

The text is simply written and there are numerous clear line illustrations. Emphasis on interpretation of field evidence is admirable.

Extensive references (19 pages double column) are arranged under some sixty subject headings valuable for ease of reference for students, but involving some repetition. There are few references to works in languages other than English; American sources, not all of major importance, are preferred. Mannerfelt's classic paper on stagnation decay, with its substantial English summary, would be a welcome addition.

Although appreciative of the value of extrusion flow as an empirical concept in the interpretation of observed facts, the reviewer found the general sections on the difficult subject of glacier movement the least satisfying.

The book is to be welcomed as a clear presentation of mature views of a geologist of great experience in the study of deposits of continental glaciation.

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COMPENDIUM OF METEOROLOGY. Prepared under the direction of a Committee of the American Meteorological Society, 1951. ix + 1334 pages, figures, diagrams and index. American Meteorological Society, Boston, Mass.

THE object of this very large and compendious work, printed double-column on large pages is, quoting from the preface, to take stock of the present position of meteorology, to summarize and appraise existing knowledge, and to indicate avenues which need to be explored. Within are a hundred and eight papers covering almost every branch of a rapidly developing subject, from solar radiation to the significance of microseisms. The majority of the authors are American, but within each of the twenty-five sections there are generally one or more contributions from the rest of the world; for example, F. H. Ludlam of the Department of Meteorology at Imperial College contributes a paper on the physics of ice clouds and mixed clouds. Several papers appear likely to be of direct interest to readers of this journal. Within the section on cloud physics, U. Nakaya contributes a short but welcome account of our knowledge of the formation of ice crystals with particular reference to his classical work on artificial snow. V. J. Schaefer follows with a discussion of recent advances in experimental meteorology and, as might be expected, he gives a summary of work on the transformation by "seeding" of supercooled cloud into snow crystals. There are three papers on "Polar Meteorology." Very notably Arnold Court gives a comprehensive and valuable review of the present state of knowledge of the Antarctic atmospheric circulation, which, together with a similar paper on "Arctic Meteorology" by H. G. Dorsey, cannot fail to be of use to all interested in the alimentation of ice caps. In a succeeding paper F. K. Hare writes on Arctic climatology; both Dorsey and Hare devote space to the further burial of the Hobbs doctrine which, as Matthes pointed out in 1946, had many years earlier become the target of criticism by European authorities. Two later papers in the collection include one on the geological and historic aspects of climatic change by C. E. P. Brooks and a short contribution on climatic implications of glacier research by R. F. Flint, emphasizing the value of glaciers as indicators. Throughout, in these and other papers the policy has been to provide extensive bibliographies of recent work, a commendable feature. While notice of such an extensive collection must needs be short, readers of this journal will find a great deal to interest them in the many other ramifications of atmospheric physics; as a work of reference and a stimulus to further work it is an admirable production on which the sponsoring Society is to be congratulated.

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