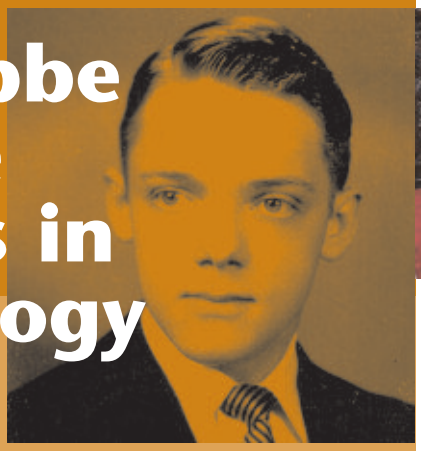
Paul Ribbe and the Reviews in Mineralogy



"Before and after" the Reviews in Mineralogy! On the left, the picture Paul Ribbe submitted to the University of Cambridge as part of his application in 1959. On the right, Paul enjoying well-earned retirement from editing the RiMG volumes for 30 years.

Paul Ribbe retired from the Series Editor position of the Mineralogical Society of America in 2003, after editing 50 RiMG volumes and five monographs over the past 30 years. This stunning achievement was recognized at the recent meeting of the Geological Society of America, where a special symposium was held in his honor. We gladly accepted his offer to write a brief history of the Reviews in Mineralogy.

Professor Emeritus of Mineralogy at Virginia Tech, Paul served as president of MSA in 1986 and 1987 and was awarded the Distinguished Public Service Medal by MSA in 1993 for his work with the Reviews in Mineralogy. He suspects that he was presented the 1995 Mineralogical Society of Great Britain and Ireland Schlumberger Award for the same undertaking. Paul retired from Virginia Tech in 1996 after 30 years. He and his wife, Elna, live contentedly in Blacksburg, Virginia, where both are heavily involved in Christian ministries.

A BRIEF HISTORY OF MSA'S REVIEWS IN MINERALOGY:

FROM MANHATTAN TO THE MOON

Paul H. Ribbe

Alcohol-Soluble Short Course Notes

In the beginning, short courses of mineralogical interest were intended to be held in conjunction with the annual meetings of the Geological Society of America and affiliated societies. Sponsored by the American Geological Institute's Council on Education and directed by Joseph V. Smith, the first short course, *Feldspars*, was held November 1–3, 1965. Notes were produced for the 90 participants by Joe Smith, David Stewart, and myself using state-of-the-art Ditto-Master technology. Tragedy struck when a bottle of Scotch being smuggled in Dave's briefcase into dry Manhattan, Kansas, broke, smearing or completely dissolving the purple ink from most of his handouts. A surviving fragrant fragment reads: "A discussion of what needs to be known in comparison with what might be determined will be given at the beginning of the lecture." Auspicious beginning!

AGI's Mimeographed Notes

In subsequent years, courses entitled *Pyroxenes and Amphiboles*, *Sheet Silicates*, and *Resonance Spectroscopy* were presented. Lecturers expanded their short course notes into longer chapters. These were mimeographed and compiled in ever-thicker binders for circulation by AGI, which coincidentally (?) ran out of funding for the project in 1968.

MSA's Short Course Notes

Five years passed before J.V. Smith, President of MSA, surveyed the members about the desirability of reviving the short course idea. Thus in 1973 the MSA Councilors appointed a committee to initiate the project that continues to this day. The first of 48 "modern" courses was held the following year with Charlie Prewitt directing. *Sulfide Mineralogy*, a 284-page book, with six authors and six chapters—Short Course Notes, Volume 1—was produced under my editorship in time for presentation at the Miami GSA. (Interestingly, *Sulfides* went through four printings and sold 7600 copies, more than any other single volume.) Three more volumes appeared in subsequent years, with increasing difficulty of scheduling and quality control. Thus, in 1978 Council asked me to assume the role of Series Editor.

Reviews in Mineralogy and the Science Citation Index

In 1980 two significant events took place: MSA changed the name of Short Course Notes to Reviews in Mineralogy and the Institute for Scientific Information asked for permission to reference RiM papers (chapters) in their *Journal of Citation Reports*. Listings in JCR and *Current Contents* since 1984 have helped establish the RiM volumes as significant players in the scientific literature, simultaneously satisfying promotion-and-tenure "bean counters" who insist on knowing the number of citations an author's papers receive in a given year. Furthermore, RiM and RiMG have been provided since 1987 to all libraries that subscribe to *American Mineralogist*, making them accessible to a worldwide audience. (Then there were 1300+ library subscribers, now there are 790.)

Before 1984, all 12 volumes had been typed on an IBM Selectric (5000 pages by one person—Margie Sentelle), pasted up, and submitted as camera-ready manuscripts to the printer. Ed Roedder's *Fluid Inclusions*, our first monograph, moved us into the era of word processors, at which time the average number of pages per volume jumped from 430 to 530. By the late 1990s, size was becoming a problem for paperbound volumes. The average cover-to-cover distance was 630 pages, with the apogee at 1037 pages (*Planetary Materials*). In 1989, the second edition of Volume 2, *Feldspar Mineralogy*, appeared in a Chinese translation, and in 1992 Roedder's *Fluid Inclusions* was published in Russian.

Reviews in Mineralogy and Geochemistry

In the year preceding 2000, MSA, led by Executive Director Alex Speer, and the Geochemical Society, led by President Mike Hochella, negotiated a change of name for the Reviews series: RiM became RiMG—Reviews in Mineralogy and Geochemistry. Jodi Junta Rosso was appointed Series Editor for the Geochemical Society's volumes. The new title better reflected what had been the case for at least 15 years and expanded our horizons significantly.

In 2000, Volume 39 *Transformation Processes in Minerals* became the first RiMG book. The accompanying short course was convened in Cambridge, England—the first outside the continental USA. That year, 1565 pages (3 volumes) were published—not all that remarkable. In 2001—the year the Department of Energy began generous support of student scholarships for select short courses—there were 2196 pages (4 volumes), and in 2002, 3775 (6 volumes!). As editor, I was beginning to feel like a full-time employee of the Society,

even though Jodi Rosso had assisted with several volumes and edited 2.5 of the 13. With my wife's gentle encouragement, I retired, knowing that Jodi would accept the job of Series Editor for both GS and MSA beginning with Volume 54.

RiMG in Cyberspace

By 2003 MSA had joined GSW (GeoScience World), an aggregate of Earth science societies bonded together to market their electronic publications, all of which are designed to exploit the search capabilities of AGI's GeoRef.

Although the means of individual access to RiMG has not yet been determined, the five volumes printed in 2003 and 2004 are already online through GSW, thanks to Jodi and Alex. The plan is to continue electronic publication of RiMG and in the near future to post volumes dating back to 2000 and earlier.

RiMG in Orbit?

The next volume to appear will be Volume 57 *A New View of the Moon* to be published in cooperation with NASA.

Conclusion

It would be false modesty to underestimate the impact on the disciplines of mineralogy, petrology, and geochemistry of the work of 963 different authors of 716 chapters (30,314 pages) in 56 volumes. For the curious: the entire series occupies nearly 6 feet (1.8 m) of shelf space and weighs 103 pounds (46.8 kg). More than 170,000 books have been sold to individuals over 30 years; about 40,000 are in libraries, and more than 42,000 are in inventory. Now that the number of books in print has exceeded the number of miles from Manhattan to the Moon, RiMG would appear to have a solar if not a stellar future.

Looking Forward to the Past: A Session in Honor of Paul Ribbe and the Reviews in Mineralogy and Geochemistry

Mineralogists young and old from all over the world gathered in Denver last November, at the annual meeting of the Geological Society of America, to contribute to a session in honor of Paul Ribbe. The title of the session reflected the fact that, as reviewed by Michael Hochella (Virginia Tech), Paul Ribbe's career as a teacher and researcher in mineralogy became so intertwined with the development of the Reviews volumes that it is difficult to separate one from the other.

The session was opened by Michael Carpenter (Cambridge), with a picture of Paul Ribbe (reproduced here) that Paul had submitted as part of his application to the University of Cambridge back in 1959. At Cambridge, Paul determined the crystal structures of several feldspars and was the first to show that the structure of low albite had an effectively fully ordered distribution of Al and Si atoms. Throughout Paul's career, the underlying theme of his feldspar research was the connection between the details of the crystal structures at the atomic level and their macroscopic thermodynamic properties and lattice parameters. This was emphasized in a review by Ross Angel (Virginia Tech) of high-pressure crystallographic studies of feldspars that have been made since the feldspar RiM volume was last revised in 1982, and by Ian Parsons (Edinburgh) who discussed the fascinating exsolution microtextures in perthites from the Klokken intrusion, which can only be understood in terms of the coupling between ordering and un-mixing within the feldspars.

The other early volumes in the Short Course Notes series were also devoted to specific mineral groups and built on the same "micro to macro" theme that was to become the subject of a later RiM volume in its own right. Progress in understanding bonding in sulfides through high-pressure crystallographic studies was reviewed by Charlie Prewitt (University of Arizona), a contributor to that first sulfides volume. "Changing Perspectives" was the very apt title chosen by David Vaughan (University of Manchester) for his presentation that emphasized both the development of studies of the *interactions* of sulfide minerals and the environment over the last 30 years, and the novel experimental tools that have been developed to enable those studies. Having started as critical reviews of the structures and properties of specific mineral groups, the RiM volumes have evolved over the years to encompass "even petrology", as noted by Darrell Henry (Louisiana State) in his talk on Ti in biotite, as well as experimental techniques. Robert Bodnar (Virginia Tech) took up his theme in reviewing the progress in fluid inclusion research since the publication of the only single-authored volume in the RiM series—volume 12 by Edwin Roedder. Novel computational methods have also revolutionized mineralogy on all scales from bonding in minerals (Jerry Gibbs, Virginia Tech) and molecular interactions (Jim Kubicki, Penn State) to km-scale modeling of metamorphism (Barb Dutrow, Louisiana State).

The last part of the session returned to the theme introduced by David Vaughan, that of mineralogy being an integrated study of the interaction of minerals with their environment. Mickey Gunter (University of Idaho) discussed the health issues arising from mineral dusts. Patricia Dove (Virginia Tech), editor of the recent RiMG volume on biomineralization, reviewed the incredible structures built by various organisms out of calcite that must reflect some "vital" or biological effect. Both she and Jill Pasteris (St. Louis) also emphasized the importance of quantifying such effects so as to be able to use the compositions of biominerals as a proxy for the environment in which the organisms originally lived. Bob Hazen (Carnegie Institution of Washington) looked back to the origin of life and the problem of understanding how life's essential molecules, such as amino acids and sugars, became handed or "chiral." He suggested that chiral mineral surfaces may have played a key role in separating left- from right-handed molecules or in catalyzing chiral synthesis reactions. And he looked forward to the exciting new experimental techniques, borrowed from biochemistry, that are starting to be used to characterize the interactions between mineral surfaces and biomolecules. Bob Downs (University of Arizona) looked even farther forward with his presentation of a recently developed hand-held Raman spectrometer that was straight out of Star Trek!

The breadth of the talks and posters in the session emphasized the influence of the RiM volumes on the careers and thinking of most mineralogists. Jim Kubicki (Penn State) reflected the feelings of many in saying that being asked to edit a RiM volume was one of the highest honors he had received in his career. Several speakers concluded their talks with either news of forthcoming volumes in the series or informal proposals for new volumes, clearly demonstrating that the series Paul Ribbe founded and developed over thirty years remains a vital endeavor and a valuable resource for mineralogists. While all participants at the session expressed their thanks in various ways to Paul Ribbe for his service to the mineralogy community and for his incredible patience with authors and editors, the last slide of Bob Hazen's talk said it best. It simply read, in large friendly letters, "Thank you Paul".

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Virginia Tech
Blacksburg, November 2004