

BOOK REVIEW

MINERALS OF THE WORLD (Princeton Field Guides series). Ole Johnsen. Princeton University Press, 2002, 440 p. \$49.50 hardback (\$24.95 paperback).

In most respects *Minerals of the World* is typical of the mineral field guide genre. It presents photographs and descriptions of those minerals that are most commonly encountered by or are of greatest interest to mineral collectors. This publication takes a step beyond the typical, however, through the surprisingly high quality of its production.

The first of the book's three parts, "Mineralogy and Crystallography," covers basic concepts: "what is a mineral?," mineral names, crystal systems, crystal growth, and chemical, physical and optical properties. These topics are given very accurate and authoritative treatment by Dr. Ole Johnsen, a curator at the Geological Museum of the University of Copenhagen and a member of the IMA commission on New Minerals and Mineral Names. The text is lucidly written, but is perhaps a bit too sophisticated for the beginner.

Part two, by far the largest portion of the book, contains descriptions of more than 500 minerals, arranged in traditional systematic "Dana" order. Virtually all of the macroscopic minerals that are of interest to collectors are included. In addition, Johnsen has chosen to include a significant number of rarer species. Among the latter are a relatively large number of minerals found in Greenland, clearly a reflection of the strength of the collection of the Geological Museum. In fact, nearly all of the specimens illustrated in *Minerals of the World* are from the museum's collection.

A chemical formula is provided for each mineral. The descriptions for the minerals of greatest importance or collector interest include sections on crystallography, physical properties, chemical properties, common synonyms and variety names, occurrence, use and diagnostic features. Those minerals deemed to be of lesser importance are described much more briefly, generally in a single paragraph. With the exception of chemical composition, the more complete descriptions provide only those characteristics that can be readily observed without sophisticated scientific methods (e.g. crystal symmetry, habit,

cleavage, hardness, density, color, luster and transparency). Information on occurrence gives the type of deposit and sometimes one or two important localities. A glossary at the back of the book is helpful in deciphering the jargon that is by necessity used in the mineral descriptions.

Color photographs and/or crystal drawings illustrate nearly all of the minerals described. The photographs are well chosen and the photography is generally excellent. Many of the mineral images have been digitally plucked from matrix and floated on the pages with shadow-like halos. The gray shadow assures generally good contrast between the edges of the images and the white pages and gives the pages a three-dimensional look. Another nice touch is the inclusion of beautifully drawn color diagrams depicting the atomic structures of selected minerals. While this may seem out of place in a "field guide," it is often very effective for understanding crystal habit and properties such as cleavage.

Determinative tables are a hallmark of mineral field guides and many approaches have been attempted. The last major portion of this book consists of two tables, one for minerals with metallic or submetallic luster and one for those with non-metallic luster. The minerals within each table are arranged in order of hardness and, for those with equal hardness, by specific gravity. Each mineral entry provides all of the standard descriptive characteristics. This minimalist approach, apparently chosen to conserve space, is nevertheless reasonably effective.

In conclusion, this excellent up-to-date publication rates as one of the best mineral guidebooks around. The text is accurate and authoritative, the illustrations are well chosen and of high quality and the production quality is superb. While it is probably most appropriate for the intermediate to advanced collector, this book will delight the beginner and prove a good reference for students and, indeed, anyone interested in hand-specimen mineralogy.

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