

**THE 780th MEETING  
OF  
THE MINERALOGICAL SOCIETY  
OF SOUTHERN CALIFORNIA**

**7:30 p.m., Friday February 21, 2003**

**Building E, Room 220  
Pasadena City College  
Pasadena, California**

**Featuring a Talk by**

**Bob Housley**

**on his**

**Recent Trip to Thailand**

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**February Program**

Our February speaker will be our own Bob Housley who will talk on his recent tour of Thailand featuring the SAP sapphire mine.

**Big Maria Mountains Spinel**

**Walt Margerum**

In early October I received an e-mail from Bill Moller asking if I was interested in going to the Big Maria Mountains, north of Blythe in search of a spinel location he had found in the 1970's. Of course I said yes. I was especially interested because I had never heard of spinel coming from this locality. After hearing of the size of the crystals, some over 2 inches on a side, I became even more interested.



Two Inch Spinel Collected By Bill Moller

Arrangements were made and five of us (Bill and Elizabeth Moller, Carl Biggs, Jim Sobeleski, and I) met at 8:00 AM Friday November 9, 2002 at the Denny's on Lovekin Road in Blythe. After breakfast, following Bills hand drawn map we caravanned about 21 miles up Lovekin road to find the turnoff. It took several tries to find the right road, but find it we did. That's when the fun started. After traveling close to our camping location, an old wollastonite and gypsum quarry called the Grey or White Elephant, we came upon an impassible wash. We decided to try to go further up Lovekin road to see if we could have better luck. We didn't! We then decided to go south on Lovekin Road and make an end run on the site. We couldn't! It was then back to the original road to see if we could find a way around the impasse. After two flat tires and a lot of frayed nerves we finally made the campsite.

Bill told us the spinel location was just up the draw and around the hill, and showed us his map of how to get there. All we had to do was go up the hill turn right at a clump of yuccas and proceed to the location. As the rest of us were setting up camp Jim decided to climb the hill. As it was becoming dark he staggered back into camp with a 1/2 inch spinel. His comment was "that it was a tough climb." This was discouraging since Jim is in the Army; stationed at Fort Irwin and is in good shape. I won't belabor the point that this description doesn't quite fit the rest of the group anymore.

Early the next morning the intrepid five started up the hill. One by one the group got smaller until there was only Jim and myself. Onward we went until we got to the location indicated on Bill's map. Needless to say we did not find anything.

If you want to go there all you have to do is drive to Blythe, take the Lovekin Road exit from I10 and proceed 20.8 miles North on the road. On the left you will see a loading ramp for the ATSF railroad. Proceed to the right on a typical desert road toward the Big Maria's until you can go no further. Make a left jog, like Schwarzkopf did in Iraq, across the desert to intersect the road to the old wollastonite diggings. From this camp area you are ready to tackle the hill. Hike up the hill taking the right canyons for about 1250 meters (.78 miles). The elevation gain is about 260 meters (850 feet). At this point you will see a small side canyon to your right with several

small yuccas. Go up this canyon until you come to the pinnacles. You are in the spinel area. There are several caveats to this description. Firstly there are many yuccas. All you have to do is find the right ones. Secondly hike is a relative term. In this case it means climbing over boulders. Thirdly, find the spinel implies they are lying all over the place. They are not.

## **A New Location for Atacamite**

### **Charlie A. Crutchfield**

At the February 2002 MSSC meeting, Dr. G. Rossman gave a talk on biominerals. These are minerals that are formed by living creatures as essential parts of their anatomy, such as magnetite in the outer layer of the teeth of the mollusk Chiton, and hydroxyapatite in our own bones and teeth.

Recently a new instance of this was discovered [1,2]. The copper mineral atacamite [Cu<sub>2</sub>(OH)<sub>3</sub>Cl] was found in the teeth of a small, carnivorous, venomous, marine bloodworm, *Glycera dibranchiata*. Its four teeth are about 1.5 mm long, curved and contain a venom canal. They contain up to about 1-9% of atacamite by volume, and up to about 13% Copper by weight. The "excess" Copper may serve some other function in the creature's system.

There are four known mineral polymorphs of Cu<sub>2</sub>(OH)<sub>3</sub>Cl. They are atacamite, paratacamite, clinoatacamite, and botallackite. Atacamite was positively identified as such by XRD and the other three polymorphs were eliminated, and the chemical composition verified by other laboratory techniques. Something about the body chemistry of the worm must control the formation of one polymorph as opposed to the others.

The atacamite seems to be present in the teeth as layers of polycrystalline fibrils dispersed in a protein. The investigators found that the teeth are remarkably resistant to abrasion, nearly as resistant as human tooth enamel. This is odd since atacamite has a Moh's hardness of 3-3.5, and hydroxyapatite is 5. However, a rubber tire has low hardness but it is also highly resistant to abrasion.

The internal workings of a small marine worm hardly falls within the interest of the MSSC, but here is a new location for an uncommon mineral. Field Trip Chairman - please note.

1. Science, 298, 389 [2002]
2. Chem. Eng News, page 16, October 14, 2002

#### Editor's Note

The bloodworm *Glycera dibranchiata* is found along the Atlantic Coast from the Bay of Fundy to the Carolinas. It ranges in color from pink to red, and is generally 6 to 8

inches long, but has been reported to 3 feet. They are used as bait by anglers.

Bob, since this qualifies as a micromineral you might want to lead the field trip.

More information can be found at  
[www.engineering.ucsb.edu/Announce/bloodworm.html](http://www.engineering.ucsb.edu/Announce/bloodworm.html).

## **Potential Field Trip Location**

### **Walt Margerum**

Carolyn Seitz recently made me aware of a potential Field Trip location. It is the Fat Jack mine in Yavapai County Arizona. There is a write up in the February 2003 issue of Rock and Gem Magazine. The primary mineral to be collected is quartz crystals, including scepters, although other minerals such as malachite, stoltzite, and osarizawaite, have recently been collected. The collection fee is \$20 per person per day. If you have web access you can find more information at [www.azminfun.com/sundog/fatjack/](http://www.azminfun.com/sundog/fatjack/). If you are interested please contact me either by email or snail mail.

## **Minutes of the January Meeting**

The 779th meeting of the MSSC on January 18, 2003, at the Oak Tree Room in Arcadia began with a lively social hour at 5:30 p.m. After a delicious dinner, the business portion of the meeting was brought to order by out-going President Dave Smith about 7:30. Dave introduced for MSSC and CFMS Presidents who were in attendance. He installed the new officers and board members, handing the gavel over to in-coming President JoAnna Ritchey. Carolyn Seitz gave a report about the show, and Jesse Fisher was presented the Stan Hill Trophy and the Gus Meister Trophy for his display at the show. Dave Smith presented Carolyn Seitz with a thank you letter and gift on behalf of the Society as a token of our gratitude for her work as show chairperson.

After a short break, Janet Gordon introduced Dr. George Rossman of Caltech, who gave a fun, informative, and interesting talk on minerals named after persons who lived in the Los Angeles area. George kept us guessing as he described more than 30 minerals and their namesakes, but, yes, there is a rossmanite. An additional attraction was a silent auction of two copies of "The F. John Barlow Mineral Collection" that had been donated to the Society by Bob Jones. The proceeds from the sale will go to fund educational activities. The evening was enjoyed by all, and a special thanks goes to Cathy Casey for making the banquet arrangements.

Respectfully submitted, by Janet Gordon, for the secretary

## **Minutes of the January 19 Board Meeting**

The MSSC Board met at the home of Janet Gordon at 1:00 p.m. on Sunday, January 19, 2003. Board members JoAnna Ritchey, Jim Kusely, Janet Gordon, Larry Bruce, Dave Smith, Charlie Freed, Ron Thacker, James Imai, and Rock Currier were present. Also attending were show chair Carolyn Seitz and guest Dorothy Etensohn, who represented the Natural History Museum. In the absence of the secretary, Janet Gordon agreed to take minutes. Rock Currier was unanimously appointed to fill the vacant position on the Board for the years 2003 and 2004.

Janet Gordon gave the treasure's report and presented the Society operating budget for 2003. These were accepted. This led to a discussion about increasing dues for the year 2004. The present dues do not cover the increased cost of Federation dues (which includes insurance) and the Bulletin. It was moved, seconded, and carried that a dues increase be presented to our membership for vote in accordance with the by-laws. The proposed new dues rates for 2004 are \$25 for an individual membership and \$40 for a family membership. The student rate is to be eliminated, as it has rarely been used and there are no current student members.

Carolyn Seitz reviewed the finances of last December's show and discussed how changes could be made in the future to make a show at the Natural History Museum profitable. Board members shared possible ideas, and Dorothy was able to answer several specific questions and clarify issues. It was moved, seconded, and carried that the MSSC have a show in the Natural History Museum in 2003. Carolyn Seitz was appointed show chairperson and charged to make a list of show committee positions with specific tasks that need to be filled. The show will be held the weekend of Dec. 6 and 7, 2003, and may include activities on Friday, Dec. 5. The theme will be minerals from China.

Jim Kusely will follow up on offers for MSSC open houses. Rock Currier agreed to contact a member about replacing Bill Besse as Web Master because Bill wishes to retire from this position after several years of excellent service to the Society. Dates for future Board meetings have been scheduled as follows: Sunday, April 6 at the home of Rock Currier, Sunday, July 13 at the home of Jim Kusely, Sunday, October 19 at the home of Carolyn Seitz, and Sunday, January 11, 2004 at the home of Janet Gordon. The meeting was adjourned shortly after 3:00 p.m.

Respectfully submitted, by Janet Gordon, for the secretary

Calendar of Events

## February

14-23 Indio, CA **San Gorgonio Mineral & Gem Society**

Riverside County Fair & National Date Festival; Gem & Mineral Bldg. (on the Fairgrounds); 46-350 Arabia Street

Hours: 10 am - 10 pm

Don Grisham (909) 795-7289

22-23 Stockton, CA **Co-Hosts; Stockton Lapidary & Mineral Club; North California faceter's Guild** Scottish Rite Temple

33 W. Alpine Ave.

Hours: Sat. 10-5 Sun. 10-4

28 - March 2 Hayward, CA **Mineral & Gem Society of Castro Valley**, Centennial Hall, 22292 Foothill Blvd.

Hours: Fri. & Sat. 10-6 Sun. 10-5

Cheryl Archer [clsagitta@msn.com](mailto:clsagitta@msn.com)

## March

1-2 Arcadia, CA **Monrovia Rockhounds, Inc.**

The Arboretum of Los Angeles County , Ayers Hall: 301 N. Baldwin Avenue, Arcadia

Hours: 9-4:30 both days

Fee to enter The Arboretum

Jo Anna Ritchey (626) 359-1624 / [j.ritchey@verizon.net](mailto:j.ritchey@verizon.net)

1-2 Ventura, CA The Ventura Gem & Mineral Society, Inc., 41 annual show; Ventura County Fairgrounds.

Hours:(10:00 AM - 5:00 PM, Saturday; 10:00 AM -4:00 PM, Sunday).

The show is free. Kids will enjoy a "petting zoo" of dinosaur bones and casts, grab bags, and a variety of kids' activities. There will also be demonstrations of lapidary arts and exhibits from wonderful private collections of rocks, minerals, fossils, and lapidary work. Donation award prizes and a silent rock auction will be held continuously throughout the show. Approximately 15 dealers in fossils, minerals, lapidary equipment, slabs, etc., will be on hand, along with a country store featuring rummage sale items, used books and magazines, and plants. For further information (or to enter a display), contact Jim Brace-Thompson, show chair, at (805) 659-3577, email [jbraceth@juno.com](mailto:jbraceth@juno.com).

8-9 San Marino, CA **Pasadena Lapidary Society**, San Marino Masonic Center, 3130 Huntington Drive

Hours: Sat. 10 - 6; Sun. 10 - 5

Marlene Kyte (626) 794-0519

Show Theme: "Gems, Minerals and Jewelry of the Southwest"

17-18 Hawthorne, CA **Northrop Grumman Gem & Mineral Club**, 12303 Crenshaw;  
Entrance 16

Hours: Sat. 10 - 5; Sun. 10 - 4

Jimmy Lamham (310) 784-0407

22-23 Torrance, CA **South Bay Lapidary & Mineral Society**

Torrance Recreation Center, 3341 Torrance Blvd.

Hours: Sat. 10 - 6; Sun. 10 - 5

Omer Goeden (818) 353-9279

29-30 San Diego, CA San Diego Mineral & Gem Society

Al Bahr Shrine Center, 5440 Kearny Mesa Road

Hours: Sat. 9:30 - 5; Sun. 10 - 4

Wayne Moorhead (858) 586-1637

### **It's time to renew your MSSC membership for 2003!**

Cut it out this form and follow the mailing instructions below to renew. Please fill out all information so that we may check our data base.

PRINT CLEARLY!

Name \_\_\_\_\_

Address \_\_\_\_\_ Apt.  
Street

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Home phone: \_(\_\_\_\_\_)\_\_\_\_\_

Work phone (optional): \_(\_\_\_\_\_)\_\_\_\_\_

FAX (optional): \_\_ (\_\_\_\_) \_\_\_\_\_

Email (optional): \_\_\_\_\_

Additional name(s) and relationship(s) if this is a family membership:

\_\_\_\_\_

Check amount of payment for membership category:

\_\_\_\_ \$15 Individual                      \_\_\_\_ \$20 Family

\_\_\_\_ \$5 Student under age 21.

Make checks payable to MSSC and mail with this form to

MSSC Treasurer  
P.O. Box 41027  
Pasadena, CA 9114-8027

Questions?

Contact Janet Gordon at [jggordon@pacbell.net](mailto:jggordon@pacbell.net) or (626) 441-6715.



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