therefore the limitations of this method should be explained in the text, for without knowledge of them some of the charts of mean ice conditions become positively misleading. The Antarctic charts for January and February, for instance, are dotted with small enclaves of one concentration of ice within a large area of another concentration. The exact location of these enclaves can have little significance, since the chart must be based on very scanty data. All that they should be taken to indicate is that the ice in that general area is often a mixture of the two sorts. But unwarned users may try to read more into them than that.

This was a disadvantage of the preceding ice atlas from this source.[4] But although it has not been eradicated, there is undoubted improvement on the earlier work in other ways. For instance, the inclusion now of the charts of actual conditions in close propinquity to those showing means, does help to impress on users the wide range of variability from year to year, and the danger of thinking in terms of an "average" state of the ice. These two volumes give every appearance of having been compiled with care, and the end products are laid out both comprehensibly and pleasingly. The user who wishes, for instance, to correlate ice distribution with weather processes will find just the information he requires; while he who wishes to make, well in advance, the best possible estimate of his chances of sailing from, say, Pond Inlet to Resolute Bay on 1 August will be less well satisfied. But as the Preface states, "the atlas cannot possibly satisfy the needs of all users". Nevertheless, it will be, as it deserves, the standard work of reference for some time to come.

*MS. received 7 November 1959*

## REFERENCES

1. *Oceanographic atlas of the polar seas.* Washington, D.C., Hydrographic Office, 1957-58. 2 vols. (H.O. Pub. No. 705.) [*Part 1, Antarctic*, 1957, $2.50; *Part 2, Arctic*, 1958, $5.00.]
2. *Sea ice north of the U.S.S.R.* London, Hydrographic Department, 1958. 2 vols. (H.D. 511.) [£5 12 0.]
3. For instance, *Ice atlas of Arctic Canada*, by C. W. M. Swithinbank, to be published by the Defence Research Board of Canada.
4. *Ice atlas of the northern hemisphere.* Washington, D.C., Hydrographic Office, 1946. (H.O. [Pub.] No. 550.)

## GEOGRAPHIC STUDY OF MOUNTAIN GLACIATION IN THE NORTHERN HEMISPHERE. W. O. Field *and others*. Parts 1-10. New York, American Geographical Society, 1958, illus., maps.

This considerable work, undertaken on behalf of the U.S. Army Quartermaster Research and Engineering Command, is divided into 10 Parts which are listed as follows:

Part 1. Distribution, study, characteristics, classification and terminology of glaciers.
Part 2a. Glaciers of Alaska and adjoining parts of Canada.
Part 2b. ,, ,, Western and Arctic Canada.
Part 3. ,, ,, the United States, Mexico, and the Northern Andes.
Part 4. ,, ,, the North Atlantic Islands.
Part 5. ,, ,, Europe and Africa.
Part 6. ,, ,, Western Arctic and Eastern Asia.
Part 7a and b. Glaciers of the Central Asian mountain system.
Part 8. Glacial geology; Cartography in the service of glaciology.
Part 9. Glaciers and human activities, avalanches, etc.
Part 10. Atlas of glaciers in the Northern Hemisphere.

The data have been compiled from observations made during the two years prior to 1957 by the Department of Exploration and Field Research of the American Geographical Society.

In a letter to the undersigned, Mr. Field writes that this mimeographed report is considered to be only a first draft of a more finished publication. Clearly some of the data obtained, although chiefly compiled from published works, must be considered tentative. To illustrate the immense amount of work which has gone to make up this publication, Part 10 includes no less than 48 separate maps.

Seeing that any subsequent publication on the same lines is not likely to appear for several years, the whole work, which was received in nine jackets, has been bound in 4 volumes for the Society's library, Vol. 1 consisting of Parts 1 and 2a, Vol. 2 Parts 2b-4, and Vol. 3 Parts 5-10. Vol. 4 is a very comprehensive index.

Distribution has been very limited. In Great Britain, in addition to the Society's copy of the report, only the Scott Polar Research Institute and the Royal Geographical Society have received copies.

In his letter Mr. Field writes that he will welcome comment and criticism. He wishes "to be notified of any errors or omissions so that errata sheets may be noted and new sources of information kept on file. Such information will be of help to anyone who in future may consult the report or use it as a basis for assembling a more complete and up-to-date account." In this connexion there is one criticism I have to make. The compilers have obviously been in some difficulty in settling the title of the work. In the introduction its scope is defined as "concerned primarily with the location, distribution, characteristics, behaviour and significance of existing mountain glaciers". Since the operative word is "existing" the use of the word "glaciation" in the title is thus not desirable.

In 1954 there was an editorial note in this Journal, Vol. 2, No. 16, 1954, p. 378, advocating the use of the words "glacierization", "ice-cover" or "glacier-cover" for existing glaciers and ice sheets, and urging that the word "glaciation" should be used only in the sense of "land formerly under ice". Of the eight letters published in the ensuing correspondence (ibid., p. 507-09) only one dissented from this distinction.

It is true that in this work there is brief reference to glacial geology and to one or two subjects not purely glaciological, but these constitute only a very minor part of the work. I suggest that a more suitable title would be "The mountain ice cover of the Northern Hemisphere".

Finally I want to accord the greatest credit to Mr. Field and his many helpers for bringing together and compiling so many data from such widely separated regions.

G. SELIGMAN

# OBITUARY

## RUDOLF STREIFF-BECKER—1873-1959

RUDOLF STREIFF was born on 19 May 1873 in Vienna. After the death of his father, who was an engineer, his mother returned to her home town in Switzerland. Here in the house of his grandfather Rudolf passed a happy youth in very simple surroundings. While at school he had already shown considerable artistic talent. As his wish to become a naturalist appeared to his mother to promise an uncertain career, he went to the Technical College in Winterthur to become an engineer.

In 1894 Streiff left his home in order to emigrate to Brazil. With considerable endurance and untiring industry he was able, together with his younger brother, to build up a sound and promising business in a few years; this remained under his management for two decades.

After his return in 1919 with his family, he was able to fulfil the dream of his youth of becoming an investigator into the problems of nature. His principal interests were the föhn