



Antique Miner's lamp with Kunzite Crystals

Scholarly Treasure: The Role of Gems in a University Setting

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A visual feast overviewing the author's paper presented at the first-ever Gemological Session of the historic 125th Anniversary Annual Meeting of the Geological Society of America (GSA) held in Denver, Colorado in October 2013.

***The Gemological Session of the
125th Anniversary Annual Meeting of the Geological Society of America
Paper No. 375-3 (abstract):***

Gems and gem-related programs are uniquely suited for an academic environment, and diverse gem collections are invaluable educational assets for a university. The vast majority are derived from minerals, therefore the science of gemology is intrinsically linked to that of geological studies, including optical mineralogy, crystallography, geophysics, petrography, mineral physics and mining - just to name a few. They can also attract those interested in the fine arts, economics, social issues, history, archeology, environmental science, materials science and, in the case of gems of organic origin, the biological sciences as well. Therefore they can be anticipated to attract added resources and notoriety to a geological department.

Gemology, the science of gem materials, investigates the properties which make gems desirable and uses (usually) non-destructive technique in their identification and characterization. At its heart a forensic science, gemology encompasses a range of skills depending on the setting, from a simple triplet loupe used in the field, to the advanced instrumentation used in gemological and other types of high-tech laboratories (e.g.: microtomography, Raman, FTIR, EDXRF and UV-Vis spectroscopy).

Gems with inclusions offer an exciting area of expertise found at all levels of study, from vocational to the highest levels of academia. Understanding these microscopic clues can tell us much about minerals and the gems themselves, including their identity, origin and possible treatment, making polished gems veritable windows into both geologic processes and the gem's own history.

Gems are ideally suited for use as teaching models, for attracting scholarship through research activities, and for educating the public through community outreach. Gem displays in university museums, along with academic programs and non-credit course offerings related to gems may

inspire career paths and academic pursuits not previously considered, while also providing enrichment to the overall academic experience.

Excerpted from: Skalwold, E.A. and Bassett, W.A. (2013) “Scholarly treasure: the role of gems in a university setting.” For a review of the Gemological Session please see: “Gemology bears triumphant tidings. A review of the historic 125th Anniversary Annual Meeting of the Geological Society of America (GSA)” archived at http://www.nordskip.com/GSA_Gemology_Session.pdf



Elise A. Skalwold is an Accredited Senior Gemologist, independent researcher, educator and author. She serves as Consulting Gemological Curator at her alma mater, Cornell University (B.Sc. 1982), and is Contributing Editor and author for the quarterly column *G&G Micro-World* featured in *Gems & Gemology*, the peer-reviewed scientific journal of the Gemological Institute of America (GIA). Ms. Skalwold is a Graduate Gemologist (G.G.) trained in residence at the Gemological Institute of America Robert Mouawad Campus located in Carlsbad, CA. While living in Thailand she worked in the famous gem markets of both Chanthaburi and Bangkok and pursued studies at the Gem & Jewelry Institute of Thailand for which she was subsequently elected a Fellow of the Gemmological Association of Great Britain (F.G.A.). She is an active member of the Society of Mineral Museum Professionals (SMMP), a world-wide network linking curators from large and small institutions from which members draw on combined expertise.

As well as having co-authored the 415 page book [The Edward Arthur Metzger Gem Collection](#) and presently working on a companion volume to it, Ms. Skalwold is an author/co-author of gemology and mineralogy papers featured in *InColor*, *Gems & Gemology*, *The Journal of Gemmology* and *Rocks & Minerals Magazine*. Passionate about gemology,

she is actively involved in bringing this science into a university setting for the benefit of students and non-students alike – this is the quintessential theme of her paper “Scholarly Treasure: The Role of Gems in a University Setting” presented at the 2013 GIA-sponsored first-ever Gemological Session of the Geological Society of America (GSA) 125th Anniversary Annual Meeting. Her speaking engagements have recently included the New York Mineralogical Club (co-founded by George F. Kunz in 1886), the Rochester Mineralogical Symposium and the 11th Annual Sinkankas Symposium [Ruby] held at the Gemological Institute of America in Carlsbad, CA.

Selected recent projects include:

- Skalwold, E.A. and W.A. Bassett. (2016) **Blue minerals: exploring cause & effect.** *Rocks & Minerals*, Vol.91, No.1, pages 61-75
- Skalwold, E.A. and W.A. Bassett. (2015) **Double Trouble: Navigating Birefringence.** Chantilly, VA: Mineralogical Society of America. 20 pages (booklet).
- Skalwold, E.A. and W.A. Bassett. (2015) **Quartz: a Bull’s Eye on Optical Activity.** Chantilly, VA: Mineralogical Society of America. 16 pages (booklet).
- Koivula, J.I. and Skalwold, E.A. (2014) **The Microworld of diamonds: images from earth's mantle.** *Rocks & Minerals*, Vol. 89, No. 1, pages 46-53.
- Skalwold, E.A. (2012) **Nano-polycrystalline diamond: circle the wagons or embrace as a gem of the future?** *The GemGuide, Gem Market News*, Vol. 31, No. 6, pages 8-11.
- Skalwold, E.A., Renfro N., Shigley J.E., and Breeding, C.M. (2012) **Characterization of a synthetic nano-polycrystalline diamond gemstone.** *Gems & Gemology*, Vol. 48, No. 3, pages 188-19.
- Skalwold, E.A. (2012) **Nano-polycrystalline diamond sphere: a gemologist's perspective.** *Gems & Gemology*, Vol. 48, No. 2, pages 128-131

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