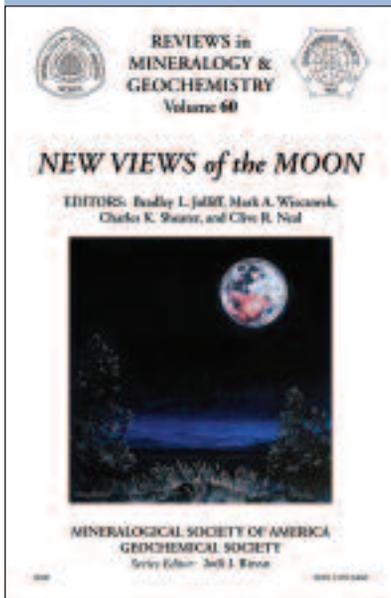


## NEW VIEWS OF THE MOON<sup>1</sup>



In the 1990s the Galileo, Clementine, and Prospector missions infused lunar science with new photographic, spectroscopic, and geophysical data: the South Pole Aitken basin was extensively imaged for the first time; the Th-rich Procellarum-KREEP terrain was recognized; and there were global measurements of surface composition, gravity, and shape. *New Views of the Moon* (NVM), edited by Bradley L. Jolliff, Mark A. Wicczorek, Charles K. Shearer, and Clive R. Neal, was conceived in large part to report on the advances fueled by these new data.

Although NVM reports on the quality of these data and their application in nearly every aspect of lunar science, NVM's emphasis is the perspective these data provide. Most of the book consists of well-researched and well-balanced reviews of the major aspects of lunar science, which lead into state-of-the-art models, detailed discussions, partisan conclusions, and suggestions for future work.

What makes NVM different from many other reviews is that for many controversial topics there are two or more treatments. For example, lunar mantle composition is addressed separately in terms of seismology, melting models, and geochemistry. There is much repetition in these treatments, but not a lot of agreement. Ideally, one expects a streamlined, consensus judgment in a review, but such an endeavor inevitably eliminates much of the nuance that underlies opposing views. NVM retains nuance and promotes insight.

Finally, although NVM will be a valuable resource for planetary scientists for many years to come, it truly distinguishes itself in the final of the seven chapters with an exercise in imagination: what would our understanding of the Moon be like if we had explored it as we have Mars—only with satellites and rovers. Granted we would have been aware of the South Pole Aitken basin a lot sooner, but at what loss: radiometric ages, the Eu-anomaly, basalt and impact melt textures, regolith chemistry, siderophile elements, oxygen isotopes, the seismic network. NVM at once provides a hopeful view of the rich scientific rewards awaiting a return to the Moon, as well as a sobering view of where we might have gone if an earlier generation of planners had lacked vision.

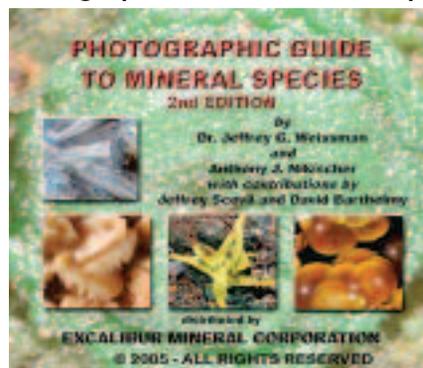
**John Longhi**  
Lamont-Doherty Earth Observatory  
Columbia University  
Palisades, NY

<sup>1</sup> Jolliff BL, Wicczorek MA, Shearer CK, Neal CR (eds) (2006) *New Views of the Moon*. *Reviews in Mineralogy & Geochemistry* 60, 708 pp. Available from the Mineralogical Society of America, ISBN 093995072-3, \$45 (soft cover); \$55 (hard cover)

## MINERALS ON CD AND DVD

Why buy a CD or a DVD on minerals in these days of widespread Internet use? I started looking at the *Photographic Guide to Mineral Species* and the *Photo-Atlas of Minerals* with this question in mind. Both are labors of love by committed mineralogists, mineral collectors, and developers; this has allowed keeping both products at very reasonable prices. Their focus is different, however, as one strives to illustrate as many mineral species as possible and the other concentrates on the more aesthetic members of the mineral family. Both would make an easy-to-use reference on minerals and provide a never-ending supply of mineral pictures to illustrate talks and lectures. (In both products, the photographers are the copyright holders of the photographs, and copyright permission would need to be obtained for official use.) I found both very easy and intuitive to use. Either would make a welcome addition to the bookshelf of anyone interested in minerals or teaching mineralogy or related topics. Read on to decide which one might be more suitable for you.

### *Photographic Guide to Mineral Species 2<sup>nd</sup> Edition*<sup>2</sup>



The CD-ROM *Photographic Guide to Mineral Species* by Jeffrey G. Weissman and Anthony J. Nikischer contains more than 6700 images, including some 750 images from world-renowned photographer Jeff Scovil and others. Like the first edition published in 1999, this CD-ROM emphasizes rare minerals, i.e. species rarely pictured in books and other media sources. Hence, 80% of the

4200 or so approved mineral species are shown on this CD. This is not surprising considering that one of the authors, Tony Nikischer, owns Excalibur Mineral Corporation, the largest dealer in rare species in the U.S. and, perhaps, the world. The Excalibur inventory contains more than 200,000 samples, and at any point in time, over 3100 different mineral species are in stock. According to the authors, photographs of at least 1500 minerals are available only on this CD. They are not necessarily the best samples of the given mineral but are representative of what a typical researcher or collector might encounter.

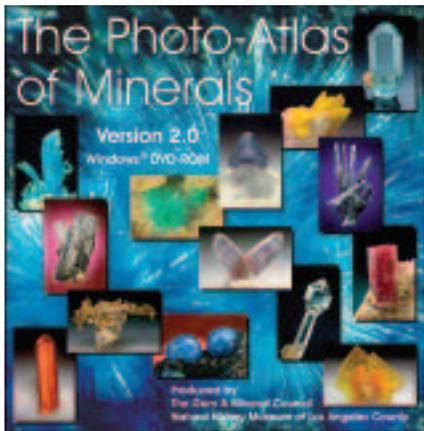
Interestingly, this CD will run on any computer with a CD player and a web browser like Netscape or Explorer, and no Internet connection is required. Image quality has also been improved to higher resolution standards for this version but is still quite variable. Of course, many of the mineral species illustrated are found only as tiny hard-to-photograph crystals.

A complete database of all approved mineral species published through the end of 2004 is included, courtesy of webmineral.com, making this CD a powerful reference work in an easy-to-access, simple format. The database provides a wide variety of information, including chemical formula, compositional data, physical and optical properties, crystallographic data, radioactivity, cataloguing information (validity, name origin, type locality, etc.), plus links to additional information available on the Internet. These data are given for every valid mineral whether pictured or not. Also of interest are the cross-references to obsolete names. Some information is available on mineral localities, but the treatment is not exhaustive.

Cont'd on page 220

<sup>2</sup> Weissman JG, Nikischer AJ (2005) *Photographic Guide to Mineral Species 2<sup>nd</sup> edition*, CD-ROM, available from Excalibur Mineral Corporation, [www.excaliburmineral.com](http://www.excaliburmineral.com), US\$49.95 plus shipping and handling (see ad page 164)

Cont'd from page 219

**The Photo-Atlas of Minerals Version 2.0<sup>3</sup>**

*The Photo-Atlas of Minerals* DVD is produced by the Gem & Mineral Council of the Natural History Museum of Los Angeles County. The project started in 1992 when project developer George Gerhold asked the executive council of Friends of Mineralogy to endorse the production of a video disk of mineral specimen pictures. Lou Perloff provided over 2000 of his mineral slides for the project, but funding was not obtained. Over the

next three years George worked with IBM and National Geographic to produce some of the first multimedia CD ROMs, and in 1995, with this new experience, he decided to try again. Help was provided by Anthony Kampf, who brought his expertise and his credibility with the mineral community. Importantly he also brought financial support via the education budget of the Gem and Mineral Council of the Natural History Museum of Los Angeles County. The first version was launched at the Tucson Gem and Mineral Society Show in 1998. Four updates, at roughly 18-month intervals, contained data corrections, additional

photos, and other refinements. In 2002, technological advances allowed work on version 2 to start. A new screen size was chosen, photos were reprocessed at higher resolution, and about 10,000 new photos were added. Version 2 was launched early this year.

The newly released DVD contains 16,000 high-resolution images. Coverage is not uniform: for many minerals there are no pictures, but for photogenic calcite there are about 400. Photographs of some 1600 mineral species have been provided by several well-known photographers and collaborating photographers, and minerals from more than 3500 different localities are represented. In order to reach the educational market, which version 1 did not do to any great extent, crystal form and atomic structure drawings (links provided by Steven Weber and Robert Downs) were added to this new version.

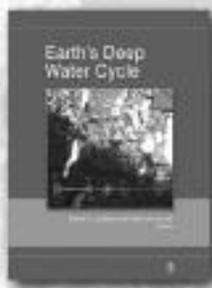
A wealth of information is provided on all minerals, including a pronunciation guide, crystal and atomic structure drawings, the origin of mineral names, and the standard descriptive and crystallographic data. Among the many different features are the ability to add one's own images; the possibility of searching by properties, by localities, and by chemistry (though this is restricted to one element); and the possibility to set up slideshows based on certain criteria (macroscopic minerals, gemstones, inclusions, etc.).

**Pierrette Tremblay**  
Québec, Canada

<sup>3</sup> The Photo-Atlas of Minerals Version 2 (2007) The Gem & Mineral Council, Natural History Museum, [www.nhm.org/pam](http://www.nhm.org/pam), US\$59.95 plus postage and handling (see ad, Elements 3: 126)

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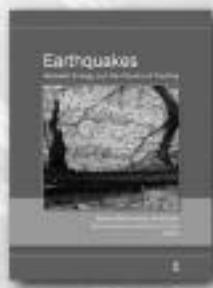
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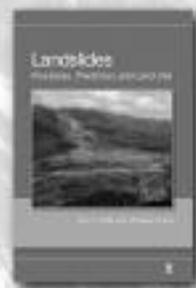
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