# Bulletin of the Mineralogical Society of Southern California

Volume 86 Number 10 October, 2013


*The 902nd meeting of the Mineralogical Society of Southern California*

***With Knowledge Comes Appreciation***

***October 11th, 2013 at 7:30 pm***

**Pasadena City College**
**Geology Department, E-Building, Room 220**
**1570 E Colorado Blvd., Pasadena**

## Program: *Gypsum: Not Just Drywall Ore* by: Dr. Steve Hardinger

## In this Issue:



**Remember:**
**If you change your email or street address, you must let the MSSC Editor and the Treasurer know or we cannot promise delivery of future Bulletins**

## About the Program: *Gypsum: Not Just Drywall Ore* by: Dr. Steve Hardinger

Among collectors, gypsum is a neglected mineral, often thought of as nothing more than drywall ore. In this talk classic gypsum localities, typical and atypical associations, pseudomorphs, fluorescence, current pricing, and more will be discussed. This enlightenment (we hope) will convince collectors that gypsum really is a collectable mineral.

Dr. Steve Hardinger is a senior lecturer in organic chemistry at UCLA. He has been a mineral dealer for ten years (owner of Dragon Minerals), and a collector for thirty. His collecting passions are quite eclectic, and include gypsum, naturally etched crystals, pegmatite oddities, French Creek (Pennsylvania) and A. E. Foote material.

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## From the Editor:

Well, here we are at October already! Where is the time going? I want to again thank everyone who has so graciously contributed articles for the bulletin. The feedback I've been getting is that everyone really enjoys these "member" articles. I have agreed to continue as Bulletin Editor for another year. But I need your help! I'm always looking for more from you, our interesting and well informed membership, to share. Therefore, I'm asking again for you to consider putting pen to paper or fingers to keyboard and send me a piece to share in the bulletin.

What interesting field collecting have you been doing? What's your favorite mineral or location and why? What or who got you started in studying or collecting minerals. What is your favorite hobby related memory? Any interesting books or websites you would like to review for the benefit of our members? If you actively collect mineral specimens, what is the focus of your collecton? Is it based on any special criteria such as a favorite location or mineral, a specimen size, a color, etc.

Come on…I know you all have interesting stories to share! Let's get them out there for others to enjoy. Your contribution can be one paragraph or several pages…any length is welcome. They can me emailed to me at msscbulletin@earthlink.net or mailed to me at the address in the roster. Thank you, Linda Elsnau

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## Meanderings From The President by Ann Meister

**"We need a volunteer!"** Dr Bruce Carter is stepping down as Program Chairman. He has held the job for five years – that's a lot of programs! This is an important position in the MSSC as we thrive on good programs. Though it is a demanding position, it is also interesting and full of satisfaction. First of all, you get to meet lots of interesting people in the field of mineralogy, geology and ancillary areas – people you might otherwise not have a chance to meet. Secondly, you get the satisfaction of knowing that you have added to the knowledge of the Society members. And you get personal satisfaction for a job well done. Programs should not be a one-person committee; get assistants and divide up the schedule. Also members who meet potential speakers elsewhere will give you info for contacts. Who will volunteer? Please contact me or Bruce if you are interested. Otherwise, no programs...

We have a slate of officers listed elsewhere in the bulletin. All of the 2013 officers and Board members have opted to continue in their positions, though Jo Anna Ritchey, the CFMS Federation Director is willing to yield the position to anyone interested. Talk with Jo Anna to see what this entails. In addition, though not elected positions, Linda Elsnau and Leslie Ogg will continue as Bulletin Editor and Webmaster respectively. Now it is your turn as members to consider the slate and add candidates if you so desire. Before you place a name in nomination however, please get that person's permission! Per the procedure in the Bylaws, we will vote on the officers at the November meeting, but nominations from the floor are open in October and November.

And I want to thank you for the quick vote in September on the new and improved Bylaws and Operating Procedures. Now we can get on with more interesting activities.

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**MINUTES of September 13, 2013 Meeting:**

The 901st meeting of the Mineralogical Society of Southern California (MSSC) was held on Friday, September 13, 2013 at Geology Building of Pasadena City College. The meeting was called to order by President, Ann Meister at 7:30 p.m.

**Regular Business**

- Our 900th meeting/ picnic/pot luck, hosted by Bruce and Cathy Carter was a fantastic success. Thanks to all who brought something. There was great food and company and we really enjoyed ourselves. The ice machine [sno-cone] was great! "We should think about doing it again in the future instead of going all the way to Fallbrook [for our annual picnic]" said Bruce. Ann responded: "If you're willing to host it, we're willing to show up!"
- Minutes for July, 2013meeting, as published in the August 2013 Bulletin and the August, 2013 meeting, as published in the September Bulletin: **Motion to approve both Minutes** was made by Linda Elsnau, seconded by Fred Elsnau and voted on by the membership. Vote: *unanimous to approve. Motion passed*.
- The Mojave Mineralogical Society is having a show on October 5th and 6th in Boron (flyer). There was a question about being able to tour the mine and consensus was yes, probably.
- Banquet is January 18, 2014. Save the date.
- Elections are coming up. If anyone would like to hold office you're welcome to let us know. And, for those who hold office and don't want to hold office any longer, please find your replacements.
- Major business: Approval of new By-Laws and Operating Rules. The floor was open for questions regarding these items. These documents had been e-mailed to the membership with the August Bulletin; however Ann briefly went over the changes. Bruce Carter stated that the revisions took 2 years and a lot of work by the board. Ann mentioned that credit be given, as well as, many thanks to Bob Griffins, who actually laid out much of the basis background.

  President Ann Meister opened the floor for general discussion of the By-Laws, seeing none, **a motion was called to approve the *By-Laws* as published in the August 2013 Bulletin and dated September 20, 2013**. Motion made by Fred Elsnau and seconded by Bruce Carter. Vote: *unanimous to approve. Motion passed*.

  Next, Ann Meister opened the floor for general discussion of the Operating Rules, seeing none, **a motion was called to approve the Operating Rules that are dated September 13, 2013 and were published in the August 2013 Bulletin**. Motion made by Dee Trent and seconded by Bruce Carter. Vote: *unanimous to approve. Motion passed*.
- Ann has some old booklets if anyone is interested: History of Society Constitution of Officers 1951 and By-Laws from 1940's.
- Fred Elsnau asked if the Dana Club (PCC's geology club) published a magazine: "Dana (something)". He will research further. Ann suggested GeoLiterary Society may be helpful.
- Show and Tell: Laura recently returned from upper Lake Michigan and Lake Superior areas sharing her Petoskey stone, other samples from there and Nevada arrowheads.
- Call for other announcements: there was a refreshing comment on MSSC procedures.

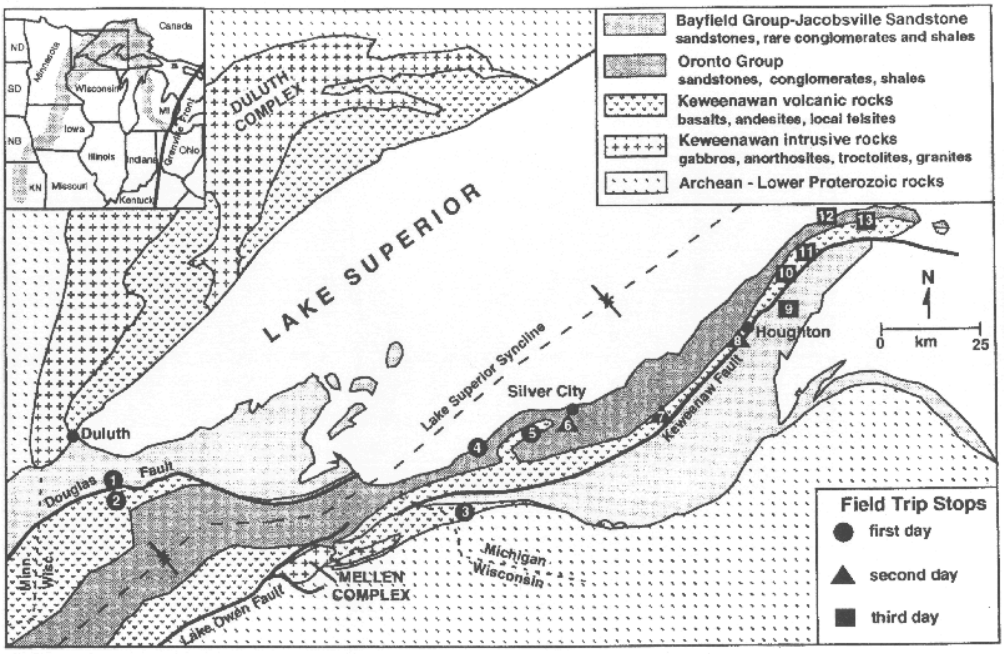
**Program**

Meeting was turned over to Bruce Carter who introduced our presenter, Janet Gordon. Janet was hired by Pasadena City College (PCC) to teach petrology, mineralogy and formed a core of the program here at PCC. Janet taught at PCC for 15 years.

Presentation: Exploring Michigan's Copper Country by Janet Gordon (photos by Paul Gordon). Janet began her presentation by describing her recent trip ("…my summer vacation") to Michigan's Lake Superior, Isle Royale (a 53 mile boat ride) and travels in the nearby area including Seaman Museum, Houghton Museum, Quincy mine, C&H mine and Pictured Rocks. The Quincy mine, for example, used the largest steam hoist, ran

from 1846-1945 with some minor mining until 1970's. "Old Reliable", as Quincy was called, had its peak from 1890-1915 with 1910 producing 225 million pounds of copper.

Janet explained that native copper in basalt is very plentiful in this area due to geologic activity including multiple ancient glacial activities. She showed how the Mid-continent Rift System, extending from Kansas up through Nebraska and Iowa into Minnesota, over and through Michigan and the Keweenaw Peninsula down to Ohio and south into Tennessee (see below, upper left corner) had a "hot spot", a geologic volcanic region fed by mantle (magma) in the Michigan portion contributing to the plentiful basalt and copper there.




(↑ Ignore lower right corner ↑)

Northeast, the Grenville Front, a major tectonic zone feature (of the Canadian Shield), shows multiple fault lines, as well. Noticeably, there are no mines east of fault lines in the area.

Many of the rocks in this region are 1.1 billion years old. The Michigan state gem is the Isle Royale Greenstone, chlorastrolite and Petoskey Stone, fossilized coral (350 million years old) and pebble shaped is the state's official stone (as of 1965) and is found in abundance in the lower peninsula.

Janet went on to tell about the largest lava flow known (800-1,500 cubic km), the native copper *Big Copper Boulder,* 19' long, 8' wide and weighing 17 ton housed at Michigan Technological University (MTU)and another native copper specimen, the *Ontonagon Boulder***,** weighing3,700 pounds and now housed at the Smithsonian.

She spoke of other related topics and took questions at the conclusion of her presentation. We thank Janet and Paul for a wonderful and interesting presentation.

The drawing was won by Linda Elsnau.

The meeting was adjourned at 8:55 p.m. Refreshments were served at the social afterward.

Respectfully submitted, Angie Guzman, Secretary

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**PROPOSED SLATE OF OFFICERS FOR 2014**

President: Ann Meister
Vice-President: George Rossman
Secretary: Angie Guzman
Treasurer: Jim Kusely
Federation Director: Jo Anna Ritchey
Directors – 2 year term – 2014-2015
Pat Caplette
Pat Stevens

The election of officers is at the November meeting. Nominations from the general membership can be made at the October and November meetings. The potential candidate's approval must be secured before their name is placed in nomination. Note that only two Directors are up for election. According to the Bylaws (Article IV Sections 3 & 4), the job has a two year term with three Directors elected in even years and two in odd years.

The Board decided that the 2013-2014 Directors will be Leslie Ogg, Bruce Carter, and Bob Housley (no need to re-elect this year) They have been Directors (or officers) for the longest time, so that would give them one more year to serve officially, before they stand for re-election in November 2014, or step down. That leaves Pat Caplette and Pat Stevens to be up for election this year and would end up serving 3 years total since they would not stand for election again until November 2015. Now the proper rotation of Directors is established.

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## Fredite

Article and photographs by Rolf Luetcke

The story starts with a friend from Illinois. Glenn Nicol collected minerals for many years and had a wonderful mineral collection but he was not a micro mineral collector. Glenn had a close friend who did collect a lot of micro minerals and had an extensive collection.

When Glenn's friend Fred Ferrar passed away he left Glenn a lot of mineral specimens. In the collection were hundreds of half inch micro boxes full of minerals. Glenn had set the boxes of micro mounts aside since it was not anything he collected. He was sure someone would come along that the collection was just right for.

We got to know Glenn when we owned a mineral shop in Southeastern Arizona and he would stop in to chat and pick up a specimen or two for his collection. We became good friends and often went collecting together.

**Pic 1**

Glenn spent several months every Winter in Arizona and we often went together to the Tucson mineral show. One year when he came out he brought me the box of micro minerals from Fred Ferrar since that was my field of interest. Glenn thought they would find a good home with us. The minerals were all mounted in the tiny plastic micro boxes and nearly all had labels. Some were purchases, some gifts and the rest Fred got from friends at minerals shows that saved all the pieces that broke from larger specimens during the moving around between shows.

Fred must have spent many hours mounting and labeling all the small pieces with nice crystals. Many of the specimens were from Mexican mines and fortunately I knew a bit about Mexican minerals. Many of the specimens were only labeled with the country but I was able to fill in information on most of them.

I spent many hours going through the collection after the Tucson show was over and Glenn had gone back to Illinois. Most of the specimens were well crystallized and I had a great time. A number of pieces were either not labeled or the information on the label was not enough. These went into a separate box to be worked with later.

There was one in particular called Fredite that had me stumped. I checked all the literature I had and the internet but could find nothing on this name. There was also nothing about locality on these boxes. There were a couple dozen of them and the crystals looked like either Calcite or Dolomite. The crystals were sharp and well formed and often in clusters of crystals.

I had finished with the specimens that were labeled and decided to call Glenn and ask about the Fredite and a few other pieces.

**Pic 2**

When I told Glenn I was curious about the Fredite there was a raucous laughter on the other end of the phone. Then Glenn went into the story about Fredite.

It appears that Fred collected more than the normal range of minerals. Fred had to have a gallbladder operation to remove some stones and he had asked the doctor to please save the stones for him. When he was home and recovered from the operation he mounted the stones in the little boxes and put his minerals name on the boxes. That must have been a heck of a gallstone since there were so many boxes.

**Fredite 2**

I have passed a kidney stone or two but have never saved any. The collection of Fred's also had a few kidney stones in it. It seems his body produced a number of mineral specimens. If I had not gotten the answer from Glenn I would have assumed they were minerals specimens.

I have shown the Fredite to a number of collector friends and most were fascinated by the crystals. I have given a number of them away but not all the friends wanted one.

I was working with the box that had the Fredite in it today and took a few photos and thought I would share the story.

Hope people have some fun with it.

*Editor's Note: Our thanks to Rolf Luetcke for his generous permission to use this article and his photographs which were originally published in mindat.org*

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## **Benitoite Revalued** by Linda Elsnau

Did you see the article in the LA times on Sept 17th about the $50,000 Benitoite twin crystal recently found at the California State Gem Mine's fee dig? Well, the value has been reduced From $50,000 in an appraisal done by the Austrian customs authority to a mere $487! To read more:

The original article is here: http://www.latimes.com/news/local/la-me-rare-gem-20130818,0,3304203.story

The second article : http://www.latimes.com/local/la-me-star-dispute-20130917,0,2641975.story

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© irocks.com

**Quartz**: $SiO_2$
Goboboseb Mountains,
Brandberg Area,
Erongo Region,
Namibia
6.8 x 4.4 x 3.2 cm.

## **Quartz and its' Colors** by D.D. Trent and Rick Hazlett

*( originally published in the Sierra Club's Newsletter : Naturalist Notes, Sept-Oct, 2002)*

Quartz, one of the two most common minerals in the earth's crust – feldspar being the other common mineral – exists in many forms and colors. A combination of its many colors and its hardness have made it a popular semi-precious gem stone mineral since ancient times.

An understanding of color in minerals has been pondered for perhaps thousands of years and the causes of some mineral colors is still something of a mystery. As a starter for understanding mineral colors we will consider six varieties of quartz; milky quartz, clear crystalline quartz, amethyst, smoky quartz, rose quartz and jasper.

The origin of the color of milky quartz in relatively simple. It's very much the same story as why the water one sometimes gets from a water tap is milky. The water is charged with millions of tiny bubbles of air that eventually escape to the atmosphere leaving the water clear. In the case of quartz, the mineral solidifies deep within the Earth from a hot liquid, san about 800 to 1,000 degrees F, and large amounts of $CO_2$ gas are present in the liquid. As the liquid cools the gas comes out of the solution, much as the $CO_2$ bubbles appear in a beer that has just been opened, but in the case of the cooling and crystallizing quartz, the $CO_2$

bubbles can't escape to the atmosphere and become trapped within the quartz. Should the hot liquid lack gas, however, there will be no bubbles and the resulting quartz will be transparent.

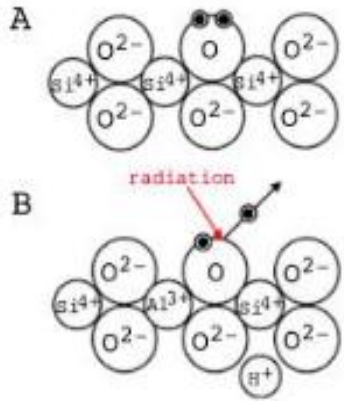
© irocks.com

**Quartz (Var: Amethyst)** : $SiO_2$
Diamond Hill (Ashaway Village), Ashaway, Hopkinton, Washington Co., Rhode Island, USA
3.3 x 3.1 x 2.0 cm.

Explaining the colors of amethyst and smoky quartz is more complex and requires that we first discuss the silica tetrahedron. The composition of quartz starts with a very simple molecule composed of the element silicon as a positively-charged ion (called a cation) that carries a negative charge because of two extra electrons. Silicon atoms are the most common, and one of the lighter cations in the Earth's crust, and oxygen atoms are overwhelmingly the most common of the crust's atoms. Silicon is tiny, in contrast to oxygen which, when it has the extra electrons, is huge, so big in fact that only four oxygen atoms can fit around a single silicon atom. Because silicon has a 4+ electrical charge, and oxygen ha a 2- charge, the two elements are drawn to one another wherever heat and fluid activity allows new minerals to form. And the structural shape taken by the molecules of silicon and oxygen is that of a tetrahedron, a four-sided structure, with a silicon atom in the center of the structure and oxygen atoms surrounding it. One oxygen atom is positioned at each pointed end of the tetrahedron., The resulting tetrahedron, however, is not electrically stable because of an unbalanced electrical charge due to the "extra" electrons. Consequently, several tetrahedral may link together in one of several different arrays, depending on what other atoms of other elements are available. In the case of pure quartz, many silica tetrahedral attach together in an interlocking three dimensional network that is so solidly linked by strong chemical bonds that quartz is one of the hardest of all common minerals.

© irocks.com

**Quartz (Var: Smoky Quartz)** : $SiO_2$
Burg - Fiesch Glacier area, Fiesch, Goms, Wallis (Valais), Switzerland
10.5 x 3.7 x 3.6 cm




**What is a Hole Color Center**

**Schematic representation of creation of a "hole" color center.** Quartz consists of a repeating unit of $SiO_2$. In smoky quartz, aluminum typically replaces one out of every 10,000 silicon atoms. The aluminum is in the form $Al^{3+}$. A hydrogen or sodium ion ($H^+$ or a $Na^+$) will always be found nearby to neutralize its charge.

http://www.webexhibits.org/causesofcolor/12.html

But, you ask, what does this have to do with the colors of quartz? Stay tuned, the answer now begins to really bristle with technical details. In the case of amethyst, the color results from a fairly common phenomenon, the so-called **hole color center**. In addition to silicon and oxygen, another common element in the Earth's crust is iron, one form of which is ferric iron ($Fe^{3+}$). Because $Fe^{3+}$ has an ionic radius close to that of silicon it can substitute easily for silicon in some quartz crystals when the geochemical conditions are appropriate. Because of the differences in the electrical charges of ferric iron cation, 3+, and silicon, 4+, the quartz must find some other cations to draw into its crystal structure in order to achieve electrical neutrality. It grabs a sodium cation ($Na^{1+}$) and a hydrogen cation ($H^{1+}$), both of which are extremely common in most geological environments as "free" ions, and which can be held easily in the spaces between adjacent silica tetrahedral inside the three-dimensional quartz crystal lattice.

Now the plot really thickens. Locally within amethyst's iron-filled tetrahedral are weakly-held oxygen electrons (due to the weaker positive charge of iron in contrast to silicon). When natural radiation from nearby uranium-bearing minerals or rocks impacts the iron-bearing quartz, the weakly-held electrons will be blasted out to their sites around the oxygen and displaced to other sites within the quartz structure. This forces the remaining electrons to adjust their positions around the oxygen nuclei, and the process light energy is absorbed

that produces the beautiful color we see in amethyst. Thus, the hole color centers in amethyst are the sites opened up due to electron readjustment.

Thus, amethyst is actually a defective form of quartz. Should one heat ame6thyst to about 800 degrees F, the heat energy causes the crystal structure to expand and allows the errant electrons to slip back into their "proper" positions. When this happens, the amethyst will turn yellow or green and will retain these colors upon cooling.

Similar hole color centers account for the dark color of smoky quartz. In this case, however, it is aluminum (with a 3+ charge), not iron, that substitutes for the silicon (4+). However, aluminum has a different ionic radius than iron and it exerts a different attraction to the neighboring oxygen. Consequently, the electron adjustments and the color absorption triggered by the hole color centers will be different than in amethyst and likewise, the color absorption will differ. As with amethyst, heating smoky of quartz will cause its color to change permanently.

*Editor's note, Thanks to Dee Trent for his contribution of this article. This article was edited slightly after review by Dr. George Rossman. Thank you George for your help in presenting correct information to our members..The photographs were added by the editor for your enjoyment.*

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**July Featured Mineral:** **Pyrite**

**Formula:** **$FeS_2$**

**Crystal System:** Isometric

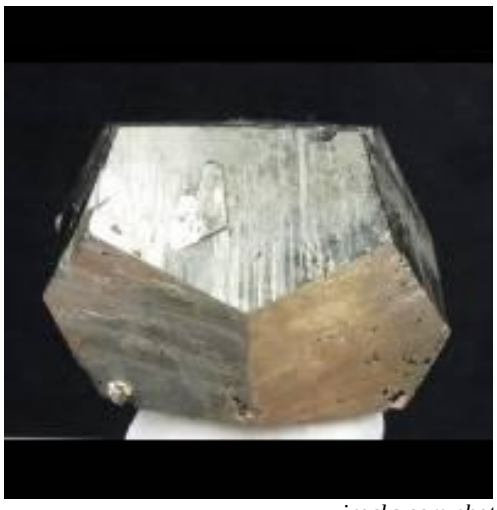
**Name:** Named in antiquity from the Greek "pyr" for "fire", because sparks flew from it when hit with another mineral or metal. Known to Dioscorides (~50 CE) as περι υλης ιατρικης and include both pyrite and chalcopyrite.

*irocks.com photo*

**Pyrite** $FeS_2$
**Locality:** Nanisivik Mine, Nanisivik, Baffin Island, Nunavut Territory, Canada
3.4 x 2.8 x 1.8 cm.

*irocks.com photo*

**Pyrite:** $FeS_2$ **Quartz:** $SiO_2$
**Locality:** Spruce claim (Spruce Ridge), Goldmyer Hot Springs, King Co., Washington, USA
3.4 x 3.2 x 2.8 cm



*irocks.com photo*

**Pyrite** $FeS_2$
**Locality:** Falcacci stope (Le Cavacce), Rio Mine (Rio Marina Mine), Rio Marina, Elba Island, Livorno Province, Tuscany, Italy 3.6 x 3.5 x 2.4 cm

**Pyrite** $FeS_2$
(pyritized Spirifer brachiopod)
**Locality:** Sylvania, Lucas Co., Ohio, USA 6.4 x 4.8 x 4.5 cm

*irocks.com photo*

## ***Ride Share Listing***

**Can You Provide A Ride?**

**Would You Like Company On The Drive To Meetings?**

We have heard from several of our members that they would like to ride-share with someone to the meetings. We will list the names, general location and either a phone number or an email address of anyone who would like to connect for a ride-share. If you would like to catch a ride or would like company for the trip, let me know at msscbulletin@earthlink.net and I'll put the information in this section of the bulletin. After that, any final arrangements made are up to you. Also, If you make a connection that works for you, let me know so that I can remove your information from the bulletin. The Editor

| Looking for | Who | Where | Contact at |
|---|---|---|---|
| A ride | Richard Stambert | North Orange County, near Cal State Fullerton | 714-524-3577 |
| A ride | Catherine Govaller | San Bernardino, CA | cgovaller@msn.com |

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| **MSSC Advertisement Policy:** Mineral-related ads are allowable in the MSSC bulletin. Below is the price per month | |
|---|---|
| Business Card | $5.00 |
| 1/3 page | $10.00 |
| 1/2 page | $20.00 |
| Full Page | $35.00 |
| In addition, any advertiser who purchases 12 months of space in advance will receive a discount of 12 months for the price of 10 months. The copy for the ads should be mailed to the editor at bulletin@mineralsocal.org and the payment should be sent to the **MSSC Treasurer 1855 Idlewood Road, Glendale, CA 91202** | |

# Calendar of Events:

Only local area shows are listed here. Other CFMS Club shows can be found at: http://www.cfmsinc.org/

## OCTOBER, 2013

**October 5 - 6: BORON, CA**
Mojave Mineralogical Society
Boron Community Building
South End of Boron Avenue
Hours: Sat 9 - 5; Sat, Sun 9 - 4

**October 6: FALLBROOK, CA**
Fallbrook Gem & Mineral Facility
123 West Alvarado Street
Hours: 10 - 4
Website: www.fgms.org

**October 12 - 13: TRONA, CA**
Searles Lake Gem & Mineral Society
Gem & Mineral Building
13337 Main Street
Sat. 7:30 - 5; Sun. 7:30 - 4
Website:
www1.iwvisp.com/tronagemclub

**October 12 - 13: VISTA, CA**
Vista Gem & Mineral Society
Antique Gas & Steam Engine Museum
2040 North Santa Fe Avenue
Hours: Sat 10 - 5; Sun 10 - 4
Website: www.vistarocks.org

**October 19: WEST HILLS, CA**
Woodland Hills Rock Chippers
First United Methodist Church
22700 Sherman Way
Hours: 10 - 5
Website: www.rockchippers.org

**October 19 - 20: WHITTIER, CA**
Whittier Gem & Mineral Society
Whittier Community Center
7630 Washington Blvd (corner of Mar Vista & Washington)
Hours: 10 - 5 daily

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## NOVEMBER, 2013

**November 2 - 3: ANAHEIM, CA**
American Opal Society
Festhalle at The Phoenix Club
1340 South Sanderson Avenue
Hours: Sat 10 - 6; Sun 10 - 5
Website: www.opalsociety.org

**November 2 - 3: RIDGECREST, CA**
Indian Wells Gem & Mineral Society
Desert Empire Fairgrounds
520 West Richmond Road
Hours: 9 - 5 daily
Website:
www.indianwells.weebly.com

**November 16 - 17: OXNARD, CA**
Oxnard Gem & Mineral Society
Oxnard Performing Arts Center
164 Seaspray Way
Hours: Sat. 9 - 5; Sun. 10 - 4
Website: www.oxnardgem.com

**2013 MSSC Officers:**

| | | |
|---|---|---|
| **OFFICERS** | | |
| President | Ann Meister | *president@mineralsocal.org* |
| Vice President | George Rossman | *programs@mineralsocal.org* |
| Secretary | Angie Guzman | *secretary@mineralsocal.org* |
| Treasurer* | Jim Kusely * | *treasurer@mineralsocal.org* |
| CFMS Director | Jo Anna Ritchey | |
| Past Pres. | Geoffrey Caplette | |
| **DIRECTORS** | | |
| 2013- | Geoffrey Caplette | |
| 2013- | Leslie Ogg | |
| 2013- | Pat Caplette | |
| 2013- | Bruce Carter | |
| 2013 | Pat Stevens | |
| 2013 | Bob Housley | |
| **COMMITTEE CHAIRS** | | |
| Publicity | Linda Elsnau | *bulletin@mineralsocal.org* |
| Membership | Jim Kusely | *treasurer@mineralsocal.org* |
| Program and Education | Bruce Carter | |
| Webmaster | Leslie Ogg | *webmaster@mineralsocal.org* |
| Bulletin Editor | Linda Elsnau | *bulletin@mineralsocal.org* |
| Micro Mount Conf. Chairman | Al Wilkins | |
| * Treasurer | Jim Kusely –proviso due to surgery, mid 2013, Ahni Dodge and Laura Davis to assist while Jim convalesces | |

## About the Mineralogical Society of Southern California

Organized in 1931, the Mineralogical Society of Southern California, Inc. is the oldest mineralogical society in the western United States. The MSSC is a member of the California Federation of Mineralogical Societies, and is dedicated to the dissemination of general knowledge of the mineralogical and related earth sciences through the study of mineral specimens. The MSSC is a scientific non-profit organization that actively supports the geology department at Pasadena City College, Pasadena, California. Support is also given to the Los Angeles and San Bernardino County Museums of Natural History. The Bulletin of the Mineralogical Society of Southern California is the official publication of the Mineralogical Society of Southern California, Inc.

The MSSC meetings are usually held the second Friday of each month, January, February and August excepted, at 7:30 p.m. in Building E, Room 220, Pasadena City College, 1570 E Colorado Boulevard, Pasadena, California. The annual Installation Banquet is held in January, and the annual Picnic and Swap Meeting is held in August Due to PCC holidays, meetings may vary. Check the Society website for details.

The Society also sponsors the annual Pacific Micro mount Symposium held at the San Bernardino County Natural History Museum during the last weekend of January.

Annual Membership dues for the MSSC are $20.00 for an individual membership, $30.00 for a family membership. The Society's contact information:

**Mineralogical Society of Southern California**
**1855 Idlewood Rd.,**
**Glendale, CA 91202-1053**
**E-mail:** *treasurer@mineralsocal.org*
**Web: http//:wwwmineralsocal.org The Mineralogical Society of California, Inc.**



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## Did you know?

When a mineral specimen consists of parallel or radiating groups of crystals, it is described as:

*Descriptions are as defined in Manual of Mineralogy,15th edition, by: Dana & Hurlbut; published in 1941*

*irocks.com photo*

### Globular

Radiating individual crystals form spherical or hemispherical groups as in the Adamite shown here:

**Adamite :**
$Zn_2(AsO_4)(OH)$
**Locality:** Ojuela Mine, Mapimí, Mun. de Mapimí, Durango, Mexico
3.4 x 2.2 x 1.7 cm.

*irocks.com photo*

### Botryoidal

But, when the globular forms are in groups, the specimen is described as botryoidal, which is derived from the Greek for a "bunch of grapes"

**Plancheite :**
$Cu_8(Si_8O_{22})(OH)_4 \cdot H_2O$
**Locality:** Kambove District, Katanga Copper Crescent, Katanga (Shaba), Democratic Republic of Congo (Zaïre)
10.9 x 7.2 x 6.9 cm

# Your MSSC Bulletin Is Here!

## With Knowledge comes Appreciation

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**To:**