# The Lake George Gem and Mineral Club -

## *Club News, January, 2009*

## Meeting Time 10:00 AM, January 10 at Lake George Community Center!

Our speaker for the meeting is Mike Nelson from Colorado Springs. . Mike, who recently received his Ph.D. in geology, will talk about the climate and residents of parts of Utah several tens of thousands of years ago. It should be interesting to see an indication of the types of animals that roamed Utah, and probably this area also, in the relatively recent past. It's a reminder that the Earth's climate was variable even without industrial activity. Mike provides this summary of his talk:

## Mammoths, Mastodons, Musk Oxen and Mountain Sheep: Lake Bonneville, a Window into the Ice Age

The Great Salt Lake (GSL) is but a small remnant of a much larger lake system that occupied the western Utah Basin during the Pleistocene. These earlier lakes are usually referred to as Lake Bonneville (LB) with the latest lake cycle beginning around 25,000 YBP (years before present). The LB reached a maximum about 18,000 YBP (Bonneville Level) before breaking through a threshold at Red Rocks Pass in southern Idaho. The lake continued to fluctuate for several thousand years before reaching an equilibrium level of approximately 4200 feet about 10,000 YBP. That current elevation of GSL contrasts with the Bonneville level of about 5200 feet. Of great interest is the large mammal fauna that inhabited the shorelines of LB. Paleontologists have uncovered numerous specimens of extinct mammals, such as mastodons, camels. mammoths, musk oxen, and short-face bears. In fact, these shoreline gravels have produced more finds of extinct musk oxen than any other locality in the world.

**Reminder:** It's wintertime, and in the event of adverse weather or dangerous road conditions we will cancel the meeting. Watch for email notice of cancellation or call one of the Officers.

**Silent Auction:** Bring specimens, books, etc. that you can spare to help the Club's treasury!

### Coming Events

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| **Family Exploration Day: It's All About Power**, Western Museum of Mining and Industry, Colorado Springs (Reservations requested at 719-488-0880.) | … **January 10** |
| **Rocky Mountain Micromineral Association** meeting, "Crystal Symmetry 101" by Richard Parsons (rescheduled), 2-4PM in the Colo. School of Mines Conference Room. (Contact Richard Parsons at Richard.parsons@att.net for information) | … **January 11** |
| **Annual Awards Banquet and Officer Installation**, Colorado Springs Min. Soc., 6PM, Embassy Suites, 7290 Commerce Center Dr. (Contact Betty Cain at bettycain@comcast.net) | … **January 15** |

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| **Northwest Colorado Gem & Mineral Show**, Grand Ballroom, Sheraton Steamboat Resort, 2200 Village Inn Court, Steamboat Springs; free admission. (Contact mwcogemshow09@hotmail.com) | **… January 16-17** |
| **Arizona Mineral & Fossil Show**, various venues, Tucson (free admission). (Go to wwwmzexpos.com or xsupport@xpopress.com for more info.) | **… January 31-February 14** |
| **Tucson Gem & Mineral Show**, Tucson Convention Center, 2605 S. Church Ave. This year's theme is **Mineral Oddities**. ($9.00 admission) | **… February 12-15** |
| **Columbine Gem & Mineral Society**, monthly meeting, 6:30PM, Mt. Shavano Manor, 525 W. 16th (at J St.), Salida. Visitors welcome. | **… February 14** |
| **Homesteaders, Fossils, and Scientists, a Tribute to Charlotte Hill on Her 160th Birthday**, Florissant Library Reception Hall, various speakers, reception, etc. Doors open at 11AM, and seating is limited, so come early! (Contact Steve Veatch for more info.) | **… February 15** |
| **Why are there so many "pretty" copper minerals?** by Bob Carnein, Colo. Springs Mineralogical Soc. Monthly meeting, 7:30PM, Colo. Springs Senior Center, 1514 N. Hancock Ave. Visitors welcome. | **.. February 19** |
| **Denver Gem & Mineral Guild**, Jewelry, Gem, and Mineral Show, Jefferson County Fairgrounds, 15200 W. 6th Ave., Golden (Go to DGMG website for more info.) | **.. February 27-March 1** |
| **International Gem & Jewelry Show**, Denver Merchandise Mart, $7.00 admission. | **.. March 6-8** |
| **Albuquerque Gem & Mineral Show** "Treasures of the Earth", School Arts/Flower Bldg., NM State Fairgrounds, San Pedro entrance. | **.. March 20-22** |
| **48th Annual "Nature's Treasures Gem & Mineral Show**, Fort Collins Rockhounds, Lincoln Center, 419 W. Magnolia St., Ft. Collins. (Go to fortcollinsrockhounds.org for more info.) | **.. March 27-29** |
| **North Jeffco Gem & Mineral Club Silent Auction**, 7-10PM, Arvada Senior Center, 6842 Wadsworth Blvd., Arvada. | **… April 10** |
| **Colorado Mineral & Fossil Show (Spring)**, Holiday Inn, 4849Bannock St., Denver (free admission). | **… April 24-26** |
| **Contin-Tail Rock and Gem Show**, Buena Vista Rodeo Grounds (free admission) | **… August 6-9** |
| **42nd Annual Denver Gem & Mineral Show: "Fossils—Windows to the Past** | **… September 18-20** |

## Club News

About 20 members and guests gathered on Dec. 13 for the annual "Towel Show". First-timers **Jeannette Czekaj** and her mother **Adrienne Pohrte** were welcomed. Congratulations to **Wayne Johnston**, who was elected as our new Treasurer. And many thanks to outgoing Treasurer **Mary O'Donnell**, whose long service to the Club included stints as Secretary and Newsletter Editor.

Congratulations are also in order for **Rich Fretterd**, who displayed several gorgeous smoky quartz/microcline specimens at the December meeting. I didn't see the pieces when Rich found them (on the November field trip), but they were spotless and highly lustrous (and lusted for) by December. Thanks to Rich and to all the others who brought "show and tell" pieces to the meeting.

Thanks, also, to the Club's many accomplished cooks, who provided a wide variety of treats in Dec. I was especially partial to the *stollen*, but then I'm partial to food in general. Several members got some tremendous bargains at the silent auction. Also at the meeting, **Steve Veatch** passed out copies of the abstracts of the Guffey Study from the New Mexico Mineral Symposium to those who helped with the study. A related article from the Flume will be posted on the Club website, which was recently updated by **Dan Alfrey**. Check it out!

Speaking of **Dan Alfrey**, he's looking for suggestions for field trips for this summer. You can e-mail him at alfreydan@aol.com

Our new President, **John Rakowski**, reports that future programs are planned on "Purchasing Lapidary Equipment and Supplies", "The Guffey Study", "Geology and Minerals of the Cripple Creek District", and "Cleaning and Labeling Mineral and Fossil Specimens". John would be happy to entertain other program suggestions or volunteers. Well, maybe he won't entertain the volunteers, but he'd be happy to have some.

**Dues are due! $15 for individuals 18 and older; $25 for a family (parents plus dependents under age 18).** Send them to Lake George Gem & Mineral Club, PO Box 171, Lake George, CO 80827. A membership application is included in this newsletter.

## Ask a mineralogist

Bob Carnein, Editor
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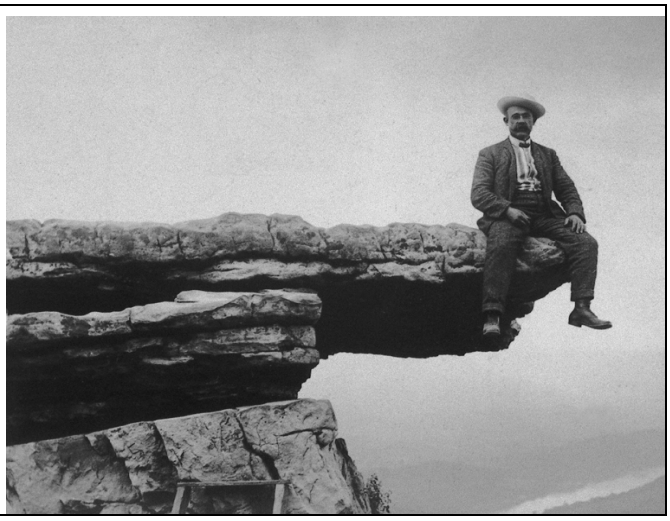
719-687-2739



**Anonymous asks: What's the best way to tell quartz from topaz?**
This is a good question for the central Colorado mineral collector, considering that several great topaz localities and numerous quartz localities occur nearby. When I taught mineralogy, my students commonly had trouble telling these two apart. I'll divide the answer into two parts. "Similarities" includes the overlapping properties that cause the confusion in the first place. "Differences" includes the properties that distinguish the two.

**Similarities**

First, the similarities.

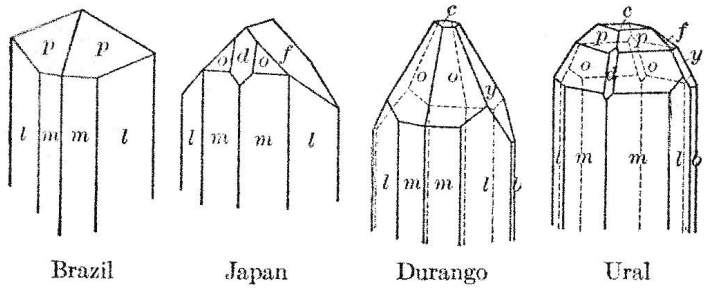
- Both minerals are commonly colorless or lightly colored and translucent or transparent.

- Each has a glassy luster, and they commonly occur together, especially in granitic pegmatite.
- Depending on how they are broken, both may exhibit conchoidal fracture (the curved fracture surfaces seen on flint or glass).
- Both are relatively hard (quartz is no. 7 on the Mohs scale; topaz is no. 8).
- Both commonly occur as crystals, or as frosted, rounded fragments in stream deposits.

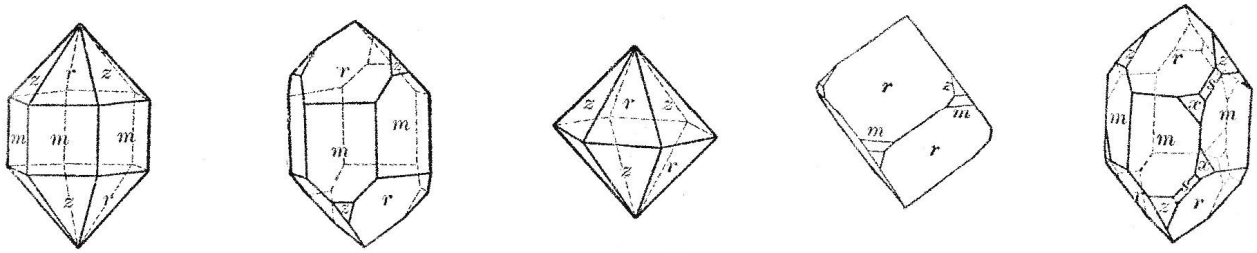
**Differences**

Differences include the following:

- Although the colors of quartz and topaz often overlap, there are some colors that normally are exclusive to one or the other. Purple or pink topaz is very rare (except in some treated stones), compared with purple or rose quartz. On the other hand, the pale blue color typical of topaz from some Colorado localities is almost never seen in quartz. The dark smoky gray-brown stone in my wife's wedding ring, commonly called "smoky topaz", is actually smoky quartz. (OK, I know "diamonds are forever", but she **asked** me for a smoky quartz ring—we first met at Imboden's Café in Lake George, and she doesn't like diamonds). A light smoky or yellowish color may occur in either mineral.
- Although topaz may exhibit conchoidal fracture in certain directions, it has one really obvious cleavage direction (perfect pinacoidal cleavage) that readily separates it from quartz, if it's shown. Quartz sometimes exhibits a poor cleavage, but the breakage surfaces are much less smooth and shiny than those shown by topaz.
- Topaz, though harder than quartz, is also more brittle. If you try to scratch quartz with topaz, the topaz may crush, especially if you use a piece with a sharp edge. So, you have to be very careful when comparing the hardnesses of the two.
- Well formed crystals of quartz and topaz usually are easy to distinguish. Quartz crystals' faces are mostly arranged in sets of 6 or 3, while topaz commonly has sets of 2 or 4 faces. Both minerals commonly exhibit striated faces; in quartz the striations are usually perpendicular to the long axis of the crystal (right photo below), while those in topaz are parallel to the long axis (left photo below). Quartz generally shows one set of steeply inclined terminal faces, but topaz may have several sets or a flat termination, which is very unlikely for quartz (see diagrams).




Typical habits of topaz crystals



Typical habits of quartz crystals.

- If you're lucky enough to have a large sample, you can try the "heft test". Heft a piece of topaz and a similarly sized piece of quartz in your hand, and you'll likely notice that the topaz feels significantly heavier. That's because the specific gravity of topaz is 3.4-3.6, compared to 2.65 for quartz. As a result, topaz sometimes accumulates as frosted, rounded crystals or pebbles in placer deposits, along with other "heavies", such as garnet and magnetite.

Nothing beats experience, when it comes to mineral identification. The more specimens you handle at Club meetings, mineral shows, and collecting sites, the easier it will be for you to tell these two minerals apart. If you aren't sure, ask someone who is likely to know.

**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**