

The Lake George Gem and Mineral Club - *Club News, January, 2008*



Meeting Time 10:00 AM!

Annual Pot Luck (Second Attempt)!

After inclement weather forced cancellation of the December meeting, we have rescheduled the pot luck party and program to January. The club will furnish drinks, plastic utensils, and paper bowls/plates. Please bring a dish of your choice (main or side dish, salad or dessert) to share with the group.

Program for the month:

Steven Veatch, Geologist and long-time member of the Lake George club, will speak about a recent [discovery of dinosaur footprints in El Paso County](#).

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!

It's that time again. 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.

Remember Last Summer?



View of Climax Mine.

Last August, 13 Lake George members attended the Leadville Field Symposium sponsored by the Friends of Mineralogy, Colorado Chapter.

Ingrid Hamilton took a number of great pictures along the way. First stop? The famous Climax Molybdenum Mine. Pictured at left, several participants searching a high-grade ore pile for specimens of molybdenite, pyrite, fluorite and other minerals.

Photo Aug. 2007, by Ingrid Hamilton.

Coming Events

Lake George Gem and Mineral Club

... January 12, 2008

Annual Pot Luck. (postponed from December) There will be a silent auction and another great presentation by Steven Veatch. The meeting will start at 10:00 AM (winter hours).

Science and nature writing workshop (K-12)

... February 2, 2008

9:00am-5:30pm, Cripple Creek Park & Recreation. Instructors Steven Veatch and Don Miranda, local authors. Registration Fee: \$49, includes certificate of completion. To register or for more information, contact Cripple Creek Park & Recreation, 719/689-3514

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/>

MINING AND MINERALS: FOUNDATIONS OF SOCIETY

Special class at the Western Museum of Mining and Industry

This class will explore Colorado's mining heritage, investigate historic mining and milling (including a one-of-a-kind virtual tour of the ghost town of Gilman and the associated Eagle Mine), examine modern mining methods, look at environmental considerations, and become familiar with available mining educational resources. There will be special tours of the mining museum during the course. The instructor is Steven Veatch, an adjunct professor of Earth science at Emporia State University where he received an MS in Earth science and has published over 100 articles and professional papers on geology and regional mining history. The course fee of \$50 includes all materials and a box lunch (\$40 for WMMI members). For an additional fee of \$30, participants may earn 0.5 graduate-level semester credit from the Colorado School of Mines. The credit is optional but is applicable for teacher license renewal in the State of Colorado and is generally accepted elsewhere. Class date: **Saturday, April 12,**

8:30 am to 5:30 pm. To register or for more information, contact:

Brad Poulson, Western Museum of Mining and Industry, Phone: 719/488-0880



So many mine dumps, so little time! Photo Aug. 2007, by Ingrid Hamilton.



A Topaz Arrowhead Found in the Heart of Ute Hunting Grounds

By
Steven Wade Veatch

The Utes or the “Mountain People” once used the Florissant-Lake George area as their hunting grounds. They left evidence of their use scattered on the landscape: arrowheads, stone tepee rings, medicine wheels made from rocks, and other tell-tale signs. Occasionally a new artifact is found in this beautiful land of deep green forests, quiet aspen groves, and backcountry streams. Recently, an arrowhead was found in the Florissant-Lake George gem fields on a private mining claim (Amanda Schaak, pers. comm.). This arrowhead is unusual—it is fashioned out of topaz (figures 1 and 2), one of the local gemstones (Amanda Schaak, pers. comm.).

Topaz is not commonly used for arrowheads. The preferred local material for arrowheads and stone tools was jasper (figure 3). Other materials used in the Pikes Peak region include petrified and opalized wood, smoky and clear quartz, obsidian, rhyolite (Wall Mountain Tuff), chalcedony, flint, agate, high-quality chert, and quartzite. Topaz is one of the hardest minerals (8 on the hardness scale) found in nature. Topaz from this area is generally clear or a pale blue. This area also yields remarkable crystals of amazonite and smoky quartz.

In historic times the Utes lived in the mountains and valleys of Colorado, Utah, and parts of New Mexico and Arizona (Lamar, 1998). They were a relatively small tribe considering the vast area they controlled. The Utes were composed of a number of distinct bands: The Pikes Peak area was home to the Tabeguache band of Utes.

The Utes traveled through the Pikes Peak area on several different trails, including the Ute Pass Trail—one of the oldest documented routes of North American Indians (Pettit, 1990). Ute Pass—called the “doorway into the Red Earth Mountains” by the Utes—winds through Garden of the Gods where the Utes spent winters. The Ute Pass Trail continues on through Manitou Springs before going on into the mountains.



Figure 1. A projectile point fashioned from gem-quality clear topaz was found on private property in the Florissant-Lake George crystal area of Colorado. Photo date 2007, © by A. Schaak.



Figure 2. Close-up view of the topaz point. A corner notch is broken off. A flaking pattern along the worked edges can be seen. This unusual artifact may have been used in ceremonies. Photo date 2007, © by A. Schaak.

The Utes would remain in one area several months each year, hunting game and gathering seasonal plants, nuts, and berries.

The famous Ute chief Ouray (1833-1880) and his wife Chipeta (1843-1924) were part of a large encampment each year near Florissant. This small mountain town had been established in 1870 by Judge James Castello as a Ute Trading Post. The Ute camps at the Florissant and Lake George area were generally made on high meadows near trees and streams. Each season colorful tepees, decorated with various symbols and figures of warriors and horses, were put up (Kaelin, 1999). This large group of Utes lived amicably with the white settlers in the area. The Indians collected crystals (figure 4) that were valued as medicine stones and traded deerskins and other items with the local homesteaders. The Utes prized freshly baked pies and biscuits obtained in trade from the settlers. This encampment occurred until the Utes were relocated onto reservations in 1880. This was one of Ouray's favorite camping sites. Ouray was an important leader of his people. Acting as their spokesman and peacemaker, he arranged the first treaty between the Ute people and the U.S. government (Lamar, 1998).

Today prospecting and mining for valuable minerals and crystals is ongoing. As these activities continue, the present will, on occasion, intersect with the past upon the discovery of these relics.



Figure 3. This broken-tip point is dusty orange in color and is made from a jasper. Florissant Fossil Beds National Monument specimen no. 519. Photo date 2005, © by S. W. Veatch.



Figure 4. View of Crystal Peak. The Ute people collected crystals from this Florissant landmark. The crystals were used by medicine men in ceremonies and in healing. Photo date 2007. © by S. W. Veatch.

Note: *Archaeological sites and artifacts on public lands are protected by federal law. If discovered, artifacts should be left undisturbed and reported to the federal agency that manages the land.*

References:

Kaelin, C., 1999. *Pikes Peak Backcountry: The Historic Saga of the Peak's West Side*. Caxton Press, Caldwell, ID, 238 p.

Lamar, H.R., 1998. *The Encyclopedia of the American West*. Yale University Press, New Haven, CT. 1324 p

Pettit, J., 1990. *Utes: The Mountain People*. Johnson Books, Boulder, CO. 178 p.

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You might be a rockhound if –

You have ever had to respond "yes" to the question, "What have you got in here, rocks?"

Your idea of a relaxing day is breaking open rocks near Death Valley (or at 13,000 ft. in the Colorado Mountains).

You have an entire shelf of "Roadside Geology" books, and two shelves of "Gem Trails" books.

## Observations on Diamond Crystals

*By James Hurlbut, 2007*

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One of the 92 stable elements found in nature is the element carbon. Its chemical symbol is "C", the atomic number is 6 in the periodic table. Carbon in its pure form is found in two substances, graphite and diamond. Graphite crystallizes in the hexagonal system and may be found as crystals or large masses. Diamond crystallizes in the cubic system and has never been found massive, but always as crystals or crystal fragments.

The basic unit to describe the size of Diamonds is the carat weight:

- 1 Carat 200 Mgr or 3 grains
- 3 Carat 1 gram 437.5 grains
- 146 Carat 1 oz Avoirdupois 480.0 grains
- 160 Carat 1 oz. Troy
- 16 oz. or 1 lb 2336 Carats.

The largest crystal fragment ever found was the Cullinan, which weighed 1 lb 5 1/2 oz or 3106 Carat. It was found at the Premier Mine, Kimberly, South Africa, on January 25, 1905. The largest diamond found in Colorado was 28.2 carats. It was cut into a 16.87 cushion cut gem of light yellow color. This was from the Kelsey lake mine.

Diamonds grow deep in the earth at high temperature and pressure. These conditions exist about 150 miles below the surface. They grow slowly atom by atom when there is an excess of carbon atoms in the rock. When the carbon is used up they stop growing. If, due to convection currents in the molten rocks, the temperature or pressure changes there may be an excess of carbon and the diamonds begin to grow again. If, due to changes, the solution becomes deficient in carbon the diamond will begin to dissolve.

Now we come to a peculiar characteristic of crystals, namely; ... the attraction of the atoms to each other, and therefore the tendency of growth, seems to be greater in certain directions than in another direction. On the other hand, in certain directions, the tendency of "solution" (Dissolving Power) is greater than in others. Each crystal form has its own peculiar, preferred direction of growth as well as dissolution. The crystallography of diamond crystals and the arrangement of the atom in the lattice cause some crystal faces to have a stronger attraction for the carbon atoms than others.

The directions are crystallographically defined through the faces that lie in those directions. Accordingly, we have main growth as well as many solution faces. These are, at the same time, the most important crystal faces. The directions of growth or solution are normal (perpendicular) to the face. On the diamond the main growth is the octahedron face, the main dissolution faces are the cube face and the dodecahedron face.

As said before, when the mother liquor (the magma) is neutral, no particles are added or taken from the already formed diamonds. When the magma is not neutral, particles are added to the octahedron or taken away from the direction of the cube and dodecahedron faces. (For this reason), octahedrons with rounded edges (are) frequently observed.

**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:**

Maury Hammond, President  
PO Box 549  
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719-687-2702  
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John Rakowski, Vice President  
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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:**

\_\_\_\_\_  
\_\_\_\_\_