

The Lake George Gem and Mineral Club -

Club News,
July, 2010, 9:00AM



Regular Meeting of the Lake George Gem & Mineral Club **Saturday, July 10, 9:00AM** **Lake George Community Center**

On Saturday July 10, after a short business meeting starting at 9 AM in the *parking lot* of the Lake George Community Center, we will convoy up to the **Petra Placer**, Rich Fretterd's famous TOPAZ locality. It will be important to carpool as much as possible as parking is limited. Bring a pick, shovel, 1/4 inch grid screen. Also bring a hearty lunch & plenty of water. There is a LONG, STRENUOUS HIKE to the collecting area. There are bears and mountain lions in the area. No dogs please. Any kids should be supervised closely.

Directions: Provided at club meeting

Time: Starting approximately at 9:20 AM

Collectables: **TOPAZ!**

Mileage: About 20 minutes travel time from Lake George

Hazards: Rocky and steep terrain with loose gravel, trees that can fall and/or poke you in the face; ticks, mountain lions, bears, stray barbed wire

Terrain: STEEP, rocky, loose gravel—BE CAREFUL walking/hiking

Difficulty: Moderate

Elevation: 9,600 ft. or so

Vehicle suggested: no problem with regular cars to parking area

Equipment: Hiking boots, gloves, safety goggles, pick, shovel, ¼-mesh screen, first aid kit
BRING YOUR OWN WATER—NONE AVAILABLE AT SITE

Additional comments: This trip involves a very strenuous hike.

Coming Events

Monthly Meeting, Columbine Gem & Mineral Society, Annual picnic, 6PM, ... July 8
Centennial Park, Salida

Monthly Meeting, Pueblo Rockhounds, 7:30PM, Westminster Presbyterian Church, ... July 8
10 University Circle, Pueblo

Private Sale of gems, minerals, & fossils by Eldon Hunell, 348 S. Newcombe St., ... July 9-11
Lakewood; e-mail deafroguy@aol.com for info

Dinosaur Discovery Day: Reptile Day, Dinosaur Ridge, Morrison, 10AM-2:30PM; for ... July 10
info, call Tom Moglestad at 303-697-3466, ext. 13

"Mineral Luminescence", by Bob Carnein. Monthly Meeting, Colorado Springs ... July 15
Mineralogical Society, 7:30PM, Colorado Springs Senior Center, 1514 N. Hancock
Ave., Colorado Springs

"Oil Sands", talk by Andrew Nikforuk, 7PM, Western Museum of Mining & Industry; for ... July 15
info, go to <http://wmmi.org/>

U.S. Geological Survey Free GPS, Map, & Compass Class, 9AM-5PM, Bldg 810, ... **August 13**
Denver Federal Center, Lakewood. [Reservations](#) at 303-202-4689 or
gpsworkshops@usgs.gov

Annual Contin-Tail Mineral Show and Swap, Rodeo Grounds, Buena Vista ... **Aug. 12-15**

Lake George Gem & Mineral Club Gem & Mineral Show, Lake George. ... **Aug. 20-22**

Free parking & Free admission! See our website for information

Creede, CO Mineral Symposium, hosted by Colorado Chapter, Friends of ... **Sept. 10-12**
Mineralogy. Talks and field trips; contact dlconti@aol.com for info.

Colorado Mineral & Fossil Show, Holiday Inn-Denver Central, 4849 Bannock St. ... **Sept. 15-19**
(free admission and parking)

Denver Gem & Mineral Show, Denver Merchandise Mart, 58th Ave. at I-25 (exit 215). ... **Sept. 17-19**
Theme is Minerals of the Creede Mining District, Mineral Co., CO. Admission charge;
go to www.denvermineralshow.com for info.

Club News

Please Welcome New Members:

Stephen & Patrick Dee of Highlands Ranch
George D. Marljar of Florissant

🎉🎉 At the June 12 meeting, about 20 LGGMC and 20 Colorado Springs Mineralogical Society members met in the pouring rain to collect topaz at the Spruce Grove Campground locality. Before the trip, Erin Leidy, our 2010 scholarship winner, was presented with a check.

About 30 people actually went on the trip, and at least 4 excellent, gemmy topaz crystals were found. Luckily, the rain gave us a break.



Treasurer Wayne Johnston presents LGGMC Scholarship to Erin Leidy (Rakowski Photo)



Spruce Grove topaz diggers (Rakowski Photo)

🎉🎉 Dan Alfrey and Dick Lackmond have planned a visit to Creede and **The Last Chance Mine** (sowbelly agate) on **July 17** and Del Norte (geodes) **July 18**.
Trip is described below:

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We will all meet at the Mining Museum Parking Area, on the North side of Creede at **11:00am** on **Saturday, July 17th**. Carpool on your own.
We can have around 70 people with about 25 cars for the rest of the day there!

This is 190 miles (each way) from Lake George.
It is approx. 3 Hours & 20 Minutes travel time per www.Mapquest.com

The owner has agreed to a **Group Rate of only \$2 per pound for prized sowbelly agate** pieces. He will also have other mineral specimens available for purchase. There is also a **free-area for agate**, with a very strenuous hike required!

The plan is to hang out there, visit with the Mine Owner, utilize his unique rustic cabins onsite, maybe have an adult beverage, and Talk Mining all evening.

The next day, we will go to **Del Norte area to explore for geodes and fossils** (no fee required).

Contact Dick Lackmond dLackmond@msn.com or Dan alfreydan@aol.com for more!

🔥🔥 More upcoming field trips:

(Sat.) July 10, 2010 ~ 9:10am-4pm ~ "Petra Placer" Private Claim / TOPAZ! (Leaders: Richard Fretterd & Dan Alfrey) 9,600' elevation, strenuous hike required!

(Sat.) July 10, 2010 ~ Alma Geostudy group will tour the Paris Mill in Buckskin Gulch (email steven.veatch@gmail.com for details)

(Sat-Sun) July 17-18, 2010 ~ "Last Chance Mine" Creede <\$2/lb.> & NF exploration Del Norte < FREE! > / sowbelly agate, geodes, thunder eggs (Leaders: Dick Lackmond & Dan Alfrey)

July 31: Restricted "Glacier Peak Amazonite Mines" (private claim; see below)

August 7: New Hope Amethyst Locality (Canon City Club claim)

Sept. 4: "Sedalia Mine" Salida/fist-sized garnets, along with numerous other minerals. Strenuous climb to main collecting area; details later.

Sept. 18: Holcim Cement Quarry, Penrose (calcite, pyrite, quartz)

Sept. 25: GodSend (private claim) (amazonite, smoky quartz)

Visit the LGGMClub.org website for details on these and updates on other trips.

🔥🔥 Field-trip coordinator Dan Alfrey (alfreydan@aol.com) is taking names for the smoky quartz-amazonite private claim trip to '**Glacier Peak Amazonite Mines**' for **July 31**.

>>> The number of participants on this trip is limited, please sign-up now! <<<

Also, remember, we have another hot trip scheduled to visit The Canon City Club's **New Hope Amethyst Claim** on **August 7th!!!**

🔥🔥 Our condolences to **Wayne and MaryAnn Johnston** on the loss of MaryAnn's sister.

🔥🔥 **Grace and Maury Hammond** report progress on their mining adventure in Alaska I'm hoping we'll hear more about that soon.

🔥🔥 Dick Lackmond and Dan Alfrey sent some photos and information on the Club trip to **Baculite Mesa** on June 19. Here's Dan's report:

14 members battled cactus in bloom and 97-degree heat to load up on fossils, agates, and other treasures near Pueblo! The quote of the day was repeatedly, " *I found one* ".

Our next trip back there will be on October 2nd, and we've invited the North JeffCo Gem & Mineral club to attend with us. Hope to see you then!



Dan's crystallized *Baculites* (Alfrey Photo)



Nice *Baculites* showing suture pattern (Lackmond Photo)

🔥🔥 Dan sent the following report on the Topaz Mountain Gem Mine trip:

19 adult members (+ 4 kids) visited the famous mine, North of Lake George, on Saturday June 26th. A fun time was had by all on a beautiful day. President John Rakowski will attest that a screen was not required (when you find ones as large as he did!).



John Rakowski's topaz finds (Rakowski photo)



The Mine Owner demos "farming" for topaz! (Alfrey Photo)



A nice, 85-carat find



Topaz farmers at work (Alfrey Photos)

The Topaz Mountain Gem Mine usually has bags of gravel for sale at The Picket Fence (behind Wendy's in WP). There are also select gems available for purchase.

Thanks to **Joe Dorris** for his generosity in allowing Club members to visit his claim.

Reminder: It is **not okay to return to the site of any private claim field trip, ever**, without the permission of the owner.

~ Mineral Trespass is a crime and grounds to lose club membership privileges ~

Pebble Pups Corner

At the June meeting, **Bob Carnein** gave a presentation on "**Mineral Luminescence**". Two "Pups" attended, along with **Kent Greenes**, and everybody had a good time. The Pups' newly-broken geodes fluoresce green due to uranium. However, because of poor attendance at the June meeting and on the Florissant Fossil Beds trip, the July and August meetings have been canceled. We're working out a schedule for the fall, with the first meeting planned for September. More on that later; have a great summer!

🌸🌸 **Dan Alfrey** sent the following update on the **2010 Alma GeoStudy** project:

Chair Steven Veatch was recently interviewed for an upcoming article in the Colorado Springs Gazette.

Two project 'exploration & research' trips have been scheduled (July 10th ~ Buckskin area; and July 25th ~ Mosquito region)

Professor Veatch was also allowed to make an announcement about our Project at the recent South Park Symposium in Fairplay. It was very well received!

A visit was approved and completed to review the Special Collections of the Colorado School of Mines geology museum in Golden Colorado.

Images have recently been obtained from the awesome gem & mineral collectors of The Arkenstone!

Club secretary, geostudy team member, and local artist, Marge Breth, has painted several nice watercolors for the Alma project! Marge has offered to donate two watercolors to benefit The Alma Foundation at our presentation! **Thanks Marge!**

A delegation from the team will visit The Collector's Edge for mining & specimen images

A story has re-surfaced about a possible 'dinosaur?' or concretion that was recovered at The London Mine in 1932... Unbelievable !?!

Interesting updates to the project can be found at the following Blog : <http://coloradoearthscience.blogspot.com/>

NOTES FROM THE EDITOR

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"Ask a Geologist" by Bob Carnein

Faithful reader Dan Alfrey noticed the odd, layer-like features shown in Figure 1 when he was driving on US Route 24, about a mile east of Florissant. You may have seen them too. The rock exposed here is the Pikes Peak Granite—not the kind of rock in which one expects to see "layers"! To explain the features, one needs to look closely at the layers and compare them with the surrounding rock.

If you examine the "layers", you'll notice that they stick out slightly and don't weather as easily as the surrounding granite. You'll also discover that they are made out of the same minerals as the surrounding granite but in different proportions and in smaller grains. Both rocks are made of quartz, microcline feldspar, and plagioclase, with smaller amounts of biotite mica.

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The finer grained "layers" contain very little biotite—they're mostly a fine grained mass of quartz and microcline (Figure 2). Such fine grained granitic rocks are sometimes called granite *aplite*. The coarser, "normal" granite (the more crumbly rock, shown close up in Figure 3) has more biotite than the finer-grained granite. This is critical to explaining why the aplite doesn't weather like the "normal" granite that surrounds it.



Figure 1. Bedrock exposure, North side of Hwy 24, 1 mile East of Florissant. (Carnein photo)

When the Pikes Peak Granite was crystallizing, the magma contained a lot of water. (Remember, water-rich steam bubbles were partly responsible for the development of the crystal-lined cavities of the Crystal Peak area.) Magma doesn't crystallize all at



Figure 2. Fine grained Pikes Peak Granite aplite from Route 24 exposure (Carnein photos)



Figure 3. "Normal" coarse grained Pikes Peak Granite. Note presence of iron oxide (hematite) and greasy, bronze colored altered biotite. (Carnein photo)

once—some minerals solidify before others, and the composition of the magma evolves through time. Thus, in the Pikes Peak Granite, as more and more biotite, quartz, and microcline formed, the water became concentrated in the remaining magma. While this was occurring, the temperature of the magma gradually decreased. As the temperature dropped, the already-crystallized, relatively coarse "normal" granite responded by contracting and fracturing. It also underwent microfracturing as a result of movements in the deep, insulated core of the batholith, which was still crystallizing. These processes opened pathways along which the water-rich residual magma rapidly injected itself and crystallized to form the aplite "layers". So, the "layers" are "fossil fractures". Pegmatites form in the same way, and pegmatites and aplites are often closely associated in the Pikes Peak Granite.

Now, the final question that we need to answer is, Why do the aplite "layers" stand out against the more weathered "normal" granite? This has to do with the biotite that I mentioned earlier. Biotite mica is easily altered by water in magma or by ground water after the granite is exposed to weathering. If you look at the biotite in the Pikes Peak Granite, it often has a bronze or somewhat golden or dull black color, rather than the shiny, black color of fresh biotite. This is why local streams commonly contain sparkly gold-colored flakes that some panners mistake for gold—it's actually altered biotite. It's also why my wife's cat, Argie, sparkles when he comes inside after rolling around in the dust in our driveway. The altered biotite has converted to hydrobiotite and vermiculite

(Blair, Jr., 1976). When biotite alters, it expands in volume. In the Pikes Peak Granite, the biotite is surrounded by quartz and feldspar grains, many of which may have been fractured as the granite cooled and crystallized or during the Late Cretaceous-Early Tertiary Laramide orogeny. Therefore, as the biotite alters and expands, this exerts pressure on the surrounding quartz and, especially, feldspar grains, shattering them along pre-existing fractures. The alteration of biotite also releases iron ions that oxidize to produce hematite. This may be deposited along cleavage planes in fractured microcline, coloring it red and giving the whole rock a reddish color.

As erosion removes the overburden, reduced pressure allows the whole rock to expand and crumble, forming coarse, angular fragments of quartz, microcline, and granite. This crumbled "gravel" is called **grus**, and it's an important resource for constructing roads and driveways in the Pikes Peak region (see bottom of Figure 1). I should mention that the same outcrop that Dan asked about also contains some other features that need to be explained. As shown in Figure 4, there are some roundish, relatively fresh masses of coarse granite surrounded by badly deteriorated granite grus. In next month's newsletter, I'll talk about these and some other landscape features that are typical of areas underlain by the Pikes Peak Granite.



Figure 4. Spheroidal masses of Pikes Peak Granite at the Route 24 roadcut. (Carnein photos)

Reference: Blair, R.W., Jr., 1976, Weathering and geomorphology of the Pikes Peak Granite in the southern Rampart Range, Colorado: in R.C. Epis and R.J. Weimer, *Studies in Colorado Field Geology*, Professional Contributions of Colorado School of Mines, no. 8, p. 68-72.

🌸🌸 **'Gold Rush Days' presentations to benefit the Lowell Thomas Museum.**

Sunday, July 18 club member Steven Veatch will present the second annual Discover Victor program and guided tour. The program includes a one-hour presentation and a two-hour guided tour of the Victor area, with stops at historic sites.

There will be two sessions for the event on July 18 – at 9 a.m. and 1 p.m.

Lake George Gem and Mineral Club

P.O. Box 171
Lake George, CO 80827

www.LGGMclub.org

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 2010 are:

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