

# Bulletin of the Mineralogical Society of Southern California



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The 844th Meeting of The Mineralogical Society  
of Southern California

**St. Lawrence County, New York:  
A Field Collector's Wonderland**  
by  
**Justin Zzyzx**

**Friday, June 13, 2008, at 7:30 p.m.**  
Geology Department, E-Building, Room 220  
Pasadena City College  
1570 E. Colorado Blvd., Pasadena

## Featuring:

- Collecting minerals in New York
- Darwin Mine
- Agate Symposium
- Opal/Hyalite from Utah

## June Meeting

### St. Lawrence County, New York: A Field Collector's Wonderland

By Janet Gordon

On Friday, June 13, 2008, Justin Zzyzx of The-Vug.com and FakeMinerals.com will present "St. Lawrence County, New York: A Field Collector's Wonderland". The meeting will be held in room E220 of the Geology Department of Pasadena City College at 7:30 p.m. as usual. St. Lawrence County was known as one of the best field collecting regions on the east coast of the United States for centuries. With specimens of both dravite and uvite tourmaline in high quality plus fantastic tremolite, diopside, calcite and galena, minerals from St. Lawrence County have made their way into mineral cabinets and museums around the world. During the summer of 2007 Brandy and Justin from RockhoundingVideos.com made their way to this collecting Mecca to see what would still be available after over 200 years of collecting. While the local collectors told them that they would never get eight locations for their video field guide, with the help of a randomly met stranger, they completed their mission. Justin will share their adventures with us.

Justin Zzyzx is the owner of The-Vug.com, the guide to everything mineralogical online. He also produces a series of videos about field collecting minerals across America. Justin and his wife, Brandy, collected at over 185 mineral locations on a 5 month filming and collecting trip during the summer of 2007. Sometimes it is hard to pull Justin away from a good quartz collecting location. You can find his writing on FakeMinerals.com and in his new mineral magazine, The-Vug.com Quarterly. He has about 18 jobs, but we don't have

room to publish them all here.

## **Minutes of the May 9, 2008 Meeting**

The 843<sup>rd</sup> meeting of The Mineralogical Society of Southern California was held on Friday, May 9, 2008 at Pasadena City College, Pasadena, CA.

The meeting was brought to order at 7:30 p.m. by President Geoffrey Caplette. Vice President Janet Gordon then introduced the speaker of the evening, Alfredo Petrov, who gave a presentation entitled: "Collecting in Mine Dumps and Roadcuts in Japan."

Mr. Petrov is a world traveler and avid collector of minerals. He is also a specimen dealer, mineral and mining lecturer, field guide to productive collecting areas and a translator of mineralogical literature.

Mr. Petrov stated that there are a couple of thousand mineral collectors in Japan, many of whom have access to fairly sophisticated mineral identification equipment. He vividly described the remote and often rugged collection areas, located far from densely populated major cities.

He spoke of trekking through the steep, and sometimes snake-infested, terrain of the Japanese countryside in search of tungsten and silver mines, and mineral locales. His ingenuity and persistence resulted in the collection of andradite garnets, metallic crystals, cassiterite, scheelite, apatite, amethyst, bornite crystals, sphalerite, legrandite and graphite beans, among other finds.

At show and tell, Fred Elsnau brought a quartz crystal with unique characteristics.

Bob Housley stated that the symposium in Lone Pine was well attended, as was the field trip to the Darwin area. Participants were able to collect smithsonite, scheelite, linarite, pyrite, galena and caladonite, among other minerals.

Janet Gordon announced that the subject of the June presentation would be mineral collecting in New York State.

Geoff Caplette reminded members about the West Coast Gem & Mineral Show to be held May 16-17-18, 2008 in Costa Mesa.

The door prize was won by Lou Rector.

The meeting was brought to a close at 8:50 p.m. by Geoff Caplette.

Respectfully submitted, Pat Caplette, Secretary

*Editor's Note: Last issue I mentioned the rare rainbow garnet displayed in the Garnet Symposium. Mr. Petrov answered my quest for rainbow garnet from Japan. He had not only a suite of faceted rainbow garnet but also a rough. I promptly added them to my collection.*

## **SCFM Darwin Mines Field Trip**

By Robert Housley

Our field trip on Sunday, April 27<sup>th</sup> following the Symposium was one of the biggest and most interesting that SCFM has ever had, and we certainly want to thank Mr. Paul Skinner and Stone Brothers Construction Company, the current mine owner for making it possible.

Forty-one people signed up for the trip at the Saturday Symposium, and on the basis of word of mouth more people from the local community joined in. We assembled at 9 am Sunday morning at the Interagency Visitor Center at the intersection of US Highway 395 and State Route 136. It was typical late Spring weather for the Owens Valley, warm and a little breezy. At the higher elevations many desert flowers were still in bloom. After everyone signed release forms a string of about 30 cars caravanned to a big parking area near the Darwin Mines Offices. This was on the main dump of the Radiore tunnel through which Anaconda had mined the

consolidated workings from 1945 to 1957. After spending half an hour or so there, those of us who wanted to, which consisted of 19 cars, were allowed to continue a mile or so on around the mountain to the east dumps of the Thompson Mine.

The periphery of the Radiore dump was well exposed and provided plenty of area on which people collected nice pyrite cubes and dodecahedrons as well as abundant limonite pseudomorphs after pyrite, so quite a few people just stayed there. Galena and massive purple fluorite also occasionally turned up. In the time before I went on to the east workings, I found nice micros of wulfenite and cerussite on this lower Radiore dump.

At the east dump of the Thompson Mine there was also plenty of parking, and plenty of rock to look through. In addition those of us who wanted to were allowed to continue on up the mountain on foot to explore the dumps of the Defiance and Essex Mines, which were visible from the parking area. On the Essex dump, which was the highest one, I found some nice micros of caledonite on linarite, and fluorite on linarite. I also found micros of hemimorphite, hydrozincite, brochantite, anglesite, barite, and andradite.

Additional minerals found on the main Thompson Mine dump near the parking area included nice micros of blue and purple smithsonite, calcite, and nice miniature sized sprays of plumbojarosite.

People started drifting away about 2 pm and many left before I had a chance to see what else they may have found. I know of at least a couple of scheelite octahedra that were found and I also saw several killer pieces of linarite from an intermediate dump. I did not hear any complaints, and did not see anyone leave with empty buckets, so I am pretty certain that everyone found things they liked and left happy. I know I found the experience very educational and I hope the rest did also.

# **The History and Minerals of the Darwin Mines**

(Excerpted from SCFM Symposium Paul Skinner's  
Presentation April 26, 2008 Lone Pine, California  
By Don Buchanan)

Lead oxide minerals were discovered in mid 1870s in the Darwin area southeast of Lone Pine in the Inyo Mountains. By 1880 three smelters had been built. From 1880 to World War I the mines were dormant after the initial miners gave up on the gold, silver, lead and zinc deposits. After WWI there was some intermittent activity. In the late 1940's and early 1950's slag from the early mining was hauled off for mineral reclaiming.

Radiore Company constructed an adit, approximately 3,000 feet into the mountain to the area of the Defiance mine. They had little success with their endeavor and sold to out the Anaconda Company in about 1945. Anaconda worked the mine for only a short time when they discovered the Defiance pipe, a vertical pipe about 40 feet across of nearly pure anglesite. This anglesite was very rich in silver, over 100 ounces per ton. With this discovery Anaconda paid for the mine in about 2-3 months. This shaft is mined down to the 1,300 foot level. Anaconda then extended the Radiore tunnel about 7,000 feet more connecting the Defiance mine with the Thompson mine so that both mines could be worked through one haulage tunnel. The Thompson mine has different mineral deposition than the Defiance mine. The Thompson deposits are more bedded, creating very large ore deposits containing much higher grade silver ore.

In 1968 West Hills Exploration's geologists came down to California to see the Darwin mining area. They drilled exploratory holes into the area between 500 to 600 feet

and found solid ores. West Hills Exploration mined the Darwin hillside from 1968 to 1977.

After West Hills quit, Anaconda, Quintana and Blue Ridge companies did considerable exploratory drilling. All three drilled from both underground and the surface. The results of this drilling showed considerable tonnage of silver, zinc, and copper between the 2,500 and 3,000 foot level. There is every reason to believe that the ore extends even deeper. Stone Brothers Construction Company obtained the mine three years ago with intention of mining silver, lead, zinc, and copper along with considerable tungsten.

The Darwin area has variety of ore deposits in three different modes: regular veins, contact metamorphism and replacement processes. Igneous granite plutons rising up into the overlying sedimentary rocks created horizontal sills along the bedding planes with 200-300 foot thick contact metamorphism zones. The rock in this area is extremely hard, a calc-silicate rock. Skarn mineralization is found all over these metamorphic contacts.

There are at least 130 different minerals in the Darwin Mine area. Some specimens that have been identified are cold water galena that looks like dog poop, tabular piles, and are hollow inside filled with selenite gypsum. Grey specimen material analyzed by Alex Baird, Geology Department Head at Pomona Claremont College, contained lead, silver, copper, bismuth, antimony, selenium, arsenic, and chlorine.

Selenite gypsum and nice thin, friable, pretty yellow bladed wulfenite were found at Darwin at the 1000 ft level of the Defiance mine. At the 1200 ft level in the Defiance pipe area, there was an ore deposit that was oxidized and rusted. It had swallow tail cerussite specimens up to 2" across. There was a nice pocket of linarite and caledonite along with azurite copper ore in the Defiance mine.

One stope had cobalt, whereas it was not found in the other areas of the mine. Another oxidized area at the 1000 foot level had orange-colored material. UCLA found some blue crystals in this material. These crystals turned out to be new lead silicate minerals.

Minerals present on the Darwin dump and the Thompson tailings include pyrite, galena, sphalerite, linarite, calcite, malachite, azurite, and scheelite.

## **Agate Show 2008 in Menasha, Wisconsin**

By Shou-Lin Lee

By chance I learned about an agate conference that will be held in Wisconsin in July. Without much information to go on, I surfed the web and found the website. One thing led to another, and I ended up talking to a Mr. Gary Richards of the Weis Museum about the show. It turned out that Mr. Richards is the man behind the conference/show. And from his description of the show, it sounds like it is a “must go” for any agate enthusiasts.

The conference/show entitled “The Wonderful World of Agates” will be held from July 10 to 13, 2008. It is sponsored by the Weis Earth Science Museum, Wisconsin’s official mineralogical museum. It is a four-day event of lectures, displays and sales of agates to be held at the University of Wisconsin-Fox Valley in Menasha, Wisconsin.

The lectures that will be held on the first day of the event are open to paid registrants only. The topics of the lectures include agates from various localities, such as Lake Superior, Mexico, Argentina, Australia, Germany, and mining of agates and research methods of agates. Some of the lecturers are authors of books on agates. There are also six lectures open to the public. The titles of these six lectures are: Montana Agates by Tom Harmon, Agate Mining at



Steinkaulenberg by Regina Schafer, Lake Superior Coper Agates by Peter Rodewald, Lake Superior Agate Inclusions by Wayne Sukow, Poppy Jasper Varieties by Kevin Ponsio, and Iris Agate by Peter Rodewald.

The displays that are opened to the public, include not only agates from various U.S. localities, but also from around the world, such as, Argentina, Australia, China, Germany, Mexico and Russia. Several museums such as the Smithsonian Institution, Black Hills Institute, Seaman Museum, Jayem Gallery of Gems and Minerals and Weis Earth Science Museum also will have special displays.

The vendors for the sales are from all corners of the world too.

For more information about the show please visit [www.agateshow2008.com](http://www.agateshow2008.com) or call (920) 832-2925.

## **They Do Look Like Bacon!**

Photos and texts by Shou-Lin Lee



Last year I purchased the whole lot of opal from Utah from John Garsow. I did not see any more of this material in all the shows I went to after that. I thought I had seen the last of it. So it was a surprise when I spotted a rough on a two-dollar table at the San



Bernardino tailgate show. I got excited when the vendors told me that they personally collected the rough in Milford, Utah some time ago. This is the first time someone could actually tell me the location.

The vendors showed me the whole lot they had. And I was pleasantly surprised that some of them do look like bacon

(see pictures in page 10 and below). On close examination, I found that the majority of the rough they collected had more colorful layers, but did not have much of the thick clear layer that usually would yield the bubbly look when cut parallel to the layer. Turned out that the reason this batch did not have much of the clear layers was due to the collectors' choice. When I showed the vendors the cabochons I cut and explained to them that those were cut from the clear layers. The vendors told me that should they have known that, they would have collected more of the clear ones.



## **The Micro World of Opal from Utah**

John Koivula, Chief Gemmologist of Gemological Institute of America emailed me two pictures he took on the opal from Utah. 2.88 mm is the horizontal field of view measurement of the photos. One was taken in transmitted shadowed lighting to show the concentric layered structure while the other also used polarized light to show the strain.



Taken in transmitted shadowed lighting to show the concentric layered structure



Taken with polarized light to show the strain.

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## 2008 Calendar of Events

**May 31 - June 1 2008, Glendora, Glendora Gems** 859 E.

Sierra Madre Hours: Sat. 10 - 5; Sun. 10 - 4 Bonnie  
Bidwell (626) 963-4638

**May 31 - June 1 2008, Woodland Hills, Rockatomics Gem  
& Mineral Society** Pierce College Victory and Mason

Hours: 10 - 5 both days Louise Gerik (818) 347-1234  
Website: [rockatomics.com](http://rockatomics.com)

**June 7-8 2008, La Habra, North Orange County Gem &  
Mineral Society** La Habra Community Center 101 W.  
La Habra Blvd. Hours: 9 - 5 both days Don Warthen  
(626) 330-8974

**June 14 - July 6, 2008, Del Mar, San Diego County Fair,**  
Gem Jewelry, Mineral & Fossil Exhibits, San diego

County Fairgrounds, 2260 Jimmy Durante Blvd.

Hours: 10-10 Daily closed on June 16 and 23

**June 27, 28, 29 2008, Ventura,** California Federation of  
Mineralogical Societies Ventura County Fairgrounds

Hours: 10-5 Daily Bural LaRue (909) 874-5664

**California Federation of Mineralogical Societies**  
*presents the statewide*

## **GOLDEN BEAR GEM & MINERAL SHOW**



**June 27 – 29, 2008**  
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Adults \$5 \* Seniors (60+) \$4 \* Students \$3 \* Kids under 12 free with paid adult  
Contacts: Bural & Pat LaRue, (909) 874-5664, bplarue@earthlink.net CFMS web site: [www.cfmsinc.org](http://www.cfmsinc.org)