

The Lake George Gem and Mineral Club -

Club News,
May, 2015



Meeting Time 9:00 AM!

Program for the month: **Saturday May 9 Business Meeting followed by field trip.**

We will have a business meeting starting at 9 AM that should finish quickly. We will evaluate three candidates for LGGMC Scholarship awards. The new order of LGGMC hats has been received, and those who pre-ordered and paid Suzanne Core will be able to get their ball caps. After the business meeting, we will offer a short distance field trip accessible to any type vehicle. There will be two stops.

Stop number one involves a 150-yard walk across gentle terrain to visit a dike composed mainly of massive flesh to gray colored barite with minor amounts of purple to blue fluorite, green malachite and blue azurite. Suggested tools are rock hammer, chisel, small shovel, and brush.

The second stop involves a 300-400-yard hike across gentle to moderate terrain to visit a quartz vein containing magnetite crystals. Crystals are found weathered out loose or they can be found in the vein. Bring a magnet for this trip! A rock hammer, chisel and small shovel will also be desirable. Travel time from Lake George is about 25 minutes, mostly on paved road followed by a shorter stretch of gravel road.

The trip leader will be **John Rakowski**, contact him for any questions you might have regarding logistics.

Coming Events

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| <u>Friends of Mineralogy Silent and Live Auction</u> , noon-3PM, Clements Community Center, 1580 Yarrow St., Lakewood; free, and all welcome. ... | May 9 |
| <u>Dinosaur Discovery Day</u> , 10AM-2PM, Dinosaur Ridge, Morrison; Boy Scout Day; go to www.dinoridge.org for details. ... | May 9 |
| <u>"Early Earth vs. the Origin of Life"</u> by Steve Mojzsis, 3PM, Denver Museum of Nature and Science, VIP Room; free to the public. ... | May 12 |
| <u>"Carbonatites and Weathered Carbonatites: What are They and Why do we Love Them So"</u> by Mandy Hutchinson, Friends of Mineralogy Colorado bimonthly meeting, 7PM, Denver Museum of Nature and Science, VIP Room. ... | May 14 |
| <u>Dan's Used Rocks Annual Open House and Mineral Sale</u> , 12296 W. Mississippi Ave. Lakewood; for information, call Dan at 303-986-3647. ... | May 16 |
| <u>Cheyenne Mountain Hike and Field Trip</u> , by Mark Izod; Florissant Scientific Society, contact Beth Simmons, cloverknoll@comcast.net , for details. ... | May 17 |
| <u>Mineral Show/Sale, Rocky Mountain Gem & Mineral Co-op</u> , go to www.rockygems.com for details. ... | May 22-23 |
| <u>Even-Tide Adventure</u> , hike to an old copper prospect at the base of Lookout Mt. ... Contact Pete Modreski pmodreski@usgs.gov for details | May 28 |

Lake George Gem and Mineral Club

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Concepts of Earth Science (K-6) and Geologic Studies of Rocky Mountain Sediments (Grades 7-12) , teachers' workshops at Dinosaur Ridge; fee charged; contact Jerry Cuzella (jerryc49@aol.com) for details)	May 30
Pikes Peak Gem & Mineral Show , Colorado Springs Mineralogical Society, Western Western Museum of Mining & Industry, talks, booths; fee charged (museum free to LGGMC members with membership card)	June 5-7
Contin-Tail at Fairplay , a new rock swap type show; go to www.coloradorocks.org for details.	June 11-14
"Dinosaur Train Comes to Dino Ridge" (mainly for ages 2-7); go to www.dinoridge.org for details	June 19-21
"GEOdyssey Annual Inventory Reduction Sale" 15339 W. Ellsworth Dr., Golden Discounts from 10-50%; go to www.geodyssey-rocks.com for details.	June 20
"Geology Train on Cumbres & Toltec Scenic Railroad" ; fee charged; go to http://cumbrestoltec.com/geology-train/ for details.	June 21
"Rock Sale by John Haney" , 10-6 daily, 4246 Thompson Ct., Denver (books, lapidary material, etc.)	June 10-12
"Gunnison Mining and Mineral Symposium" , Friends of the CSM Geology Museum fee charged; go to https://www.facebook.com/LikeCSMGeoMuseum?fref=ts for info.	July 10-13
Contin-Tail Rock Swap/Gem & Mineral Show , rodeo grounds, Buena Vista; free admission and parking.	Aug. 13-16
"The Dynamic Early Paleozoic World of Colorado" by Paul Myrow, 3 PM, Denver Museum of Nature and Science, VIP Room; free.	Aug. 18
Annual Lake George Gem & Mineral Show , parking lot next to the Post Office, Lake George; free admission and parking.	Aug. 21-23

✓ ✓ **Todd Mattson** sent this photo of garnet (almandine) crystals from Arroya Gulch:



- ✓ ✓ Speaking of Todd Mattson, here's a list of planned field trips, as of May 1:
- May 16: New Hope Amethyst Mine (**Jim Meachum, Jennifer Gerring; Todd Mattson**— contact Todd at tmattsondbc@live.com)
 - May 30: Wigwam Creek claims (**John Rakowski**; rakgeologist@yahoo.com)
 - June 13: Spruce Grove (**John Rakowski, Paul Combs**)
 - June 27: St. Peters Dome (**Paul Combs, Dick Lackmond**)

- July 11: Amazonite/smoky quartz in Lake George area (TBA; **Joe Dorris**)
- July 18: Petra Placer (**Rich Fretterd**; **Richard Kawamoto**)
- August 1: Ace-In-The-Hole (**Rich Fretterd**; **Richard Kawamoto**)
- August 15: Topaz Mountain Gem Mine (fee; **Krystal & Joe Dorris**)
- August 29: South Park Blue Agate (fee; rsvp only; tba; **Dave Harvey**)
- Sept. 12: Goethite Hill (tentative)
- Sept. 26: Holcim Quarry (tentative)

✓ ✓ Here's a Pebble Pups update from **Steve Veatch**:

Both the Colorado Springs Mineralogical Society's Pebble Pups and the Lake George Gem and Mineral Club's Pebble Pups share a website and Facebook to promote their work and their organizations.

Pebble Pups have used the Internet successfully. They have their own website where they post their work, provide updates, and have a place to study for the American Federation of Mineralogical Society's merit badge program. The website is also used by distance students to participate in Pebble Pup activities.

Checkout the Pebble Pups website at:

<http://pebblepups.blogspot.com/>

The Pebble Pups use social media to communicate and share information.

Their Facebook platform has been an important and effective use of the Internet. The Pebble Pup Facebook is at:

<https://www.facebook.com/PikesPeakPebblePups>

Be sure to Like the Pebble Pups on our Facebook.

✓ ✓ And here is the latest installment of "Bench Tips" by Brad Smith (www.BradSmithJewelry.com):

MAGNETIC TOOL BAR

An easy way to keep all your files organized at the bench is to use a magnetic tool strip. They're not expensive and help keep a lot of small tools from cluttering the bench top. I got a couple of them from Harbor Freight for about \$5 each. See <http://www.harborfreight.com> and search on-"magnetic-holder"

My only regret was putting some of my small drills on the magnets. The drills got a little magnetized and now stick together when I carry them in a bottle in my tool box.



SILVER DISCOLORATION

Working with jewelry involves an ever increasing number of skills. Chemistry is one of them that comes into Lake George Gem and Mineral Club

May, 2015

play when dealing with a discoloration on the metal caused by a chemical reaction between it and the environment.

In the case of Sterling silver, there are three discolorations we typically encounter: a tarnish, a fire scale, and a fire stain. Each is different in its cause, in its cure, and in its prevention. All three have to do with the metals in the Sterling alloy (92.5% silver and 7.5% copper) and how they react with oxygen and the heat of soldering or with pollutants in the air over the long term.

Tarnish is a grayish coating that builds up slowly on the surface as a result of a reaction of the silver with sulfur-based compounds in the air. Typically these are pollutants from the burning of petroleum fuels, but they can come from other sources as well. I once tarnished all the silver in my display case by putting a pretty specimen of iron pyrite in with the jewelry. Turns out pyrite has sulfur in it! Sulfur combines with the silver to form a grayish silver sulfide film on the surface.

Preventing tarnish involves keeping sulfur away from the metal. Plastic bags will help, and anti-tarnish strips are available from jewelry supply companies to pack near your items. Tarnish is easily removed by hand polishing with a jeweler's cloth or with one of the products sold for cleaning the good silverware for holiday dinner.

Another way is to remove it chemically. Put a piece of aluminum in the bottom of a dish large enough to contain your piece. Heat enough water to cover the silver. Mix in 2 tablespoons of sodium carbonate per cup of water and pour into the dish. Be sure the silver touches the aluminum. Sodium carbonate is the main ingredient in washing soda. Read the labels in grocery and hardware stores.

The second type of tarnish is called fire scale. It is the dark gray to charcoal colored film that forms on Sterling or other copper alloys like brass or bronze when we heat it with a torch. The copper in the alloy reacts with oxygen in the air to form a dark cupric oxide coating on the surface. Luckily, the oxide is easily removed by dissolving it in a mild acid - generally called a pickle. It's important that we not let fire scale form on a solder joint because it will block the flow solder over the joint.

There are two ways to prevent fire scale. Most common is to use a flux, a borax-based solution applied to the metal before soldering. When melted, borax forms a thin glassy layer that keeps oxygen away from the metal. A second way is to do your soldering on a charcoal block. Together with the flame, charcoal greatly reduces the amount of oxygen in the area being soldered. In either case, oxygen is prevented from reaching the metal, so no cupric oxide fire scale is formed.

A second oxide can also be formed when soldering copper or a high copper content alloy like bronze or brass. It's called cuprous oxide and is reddish in color. That's why a black looking piece you put in the pickle sometimes comes out red. Problem is that while the black cupric oxide is dissolved by a pickle, the red cuprous oxide is not. The discoloration can be sanded or polished off, but an easier way is to use a "super pickle". This is a mixture of fresh pickle with a healthy shot of hydrogen peroxide from the local store.

I've saved the worst form of discoloration, fire stain, for last. Think of fire scale (above) as like getting dirt on your shirt that you have to wash off. Fire stain is like getting ink on it. The discoloration is not just on the surface, it seeps down and stains the material. Fire stain happens when we heat a piece of silver too hot, too long, and/or too many times.

Fire stain occurs when the oxides start to build up below the surface of the metal. You generally don't notice it until after polishing. It appears as a darker area of the surface and is easy to spot when viewed under light bounced off a piece of white paper. Because fire stain is below the surface, there's no easy bench tip solution. Depletion gilding may work for some pieces. Otherwise, removing it calls for sandpaper and aggressive polishing.

A much better approach for a piece that will require a large number of solderings is to protect the metal from developing fire stain by applying liberal amounts of a fire coat. Regular soldering flux will provide some protection but is not as effective as preparations made specifically for the task. Jewelry supply companies offer several commercial solutions, but my favorite is the Prips mixture in alcohol. I use it every time I intend to do more than two solderings on a piece.

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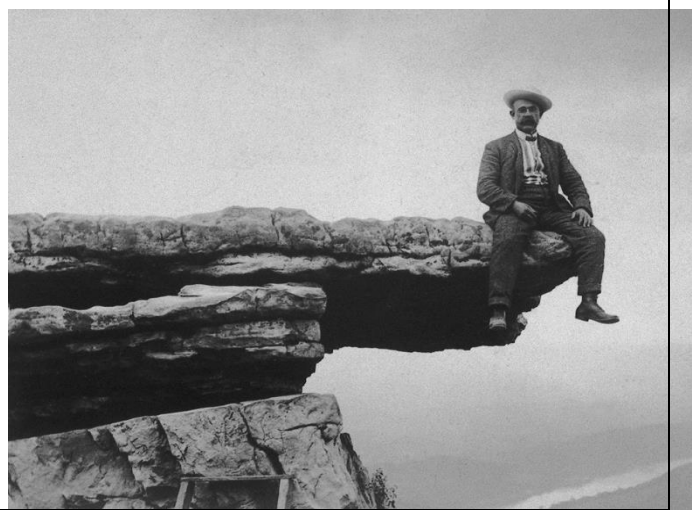
Get all 101 of Brad's bench tips in
"Bench Tips for Jewelry Making" on Amazon

Notes from the Editor

Bob Carnein, Editor

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Prolific Pikes Peak Pebble Pup, **Jack Shimon**, is 10 and lives in Colorado Springs. Recently, he has been collaborating with a Russian scientific illustrator, and this is one of the results. Thanks to Jack and to **Steve Veatch**, who keeps these kids busy!

An Unexpected Find

By Jack Shimon, age 10
Pikes Peak Pebble Pups
First Historical Fiction Piece

It was a sweat dripping summer day in the Badlands, my favorite National Park, but my dog Comet didn't care about that. Three days into our camping trip we had explored the park, enjoyed a ranger talk about the constellations in the amphitheater, seen the stars through our telescope, and we were packing up to leave. Well, mom and dad were. Comet and I were playing fetch. The campground was mostly sand and grass so I could easily throw the ball as far as I wanted to and see Comet while he chased it. But on my last throw Comet didn't come back. I jogged over to find him and picked up the ball along the way. Comet was in a small ditch excitedly wagging his tail and digging in the sand. As I reached him he turned around and had what looked like a long stick in his mouth. On closer inspection I saw that it was a bone, long and slightly curved, easily identified as a rib...



Illustration by Andrey Atuchin
<http://olorotitan.deviantart.com/>

...Badlands Park, over 30,000 years ago, although it wasn't called that at the time. Billy was a young bison living in the Ice Age. With his thick fur to stay warm he relished snow days like any young kid that ever lived, human or bison. He lived near a water hole with his family.



Illustration by Andrey Atuchin
<http://olorotitan.deviantart.com/>

He did not listen but he could run, and he was always running away from his mom to play. Six years later Billy was King of the Herd. One day Billy heard a scream that he recognized as his mom's. He rushed to the noise and saw a hungry Saber Tooth Cat ready to feast on fat bison flesh. It was circling the herd trying to get to the children.



Illustration by Andrey Atuchin
<http://olorotitan.deviantart.com/>

Billy stamped the Saber Cat and injured his leg in the process. But he did save the herd- that day. A few days later Billy knew that he wasn't going to survive his injury. As he had done so often before, he wandered off, this time slowly limping, knowing that he wouldn't return to the herd. Billy was never seen again... Until, I found this rib bone on a camping trip with my dog Comet.



Note: Jack Shimon won this Ice Age rib bone by correctly guessing that it was a rib bone of a large animal in a recent Pebble Pups meeting. It measures 20 inches straight line from end to end. It was fun to think of the animal it once belonged to and that became the inspiration for Billy's story.

References:

http://en.wikipedia.org/wiki/Bison_latifrons

Special thanks to Paleo-artist Andrey Atuchin for agreeing to illustrate this story.

Lake George Gem & Mineral Club
Box 171, Lake George, Colorado 80827
www.LGGMClub.org

Date: _____/_____/20____

Name(s) _____

Address _____ City _____ State _____ Zip _____

Telephone () _____ - _____ Email (please print) _____
(required to receive newsletter and field-trip info)

Names/ages of family members (if family membership) _____

Dues for Jan 1 through Dec. 31 each year are as follows (please check membership type):

____ Individual (18 and over).....\$15.00

____ Family (includes dependents under age 18).....\$25.00

Dues are due on or before March 31. Members with unpaid dues will be dropped from the roster on April 1. On/after **August 15**, dues will be reduced to half price for **NEW members only**.

I agree to abide by the Club constitution, by-laws, and rules regarding field trips and club claim visits.

Signed _____ Date: _____/_____/20____

I am or have previously been a member of Lake George Gem & Mineral Club. Yes____ No____

My interest areas include (check all that apply): Minerals____; Fossils____; Lapidary____;
Micromounts____; Colorado geology____; Pebble Pups (ages 7-17)____; Mining History____;
Crystallography____; Other _____

I am willing to give a talk/presentation to (the Club) or (Pebble Pups) on _____
_____ and/or lead a field trip to (list) _____

I am willing to participate/help in the following ways (can choose more than one): Club Officer____;
Newsletter Editor/Writer____; Local Show/Show committee____; Nominating Committee____;
Winter Programs Committee____; Field Trips____; Art (badges)____; Membership Coordinator____;
Website Assistance____; Pebble Pups____; Other (be specific)_____

Questions about the Club or Activities? Visit the website or contact a Club officer.

Updated 05/01/2015

Lake George Gem & Mineral Club
PO Bo 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 opportunities to learn about Earth science, 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 on 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 10:00AM. From April through October, we meet at 9:00AM, 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 2015 are:

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