

# Diabolo



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July 1999

Contra  
Costa  
Gem & Mineral Soc.

## DIABLO DIGGINS JUNE 1999

### PRESIDENT'S MESSAGE

Last Friday evening I was with almost a dozen other club members who were working on plans for our annual show. There have been a number of these meetings this year. And between the meetings many of the same people are working on their particular pieces of the show - displays, dealers, wiring, equipment, food prep, etc.

It struck me that there is something almost organic in the way the show grows month after month. **Gene Holcomb**, the Chair, is nourishing and guiding the process and lots of other people are planting and cultivating roots and branches that will all bloom and bear fruit on the first weekend in November.

**A special invitation to all CCM&GS members!** The Antioch Lapidary Club will host it's 9<sup>th</sup> annual Rock Swap and BBQ on Saturday July 24<sup>th</sup> at it's Clubhouse and Museum in Antioch. This is a really fun day and a great get-together. The event is planned to appeal to rockhounds of all ages. What is a Rock Swap? Our rock swap is rockhounds from around the Bay area and central California getting together to buy, sell and trade rocks, fossils, gems, minerals, jewelry, lapidary works, rock art, extra equipment and more. Whether you are an avid collector or just have a casual interest and especially if you enjoy the wonders of nature, you are sure to find this rock swap interesting and fun. **We will have special games and attractions for children including "panning" for polished rocks,**

One of the biggest changes from the last two years is that we will be using the entire facility at the Centre Concord. We will have more demonstrators and more dealers with a wider variety of lapidary-related material. And the way the committee is working, I think it is going to turn out to be one of our most successful shows.

When we are closer to that time, there will be plenty of notice given for more of us to have a part in it. In the meantime, I hope you are all having a good summer. See you at the next meeting.

**Tom Umholtz**

**grab bags, Wheel-of-Fortune and more. Also there will be gold panning demonstration.**

The Rock Swap is held in the large parking lot of our Clubhouse, Museum and Shop that will be open for all to see. The BBQ area overlooks the wild life sanctuary and the Sacramento River. The Antioch Lapidary club's rock and Mineral Museum will be open. We are very proud of our museum and hope you enjoy it.

The Bar-B-Que lunch will be served at 12:30 pm. Menu--Hamburgers with all the trimmings, baked beans, potato chips, dessert and can of soft drink. Cost--\$5.00.

So, come join us in Antioch for good friends, good food, and good rockhounding on **Saturday, July 24<sup>th</sup>. Admission is FREE.** If you would like to be a tailgater the fee is \$5.00 for sellers.

### DIRECTIONS

Directions: Take Highway 4 to Antioch, get off on A Street and go north, towards the water. Turn right on E. 18<sup>th</sup> St., go approximately 3/4 mile, then turn left on Cavallo. Take Cavallo past Wilbur Ave.; you now are on Fulton Shipyard Rd. Follow orange plates to the Rock Swap. Or, exit Hwy. 161 (near Antioch Bridge) to Wilbur Ave., West. Go west on Wilbur Ave. to Fulton Shipyard Rd. Turn right and follow orange plates.

**For more information and details call Dick or Betty Pankey at 925-439-7509.**

### WHO IS GOING WHERE? WHEN, & WHY?

Pending resolution of the Federation & Club insurance issue, most of the "sponsored" field trips are canceled. This list is intended only to advise of individual collecting trips announced by our own

members, and members of other associated clubs. "Tag-alongs" will usually be welcomed. Call the individual identified to confirm their plans, and for information on camping, itinerary, materials, etc.

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**July 10-11:** H.E. Neilson (510-744-1664-Castro Valley) Fee Dig at the **Cerro Gordo Mine Dumps**, \$10/day. Bunk house for rent, \$35/day w/5 spaces (call Jody or Mike at the mine-760-876-5030). Camping also permitted.

**July 24: Antioch Club Rock Swap & Bar-B-Q.**  
**September 3-6;** Terry or Julene Ensell (503)824-4184 or e-mail at [julenek@molalla.net](mailto:julenek@molalla.net). **Mt. Hood**

**Rock Club presents ASHWOOD Oregon's Annual Rockstock Rock Dig.** Some charges involved.

**September 4-5:** Will Corey (209-383-5037-Mother Lode) and Marion Roberts (209-538-0197).

**Wonderstone Mtn (NV) for Red, Yellow, Bulls-Eye Jasper & Agate.**

**Hazel Woolsey, Field Trip Chair**

### EDUCATION REPORT

THANKS to **Bob Pevahouse** and the "Genie Crew" (**Glen Hubbard, Joe Yarbrough, Jim High, Lee King and Barrie Bieler**) for the Cabbing class in June. Eight people took the class. **Bob** provided doped, pre-forms in a variety of material. Most students completed a 30x40 cab the first night.

### JULY WORKSHOP CLASSES on July 14<sup>th</sup> and 21<sup>st</sup>, by Glen Mac Kenzie

On July 14<sup>th</sup> and July 21<sup>st</sup>, **Glen MacKenzie** will teach an intermediate wire wrap class. The July workshop classes will cover **INTERMEDIATE WIRE WRAPPING**. This will consist of learning to securely retain a stone in a mounting with prongs. Also, how to make a ring. The practice wire and stones will be provided so that everyone can easily follow the same instructions. Maximum class size is 14. Signup sheet will be available at the July meeting. We will review some of the information covered at the basic wire wrapping class last year, so previous as well as new students are invited to attend.

You should bring the following equipment to the **first class on Wednesday July 14, 1999.**

- **Flat nose pliers** also known as duck bill pliers, preferably, with smooth jaws
- **Pointed nose pliers** also called chain nose pliers (sharp nose)
- **Round nose pliers**

**Spencer Opal Triplets.** By Warren Taft of the Eugene Mineral Society, Oregon. Contributed by Sieg Vogel to the BRECCIA, July 1998 issue. This article is intended to aid the buyer of Spencer Opal (from Spencer, Idaho).

- **Wire cutters** such as diagonal cutters or bead wire cutters
- **Small ruler** (6 inch)
- **Pen or pencil**
- **Optivisor (magnifier)**

The best-suited pliers are 4 1/2" to 5" hobby pliers with smooth jaws (not serrated). If you have any of these items bring them with you to class. If you don't have tools some will be available.

You should bring to the **second session on Wednesday July 21<sup>st</sup>**, the above noted items as well as a ring mandrel, if you have one or can borrow one. If you do not already have one, we should be able to round up enough to share their use.

Classes will be held at the **Mt. Diablo Adult, Pleasant Hill Education Center, 3100 Oak Park Blvd., Pleasant Hill (Room 207) 7pm to 10pm.**

**CRITTER NIGHTS !!** Two Critter Nights are scheduled for August 18<sup>th</sup> and 25<sup>th</sup> to make things for the Wheel of Fortune.

**CABS & BEADS!!** On September 22<sup>nd</sup> and 29<sup>th</sup>, **Mary Ann King** will give classes on **mounting cabs with seed beads.**

**FACETING!!** **Sam Johnston** and crew will present the **faceting class on October 11<sup>th</sup> and 18<sup>th</sup>.**

**BEAD RINGS!!** **Betty Pankey** will teach a class on **round wire bead rings on November 17<sup>th</sup>.**

**Dick Pankey, Education Chairman**

Spencer Opals are usually triplets, which means they are three pieces glued together with clear epoxy, grounded, sanded, and polished either in calibrated sizes or free forms. This procedure

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makes each one unique. Stones range in size from less than a quarter to silver dollar size (38mm).

The opals are constructed in three parts. The bottom part is black basalt of better grade. The center is a very thin layer of fire opal, ground perfectly flat and glued to the base. The top layer is usually optical grade quartz of the best quality, also glued to the layer of fire opal.

**FIRE TYPES.** Types of fire include pin fire, harlequin, and broad flash. Pin fire has small points of fire approximately the size of a pin head or smaller. Harlequin is larger, maybe the size of a match head. Broad flash is large splotches of fire or color.

**FIRE COLOR.** Fire color appears in reds, oranges, gold, yellow, blue, green, fuchsia, purple and many combinations. Some opals have a

combination of pinfire, harlequin and/or broad flash and a combination of colors. This gives Spencer Opals a bigger variety of fire types and color combinations than Australian Opal.

**OPAL JEWELRY.** Fine jewelry necklace pendants can be set in gold wire wrap or mounted in solid gold mountings. Opals can also be used in rings since the quartz protects the opal from damage.

When looking at Spencer Opal to purchase, look for flaws, the type of color(fire), the color play in various types of light: incandescent, fluorescent, quartz, and sunlight, and in the shade. Also pay attention to the light from in front of you, back and straight down. Examine the sides of the stone right on and roll the specimen from side to side in the various lights and positions.

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**CFMS SHOW IN JUNE**-Hope you enjoyed the California Federation Show in Turlock!

\*\*\*\*\***CCM&G SHOW**\*\*\*\*\*

### **MARK YOUR CALENDER.**

Mark your calendar for our club show date, **November 5 is setup day, the event is on the 6th & 7th.** Good news about Centre Concord. The room off the Ball Room is available for our use in November. This space is perfect for Demonstrators and the Show Committee is working on how best to adjust our show floor plan. If you

are interested in working with the Show Committee, contact **Gene Holcomb @ 686-6154.** Working on the show is fun and a good way to get to know other club members. If you are a new member, you will want to get involved with this group as soon as possible. Stay tuned for more show updates.

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**FASCINATING FACTS ABOUT**

**SILVER.** BY Jenifer Adams. Via the CFMS Newsletter 5/99.

Although silver was discovered later than gold and copper, it has been known and used by humankind since prehistoric times. Herodotus, the Greek historian, knew of silver used to make coins and beads, exploited from the river sands of the Pactolus in Lydia. The Chinese wrote of silver metals in 2500 BC. In the earliest prehistoric strata at the site of Troy, considerable deposits of silver and gold treasure have been excavated. Among the artifacts, silver bracelets and gold earrings, ornaments placed in a silver cup and more than 8000 beads were buried in the ancient city 2000 years before Christ.

The most ancient silver mines of importance were in Asia Minor and on islands in the Aegean Sea. The Romans obtained most of their silver from Spain until supplies became scarce during the Middle Ages. After the discovery of the Americas in 1492, Mexico became the largest silver producing country in the world. Canada and the United States also produce significant amounts of silver.

Silver is a lustrous white metal, widely distributed in nature. In ores, it is commonly associated with gold, lead, and copper. Much of the world's silver is obtained as a by-product of smelting these other metals. Horn-silver (AgCl) is found in the oxidized portions of ore-bearing lodes near the surface. Small amounts of silver in the oxidation zone form as the more complex compounds erode and weather.

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At deeper levels silver occurs as sulfides, arsenides, antimonides (compounds of silver with sulfur, arsenic and antimony). In these deposits, formation is the result of deposition from primary hydrothermal solutions. Argentite occurs in low temperature hydrothermal veins in association with other silver minerals or sometimes in the cementation zone of lead and zinc deposits.

When found in a metallic state, it is called "native silver". Native silver usually occurs in dendritic and wire-like forms which are aggregates of minute crystals. Silver may also occur in thin sheets or in large masses. In Kongsberg, Norway, magnificent crystalline wire specimens occur in associations with sulfides, calcite, barite, fluorite and quartz.

The world's largest specimen of massive silver was mined in Aspen, Colorado, and weighs in at 844 pounds. On the Keweenaw Peninsula of Michigan, small amounts of primary native silver can be found in association with native copper. In Mexico, the

Guanajuato Mine has been in operation since the year 1500 AD. During that time, more than 500 billion kilos of silver have been mined.

About three-fourths of the world's silver production is used for monetary purposes, either as coins or as bullion that governments hold to redeem paper currency. The leading industrial use of silver is for the manufacture of tableware and jewelry. The second largest industrial consumer is the photographic industry. Compounded with bromine or chlorine, silver forms the salts which register light and shade on photographic film. Silver has the highest thermal and electrical conductivity of any substance, making it ideal for use in electronic equipment. Silver is second only to gold in malleability. One ounce of silver can be drawn into a wire 30 miles long. A silver leaf can be beaten to a thickness of 1/100,000 of an inch. From Cedar Valley Gems via Drywashers Gazette 2/99.

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**CCM&GS BOARD MEETING—June BOD was cancelled due to the number of BOD members out exploring.** A short BOD meeting for July will happen at the General Meeting.

Respectfully, Sharon Neuhauser Club Secretary

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### CCM&GS GENERAL MEETING Friday, June 10 (Next meeting is second Friday of July)

President **Tom Umholtz** opened the meeting at 7:30PM with the pledge of allegiance and greetings to all, including our guest. **Ann Pevahouse** announced the anniversary and birthdays for June. It was **Brownieie Cameron's** that eve so everyone wished her well.

**Jim Bufton** announced that **John Perona** is at **Guardian of Rossmoor**. If any one wishes to send him a little note, John is sure to appreciate it.

**Bryce**, our Display Chair, had a picture of **Snyders Ranch**. It's always such a fun place.

**Barrie Bieler** informed us of his birthday present from Long Beach, sent by relatives; it was a tooth from a mammoth 20,000 to 2 million years old.

**Joe Yarbrough** told how he and the boys stopped on the way home from Quartsite and always find some great rock. He had some nice cut pieces on display.

There were pro cabs and novice cabs.

Don't forget to vote for an article of competition while at the general meeting.

President **Umholtz** discussed having a web site for our club. Are there any suggestions or does anyone know of a need for this web site? I am sure you all have got lots of ideas out there!

**Mary Crenshaw**, Education, announced dates for upcoming classes. June 16-23, Cabing at Pleasant Hill Adult Education at 7:30pm with **Bob Pevahouse** at the helm. **July 14-21 Intermediate Wire Wrapping with Glen MacKenzie**. August will be Critters, need lots of participation as things are made for show's Wheel of Fortune. September will be seed bead jewelry, "NEW" with **Mary Ann King**. October 11-18<sup>th</sup> for faceting.

See the **EDUCATION REPORT** for details.

Federation Chairman **Bob Pevahouse** encouraged all, one last time, to "Flock to Turlock" for the Federation Show. Hope it was a fun three days for those that attended June 18-20<sup>th</sup>.

**CFMS Earth Science Studies. September 12-19<sup>th</sup> at Camp Paradise.** A fun week to meet new people, hear lectures, do field trips, collect ROCK and have great fellowship with other rockhounds.

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Many families were away rockhounding these past few weeks, hope you all discovered some beautiful new sites, found great specimens and drove safely home.

**Glen Hubbard** stated that the Club has bought 20 8-foot tables and many chairs at a good price.

**President Tom and Dwayne Eggleston** explained why we need a credentialed person for our Jewelry class. The school waves our rent of the classroom and the school can bill the State of California.

Anyone interested in doing a presentation program of our show? Slides are great but any props can be used. Do you know someone able to give a presentation?

President **Umholtz** adjourned the meeting, suggesting everyone take a look at the exhibit

table, enjoy refreshments and for those wishing to join **Barrie's** workshop in mineral photography to do so.

**Barrie** had set up 2 tables with flood lights, reflectors, a camera on a tripod and one in a box to make it stationary. There was a sheet of aluminum foil for background and to backlight the specimen. The size, distance from camera, angle, and lots of measurements taken to judge for the best stereo pictures. Lots of interesting information.

**Barrie** said he has been taking pictures for some 50 years. I'd say he is an expert in his field.

**Hope all Dad's had a HAPPY FATHER'S DAY.**  
Respectfully, **S. Neuhauser Club Secretary.**

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**STAMPS**—The Sacramento Philatelic Society sells the stamps we collect at their annual show and generally makes around \$5000 for the Easter Seal programs. Stamps should still be attached to the envelope paper to maintain their value. Remember to save your cancelled postage stamps for **Bob Pevahouse.**

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**SAFETY TIPS.** When exploring in the field be aware of your proximity to overhanging or loose rock. **Rockfalls are natural risks.**

Geologists say what makes Yosemite National Park beautiful also makes it dangerous. By John D. Cox Scripps-McClatchy News Service via The Times 6/17/99.

The following is an excerpt from an article about the tragic accidental death of 22-year-old Peter Terbush, from Gunnison, Colo. "When tons of granite crushed him to death Sunday as he held a safety line for a rock-climbing friend..." "More than 400 Yosemite rockfalls have been documented, according to a study by geologist Gerald Wieczorek, a U.S. Geological Survey expert on Yosemite who is surveying the latest activity this week.

Specialists say the likelihood is high that, like trees falling in a forest, many rockfalls and landslides have gone unnoticed.

David Howell, a USGS landslide specialist, said the process of erosion and the stress of gravity unevenly affect the different minerals that compose granite.

While quartz is glassy and hard and resists breakdown to the elements, he said, feldspar and hornblend rot away more easily in the weather. A process called 'exfoliation' takes place.

Water seeps down into the eroded layers of feldspar and hornblend, and as the water freezes it expands, causing the crack to enlarge.

'When you see this, it appears to be like onion rings,' said Howell. Most commonly granite crumbles away in the exfoliation process, but on the face of a cliff, like the walls of Yosemite Valley, great slabs can suddenly give way.

Geologist James Slosson, a member of the state Seismic Safety Commission, argues that since exfoliation is the result of seasonal weather patterns which are predictable, the rockfall hazard ought to be predictable in some degree.

'If you understand meteorology and you know the geological process, you can certainly give a forecast as to when those conditions might occur,' he said. 'That is when you should be concerned about rockfalls.'

While all agree about the seasonal pattern of the erosion process, others see no such pattern in the occurrence of the rockfalls.

'There has been no study of the seasonality of rockfalls that I'm aware of,' said ranger Kendell Thompson. 'It's almost like the proverbial tree in the forest. As we hit our spring-summer-fall season, the likelihood of someone being near a rockfall increases, so we're going to get a whole lot more reports of rockfalls.'

To most geologists, predicting a rockfall in Yosemite Valley is like predicting an earthquake along the San Andreas Fault. 'It's the timing that's

messy,' said Howell. 'We can map areas that are subject to rockfalls, but we don't know if it's going to be tomorrow or in 100 years.'

### OBSIDIAN--HOWTO WORK IT

**GOLD SHEEN.** To get the most out of mahogany gold sheen obsidian, saw with the bands, as if they were a stack of plates and you wish to unstack them. Watch for "fire spots" in gold sheen. It is not plentiful, but opal-like colors do sometimes occur.

**IRIDESCENT.** There are two types of iridescent obsidian. In cutting both correctly, the orientation of the color is most important. One type of obsidian is banded and the color lies in the bands. On the unbanded types of obsidian, the surface has to be chipped to find the color. The banded type will have several colors or shades, while the unbanded types will have only one color. Cut the banded material parallel to the bands to get the effect. To get rainbow effect, cut the stone at an approximately 15-degree angle across the bands.

**MIDNIGHT LACE.** Lace patterned obsidian should be cut across the surface of a pattern that you desire to reproduce.

**RAINBOW OBSIDIAN.** It is cut parallel to the flow layers. These can be seen by examining the fractured surfaces using an overhead lamp bulb. As these are not always straight, it may be necessary to turn the stone slightly in the saw. Examine each slab wet to see if the correct angle has been obtained.

**SAFETY TIP: OBSIDIAN CHIPS!** After obsidian is sawed, be sure to bevel the edge all around on your fine grinding wheel to keep them from flaking or chipping. Wear goggles of glasses at all times. If a small chip of glass gets into your eye, it would be very dangerous, and may cut your eye seriously before the piece could be removed.

**GRINDING OBSIDIAN CABS:** Approach your grinding wheel with the material at a slight horizontal angle. If brought straight in, it may be a "shattering" experience as obsidian fractures easily if not worked correctly.

**POLISHING OBSIDIAN:** Though obsidian is comparatively soft, it is still very important to sand away all scratches before going to the polish. Sanding should always be done wet, since obsidian is heat sensitive and very brittle. For the final polish, felt with cerium oxide is the choice. Keep the polishing wheel wet. A dry polishing wheel will result in blisters and scratches.

Obsidian is a material of many uses. In addition to making beautiful cabs, the iridescent, sheen, and rainbow varieties make striking polished contoured specimens. Faceted gemstones and outstanding carvings can also be made of obsidian. From the Petrograph 6/7 1999, Tule Smoke Signals.

**SAFETY TIPS continued. SUMMER STORMS** can drop rain in quantities that can endanger you or your camp if you are too close to a stream or wash. For instance, a summer storm produced impressive runoff from heavy rains washing out a road near Las Cruces, N.M. The storm dumped 3.9 inches of water, according to the National Weather Services. (via CC Times 6/19/99). (This hazard is especially true if you have someone in your group camping in a tent! ed)

### JULY GEMSTONE

**Ruby**--The vivid red of ruby and the serene blue of sapphire are so dissimilar that it is difficult to realize how much alike the gems themselves really happen to be. They are in fact merely color varieties of a single mineral known as corundum. Only a small amount of metallic oxides, which are not even represented in the chemical formula of the

corundum gems, can create a startling difference in their appearance.

Although **ruby is red corundum** and the word sapphire is popularly applied solely to the blue variety, that latter term is equally appropriate for the other exquisite colors that grace this versatile mineral. Thus there is the superb green sapphire,

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the splendid purple sapphire, the blazing golden sapphire. Pink sapphire grades imperceptibly into ruby, the distinction between them being virtually imaginary. So it is with the other varieties, which untold in a continuous panorama from the plain colorless stone called white sapphire to these which display all the hues of a flower garden.

Burma is the home of the finest rubies, especially those having the **exceedingly rare** "pigeon's blood" color, a deep carmine slightly tinged with blue. Ruby of a paler color is found with excellent sapphire in the gem gravels of Ceylon.

Some minerals have the extraordinary ability of causing light to appear as star-like rays. The directions of these rays depend upon the crystal structure of the mineral, and so they are always

symmetrical and oftentimes exceedingly beautiful. This effect is called **asterism**.

Star ruby and star sapphire are the best-liked examples of asteriated or star stones. Because these gems crystallize in an internal hexagonal pattern, the resulting rays are arranged in a six-fold manner, radiating outward from the top center of the stone. To show the brightest and sharpest stars such gems should be cut with a fairly steep rounded top, the bottom being perpendicular to the long dimension of the original crystal. Owing its existence to the deflection of light from extremely tiny needlelike inclusions of another mineral or to hollow tubes, the star is an inherent part of the stone. Consequently a single gem may be cut into any number of smaller ones, yet if properly oriented each will contain a whole star. *From Rocks and Mineral* by Richard M. Pearl.

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### BIRTHDAYS IN JULY

Jim Bufton	3
Mark Hannan	4
Edwin Fellman	6
Jane Holcomb	11

Lee King	11
Dave Kleesattel	14
Lee Haynes	15
Howard Lederer	22

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### MARRAGES IN JULY

Louise Gilley	5
Ken Caudel	7
Marlow & Ophelia Hicks	7

David Danner	11
Lisa Sowle	20

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### Himalaya Mine by Lynn Bremner, The Carmel Valley Prospector

NOTE: The Himalaya Mine is a privately-owned mine and is not open to the public. It is accessible only through OTHER privately owned property. Owners will have any trespassers prosecuted to the full extent of the law.

Two of DesertUSA's staff were invited on a rare tour of the privately-owned Himalaya Mine to learn first-hand how the beautiful, gem-quality tourmaline is located and extracted from the mine.

On the morning of the tour, our group met at Dudley's Bakery, located at the foot of Julian Mountain in Santa Isabel, CA. After friendly introductions were made, our caravan of six cars, headed north toward Mesa Grange. The drive from Dudley's to Gem Hill, where the Himalaya Mine is located, took about 30 minutes. We had to pass through a series of private roads with gates, which

ended in a long, graded road that wound up to the home of our gracious hosts, Maryann and Bob, the current owners of the Himalaya Mine.

As we piled out of our cars, a sense of excitement and adventure started to build. We all gathered around Bob and Maryann as they began to give us an overview of the mine and what we would see during our tour. Apparently, there are three mining claims associated with the Himalaya Mine and its surrounding dumps. One of the claims, located in the dumps directly in the portal of the mine, had expired, and another group of miners seized the opportunity to register it before the last claimant could refile. Because of this new situation, we were not allowed to rockhound in many of the dumps surrounding the mine.



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The road from the house on Gem Hill up to the Himalaya required a 4WD vehicle, so many of us walked the 1/2-mile uphill road to the mine entrance. When we arrived at the entrance to the mine, we were advised to put on the knee-high rubber boots which were provided. As I stood near the entrance to the mine, I felt cold air exuding from the opening, which was refreshing compared to the 80 degree temperature outside. Flashlights and hard hats were handed out to the group, as Bob continued to tell us about the history of the Himalaya Mine.

The famous Himalaya Mine in Mesa Grande is known for the abundance and quality of green and pink tourmaline gemstones that it has produced since 1898. Tourmaline production began at the mine when an Asian Empress influenced the demand for opaque pink tourmaline stone in the Chinese market. Tons of opaque tourmaline were shipped to China and used to carve figurines and other decorative ornaments. The Chinese market continued to motivate production at the Himalaya Mine until 1912, when the Chinese market collapsed.

The Himalaya Mine has been operating sporadically since 1912, and continues to actively produce gem-quality tourmaline. The brilliant, transparent crystals that were once tossed aside by miners in search of the opaque tourmaline are now considered the most prized. After 1912, rockhounds returned to the dumps, left behind by the miners who supplied the Chinese market with the opaque stones, to find a wealth of gem-quality pink, green and watermelon tourmalines.

The historic overview of the mine continued as the tour group slowly entered the dark, damp entrance tunnel that would take us deep into the heart of the Himalaya. The air in the mine was very cold compared to the temperature outside. One of the guides told me that the temperature in the mine was always the opposite of the outside air. During the winter months the mine would be warmer than the icy air on the outside.

As I entered the mine, I noticed an In and Out board where mine worker and visitors are required to place their markers as they enter and exit the mine. It was a safety measure I had not thought of. It was easy to imagine how someone could get lost within the dark tunnels of the mine. Without a flashlight, it

would have been impossible for a visitor to find their way back to the main entrance of the tunnel.

A few feet into the tunnel our feet became submerged in ankle-deep muddy water. As we waded deeper into the mine, a sense of mystery and danger came over the group. The pitch-black tunnel was endless as our flashlights only penetrated a few feet ahead. The ceiling of the tunnel was secured with wood support beams, which were so low in areas we had to duck down to avoid bumping our heads. As we sloshed through the water, thoughts of earthquakes and cave-ins entered our minds. This tour was definitely an adventure.

After about five minutes of wading through the main tunnel, we reached an intersection where tunnels headed right and left. The tunnel to the right lead to the current production area where three production workers worked daily to produce tourmaline. The mine foreman offered to take us down that tunnel, but he said it was a long walk with many rocks and debris. We choose to take the tunnel to the left, which would take us to a huge pocket that had already been excavated producing tons of tourmaline gems.

As we worked our way through the rocky tunnel, we saw huge veins of pegmatite running through the walls of the mine. The veins contained areas called pockets, where tourmaline crystals had been removed. Brilliant fragments of pink, green and black tourmaline are all that remain in the empty pockets which were once filled with beautiful gem quality tourmalines. Shades of lavender mica shimmered against the pinks and greens creating a stunning sight.

Similar to tourmaline, quartz crystals are also common to pegmatite veins. In one area of the tunnel, a huge smoky quartz crystal was still intact in the ceiling of the mine. The miners left the crystal in place to demonstrate how crystals are formed and how they look before they are removed from the walls of the mine.

A few yards beyond the quartz crystal was a huge pocket where a vast amount of tourmaline had been found? The pocket was dug out from the left wall of the tunnel at a steep uphill slant. The workers had carefully removed all of the valuable gem-quality tourmaline by hand. To fit in the narrow sections of the pocket the workers had to lie on their

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sides and crawl to reach the deepest areas of the vein.

We returned to the main intersection of the tunnel where we learned about some of the shafts that had been successfully worked before they were flooded by underground springs. With our flashlights, we peered through a hole in the tunnel wall that opened onto one of the shafts. We were able to see the clear, still water that filled the deep shaft and thought of the tourmaline that lay beneath its cool surface.

Some of the group stayed behind to ask the foreman more questions, but I was anxious to scavenge the

mine dump for tourmaline gems, so I headed back toward the main tunnel carefully following the bright exit signs.

Outside in the mine dumps, I found some unique samples of pegmatite containing crystals of black, green and pink tourmaline. The black tourmaline is called Schorl and is not as valuable as the colorful pink and green tourmaline. One of the large samples we found contained a nice display of lavender-colored mica called Lepidolite, which is commonly found in pegmatite veins. Reprinted by permission from DesertUSA Magazine, Nov. 1997. See WEB site at [www.desertusa.com](http://www.desertusa.com).

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### STONE-OF-THE-MONTH

**Bryce Ellsworth, Display Chair**

Several Item's of interest were brought in.

**Joe Yarborough** brought in a beautiful piece of Red Agate & a Joe cab belt buckle and a pendant made from the same material, this piece of agate was found in the Cody Mountains.

**Barrie Bieler** brought in a molar of a young wooly mammoth that was found at the La Brea Tar Pits in Los Angeles, CA.

**Bruce Naylor** brought in two specimens (1) chalcopyrite and (2) marcasite which was found at the Black Friday Mine in Montana.

There were three Pro cabs and two Faceted stones in the competition.

**Winner for Pro-Cab Joe Yarborough \$5.00**

**Winner for Faceting Barrie Bieler \$5.00**

There were two stones that were in the competition that also seemed to be item's of interest--**Douglas Rue's** blue Tiger-eye and **Barrie Bieler's** Tri-color faceted stone.

There was a picture brought in by **Barrie Bieler** that showed **Ed Miller's** corner at Snyders Ranch Pow Wow.

A lot of people came by to see the stones in the competition but only 16 voted. If you need help with voting I'll gladly help you. **Bryce F.**

**Ellsworth, Display Chair.**

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### **An ornate jade shroud found.**

The body of a king wearing garments made of 4,000 pieces of extremely thin jade plaques, sawn together with gold thread, was recently found in a tomb in eastern China. The shroud was decorated with gold flowers and a gold belt with four large gold buttons,

each with a design of two bears threatening a galloping horse.

The 2,170 year old tomb of Prince Lui Wu, dated 206 BC to AD 24, was found nearly 400 feet inside the Lion Mountain on the outskirts of Xuzhou.

Summarized from San Jose Mercury News 1/16/96. Via MARIN MINERAL SOCIETY "TUMBLER" 5/99.

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### Dinosaurs in the news...

Following three articles are summarized by the Breccia (Santa Clara Valley Gem and Mineral Society).

**Dinosaurs find hints at new species.** San Jose Mercury News 4/27/99 Contributed by Daymond Speece.

The bones of two new species of heavily armored dinosaurs larger than elephants have been found in Utah according to James Kirkland, Utah state paleontologist. The bones, found near Price, Utah,

are at least 25 million years older than any similar dinosaur type previously found in North America.

The discoveries may compel scientists to revise the chronology of dinosaur migrations.

These *ankylosaurs*, or *fused lizards*, the size of army tanks, were sheathed in bony armor plates studded with horns. Their powerful tails were

## DIABLO DIGGINS JUNE 1999

tipped with clubs of solid bone, possibly to batter large attackers like Tyrannosaurus rex.

Ankylosaurs are believed to have originated in Asia. When the landmasses collided about 100 million years ago to create what is now Alaska, the ankylosaurs were among the first immigrants to

North America from Asia. Later, the Asian dinosaurs coming across the land bridge replaced most of the North American dinosaurs according to Kirkland. The new finds have been dated to 98.4 million years old.

### **Dinosaur wings for running?** San Jose Mercury News 5/6/99 Contributed by Margaret Norton.

The ancestors of birds may have evolved wings not for flying, but for running faster, thus answering a key question about the origin of bird flight, according to scientists.

Many scientists believe birds descended from two-legged dinosaurs like *Velociraptor* (as seen in Jurassic Park). The problem has been explaining how the clawed dinosaur forelimbs developed into the wings of the first known bird, *Archaeopteryx*, which lived 140 million to 150 million years ago. Some of the dinosaurs must have had limbs that

resembled wings, though they couldn't fly with them. So why have wings?

Paleontologist Luis Chiappe of the Natural History Museum of Los Angeles County, and aerodynamic engineer Phillip Burger of the San Diego Natural History Museum think they have found the answer. They believe the crow-sized *Archaeopteryx* took off from the ground. Too weak to launch itself from a standing start, as most modern birds can, it was also too slow to gain lift from just running. Chiappe and Burger calculate that *Archaeopteryx* could almost quadruple its running speed with thrust from flapping its wings. Flightless ancestors of *Archaeopteryx* could have used rudimentary wings to speed up when chasing prey or escaping predators.

### **More bones at Isle of Wright.** San Jose Mercury News 4/9/99

Looking for fossilized dinosaur bones? It doesn't get any better than the Isle of Wright off the southern coast of England. The find is major not in quantity, but in quality, yielding fossils from the early Cretaceous period, 100 million to 140 million years ago, which are rarely found elsewhere.

According to David Norman of Cambridge University, the island is important *because new*

*dinosaurs continue to be discovered there and are well-preserved and articulated, that is, their bones are joined together.*

Last year, a previously unknown cat-like, flesh-eating dinosaur was discovered. Another previously unknown dinosaur *Neovenator salerii*, a smaller version of Tyrannosaurus rex, was found on the island.

With the help of the surrounding sea, new fossils are continually unearthed layer after layer.

### **SHOW CALENDAR**-(If you attend a show and find it particularly interesting, please drop me a note. ed)

#### **July 24 Antioch Club Rock Swap & Bar-B-Q.**

This is a must for anyone who is in town on the 24<sup>th</sup>. More information and direction will be available when we get closer to the date from the Pankey's.

#### **June 30<sup>th</sup> though July 4<sup>th</sup>,**

**Madras, Oregon.** 50th Gem and Mineral Show, Jefferson County Fairgrounds, member of All Rockhounds Pow Wow

Club of America, Inc. Contact Evelyn Arnhold at 4041 So. Bell, Tacoma, WA 98408. Dealers contact Eula Dillard, 145 E. 179<sup>th</sup>, Spanaway, WA 98387, (253)-847-2755.

#### **July 10-11 Culver City,**

**CA.** Culver City Rock & Mineral club, Veterans Memorial Auditorium, Culver Blvd. & Overland Ave. Saturday 10-6 Sunday 10-5. Bradford Smith (310)472-6490,

[brad@bigdiff.com](mailto:brad@bigdiff.com) or Randy Newbill (310)473-6712.

#### **July 31 & August 1, San**

**Francisco, CA.** S.F. Gem & Mineral Society, GEODES: Natures surprises. S.F. County Fair Building, (formerly Hall of Flowers), Golden Gate Park, 9<sup>th</sup> Ave. & Lincoln Way. Saturday 10-6 Sunday 10-5. Ellen Nott (415)564-4230

## DIABLO DIGGINS JUNE 1999

**August 14-15 Lakeview, Oregon.** Tallman Rock Chippers 19<sup>th</sup> Rock Round-up. Lake County Fairgrounds, Lakeview, OR. Dean Boc (541)947-2866.

**September 3-6 Fort Bragg, CA.** Mendocino Coast Club. Town Hall-Main & Laurel. Sat & Sun 10-6, Mon 10-4. Don & Karen McDonnell (707)964-3116.

**September 18-19 Paso Robles, CA.** Santa Lucia Rockhounds, Pioneer Park & Museum, 2110 Riverside Ave. Saturday 10-6 Sunday 10-5. Harry Kuffel (805)467-3457.

**September 25 Los Altos, CA.** Peninsula Gem & Mineral Society, Los Altos Rancho Shopping Center, Foothill Expand South Springer Road. (9:30-4:45. Frank Dina (650)967-3424.

**September 25-26 Downey, CA.** Delvers Gem & Mineral Society, Woman's Club Downey, 9813 Paramount Blvd., Saturday 10-6 Sunday 10-5. Fred Dexling (562)425-0192

**October 2-3 Napa, CA.** Napa Valley Club. Napa Valley Exposition, 575 Third St., 10-5 both days, Gaylord Jerde (707)552-2324.

**October 9-10 Lancaster, CA.** Valley Gems, 9050 1/2 West Ave. J, Sat 9-5, Sun 9-4. Connie Wilhelm (661)942-1570.

**October 9-10 Placerville, CA.** El Dorado County Club. El Dorado Fairgrounds, 150 Placerville Dr., 10-5 both days. Merryan O'Neill. (530)622-4229. Publicity (530)677-8440.

**October 9-10 Trona, CA.** Searles Lake Club, 13337 Main

St, Sat 8-5 Sun 8-4, Bonnie Fairchild (760)372-5356.

**October 16-17 Whittier, CA.** Whittier Club. Masonic Temple, 7604 Greenleaf Ave Sat 10-6 Sun 10-5. Jay Valle (625)336-3714

**October 23-24 El Cajon, CA.** El Cajon Valley Club. El Cajon Masonic Temple, 695 Ballantyne jSt., Sat 10-6 Sun 10-5, Dick McWhorter (619)447-0088.

**November 5-7, Concord, CA. Contra Costa Mineral & Gem Society.** Centre Concord, 5298 Clayton Road. 10-5 Saturday and Sunday. Gene Holcomb @ 925-686-6154.

**FIRE AGATES OF ARIZONA** from Kiskigem Journal via the Petrograph. At first glance, fire agates are not impressive. They appear as a reddish-brown rock covered with a coat of chalcedony. When this covering is removed and the stone is polished, there is a burst of glowing reds, yellows, oranges, bluish-purple, and greens that are responsible for the "fire agate".

The cause of the fire is still a puzzle. Some collectors attribute the iridescence to the presence of minute plated crystals of goethite sprinkled with layers of chalcedony.

There is a difference between fire opal and fire agate. In the opal, the fire comes from long chains

of spherical quartz molecules that reflect light. The fire in the agate is due to a buildup of alternating layers of quartz and limonite, an oxide of iron. Stress patterns that develop between the layers cause the light to refract, thus producing the rainbow colors.

Fire agate is rare and the play of color under the chalcedony places it in the gem class. It is about seven in hardness on the Mohs scale, which made it suitable for gemstones. Unlike opal, it does not crack or lose its color, and it is not affected by moisture or lack of proper care.

**FROM THE LIBRARIAN** By Hawkeye Hicks  
**NEW Addition to the Library.** VCR tape  
**Channel Jewelry. #295.** CCM&GS members  
**Barrie Bieler and Robert Judd** have joined together to produce a VCR tape on Channel Jewelry. Their combined expertise clearly shows the start to finish process of making channel

jewelry. Perhaps other members could share their skills to our members in the way.

**CD-ROM #291 Dinosaur Hunter-Multimedia personal computer program.** Minimum system requirements Windows operating system, 486

## DIABLO DIGGINS JUNE 1999

DX/33 MHz CPU, 8 MB RAM, 10 MB available space on hard drive, 8 bit sound card, speakers or headphones and a mouse. Get up close and personal with 50 different species of dinosaurs

follow in the footsteps of famous paleontologists, travel the world in search of fossils, and even dig up and assemble your own dinosaurs!

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### REFRESHMENTS--Needed for the JULY Meeting

The following people are responsible to bring refreshments to the JULY meeting.

Sherb Brown

Mary and Jim Bufton

Charlie and Brownie

Cameron

Dick and Betty Pankey

Betty Carpenter

Doc Carr

Ken Caudel

Mary Crenshaw

Dave Cunningham

Dave Danner

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### A FAVORITE CASSAROLE FOR FIELD TRIP POTLUCKS from Nora Hawkins via Ophelia Hicks.

1 can or jar of sauerkraut

1 can corned beef

1 pkg. shredded cheddar cheese

1 can diced tomatoes

Place drained sauerkraut in a large frying pan. Next layer the can of corned beef spread evenly on top the sauerkraut. Spread the shredded cheese over the corned beef. Distribute the tomatoes over the mixture, poking holes with a fork so the juice penetrates. Cover and slowly heat the contents. I like to heat it on low for 45 minutes.

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**Dad's Rock Shop**-In order to serve a larger cross-section of our customers, we have moved to a larger facility in Ft. Mojave, AZ, almost to Laughlin. Our physical address is 4508 S. Highway 95, Suite G and H, Ft. Mojave, AZ 86449. Our mailing address is P.O. Box 10649, Ft. Mojave, AZ 86427. Our e-mail address is [dadsrocks@dadsrockshop.com](mailto:dadsrocks@dadsrockshop.com). Our web site address is <http://www.dadsrockshop.com>, as well as, our Toll Free phone is 800-844-3237. Thank you for your past and continued support: Kim, Debbie, & Shirley. Via CHIPS 5/99.

### BEADS OF LONG AGO by Lois Sherr Dubin, CHIPS May 1999.

The earliest known beads were found at an archaeological site in La Quin, France, and date from about 38,000 BC. Few in number, they were made from grooved animal teeth and bones. More beads, grooved and notched for hanging, were found dating from about 31,000 BC, in a large number of other places including Spain, Italy, Germany, Czechoslovakia, Austria and Russia.

By 28,000 BC, beads were perforated rather than grooved and carvings appeared. Pieces of bone and ivory were ground into bead shape and decorated with incisions concurrent with cave paintings.

About 16,000 BC, abrasives were used to drill pebbles, fossils and other hard material. Bits of flint or chert were used and palm-rotated hand drills were made of hollow bone and filled with the abrasive and/or crushed stone. A later development was to drill holes halfway through the bead from opposite ends. Beads were made with the same techniques used in creating tools and weapons.

By 65 BC, beads had become a major trade commodity, since a commercial value could be assigned to them, and they were easily portable. Demand for rare and exotic material to be used for adornment helped establish trade networks in Western Asia and the Mediterranean areas. Many of the beads were made of carnelian, shell, coral, turquoise and lapis lazuli. From "The History of Beads from 30,000 BC to the present," via DELVING, 1999.

**Diablo Diggins** editor Mary Hicks [mphicks@pacbell.net](mailto:mphicks@pacbell.net) Next deadline is July 20<sup>th</sup>.

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*Diablo Diggins* editor Mary Hicks [mphicks@pacbell.net](mailto:mphicks@pacbell.net) Next deadline is July 20<sup>th</sup>.

# CFMS EARTH SCIENCE STUDIES

SEPTEMBER 12 - 19, 1999

## CAMP PARADISE



A CFMS Earth Science Seminar will be held at Camp Paradise, about 45 miles northeast of Marysville on Highway E-21. A map to the area will be provided. There will be lectures on flora and fauna of the area and other subjects of interest, field trips for sightseeing, and some collecting. Our primary goal is to provide a place to learn and have fellowship with other rockhounds.

The facilities are a rustic church camp with rooms with double beds and/or cots and with bathrooms and shower inside. Each person is required to furnish a mattress cover (sheet or blanket) to put over the mattress under your other sheets or sleeping bag. Each person is responsible for cleaning his/her own room before leaving.

To register for this fun-filled and interesting seven days, complete this form and mail with payment of \$190.00 per person by August 1, 1999, no cancellation after that date unless there is a replacement. This fee included instructions, workshops, field trips, rooms, and three meals a day. There may be small additional fees for materials used in the workshops.

Send form and payment made out to CFMS to:  
 Florence Meisenheimer  
 101 N. Wake Forest Ave.  
 Ventura, CA. 93003-2246  
 (805) 642-3155

Isabella & Bill Burns  
 Chair Persons

**NO PETS - NO FIREARMS**

**KEEP PART ABOVE THIS LINE**

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ADDRESS \_\_\_\_\_ STREET \_\_\_\_\_ CITY \_\_\_\_\_ ZIP \_\_\_\_\_

I belong to \_\_\_\_\_ Society, a CFMS Member

Do you use a cane \_\_\_ or walker \_\_\_?

Are you a diabetic \_\_\_ vegetarian \_\_\_?

PLEASE CHECK THE ACTIVITIES THAT INTEREST YOU:

\_\_\_ FIELD TRIPS

\_\_\_ LECTURES

\_\_\_ Wire Wrap  
 \_\_\_ Faceting  
 \_\_\_ Casting  
 \_\_\_ Stone carving

### WORKSHOPS

\_\_\_ Cabbing  
 \_\_\_ Petrified wood Identification  
 \_\_\_ Bead Stringing  
 \_\_\_ Other

FEES: Room assignments will be on a first payment basis. Fees include instructions, workshops, field trips, rooms, and three meals a day. There may be small additional fees for materials used in the workshops.

Name and phone number of person to contact in case of emergency \_\_\_\_\_

Dormitory	\$190.00 per person ___
Double occupancy	\$190.00 per person ___
RV parking	\$190.00 per person ___ -

**CONTRA COSTA MINERAL & GEM SOCIETY**  
**P.O. BOX 4667, WALNUT CREEK, CA 94596**

**GENERAL MEETING: 2<sup>nd</sup> Friday, 7:30 p.m. , at the First Presbyterian Church, 1965 Colfax Street, downtown Concord.** (The Church is at the corner of Salvio and Colfax Streets in Concord—free garage across Salvio.)

**VISITORS ARE WELCOME!!—BRING A FRIEND**

Membership fees: Initiation \$5; Regular member \$10; Associate \$5; Junior \$1.

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