

**THE 735th MEETING
OF
THE MINERALOGICAL SOCIETY
OF SOUTHERN CALIFORNIA**

**7:30 p.m., Wednesday, April 14, 1999
The Arboretum of Los Angeles County, Arcadia**

Featuring A Talk By

Darryl Futrell

"Tektites M - Why They Must Be A Type Of Lunar Volcanic Glass"

APRIL SPEAKER

MSSC member Darryl Futrell will present much of the evidence for the lunar volcanic origin of tektite glass. Mr. Futrell has had numerous tektite articles and papers published in magazines and scientific journals. He is a member of the Association of Lunar Planetary Observers, the Geological Society of America, the Meteoritical Society, the American Geophysical Union, MSSC and the Whittier Gem & Mineral Society. Various examples of tektites, plus REAL impact melts, will be exhibited, and literature and small free tektite samples will be available.

PRESIDENT'S COLUMN

Bob Housley

I am happy to be able to report that several MSSC members participated in the Mineral Localities Symposium on Searles Lake sponsored by the San Bernardino County Museum, and that a couple even came on the field trip afterward to the old colemanite mining operation at Borate behind Calico. The meeting was very interesting, and the last minute addition to the program on the mining history of Borate tied in nicely with the field trip the next day.

For a period of time between 1884 and 1907 Borate was the biggest producer of borax in the world, with an estimated total production of about \$9,000,000. It also produced colemanite specimens that were reported to have found their way into all the better mineral collections around the world. The main center of borate mining moved from Borate to Death Valley in 1907. Despite that, visiting Borate in 1922, long after the main mining period was over, William Foshag, curator of minerals at the Smithsonian reported that world class specimens of colemanite, celestine, and selenite were abundant.

Somehow between then and now the area seems to have almost been forgotten by crystal collectors, although

fossil insects and lapidary material are still collected in the same general area. One can only speculate as to why. I do not think it is because the good material has been exhausted. The mineralized beds extend for about a mile and a half and most of the surface outcrops are still there. My guess is that while people could collect in Death Valley so much good material was available there that they just lost interest in Borate.

In the long time interval before mineral collecting in Death Valley came to an end weathering and erosion appear to have effectively erased most of the clues to the good collecting spots at Borate. Those who have explored there recently have certainly found some interesting locations, but my guess is that the best ones remain to be rediscovered.

On the museum field trip which I led we went to spots relocated by John Jenkins and everyone got attractive thumbnail and micro specimens of clear celestine prisms on yellow calcite or on chert, while a few people found nice cabinet specimen size specimens of the same material. A couple of people also found nice crystal clusters of colemanite, while everyone found chunks of blocky colemanite and howlite. Stomatolites, which look a little like flying saucers, and which may contain insect fossils were also fairly abundant in the area and were collected by several people. I am planning to go back for some more exploration soon, so if any of you are interested in walking and hard digging with unknown rewards let me know.

THOUGHTS ON FLUORITE

John Schwarze

At the February meeting of the MSSC, Carolyn Seitz brought in some of the Fluorites she purchased in Tucson, as well as a half-flat of green, really well colored, almost transparent specimens that she collected at our old favorite, the Felix Mine in Azusa. Inspired by that, I'm writing a few lines on Fluorite.

First, it's Fluorite; not Fluorite (What's that? A kind of bread?) The name comes to us from the Latin word flux, meaning to flow, translated by the Germans to fluorspar, and finally by scientific agreement to Fluorite. All of this alludes to the fact that, when added to other minerals (especially iron ore), the resultant mixture melts at a lower temperature than the desired mineral would without the addition of Fluorite. That is the definition of a flux" and is the primary reason why Fluorite was searched for and mined. It is also used in glass making, special optical uses, and as a source of Fluorine (no cavities, remember?).

The chemical formula is CaF_2 , or Calcium Fluoride. As a result it is classed as a Halide along with Halite, Cryolite and other salts" many of whom aren't salty and don't dissolve in water. Such is the world of descriptive mineralogy.

One of the most notable characteristics of Fluorite is that it fluoresces. In fact, the term fluorescence comes from the fact that the phenomenon was first studied using Fluorite. While the mineral itself comes in a wide variety of colors, including but not limited to purple, blue, green, yellow, pink, gray, et al, it tends to fluoresce in the color blue. Most Fluorites that I've seen do fluoresce, thereby giving anyone who collects Fluorite and owns an ultraviolet light a two for the price of one specimen.

Fluorite is an Isometric mineral, meaning that its most common habit is a cube or a variation thereof. However, the mineral exhibits perfect Cleavage in four directions forming an octahedron or diamond shape. Most of those perfect Fluorite octahedrons mounted in plastic boxes are actually cleavage fragments, not naturally formed crystals. If you find an octahedron of Fluorite in the field, treasure it.

Due to its wide range of colors, the mineral would probably be a popular gemstone, except it's too soft. At

only 4 on the hardness scale, it would be scratched by any stray protuberance. It also fractures in an irregular manner and is brittle. Alas, it is destined to be an object of admiration in the natural state or else thrown in with a few tons of iron ore to lower the melting temperature. No middle ground for Fluorite.

As far as important locations are concerned, I'll start with the Felix in Azusa. Not because it's important; but because it's close, is producing its' best stuff ever, and you can probably talk someone into going with you on any given weekend. Also it's under constant threat of development, so get there while you can. Of course, in reality, Fluorite is so ubiquitous that any list can go on and on. For United States specimens you need examples from Rosiclare and Cave-in-Rock, Illinois; Elmwood, Tennessee; and Bingham, New Mexico. Other classic locales are Cumberland, England; Switzerland, Spain, Italy, and on and on. I don't know anyone who doesn't have at least a few specimens of Fluorite and some, like the aforementioned Carolyn Seitz, seem to specialize in the mineral. It is well worth the effort.

MINUTES OF THE 733rd MEETING OF THE MSSC

The 733d meeting of the Mineralogical Society of Southern California was on February 17, 1999. Bob Housley called the meeting to order at 7:50 p.m. The Society's business was conducted before the featured presentation.

Bob Housley opened the meeting with a discussion on the proposal to change the meeting place to the Auditorium in the Geology Building at Pasadena City College. He listed these advantages; they have projector and screen, social area, minerals on display and potential increase in Dana Club participation. However, the meeting day would have to change to Friday evening. Bob passed out PCC maps provided by Janet Gordon at the Board of Directors' meeting.

Bob then discussed the Donnie Rice memorial fund and reminded members wanting to make donations to contact Carolyn Seitz.

Bob also reported on the Pacific Micromount Conference in late January. He mentioned Dorothy Ettinson's discussion in mineral preservation, preparation and labeling.

Bob announced the San Bernardino County Museum Mineral Locality Symposium on March 20 and 21. For the Show Committee, Jim Schlegel announced that he was almost ready to sign the contract with the Pasadena Center. We passed out almost 6,000 fliers at Tucson. Carolyn Seitz announced that the speaker list was firming up very quickly. The comment was made that we need to make sure that we don't book too many speakers to be accommodated during the show.

For field trips, Jim Schlegel announced the annual Boron field trip sponsored by the Mojave Mineralogical Society on March 27 and 28. The first MSSC field trip will be to Crystal Ridge on April 24 and 25. Additionally, we will have our Memorial Day trip to Petersen Mountain trip. That trip entails a \$50.00 per-person-per-day collecting fee.

Bob then adjourned the business portion of the meeting to start the Field Collectors' Forum and to hear comments by attendees at Tucson regarding new and interesting topics in mineralogy.

The Door Prize was won by Linda Magarian, who chose a sample of apophyllite. The meeting was adjourned at 9:30 p.m.

Respectfully submitted,

David Smith, Secretary.

MINUTES OF THE 734th MEETING OF THE MSSC

The 734th meeting of the Mineralogical Society of Southern California was on March 10, 1999. Bob Housley called the meeting to order at 7:35 p.m. The Society's business was conducted before the featured presentation.

Bob discussed the pending move to PCC as our meeting location with the goal of having our first meeting there in May. Bill Besse will edit a campus map for publication in the bulletin. Janet Gordon reported that she has submitted the requisite paperwork and that we could, if desired, have our first meeting there as early as April.

Rock Currier reported that he is selling the Earl Calvert collection. Earl Calvert was a charter member of MSSC and the brother of Stan Hill's wife Mary.

Ron Pellar reported that there are changes in the CFMS liability insurance coverage, the most significant being that field trips will not be automatically covered. It will be necessary to apply in advance for each field trip and there will be an additional charge. There will no longer be an additional charge for coverage of an annual show.

Bob Housley noted a number of upcoming shows and symposiums resulting in an active calendar for April and May, and it was noted that the bulletin calendar incorrectly shows our April meeting date as April 7 when the correct date is April 14.

Ron Thacker requested that materials for the bulletin be submitted no later than the 20th of the month in order for the bulletin to be published and mailed to members on the first of the month.

The Door Prize was won by Sugar White, who chose a sample of Apophyllite from India.

Bill Rader then introduced Rock Currier, who spoke on the subject "Into the Heart of Darkness" about a recent collecting trip to Zaire. The meeting adjourned at 9:30 p.m.

Respectfully submitted,
David Smith, Secretary

INYO MOUNTAINS QUARTZ

April 29-30 we will be visiting one of my favorite collecting locations, Crystal Ridge and surrounding area in the Inyo mountains. Over the past ten years, I have collected in this area about twenty times, and I still enjoy each trip like the first. The quartz is abundant, if you have the patience to locate it, and the quality is excellent.

Take US 395 north to Independence. About seven to eight miles further north, on the right, is the Black Rock fish hatchery. The sign is small so watch for it. There will be a MSSC sign on the post and the rest of the road to the camping/collecting area should be marked by 9:00 a.m.. The road is pretty good except for the Owens River crossing. The river has been diverted into the aqueduct so there is no water in the riverbed but

it may not be possible to get RV's or passenger cars across. This time of year, the nights may be cold and windy so be prepared. There is no water so bring plenty, and fire wood is scarce.

Some of the quartz veins are quite easy to work, but others may require heavy tools and a strong back. Come to the April meeting to see some samples of the material you may find.

Hope to see you there. And, don't forget to send in your registration form for the Petersen Mountain field trip, Memorial Day weekend, by April 15. I'm more forgiving than the tax man, but not much. Jim

WE'RE MOVING

MARK YOUR CALENDAR

CHANGE YOUR GPS COORDINATES

Beginning next month, we will hold our meetings on the second Friday evening at 7:30 p.m. in the Geology Building which is Building E, in the lecture hall room E220 at Pasadena City College, 1570 E. Colorado Boulevard, Pasadena. Detailed directions will be in next month's Bulletin.

IN MEMORIUM

It is with great sorrow we note the passing of our long time member and friend Francis L. Vore. Francis was born in Monrovia January 1, 1913 and passed away on March 12, 1999. He will be missed.

Answers To The Martin L. Stout March Quiz

1. Nivation
2. Nobles, or noble metals
3. Nomenclature
4. Normal zoning.
5. Nucleation
6. Nuée ardente
7. Nugget, gold nugget
8. Obsidian

CALENDAR

April 11: MSSC Board of Director's Meeting at 2 p.m. hosted by Steve Shailer, 4608 Faculty Avenue, Long Beach.

April 14: MSSC monthly meeting.

April 24-25: Field trip to Crystal Ridge.

April 23-26: 1999 Desert Research Symposium, San Bernardino County Museum.

April 24-25: Antelope Valley & Palmdale Gem & Mineral Clubs show, Antelope Valley Fairgrounds, Lancaster, CA, 9 a.m. to 5 p.m.

Friday, May 14: MSSC monthly meeting, 7:30 p.m., Geology Building, Pasadena City College.

NOTE PERMANENT CHANGE OF DATE AND LOCATION.

May 29-30: Petersen Mountain, NV field trip.

June 5-6: Rockatomics Gem & Mineral Club, Boeing Recreation Center, 8500 Fallbrook Ave, West Hills.
Hours: 10 - 5 pm

June 11: MSSC monthly meeting, 7:30 p.m., Geology Building, Pasadena City College.

June 18-20: CFMS 60th Annual Show & Convention, Turlock.

NOTES FROM THE EDITOR'S DESK

If you are interested in having your e-mail address published on the CFMS web site, the March CFMS Newsletter has a form for members to grant permission. Requirements are that the person giving the permission be a paid-up member, the form must be signed by the individual, and the form is to be sent directly to Web Master Don Ogden. If you want a copy, let me know.

Next month marks a change in our meeting location and date as we return to Pasadena City College where we met for many years when the Society was newly formed. The date changes also to the second Friday evening of each month. We will have a map and directions in the next Bulletin. Many thanks to Janet Gordon and Bruce Carter for making this possible.

Show News: Jim reports that he has a contract in hand for conference rooms 201-202 in the Conference Building for our speakers. This is a very nice accommodation for us to host our fine speakers. Twenty-one dealers have requested contracts and we anticipate having close to fifty in the main exhibition hall. We will also use the Annex for exhibitors and for dealers as well as for food service. What we most need at the moment are sign-ups on the Show Committee. Call Jim Schlegel.

If your Bulletin has a DUES STICKEY it means you should not be receiving this copy and for sure you won't be receiving future issues. Please check with Ron Pellar if you have paid, and send him a check if you haven't.