

**THE 787th MEETING
OF
THE MINERALOGICAL SOCIETY
OF SOUTHERN CALIFORNIA**

7:30 p.m., Friday September 12, 2003

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

**MSSC Town Hall Meeting
And
Silent Auction**

September Program

**MSSC Town Hall Meeting
And
Silent Auction**

At a traditional meeting, everyone faces the front of the room. This time we will ask that those in attendance form a circle and let's interact as a group concerning the goals of MSSC, What is working and what is broken concerning MSSC, what suggestions or criticisms you feel is relevant. This is an opportunity to sound off, blow steam, and get creative. Bring your thinking caps, there are no sacred cows and thinking outside the Vug is encouraged.

We ask that each person in attendance bring, as a contribution to MSSC Kid's Activities at the Show, a "five dollar" rock, defined as one of those pretty things you might have bought at Quartzite for a five dollar bill or that might sell for the same. We all have them but we aren't going to display any of them necessarily. Bring as nice a rock as you feel comfortable donating. All rocks will be put out on a table for silent auction, proceeds to Janet's Kids.

We think an exchange of information including exchanges of goals and visions of the future for our club goes nicely with an exchange of rocks. Come and let us enlighten each other and have some fun.

October brings us back to a speaker schedule with Bob Reynolds as our guest. November will be Rock Currier with an open house at Jewel Tunnel the following day.

2004 Slate of Candidates

With this issue of your bulletin, the Board presents its recommended list of candidates for offices and Board positions. The Society is grateful for those continuing to hold leadership positions and also the new faces just stepping up. This is a process that has been usual for MSSC throughout its history. It is also the method specifically approved by California law for societies, clubs, and other nonprofit associations.

It should be noted that the law also requires that a Society such as ours have an alternative nomination process that would allow nominations made directly from membership. Should any member wish to nominate any member for any office, it is necessary only to write upon a piece of paper the name of the person nominated, whether such person is actually willing to serve and have the paper signed by five members. The nomination will be listed and publicized equally with any other. The deadline to nominate from membership is the evening of the September meeting.

Voting shall take place on the evening of the November meeting. Members unable to be present will have the option to mail in ballots to Janet prior to the evening of the November meeting.

If you are a member who has a hankering to get involved in administration and planning for the Society, let me assure you that we would sure like to know that about you. We have lots of rewarding and high prestige volunteer tasks we might be talked into sharing with you. Do this and next year we'll stick you with one of these jobs.

Here are the Nomination Committee's selections:

President: JoAnna Ritchey
Vice President: Jim Kusely
Secretary: Ilia Lyles
Treasurer: Walter Margerum
CFMS Director: JoAnna Ritchey
Past President: Dave Smith

Directors 2004-2005
Larry Bruce
Bob Griffis
Justin Butt

Mineral Identification with a Propane Torch

by Janet Gordon

Back in the days before identification of minerals by X-ray diffraction was common,

mineralogists, geologists, and prospectors were adept at identifying minerals using simple laboratory tests. They used dilute acid, a Bunsen burner, charcoal and a blow pipe to determine the temperature at which a mineral fused (melted) and check for the presence of metal ions that gave off a distinctive color in a hot flame. After a period of being regarded as "old fashioned," the usefulness of these tests for quick identification has brought them back in vogue. So who has a Bunsen burner handy? Not you? Well how about a propane torch? Yes, the kind that is used for soldering copper pipe and is available at the hardware store. It's even easy to take in the field.

M. J. Hibbard has a useful section on flame and fusion testing with the propane torch in his recent text: *Mineralogy: A Geologists Point of View* (p. 345-347). He explains that when minerals are inserted in a propane torch flame, metal ions are converted to gaseous metal atoms. The atoms are electronically excited and emit characteristic visible light as they return to the ground state. For example, the copper in minerals such as chalcopyrite and cuprite will produce a green flame, the manganese in rhodochrosite makes a yellow flame, and the barium in witherite produces a pale green flame.

Hibbard also discusses testing a mineral's melting point with a torch. Whereas many minerals will not melt, others behave diagnostically. Colemanite decrepitates (pops apart noisily) and then melts; cerussite rounds in the flame; and orpiment inflames. Minerals that melt in a match flame include stibnite, ulexite, and jamesonite.

Ready to give it a try? Here's Hibbard's specific instructions (p. 347): "Burner tip should be the type that produces a point flame, which in the most oxidizing portion burns at 1,214°C. The uncontaminated flame color is bluish and any mineral that produces a white material results in a light-blue color that is not element diagnostic. Yellow flames are common due to presence of or contamination with sodium-bearing materials. The yellowish sodium flame may mask a diagnostic color such as the pale-violet color of potassium and the red of calcium. Use a pair of needle-nosed pliers or lab tweezers to hold the sample. Specimen fragment should be as small as possible, preferably a thin sliver. Some minerals will form a protective oxide coating in the oxidizing portion of the flame and the diagnostic color may flash just before that happens. Melting may be total or only a rounding of edges and corners of fragments. Some minerals decrepitate (burst apart) before evidence of melting can be evaluated. A grain that is fractured may decrepitate due to expansion of air in the fractures, not as an inherent phenomenon. Intumescence (swelling) occurs for some water-bearing minerals. Tests should be done in a darkened room (workshop) to enhance flame colors."

To learn more about flame and fusion testing and find good mineral property information, consult an old (pre-1960) mineralogy text. This information is short-changed or non-existent in many new texts. The old mineral descriptions will include statements like "fusible at 4." This information refers to the classic fusibility scale of minerals with a known melting temperature. On this scale, stibnite is (1)

with a melting temperature of 525°C. The other minerals and melting temperatures are (2) chalcopyrite, 800°; (3) almandine 1050°; (4) actinolite 1,200°; (5) orthoclase, 1,300°; (6) enstatite, 1,400°; and (7) quartz, 1,700°C. The hottest part of the torch flame (at 1,214°C) will easily melt minerals fusible at 2. Those fusible at 3 will also melt, but with greater difficulty. Those fusible at 5, 6, and 7 will not melt. A match flame is about 525°C and may be useful in identifying minerals with lower melting temperatures.

Report of the August 9, 2003 Picnic

Members began arriving at Rock Currier's home at 9 a.m. for a morning of Kid Rock preparation and fun. More than a few mineral tales were swapped as we worked in the shade of the avocado trees and enjoyed getting better acquainted with the several new members present. Much was accomplished and some volunteers left with "home work" to help complete the effort. A table of mineral specimens, which could be acquired for a modest donation to the Society's education fund, was a financial success. Thanks to those who supported this effort with specimens and donations. A lunch including many delectable choices was enjoyed while countless pages of glued samples dried in the sun. Thanks go to Jim Kusely for providing the cold drinks. Bill Besse graciously served as host for the event in Rock's stead and made sure we had the necessary tables.

Respectfully submitted for the secretary by Janet Gordon

Calendar of Events

September

3 thru 7, San Bernardino, CA,
 The Orange Belt Mineralogical Society of SB
 2nd Annual Tail Gate Event
 You are invited to come & sell your rock-related merchandise
 KOA Campgrounds in SB, CA
 For reservation & Information please Call:
 Lyle Strayer (909) 887-3394, or Tony Gilham (909) 820-2122
 E-mail with TAIL GATE in subject line:
echobyrd@aol.com or gilhamgh@sce.com

27-28 Downey, CA, Delvers Gem & Mineral Society
 Womens Club of Downey
 9813 Paramount Blvd.
 Hours: Sat. 10 - 6; Sun. 10 - 4
 Earl Liston (562) 865-1348

27-28 Fontana, CA, Kaiser Rock & Gem Club
 California Speedway, 9300 Cherry Ave.

Hours: 10-5 both days
Jo Ann Watson (909) 355-7455

October

11-12 Trona, CA, Searles Lake Gem and Mineral Society
Gem and Mineral Building, 13337 Main Street
Hours: Sat 8-5 Sun 8-4
Bonnie Fairchild (760) 372-5356
web <http://www1.iwvisp.com/tronagemclub/tronagemclub.html>

18 Canoga Park, CA, Woodland Hills Rock Chippers
Canoga Park Community Center, 7248 Owensmouth Ave.
Hours: 10 - 5
email: show@rockchippers.org

18-19 El Cajon, CA, El Cajon Gem & Mineral Society
Masonic Hall, 695 Ballantyne
Hours: 10 - 5 both days
Mikki Santens (619) 440-3201

18-19 Whittier, CA, Whittier Gem & Mineral Society
Whittier Community Center, 7630 Washington Ave.
Hours: 10-5 both days
Jay Valle (626) 934-9764 / jvalle@aqmd.gov



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Sunday - 10 AM to 5 PM



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