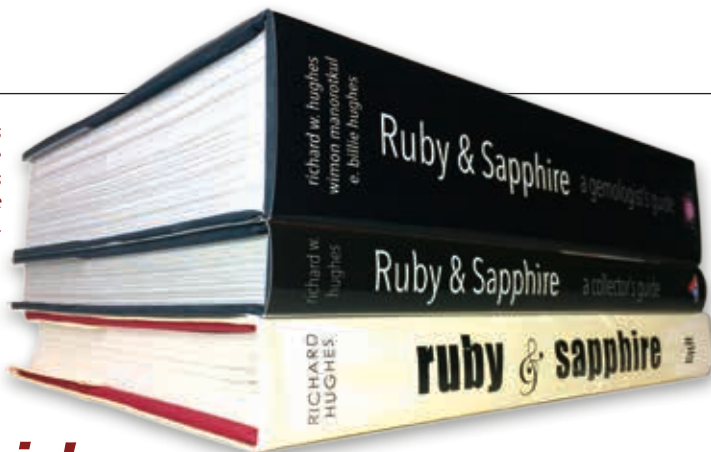


Alongside the *Collector's Guide* and *Ruby & Sapphire* (1997), the *Gemologist's Guide* is nearly as thick as the former two titles put together.



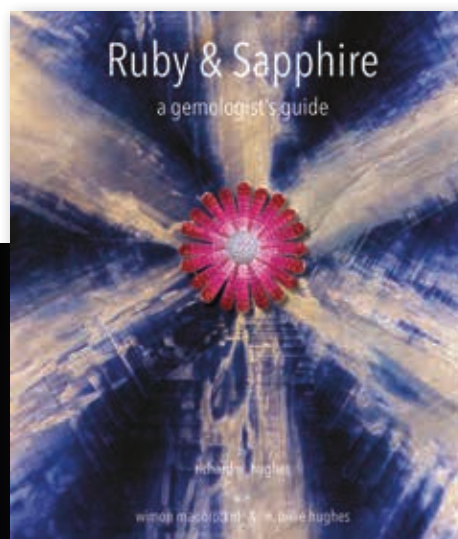
Ruby & Sapphire: A Gemologist's Guide

Elise A. Skalwold reviews Richard W. Hughes' latest book.

It has been 20 years since Richard W. Hughes presented the gem world with *Ruby & Sapphire* (1997), an academic and literary masterpiece widely recognized as one of the most authoritative and highly readable reference volumes about gem corundum. It built upon and improved his earlier texts *Corundum* (1990) and *Ruby & Sapphire* (1992), not only by expanding the scope, but also through the infusion of his own sense of style and pedagogy. By virtue of his capacity as its author, book designer and publisher, we are able to travel with him into a color-filled world rich with history, art, science and invaluable personal experiences. That venerable 511-page treatise embodies a finely crafted aesthetic which, through his later books and hundreds of published articles, we've come to recognize as pure Hughes: "witty, engaging, sometimes irreverent, always thought provoking" (Skalwold, 2016). Today, the highly anticipated present reincarnation of *Ruby & Sapphire* is formidable proof that, as with fine scotch, two decades of further aging have served to make an already

remarkable scholarly achievement into a *tour de force*; Richard W. Hughes has outdone himself—again!

First impressions are always interesting and this begins with looking, not yet touching. The cover of this massive volume is graced not with the expected imagery of the now iconic pairing of a faceted ruby and sapphire, but instead with the unexpected: a fantastic trapiche sapphire along with a deceptively simple yet stunning flower brooch. A fine quality gemmy trapiche such as this crystal slice from Mogok is extremely rare and its enigmatic appearance may actually be very new to many readers. It startles the mind to ask "why,



The book cover: "A lovely ruby flower brooch with a trapiche sapphire behind. Photos: Wimon Manorotkul (brooch) and Richard Hughes (trapiche). Specimens: brooch (Best One Jewel Manufacturing); trapiche (Jeffery Bergman)."

"Richard Hughes holding the Smithsonian's Logan Sapphire in 2006. At 423 carats, this is one of the largest sapphires on public display anywhere in the world. Photo: R.W. Hughes" (Figure 10.31. in the book).

where, how?" and in the asking, leads one immediately to appreciate that corundum may be even more complex than previously imagined. The contrasting ruby brooch centered upon the blue trapiche's main axis exemplifies the artistry of the designer and master goldsmith having collaborated with what Nature has offered up: a perfect graduation of colors within just one of the many sectors in corundum's amazing color wheel. With this pointed combination of imagery underlaid with scientific intrigue, the cover hints at the premise of the book and the long-time conviction of the author which is articulated at its beginning:

Godehard Lenzen has rightly pointed out that gemology is not merely a subset of mineralogy, but simply knowledge of a certain type of merchandise. We subscribe to the Lenzen view. To our way of thinking, gemology is a rich tapestry of interwoven disciplines. Its threads include not just mineralogy, physics, chemistry, crystallography and geology, but also history, trade, economics, decorative arts, religion, mysticism and magic. Yes, even magic.

Thus, what follows is not merely the science, but also the GEMology of ruby and sapphire. We hope to convey its romance, its history, its beating heart, its spirit, its magic. If we have succeeded in capturing even a portion of that magic, then this book is a success.

Indeed, as readers will quickly discover, this latest book succeeds in that mission with substance, grace and enviable clarity; arguably with no shortcomings. The book's title: *Ruby & Sapphire: A Gemologist's Guide* echoes not just that of the 1997 tome, hereafter referred to as "R&S '97," but also his most recent prior book, *Ruby & Sapphire: A Collector's Guide* (Hughes et al., 2014). Yet, while this is a greatly revised and expanded edition of R&S '97, the *Collector's Guide* may be considered an essential companion to both editions as it dramatically documents the gem's humanity and sense of place throughout the world as seen through its authors' camera lenses (for a review of that book, see Skaltwold, 2016). Finally, as with its companion volume, *A Gemologist's Guide* is a family affair. Wife Wimon Manorotkul and daughter E. Billie

Hughes formally join him on the cover as authors and, as we learn within, the book is dedicated to both.

Hefting this 10-pound book will surely convince many to shore up shelving in order to receive it into their libraries. Along with an added 300 pages, this edition is enriched with 1,000 photos, maps and illustrations, as well as 3,500 references. This last invaluable feature is one of its greatest strengths as the author not only includes references to the text, but also ancillary media which readers may wish to follow to dig deeper into all aspects of the subject of corundum. Each chapter and many sections within chapters have dedicated bibliographies whose entries are spelled out clearly and completely without confusing omissions and abbreviations which often confound many when consulting related literature, even as seasoned researchers! In fact, there are so many references that they are printed in a much smaller font in order to include all, while at the same time keeping the page count down, even if it means using a magnifier to read them. What is important is that no stone is left unturned; it is all here in one place though it could justifiably have been published

separately as another companion book.

Alongside the *Collector's Guide* and R&S '97 (should one be lucky enough to own that), the *Gemologist's Guide* is nearly as thick as the former two titles put together. Perusing its pages throughout, one notes the author's signature uncluttered style of plenty of white space, pleasing font and line spacing, along with illustrations that are instructive, as well as aesthetic—all of which invite one to explore and learn.

The author emphatically declares that *Ruby & Sapphire: A Gemologist's Guide* is aimed specifically at working gemologists, appraisers and students. Approximately half the book is devoted to specific corundum localities with details of their individual histories, geologies, properties, and of course, recommendations for further reading. Several localities are greatly expanded or are new to this edition, reflecting how much the world has



A family affair: wife Wimon Manorotkul and daughter E. Billie Hughes formally join Richard on the cover as authors and, as we learn within, the book is dedicated to both.



Top: "A ruby for your thoughts... Bawpadan, Mogok Stone Tract. Photo: Wimon Manorotkul, 2013." (Figure 12.71 in the book)

Left: One of several notable contributors to the book. "Dr. John Emmett, next to his hot-rod Thermal Technology 45120 electric furnace, which allows precise temperature and atmosphere control. Photo: Karen Palmer" (Figure 6.7. in the book)

changed since *R&S '97*. As with the *Collector's Guide*, these are not impressions gleaned from literature and the experiences of others. Richard W. Hughes has spent his adulthood traveling to these various localities around the world, some of which many people would not be able to access or have the opportunity to visit, especially at different times in their history. The author brings back not only first-hand knowledge, but he also, along with his gemologist/photographer wife and daughter, captures for us compelling imagery which allows us to share immeasurably in his experience.

While carefully selected travel images are sprinkled throughout this book, the coffee-table companion volume of 2014 may be considered a lavish extension of that ride. In contrast, the majority of the *Gemologist's Guide's* landscape dedicated to illustrations is reserved for those of instructional and reference value, i.e. images of properties, significant gems, diagrams and tables as well as maps.

What comes as a pleasant surprise and divergence from the *R&S '97* format is that, for selected chapters and sections of the *Gemologist's Guide*, the author has collaborated with a number of notable experts in various fields who bring unique and valuable insights to the topics at hand. These include his great friends John I. Koivula and John L. Emmett, as well as Kenneth Scarratt, John Saul, Jennifer Stone-Sundberg, Lisbet Thoresen, Emily Dubinsky, Richard M. Allen, Nathan Renfro and Danny Sanchez. Three pages of acknowledgments detailing

in very small font all the people along the way who assisted by contributing specimens, images, hospitality, and even in seemingly very minor ways to facilitate his success in bringing this endeavor to fruition, attest to his appreciation of just how much people matter to him in this pursuit of the object of his obsession. High among them are his parents and brother who assist in editorial capacities, as well as in moral support, and his late friend Dana Shorr (1952-2015) who encouraged him to proceed with this edition and was his travel companion through exotic lands in order to update the locality sections of the book.

Each of the *Gemologist's Guide's* 12 chapters and two appendices nearly constitutes a stand-alone book, though the author masterfully weaves them together into a coherent whole. The titles include: History; Chemistry & Crystallography; Physical & Optical Properties & Phenomena; Color, Spectra & Luminescence; Under the Magnifying Glass: Inclusions; Treatments; Synthetic Corundum; Assembled Stones; Methods of Fashioning; Judging Quality: A Connoisseur's Guide; Geology, and lastly, World Localities (52 countries are described). His intended audience will find these topics educational, comprehensive and an oft-visited reference, whether one is new to the field or at the top of one's game.

A final thought. It is interesting to contemplate quotations authors choose to include in their works. Hughes makes prolific use of them throughout the book. This man is widely read in



literature of all types and genres, therefore we must believe that the quotes he has selected are to make the reader think outside of the obvious; ultimately one must also smile at least at a few. At the very beginning of the book, before one even gets to the title page, are a dozen two-page spreads: the reader is greeted with a centered quote with an opposing full-page glorious photograph of a gem. Devoting so much territory to this style of presentation hints that the author wants one to linger a while and discover an embedded profundity. Taking the bait offered, here is Richard W. Hughes quoting his early self:

A fine gem is a sexual being. It lives, pulses, throbs, and breathes in a way that only those who have given themselves over to pure desire can understand. Ruby, that most sexual of precious stones, has touched me in ways like no other. Long ago I surrendered myself to her flesh. And now, having experienced her sensuous kisses, no other lover will do.

When renewing wedding vows decades into a long marriage, couples seek to reaffirm the beliefs of their youth; the mature lens of time judges how accurate were the promises, how fine the growth, how far the divergences. For Hughes, nuptials occurred as a very young man; his journey of nearly four decades since that time throughout the world of ruby and sapphire has been one of utmost fidelity and continual



Top: "E. Billie Hughes exploring the main shaft at Longido. Photo: R.W. Hughes, 2013." (Figure 12.145. in the book).

Bottom: "A sapphire trader with his latest offerings at Manombo, near Ilakaka, Madagascar. Photo: R.W. Hughes, 2010." (Figure 12.51. in the book)

growing comprehension. *Ruby & Sapphire: A Gemologist's Guide*'s steep price is the small thanks we give back for taking us along on the ride. He quotes Laurie Anderson:

Remember me, is all I ask. And if remembered be a task, forget me...

However, the author of this ruby and sapphire odyssey need have nothing to fear when it comes to history's record of his contributions to gemology, a field which he has helped define for us. Furthermore, as he implores his readers, all his hopes will be well met:

In the end, this is not the last word on the subject, but instead, a continuum, an incremental step in a process which has continued for millennia. We hope you find it worthy.

To such humility it can only be said that this generously shared masterpiece is a crowning achievement of a remarkable lifetime, an inspiration to many and a priceless resource. Richard, thank you!♦



"The millennium-old technique of blow-pipe heat treatment of ruby in Ratnapura, Sri Lanka. While still practiced, it has largely been superseded by more sophisticated methods. Photo: E. Billie Hughes, 2015." (Figure 6.1. in the book)



"The author at Tajikistan's famous Kuh-i-Lal balas ruby (spinel) mines, with the Panj River and Afghanistan in the background. Photo: Dana Schorr (RIP), 2006." (Figure 12.139. in the book)



***Ruby & Sapphire: A Gemologist's Guide* by Richard W. Hughes with Wimon Manorotkul and E. Billie Hughes.**

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Author's Note: This review will also appear in *Rocks & Minerals* magazine in 2017.