Book REVIEWS

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Pearl Buying Guide: How to Evaluate, Identify and Select Pearls & Pearl Jewelry

*By Renée Newman, 134 pp., illus., publ. by International Jewelry Publications, Los Angeles, 2004. US$19.95**

The *Pearl Buying Guide* is a well-written, beautifully illustrated book designed to help retail customers, jewelry designers, and store buyers who lack specialized knowledge make informed buying decisions about the various types of pearls and pearl jewelry available on the market today.

Drawing heavily on the Gemological Institute of America's pearl description system, it covers the standard "price factors," including size, shape, color, luster, and nacre quality. There is a good discussion of the differences in price between, for example, South Sea, Tahitian black, and Chinese freshwater cultured pearls, as well as between full-round and mabe types. Particularly effective are the sections that help consumers evaluate the relative importance of these various factors and come to decisions that reflect their own needs, as well as provide tips on evaluating the quality of information offered by retailers. Additional sections cover pearl jewelry, caring for pearls, and the gemology of pearls.

Of considerable value to retail buyers will be the sections on cultured versus natural and imitation pearls as well as treatments. These are brief yet thorough, and could also form the basis for presentations to the public or sales training sessions. It is perhaps with the latter in mind that the author has included a section with quizzes for each chapter.

The book is distinguished by photographs reflecting the range of both traditional and more unusual pearls available on the market today. The photos are abundant and well chosen, and the use of a coated stock contributes to the exceptional quality of the reproduction.

I have only two complaints about the text: I found that the typeface and page layout made reading somewhat difficult, and the chapter presenting pearl history from the pearl's perspective was perhaps more clever as a concept than it really needed to be.

Overall, the *Pearl Buying Guide* will be a valuable addition to the retailer or designer's reference library. Consumers also will find this book a source of accurate and easy-to-understand information about a topic that has become increasingly complex in the last 10 years.

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Faszination Turmalin

By Paul Rustemeyer, 309 pp., illus., publ. by Spektrum Akademischer-Verlag, Heidelberg, Germany, 2003 (in German). €*99.95*

This book will delight the eyes of gemologists, crystallographers, collectors, and the art-loving general public alike. In it, the author provides a thorough description of the many different growth features, post-growth dissolution or etch features, and causes of color in this fascinating and extraordinarily multicolored group of silicates, which are chemically and structurally some of the most complex of gem minerals. But the author's intended audience is not limited to scientists, as he avoids technical jargon. Aided by the clearly understandable diagrams, any interested layperson or collector will acquire an appreciation of the splendid diversity of forms and colors seen in tourmalines.

After an introduction that includes surprising evidence that even common "black" tourmalines are colorful in thin slices, the book goes on to cover the geologic origin and geographic distribution of tourmaline. Next are the chemistry, atomic structure, and physical and optical properties of the species in the tourmaline group, as well as tourmaline crystal growth processes and crystal shapes. It is in chapter 5, though, that the author gets into the true purpose of his book: the fascinating inner world of tourmaline crystals, mostly as illustrated by slices viewed with transmitted light. Here we find an explanation for the famous and valuable "Mercedes stars" that are seen in some tourmaline slices. Subsequent chapters explore the effects of structural (crystal lattice) flaws on tourmaline growth, broken crystals "healed" by later growth, and growth interrupted by foreign particles. Of special interest to gemologists is a section on the causes of chatoyancy in tourmaline.

These topics may give the impression of dry, technical subject matter. Yet, the phenomena being explained are expressed so much more colorfully

**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.*

in tourmaline than in other gem minerals, and the relatively small amount of text is illustrated so profusely, that the reader will be aesthetically entertained while receiving a technical education. The book ends with a two-page list of references and a helpful index.

The subject matter in the main part of the book is covered exhaustively, and it would be hard to find any fault with it, although I personally would have liked to see at least one "watermelon" tourmaline depicted.

Although this book is written in German, the vast majority of the publication consists of color photos illustrating various aspects of the internal and external structure of tourmalines. In combination with the numerous accompanying diagrams, the didactic intent of each photo becomes self-explanatory, even for the linguistically challenged. The quality of the photographic reproduction, paper, printing, and binding are all first rate.

The author displays a profound knowledge and love of his subject, and readers will undoubtedly catch some of this passion themselves. Seldom does a book exhibit such a glorious interplay of art and science. Apart from enjoying the purely aesthetic pleasures of this book, gemologists who deal with tourmaline will find it of practical use in better understanding the complex internal aspects and growth features in this mineral group. Furthermore, creative jewelers may well find it a source of inspiration for expanding their ideas on what can be done with tourmalines.

ALFREDO PETROV
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Flux-Enhanced Rubies and Sapphires

By Ted Themelis, 48 pp., illus., publ. by Gemlab Inc., Bangkok, 2004. US$20.00

Prolific gemstone author Ted Themelis has written yet another informative booklet, this time on the controversial topic of flux-enhancement heat treating of rubies and sapphires. This treatment is used to fill fractures and fissures in corundum to increase apparent clarity. It is the flux processing of Mong Hsu ruby that converts this low-grade material into gemstones.

The booklet opens with a background discussion, written partially in a question-and-answer format, that effectively serves to introduce the topic. This section is followed by one that explains fractures, fissures, and other defects and describes what fluxes do to these features. These two introductory sections place the topic in perspective.

The next section of the booklet, "Fluxes and Additives," attempts to explain the chemistry of this treatment but fails abysmally. If you have a background in inorganic chemistry it will amuse; if you don't, it will confuse. For example, it says of aluminum nitrate, "This chemical produces oxygen at the anode and hydrogen at the cathode," which actually describes what happens when electricity is run through water. The terminology and formulas of the chemicals border on the bizarre: "anhydrous chromium CrO_6" should be chromic anhydride CrO_3; "aluminum fluorite" is used instead of aluminum fluoride; "chlorite" is routinely used for chloride; and "alumina nitrate" could refer to aluminum nitrate, or maybe ammonium nitrate, or maybe something else altogether. One particularly wonders, just what is an "alkali acid"? This section calls into question the chemical knowledge of the author, the editor, or both. Avoid it.

However, Mr. Themelis does make an important contribution when he shows the results of the many experiments he has personally conducted over several years. The majority of the book photographically illustrates the results of flux processing applied to many different types of ruby and sapphire. It is unclear whether the changes in color shown are caused by the heat treatment temperature, the flux, or both, so it would have been helpful if some of the samples also had been heat treated without flux for comparison. In most cases, the clarity enhancements can be ascribed to the flux. The many photos effectively carry the topic quite independently of the text. The author champions the disclosure of flux processing, and indeed disclosure of all corundum processing, but realistically notes that it is rarely done.

This book should be on every gemologist's bookshelf, simply for the value of the "before and after" pictures of flux processing, which are unavailable anywhere else.

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Tesouros de Arte e Devoção [Treasures of Art and Devotion]

By Artur Goulart de Melo Borges, 336 pp., illus., publ. by Fundação Eugénio de Almeida, Évora, Portugal, 2004 (in Portuguese). ₤ *40.00*

Tesouros de Arte e Devoção (Treasures of Art and Devotion) is the colorful catalog of the exhibition of the same name, the result of an ambitious project conducted by the Eugénio de Almeida Foundation to classify and inventory the artistic heritage of the Archdiocese of Évora, which was created in 1540 by Cardinal D. Henrique, son of King Manuel I of Portugal. This catalog also responds to the Vatican's urgent need to study and safeguard the rich artistic and historical legacy of the church as a whole. Inside are 130 of the most interesting religious artifacts encountered during research performed in 2002, including paintings, sculptures, liturgical artifacts, vestments, and jewelry.

Among the silver, gold, and gem-set pieces, there is special mention of altar service items such as chalices, pyxes, and monstrances (the latter two designed for storing and exhibiting the consecrated host, respectively), as well as altar crosses and holy images. There are also a significant number of costume jewelry pieces that feature votive paintings known as *ex votos*.

As a note of interest, this reviewer examined these jewels and identified

an array of gem materials used in Portuguese jewelry, particularly in the 18th century. Among them were greenish yellow chrysoberyl; amethyst; pinkish, Imperial, and yellow topaz; and a series of colorless gems (known commercially in Portugal as "minas novas") typical of the period: rock crystal, topaz, and beryl. All the stones were set with a colorless or colored foil back, and doublets and colored pastes were also encountered. Diamonds play a distinguished part in the collection, cut in both in rose and old-mine styles reminiscent of Portugal's diamond wealth during Brazil's colonial era.

Of particular interest is a rosary, dated from the 17th century, that holds paste "goldstone" beads and a diamond-set silver pendant with imitation pearls that correspond to the "Roman pearl" described in the literature.

The exhibition and this illustrated catalog are a testimony to the strength and commitment of Évora's Christian heritage. They provide valuable examples of the quality of Portuguese sacred art from the 16th to 18th centuries.

The book also includes a history of the archdiocese, the particular conditions that enabled the preservation of these items (namely their concealment during Napoleonic invasions in the early 19th century), and a section of bibliographic and documental sources.

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Glitter & Greed: The Secret World of the Diamond Cartel

By Janine Roberts, 374 pp., illus., publ. by The Disinformation Co., New York, 2003. US$22.95

Author Janine Roberts, the producer of a 1994 documentary called *The Diamond Empire,* is a seasoned reporter who has spent years tracking down diamond stories. Unfortunately, hers is a world of endless conspiracies and machinations that overwhelm whatever legitimate, accurate information is presented in this book.

The work's 18 chapters cover a mix of historical and contemporary subjects—including "In Bondage—The Child and Adult Cutters of India," "How the Only US Diamond Mine Was Sabotaged," "Diamonds for Hitler," and "How Diamonds Were Made Rare"—that describe how De Beers (primarily) disenfranchised local tribal peoples, encouraged maltreatment of workers, and bullied every other potential player out of the rough diamond business. Regardless of a chapter's stated topic, Roberts inevitably turns the subject back into accounts of De Beers's master manipulations and stories of attempts to expel her from various diamond operations in Africa and India, and to suppress her documentary.

While these chapters contain a measure of truth, some information is long out of date. Take the issue of child labor in India, for example. Until the mid-to-late 1980s, many children *did* work in India's diamond-cutting industry, particularly in the "informal" cutting sector, where families often took contract work from large operations. But after pressure from several Indian firms, De Beers, and Argyle, the practice was nearly—albeit not completely—ended. A 1996 study commissioned by the Indian government, which was not mentioned by the author, pegged the total of diamond workers under age 15 at 3%. The author claims it is 16% and rising, repeating an unproven 1995 charge by the Belgian diamond workers' union as her source.

The book also contains a number of instances of sloppy writing. For example, in relating how CRA (now Rio Tinto) allegedly bullied aboriginal peoples off the area that would be developed into Australia's Argyle mine, she claims that Ernest Oppenheimer directed a "spring offensive" to secure De Beers's control over marketing Argyle's diamonds. While De Beers certainly did employ tough business tactics in securing the Argyle contract in 1981, the policy was not led by Ernest Oppenheimer, who died in 1957. On page 165, in a chapter discussing synthetic diamonds, the author refers to a proposed 1994 deal between General Electric Co. and "Zoroski" to market large, gem-quality laboratory-created diamonds. The company she meant to refer to was D. Swarovski & Co. The meetings reportedly did take place, but GE could not produce clean, white synthetics cheaply enough to make the venture profitable. And later in that same chapter, she comes up with some funny science regarding diamond origins and a baffling quote she attributes to GIA that allegedly appeared in a 1987 issue of *Diamond Intelligence Newsletter*: "[N]atural diamond cannot be distinguished from polished [diamonds] . . . using loupe or microscope."

It is unfortunate that a talented reporter with the guts to chase down interesting stories undercuts her own work with mistakes, bias, and diatribes. On this basis, the book cannot be recommended except as a reflection of the extreme distrust with which some people hold De Beers and the diamond industry.

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OTHER BOOKS RECEIVED

Minerals of Nevada. *By Stephen B. Castor and Gregory C. Ferdock, 560 pp., illus., publ. by the University of Nevada Press, Reno, NV, 2003, US$75.00.* This reference guide to Nevada's mineral wealth was written for mineral and gem collectors, prospectors, and exploration geologists. The catalog of minerals lists the more than 840 that have been found in the state and the places where they occur. The variety and quality of these minerals is illustrated in 102 color photos, most of them by noted photographer Jeff Scovil. Complementing the catalog is a series of essays on the history of mining in Nevada, its geology, and tips for collectors. Also included are an extensive bibliography and a foldout map of mining districts and important mineral occurrences.

STUART OVERLIN