

The Lake George Gem and Mineral Club -

Club News,
July, 2012



Regular Meeting of the Lake George Gem & Mineral Club
Saturday, July 14, at 9:00AM
Lake George Community Center

After a short business meeting, **Rich Fretterd** will lead a trip to his **Petra Placer mine**, well known for **topaz**. Bring: rock hammer, shovel, pick, pry bar, collecting bucket, sunscreen, hat, hiking boots, gloves, safety goggles, lots of fluids, snacks. Difficulty: This trip involves a **long, hard climb over rough terrain**.

Coming Events

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| <u>Western Museum of Mining and Industry 30th Anniversary and Membership Celebration</u> (go to www.wmmi.org for info) | ... July 14 |
| Contin-Tail Rock & Mineral Show , Rodeo Grounds, Buena Vista (go to www.coloradorocks.org for info) | ... Aug. 9-12 |
| <u>Lake George Gem & Mineral Club Annual Show</u> , Details to follow. | ... Aug. 17-19 |
| <u>Friends of the Florissant Fossil Beds 25th Anniversary Celebration</u> , with talks, tours, and banquet. Go to their website for details. | ... Aug. 18 |
| <u>Denver Coliseum Mineral Show</u> , 4600 Humboldt St., Denver (I-70 exit 275B at Brighton Blvd; www.coliseumshow.com for info). | ... Sept 8-16 |
| <u>Colorado School of Mines Geology Museum Annual Open house, Reception, and Silent Auction</u> , 6-9PM; all invited. | ... Sept. 12 |
| <u>Colorado Mineral & Fossil Show</u> , Ramada Plaza Hotel (old Holiday Inn), 4849 Bannock St., Denver. Free parking and admission. | ... Sept. 12-16 |
| <u>Denver Gem & Mineral Show and Colorado Fossil Expo</u> , Denver Merchandise Mart, I-25 at 58 th Ave.; theme is copper minerals. Admission charge. (Go to www.denvermineralshow.com for info). | ... Sept. 14-16 |

Please Welcome the Following New Members:

Matthew Gaona
Jason, Sandra, Chayse, and Keira Heffler
Carole Larkey

Club News

☀☀ I'm happy to report that long time member **Marge Breth** is recuperating (and painting) at home. Marge was in the Ft. Collins Rehabilitation Hospital, after breaking a femur.

Lake George Gem and Mineral Club

July, 2012

☀☀ **Richard Kawamoto** and others have put together a great field-trip line-up for the summer. Here's a list; **Please note that recent wild fires have forced cancellation or delay of some trips; check at the website often for updates.**

July 7: Devils Hole mine, Texas Creek (rose quartz, beryl, columbite, almandine) (**Bob Carnein**, leader)

July 14: Petra Placer claim (topaz) (**Rich Fretterd**, leader)

July 21: Victor Gold Rush Days

Sept. 8: Godsend mine (smoky quartz, amazonite) (**Richard Fretterd**, leader)

Sept. 15: Picket Wire dinosaur trackways (requires registration) (**Richard Kawamoto**, leader).

Sept. 16: Comanche National Grassland (septarian nodules) (**Dick Lackmond**, leader)

☀☀ **Dan Alfrey** reports 13 registered dealers for the August show. He needs volunteers to man the LGGM Club Welcome Center on August 17-19 (members work in pairs). Contact Dan at 719-440-6234 or at Alfreydan@aol.com if you can help out with this important task.

☀☀ **John Rakowski** received the following request from a researcher at the University of Georgia. If anybody can help with this, please contact John, who is not available on the date of their visit.

"My name is Elizabeth Bollen. I am a student currently attending the University of West Georgia. The chair of the geology department (Dr. Curtis Hollabaugh) and I are planning a research collecting trip to Utah and Colorado to collect pegmatite minerals. The rock and minerals we collect will assist in undergraduate research at the university. There will be a group of eight of us on this trip, seven students and one professor.

"We are interested in possibly meeting with some members of the Lake George Gem and Mineral club while we collect in the area of Lake George, Colorado. Last year we visited a location called Goethite Hill and were overwhelmed with the amount of pegmatitic material and abundance of dig sites. We were worried that we could possibly be claim jumping, so we did not collect anything on the hill itself. However, we would love to actually collect from some of the active claims or any other locations in that immediate area. The presence of someone from the area would greatly improve our knowledge of claims and private property. We would also be interested in trading any good specimens that your group has collected from the Goethite Hill area, especially amazonite.

"Our group is planning to be in Lake George on August 3rd, we are planning on spending a full day there. We would greatly appreciate it if someone could meet with us while we are out there. If not, then any information on claimed areas or places you think we would be interested in would also be appreciated."

Thank you!
-Elizabeth Bollen

☀☀ **Betty Cain** sent the following appeal for the American Federation of Mineralogical Societies:

AFMS ENDOWMENT FUND

The AFMS Endowment Fund is holding a raffle drawing, with tickets selling at \$5 each or five tickets for \$20. People from around the American Federation donate prizes for the raffle – they may be jewelry, crystals, minerals, or other items, the value of which range generally from \$50 to \$200. The drawing is managed so that there is at least one winner from each of the seven regional federations; last year we

Lake George Gem and Mineral Club

July, 2012

had four winners from the Rocky Mountain Federation.

There is one major change this year. The Hi-Tech Diamond Company has donated four items that will be raffled separately. They are: #1 – CabKing 6V# Machine valued at \$1500; #2 – Slant Cabber Machine valued at \$600; #3 – All-U-Need Machine valued at \$490, and #4 – Trim Saw Machine valued at \$440. If you want one or more of your tickets to go for one of these machines, you need to inform me (by number) which one. Tickets for each one of those machines will be entered in a separate drawing and will not be eligible for any other prize. Of course, I have no way of knowing how many people will choose to enter the drawings for the machines.

This is major financial support the American Federation's efforts on behalf of our hobby. Last year's raffle totaled \$5,960; because of the donations by Hi-Tech Diamond, we are hoping for a significantly higher total this year. There were about 36 prizes donated last year. Pam requests that the checks be sent to the regional chairs so that we may issue tickets and have a record of who has entered. Checks should be made payable to the "AFMS Endowment Fund". We then forward those checks to Pat LaRue, the AFMS Treasurer. I will fill out the proper number of tickets for each contribution, send the stubs to the donating individual, and take the tickets to the AFMS Show in Minnesota to be placed into the RMFMS bag. There will be one general prize ticket drawn from each of the bags for the seven regional federations. After that, all tickets will be combined into one bag, and further drawings will take place until all the prizes have been awarded.

I hope many of you will participate and be winners in Minnesota; you need not be present to win. I would also be happy to accept any donated prizes for the raffle; the more prizes, the more winners, and, hopefully, more money raised. My contact information is below and also on the RMFMS address page of our newsletter under Nominations (second column).

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☀️ Thanks to **Mary Glover**, mother of Pebble Pup **Patrick Glover**, who donated a Lortone 2-container tumbler with grit supplies, to the lapidary workshop.

☀️ **Richard Kawamoto** sent these photos of a May 25-28 trip to the Salt Plains of Oklahoma, where he and others found some really nice selenite specimens.





Richard also sent these pictures from the Hartsel barite trip of June 2:



...and these pictures from the trip to the Smoky Hawk mine on June 9:



☀☀ **Reminder:** SCHEDULED OPEN TIMES IN THE LAPIDARY WORKSHOP ARE the 2ND WED OF THE MONTH, 6PM TILL 8PM and THE THIRD SUNDAY OF EACH MONTH, 1PM TILL 4PM. FEEL FREE TO CALL **RICHARD KAWAMOTO** OR **DICK LACKMOND** TO ARRANGE A SPECIAL TIME FOR YOU TO USE THE SHOP IF YOU NEED IT!

☀☀ Friends of the Florissant Fossil Beds has announced the following seminars for this summer:

July 7: Birding 101, with Debbie Barnes;

July 13-14: Wildflowers of the Rockies, and Knowing Your Grasses, by Doug Coleman;

July 19: Easy Fossil Making in the Classroom, by Toni Ratzlaff;

August 4: Landmarks in the History of Paleontology in Central Colorado, by Herb Meyer and Dan Grenard.

For more information, go to www.nps.gov/flfo and follow the link to the seminar series.

☀☀ **Here are this month's "Bench Tips" and news items from Brad Smith:**

SHEET & WIRE STORAGE

The more you work with jewelry, the more problems you have finding the piece of metal you need. My pieces of sheet were generally stored in various plastic bags, and the wire in separate coils. Few were marked, so it often took me a while to locate that piece of 26 gauge fine sheet I bought last year, especially since I usually take my supplies back and forth to classes.

A tip from a friend helped me organize everything. I bought an expanding file folder from the office supplies store (the kind that has 13 slots and a folding cover) and marked the tabs for each gauge of metal I use. Then I marked all my pieces of sheet with their gauge, put them in plastic bags, marked the gauge on the bag, and popped them into the folder. I usually store coils of wire loose in the folder, but they can also be bagged, if you prefer. I use one tab for bezel wire and one for the odd, miscellaneous items.

The resulting folder is really convenient when I want to take my metal out to a class or workshop. It's also colorful enough for me to easily find in the clutter of the shop !



LITTLE BALLS

I often use little silver and gold balls as accent pieces on my designs. They can be made as needed from pieces of scrap. Just put the scrap on a solder pad and melt it with a torch. Then throw the balls into a small cup of pickle.

The only problem is if you need to make all the balls the same size. For that, you need the same amount of metal to melt each time, and the only way I know to do that is to clip equal lengths of wire.

But there's an easier way to get a supply of well-formed balls. Simply pick them out of your stash of casting grain. But before you grab for your magnifying glass and tweezers, you may want to do what I do. Just pour the casting grain out onto a baking pan, tilt the pan a bit, and watch all the round ones roll to the bottom. Then pick out the good ones and pour the rest back into your bag for casting.

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In addition, here are a **couple news items** that might be of interest to you:

### **BUTTERFLIES**

There's an exquisite collection of butterfly brooches on display now at the Natural History Museum in Los Angeles. The collection was created by Buzz and Bernardine, who have a passion for rare gemstones that they have chosen to share through unique jewelry pieces. Buzz faceted most of the main gems and Bernardine designed all except for the "Ninja" butterfly, which is Buzz's creation. All the metalwork is done in 18kt gold.

<http://nhm.org/site/research-collections/mineral-sciences/temporary-displays>

### **SHAPING A BENCH PIN**

What does your bench pin look like? New ones need some modification to best support the work you do. My feeling is that a bench pin that's not drilled with holes, marked with gouges, or sawed at odd angles is just not working for you.

Take a look at this short video from the GIA (via BenchTubes at Ganoksin.com) that shows some changes to a standard bench pin that makes it efficient for stone setting. It may give you some ideas about changes you could make to your own pin that would let you do your work faster and avoid mistakes that waste time and effort.

<http://www.ganoksin.com/benchtube/video/774/Ergonomics-for-Bench-Pin-Modifications>

More BenchTips by Brad Smith can be found at [facebook.com/BenchTip](https://www.facebook.com/BenchTip) or [groups.yahoo.com/group/BenchTips/](https://groups.yahoo.com/group/BenchTips/)

### ***Pebble Pups Corner***

Pebble Pups wrapped up their regular meetings for the year on May 15.

We will soon have a list of the new year's activities, which will start in September, 2012. If you have suggestions for programs, please contact **Steve Veatch**, **John Rakowski**, or **Bob Carnein**.

**Remember**, Pebble Pups are welcome on LGGM Club field trips!

## NOTES FROM THE EDITOR

Bob Carnein, Editor  
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Here's an article by your editor about the Devils Hole mine, subject of our July 7 field trip.

### Famous Colorado Mineral Localities The Devils Hole Mine, Fremont County, Colorado by Bob Carnein

Information for this article came from Eckel, *et al.*, 1997; Hanley, *et al.*, 1950; Heinrich and Vian, 1965; and mindat.org.

The Devils Hole (aka Zingheim; Wild Rose) mine is a famous source of K-feldspar, scrap mica, beryl, rose quartz, and columbite. Located in Fremont County, about 6 miles (9.6km) north of Texas Creek, the mine was discovered in the early 1900s and worked mainly into the early 1940s. It now belongs to Mike Tezak, who, with his wife Denise, operates the Gold Mine Rock Shop, on US Route 50 near the Royal Gorge. Currently, it is used mainly as a source of rose quartz for decorative purposes.



Typical rose quartz (left) and beryl crystal (right) from the Devils Hole mine. FOV is 3.5cm (left) and 5.5cm (right). C.R. Carnein collection and photos.

Historical records show that, besides an unknown amount of rose quartz, the mine has produced at least 300 tons of beryl, 17,000 tons of K-feldspar, 1600 tons of scrap mica (muscovite), and 200 pounds of columbite. The minerals occur in a large mass of pegmatite that is surrounded by high grade metamorphic rocks of varied composition. The pegmatite body trends north-south and has two major branches. Most mineralization occurs in the eastern part of the deposit, known as the "main body". That is the subject of this description.

The main body trends north, dips west at a variable angle, and is 35 to 200 feet (10 to 60m) wide. Its bulbous southern end has 2 minor branches: a west branch extending northwest, then south, then southeast (making a sort of circle); and an east branch trending northeast for 300 feet (91m). The whole body cuts across bedding and foliation, though contacts with surrounding metamorphic rocks are generally gradational. The main body, unlike the rest of the pegmatite, can be subdivided into 3 zones, each characterized by a distinct mineral composition.

The **wall zone** is the part in direct contact with metamorphic rocks. Ten to 30 feet (10m) thick, it consists of quartz-microcline-muscovite-albite pegmatite in which grain size averages 2 inches (5cm). Some large masses of quartz and microcline are present, and biotite, schorl, garnet, and magnetite occur near contacts with metamorphic rocks. Well formed garnet and schorl crystals are locally common.



Schorl crystal (left; 3.5x9.5cm) and muscovite showing "A" structure (right; 11cm long).  
C.R. Carnein photos and collection.

An **intermediate zone** occurs discontinuously along the main body's strike and dip. It contains muscovite-albite-quartz pegmatite and is thickest adjacent to microcline pegmatite in the core zone (described below). In it, radial masses of gray-green muscovite to 5 feet (1.5m) across are made up of wedge shaped "books" of muscovite with pale pink to white quartz. Between the muscovite masses and the wall zone, pale pink albite may contain small black columbite crystals. Beryl occurs throughout but is especially common in the footwall area. The largest crystals mined, which were up to 4 feet (1.2m) across and 20 feet (6m) long, occurred in muscovite; those in albite were generally small.



The **core zone** consists of two distinct units. A **microcline pegmatite**, which consisted of 3 large masses, was nearly pure microcline. Cleavages up to 75 by 40 feet (23 x 12m) constitute some of the largest crystals ever described in Colorado. Because of its high aluminum content and scarcity of quartz blebs and stringers, this material fetched a premium price and was the main source of income during active mining in the first half of the 20<sup>th</sup> century. The microcline pegmatite contains occasional vugs near contacts with the intermediate zone. These may contain quartz crystals to 2 inches (5cm) and rare blebs of apatite and beryl with bright yellow fine grained muscovite.

The second core unit is a **quartz pegmatite**, consisting of almost pure pale to deep rose quartz. Accessory minerals are concentrated near the north end of the main body; minor bismuth minerals and free gold were identified in underground operations.

Currently, the **mineral list** for the Devils Hole mine includes the following:

|           |                |            |           |
|-----------|----------------|------------|-----------|
| Albite    | Biotite        | Gold       | Quartz    |
| Almandine | Calcite        | Magnetite  | Tantalite |
| Apatite   | Columbite      | Microcline | Schorl    |
| Beryl     | Columbite-(Fe) | Muscovite  |           |

**Beryl** occurs as greenish blue, pale blue, bluish white, and brown crystals from 0.25 inches to 4 feet (0.6cm to 1.5m) across (average 4 inches). Crystals up to 20 feet (6m) long were found with muscovite concentrations in the intermediate zone. Although it occurs scattered throughout the main body, beryl production was concentrated in the intermediate zone and totaled about 300 tons.

**Columbite** was most abundant in the outer, albitic part of the intermediate zone. Crystals are generally blades that average less than an inch long, though they rarely reached over 4 x 2 inches (10x5cm). Locally, where muscovite concentrations occur along the footwall of the intermediate zone, columbite made up as much as 1 percent of the rock. Production totaled about 200 pounds; most columbite contains very little tantalum.



Columbite crystal in pegmatite (left) and plates of columbite intergrown with albite (right). FOV is 4.2cm high (left) and 7cm across (right). C.R. Carnein photos and collection.

**Muscovite** occurred in masses up to 30 x 20 x 4 feet (9x6x1.2m). Crystals tend to be wedge shaped perpendicular to cleavage. Muscovite in this deposit was not suitable for higher value "sheet mica" production, but about 1600 tons of scrap mica were shipped.

**Rose quartz** owes its color to the presence of microscopic oriented inclusions of a pink borosilicate mineral related to dumortierite. At the Devils Hole mine, masses the size of cars are common in the quartz core, but larger masses often exhibit fractures coated by iron oxide. Careful selection yields small, translucent, somewhat milky, gemmy masses that are suitable for cabochons and other jewelry applications. As is typical or nearly all pegmatites, crystals do not occur here.

**Schorl** (black tourmaline) occurs as lustrous, euhedral, striated, prismatic crystals up to an inch (2.5cm) across and a few inches long. They are generally enclosed in milky quartz and are extremely brittle, making it a challenge to collect good examples.

**Garnet** (almandine) occurs as dark red to black, fractured, euhedral trapezohedral crystals on and in pegmatite. Local concentrations consist of "pebbly" stringers of quarter- to half-inch crystals, many of which exhibit faces.

In addition to the above, the writer has found small (up to 2 inches; 5 cm) milky quartz crystals with calcite and euhedral apatite in vugs. The apatite fluoresces bright yellow, and calcite fluoresces and phosphoresces blue-white in SWUV. Also in the vugs is an unidentified brown mineral, intergrown with calcite, that fluoresces bright red. Other minerals found by the writer include azurite and malachite.



**Apatite crystal (left) showing fluorescence in SWUV; quartz crystals in vuggy pegmatite. FOV is 1.3cm (left) and 6cm (right) C.R. Carnein collection and photos.**

#### **-References-**

Eckel, E.B., *et al.*, 1997, Minerals of Colorado, Updated and Revised: Golden, Colorado, Fulcrum Publishing

Hanley, J.B., *et al.*, 1950, Pegmatite investigations in Colorado, Wyoming, and Utah, 1942-1944: U.S. Geological Survey Professional Paper 227.

Heinrich, E.W., and R.W. Vian, 1965, The Chief lithium pegmatite, Devils Hole, Fremont County, Colorado: *The American Mineralogist*, vol. 50, p. 96-104.

Lake George Gem and Mineral Club

**July, 2012**

**Lake George Gem and Mineral Club**

Box 171

Lake George, Colorado 80827

LGGMClub.org

**2012 MEMBERSHIP APPLICATION**

Name(s) \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_ Zip \_\_\_\_\_

Telephone ( ) \_\_\_\_\_ - \_\_\_\_\_ E-mail \_\_\_\_\_

Names and ages of dependent members: \_\_\_\_\_  
\_\_\_\_\_

Annual membership - dues Jan. 1 through Dec. 31 are as follows:

- Individual (18 and over) ..... \$15.00
- Family (Parents plus dependents under age 18) ..... \$25.00

Annual dues are due on or before March 31. Members with unpaid dues will be dropped from the roster after this date. **Any new member joining on/after August 17 shall pay one half the annual dues.**

I hereby agree to abide by the constitution and by-laws of this club.

Signed \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

I have previously been a member of Lake George Gem & Mineral Club. Yes \_\_\_ No \_\_\_

My interest areas include:

Minerals \_\_\_ Fossils\_\_\_ Lapidary \_\_\_ Micromounts \_\_\_  
Other \_\_\_\_\_

I would be willing to demonstrate any of the above for a club program or educational activity? If yes, which: \_\_\_\_\_

Please indicate which of the following activities you might be willing to help with:

Writing \_\_\_\_\_ Editor \_\_\_\_\_ Mailing \_\_\_\_\_ Local shows \_\_\_\_\_

Club Officer \_\_\_\_\_ Programs \_\_\_\_\_ Field trips \_\_\_\_\_ Refreshments \_\_\_\_\_

**Questions about the club or club activities? Contact John Rakowski (719) 748-3861**

Rev. Jan. 2011

**Lake George Gem and Mineral Club**  
**P.O. Box 171**  
**Lake George, CO 80827**

**The Lake George Gem and Mineral Club** is a group of people interested in rocks and minerals, fossils, geography and history of the Pikes Peak/South Park area, Indian artifacts and the great outdoors. The club's informational programs and field trips provide an opportunity to learn about earth sciences, rocks and minerals, lapidary work and jewelry making, and to share information and experiences with other members. Guests are welcome to attend, to see what we are about!

The club is geared primarily to amateur collectors and artisans, with programs of interest both to beginners and serious amateurs. The club meets the second Saturday of each month at the Lake George Community Center, located on the north side of US Highway 24 on the east edge of town, sharing a building with the county highway shops. **In the winter we meet at 10:00 AM. From April through September, we meet at 9:00 AM, to allow more time for our field trips.**

Our organization is incorporated under Colorado law as a nonprofit educational organization, and is a member of the Colorado, Rocky Mountain and American Federations of Mineralogical Societies. We also sponsor an annual Gem and Mineral show at Lake George, where collectors and others may purchase or sell rocks, minerals, fossils, gems or jewelry. Annual membership dues (Jan. 1 through Dec. 31) are \$15.00 for an individual (18 and over), and \$25.00 for a family (Parents plus dependents under age 18).

**Our Officers for 2012 are:**

**John Rakowski**, President

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