

Bulletin of the Mineralogical Society of Southern California



Volume 80 Number 1

January 2009

The 850th Meeting of The Mineralogical Society
of Southern California

Latest Discoveries of Minerals on Mars

By

Dr. Ralph Milliken

Saturday, January 24, 2009, at 5:30 p.m.

**Oak Tree Room
1150 East Colorado Blvd., Pasadena**

Featuring:

- Opal on Mars**
- Meteorites**
- Micro Mount Conference**
- Natural red labradorite: fact or fiction?**
- Virgin of Acton?**

January 24th Banquet and a Visit to Mars!

Come for an evening of festivities, food, and a talk on the latest discoveries of minerals on Mars by Dr. Ralph Milliken of JPL/Caltech. Bring your family and friends!

When: Saturday evening, January 24, 2009. Festivities begin at the 5:30 with a Social Hour and Silent Auction. Wine and beer will be available from a no host bar. Dinner at 6:30 will be followed immediately the talk.

Reservations are required (see below)!

Where: The Oak Tree Room, 1150 East Colorado Blvd., Arcadia at the SE corner of Colorado Blvd. and Michalinda Ave. , adjacent to Coco's Restaurant.

The Food: The meal will be a buffet featuring prime rib, salmon, chicken dejon, mash potatoes and gravy, rice pilaf, salad bar, bread, dessert table, and dinner beverages. The cost for the complete meal including tax and tip is \$33.00.

Reservations are imperative! Make reservations **no later than Sunday, January 18th** by email or phone to Janet Gordon. Please pay \$33 per person at the door by check or cash.

The Auction: Bring your money for great buys and a mineral specimen or related item to donate to our once-a-year fundraising event! This fun event is a great way to support your Society. Please contact Janet Gordon if you have questions or wish to make special arrangements for a donation.

The Program:

“Opals and Other Mysterious Materials on Mars”

Dr. Ralph Milliken will speak about recent high-resolution observations of Mars acquired by satellites and rovers that have provided a wealth of information about its rocks and minerals. The types of minerals and their composition gives us important information about the evolution of the red planet, and how it is at times both strikingly similar and yet vastly different from our own world.

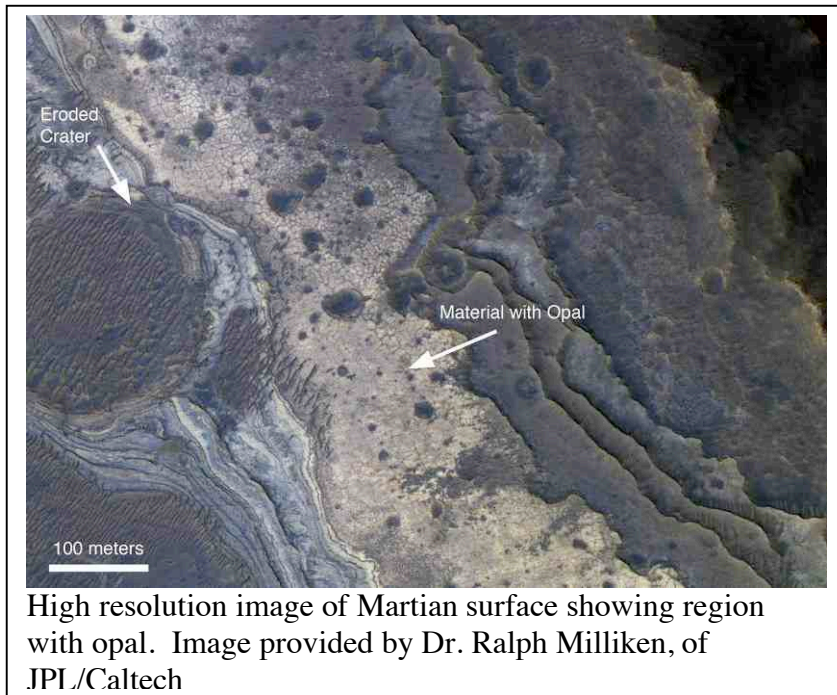
Of particular importance has been the discovery of hydrated minerals on the Martian surface. The presence of clays, hydrated salts, opal, and carbonate preserved in the ancient rock record tell us about the water inventory on Mars, the fate of that water, and how such water interacted with the basaltic crust. These minerals are commonly found in very ancient terrains on Mars (> 3 billion years old), providing a unique window into the early history of the solar system as such old rocks are rarely preserved on Earth.

Studying the mineralogy of Mars and roles of H₂O and CO₂ as recorded in these ancient sedimentary rocks may ultimately tell us about the role of water and future climate of our own planet.

Dr. Milliken has been a research scientist at JPL/Caltech since 2006. His current work focuses on studying hydrated minerals throughout the solar system with a strong interest in Mars, asteroids, and meteorites. He uses various laboratory and remote sensing techniques to accomplish this, but reflectance spectroscopy is the primary method. He also has been involved with characterizing possible landing sites for the next Mars rover (Mars Science Laboratory that launches in 2011).

Ralph earned a B.S. in Geology from Indiana University (2001) and M.S. and Ph. D. degrees in Geology from Brown University, graduating in 2006. He enjoys spending time

outdoors hiking, camping, and looking at rocks. In his ever-decreasing spare time, he likes to play piano, read and cook.



Minutes of the December 12, 2008 Meeting

The 849th meeting of the MSSC was called to order at 7:35 on December 12, 2008 by Vice-President Janet Gordon who introduced the speaker. Alyssa Morgan, Collections Manager for the Mineral Sciences section of the Natural History Museum of Los Angeles County gave an excellent talk on extraterrestrial minerals and their relation to planet formation. Ms. Morgan became interested in minerals as the building block of planets, and described the formation of our solar system and the mineralogy of chondrules, the oldest

material in the solar system composed of the minerals forsterite, enstatite, and anorthite plus sulfides and oxides. Meteorites containing chondrules have ages of 4.56 billion years and as these accreted into early planets. The chondrules were reworked as planetary cores and mantles were formed. When these early planets fragmented, the scraps became achondrite meteorites, which include the iron, stoney, enstatite, and stoney-iron varieties. These are slightly younger at 4.5 billion years.

Alyssa also discussed the origin of the Moon, how the concept of magma oceans explains the distribution of minerals on the Moon, and how this idea is being applied to Mars and the Earth as well. She brought samples of several kinds of meteorites for people to look at.

After the talk, members were reminded of the open house at Jewel Tunnel Imports on Saturday, December 13, and of the upcoming January banquet with Dr. Ralph Milliken as speaker. Ann Meister announced that she had brought a mineral trimmer for members to try and that she would bring it to future meetings. Shou-Lin Lee commented on some opalescent artificial quartz that she had purchased.

Janet Gordon announced the slate of officers for 2009. Ann Meister moved that that we elect the entire slate as announced, and Carolyn Seitz seconded the motion which carried unanimously. The slate is as follows:

OFFICERS

President: Geoffrey Caplette
Vice President: Bruce Carter
Secretary: Pat Caplette
Treasurer: Herman Ruvalcaba
CFMS Director: Jo Anna Ritchey
Past President: Islia Lyles

DIRECTORS 2009-2010

James Imai
Leslie Ogg
Geoff Caplette
Fred Elsnau

(Robert Housley and Jo Anna Ritchey will continue their terms as directors through 2009.)

Carolyn Seitz announced that former member and long-time mineral supplier, George Burnham passed on this week. Rock Currier told of George's early dealings in minerals from Tiger, Tsumeb, and various Mexican localities. It was noted the Burminco, George's business, would be closing its doors on December 31, 2008. The business has been a major supplier of minerals and rocks for educational institutions for decades.

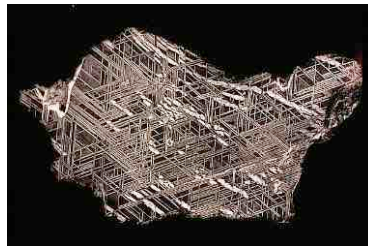
Ed Kiessling won the door prize.

Respectfully submitted, Janet Gordon, acting secretary

Photos of Meteorites from the Program

By Alyssa Morgan

Widmanstätten: a distinct texture of Iron meteorites that was produced by intergrowth of taenite and kamacite.



Pallasites are believed to be pieces of the core-mantle boundary of small planets. They consist of forsterite (often gem quality peridot) in a matrix of iron metal

The 44th Pacific Micro-Mount Conference

The 44th Pacific Micro-Mount Conference is scheduled for January 30, 31 and February 1, 2009 at the San Bernardino County Museum at 2024 Orange Tree Lane, Redlands.

Registration forms were mailed out already if you did not receive one please contact Walter Margerum. All members are encouraged to attend even if you do not own a microscope!

This year speakers include not only past and present MSSC members such as Sugar White, Paul Adams and Bob Housley, but also the chief gemologist from GIA: John Koivula.

Mr. Koivula is the co-author of the Photoatlas of Inclusions in Gemstones volume 1, 2, and 3 with the late renowned gemologist Dr. Eduard J. Gübelin. Many of Mr. Koivula's photomicrographs are more than pictures that documented the inner world of gem and mineral, they are also pictures of art. Some samples of his works can be found at the webside: www.microworldofgems.com.

Micro's Needed



Micro's are needed for the Pacific Micro-Mount auction.

Please send your specimens to:

Walt Margerum
14892 Sutro Ave.
Gardena, CA 90249.

Another victim of bad economy???

An announcement about the second Gemological Research Conference organized by Gemological Institute of America (GIA) was calling for abstracts was included in the October 2009 issue of MSSC bulletin. Recently GIA announced that the Conference has been postponed until the global economy improves. Any new development regarding the Conference will be posted in the future Bulletin.

It is Dues Time Again

Membership dues are due

If you receive the due notice in the mail

Please reply promptly

If you did not receive the due notice

Please contact Membership Chair:

Herman Ruvalcaba by phone at 562-944-4855

It is confirmed!!!

**There are Red Labradorites in Tibet:
New Development in the Saga of Red Labradorite**

by Shou-Lin Lee

Since the introduction of a mysterious red labradorite from some undisclosed localities was introduced to the public around 2005, the story of red labradorite/andesine read like a crime novel full of real and perceived deceptions. In MSSC October 2009 bulletin, I briefly mentioned about the

controversy involved this material. Recently Gemological Institute of America (GIA) reported that a Dr. Ahmadjan Abduriyim of the Gemmological Association of All Japan recently visited the andesine mines in Tibet and Inner Mongolia with his colleagues.

Dr. Abduriyim reported that the Tibetan locality does produce natural red andesine. The mining area was near a riverbed at the base of a mountain. The deposit appeared to be alluvial in origin. The best quality from this locality is deep red. Bright orange red is common. Some stones had areas of green or colorless, but they did not see any piece that was completely brown, yellow or colorless. The annual production from this area is about 700 to 800 kilograms of which only about five percent are gem quality. According to the miners, the red andesine was found in the area as far back as 1970s, but beads made of red andesine first appeared in Lhasa only since 2003.

The deposit at Inner Mongolia is also an alluvial deposit. The production in this area is much larger, up to 100 tons a year. However, the majority of them are pale yellow, but colorless or deep yellow were uncommon. Unlike the Tibetan deposit, no red or green andesine had been found from this locality so far.

When I told Dr. Rossman about the above report, he told me that yes, he knew about Dr. Abduriyim's trip and as a matter of fact, he received some of the labradorite/andesine that Dr. Abduriyim brought back from the mine.

Rock Currier commented that when a large quantity of ametrine from Bolivia first appeared on the market, he did not believe that the colors were natural. He thought that they were treated until he saw the rough. This could be the case in the red andesine from Tibet.

The complete report of Dr. Abduriyim's trip to these two mines and the properties of these labardorite will appear in the upcoming Winter issue of Gem and Gemology.

What do you see in this agate?

By Shou-Lin Lee



This is an agate nodule half from Acton, California. Some people would swear that there is an image of the Virgin Mary in this agate. The owner of this agate thought so too and the price tag of this piece is marked at five figures. If a piece of toast with Christ's image could fetch a large sum in the internet auction, why not an agate with the Virgin Mary's image. I cannot afford it, so I asked to take a picture. By the way, according to the owner, the other half and a slab from the

same nodule, that all have the same image, are somewhere out there.

From the editor---

There is no mistake that this page is blank because I need your help. I am really grateful for all the regular contributors. Your input made this Bulletin interesting. But I need more.

There is no monetary compensation for printed articles but you get to talk about your favorite specimen, weird specimen, field trips, visits to museums or symposiums. Particularly, some “how to’s,” such as how to take pictures of opals, how to clean specimens, etc.

To some of the old timers, would you like to introduce a “who’s who in the Society” to the newcomers in the Society while these people are still alive? Just a brief write-up.

Oh, and I need your feedback too. Your feedback help me to decide what to include in the Bulletin.

ARIZONA MINERAL & FOSSIL SHOW

TUCSON ~ JAN. 31 - FEB. 14, 2009

Show Hours: 10 - 6 daily

4 LOCATIONS

- ★ **Quality Inn - Benson Hwy.** - I-10, Exit 262, Northeast corner of Benson Hwy at Park
- ★ **InnSuites Hotel - Downtown** - 475 N. Granada Ave., at St. Marys
- ★ **Ramada Ltd. - Downtown** - 665 N. Freeway, at St. Marys
- ★ **Mineral & Fossil Marketplace** - 1333 N. Oracle, at Drachman

Over 400 dealers with the best minerals & fossils in TUCSON!

Retail ★ Wholesale ★ Open to the Public ★ Free Admission & Parking

Special wholesale bathroom - Quality Inn - Benson Hwy.
DAVE BUNK MINERALS ★ ROCKS OF AGES BOOKS

2009 Calendar of Events

January 2-February 28, Quartzsite, Az. Various rock and mineral shows, for more information check Web site www.ci.quartzsite.az.us

January 1-31, Laughlin, NV. Annual show; Cloud's Jamboree; Avi Resort & Casino, 10,000 Aja Macav Pkwy.; 7-6 each day; free admission; indoor and outdoor vendors; Web site: www.cloudsjamboree.com

January 9-11 2009 Mesa, Az: 37th Annual Flagg Gem and Mineral Show will be held Friday, January 9, 2009 to Sunday, January 11, 2009 from 9 am to 5 pm. Arizona Mineral and Mining Museum Foundation; Mesa Community College, Dobson Rd. and U.S. Hwy. 60; Fri. 9-5, Sat. 9-5, Sun. 9-5; free admission; e-mail: dminerals@yahoo.com A rare public display of the Peralta Stones will be featured along with other special exhibits.

January 21-23 Globe, Az 43rd annual show; Gila County Gem & Mineral Society; Gila County Fairgrounds, U.S. Hwy. 60; Fri. 9-5, Sat. 9-5, Sun. 9-4; adults \$2, high school students with ID and children with parents free

January 17-18 2009, Exeter, CA Tule Gem & Mineral Society Exter Memorial Bldg. 420 N Kaweah, Exter
Hours: Sat. 10 - 5, Sun. 10-4 Margaret Buchmann
(599) 739-0401 Email: mab@mindinfo.com

January 30-February 1 2009, Redlands, CA The Mineralogical Society of Southern CA 44rd. Pacific Micromount Conference San Bernardino County Museum 2024 Orange Tree Lane (exit North on California St. from I-10