

**BEEHIVE ROCK & GEM CLUB**  
**DAVID HARRIS, EDITOR**  
2208 NORTH 700 WEST  
OGDEN, UT 84414



**2012 Dues are due!**

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BEEHIVE ROCK AND GEM CLUB

P.O. BOX 1011  
OGDEN, UTAH 84402

**VOL. 39 No. 10**

Website: <http://www.beehiverockandgem.com>

October 2011

**MEMBER OF UTAH FEDERATION OF MINERALOGICAL SOCIETIES  
ROCKY MOUNTAIN FEDERATION OF MINERALOGICAL SOCIETIES  
AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES**

The Beehive Rock & Gem Club began in April of 1970.

The purpose of our club is: To collect, cut and polish rocks, to gather fossils, mineral specimens, to discuss and impart our knowledge of the different phases of collecting, polishing and displaying-

To promote, organize and hold meetings, outings, trips, and similar events. To enjoy and protect our natural resources.

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**USUAL DATE FOR MEETING – FOURTH THURSDAY – 7 PM  
OGDEN HINKLEY AIRPORT TERMINAL, 3900 S & AIRPORT ROAD**

November, December have changes. Maybe others.

Call any Board member for current information.

**BOARD OF DIRECTORS OF THE BEEHIVE ROCK & GEM CLUB FOR 2011**

President & Board Chair	Joe Kent	801-771-8184
Vice President	Steve Smith	801-731-4216
Secretary	Norine Ramos	801-774-8306
Treasurer	David Law	801-731-4255
Field Trip Coordinator	Roger Bush	801-775-0147
Assistant	Ray Law	801-825-5857
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Managing Editor of BUZZER	Dave Harris	801-737-1266
Associate	Leora Alexander	801-399-0785
Calling Committee Chairs	Sherm & Ricky Thomson	435-760-1362
Calling Committee Chairs		

**FEDERATION REPRESENTATIVES**

Rocky Mountain Federation Delegate -----President  
 Utah Federation Delegate -----TBA  
 Public Land Advisory Committee ----- Jim Alexander

**DUES**

Due: October 1  
 Single - \$11  
 Couple or  
 Family - \$16  
 Junior - \$5  
 Overdue: January 1



**Notice! Next month meeting on 3<sup>rd</sup> Thurs. See note below.**

**Beehive Rock & Gem Club Meeting****October 27, 2011**

The program for this month will be rock collecting presentations by 3 -4 members who recently took field trips to McDermitt, Nev. and various other places in Oregon during a two week stint. They brought back some beautiful rocks, experiences and appreciation for these areas to share with us.

“Rocky” Ray  
 Program Chairman

**Reminder:**  
**Time for 2012 dues.**

**Note:** The November meeting will be held on the third Thursday, November 17, instead of the typical fourth Thursday due to Thanksgiving. We will meet at our usual time of 7 pm. We will be holding elections in the November meeting.

**Board Notes**

October 4, 2011

As we waited for board members to arrive, the discussion centered around the Floy Wash – Yellow Cat Field Trip. Rain? Going anyway? Camp at Yellow Cat or Floy Corral?, etc. Updates will be passed on as needed. Dave Law passed on the news that proceeds from sales of rocks and other things at the picnic covered all the expenses. Good job, Beehivers!

Rocky Ray is getting the Nov 17 program set up with those who will be giving it. He is looking for members who will be willing to give short or long programs this winter.

We have not had anyone volunteer to take the Secretary position. The board would like to see one of our newer members step in to help the club this way. It is a great way to get to know the members. Call a board member to volunteer.

Have you filled out the form from the September Buzzer? Please find it and get your name in as a volunteer to keep the Committee Chairs from being overworked. Only one couple has submitted a form so far.

Leora Alexander, Associate Editor

**September Meeting**

September 22, 2011

Joe opened the meeting by asking if we had any visitors. We didn't, but we had about 22 people there. He then took a few minutes to tell us about his trip to McDermit. It was interesting and sounded like they had a good time.

Joe has the permits for the trust lands, anyone needing one should contact him.

The Golden Spike Club is having a field trip on the 1st and 2nd of October to Dugway. This trip needs a leader and anyone interested should contact Kay Berry. Our club will be going to Yellow Cat the weekend of the 8th and 9th of October. For further information contact Joe.

Leora Alexander gave a short talk on garnets. She pointed out there are many different colors of garnet and they are found in a lot of places.

Rocky Ray gave a talk about what Utah looked like back in time. He talked about the different rock formations and when they formed. Rocky drove up Soldier Summit taking pictures of the different rock

formations he could explain and tell us about. It was a very interesting presentation and it took a lot of work on his part. We should all give him a pat on the back for being so dedicated to the club. Thank you Rocky Ray.

Norine Ramos, Secretary

**Associate Editorial – By the Way**

The Rocky Mountain Federation dues are due in November. These are used for running expenses, such as, the website, the Rocky Mountain Federation Bulletin, yearly directory of the clubs from the 12 states, insurance to cover any damage done by a club, etc. The program library, slides, videos, etc, is maintained as well. Part of the Rocky Mountain Federation dues are also sent on to the American Federation, which ties all the federations together. The Utah Federation dues are due soon, too. This helps pay for our state school lands permit to hunt on that land. Beehive Rock & Gem dues 2012 dues *were due* October 1<sup>st</sup>. We need these in soon to help cover all our federation dues.

Will the board get their's in before the rest of you? Challenge?

Leora Alexander, Associate Editor

**Fossilimericks**

by Matt Westbrook, Maryland Geological Society

From: The Rostrum, 3/07

(1st Place, 2008 AFMS Adult Poetry)

"It's a beauty!" you say as your hand  
Reaches down toward a shape in the sand.  
But your ecstasy's brief:  
It's another black leaf.  
How it fooled you, you can't understand.

When *Carcharodon* searched the pre-Bay,  
They consumed all they saw as their prey.  
Now the search for their teeth,  
As they rise from beneath,  
Can consume every spare waking day.

From long Latinate names my mind begs  
For relief. When done combing dregs  
Of the cliffwash for sport,  
I keep my terms short.  
See these Hemis and Chubbies and Megs?

At the Cottages, Calvert, or Bayfront,  
When waves break the clay until blunt,  
They release to the beach  
Things that lived before speech.  
So enough of this talking - let's hunt!

Via T-Town Rockhound Oct/09, Strata Gem Oct/11

## Show Dates

### November

#### **4-6—BLACK CANYON CITY, ARIZONA:**

Annual show, "Rock-A-Rama"; Braggin Rock Club; High Desert Park, 19001 E. Jacie Ln.; free admission; gems, rough, slabs, minerals, crystals, jewelry, equipment; contact Don, (623) 374-0202, or Braggin Rock Club, PO Box 308, Black Canyon City, AZ 85324

#### **4-6—GOLDEN, COLORADO:**

5th annual show; Denver Area Mineral Dealers; Jefferson County Fairgrounds, 15200 W. 6th Ave.; Fri. 10-5, Sat. 10-6, Sun. 11-4; free admission; annual show and sale: 18 dealers, minerals, fossils, gems, jewelry; contact Pat Tucci, (303) 279-5504; e-mail: ptucci@sprintmail.com; Web site: geodysey-rocks.com

**12-13—LAKE HAVASU CITY, ARIZONA:** 42nd annual show; Lake Havasu City Gem & Mineral Society; LHC Community Center, 100 Park Ave.; mineral and jewelry displays, dealers, demonstrations, educational geological presentations; contact C. Russell, (928) 846-0927

**19-20—PAYSON, ARIZONA:** 14th annual show; Payson Rimstones Rock Club; Mazatzal Hotel & Casino Event Center, Bingo Hall, Tonto Apache Reservation; adults \$3, children under 12 free; gems, minerals, fossils, lapidary equipment, education center, spinning wheel, silent auction; contact Margaret Jones, (928) 476-3513 or (928) 970-0857

**26-27—WICKENBURG, ARIZONA:** 11th annual show, "WOWW Gem Fair"; Wickenburg Gem & Mineral Society; Wickenburg community Center, 160 N. Valentine St.; free admission; Sat. 9-5, Sun. 9-5; more than 40 dealers, gems, minerals, jewelry, door prizes, grab bags, spinning wheels, raffle; contact Beth, (480) 540-2318 or (928) 684-0380

### January 2012

**1-31—QUARTZSITE, ARIZONA:** Wholesale and retail show; Desert Gardens RV Park; 1055 Kuehn St., I-10 Exit 17; Sun. 9-6 daily; free admission; crystals, minerals, rough, polished, jewelry, lapidary equipment; contact: Sharon or Sandy, 1055 Kuehn St., Quartzsite, AZ 85346, (928) 927-6361; e-mail: dggemshow@ureach.com; Web site: www.desertgardensrvpark.net

**6-15—QUARTZSITE, ARIZONA:** Annual show; Tyson Wells Enterprises Inc.; Tyson Wells Show Grounds, 100 W. Kuehn St.; Fri. 9-5 daily; free admission; rocks, gems, minerals, jewelry, silver and gold smithing, faceting, precious metals, lapidary tools, equipment, supplies; contact: Kym Scott, P.O. Box 60, Quartzsite, AZ 85346, (928) 927-6364; e-mail: tysonwells@tds.net; Web site:

[www.tysonwells.com](http://www.tysonwells.com)

### January - February 2012

**26-12—TUCSON, ARIZONA:** Wholesale and retail show; Eons Expos RLLLP; 22nd St., at I-10; Thu. 9-6 daily; free admission; minerals, fossils, dinosaurs, crystals, gems, jewelry, meteorites; contact: Christine Coyle, 38 Fox Ridge Rd., Sparta, NJ 07871, (516) 818-1228; e-mail: lowellcarhart@yahoo.com; Web site: [www.22ndstreetshow.com](http://www.22ndstreetshow.com)

**28-11—TUCSON, ARIZONA:** Arizona Mineral & Fossil Show; Martin Zinn Expositions; Ramada Ltd., 665 N. Freeway; Thu. 10-6 daily; free admission; more than 400 dealers, free shuttle among locations, Artists' Gallery at the Hotel Tucson City Center; contact: Martin Zinn Expositions, PO Box 665, Bernalillo, NM 87004-0665; e-mail: mzexpos@gmail.com; Web site: [www.mzexpos.com](http://www.mzexpos.com)

Check [www.rockngem.com/showdates](http://www.rockngem.com/showdates) for other Fall shows out of our area.

## November Birthdays & Anniversaries

**BIRTHSTONES** — Topaz — for Loyalty — An aluminum fluorsilicate — hardness of 8. A favorite trip is to collect and excavate the golden topax from Topaz Mountain, UT.

**ANNIVERSARY** -- 16th.

**Golden Sapphire** — Aluminum oxide (corundum), hardness of 9 on Mohs scale. Montana is a good source — fee claims are best.

**Citrine** — Silicon dioxide (quartz), suncolored stone with a Mohs hardness of 7. Does anyone know a close source for it? .

**FLOWER** — Chrysanthemum for Cheerfulness. While colors abound, the fall giant gold mum and football are traditional.

From BEEHIVE BUZZER Oct-Nov, 2000



**IMPORTANT INFORMATION!!**

Rockhounds, if you also hunt, please read the message below. It applies to all Forests, even though this is addressing problems in California specifically.

Shirley Leeson, ALAA

Rockhound Activist

[shirleyleeson@cox.net](mailto:shirleyleeson@cox.net)

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## **Calling All Sportsmen**

Hunters, Fishermen, and **Rockhunters**



As hunting season has started and is in full swing, many hunters are expressing surprise at the changes they're finding in our national forests. When traveling to their favorite hunting areas sportsmen are wondering why certain roads are closed, why dispersed camping spots long used and enjoyed by generations of families are no longer accessible, and why parking and big game retrieval is limited to only one car length off a designated road or trail.

Welcome to the effects of the Travel Management Plan.

Travel Management plans started public scoping in most northern and central California forests back in 2005/6, and after years of environmental analysis, decisions that have been made regarding travel on forest dirt roads and trails are finally being enacted. It's a tough realization for many, as sportsmen were not contacted by Forest Service personnel in regards to these analyses, or their input was ignored and disregarded. By calling Travel Management an off-highway vehicle travel plan, many sportsmen did not consider these plans would affect them, or change the fundamental way they enjoy their sport. After all, sportsmen aren't off-roaders...or so they thought. To the surprise of many anyone who travels on a dirt road or trail in a forest or desert is an off-roader.

Whether the Forest Service purposely misled the sporting community, or simply ignored the ramifications that Travel Management would have on hunting and fishing is debatable. What isn't in question is the very real on-the-ground affects now being experienced. Motor Vehicle Use Maps showing the designated roads and trails remaining after Travel Management are flimsy and inaccurate, but in many cases are the only guides sportsmen have to know which roads are open and which are closed.

CORVA has been involved since the very beginning with Travel Management, trying to spread the word far and wide throughout the state about the future ramifications. We realized that Travel Management could have wide-ranging affects on sportsmen, and started working with the California Outdoor Heritage Alliance to spread the word. The CORVA Comments Project held workshops educating enthusiasts, but few sportsmen attended, mostly out of disbelief that this OHV Travel Management Plan had anything to do with them. But the truth is we were outgunned and outmaneuvered by extreme environmental groups, their political ideology dominated the Forest Service and became a critical part of national planning for Travel Management.

Their stated goals have always included targeting all dirt roads and trails for closure.

Now that we know Travel Management affects anyone who uses a dirt road or trail in a forest for access, here are a few ground rules for sportsmen:

1. Before you head out to the forest on your hunting trip, call the Forest Supervisor's or District Ranger's office and ask about travel restrictions. Don't be surprised if the person answering the phone has no idea what you're asking, be persistent and ask for a recreation coordinator or Travel Management team leader.
2. Go to the forest website and download the Motor Vehicle Use Map. Many times downloaded maps will have more detail than the maps available at the office.
3. If confronted by a Law Enforcement Officer in the forest, stay calm and be polite. In all the forests except for the Eldorado, this first year officers should be educating the public about changes in designations, and about the loss of hundreds of dispersed camping spots. Please document any instances of bias or misuse of power by Law Enforcement Officers, CORVA has coordinated with the Forest Service to form a task force dedicated to investigating and reducing bias against motorized enthusiasts. Send all documentation, including when, where and badge number to [amy.granat@corva.org](mailto:amy.granat@corva.org).
4. Be prepared to pack out your game without using an off-road vehicle or truck. The restrictions on traveling more than one car length off the roads are illogical, but until we can bring more pressure to bear on the Forest Service to rescind this rule, we have to follow the rule or face federal fines.
5. Be aware that most forests have some sort of seasonal closure. Ask at the office, or look on the website and make sure you know when the forest is scheduled to close down for the winter. In many cases, these closures will curtail hunting seasons. Express your displeasure to your friends, but not at Forest Service personnel. These rules were decided by regional and national officials, in some cases local personnel are not in favor of these restrictions.

Above all, be aware that CORVA, and many on-the-ground groups are trying to work within the system to challenge these restrictions. More than anything else, these hard-working folks are dedicated to regaining access to the forest for you, and future generations. To this end, Sierra Access Coalition, along with Plumas County and CORVA are preparing to file a lawsuit against the Plumas National Forest challenging the Forest Service in court over the decisions made during Travel Management. Although we are filing suit against one forest, all the forests in California will be affected if our charges are held up in court. We are defending traditional American sporting activities, and in return we need you to support our lawsuit. This legal effort will be funded by the hard-working Americans most affected by Travel Management, and every single dollar helps us achieve our goals.

CORVA supports sportsmen and supports access to hunting and fishing areas, as well as off-road areas. No matter what the size of the tire, green-sticker or street legal, we're all looking for the same thing, access to our public lands.

Amy Granat, Managing Director, CORVA

916-710-1950

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Via Magic Valley News Oct/11



## Mineral IQ Test by Anita Westlake from Tips & Trips, April 2011 meteor via *Gem Cutters News* – June-July, 2011

1. What is black mica called?
2. What color streak does hematite leave on an unglazed porcelain tile?
3. What does pseudomorph mean?
4. What is the purple variety of quartz called?
5. Are diamonds found in meteorites?
6. In the mineral kingdom, what is a halfbreed?
7. Johann Wolfgang von Goethe had what mineral named after him?
8. What mineral is 4 on the Mohs Hardness scale?
9. Which mineral is a natural magnet?
10. Which is the stalagmite and the stalactite?
11. What is another name for pyrite?
12. What is a "thin section"?
13. What's the difference between magma and lava?
14. What is silver/clear mica called?
15. Is amber a mineral?
16. What are aa and pahoe-hoe?
17. What's the difference between a meteorite and a meteor?
18. Do meteorites come from meteor showers?
19. Where in outer space do meteorites originate?
20. Which mineral has variable hardness?
21. What is the principle use of bauxite?
22. What is "quicksilver"?
23. Why is Rancho La Brea famous?
24. What common natural glass is still used in eye surgery?



## MINERAL Quiz



Answers on Page 10

Via MOROKS Oct 2011

## BEFORE YOU BUY A MAGNIFIER

BY ANDREW ALDEN, ABOUT.COM GUIDE

After you get a rock hammer, you'll need a magnifier. The big Sherlock Holmes type lens is a cliché; instead you want a lightweight, powerful magnifier (also called a loupe) that has impeccable optics and is easy to use. Get the best magnifier for demanding jobs like inspecting gems; in the field, for quick looks at minerals, buy a decent magnifier you can afford to lose.

### Using a Magnifier

Hold the lens up next to your eye, and then bring your specimen close to it, only a few centimeters from your face. The point is to focus your attention through the lens, the same way you look through eye-glasses. If you normally wear glasses, you may want to keep them on. A magnifier won't correct for astigmatism.

### How Many X?

The X factor of a magnifier refers to how much it magnifies. Sherlock's magnifying glass makes things look 2 or 3 times bigger; that is, it's 2x or 3x. Geologists like to have 5x to 10x, but more than that is hard to use in the field because the lenses are very small. 5x or 7x lenses offer a wider field of vision, while a 10x magnifier gives you the closest look at tiny crystals, trace minerals, grain surfaces, and microfossils.

### Magnifier Flaws to Watch For

Check the lens for scratches. Set the magnifier on a piece of white paper and see if the lens adds color of its own. Now pick it up and examine several objects, including one with a fine pattern like a halftone picture. The view through the lens should be clear as air with no internal reflections. Highlights should be crisp and brilliant, with no colored fringes (that is, the lens should be achromatic). A flat object should not look warped or buckled—move it to and fro to be sure. A magnifier should not be loosely put together.

### Magnifier Bonuses

Given the same X factor, a larger lens is better. A ring or loop to attach a lanyard is a good thing; so is a leather or plastic case. A lens held with a removable retaining ring can be taken out for cleaning. And a brand name on the magnifier, while not always a guarantee of quality, means you can contact the manufacturer.

### Doublet, Triplet, Coddington

Good lensmakers combine two or three pieces of glass to correct for chromatic aberration—what gives an image blurred, colored fringes. Doublets can be quite satisfactory, but the triplet is the gold standard. Coddington lenses employ a deep cut inside the solid glass, using an air gap to create the same effect as a triplet. Being solid glass, they cannot ever come apart—a consideration if you get wet a lot. (Via *Quarry Quips* May 2011)

Via Rocky Mountain Federation News Oct 2011





## GREAT BUYS FROM SILENT AUCTIONS

BY DR. MIKE NELSON, CSMS & LGGMC



*People always say congratulations. When you're a successful bidder it means you're willing to spend more money than anyone else. I'm not sure if that's congratulations or condolences (Eli Broad).*

Many of the rock and mineral clubs use the "silent auction" route as a way to raise resources for their many projects and groups. Some clubs hold an auction monthly before their member meetings. Others establish special days for a large auction. For example, I note that the Colorado Mineral Society (Denver) holds their silent auction in early May while the Friends of Mineralogy (Denver) has an event in mid-May. The Colorado Springs Mineralogical Society (CSMS) has at least one silent auction per year, and usually three. The more formal, annual event is now held in the Spring and was last scheduled (2011) on April 23. In addition, the December monthly meeting features an auction, and the CSMS annual show held in late June has numerous opportunities for picking up specimens via the auction route. Receipts from the CSMS auctions are targeted for several of the Society's groups, including the Pebble Pups and Juniors. But to many rockhounds, the auctions are a prime time to acquire specimens for their cabinets at very reasonable prices

[csrockquy@yahoo.com](mailto:csrockquy@yahoo.com)

One of the great "things" about club auctions is that many members are quite generous with their donations. At other times, the club receives collections from the family of deceased rockhounds. As a result, some auctions have very nice and beautiful specimens from exotic localities. During these last several CSMS auctions I have been able to acquire several minerals that I could not afford to purchase in shops or collect in far-away localities.

One of the "gems" that I recently acquired was a piece of brecciated chert? covered with radiating balls of green wavellite. Wavellite is a hydrated aluminum phosphate mineral  $[Al_3(PO_4)_2(OH,F)_3 \cdot 5H_2O]$  that commonly appears in botryoidal and radial aggregates, a trait that makes specimens quite interesting. Fairly soft at ~3.5-5.0, the mineral has a vitreous to silky luster and is translucent. Although the green color is most impressive to me, it may be colorless to yellow and brown. On the piece that I purchased several green spherules were broken and therefore one may observe the radiating fibers. Wavellite is most often a secondary or low temperature mineral found in vugs and fissures of the associated host rock. It sometimes occurs with another green, hydrated aluminum phosphate, variscite ( $AlPO_4 \cdot 2H_2O$ ). Since the green color of variscite seems due to small quantities of Vanadium and Chromium (Foster and Schaller, 1966), I presume (out of my comfort zone here) that the green color of wavellite is due to the same elements.

My specimen was labeled "Montgomery County, Arkansas", a fairly "famous" collecting locality near Mt. Ida.

Barite, or Baryte, is well-known to Colorado collectors since the state has several well-known localities. The mineral is known for its variety of colors and crystal shapes and is a barium sulfate ( $BaSO_4$ ). Barite commonly is secondary in nature, forming after the deposition/emplacement of the host rock, often from percolating ground waters or low temperature hydrothermal activity. Barite is, to me, a fascinating mineral as it may be found associated with lead, zinc and copper ores, and as Desert Roses (inclusions) in unconsolidated sands. Most collectors identify barite by its "heaviness", or high specific gravity. I believe that the mineral has the highest specific gravity of any non-metallic mineral.

Near Colorado Springs, the Hartsel Locality has produced thousands of bladed specimens that occur as veins or layers in late Paleozoic rocks. Most come from a single quarry located on private land and range in size from microscopic to 12-13 cm. Often clear in color when excavated, the crystals turn blue after exposure to sunlight.

The Book Cliffs north of Grand Junction, Colorado, have produced wonderful gemmy crystals of water-clear, terminated barite crystals from concretions in the Cretaceous Mancos Shale.

The Stoneham area in Weld County, Colorado, produces beautiful crystals of often-gemmy barite that are seen in rock and mineral shows throughout the U. S. As at Hartsel, the barite is secondary and in this locality occurs in altered volcanic ash of the Tertiary White River Group/Formation. I have never visited the collecting localities but hope to do so in the near future. Meanwhile, I was able to acquire several specimens via the auction route.



Fig. 1. Gemmy clear barite blades from Muddy Creek, Rio Grande County, Colorado.

In my opinion, some of the most beautiful barite crystals in the state come from a locality known as "Muddy Creek". Located in Rio Grande County, Colorado, the crystals occur in vugs of a silicified, brecciated fault zone (Truebe, 1981). One of the CSMS members has collected this locality and graciously contributed to the auction and I was able to acquire some museum-quality (my opinion) specimens (Fig. 1).

Quartz ( $SiO_2$ ) crystals are among the most common specimens on the market and appear in every auction. However, I recently was the successful bidder on a very unique specimen from the San Vicente Mine in Guanajuato, Mexico. The specimen has several large quartz points (~2.5 cm. in height) covered with



very small siderite (iron carbonate,  $\text{FeCO}_3$ ) crystals and scattered water-clear calcite ( $\text{CaCO}_3$ ) crystals. Although most siderite is sedimentary in nature, I presume these crystals were formed via hydrothermal activity (I have been unable to locate much information about the mine). It is a beautiful and unique cabinet specimen (Fig. 2).



Fig. 2. Quartz points, well-terminated, ~4 cm. (height) X 2 cm. (width) with scattered small crystals of siderite and water-clear calcite. Specimen collected from the San Vicente Mine in Guanajuato, Mexico.

A mineral related to siderite is rhodochrosite, a manganese carbonate ( $\text{MnCO}_3$ ). There is a solid solution relationship between calcite, siderite and rhodochrosite. What happens is that calcium, as well as iron, may substitute/replace the manganese; therefore, you get many different shades of pink and red for rhodochrosite and the exact chemical formula varies with the amount of manganese, iron, and calcium. It is my understanding that "pure" rhodochrosite is rather rare.

The most "famous" rhodochrosite crystals are the specimens collected from the Sweet Home Mine near Alma, Colorado. These rose-red colored crystals are prized by collectors the world over. However, of interest to many rockhounds are the "sliced and polished stalactites" from the Capillitas Mine in Argentina. These specimens are very recognizable and occur as the principle gangue mineral in this lead-zinc sulfide mine (Fig. 3). The minerals are the result of hydrothermal activity in the late Tertiary and may be the largest mass of rhodochrosite ever discovered (The Giant Crystal Project, 2011). I was able to pick up a couple of these slices and treasure them for their uniqueness (Fig. 4).

It is not often that one is able to acquire turquoise at a club silent auction; however, CSMS received several "boxes of rocks" for liquidation and those "boxes" included specimens of turquoise. As I remember, those nuggets and slabs were popular items at the auction, but I was able to pick up a nice pebble. The mineral is generally thought of as a hydrous copper-phosphate mineral ( $\text{CuAl}_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4\text{H}_2\text{O}$ ) and is a valued semi-precious gem stone; it usually is cabbed or mounted "whole". Turquoise is a secondary mineral developed during weathering and oxidation and usually occurs as a vein filling or as nuggets. I am uncertain about the collecting locality but the brownish-red matrix and the blue color certainly resembles Bisbee Blue (Fig. 5).



Fig. 3. Massive rhodochrosite stalactites exposed in the Capillitas Mine, Argentina. Photo courtesy of J. A. Saadi and The Giant Crystal Project.

Fig. 4. Rhodochrosite (stalactites) from Capillitas Mine in Argentina. Specimens ~4 X 4 cm.

I once purchased a specimen labeled as "chalcotrichite, Campbell Shaft, 1800'-2300' level, Bisbee, AZ". In doing some research on this partially-polished specimen, I found some interesting aspects concerning the mineral. Chalcotrichite is "a variety of cuprite consisting of fibrous sprays or mats of hair-like crystals" (MinDat, 2011). However, my specimen seems a composition of blood red cuprite (copper oxide,  $\text{Cu}_2\text{O}$ ), white calcite ( $\text{CaCO}_3$ ), and perhaps some native copper (Cu)—no hair like crystals are present. This specimen, collected from the Campbell Shaft or mine near Bisbee, Arizona, is known locally as campbellite (Fig. 6). The mixture is valued as polished specimens or cabochons. The mine seems a prolific producer of minerals and MinDat has listed 110 different minerals. Mineralization at the Campbell Mine ore body is largely oxidized copper in Cambrian, Devonian and Mississippian limestones (MinDat, 2011). At one time the underground mine was a major producer of copper and collectable specimens of azurite, cerussite and malachite.



Fig. 5. Turquoise nugget ~3.5 cm. in length. Unknown collecting locality.

The Guanajuato, Mexico, Mining District (located approximately 175 miles northwest of Mexico City) is well-known to collectors of calcite, amethyst and quartz, and various sulfides of silver. The area was "discovered", or at least mined initially, in the mid-1550's, and has produced a prodigious amount of silver, perhaps 44.5k U. S. short tons. That works out to about 89 million pounds of silver! A further calculation would seem to indicate that with the current price of silver hovering around \$50 oz., the total silver would be somewhere north of 7 billion dollars. Wow. These mines were the one of the major sources of funding for the Spanish Empire during their colonial rule of Mexico.

- I have three beautiful specimens from the area picked up for very reasonable prices at various auctions. One is a combination of large quartz points coated with micro-crystals of quartz and pyrite covered with finely pointed, translucent calcite scalenohedrons (Fig. 7). These crystals came from the La Si-rena Mine.
- A second specimen is from the Peregrina Mine and is a large, waxy luster, stepped-face calcite scalenohedron sitting on a matrix of micro crystals of bladed calcite arranged in tiny spheroidal puffballs (Fig. 8).



Fig. 6. Polished "campbellite" from Campbell Shaft (~6 X 5 cm.).



- The third specimen, also from the Peregrina, is a matrix of small, sharply-pointed translucent quartz crystals holding, what appears to be, a large, step-sided calcite scalenohedron covered with small pointy quartz crystals (Fig. 9). It also appears to me that the calcite has been replaced by silica. The numerous quartz points shimmer in the light.

My suggestion is to patronize the various silent auctions sponsored by rock and mineral clubs. The camaraderie is always quite enjoyable and abundant.



"bargains" often

*There really is camaraderie among "rockhounds" and a willingness to help out whenever we can (adapted from Rocco DiSpirito).*

#### References Cited:

Foster, M.D. and W. T. Schaller, 1966, Cause of Color in Wavellite from Dug Hill, Arkansas: American Mineralogist, v. 51.

MinDat, the Mineralogical Data Base: <http://www.mindat.org/min-977.html>

The Giant Crystal Project, 2011: <http://giantcrystals.strahlen.org/america/capillitas.htm>

Truebe, H. A., 1981, Water-Clear Barite from Muddy Creek, Colorado: The Mineralogical Record, v. 12, no. 2.

Wallace, T. C., C. Francis, P. K. Megaw, Peter K.M, M. Hall-Wallace, 1999, Silver Mineralogy of Guanajuato Mining District, Guanajuato, Mexico.(20th Annual FM-TGMS-MSA Mineralogical Symposium: Minerals of Mexico): The Mineralogical Record.

Via Rocky Mountain Federation News Oct 2011

## Mineral Test Answers from page 7

1. Biotite
2. Red to Brownish Red
3. False-Form
4. Amethyst
5. Yes, most notably in Canyon Diablo
6. A specimen of half silver and half copper
7. Goethite
8. Fluorite
9. Magnetite
10. Stalagmite grows up mightly from the ground. Stalactites have to hang on tight to drip from the ceiling
11. Fool's Gold
12. A wafer thin slice of a mineral or meteorite that is virtually transparent. It is placed in a polarized microscope to identify individual minerals and their crystal structures.
13. Magma forms inside the volcanic chamber lava flows outside the chamber and is visible to the eye.
14. Muscovite
15. No it does not pass one of the five characteristics of a mineral most specifically "inorganic"
16. Types of lava. Aa is named for the sound one makes when walking upon its rough surface pahoehoe is ropy lava.
17. A meteorite is a rock from space that makes it to the ground. A meteor is the LIGHT you see when the meteoroid hits the earth's atmosphere and briefly catches fire.
18. No-Meteor showers are cyclical and are the result of comet trails intersecting with earth's orbit. 19. The asteroid Belt between Mars and Jupiter
20. Kyanite
21. Aluminum
22. Mercury (the liquid metal that used to be in thermometers) 23. The La Brea Tar Pits where hundreds of animals were found preserved in tar
24. obsidian

