FEBRUARY 2013

WHITTIER ROCKHOUNDER GEM & MINERAL SOCIETY

February 28, 2013
"Don & Jay Present..."

Nothing more patriotic than a blazing campfire in front of an American Flag… er… chair. A windy night at Afton Canyon. (Go USA).

ROCKHOUNDER

THE PREZ SEZ:

As January comes to a close rockhounding planning and activities are already into full swing for our club. On January 19th, several club members from WGMS and the Pasadena Lapidary Society got together to establish a tentative schedule of Field Trips for 2013. In January, rather than scheduling anything specific, the month was left open for individual trips to Quartzsite.

As I mentioned in last month's message, Ginger and I planned to, and did, travel to Quartzsite for this year's annual QIA Pow Wow. As usual, there was much more to see, and participate in, than time allowed. Highlights of the five nights that we were in town included rain for most of one day, a great Field Trip to search for (and find) birds-eye ryolite, and days visiting with great rockhounds from all over the nation.

On our ryolite field trip, there were rockhounds from five different states. This year I appreciated more than ever how Quartzite really is in "our" backyard compared to how far so many folks travel to participate. When I say folks who participate I am talking only about rockhound visitors. I also always enjoy meeting vendors from Australia, South Africa, Canada, and so many other countries from around the world.

Capping off all of the visiting during our stay was a potluck and campfire on Saturday evening at the Ragazzi/Cliff camp site with WGMS members and friends. Fortunately, Saturday afternoon and evening turned out to be one of the nicer times weather wise during the long weekend.

(Continued on page 4)

WGMS General Meeting

Thursday, February 28, 2013

"Don & Jay Present..."

The program for this month will be presented by Don Ogden and Jay Valle. It is scheduled to be a photographic presentation of a club event or field trip.

Marcia

The Prez Sez

(Continued from page 3)

With the passing of January, I look forward to February for our club for both the program that we have scheduled for our General Membership meeting on February 28, and Field Trip the weekend of the 16th and 17th. On our Field Trip we will be visiting an area that I think will be new to quite a few of us.

See you at our next meeting, and around the campfire.

Art

SLAB SAWS AND MISTING PROBLEMS – A SOLUTION

by Vern and Sylvia Cliffe, Pasadena Lapidary Society

The use of slab saws to cut rocks creates the problem of mist that takes upwards of fifteen minutes after the cut before settling inside the hood. Opening the hood shortly after cutting exposes the operator to possible health problems and "coats" clothes and equipment. Many rockhounds elect to wait fifteen minutes before opening the hood, slowing production, especially during club workshops. Now a simple solution to the problem has surfaced!

While talking to our friend, Dan Stevens (of Caldwell, Idaho), he suggested an additive to the cutting oil that literally stops the misting. It's thick as honey

(Continued on page 12)

Field Trip Schedule for 2013

This is the official field trip list for the new year. Details will be available closer to the date.

Jan 18-22	QIA at Quartzite. Camping at Scaddam Wash.
Feb 17	**Salton Sea (day trip)**
Mar 9-10	Stoddard Wells tailgate
Mar 16-17	Lavic Siding/Southern Cadys
Apr 20-21	Molycorp Area
Apr 27	Oceanview tourmaline mine trip (fee location)
May 25-27	Kramer Junction & surrounding areas
Jun 15-16	Big Bear (cool)
July TBA	Pacific Palisades (day trip)
Aug 17	Jurupa & Alf Museums (day trip)
Aug 3-4	Nipomo Show
Sept 14	Beach trip - Jalama Beach (Whale Bone areas)
Oct 12-13	Trona - Searles Lake Club show & field trips
Nov 2-3	Whittier Club Claim (Barstow)
Nov 28-Dec 2	Afton Canyon
Dec	TBA

Possible Summer trips or day trips TBA:

- Adalanto for florescent material (Princess Pat mine)
- Gem Hill
- Felix Mine
- Long trip to remote destination (if there's interest)

We are always open for suggestions if you can think of locations you want to visit. Also, throughout the year other clubs lead field trips to many locations and usually we can join them. We'll keep you posted.

Joe Goetz, Field Trip Chairman

Minerals in the Spring

by Andrew A. Sicree, Ph.D.

Mineral springs

Travel the back roads and by-ways of America and before long you will encounter a town or hamlet bearing the name "Mineral Springs." Sometimes the town name is more specific, such as "Alum Springs" in Virginia or "Radium Springs," a town of about 1700 residents northwest of Las Cruces, New Mexico. Towns bearing the name "Sulfur Springs" appear in Texas, California, and Kentucky, as well as other states, and there is a village called "Hot Sulfur Springs" in Colorado. This is only a small sampling of the "Mineral Springs"-type place names that speckle America. As one might suspect, these towns are named for nearby mineral springs. But what is a mineral spring and how does it differ from an ordinary spring?

A little hydrology

Rain falls on the ground and that which doesn't evaporate or run into nearby streams, percolates underground. Once below ground, rainwater will descend to the "water table" which is the upper surface of what is called the "saturated zone" underground. In the saturated zone water fills all of the cracks and joints in the bedrock and all of the spaces between grains of sediments.

If the saturated zone (the water table) comes to the surface at any point, water can flow out of the ground. The water table hits the ground surface at the banks of many streams and ponds and they gain water from underground. This, by the way, is what keeps many streams flowing even when it has been weeks since the last rainfall.

When the water table intersects with the ground surface at points uphill from the local streams, springs will result. Water will seep out of the ground and trickle downhill to the nearby streams. Often, but not always, these springs produce good quality water and they were utilized for drinking purposes. Many people still prefer to drink "spring water" and a good portion of the bottled-water industry exploits natural springs for this purpose.

Mister, can I drink from that waterhole?

Early settlers soon noticed that not all springs were so refreshing. Some springs were warm or even boiling – these we call "hot springs" – and others tasted bad, smelled worse, or were hard on the digestion. In a few cases, spring water might even be poisonous. There is more that just water coming out in these "mineral springs." For instance, Wilson (James Wilson, A Collector's Guide to Rock, Mineral, and Fossil Localities of Utah, 1995) notes occurrences of springs made poisonous by dissolved selenium in the uranium-rich Poison Strip area east of Crescent Junction, Utah.

It wasn't long, however, before resourceful speculators and quack doctors decided to turn a liability into an asset by promoting mineral springs as healthful. Throughout the late 1800s and into the 1900s, patients suffering from a wide variety of aliments were sent off to spring-side sanitaria, spas, and resorts to "take the waters." They swam and soaked in the springs and drank mineral waters for their therapeutic values. Health benefits may have been uncertain, but popular vacation resorts grew up around the springs as first one then the next became the trendy spot for the wealthy and famous. The popularity of mineral spring resorts continues to this day.

Where are the minerals?

Mineral springs produce more than just water. Water can dissolve minerals, and waters that contain a substantial portion of dissolved minerals are termed mineral waters. Typically, these waters contain gases, sulfur compounds, and a variety of salts. You may hear the term "total dissolved solids" or TDS used to describe the concentration of dissolved minerals. The US Environmental Protection Agency recommend that drinking water contain less than 500 parts per million (500 milligrams per liter of water) or total dissolved solids. Waters with more than 1500 ppm (1500 mg/L) TDS are labeled as having "high mineral content."

So where do the dissolved solids originate? As ground water passes through rock, it will dissolve any minerals it encounters. Of course, many minerals (e.g. quartz, corundum, etc.) aren't very soluble, especially in cold water. Carbonate minerals such as calcite ($CaCO_3$) and dolomite ($(Ca,Mg)CO_3$) and sulfate minerals such as gypsum ($CaSO_4 \cdot 2H_2O$) will dissolve, and halide minerals such as halite (NaCl) and sylvite (KCl) dissolve very readily. When a mineral like halite goes into solution in the groundwater,

(Continued on page 10)

WGMS Field Trip for February

Salton Sea Day Trip

Obsidian Butte and Mud Volcanoes

This month we are going to several local interesting sites. On Saturday, February 16th we will join with other local clubs on a one-day field trip.

Meet: 6:30am in San Dimas at the Lowes/McDonald's parking lot.

Directions:

From Pasadena, take I-210 east to CA-57 south. Exit Arrow Highway and turn left (east). Pass under the freeway and turn left at the light (McDonalds). After the briefing we will drive one hour to Whitewater Rock Company, where we'll have an hour to use their facilities and tour their extensive landscape rock inventory in golf carts.

Field Trip Collecting:

Then we'll drive to Obsidian Butte - a natural upswelling of glassy obsidian with white inclusions. This part of the Salton Sea is highly geothermic. After collecting specimens and enjoying our lunch we'll visit the famous Salton Sea "Mud Volcanoes" and have the rest of the afternoon to attend the San Gorgonio GMS show in Indio or to return to our homes.

Those wishing to see other sites in the area are welcome to stay overnight in the Salton Sea/Indio area and participate in other rock collecting explorations on Sunday.

Vehicles: Saturday's field trip is suitable for all vehicles.

Bring: Water, hat, collecting bags and buckets. Lunch. If you are spending the night - plan accordingly.

Contact: As with all field trips, contact the field trip leader to let him or her know that you are planning to attend. Sometimes the trip is cancelled or changed because of weather or other circumstances. The leader for this field trip is Mark Nelson (909) 592-1322 or mnel-sonair@aol.com.

Somewhere in California dreaming of gems —- Joe Goetz

Shark Tooth Hill, Ernst Quarries, Bakersfield, California

CFMS Field Trip
March 24th 2013 Sunday 8am-4pm
CFMS Co Chair Field Trips South, Robert Sankovich 805-494-7734 rmsor-ca@adelphia.net
Rob Ernst, host and owner of Ernst Quarries
www.sharktoothhillproperty.com, 661-319-7080

Field trip: Our March field trip will be to the Shark Tooth Hill, Ernst Quarries, near Bakersfield California. This is a special field trip, I contacted Rob Ernst and we set up the date, there will only be members from our clubs and the CFMS, no general public will be there. We will have a full day of digging 8am-4pm. Rob Ernst gave our cost $50 dollars each person, we got a deal! **We can't have more then 50 rock hounds attending, this is a first come first served. The first 50 people who contact Robert Sankovich to attend will be the ones going.** When you arrive I will have two documents for those attending to fill out and sign. The rules and waiver documents. Bring the $50 in cash to be paid to Rob Ernst. Come out for a fun day of digging for shark teeth fossils, the weather should be nice, cool. The dig site is a walk of 500 yards over semi flat ground, then up a hill 100 yards. Once there most of the time you'll be digging in small area. This time of the year there is always the chance of rain, bring the necessary clothing. If it is raining, we won't be digging.

When: March 24th 2013 Sunday 8am-4pm

Directions: Take 99 freeway North, to Merle Haggard Drive just north of Bakersfield, This is Map Point 1; Take Merle Haggard Dr. EAST until it turns into Manor St (about a 10 minute drive through several lights and past the airport); Just after Merle Haggard turn into Manor, the road will begin to turn south; Once you've turned southbound the next light will be China Grad Loop, You have reached Map Point 2; Make a LEFT Turn at China Grad Loop and proceed East; You will travel 2.5 miles down this road (eastbound through the oilfields) until you pass the "Gordon's Ferry" junction, You have reached Map Point 3; This junction is where China Grade Loop goes south, and the road you are on turns into Round Mountain Road; From this point continue to go east on Round Mountain Road for EXACTLY 5.6 MILES, (Setting your mile gauge helps); This will take you to Map Point 4 and The Ernst Quarries Staging Point; Please arrive at 7:30am start time, for check in. These directions are from Rob Ernst/Shark Tooth Hill.

E-mail Robert Sankovich and I will send you the Rob Ernst/Shark Tooth Hill map. You will also receive the rules and waiver documents. Fill out the documents and bring then to the field trip staging point and the $50

(Continued on page 13)

Minerals in the Spring

(Continued from page 7)

it dissociates into sodium (Na+) and chloride (Cl-) ions. Much of what makes up the total dissolved solids of many natural waters is in the form of ions such as calcium (Ca2+), magnesium (Mg2+), carbonate (CO32-), bicarbonate (HCO3-), sodium (Na+), and chloride (Cl-) ions. If you evaporate these waters, compounds such as calcium carbonate (calcite) and sodium chloride (halite) will precipitate as solids. Warmer waters found in thermal springs will dissolve more minerals than cooler water and at higher temperatures even sparingly soluble minerals like quartz begin to dissolve.

Types of mineral springs

Not all "mineral springs" are the same. Some are called "sweet springs" but because the water is quite low in dissolved solids, they scarcely deserve to be called mineral springs.

Alum is KAl(SO4) 2·12H2O and alum springs contain higher levels of potassium (K+), aluminum (Al3+), and sulfate (SO42-) ions. You may be familiar with synthetic crystals of alum that are often sold at mineral shows. Alum can also be found in your grocery store with the canning supplies. Drinking water from alum springs can give one diarrhea and other gastrointestinal problems.

Chalybeate springs produce ferruginous, or iron-rich, waters. Containing dissolved iron(II) carbonate (siderite) and manganese(II) carbonate (rhodochrosite), the water has a distinct taste of iron. Among the notable chalybeate springs are Tunbridge Wells in England and the Sweet Chalybeate Springs of Allegheny County, Virginia.

Sulfur (sulphur) springs are notable for their strong rotten egg smell. Dissolved hydrogen sulfide (H2S) escapes from the water a gives it a brimstone odor. Our noses are extremely sensitive to hydrogen sulfide and we can detect extraordinarily low levels of hydrogen sulfide in air (most people can discern it at levels of 0.5 ppb – that's parts per billion!). The source of the hydrogen sulfide can be sulfide minerals such as marcasite and pyrite (FeS2).

Saline spring waters typically contain dissolved chloride salts of sodium, calcium and/or magnesium. They have a strong salty taste, much like seawater.

Alkaline springs contain higher levels of alkalis or alkaline earth elements, such as sodium, potassium, lithium, calcium or magnesium ions, along with carbonate or hydroxide ions. Alkaline waters are more bitter and more basic (pH = 8 or higher) than other spring waters. Lithia springs contain lithium ions and calcic springs are high in calcium.

Soda springs contain excess dissolved carbon dioxide in the form of sodium carbonate or as the dissolved gas itself. At depth and under pressure, natural waters can dissolve carbon dioxide gas. Upon rising to the surface, some of these soda waters may effervesce (bubble up) like so much natural champagne, releasing bubbles of carbon dioxide. Carbonated water is also called "seltzer water." Seltzer water originally referred to the effervescent mineral water obtained from the natural springs near the village of Niederseltsers in Germany but today seltzer water is produced artificially. Interestingly for mineralogists, the Yale chemistry professor Benjamin Silliman (for whom sillimanite was named) bottled and sold artificial seltzer water beginning in 1807. Flavored seltzer waters followed eventually leading to the flavored artificial mineral waters sold as Coca-Cola and Pepsi.

Spring water can be radioactive. Radon gas dissolves readily into groundwater but will rapidly escape from water on the Earth's surface. "Radium springs" contain traces of radium derived from underground uranium or thorium deposits. One hundred years ago, radium was valued as a wonder drug reputed to cure many diseases including cancer. A mineral spring that contained traces of radium was thought to be particularly healthful. Radium Springs near Albany, Georgia, produced radium-laced water and became the site of a spa and a casino. Radium Springs, New Mexico, is a village of about 1700 people just northwest of Las Cruces.

Source:

Dr. Andrew A. Sicree is a professional mineralogist and geochemist residing in Boalsburg, PA. This ***Popular Mineralogy*** *newsletter supplement may not be copied in part or full without express permission of Andrew Sicree.* ***Popular Mineralogy*** *newsletter supplements are available on a subscription basis to help mineral clubs produce better newsletters. Write to Andrew A. Sicree, Ph.D., P. O. Box 10664, State College PA 16805, or call (814) 867-6263 or email sicree@verizon.net for more info.*

Via The Glacial Drifter, Vol. 56, No. 1, January 2013

More Words to Dig By

Fossil: Farmers in medieval Europe dug trenches and ditches to drain rainwater off their fields. These trenches were called "fosses" after the Latin expression meaning "to dig." Often enough, the ditch diggers uncovered what appeared to be ancient bones, teeth, or shells and called them "fossils" because they came from a fosse.

Erosion: Mice and other gnawing animals plagued the ancient Romans, and it is from their term rodere, "to gnaw," that we derive the word "rodent." Later, the alchemists experimented with acids and discovered that they would attack metals, slowly dissolving them. This slow corrosive action was labeled "erosion." Geologist then adopted the term erosion to describe how glaciers, streams, and rivers gnawed away sediments and rocks.

Goldbrick: Goldbricking is the shirking of one's duties, but the term had its origins during the Gold Rush days. An unscrupulous promoter would cover a block of lead with a layer of gold and offer it at a "discount" to unwary investors. The man who bought the "goldbrick" was cheated and the word came to be a verb meaning "to swindle." During World War I, however, the term acquired a somewhat different meaning. A soldier who avoided doing his duty was called a "goldbrick." The term retains it original meaning as a secondary definition.

Bonanza: Bonanza is another word that entered general use during the Gold Rush days. Derived from the Latin bonus for "good," the work bonanza was coined by Spanish sailors to describe days of clear weather coming on the heels of a storm. The term came to mean any good fortune and was applied to very rich gold discoveries. Today, the term is applied to any source of great wealth.

Source: Ref.: Garrison, W., 445 Fascinating Word Origins (Galahad Books, N. Y. 2000) 248 pp. ©2011, Andrew A. Sicree, Ph.D.

The Glacial Drifter, Vol. 56, No. 1, January 2013

SLAB SAWS AND MISTING PROBLEMS

(Continued from page 4)

and available from auto parts stores and Wal-Mart. The product is "No Smoke + Stopleak", made by Bardahl. Dan adds ½ cup to his 18" and 24" saws.
So, Rockhounds, you can get back to production

Via PLS Rambling 11-12

Shark Tooth Hill

(Continued from page 9)

each persons fee money to Rob Ernst who will be there with me.

Tools: Rock pick/hammer, pry bar, hand sledge, sifter, shovel, pick, brush, sifter, bucket, eye protection, newspaper to wrap your fossils in, collecting bags, wide brimmed hat, suntan lotion, lots of water, lunch, small containers or plastic bags for small fossils. There is no shade morning, afternoon, and it can be hot, but it will probably be cool, so dress accordingly, layers. After 1pm or so the dig site will be in the shade as the sun moves to the West, the holes are East facing. I would recommend a daypack, to put your tools in. It's a bit of a walk and it will be easier carrying your gear. Any Tools with a dimension greater then 30" will require a $25 surcharge for use to Rob Ernst. This includes, but is not limited to: picks, crowbars, sifting screens, railroad spikes, sledges, etc.

Material to Collect: Shark teeth fossils, many types, sizes, including Megalodons from the Miocene Epoch 10-15 millions years ago. There are other fossils, bone fragments, teeth to be found. The fossils are found in a layer about 1'-3' feet, you will see the exposed holes from previous digs. They are in a semi soft clay that you will dig out the biggest pieces you can, and then carefully break apart and sift to find the fossils. I usually use a gad pry bar to dig out bigger pieces of the clay, about golf ball to baseball size or so, if I see any sign of a shark tooth or fossil, I'll wrap it into newspaper and later I will use dental tools or dremel motor tool to remove the clay to reveal the tooth. I keep some of the teeth still in the matrix, it makes a nice display. The main thing is patience when working with fossils.

For more info contact CFMS-South Co-chairs:

Adam Dean:	(909) 489-4899	theagatehunter@verizon.net
Robert Sankovich	(805) 494-7734	rmsorca@adelphia.net

The Digital Rockhounder

This Newsletter is available by e-mail as a full-color PDF. If you wish to receive the WGMS Rockhounder directly to your computer, send an e-mail to **res19pnb@verizon.net.**

Editor

Upcoming CFMS Gem Shows

Feb 15-24 **INDIO, CA.** San Gorgonio Mineral & Gem Society
Riverside County Fair & National Date Festival
46-530 Arabia Street
Hours: 10 - 10 daily

Mar 2-3 **ARCADIA, CA.** Monrovia Rockhounds
The Arboretum & Botanic Gardens
301 Baldwin Avenue (Ayers Hall)
Hours: 9:00 - 4:30 daily
Website: www.Moroks.com

Mar 2-3 **VENTURA, CA.** Ventura Gem & Mineral Society
Ventura County Fairgrounds, 10 W. Harbor Blvd.
Hours: Sat 10 - 5; Sun 10 - 4
Website: www.vgms.org

Mar 9-10 **SAN MARINO, CA.** Pasadena Lapidary Society
San Marino Masonic Center, 3130 Huntington Drive
Hours: Sat 10 - 6, Sun 10 - 5

Mar 23-24 **TORRANCE, CA.** South Bay Lapidary & Mineral Society
Ken Miller Recreation Center, 3341 Torrance Blvd.
Hours: Sat 10 - 5; Sun 10 - 4
Website: www.palosverdes.com/sblap

May 3-5 **BISHOP, CA.** Lone Pine Gem & Mineral Society
Bishop Fairgrounds, Sierra Street & Fair Drive
Hours: Fri 6 - 9; Sat. 9:30-5; Sun 9:30-3

May 4-5 **ANAHEIM, CA.** Searchers Gem & Mineral Society
Brookhurst Community Center, 2271 W. Crescent Avenue
Hours: Sat 10 - 5; Sun 10 - 4:30
Website: www.searchersrocks.org

May 31 to June 2 **VENTURA, CA. CFMS SHOW & CONVENTION**
"California Rocks"
Sponsored by:
Conejo, Oxnard, & Ventura Gem & Mineral Societies
Ventura County Fairgrounds, 10 W. Harbor Boulevard
Hours: Fri & Sat 10 – 5; Sun 10 – 4
Website: www.cfms2013.com

WGMS MEETING LOCATION!
Whittier Community Center
7630 Washington Ave. Whittier

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