

NOC NEWS

**NORTH ORANGE COUNTY GEM AND MINERAL SOCIETY, INC.**

**ALL AMERICAN CLUB**  
1985, 1986, 1988, 1989, 1990, 1992

*A member of the*  
**AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES**  
**CALIFORNIA FEDERATION OF MINERALOGICAL SOCIETIES**

---

**Meetings**

**Day and Location:**

With the exception of July, August and December, meetings are held at 7:30 p.m. the second Tuesday of the month at the La Habra Community Center, 101 W. La Habra Blvd., La Habra.

The La Habra Community Center is located west of Euclid on La Habra Blvd.

For current meeting information, please call (909) 598-2456

---

North Orange County Gem & Mineral Society, Inc.  
Box 653  
La Habra, CA 90633-0653



<http://home.inreach.com/o-nocgms>  
<http://www.cfmsinc.org>

**DATED MATERIAL - DO NOT DELAY**  
May 2002

*NORTH ORANGE COUNTY GEM AND MINERAL SOCIETY, INC.*

*P.O. Box 653*

*La Habra, California*

Regular meetings are held the second Tuesday of each month (excluding July, August and December) at the La Habra Community Center, 101 W. La Habra Blvd., La Habra (west of Euclid).

2002 OFFICERS

President .....	Don Warthen .....	(626) 330-8974
First Vice President .....	Irene Veloz.....	(714) 970-7143
Second Vice President .....	Jane Livezey .....	(714) 524-6280
Secretary .....	Susan Hansen .....	(562) 865-2040
Treasurer .....	Don Livezey .....	(714) 524-6280
Federation Director .....	Loretta Ogden .....	(909) 598-2456
Director .....	Virginia Grafton .....	(562) 865-2040
Director .....	Floyd Allen.....	(714) 777-5159
Director .....	Izzie Burns .....	(626) 288-2896
Director .....	Ofelia Warthen .....	(626) 330-8974
Director .....	Bill Burns .....	(626) 288-2896

2002 COMMITTEE CHAIRPERSONS

Operating Supplies .....	Virginia Grafton .....	see above
Budget & Finance .....	Don Livezey .....	(714) 524-6280
Bulletin Editors .....	Don & Loretta Ogden .....	see above
Displays & Education .....	Virginia Grafton .....	(562) 865-2040
Door Prizes .....	Ofelia Warthen .....	see above
Field Trips .....	Bill & Izzie Burns .....	see above
Historian .....	Susan Hansen .....	see above
Membership .....	Jane Livezey .....	(714) 524-6280
Insurance .....	Don Livezey .....	(714) 524-6280
Librarian .....	Jane Livezey .....	(714) 524-6280
Operating Regulations & By-Laws .....	Don Warthen .....	see above
Programs .....	Irene Veloz.....	see above
Publicity .....	Jane Hendrixon .....	(562) 691-9595
Refreshments .....	Oscar Veloz .....	(714) 970-7143
Show Chairmen 2002 .....	Don & Jane Livezey .....	see above
Assistant Show Chairman .....	The entire club	

The objective and purpose of the North Orange County Gem and Mineral Society is to disseminate knowledge of mineralogy and the earth sciences and to encourage study in these subjects through means of: the presentation of public exhibitions, lectures, slide programs; field trips for explorations, study and collection of specimens; the preparation, publication and distribution of articles and studies pertaining to mineralogy and the earth sciences; the promotion of scientific research in these fields; the encouragement of interest among young people and the fostering of classes in mineralogy and lapidary arts; and all other means which are appropriate to the accomplishment of the primary objectives set forth.

*Annual Membership Dues: Individual, \$10; Family, \$15; Juniors, \$3.  
Visitors are always welcome at our regular meetings and field trips.  
The North Orange County Gem & Mineral Soc. does not yet have a Junior Division.  
Material contained in this newsletter may be used if credit is given.*

Please send exchange bulletins to:

Don & Loretta Ogden, Co-Editors  
NOC Gem & Mineral Society, Inc.  
20904 Trigger Ln.  
Diamond Bar, CA 91765  
909-598-2456  
donogden@aol.com  
<http://www.cfmsinc.org>

# NOC GEM & MINERAL SOCIETY NEWS

Vol, 21 No. 5

May 2002

## President's Message

*by Don Warthen*

We had another great turnout for the beading class a couple of week ago. There were about 13 people in the class and everyone came away with a beautiful necklace. Having a class about four times a year seems to workout pretty good. We have several people who want to do a class a class on wire wrap next. If you would like to see a class on any particular subject please let Ginny or myself know.

We had a few members this last week at the Bowers Museum. The exhibit on gemstones is great if anyone is thinking of going to see it the exhibit has been extended through September.

We are still working on the ideas for next years show; I hope to have a report at the meeting.

## May Meeting

Date: May 14  
Time: 7:30 p.m.  
Place: La Habra Community Center  
101 W. La Habra Blvd.

## Refreshments

*by Oscar Veloz*

Jane Livezey will bring the goodies for the May meeting. Thanks to Don and Ofelia for bringing the goodies to the April meeting.

**NOC News - May 2002**

## NOC Club Activities

Cab Classes at Walt Messemer's — 7-10 p.m.  
every Wednesday Evening.  
Board Meeting — To be announced  
Field Trip — To be announced  
Deadline for NOC News — May 17.

## Programs

*by Irene Veloz*

May's speaker will be Helga and Werner Wagener on "The Introduction of Identification of Petrified Wood". They will explain the difference of wood structure in conifers and dicots (leaf bearing trees) by looking through a microscope. How petrification may occur, age of different formations, particularly in the US, plus some oddities in fossilized wood.

Helga and Werner have a collection of over 1,300 pieces of petrified wood cataloged as to species and if available the locality, they call "Our Museum".

## Members in the News

HAPPY BIRTHDAY and have a wonderful day all of you who were born in May.

*Lucille Howe - May 7*  
*Isabella Burns - May 23*  
*Mary Maneth - May 25*  
*Bill Burns - May 28*

Your gemstone is Emerald.  
Your flower is Lily of the Valley or Hawthorn.

## Shows and Events

---

*via CFMS Web Page*

### **May 4-5 2002, Anaheim, CA**

Searchers Gem & Mineral Society  
43rd Annual Show, America's Treasures  
Brookhurst Community Center  
2271 West Crescent Ave.  
Hours: Sat 10-6 Sun 11-4:30  
Betty Nelson (714) 530-1365 / [bethar@msn.com](mailto:bethar@msn.com)  
Nancy Norlund (714) 960-6957 /  
[njnorlund@netzero.net](mailto:njnorlund@netzero.net)

### **May 18-19 2002, Yucaipa, CA**

Yucaipa Valley Gem & Mineral Society  
Scherer Community Center  
First Street & Avenue B  
Hours: 10-5 both days  
Linda Metcalfe (909) 359-7263

### **May 18-19 2002, Newbury Park, CA**

Conejo Gem & Mineral Club  
Borchard Park Community Center  
190 Reino Road  
Hours: Sat 9-5 Sun 10-5  
Bob Stultz (805) 498-4220

### **June 1-2 2002, Glendora, CA**

Glendora Gems  
Goddard Middle School  
859 E. Sierra Madre  
Hours: Sat 10-5 Sun 10-4  
Mark Thompson (626) 335-3814

### **June 1-2 2002, San Diego, CA**

San Diego Lapidary Society  
A Bahr Shrine  
5440 Kearny Mesa Road  
Hours: 10 - 5 both days  
Richard Large (858) 693-0464

### **June 29-30 2002, Culver City, CA**

Culver City Rock & Mineral Club  
Veteran's Memorial Auditorium  
Culver Blvd. & Overland Avenue  
Hours: Sat 10-6 Sun 10-5  
Rosalie Peschel (310) 397-4336  
Linda Taibi  
Web Site: <http://www.gembiz.com/ccrnc/fiesta.htm>

### **July 12-14 2002, Placerville, CA**

CFMS 23rd Show & Convention -  
Treasures of the Sierra Nevada  
El Dorado County Mineral and Gem Society  
El Dorado County Fairgrounds  
100 Placerville Drive  
For more info: (530) 622-3038

### **September 28-29 2002, Downey, CA**

Delvers Gem and Mineral Society, Inc.  
Woman's Club of Downey  
9813 Paramount Blvd.  
Hours: Sat 10-5 Sun 10-4  
Chuck Pierce (714) 526-5614 / [caseychuck@att.net](mailto:caseychuck@att.net)

### **September 20-21 2002, Fontana, CA**

Kaiser Rock Club  
California Speedway  
9300 Cherry Ave.  
Hours: 9-5 both days  
Jo Ann Watson (909) 355-7455

### **October 12-13 2002, 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>

### **November 2-3 2002, Anaheim CA**

The American Opal Society  
Quality Hotel Maingate  
616 Convention Way  
Hours: Sat. 10-6. Sun. 10-5  
Robert Dixon (714) 534-5063  
Jay Carey (714) 525-7635

## NOC General Meeting April 9, 2002

---

by Susan Hansen

The meeting was called to order at 7:30 p.m. by President Don Warthen.

The flag salute was led by Ginny Grafton.

Don Warthen introduced the program: Bill and Izzie Burns on Priday Plume Agate.

Jane Livezey announced that 25 members and 5 guests were present.

Drawings were held by Ofelia Warthen, The main prize was a plume agate donated by Izzie Burns, which was won by Al Hermosillo.

The minutes were printed in the bulletin and were approved as printed.

The treasurer's report was given by Don Livezey, approved as given.

The Federation report was given by Loretta Ogden. Zzyzx is over, they had good weather. Camp Paradise is coming up in the fall, the form is on the internet.

Education report was given by Ginny Grafton. She reported on the Women in Mining (WIM) Conference the previous week. They have a website similar to CFMS. There will be a workshop for teachers in Sacramento in June, and one in August in San Diego. There was some discussion about our sponsoring 2 teachers to go, maybe just pay for the workshop. We will see if there are any interested teachers first. Ginny got an award for being the most enthusiastic from WIM.

Field Trip report: this month's activity is a bead stringing workshop at Don and Ophelia's on April 20 from 10 to 2 or 3. Next month trip is tentatively to the Cady Mountains. Ginny mentioned that the next weekend is the last for the Daffodils in the mountains, if anyone wanted to come up to Smiley Park. Torrance club is going to Ventura Beach. There was some questions as to whether Ventura Beach is on

State Beach property and if so, could we collect if we went.

April 27th is a lecture on the National Gem Collection at the Smithsonian at the Bowers Museum in Santa Ana. The Monterey Park club is going to the Gems! Exhibit and then stay for the lecture. There is a sign up sheet for members interested in going. We are still working on a possible bus trip to the GIA facility and museum near Carlsbad.

Show report - Don Livezey went over the expense and income report. He compared the report to last 3 years. There were competing activities in the park that drew a lot of the kids away from our show. The geodes at the sales table were good this year. Izzie's rock collections went over well. Next year expenses will go up. The banner price is increasing from \$40 to \$100. City activities will take priority over our show next year. We could get 'bumped'. We were told the clubhouse is only assigned 25 tables. We need 60 and this year we got 60. Next year we may have to rent the rest. The city also want us to get a business license for the Club. Don Livezey will check on it..

Don Warthen suggested we need a committee to come up with new ideas for the show. Suggestions given include: get a "big" display from a museum, or a big or famous stone; make up the egg carton rock collections and give it to the science teachers that teach earth science as advertisements. Get a dealer with equipment and findings. Pat Felix, Ginny Grafton, Izzie Burns, Don Warthen and Trini Hermosillo volunteered and were appointed to the committee.

Searchers show is the 1st weekend in May. We are going to put in a club case in the Searchers show.

New business: Pat Felix donated 3 books to the library: Jewelry making techniques, Geology underfoot in Southern California, Geology underfoot in Death Valley and Owens Valley.

Refreshments were provided by Ofelia and Don Warthen. Next month will be the Livezeys.

We received a thank you card from Zeke Wilder. Zeke was presented a Life Membership at the show.

The meeting adjourned at 7:30 p.m.

---

## Mini CFMS Newsletter

---

by Loretta Ogden

**CFMS show** in Placerville on July 12-14. Now is the time to get your reservations in and enter the competition or just put in a show case. See Loretta for forms and information.

Dick Pankey (dickpankey@juno.com) is working on a **rockhound sticker** for vehicles. The sticker would much be like the scuba divers red and white sticker.

**Forms** for the CFMS Earth Science Studies at Camp Paradise (Sep 8-14 or 15-21, 2002) are available.

CFMS Publicity/Public Relations **brochure**. See Loretta for a copy.

**"Cough CPR"** in April 2002 CFMS Newsletter. Authorities quoted "Mended Hearts Inc., have renounced their position on this. The American Heart Association recommends using this under medical supervision where a person having a heart attack is about to lose consciousness. It can be dangerous to us where the heart attack does not result in cardiac arrest. Ed.

**Memorium** - Long-time Dedicated Workers  
Myrtle Hulstrom Williams 1911 - 2002  
Ruby Meyers 1919 - 2002

---

## Golden Bear Award

---

via the CFMS Newsletter

The Golden Bear award shall be presented only for recognition of outstanding services to the CFMS. The person must be or have been a member of a CFMS member society.

Nominations for the award are due by June 12, 2002. Please send nominations to the Golden Bear Committee - either to Bob King or Frank Mullaney. (See Loretta or Izzie for more information)

---

## Clean Air Fair Victor Valley College Saturday May 4, 2002

---

by Virginia Grafton

The Women in Mining (WIM) will be at the clean air fair in Victorville. I will be setting up the booth on Friday afternoon, the 3rd, about 3 p.m. at the gym on the lower campus. Doug Shumway says we should be out of there by 3 p.m. on Saturday. We will be located with other mining companies. I will have some minerals to give away, handouts, and the theme of our booth will be minerals in the home.... and the usual stuff....

WE will have some WIM mineral kits at the raffle as giveaways....

---

## Shoe Shining Cabochons

---



Bill Burns demonstrating "Shoe Shining Cabochons" at the NOC Show in La Habra. A method he picked up at an eastern show.

# Volborthite from the Green Monster Mine, Inyo County, California

by Paul M. Adams  
via Microbits April 2002

At the 2002 Micromount Conference I provided some preliminary information on "volborthite" that I had recently collected from the Green Monster mine, near Independence, CA. This report is intended to bring that information up to date. From some black lined vugs in a highly fractured quartz and clinozoisite vein, I collected some minute (0.2 mm) yellowish green hexagonal crystals which I assumed to be volborthite. In the scanning electron microscope (SEM) the crystals looked very interesting because they appeared to have a reticulated overgrowth (Figures 1-2). Qualitative chemical analysis of the surface showed that it consisted primarily of calcium, copper and vanadium, which suggested that the crystals were tangeite rather than volborthite. The x-ray diffraction pattern, however, showed that volborthite was a major constituent, along with an unidentified mineral, and that tangeite may or may not be present. The solution to the mystery came when I analyzed a polished cross section of one of the crystals (Figure 3). Indeed, calcium, copper and vanadium were present - but only in a layer about 2 -3 microns thick at the surface, which corresponded with the reticulated overgrowth. The interior of the crystals consisted of alternating bands of copper and vanadium (darker areas concentrated near the interior) and barium, copper and vanadium (lighter areas in Fig.3). Taking all this information into consideration it became clear that the crystals consisted of a core of volborthite [ $\text{Cu}_3\text{V}_2\text{O}_7(\text{OH})_2 \cdot 2\text{H}_2\text{O}$ ] with a thick overgrowth/intergrowth of vesignieite [ $\text{BaCu}_3(\text{VO}_4)_2(\text{OH})$ ] and a thin reticulated overgrowth of tangeite(?) [ $\text{CaCuVO}_4(\text{OH})$ ]. The presence of volborthite and vesignieite were confirmed in the XRD pattern but tangeite could not positively identified because it was a minor constituent and some of its XRD lines overlapped with those of the other phases. Volborthite and vesignieite have very similar crystal structures which suggests that epitaxial intergrowths are possible and the structure of tangeite is somewhat similar, such that reticulated oriented overgrowths may also be possible:

## Crystallographic Data

Volborthite: Monoclinic (C2/m)  $a = 10.604\text{\AA}$ ,  $b = 5.874\text{\AA}$ ,  $c = 7.214\text{\AA}$ ,  $\beta = 94.9$

Vesignieite: Monoclinic (C2/m)  $a = 10.27\text{\AA}$ ,  $b = 5.911\text{\AA}$ ,  $c = 7.711\text{\AA}$ ,  $\beta = 116.42$

Tangeite: Orthorhombic  $b = 9.26\text{\AA}$ ,  $c = 5.91\text{\AA}$ ,  $a = 7.45\text{\AA}$

Subsequently I have collected volborthite crystals from a different area of the mine. The intergrown tangeite-vesignieite-volborthite crystals are typically translucent and have a milky luster and are a result of the reticulated overgrowth. In contrast, the pure volborthite crystals are yellow-green in color, but are transparent.

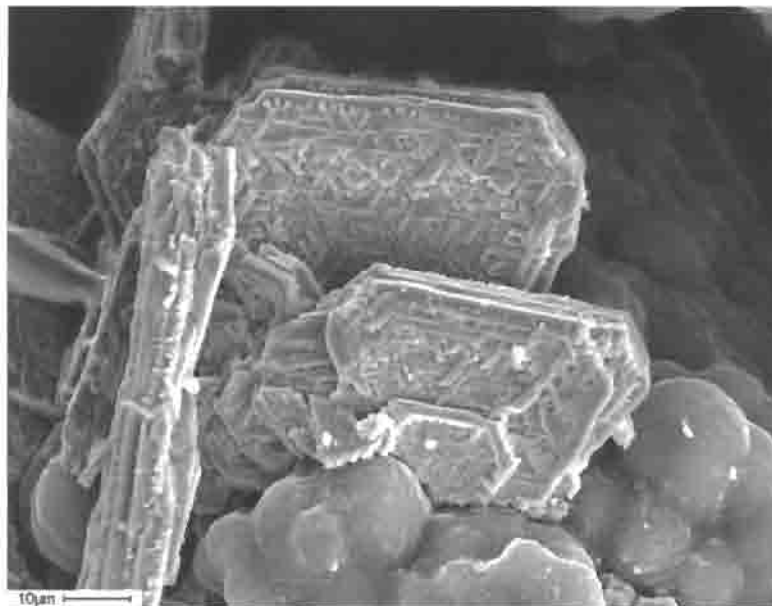


Figure 1. Scanning electron micrograph of tangeite-vesignieite-volborthite crystals.

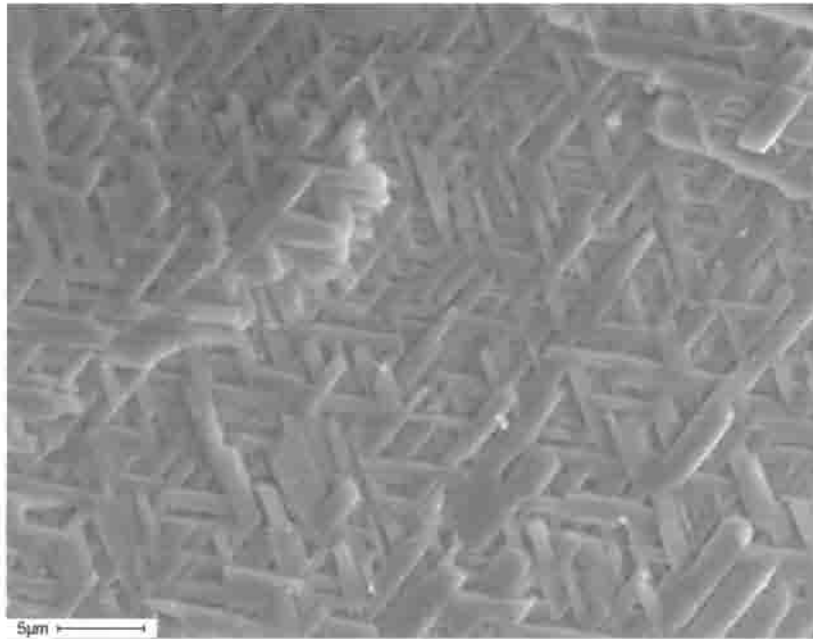


Figure 2. Scanning electron micrograph of tangeite-vesignieite-volborthite crystals showing detail of reticulated surface.

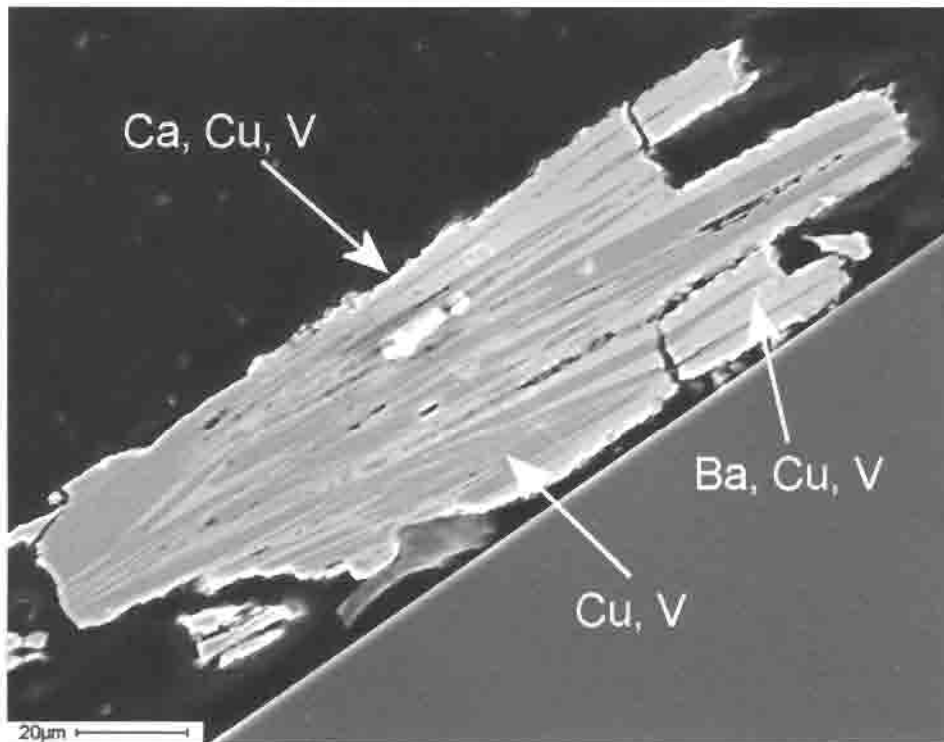


Figure 3. Scanning electron micrograph of cross section of tangeite-vesignieite-volborthite crystals.