

The Lake George Gem and Mineral Club -

Club News, September, 2011



Regular Meeting of the Lake George Gem & Mineral Club
Saturday, September 10, 2011, at 9:00AM
Lake George Community Center

Nominations for 2012 officers will be entertained at the September meeting. After the business meeting, members are invited to an OPEN HOUSE at the club's Lapidary Workshop at 10am. **Please Note:** There are 2 other "alternative" programs scheduled for September 10: a field trip to the **Sedalia mine**, near Salida, and the **Alma Geostudy presentations** and other events at Alma (see notes under "Club News"). How many clubs give their members these kinds of choices??

Coming Events

- Dinosaur Discovery Day: Reading Really Rocks**, 10AM-2:30PM, Dinosaur Ridge, Morrison; festivities include gold panning, exploring for fossils, and guided hikes. Go to www.dinoridge.org for information. ... **Sept. 10**
- Alma Geostudy Presentations at Alma** ... **Sept. 10-11**
- Symposium: Minerals of Russia**, Petroleum Hall, Green Center, CSM, Golden (contact pmodreski@usgs.gov for info) ... **Sept. 10**
- Denver Coliseum Show**, 9-6 daily, 1900 44th St. (from I-70, exit 275B at Brighton Blvd.; free parking & admission) (go to <http://coliseumshow.com/> for info) ... **Sept. 10-18**
- CSM Geology Museum Open-House, Reception, and Silent Auction**, 6-9 PM, CSM Geology Museum, 13th and Maple Sts., Golden ... **Sept. 14**
- Colorado Mineral & Fossil Show**, Holiday Inn-Denver Central, 4849 Bannock St. (free parking & admission) ... **Sept. 14-18**
- Colorado Springs Mineralogical Society** monthly meeting, 7:30PM, Colorado Springs Senior Center, 1514 N. Hancock. ... **Sept. 15**
- Pueblo Rockhounds** monthly meeting, 7:30PM, Westminster Presbyterian Church, 10 University Circle. ... **Sept. 15**
- Denver Gem & Mineral Show and Colorado Fossil Show**, Denver Merchandise Mart, I-25 at 58th Ave. (admission charge) ... **Sept. 16-18**

Club News

Welcome, New Members:
BeLinda Adams (Florissant)
Glenn Russell Foote (Littleton)

Michael Gemmill (Leadville)
Dane Holbrook (Florissant)
Mark & Rebecca Kilburn (Bailey)
Conrad & Sandy North (Centennial)
Christopher Pohl (Florissant)

◆◆ Vice President and field-trip director **Dan Alfrey** has a great and ever-expanding field-trip line-up. Here's the latest list; please visit our website often for updates, and, remember, you must be a Lake George Gem & Mineral Club member to attend trips. **Please remember to pay your 2011 dues—still a bargain at \$15 for individuals or \$25 for a family; half-price for new members** for remainder of 2011. **A membership form can be found at the back of the newsletter.**

September 3: Trip to **Devil's Hole mine**, near Texas Creek. **Very limited;** trip involves a 5-mile ride on rough roads followed by a long up-hill hike. Contact Bob Carnein ccarnein@gmail.com if interested in going.

September 10: GeoStudy presentations (Alma) Contact **Steve Veatch** for details, and see note below;

also **Sedalia mine** (with Columbine Club; meet at Salida Safeway at 9 AM);

September 24: Holcim quarry; meet 8AM in Florence

October 1: Patience club claim meet 8AM in Woodland Park (at Hwy 24 at Hwy 67)

If you'd like to lead a trip or have a suggestion for one, contact Dan at 719-440-6234.

◆◆ **John Rakowski** sent the following report about our very successful 2011 Club show:

2011 Show Report

The Lake George Gem and Mineral Show was a success this year thanks to the help of all the volunteers, and especially those on the Weather Committee again! The temperature was warm, and we had one evening rain to settle the dust, but no daytime rain or hail. We had plenty of help to set up signs and mark out spaces on Saturday, August 13th. Up until about a week before the show we thought we would have about a dozen dealers, but by Show Time we ended up with about 28 having purchased spaces. The dealers were pleased by the crowds viewing their wares, and most were very pleased with their sales. Several dealers said this was their best show of the year, sales-wise. Considering that we are still recovering from a recession and people are nervous, I believe the show was very successful. By having a "Jump Start", thanks to **Bob Kane**, we attracted more dealers than last year.

There were plenty of give-away specimens at the club canopy for the youngsters, thanks to **Rich Fretterd, the Leidys, and the Greenes**. We had many enquiries about membership and actual signups of new members because of the exposure from the show.

Thanks to all, with your assistance, the LGGMC Show turned out well this year! Special thanks to **Dick Lackmond** for assisting with publicity and **Becky Blair** for communicating with dealers as Dealer Chair. **Char DeVries, Miriam Hilson, Roger and Joanne Petrik, and Dick and Auston Mammenga** were all conspicuous by the generous amount of time they volunteered. Many others were also very helpful volunteers. **Wayne Johnston** gave a hand with cleanup on Monday.

I will be starting on the planning for next year's show and need to get a new Show Chairman to volunteer this year as I have done it for four years. I will help with this volunteer on the

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preparations and the person will be able to easily take over. A summary of contacts and timing for all show duties has been prepared to ease the transition. If no one individual wants to take over, how about a group of you getting together to volunteer? One of the first things to be done is to determine if we will or won't have a jump start.

Thanks again to all of you who helped out at the show! --**John Rakowski**

◆◆ Here are some photos that John took at the show:



Rich Fretterd's giant smoky



Potential Pebble Pups?



Spectacular Moroccan ammonites and other goodies



◆◆ Highlights of the August 13 meeting: President **John Rakowski** reported that 24 vendors were either paid or verbally committed to set up at the annual show (see above for report). The Pebble Pups schedule is now set for September through next May. You can find it at the Club website. **Dick Lackmond** reported that he bought 2 used motors for the lapidary workshop at the Contin Tail show. He also noted that 7 people showed up for the regular workshop meeting on Wed., August 10. Other meeting times may be arranged for those who can't attend on the second Wednesday. **Loren Lowe** said he has synthetic oil available to try in the saws, and **Dave Harvey** offered to get lapidary supplies for the shop at wholesale prices. Members voted to purchase a digital projector for use at meetings and Pebble Pups presentations, along with a 25-foot cord to connect the projector to a computer.

◆◆ The next lapidary workshop meeting will be Wednesday, Sept. 14th, at 6PM at **Mountain Aspen Granite Co.**, in Woodland Park. Directions can be found at the Club website.

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◆◆ **Steve Veatch** sent the following reminder about September events in South Park:

Colorado Preservation's Annual Heritage Event
Celebrating Preservation & Preservationists
in Colorado's Communities

On The Road in the South Park National Heritage Area
September 9 - 11, 2011

Annual Membership Meeting
September 9, 2011

On The Road 2011 in the South Park National Heritage Area will explore the beautiful natural resources and dynamic history of mining, railroading and ranching. We'll visit Tarryall Natural Rural Landscape District and the towns of Como, Fairplay and Alma. Special events include the South Park Plein Air Arts Celebration.

For additional information, contact Susan Livingston slivingston@coloradopreservation.org
(303)893-4260.

Steve is also offering a nature writing course at the Pikes Peak Heritage Center, in Cripple Creek. The class meets November 5 and costs \$99 (plus tuition, if desired). Contact Steve for details.

◆◆ Thanks to **Loren Lowe** for a great gold-panning demonstration on August 6. Here are some photos taken by **Ingrid Hamilton**:



◆◆ **This month's "Bench Tips" from Brad Smith** haven't arrived yet; I'll include them in next month's newsletter.

More BenchTips by Brad Smith are at: groups.yahoo.com/group/BenchTips/ or facebook.com/BenchTips.

◆◆ John **Rakowski** reports that the new digital projector is here and that it works as promised, with easy interfacing with his laptop.

◆◆ Steve **Veatch** will present the Guffey Project ("**From Mineral Strike to Meteor Strike: Guffey and the Freshwater Mining District, Colorado**") at a special potluck and celebration on Sept. 29, starting at 5PM, at the Guffey School. *This was the first LGGMC study project.* Everyone is invited.

Pebble Pups Corner

Steve Veatch is in the process of trying to arrange transportation for a trip to the Denver Museum of Nature and Science. The trip would feature a private tour and talk by Ian Miller, one of the investigators at the recent Pleistocene excavation at Snowmass that received so much media attention. The trip would be open to LGGMC and CSMS Pebble Pups and their parents. We'll have more information later.

Steve is also in the process of devising a new research project for the Pups. We'll also be hearing more about that as the process moves forward.

Pebble Pups classes will start up on September 20 (**note, we now meet on the third Tuesday of each month**). The program will be on "Building a Collection", by Steve Veatch. There will also be a field trip to the Denver Gem & Mineral Show on **September 17**. Contact Steve (steven.veatch@gmail.com) for more information on the program or trip.

Dan Alfrey sent this report about the private Pebble Pups Amethyst Dig on July 23rd, that was enjoyed by all attendees!

It was very hot, yet a nice group of clouds cooled us off around noon.
Thank-You to Canon City club president James Meacham for the invite!!!

One particular Pebble Pup, age 6, journeyed all the way from Nederland, and explained how he planned to be a Scientist! He has already has grown crystals, which he lets his friends look at under his microscope.... Yet, I couldn't help notice that he has "future Mine Superintendent" qualities, as displayed working together with trip leader Dan Alfrey to recover a bag full of Amethyst today!



NOTES FROM THE EDITOR

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Faithful member **Andy Weinzapfel** sent the following article on an interesting blue quartz locality north of Lake George, that he explored earlier this summer. This was new to me, and I think you will enjoy reading about it!

On the Trail of Colorado Blue Quartz: Re-discovery of “Llanite” Outside the Lone Star State by Andy Weinzapfel

Many mineral collectors are aware of a hard, attractive rock (fig. 1) from the Texas hill country west of Austin, informally known as “llanite” or “llanoite”. Occurring as dikes injected into the 1-billion-year-old Town Mountain Granite and older metamorphic rocks, the rhyolite contains unusual blue quartz as bipyramidal crystals.



Fig 1: Typical Texas llanite (rhyolite), showing blue quartz crystals and pink K-feldspar phenocrysts in a dark groundmass (porphyritic-aphanitic texture).

The blue coloration in Ilanite quartz is a result of Rayleigh scattering of light by sub-micrometer ilmenite (titanium oxide) inclusions (Zolensky et al, 1988). The total amount of ilmenite within the blue quartz is only about 0.02 per cent by volume.

Library research by the author recently uncovered references (Hawley, 1969; Hawley and Wobus, 1977) to blue quartz within a small, unnamed, circular or funnel-shaped zoned intrusion in the Tarryall Valley, Park County, Colorado. This is along the western edge of the Precambrian Pikes Peak batholith. While cryptocrystalline blue to pale blue quartz (agate, chalcedony) of volcanic origin has been documented in four counties of Colorado (Eckel, 1997), the Tarryall Valley quartz is exceptional because it is of the relatively coarsely crystalline, subhedral to euhedral variety, hosted within a plutonic rock. This rock occurs only on and near the topographic crest of a small mountain having no formal USGS place name (figure 2). For purposes of this article, the locality is named “Blue Quartz Mountain”, and the unnamed igneous pluton “Blue Quartz Mountain Intrusive”, or “BQMI.



Figure 2: Blue quartz is found only on and near the topographic crest (elevation 8906 feet) of this unnamed mountain, extensively burned by the very large Hayman fire of 2002.

The BQMI, as well as several other plutons, lies along the Florissant lineament (Weinzapfel, 2004, Fig. 3), a regional, straight-line feature interpreted as an old Precambrian fault system reactivated in the Tertiary. The four northern intrusives along this lineament—Lost Park, Redskin, BQMI, and Lake George--are all thought to be the deeply eroded exposed plutonic roots of volcanoes. The BQMI appears to be similar in origin and in size to the Ossipee ring complex of New Hampshire (Eby et al, 2004).

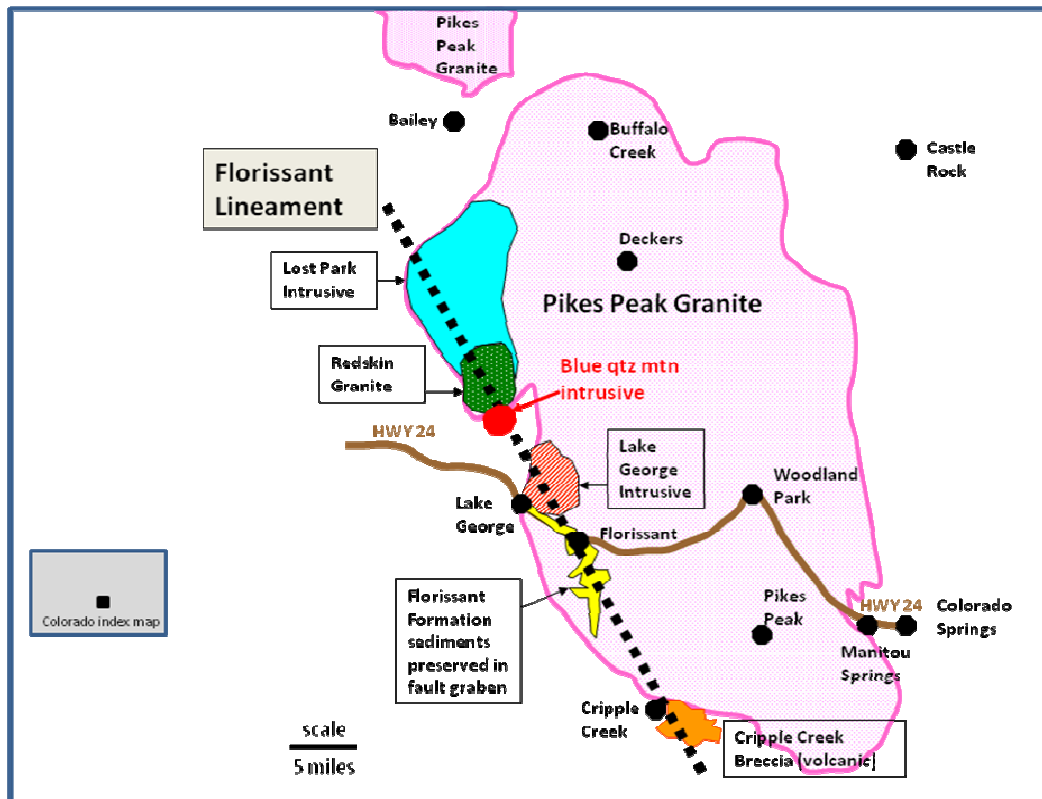


Fig 3: Elements of the Florissant lineament.

Figure 4 is a simplified map of the BQMI, modified from the USGS. This map was field checked during summer, 2011, and found to be quite accurate. Only a part of the original BQMI exists today, as the northern portion was consumed by intrusion of the Redskin Granite about 1 billion years ago. The Redskin is a highly evolved tin granite, rich in fluorine (fluorite, topaz), and is perhaps the youngest intrusive center of the entire Pikes Peak batholith. The BQMI, clearly older than the Redskin, has not been radiometrically dated, but may be considerably older than Pikes Peak Granite. Younger fluorite veins crosscut both the Redskin and BQMI.

The outer zone of BQMI is described by the USGS as a very dark, coarse grained olivine gabbro that contains noticeable interstitial ilmenite (figs. 4 and 5). The inner core of the intrusive is described as a pink to gray quartz monzonite porphyry containing blue quartz (figs. 4 and 6). This rock is resistant to erosion, forming the crest of a hill at 8906 feet elevation. In the field, it often displays a fine grained phaneritic-porphyratic texture quite similar to Texas Ilanite, and resembles porphyritic quartz latite. The genetic association of ilmenite and blue quartz in different parts of the same intrusive strongly suggests that the cause of the blue color of this quartz is ilmenite inclusions, just as in Texas Ilanite.

Figure 4: Blue Quartz Mountain Intrusive

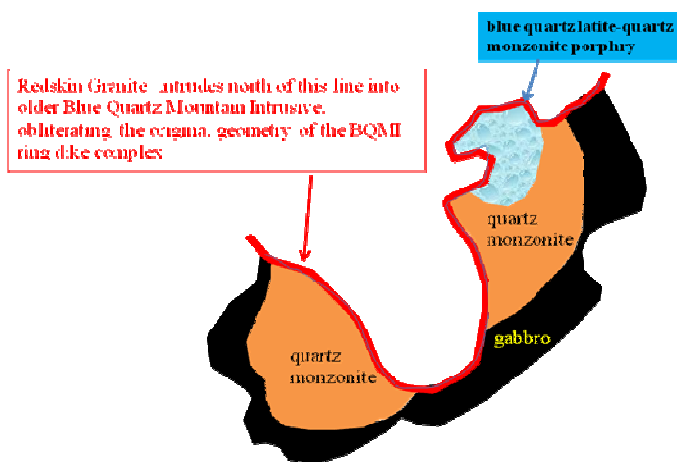


Figure 5: Gabbro from the outer ring of BQMI, showing abundant ilmenite grains in reflected light (top portion).

Examination under a binocular microscope, without the benefit of thin sections or more sophisticated mineralogical techniques, reveals many similarities between Texas Ilanite and Colorado quartz latite: silica rich calc-alkaline compositions for both; unusual blue quartz having the same crystal size (usually about 2 mm diameter); similar porphyritic-aphanitic to fine grained phaneritic-porphyritic textures more typical of volcanic rocks than igneous intrusives; reaction rims around some K-feldspar crystals; biotite mica

included within some K-feldspar grains; and the likelihood that titanium is the chromophore (coloring agent) in the quartz for both.



Figure 6: Quartz latite porphyry from Colorado's BQMI, the host of the blue quartz. This rock grades into a quartz monzonite porphyry, as described by USGS.

The fine grained phaneritic groundmass of Colorado quartz porphyritic monzonite is generally lighter than the aphanitic groundmass of Texas Ilanite; hence the contrast between the blue quartz and its host rock is somewhat less for the Colorado occurrence. This means, in my opinion, that Texas Ilanite is more attractive. There are no data related to the percent ilmenite by volume in the Colorado blue quartz, but some Texas Ilanite quartz *appears* to be slightly bluer. Texas Ilanite seems to have been injected as narrow dikes, while the BQMI is clearly a much larger ring complex. Texas Ilanite occurs in only one small outcrop that is open to the public, which is gradually disappearing due to decades of collecting in a very limited road cut. In contrast, the Colorado locality in Pike National Forest is open to the public for mineral collecting (except for some private mining claims targeting fluorite near the edge of the blue quartz area). By volume, this interesting Colorado site cannot possibly be depleted by non-mechanized equipment, and is a legacy for future generations to enjoy.

The literature suggests a few other geographic occurrences of plutonic blue quartz, in and outside the USA. Contrasting the geology of these localities could be an excellent topic for a future masters/PhD thesis.

Finally, I want to thank Bob Carnein, Pete Modreski, and John Rakowski for insightful comments made during field work together.

All figures and photographs are by the author.

References:

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Lake George Gem and Mineral Club
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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 2011 are:

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