

The Lake George Gem and Mineral Club -

**Club News,
February 2008**



Meeting Time 10:00 AM Saturday, Feb. 9 (winter hours)!

Program for the month:

As we have many new members since he last gave his program on Crystal Symmetry, Richard Parsons has agreed to do the program for us again this month.

Richard is a long-time mineral collector whose fascination with crystals was ignited by a cluster of La Garita Quartz crystals received as a gift over 50 years ago. Richard's presentation will be captioned "**Among us Amateurs – the Basics of Crystal Symmetry**". Not only is symmetry an important element in the beauty and fascination of crystals, it is a valuable tool in identifying minerals. The presentation will start from "ground zero", while still attempting to have something of interest for the more advanced collectors. The presentation includes numerous beautiful pictures of minerals illustrating the various symmetry classes, and Richard will display examples of "real, live" minerals in each system.



**Wulfenite, Silver Bill Mine, AZ
Collection of R. Parsons**

We will also be trying something new: The PowerPoint slide presentation will last about an hour, after which we will break for lunch (brown bag, or a quick trip to a Florissant eatery). After lunch, in lieu of a field trip, we will have a hands-on "lab" session for members who would like to look more closely at crystals and explore their symmetry. We will look at Richard's samples and any crystals you would like to bring in to enjoy and figure out their symmetry. Richard will hang out as long as there are members interested, but we must clear the building by 3:00.

Silent Auction:

For those members or guests who would like to go home with a few new specimens, but who might not feel like they have "trade stock" available, we will also have a silent auction of donated items, the proceeds of which will go to support the club's educational activities. For the silent auction, please bring items you are willing to contribute to the club, and a few dollars to buy things with.

The Guffey Project

Steve Veatch was contacted by the community of Guffey and asked if the LGGMC would like to do a research project on the geology of Guffey including the Guffey Volcano, agates, gold

deposits, the famous Guffey meteorite and any other interesting history we dig up and present it to the community.

At our January meeting, the membership voted to support Steve's proposal that we take a field trip or series of field trips to the area and work in small groups to create a presentation for Fall 2008 for the Guffey Community. This program could be presented to the Lake George and other rock clubs, could also possibly be taken to the Denver show and, if interesting minerals are found, presented at the New Mexico Mineral Symposium as well.

Steve will head the project and groups will perform land reconnaissance, historical research and other tasks. He will need help investigating the geology, listing minerals found in the area, a literature search, Internet search, looking for historical photos at local libraries, etc. Club members could help in any capacity they would like to. We will need to get some maps and explore sites of interest, take pictures, etc. Steve can get someone from Guffey to help with obtaining access to important localities. The end product would be:

Please contact Steve if you would like to be involved in this exciting project! His email address is sgeoveatch@att.net.

Silent Auction:

We will also have a silent auction of donated items hobby-related items, the proceeds of which will go to support the club's activities. For the silent auction, please bring items you are willing to contribute to the club, and a few dollars to buy things with!

Dues are Due for 2008!

If you haven't renewed your membership for 2008, we have attached a renewal application for your convenience. In order to keep your membership and all its benefits (field trips, programs, newsletter ...) coming, renew now! You can mail your renewal application and check to Mary O'Donnell, Treasurer, or bring it to the meeting.

! It's Quartz

The article on the "topaz" arrowhead published in last month's newsletter was released before the author (Steven Veatch) had the opportunity to confirm the collector's identification of the material. Steve reports that tests have revealed this very interesting artifact not to be topaz (it appears to be quartz). A quartz arrowhead is perhaps not as exciting as topaz, but is still a rarity!



Coming Events

Lake George Gem and Mineral Club

... Feb. 9, 2008

The meeting will start at 10:00 AM (winter hours). Richard Parsons will present a program titled "**Among us Amateurs – the Basics of Crystal Symmetry**". After lunch (1:00 – 2:45) there will be a "lab session" allowing participants to explore the symmetry of crystal specimens, "hands on".

2008 Tucson Gem, Fossil and Mineral Shows

... February 5 - 17, 2008

Main show at Tucson Convention Center February 14 –17. Largest Gem and Mineral show in the US! For info, go to <http://emol.org/tucson/gemshow/>

Traveling exhibit on Gold

... February 15–June 8, 2008.

Opens Feb. 12 at the Denver Museum of Nature and Science. Organized by the American Museum of Natural History (NYC), the exhibit will be quite spectacular. This dazzling exhibition contains more than 2,000 pounds of the "shiny stuff,".

Colorado School of Mines Geology Museum - Used book sale!

... February 18-22, 2008

This monster sale of thousands of books and many magazines and journals will run 9-4 daily. There's a wide range of interesting publications for rock hobbyists, mineralogists, geologists, miners and mining history buffs.

Prices on most items will decrease about 50% each day until everything (hopefully) is gone. The Museum address is 1310 Maple Street in Golden. Call Bruce Geller with any questions at 303-273-3823.

Denver Gem and Mineral Club – Jewelry, Gem and Mineral Show

... February 22- 24, 2008

Jefferson County Fairgrounds, 25200 W. 6th Ave., Golden, CO. For info contact Roger Bennett at 303-986-9056 or bighorn18@comcast.net.

Opening of a new special exhibit at the **Western Museum of Mining and Industry, Colorado Springs; "Back to the Future: Uranium"**. 5:00 p.m., reception, light appetizers, beverages, music, & speaker Matt Mathisen. FREE with Reservations by February 14; (719) 488-0880 or info@wmmi.org

... Feb. 21, 2008

Uranium mining issues in Colorado and the World;

... Feb. 28. 2008

Western Museum of Mining and Industry, Colorado Springs; Heritage Lecture Series speaker, Dr. Jim Burnell, in connection with their new exhibit on **Uranium Mining**. 7:00 p.m. Free with reservations made by February 14; (719) 488-0880 or info@wmmi.org

Gem and Mineral Show sponsored by the Fort Collins Rockhounds Club, at Lincoln Center, 417 W. Magnolia St., Fort Collins; see <http://www.fortcollinsrockhounds.org/> for more info.

... Mar. 28-30, 2008

Mining And Minerals: Foundations Of Society

... April 12, 2008

Special class sponsored by the Western Museum of Mining and Industry. The instructor is Steven Veatch, adjunct professor of Earth science at Emporia State University, where he received an MS in Earth science. Saturday, 8:30 am to 5:30 pm. To register or for more information, contact Brad Poulson, Phone: 719/488-0880

New Lake George Member Orientation:

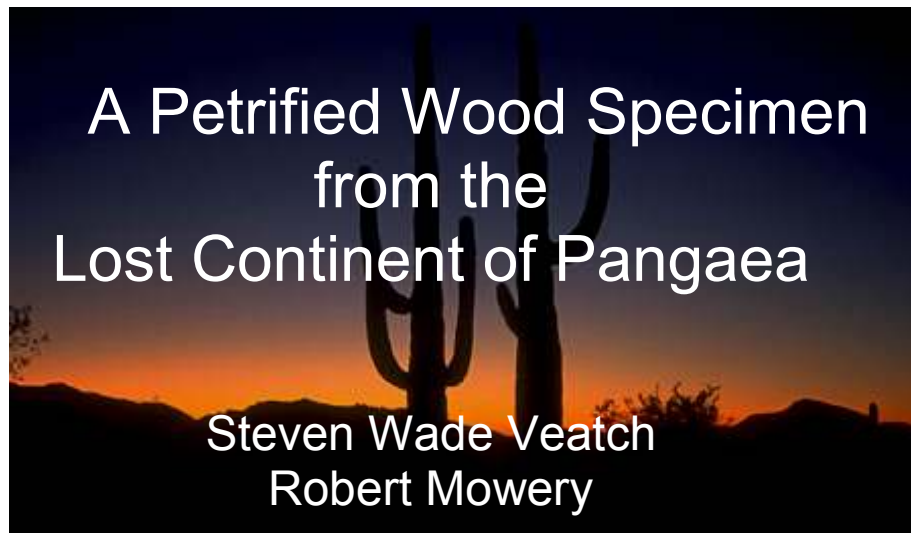
... May 17, 2008

May 17 at the Museum of Mining and Industry north of Colorado Springs will be a full day at no cost to LGGMC members to get hands-on experience with reading maps, GPS, gold panning, collection procedures, etc.

Here is information from the museum's website:

Colorado Prospecting & Mineral Collecting Seminar
10 a.m.-7:00 p.m.

Catch the fever and discover the secrets of mineral collecting and gold prospecting in Colorado's world famous geology! With the assistance of the Gold Prospector's Club of Colorado, the Colorado Mineralogical Society, the Lake George Gem & Mineral Club, and the Friends of the Florissant Fossil Beds, experts in Colorado geology will teach an introduction to mineral collecting and gold prospecting. The course will include a practical hands-on session in the morning, a classroom session in the afternoon, and a keynote speaker in the early evening. Members are encouraged to donate \$5 per person and a \$10 donation is encouraged for nonmembers. For an additional \$10 per person, a box lunch can be reserved or attendees can bring their own picnic lunch to be enjoyed on the Museum grounds. **Space is limited so please RSVP to the Museum at 719-488-0880.**



About 35 miles outside of St. Johns in northeast Arizona an interesting section of petrified wood was recently found. The specimen was situated with a large number of petrified wood fragments that had weathered out of the Chinle Formation in a ravine rimmed with cedar and piñon trees. The petrified wood specimen was carefully removed and lightly brushed off with a toothbrush which revealed a crystalline interior (figures 1 and 2). The crushing force from overlying sediments or the process of decay left an open space in the sample of petrified wood that allowed a cluster of jewel-like crystals of quartz to form (NPS website, 2007).



Figure 1. Petrified wood is a fossil of a woody plant preserved by chemical and physical processes. This specimen, found by Robert Mowery, has a center filled with quartz crystals. Robert Mowery specimen. Photo



Figure 2. Close up view of the crystal core. Robert Mowery specimen. Photo date 2007, © by S. W. Veatch.

The petrified wood specimen is from the Chinle, a thick and expansive rock formation that occurs across Arizona, Nevada, Utah, western New Mexico, and western Colorado. The Chinle Formation was laid down in the Late Triassic; a prehistoric time of floodplains, deltas, and marshes at the western edge of Pangaea—the super continent that existed 300-200 million years ago (Daniels and Dayvault, 2006). Specimens of petrified wood serve as a window to ancient forests and provide a fascinating view of lost worlds.

The Petrified Forest Member of the Chinle Formation is rich in petrified wood and is known for the so-called “rainbow wood” of brilliant colors (NPS website, 2007). This member contains the Petrified Forest National Park’s petrified logs. The southern portion of the Chinle reaches a maximum thickness of just over 520 meters (1,706 feet). At the Petrified Forest National Park the Chinle is approximately 400 meters (1,300 feet) thick. The formation was named for the Chinle Valley in Apache County, Arizona.



Figure 3. The top of the specimen shows the details of the wood preserved by the process of permineralization from minerals (including silica from volcanic ash) in the groundwater. Robert Mowery

Certain conditions must exist for petrification to occur (table 1). After rapid burial, the wood is transformed by a process called permineralization. Groundwater, enriched in silica, permeates wood and precipitates silica within wood cells (figure 3). Silica, in the form of silicon dioxide (SiO_2), or quartz, is the most common replacement mineral (Teachout, 1995).

Conditions Required For Petrified Wood	
Burial	Rapid burial below the water table.
pH	A pH of 5 or 6 is favorable for polymerization of silicic acid which replaces wood and prevents chemical breakdown of cellulose in the wood.
Silica source	An abundant source is required, generally from a volcanic source (lava flows, tuffs, ash).
Temperature	Plant tissues break down at temperatures greater than 212°F (100°C). Fungal activity stops at temperatures less than 30°F (4°C) and more than 104°F (40°C). Fungal activity causes rotting of wood and prevents detailed petrification.
Sedimentary environment	A basin for deposition is required.
Time	The process is very slow, probably taking millions of years.

Table 1. Modified from Daniels and Dayvault, 2006

Specimens of petrified wood are important fossils. Together with other fossils and the surrounding rocks they reveal prehistoric ecosystems and ancient climates. Petrified wood, just as all fossils, is a limited resource that reveals prehistoric worlds. Fossil collectors must have permission from landowners in order to collect fossils from private lands. Since regulations on public lands vary, the collector should contact the land manager before collecting any specimens.

References cited:

Daniels, F.J. and Dayvault, P.D., 2006. *Ancient Forests: A Close Look at Fossil Wood*, Western Publishing Company, Grand Junction. 450 p.

NPS Website, 2007. *Petrified Wood*. Retrieved December 9, 2007, from Petrified Forest National Park Web site: <http://www.nps.gov/pefo/naturescience/petrified-wood.htm>

Teachout, G., 1995. *Petrified Wood of South Dakota*. Retrieved December 9, 2007, Web site: <http://www.northern.edu/natsource/earth/Petrif1.htm>



**Wulfenite, China
Collection of R. Parsons**

**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 2008 are:

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Lake George Gem and Mineral Club
Box 171
Lake George, Colorado 80827

MEMBERSHIP RENEWAL APPLICATION - 2008

Name(s) _____

Address _____ City _____ State _____ Zip _____

Telephone () _____ - _____ E-mail _____

Names and ages of dependents: _____

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.

I hereby agree to abide by the constitution and by-laws of this club, which I will receive at the next regular meeting following receipt of dues.

Signed _____ Date: ____/____/____

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 _____ The Lake George Show _____
Club Officer _____ Programs _____ Field trips _____ Refreshments _____

Programs or Field Trips I would like to see this year:

