

BOOK REVIEWS

A MANUAL OF DETERMINATIVE MINERALOGY WITH TABLES FOR THE DETERMINATION OF MINERALS BY MEANS OF 1, THEIR PHYSICAL CHARACTERS; 2, BLOWPIPE AND CHEMICAL PROPERTIES; 3, OPTICAL PROPERTIES. J. VOLNEY LEWIS, fourth edition, revised by A. C. HAWKINS. IX+230 pages. John Wiley & Sons, Inc., *New York*, 1931. Price \$3.00.

The fourth edition of this very well known text makes its appearance ten years after the third edition. (For a review of the third edition, see *Am. Mineral.*, 7, p. 57, 1922.) The revision has been undertaken by the junior author who is associate professor of geology at Rutgers University. The arrangement of the material is similar to that followed in the earlier edition, although the authors state in the preface to the fourth edition that "In this work we are agreed that the following are the principal changes required: (1) to reduce to the minimum the repetitions in the tables for the determination of minerals by means of their physical properties; (2) to eliminate from the blowpipe tables a number of minerals that are so rare as to have no practical importance; (3) to add a chapter on optical methods"

The portion devoted to optical methods, however, is restricted to slightly more than three pages. Here the color, cleavage, crystallization and refractive indices are recorded for 64 non-opaque minerals. No attempt is made to discuss the theory involved or the technique employed in determining the indices of refraction. For this discussion the student is referred to other standard texts.

The fourth edition shows a decrease of 68 pages compared with the previous edition. This reduction in size has resulted largely through the elimination of over 90 mineral species from the blowpipe tables.

The book is up-to-date, is unusually free from typographical errors, and will continue, no doubt, to be one of the most popular texts in the field of determinative mineralogy, although in some quarters it will be regretted that the authors have deemed it desirable to make such a drastic cut in the number of minerals contained in the blowpipe tables.

W. F. H.

SNOW CRYSTALS. WILSON A. BENTLEY AND W. J. HUMPHREYS. McGraw-Hill Book Co., Inc., *New York*, 1931. Price \$10.00.

A few of the over 5,000 wonderful enlarged photographs of snow crystals taken by Mr. Bentley in Vermont for a period of over forty years, have become well known, being reproduced in part by many authors writing on many subjects. The permanent preservation of over 2,200 of the best of these, on 185 plates with a dozen to a page, each photograph being about 2 inches in diameter, is now assured by the present volume, sponsored by the generous gift of a friend of the *American Meteorological Society*. Eighteen additional plates contain smaller reproductions of snow crystals, and of frost, rime, ice, glaze, graupel, sleet, and dew.

The 21 pages of explanatory text, by W. J. Humphreys, with a selected bibliography, make most interesting reading. The exquisite beauty of the designs and traceries is very intriguing, as is also the deciphering of the various crystallographical forms.

W. T. SCHALLER

GEMS AND GEM MATERIALS, EDWARD HENRY KRAUS AND EDWARD FULLER HOLDEN. Second edition. x+260 pages, 325 figures. McGraw-Hill Book Co., New York, 1931. Price \$3.00.

This excellent and popular text is a revision of an earlier edition published by the same authors in 1925. While the order of presentation of the subject matter of the first edition has been retained the chapters have all been expanded and supplemented with additional diagrams and photographs. The statistical data also have been brought up-to-date. The revised text has been greatly enriched as the direct result of a trip abroad to important gem cutting centers by the senior author.

As in the earlier edition the subject matter is divided into two parts. Part 1, approximately one half of the book, is devoted to a general discussion of those properties which are essential to an appreciative understanding of gems. Part 2 contains a detailed description of 60 minerals of inorganic composition and four (pearl, coral, amber, and jet) of an organic nature, that are now being used for gem purposes. Eleven conveniently arranged tables are included which summarize the properties of those minerals described in the text proper.

The style of presentation is direct, clear, and not too technical. The book is well adapted to serve either as a college text in this special field, or as a handy reference work for jewelers and those with an active interest in gems and gem materials.

A. J. WALCOTT

TEACHING FELLOWSHIP IN MINERALOGY

A teaching fellowship in mineralogy has been established at Stanford University. This fellowship is open to graduate students who intend to specialize in mineralogy and preference will be given to those who have had one year of graduate work. The chief duty of the fellow is to assist in laboratory instruction. Not more than eight or nine hours work a week will be required. The amount of the fellowship is \$750.

Application for the year 1932-33, accompanied by testimonial letters, should be made to Professor A. F. Rogers, Box 87, Stanford University, California.