

# The Lake George Gem and Mineral Club -

**Club News,**  
**February, 2012**



**Regular Meeting of the Lake George Gem & Mineral Club**  
**Saturday, February 11, at 10:00AM**  
**Lake George Community Center**

Our program for January will be a video tour "**behind the scenes at the Smithsonian**" by **Jeffrey Post**, Curator of the US National Gem and Mineral Collection (National Museum of Natural History) since 1991. Dr. Post gave this presentation at the Dallas Mineral Symposium in 2011.

## Coming Events

- Free "Lizards and Snakes" EDUCATORS ONLY** night at Denver Museum of Nature & Science; online registration at Denver Museum website ... **Feb. 6**
- Columbine Gem & Mineral Society** monthly meeting, 6:30PM, Mt. Shavano Manor, 525 W. 16<sup>th</sup> (at J St.), Salida. ... **Feb. 9**
- Tucson Gem & Mineral Show**, Tucson Convention Center, 260 S. Church St. Go to [www.tgms.org](http://www.tgms.org) for information. ... **Feb. 9-12**
- USGS Rocky Mountain Seminar Series**, (topic TBA), by Pete DeCelles; 10:30AM, Bldg. 25 auditorium, Denver Federal Center, Public Welcome ... **Feb. 14**
- Colorado Springs Mineralogical Society** monthly meeting, 7:30PM, Colorado Springs Senior Center, 1514 N. Hancock. ... **Feb. 16**
- Pueblo Rockhounds** monthly meeting, 7:30PM, Westminster Presbyterian Church, 10 University Circle. ... **Feb. 16**
- Colorado Scientific Society**, (topic TBA), 7PM, Shepherd of the Hills Presbyterian Church, 20<sup>th</sup> St. at Simms St., Lakewood; go to <http://www.coloscisoc.org/> for info. ... **Feb. 16**
- Annual Book Sale at CSM**, 9-4PM daily, CSM Museum and Arthur Lakes Library; call 303-273-3815 for info. ... **Feb. 20-24**
- Denver Gem & Mineral Guild Show**, Jefferson Co. Fairgrounds, Golden. Contact Joe Payne (303-783-0221) for info. ... **Feb. 24-26**
- USGS Rocky Mountain Seminar Series**, "Gold Metallogeny and Global Tectonics", by Richard Goldfarb; 10:30AM, USGS Bldg. 25 auditorium, Denver Federal Center ... **Feb. 28**
- Rocky Mountain Federation of Mineralogical Societies Convention and Show**, Creative Arts Bldg., NM State Fairgrounds, Albuquerque (advance registration by March 1.) Go to [www.RMFMS.org](http://www.RMFMS.org) for information. ... **March 16-18**
- Ft. Collins Rockhounds Annual Show**, Larimer Co. Fairgrounds, Ft. Collins. Contact Dave Halliburton (970-493-6168) for info. ... **March 23-25**

**Colorado Mineral and Fossil Spring Show**, Ramada Plaza Hotel (formerly Holiday Inn), 4849 Bannock St. (frontage road on west side of I-25, north of I-70), 10-6 Fri., 10-5 Sun.; free admission and parking.

... **Apr. 20-22**

**Colorado Mineral Society Annual Auction**, Holy Shepherd Lutheran Church, 920 Kipling St., Lakewood. Contact Richard Nelson ([rsnelso@gmail.com](mailto:rsnelso@gmail.com)) for info.

... **May 5**

### Club News

❁❁ The January 14 meeting was attended by about 20 members and guests, including **Dee and Roger Loest**. We received an excellent, detailed account of work at the Cloudbait Observatory, in Guffey, by **Chris Peterson**, who is a research associate at the Denver Museum of Nature and Science. Over a period of 10 years, Cloudbait has recorded over 95,000 meteoroids, 47,000 of which are documented online. They have also recorded 5500 fireballs and participated in several ground searches for meteorites. The observatory is a volunteer effort with no "official" funding. After the talk, President **John Rakowski** reported that the Club Library is looking for a new home. **Dick Lackmond** announced that the new 24-inch saw is ready to go in the Lapidary Workshop. He also reported that the "Tri-Club" fieldtrip committee will meet in mid-March; we may want a representative there so we can coordinate our trips with theirs. Anyone with field-trip suggestions should contact **Richard Kawamoto**. Our annual scholarship for Park or Teller County students will be awarded in March. Anyone interested in applying should contact **Jo Beckwith** or **John Rakowski**.

❁❁ We're looking forward to a talk about Colorado geomorphology (a big word that means the study of landforms and landscapes) in March.

❁❁ We received the following note about a new gem/mineral project that is looking for donations. It came from John Adam Barwood ([ibarwood@gmail.com](mailto:ibarwood@gmail.com)).

"MineralCollecting.org Presents: Minerals - A 3D HD Journey" was recently approved by the team at Kickstarter.com, a crowd funding website, and we're offering some fun rewards in exchange for contributions toward getting this important project funded.

My name is John Adam Barwood and I'm a long time collector and enthusiast. I used to run MineralCollecting.org, and I've started rebuilding the website to focus on creating a documentary video series about gems, minerals, and mineral collecting.

We have until March 6th at 11:01 PM EST to raise \$4000 for the project. Kickstarter is an all or nothing project funding site, so we need to reach the mark to get funded. It's quick and easy and we're in dire need of backers! You can contribute toward this project by visiting the project page online by typing the URL address below into your browser's address. Every dollar counts! A variety of payment methods are accepted and no charges are collected unless/until the project reaches its goal before March 6th.

"'MineralCollecting.org Presents' is a comprehensive 3D HD documentary video series journeying across the globe and deep into the ground to discover and document gems and minerals. From the ground to the museum, viewers come along for the fun, laughs, beauty and breathtaking earthly creations."

For the Project page, more info, and to make donations, go to:  
[Kickstarter.com/projects/1119735507/mineralcollectingorg-presents-minerals-a-3d-hd-jou](http://Kickstarter.com/projects/1119735507/mineralcollectingorg-presents-minerals-a-3d-hd-jou)

Our project video submission on YouTube: [Youtube.com/watch?v=8KO5Q0TCMVI](https://www.youtube.com/watch?v=8KO5Q0TCMVI)

Follow the project on Facebook: [Facebook.com/pages/MineralCollectingorg-Presents-Minerals-A-3D-HD-Journey/161332313969650](https://www.facebook.com/pages/MineralCollectingorg-Presents-Minerals-A-3D-HD-Journey/161332313969650)

❄️❄️ **Richard Kawamoto** reports that our Lapidary Workshop will be open as usual on Wednesday, February 8 at 6PM. It will also open on Sunday, Feb. 19 at 1PM; but, **if nobody is there by 1:15**, it will close. After **Fred Ceconi's** great wire-wrapping workshop in December, we're hoping for a couple more workshops from Fred later this year.

❄️❄️ Field-trip coordinator **Richard Kawamoto**, [kawahome@hughes.net](mailto:kawahome@hughes.net) is starting to line up some great trips for this summer. If you have suggestions for new trips or for ones you liked so much that you want to go back, please contact Richard.

❄️❄️ **Here are this month's "Bench Tips" from Brad Smith:**

### **IDENTIFYING UNMARKED SOLDERS**

There are plenty of ways to mark your sheet or wire solders, but suppose you forgot to mark them and have a couple that you can't identify. The answer is to compare the melting temperature of the unknowns with that of a known solder. What I do is take a thick scrap of copper or nickel and arrange several solders on it. Ideally, I would have a sample of easy, medium, and hard known solders surrounding the unknown solder. Then I heat the plate from the bottom and watch the order in which the solders melt.

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### **INEXPENSIVE ELECTRIC WAX PEN**

You can make your own wax pen from a small soldering iron plugged into a light dimmer switch for heat control. Both components are easily found at Radio Shack, a big hardware store or at Harbor Freight. Set the dimmer control just hot enough to melt the wax without producing any smoke.

Look for a soldering iron of around 25-30 watts. File the tip to the shape you prefer, or, even better, get a soldering iron with replaceable tips. Then you can make several tip shapes for different tasks.

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More BenchTips by Brad Smith are at: [groups.yahoo.com/group/BenchTips/](https://groups.yahoo.com/group/BenchTips/) or [facebook.com/BenchTips](https://www.facebook.com/BenchTips).

### ***Pebble Pups Corner***

Pebble Pups received a nice letter from Linda Sanders, of Colorado Springs School District 11, congratulating them for publication of their article on Egyptian artifacts and inviting them to an awards ceremony in Colorado Springs on February 8.

**Bob Carnein** will present the February program, which will cover "**Basic Mineral-Identification Skills**". We will meet at the regular time, on **February 21**. **Please bring the following tools: a small glass jar filled with vinegar; a pocket knife; a small hammer; a magnifying glass**

**(if you have one).** If you attended this program 2 years ago, please bring your **hardness set of minerals**. Free mineral samples will be supplied for all attendees!

Remember, parents and other guests are welcome to attend Pebble Pups meetings, which are normally held at **6PM on the third Tuesday** of the month in the **Lake George Community Center**.

## NOTES FROM THE EDITOR

Bob Carnein, Editor  
ccarnein@gmail.com  
719-687-2739



As some of you may remember, I have written a couple of articles in the past about minerals of the Mohs hardness scale. Articles on talc, gypsum, and fluorite appeared in the March, 2011, November, 2011, and November, 2010 newsletters, respectively. (No, there's no logic to the order—sorry about that!) Here's a short article about number 3: calcite.

## Capital Calcite

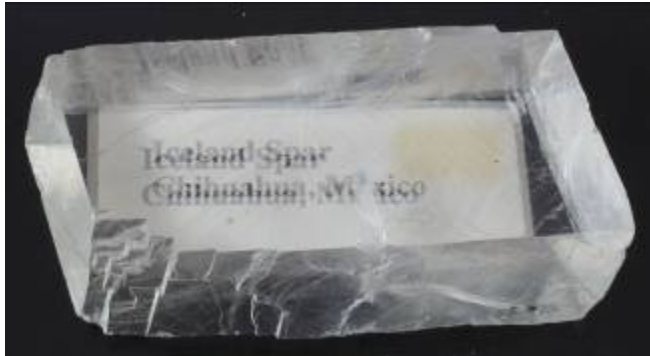
by Bob Carnein

Calcite,  $\text{CaCO}_3$ , is the commonest carbonate mineral, being found in all 3 major rock types as well as in many soils. It is number 3 on the Mohs hardness scale. Next to quartz, calcite is the mineral that a collector is most likely to find in well formed crystals. Like quartz, it comes in many colors, and its crystal habits are so varied that some collectors are happy to collect nothing but calcite.



Calcite crystals from (left to right) Viburnum, MO; Webb City, MO; and Irai, Brazil.  
(Carnein collection and photos)

Despite its varied crystal habits, calcite is pretty easy for even the beginner to recognize. It's harder than a fingernail, unlike gypsum, which it may resemble. Transparent fragments exhibit double refraction in most orientations. Its perfect rhombohedral cleavage allows it to break into pieces whose sides are parallelograms. This may even be visible on unbroken pieces. Several other carbonate minerals (e.g. dolomite, siderite, ankerite, and rhodochrosite) break this way, but one can usually distinguish calcite by applying a drop of dilute hydrochloric (muriatic) acid. Calcite bubbles vigorously when acid is applied. If powdered, it will even fizz in vinegar.



**Calcite showing double refraction (left) and typical cleavage (right). Left is from Mexico; right is from near Pike San Isabel Village, Park Co., CO. (Carnein collection & photos)**

You are likely to encounter calcite under a variety of conditions. It is the main constituent of limestone, a large group of sedimentary rocks with varied textures and origins. As a result, limestone quarries are often good sources of fine calcite crystals. Massive calcite of secondary origin commonly fills fractures in bedded limestone. If you have visited the Holcim quarry, near Fountain, you may have found large white calcite crystals in irregular cavities in the Niobrara Limestone. Limestone quarries all over the world have long provided excellent crystals, often associated with dolomite, celestine, pyrite, and fluorite, among other minerals.



**Niobrara Limestone, Holcim quarry;**



**Calcite crystals from Holcim quarry (Colorado**

**Mineral Society photos)**

Calcite is also a common constituent of concretions found in other sedimentary rocks, and of speleothems—the stalactites, stalagmites, and other water deposited formations of caves and caverns. Here, as in the veins in limestone layers, calcite forms by secondary processes. First, calcite is dissolved as ground water laced with  $\text{CO}_2$  percolates downward from above. When the water reaches an opening,  $\text{CO}_2$  is released. This changes the pH, decreasing the solubility of  $\text{CaCO}_3$ . The dissolved  $\text{CaCO}_3$  slowly precipitates to form the features that make caves so fascinating.



Speleothems (Wind Cave National Park)  
(karstwaters.org)



Septarian concretion with calcite  
(picfun.ru)

Metamorphic rocks often contain calcite, though well formed crystals are rare. Metamorphism of limestone produces a variety of rocks, depending on how chemically pure the original limestone was. A simple calcite limestone produces, when heated and squeezed, calcite marble like that found in Marble, Colorado. If the original limestone contained clay, silt, magnesium, or other impurities, the rock that results from metamorphism may contain a wide variety of calcium and magnesium rich silicate minerals. Examples include the calcium garnets (grossular, andradite), the calcium silicate wollastonite, and a whole series of complex silicates containing Ca/Mg (e.g. vesuvianite, titanite, epidote, tremolite, and phlogopite). The metamorphic petrologist calls such rocks *lime-silicate rocks*. Many lime-silicate rocks can be recognized by the pistachio-green color imparted by epidote.



Marble (about.com)



Lime-silicate gneiss (answers.com)

Even igneous rocks may contain calcite. A rare class of rocks, called *carbonatites* results from intrusion or eruption of carbonate rich magmas and lavas. In Colorado, the Iron Hill (Gunnison Co.), Gem Park, McClure Mt., and Denver Creek (Fremont/Custer counties) bodies have been studied, and the carbonate breccias that some readers have seen, associated with amethyst at the New Hope deposit, Fremont Co., are part of a halo around the McClure Mt. complex (Heinrich and Shapirio, 1996).



Twinned calcite crystals from (left to right) Russian Federation; India; Pennsylvania.  
(Carnein collection and photos)



Twinned calcite crystals from Madagascar (left); China (right); and Tennessee (bottom)  
(Carnein collection and photos)



Reference:

Heinrich, E.W., and J.R. Shapirio, 1966, Alkalic rocks and carbonatites of the Arkansas River canyon, Fremont County, Colorado. 3. The amethyst carbonatites: *American Mineralogist*, vol. 51, July, 1966, p. 1088-1106.

Here's a contribution by **Steve Veatch**, our Poet Laureate. Steve has a new project to encourage Pebble Pups to try their hands at poetry.

## **The Student Paleontologist: on the Pathway to Discovery**

By Steven Wade Veatch

Ancient worlds, long lost and hidden behind the murky mists of time,  
wait for students to discover new answers most sublime—  
to inspect, reconstruct and peer into an ancient, primordial world:  
allowing student paleontologist's answers to be inexorably unfurled.

The light of knowledge burns with passion by young scholars so enthused  
as the exciting tools of these new scientists are imaginatively used  
to study fossil bones, petrified trees and cones, and an impression in shale,  
pollen and spores, tree ring's revelations, even a trace fossil dinosaur trail.

The fossil materials are brought back carefully in jackets to the paleo lab,  
where workers clean and stabilize fossils such as the impressive petrified crab.  
Carefully examined with a microscope and viewed on a digital screen;  
observations are made, hypothesis created—all based on what is seen.

Only a very small part of the fossil world has been currently uncovered—  
while many more fossils of all sizes and shapes are waiting to be discovered.  
Now it's the student's turn to work and ponder the pieces of data and reconstruct  
these ancient worlds and add their findings to science that will eternally instruct.





**DUES ARE DUE! DUES ARE DUE! DUES ARE DUE! DUES ARE DUE!**

**Lake George Gem and Mineral Club**

Box 171

Lake George, Colorado 80827

LGGMClub.org

**2011 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. **Any new member joining on/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**

Rev. Jan. 2011

**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 2011 are:**

**John Rakowski**, President

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