

The Lake George Gem and Mineral Club -

**Club News,
July, 2009**



REGULAR CLUB MEETING: 9:00AM, July 11 **Lake George Community Center**

LGGMC member Rich Fretterd will lead the group to his Petra Placer mining claim, which is famous for topaz. **The trip requires a strenuous hike to over 9000 ft. elevation—BE PREPARED.** Bring hand tools, a screen, a small shovel, **plenty of water**, lunch, etc. **No small children or pets allowed.** Car pooling is strongly recommended; there are only 6 to 8 parking spaces at the trailhead. Rich will give rides from the parking area to the base of the steep trail in his pickup truck. Club **membership is REQUIRED.** If you need more info, **contact field-trip chairman Dan Alfrey at AlfreyDan@aol.com.**

Reminder: There will be a field trip to **Joe Dorris'** very productive smoky quartz/amazonite claim on **July 25**. This trip is limited to 20 members of the LGGMC; **preference will be given to the newest members who want to go.** Contact Dan at the above e-mail address to reserve a space.

Coming Events

- | | |
|---|-----------------|
| <u>Lake George Gem & Mineral Club</u> field trip to Rich Fretterd's Petra Placer | ... July 11 |
| <u>Dinosaur Ridge Class</u> , Steve Veatch and others, Cripple Creek Parks & Recreation, cost is \$33, including transportation. Call 719-689-3514 for information. | ... July 11 |
| <u>"Digital Earth: Explore the World from Space"</u> , by Dr. Ka Chun Yu and Dr. Bob Reynolds, Gates Planetarium, Denver (\$15 admission) | ... July 7 |
| <u>Rocky Mountain Micromineral Association</u> monthly meeting, 2-4PM, Colorado School of Mines Museum: Bruce Geller will demonstrate the Museum's X-ray fluorescence analyzer; also view samples from the Lazard Cahn micromount collection. (Info from Richard Parsons at Richard.parsons@worldnet.att.net) | ... July 12 |
| <u>Contin-Tail Rock and Gem Show</u> , Buena Vista Rodeo Grounds (free admission) | ... Aug. 6-9 |
| <u>Fairplay Bead & Fiber Show</u> ; Fairplay, CO; contact Pat Pocius at 719-836-2698. | ... Aug. 8-9 |
| <u>Lake George Gem & Mineral Club Annual Show</u> , U.S. Highway 24 (next to Post Office), Lake George (free admission) | ... Aug. 14-16 |
| <u>"The History of Scientific Discovery at Florissant Fossil Beds N.M."</u> by Dr. Herb Meyer and Steve Veatch, Friends Summer Seminar Series; cost TBD. Call 719-748-1156 to register. Can be used for 0.5 hrs. grad. Credit at Adam State College (tuition extra). | ... Aug. 23 |
| <u>Colorado Mineral & Fossil Show (Fall)</u> , Holiday Inn, 4849 Bannock St., Denver (free admission); info at MartinZinnExpositions | ... Sept. 16-20 |

- Denver Coliseum Mineral, Fossil, Gem, & Jewelry Show**, Denver Coliseum, 4600 Humboldt St.; \$3/\$2 admission; info from Lowell Carhart, 719-886-7046. ... **Sept. 16-20**
- Bead Renaissance Show**, Crown Plaza, 15,500 E. 40th Ave., Denver; call 575-894-1293 for info. ... **Sept. 17-20**
- 42nd Annual Denver Gem & Mineral Show: "Fossils—Windows to the Past"**
Denver Merchandise Mart Expo Hall, 451 E. 58th Ave. (I-25 exit 215); \$6/\$4 admission. ... **Sept. 18-20**
- Colorado Fossil Expo**, Denver Merchandise Mart Plaza Annex, 451 E. 58th Ave.; \$6/\$4.50 admission; info at MartinZinnExpositions. ... **Sept. 18-20**
- Field Studies in Paleontology: Exploring the Shelf Road from Cripple Creek to Garden Park, Colorado**, Cripple Creek Parks & Recreation; cost is \$69. Call 719-689-3514 to register. Can be used for 0.5 hr. grad. Credit at CSM (tuition extra). ... **October 3**
- 46th Annual Pikes Peak Gem & Mineral Show**, Phil Long Expo Center, Colorado Springs, contact Rick Copeland, 719-332-7915 or rick@rockymountainwonders.com ... **Dec. 5-6**

Club News

About 30 members toured the active Alma Placer gold mine on a beautiful Saturday morning (June 13). Upon reporting to the Safety Office, everyone was fitted with their own full set of personal safety equipment. We each completed the required site-specific hazard training and reviewed the Guidelines & Rules of the Mining Operation, in accordance with MSHA regulations. We were then escorted by experienced miners on a tour of the facility.



Club members try their hands at panning (Dick Lackmond Photo)

We learned that the mine currently produces an average of about 5 ounces of 82% gold/18% silver per day from about 1000 cubic yards of gravel. Mining at the 125-acre site is concentrated in pay channels in semi-consolidated glacial deposits. Some spots at the bedrock/gravel interface have yielded significant production. After excavation, the gravel is loaded into a grizzly (which removes the coarsest material) and then passes through various sorting devices to separate out the fines. The fines are then sent to a shaking table, which separates the gold from the waste material. Dish detergent is used to keep the fines from clumping together. Most of the gold is very fine, averaging 8 to 30 mesh, though we were

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shown some nuggets up to one troy ounce. Because of the climate in the area, mining normally occurs for only 130 days per year, from April through November.

Our generous hosts offered us soft drinks and water and even supplied pieces of chocolate wrapped in gold-colored foil at the end of the tour. Then, we were given an hour or so to try our hands at panning from the gravels near the working area.



Our host Megan shows off recent gold finds (Dick Lackmond Photo)

Many thanks to the Alma Placer Mine-Miller-HFI, LLC owners and staff for one of our best field trips ever!!

Our condolences to **John Rakowski**, whose mother recently passed away. John asked that members be reminded that we will have a very important meeting on **August 8**, when we stake out the dealer spots in the field and post signs and flagging for the **annual show**. Last year, we had about 20 people and got the job done quickly, **followed by pizza across the street at the Lake George Pizza Parlor**. This is a fun job, and we look forward to seeing many members there!

The following is a news release by **Dan Alfrey**, relating to the Victor Study Project:

**Experience Victor, City of Mines
And Help Save the Victor Lowell Thomas Museum**

Discover the rich history of Victor, City of Mines, in a special program during Victor Gold Rush Days this July.

Saturday, July 18, the Victor Lowell Thomas Museum, along with the **Lake George Gem & Mineral Club (LGGMC)**, will host a one-hour presentation and two-hour guided tour of the Victor area. There will be two sessions/tours for the event on July 18—one at 9 a.m. and another at 1 p.m. This is a great opportunity to learn about Victor's gold-rush history from a well-known geologist, historian, and author.

Lake George Gem and Mineral Club

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The presentation, which will be held at the Victor Community Center at Second and Portland Avenue, will be about one hour long, followed by a guided, two-hour, information packed tour through Victor area historic sites. Carpooling will be required. The cost for the event is \$10 per person, including handouts. Please reserve your space by calling 719-689-5509. The LGGMC is donating all proceeds of this event to the Victor Lowell Thomas Museum's building-restoration fund.



The LGGMC study group this year chose to delve into the little-known facts of Victor's amazing history, including the famous mines of Battle Mountain that made Victor famous, and the remarkable minerals of the mining district. The Club conducted a number of field trips to Victor to explore some of the interesting areas and to photograph Victor's great mines along the Battle Mountain Trail. The study group consists entirely of members of the LGGMC and includes several college professors, a retired geologist, a scientist from the US Geological Survey, an artist, several photographers, and people from all walks of life.

The LGGMC 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 is generally geared 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 side of town. For further information, call Steven Veatch at 719-748-5010.

Gold Rush Days, July 17-19, honors the town's mining heritage with mining games that give visitors a close-up look at mining skills of yesterday and today, including jack-leg drilling, hand mucking, hand-steel drilling, and gold panning. Families can also enjoy vendors, Victorian home tours, a street dance on Friday night, the District Reunion dance on Saturday night, kids' games and clowns, and a parade on Sunday afternoon. There will also be a CC&V gold-mine tour Friday, July 17 at 10 a.m. and 1 p.m.—call 719-689-4211 for reservations.

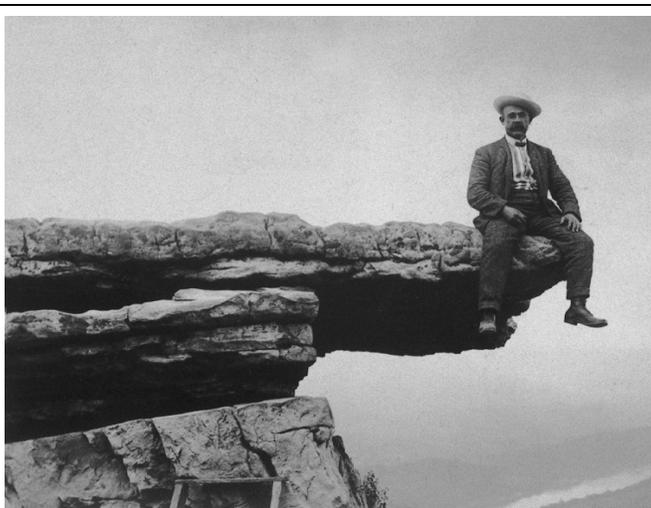
The next Victor Lowell Thomas Museum fundraiser will be Saturday, Sept. 12. A Miners' Dinner and a Whiskey Tasting and Auction will be held at the Victor Elks Lodge. For more information, visit victorcolorado.com/museumevents.htm.

NOTES FROM THE EDITOR

Bob Carnein, Editor

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719-687-2739



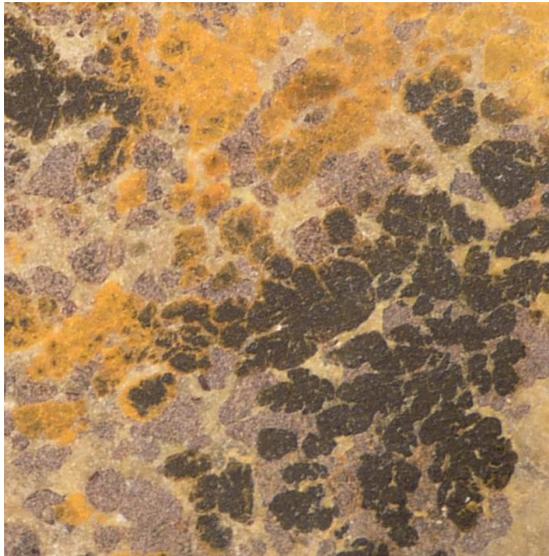
This month, I have included another article from *Popular Mineralogy*, a publication put out by my old friend from PA, Andy Sicree (subscribe by contacting Sicree@verizon.net). It first appeared in the May, 2008 issue, and I have made a few modifications (including addition of figures) for your enjoyment. It relates to the article I wrote last month about pegmatite pockets, so I hope you'll find it interesting.

Pegmatites: The Mineralogical Mother Lode By Andrew A. Sicree

Pegmatites and the Collector

The mineral collector often hears the term *pegmatite*, and a novice may mistakenly think that pegmatite is a species of mineral to be collected. However, pegmatite is a type of rock, not a single mineral. Feldspars, quartz, and micas are the major mineral constituents; thus pegmatites are compositionally similar to granites. Pegmatites are coarse-grained igneous rocks. Mineral grains in a pegmatite are typically about one-half inch (about 1 cm) across or much larger. Coarseness of the crystal grains in a pegmatite is a major distinguishing characteristic. One can think of them as very coarse-grained granites.

Mineralogically, pegmatites are the mother lode of interesting minerals, especially silicates. In addition to a variety of feldspars (such as albite, amazonite, etc.), there are micas (muscovite, phlogopite, biotite, lepidolite) and quartz varieties (e.g., smoky and rose quartz). Garnets, particularly spessartine and almandine, occur, as do spodumene, beryl, topaz, and tourmaline. And, depending upon the type of pegmatite, a host of other unusual minerals, such as columbite, tantalite, niobite, and uraninite, may also be found.



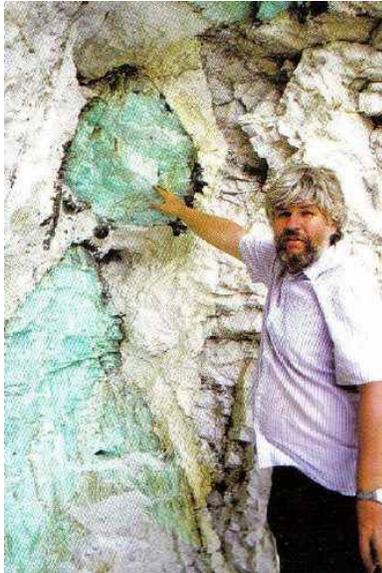
Uraninite (black) and "gummite" in pegmatite (www.civilminerals.com)



Pikes Peak pegmatite consisting of pink K-feldspar and dark gray smoky quartz

The World's Largest Crystals

Pegmatites have produced the world's largest crystals. For instance, the largest crystal on record is an immense crystal of microcline feldspar encountered at the Devils Hole beryl mine in Fremont County, Colorado. This microcline was about 162 ft. long by 118 ft. high and 45 ft. deep (49m x 36m x 14m) and weighed an estimated 17,500 tons (15,900 metric tons). Another large crystal was a phlogopite mica from the Lacy mine in Ontario, Canada, that was 33 ft. long (1000cm) and 14 ft. (430cm) in diameter.



Giant beryl crystals in a northern Portuguese pegmatite (photo: R. Hochleitner; giantcrystals.strahlen.org/europe/ascensao.htm)

Large crystals form in pegmatites because of low rates of nucleation (meaning that only a few crystals start to grow, rather than many crystals at once) and high rates of diffusivity (meaning that the elements needed to keep crystals growing can rapidly move through the fluid phase to the crystal).

Origins of Pegmatites

The origins of pegmatites are a topic of continued debate. Some pegmatites appear to have formed from the partial melting of rocks subjected to intense metamorphism. Many pegmatites are associated with large intrusions of granite and may have formed when the granitic magma cooled to the point at which it became saturated with water. (Editor's note: see last month's newsletter.) Then, under high temperatures and pressures, pegmatite minerals grew from a fluid consisting of silica, water, and other dissolved elements. Other pegmatites probably are not produced during water-saturated granite crystallization.

Pegmatites occur as dikes or lens-shaped bodies that appear to have been injected into the surrounding rocks. Typically, pegmatites are zoned. Minerals nearest the exterior of the pegmatite are smallest while those in the interior get progressively larger as one approaches the center. The largest crystals are found near the center of a pegmatite (a useful bit of knowledge if one is searching for large crystalline specimens).

In addition to the more common elements silicon, aluminum, oxygen, sodium, potassium, etc., which make up feldspar, micas, and quartz, pegmatites can carry a host of other less common, even rare, elements. Beryllium, lithium, boron, zirconium, tantalum, niobium, tin, tungsten, cesium, cerium, thorium, and uranium are found in pegmatites. As a pegmatite cools, rare elements tend to become concentrated in the fluid phase and precipitate out late in the cooling history. Thus, unusual minerals, such as those containing uranium, tantalum, or the rare earth elements, may form in pegmatites.

No two pegmatites are exactly alike, but it is possible to group various pegmatites according to shared characteristics. Several classification schemes exist. One way to classify pegmatites is by their elemental assemblages. Thus, we recognize niobium-yttrium-fluorine and lithium-cesium-tantalum families of pegmatites. (Editor's note: the pegmatites of the Pikes Peak Granite fall into the Nb-Y-F type.) These families are thought to combine groups of pegmatites with similar origins (e.g., the pegmatites of the Pikes Peak Granite, Mt. Antero, and the South Platte district of Colorado).

Economic Importance

Some pegmatites can be exploited commercially. As noted above, large, even huge, feldspars are common in pegmatites. Feldspar finds use, for instance, in ceramics, dentistry, and as a scouring agent. Large sheets of mica or isinglass can be culled from some pegmatites, and large amounts of quartz are produced, especially smoky quartz and rose quartz.

Pegmatites are an important source of the rare earth elements and niobium and tantalum. Most of the world's beryllium comes from pegmatite beryl. They are also the most important source of lithium, which is found in the minerals lepidolite (lithium mica), lithiophyllite, or spodumene.

Gemstones are also found in pegmatites. Large tourmalines, topazes, and gemmy beryls occur near the centers of some pegmatites. Single gem-quality topaz crystals more than two ft. (60cm) long and one ft. (30cm) in diameter can be found. Beryls may occur as the morganite or aquamarine varieties. Gem-quality apatites, fluorites, and smoky quartzes are recovered from pegmatites, too.

Reference: Rickwood, P.C., 1981, The largest crystals: American Mineralogist, vol. 66, p. 885-907.

Lake George Gem and Mineral Club

Box 171

Lake George, Colorado 80827

2009 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. **Anyone joining after August 30 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**

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).

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