Book Reviews

SUSAN B. JOHNSON AND JANA E. MIYAHIRA, EDITORS

THE PEARL BOOK: THE DEFINITIVE BUYING GUIDE—How to Select, Buy, Care for & Enjoy Pearls

*By Antoinette L. Matlins, 198 pp., illus., publ. by GemStone Press, Woodstock, VT, 1996. US$19.95**

As the subtitle suggests, this book describes the "how-to's" of selecting, buying, caring for, and enjoying pearls. Although targeted for the pearl consumer, the information presented is useful for trade professionals as well.

The Pearl Guide opens with some history and lore, and then moves on to explain how pearls form. Because today's consumer can choose from a variety of pearls (saltwater Japanese, South Sea, and Tahitian—and freshwater Chinese and American—cultured pearls, among others), the author describes and compares the different types. Next is a discussion of the six factors that affect the quality and value of pearls: (1) luster and orient, (2) nacre thickness and quality, (3) color, (4) surface perfection, (5) shape, and (6) size. This section, which also offers some pricing guidelines, is perhaps the most useful to consumers. It is followed by a section that presents commentary from industry experts.

Wear, care, and consumer protection advice are included in the next two sections. *The Pearl Guide* concludes with referrals to appraisal organizations and independent laboratories. There is a section of color photos, in the center of the book, that features some magnificent pieces of jewelry. Missing, however, are color photos of the different quality factors.

Pearls are enjoying a surge in popularity today, and Ms. Matlins' book is an interesting buying guide.

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GEMSTONES OF BRAZIL: GEOLOGY AND OCCURRENCES

By Patrick J. V. Delaney, 125 pp., illus., publ. by Revista Escola de Minas, Ouro Preto, Brazil, 1996. US$23.80

In the preface to this thin volume, the author states his intent to pull together, from various sources and for the first time, what is known of the geology of Brazilian gemstone deposits. Dr. Delaney is well qualified, having spent his professional career as a geologist in Brazil. His sources, largely from Brazilian literature, are well documented and make the reference list valuable for gemologists interested in Brazil. Unfortunately, poor editing and proofreading detract considerably from the book's overall value.

Chapter 1 covers (in 22 pages) the 12 principal diamond-producing districts. Each is discussed separately, except for the Pardo (Bahia) district, a brief description of which is included in the section on the Chapada Diamantina district. Dr. Delaney indicates that he combined these two districts because the diamond-bearing formations are correlative. However, the diamond-bearing Tombador-Lavras Formation in the Chapada Diamantina area is Middle Proterozoic, while the Salobro Formation at Pardo is Late Proterozoic, or possibly Cambrian in age.

The descriptions of each district include some historical aspects and the geologic settings. The names of the sedimentary or meta-sedimentary formations in which the diamonds occur are noted, but because there is no section describing the general geology, this information is lost on readers who are not familiar with Brazilian stratigraphy. On the important Diamantina-Jequitinhonha district, Dr. Delaney writes that "Conventional wisdom tells us that the further downstream diamonds are found in the Jequitinhonha River basin, the *poorer* [italics added] the quality and the smaller the size." Since fluvial transport actually increases the general quality of diamonds, this error appears to be a glaring example of the poor editing given this book.

Chapter 2 covers the 12 principal emerald deposits in 19 pages, with the greatest emphasis on Carnaíba and the Santa Terezinha deposits. The format is similar to that of the diamond chapter. The Socotó deposit, near Carnaíba, is placed incorrectly both on the map (figure 11) and in the text; its actual location is about 25 km north-northeast, not 15 km east, of Campo Formoso.

The remaining chapters cover aquamarine and other beryl, chrysoberyl, Imperial and other topaz, tourmaline, opals, quartz, and other gemstones. The format changes in these chapters, with interesting bits of information on history and gems from the various mines. Discussion of the geology of individual mines or districts is limited because of their sheer number.

Three appendices follow: a list of localities for gems not discussed, a section with suggestions for field trips to Brazil, and a glossary. The glossary gives both geologic and gemological terms, which suggests that the intended audience is the lay public.

Although this book contains much information of interest to gemologists, the author has tried to cover too much material in too few pages. This lack of depth, coupled with poor editing, limits the book's usefulness.

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This book is available for purchase through the GIA Bookstore, 5345 Armada Drive, Carlsbad, CA 92008. Telephone: (800) 421-7250, ext. 4200; outside the U.S. (760) 603-4200. Fax: (760) 603-4266.

ENCYCLOPEDIA OF MINERAL NAMES

By William H. Blackburn and William H. Dennen, illus., edited by Robert F. Martin, 360 pp., illus., publ. by the Mineralogical Association of Canada, Ottawa, Ontario, 1997. US$40.00

With this book, the Mineralogical Association of Canada introduces its *Special Publication* series. In the words of the editor, the intent is "to provide reference books of broad interest to all involved in the study of minerals." This encyclopedia is indeed a worthy first offering.

The authors begin with an intriguing and illuminating introduction to mineral nomenclature that includes a discussion of the development and evolution of European languages. The core of the book is an alphabetical compilation of all 3,800-plus minerals officially accepted by the International Mineralogical Association (IMA) through the end of 1996. Also presented here are important mineral group and series names and a few mineral names in common usage that are not currently accepted by the IMA. Each entry includes the etymology of the name and the mineral's chemical formula, original source (type locality), and crystallographic space group, plus relevant literature references and information about relationships to other minerals.

One's first reaction might be that at least some of the information provided is superfluous to the specific subject, but the authors have actually planned their presentation well. The information they have chosen to include relates to the most common origins for mineral names: locations, chemical constituents, crystal symmetry, relationships to other minerals, and (most commonly) people. The careful research and editing that went into this work is obvious from the quality and accuracy of the content and the effectiveness of the presentation. I noted only a few minor typographical and informational errors. The 32 excellent black-and-white mineral drawings by Peter Russell, while not a significant source of information, contribute polish and aesthetics. This is a book that I can recommend virtually without reservation to anyone interested in minerals.

Still, I must also mention a shortcoming that will certainly affect the usefulness of this book for those primarily interested in gems. Most of the names in common usage in the gem world are mineral variety names and, as such, are not considered "official" names for minerals. Very few variety names (e.g., *emerald, ruby,* and *sapphire*) are included in the *Encyclopedia.* The only such names I found were *adularia, agate, alexandrite, amazonite, amethyst, aquamarine,* and *jade.* It seems odd that of the few variety names included, all but one (*jade*) begin with the letter A. I can only guess that the authors started to include the variety names and subsequently changed their minds. The *Encyclopedia* would have been of greater interest to a broader audience if mineral variety names had been included.

The authors have promised annual updates in the Mineralogical Association of Canada's scientific journal, the *Canadian Mineralogist*. I hope they decide to add variety names and to make the updates available as separate supplemental publications, or—better yet—as a second edition a few years down the line.

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PROCEEDINGS OF THE SIXTH INTERNATIONAL KIMBERLITE CONFERENCE

Edited by N. V. Sobolev and R. H. Mitchell, 619 pp. in two volumes, illus., publ. by Allerton Press, New York, 1997. US$95.00 (individuals), US$225.00 (institutions)

Since the First International Kimberlite Conference was held in Cape Town, South Africa, in 1973, the world's leading authorities on the earth's upper mantle and the formation of natural diamonds have gathered every four or five years in various parts of the world (USA, 1977; France, 1982; Australia, 1986; Brazil, 1991) to present the results of their research. In August 1995, they met in Novosibirsk, Russia, for the sixth conference. This was a milestone not only because it marked the first time the conference had been held in Russia, but also because it was the first opportunity for many in the international scientific community to see various aspects of the Russian diamond industry, including mines and research centers. This two-volume set is an excellent English publication of 47 papers that are representative of the 268 oral and poster presentations at the conference. Only about 40% of the papers in this *Proceedings* are concerned strictly with Russian localities or minerals.

Volume 1—*Kimberlites, Related Rocks and Mantle Xenoliths*—contains 24 papers describing these rocks in Canada, Botswana, Namibia, Tanzania, Australia, Vietnam, Brazil, the Czech Republic, and various parts of Russia. Volume 2—*Diamonds: Characterization, Genesis and Exploration*—contains 23 papers covering a wide range of topics, such as inclusions in diamonds, physical and chemical characteristics of diamonds from numerous localities, characteristics of indicator minerals, and upper-mantle studies of kimberlite areas in Yakutia (Russia), Canada, and elsewhere. In general, the papers show that substantial progress has been made in the understanding of the mineralogy and petrology of kimberlites and lamproites, and in the study of diamond genesis by various techniques (e.g., cathodoluminescence).

There is plenty in these volumes to bewilder the average gemologist, as the papers are written at a very advanced technical level. Nevertheless, there is much to interest and challenge experts in the physical and chemical aspects of diamonds, kimberlites, and the upper mantle, as well as those individuals who are seriously involved in diamond exploration.

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