thesis will be published with the assistance of Mrs. Battle.

Battle pursued his researches in his own dogged manner, and their success owed something to his not always taking the advice of those around him.

In 1952 he went to Montreal with a Senior Carnegie Fellowship and as a Research Associate in the Department of Geography at McGill University. In the summer of 1953 he joined the Arctic Institute Expedition to Baffin Island, where he worked on the glaciers descending from the Penny Highland to the Pangnirtung Pass. He met his death in a melt-water stream that had remained frozen over and concealed, while returning to camp across a portion of the glacier that had regularly been used as a route.

His popularity with his companions on this last expedition had fully equalled that with which he had been received in the wide circle of friends which his active and all too short life had encompassed.

W. V. LEWIS

GLACIOLOGICAL LITERATURE

THIS bi-annual list of glaciological literature aims to cover the *scientific* aspects of snow and ice in all parts of the world. Attention is drawn to the bibliographies in each number of the *Polar Record* (Cambridge), which aim to cover the significant work dealing with expeditions, research, equipment and conditions of living in the Polar regions. Both journals, however, deal with Polar literature having specific glaciological interest and with general matters of a practical nature such as snowcraft.

Readers will greatly assist the Editor by notifying him of their own, or any other, publication of glaciological interest.

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BEAUJEU-GARNIER, J. A propos du modelé périglaciaire du Limousin. *Bulletin de l'Association de Géographes français*, Nos. 226–27–28, 1952, p. 128–33. [Solifluction phenomena in the Central Massif of France differ in form with altitude.]

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BOIVIN, B. Les décharges du glacier continental à travers la Prairie canadienne. *Revue Canadienne de Géographie*, Vol. 7, Nos. 1–2, 1953, p. 23–25. [Retreat of ice left a complex system of furrows on the Canadian Prairies.]

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