

Lake George Gem & Mineral Club

Club News, July, 2023



Please Note: The July meeting will take place in the gym of the Lake George Charter School at 9AM. We originally thought that we could not meet at the school in July.

“How I Became the Fossil Guy”

LGGMC member **Chad McCarty** will talk about his experiences as a fossil collector in Florida and Colorado, leading up to the recent discovery of dinosaur remains near Canon City. He will include an account of how he got interested in minerals and fossils in the first place, and will show off some of the cool things he has collected over the past few years.

Biography:

Chad “The Fossil Guy” McCarty became interested in Rockhounding after dropping out of college and finding all sorts of calcified invertebrate fossils in the Florida Limestone aggregates when working construction. Intrigued by Florida’s modest selection of showy calcite clam and agatized coral specimens, he traveled the state collecting rare specimens before moving to Colorado last year to pursue higher quality minerals and larger dreams. Chad currently works as a bartender in the restaurant industry, but earns side income through the buying and resale of all types of minerals. He is also an artist and fabricates unique sculptures using welding processes and scrap metal.

✎ Speaking of fossils, some of you know that, after today’s meeting, Club members will have a chance to collect at the **Florissant Fossil Quarry**, on Teller Route 1, just south of Florissant. The trip will be led by your newsletter editor, and I have been promised that we will have a private collecting area and a discounted entry rate of \$15 per person. There are still a few slots open—it isn’t too late to register for this trip. **Go to the website, if you’re interested.** **Bob Carnein** will provide a short introduction to the geology, to get you oriented, and a couple handouts will be provided. For more information, contact Bob at ccarnein@gmail.com.

- At our October meeting, **Dan Mira** will take us on a journey to the beautiful Maramures region of Romania, which lies on the border with Ukraine. Home of numerous mines going back at least to the 14th century, the Maramures region has produced nearly 300 mineral species. Dan will give us an introduction to this historic, mineral-rich area.

- **Markus Raschke** will give a talk (not yet scheduled, but probably this fall) on his adventures tracking down a world-class scheelite-beryl-cassiterite deposit in the Tibetan Plateau of China.

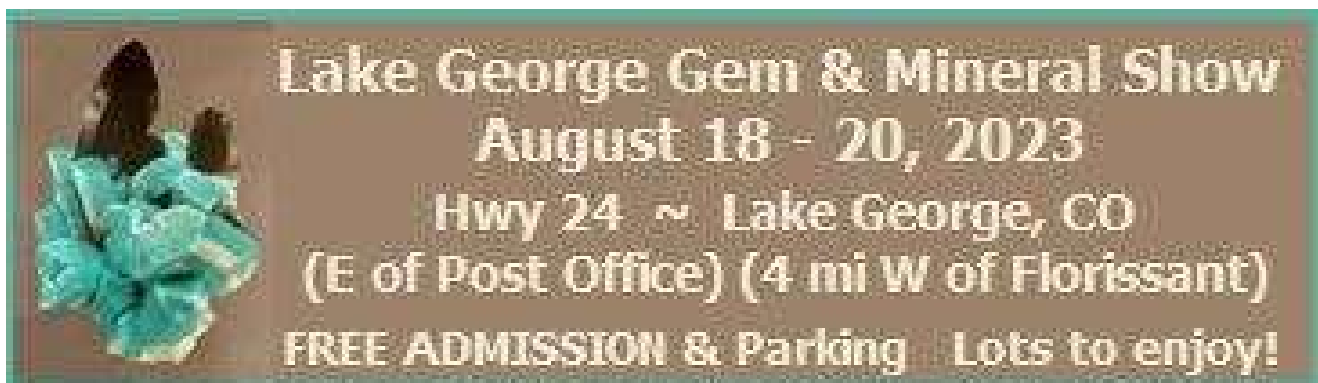
↘↘ **ADDITIONAL COMING EVENTS OUTSIDE THE LGGM CLUB:** (Nearby gem, mineral, fossil, and geology events that you may enjoy.) Go to each club's website for more information.

- **Cañon City Geology Club** meets on the 2nd Monday of the month at 6PM in the United Methodist Church, Cañon City
- **Columbine Gem & Mineral Society**, meets on the 2nd Thursday of each month, 6:30PM in the meeting room, Mt. Shavano Manor, 525 W. 16th (at J St.), Salida
- **Colorado Springs Mineralogical Society**, meets on the 3rd Thursday of each month at 7PM in the Mt. Carmel Veteran's Service Center, 530 Communication Circle, Colorado Springs;
- **Pueblo Rockhounds**, meets on the 3rd Thursday of each month at 6:30PM in the Westminster Presbyterian Church, 10 University Circle, Pueblo.

↘↘ Show season is in full swing:



Fairplay Gem, Mineral, & Jewelry Show
 9-5 Daily, July 27-30
 200 Platte Drive (Fairplay River Park Event Site)





**BUENA VISTA
CONTIN-TAIL
GEM, MINERAL,
& FOSSIL SHOW**

Free Admission - Free Parking
Buena Vista Rodeo Grounds
Gregg Dr. Buena Vista, CO 81211
August 10th -13th 2023
9 AM- 6 PM Daily

  @bvrockshow


BVROCKSHOW.COM

**America's Largest
Mineral, Fossil, Gem
& Jewelry Show**


**National Western
Complex**

FREE Entry & Parking

www.Denver.Show



Colorado Mineral & Fossil Fall Show
September 8-16, 2023
Crowne Plaza DIA
15500 E. 40th Ave, Denver, Colorado 80239



Grand Junction
Gem & Mineral Club
P.O. Box 953
Grand Junction, CO 81502

Grand Junction Gem & Mineral Club Presents
The 2023 Fall Gem & Mineral Show
September 23 & 24 • Sat 9-5; Sun 10-4



Mesa County Fairgrounds
2785 Hwy.50, Grand Junction, CO
www.grandjunctionrockclub.org

POSTAGE

Please post on your
bulletin board!
Thank You.

Silent Auctions All Day • Displays & Demonstrations • Geodes • Tools & Equipment • Finished Stones

Grand Junction Gem & Mineral Club presents
77th Annual Gem & Mineral Show!

September 23 & 24, 2023;
Sat 9-5; Sun 10-4
Entry \$5, Seniors & Military \$4;
Kids under 12 Free


World of Rocks

Mesa County
Fairgrounds,
Grand Junction, CO

One of the Largest Shows in Western Colorado and Eastern Utah

Kids Activities • Mineral Specimens • Showcases • Beads & Gems • Jewelry • Interactive Exhibits • Fossils



the
**JUST
& MINERALS
CRYSTALS**
Event

Summit Conference & Event Center, 411 Sable Blvd., Aurora, Colorado 80011

September 7, 2023: 2 pm - 7 pm

September 8-10, 2023: 10 am - 5 pm

September 11, 2023: 10 am - 4 pm

**HARD
ROCK
SUMMIT**
DENVER

The Fall Show for
the finest minerals, fossils,
gemstones & jewelry

SEPTEMBER
15 – 18 2023



Colorado
Convention Center

↘↘ Our own Mineral-show coordinator, **Carol Kinate**, reports that planning for our annual August show is moving along. Here's a reminder:

SAVE THE DATE – AUGUST 18-20, 2023 (LGGMC Annual Show)

Set-up for the show will be August 12, our regular meeting date.

- "2023" SHOW POSTCARDS WILL BE AVAILABLE @ the July and August monthly meetings.
- Show Volunteer Sign-up sheets will be available at the July and August meetings.

Carol Kinate, Show Chair
719-648-9015 (text/call)

↘↘ From Rock&Gem: How do fireworks get their color?

https://www.rockngem.com/how-do-fireworks-get-their-color/?fref=45ffe61e-3716-4979-bc09-643bd719ea98&em=Y2Nhcm5laW5AZ21haWwuY29t&utm_campaign=RnG+Weekly+June+29_2023

↘↘ Also from Rock & Gem: What is moonstone?

https://www.rockngem.com/what-is-moonstone/?fref=5c9c0b5f-d990-45be-89c1-e7da47dca207&em=Y2Nhcm5laW5AZ21haWwuY29t&utm_campaign=RnG+Weekly+June+22_2023_023

↘↘ From Rock Seeker, here's an article about where to find diamonds (if you're very lucky!):

https://rockseeker.com/where-to-mine-for-diamonds-in-the-united-states/?ck_subscriber_id=1874913717&utm_source=convertkit&utm_medium=email&utm_campaign=Diamonds+in+Your+Backyard%3F+Local+diamond+hot-spots%2C+kimberlites+and+more%21%20-%2010964380

Lake George Gem & Mineral Club

July, 2023

✎✎ Also from Rock Seeker, here's a short article about fool's gold:

Featured Mineral: Pyrite



Today we're shining a spotlight on Pyrite, the charismatic mineral that never fails to turn heads with its lustrous glow. Here are some fascinating facts about Pyrite:

- Despite being called "Fool's Gold," Pyrite has a remarkable personality of its own.
- It forms in beautiful cubic or pyritohedron (12 faces) structures, giving it a unique aesthetic appeal.
- Pyrite is not only a mineralogist's delight but also has significant industrial use.
- Unlike real gold, Pyrite is quite hard, brittle, and often forms sharp-edged crystals.

Where To Find Pyrite (Fools Gold) in The United States!

Q&A - How Can I Tell the Difference Between Gold and Fool's Gold (Iron Pyrite)?

- While superficially similar, gold and iron pyrite have some major differences between them. The biggest is that iron pyrite has a cubic crystal habit which is almost always euhedral (sharp surfaced), while native gold generally appears in a dendritic form or as anhedral (rounded and indistinct) octahedrons and cubes.
- Actual gold crystals are quite rare, and it's more commonly found as easily recognizable nuggets.
- Most forms of gold are readily distinguishable from pyrite, but you need to have enough to test. For instance, gold is ductile, while pyrite isn't.
- The problem generally occurs when a rock is "speckled" with gold-colored particles. A loupe can be handy in this case, allowing you to examine the tiny crystals closer. You can also try poking the larger ones with a sewing needle. Pyrite will crumble, while gold will indent.

- If you have it on hand and know how to handle it, nitric acid is the best test in this case. It will immediately turn pyrite black, while gold will remain the same color. Just be cautious when handling it!

[You can learn more about how to distinguish it from real gold at Rock Seeker.com!](#)

Picture of The Day: "Pyrite Sun Disk"



These breathtaking "Pyrite Suns" or "Pyrite Dollars" are found in coal mines of Illinois. They're called sun disks due to their striking radial growth pattern resembling the sun. Truly a sight to behold!

Geological Facts: Digging Pyrite in The U.S.

The U.S. has some exceptional locations where you can find Pyrite. From the sprightly Pyrite Suns of Illinois to the Pyrite clusters of Colorado, these locales offer something for every Pyrite enthusiast.

Did you know that you can even find Pyrite at the beach? The shores of the Potomac River in Maryland are known to reveal beautiful Pyrite after a good storm. Check out this guide on [Where to Find Pyrite in the United States to discover more locations at Rock Seeker.com.](#)

Geological Curiosities: "Pyritized Fossils"



In certain rare and unique conditions, Pyrite can replace the remains of ancient creatures, creating what are known as Pyritized Fossils. These stunning fossils preserve incredible details, with the Pyrite imparting a spectacular golden shimmer. It's like looking at a piece of prehistoric life, frozen in gold!

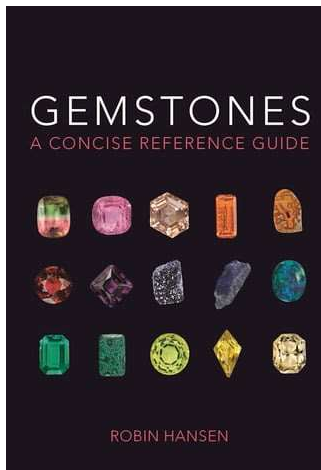
Read More: [Tips For Preserving Pyritized Fossils](#) at Rock Seeker.com.

👇👇 Although I don't normally believe in posting ads, here's one that could be of use to many LGGMC members, with a discount, if you're interested:

From glittering rubies, sapphires, and topaz, to breccia, brimstone, and volcanic bombs, Princeton University Press offers an exciting new array of books exploring the rocks and minerals of the world.

Enter this exclusive promo code at checkout: GEM30 for 30% off Gemstones and other Princeton Titles! (Available now through 8/31/2023). (How to check out is at the end of this blurb.)

We encourage you to share the above discount code and announcement with your members via your newsletter, listserv, or website. We'd love to see where you post it! We'd also be happy to work with you to facilitate a bulk purchase or promotional book giveaway to complement your programming.



Gemstones: A Concise Reference Guide

Robin Hansen

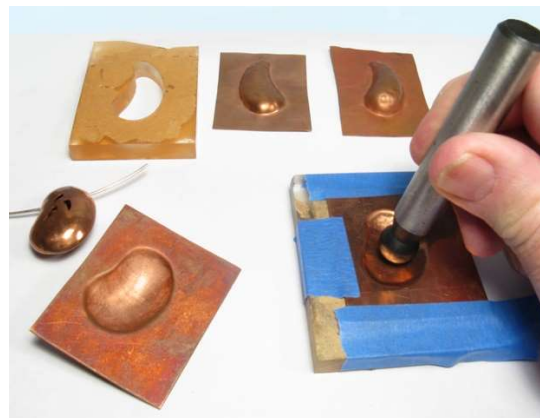
A sumptuously illustrated guide to every known type of gemstone, exploring each one's unique beauty, rarity, and durability. It reveals how gems form, where they are found and mined, how to identify them, and more.



Browse these titles and many more at press.princeton.edu.

For more information about ordering and available discounts, contact Steve Stillman at Steve_Stillman@press.princeton.edu.

✎ And here are the Bench Tips from Brad Smith for July:



ONE PART DIE FORMING

An easy way to make large and strong components for your jewelry designs while keeping the weight of precious metal to a minimum is done with simple tools in a process called one-part die forming. Complex 3-D shapes can be made quickly from thin gauge sheet with just a piece of plastic and a dapping ball.

I make a forming die by sketching the shape I need on a piece of thick plastic. Then drill a hole and saw out the shape with a jeweler's saw and a coarse blade. When sawing, try to keep edges straight up and down. Refine the cut as needed with a sanding drum or file. Select a thickness of plastic that is just a little more than the amount of doming you want.

> Note: I tend to use 1/4-inch or 3/8-inch plastic that I get as scraps from a local plastics shop.

To use the die, cut a piece of sheet about 3/8 inch wider than the hole in the die on all sides. Anneal the sheet and tape it down on the plastic. Use a dapping ball and hammer to create the domed shape. When the taped down edges begin to warp, planish them flat on the top of the die. Finally, if the sheet is to be domed deeply, you will need to anneal the metal occasionally.

One nice feature of this technique can be seen in the top and left of the picture. If the sawed walls are straight up and down, the hole on the bottom is a mirror image of the hole on the top. This allows you to produce a mirror image shape as needed to make left and right earrings or both sides of an irregular shaped bead as shown.



OCHRE APPLICATOR

Yellow ochre is used when you want to be sure the solder won't flow on an area of your piece while you're soldering another area. The only problem with ochre is coming up with a good way to store and apply it.

I use recycled nail polish bottles. They seal well and have a built-in brush applicator. Just clean them out with a little acetone or nail polish remover, and they're ready to go.

See Other Tips in my [Smart Solutions for Jewelry Making Problems](http://amazon.com/dp/B0BQ8YVLTJ)

<http://amazon.com/dp/B0BQ8YVLTJ>



Notes from the Editor

Bob Carnein

Newsletter Editor

ccarnein@gmail.com

Our friend and Club member **Steve Veatch** sent this short article about his development as an Earth scientist. Thanks, Steve!

Unlocking Earth's Mysteries: Ten Ways to Enter the World of Earth Science

By Steven Wade Veatch

1. Live in Colorado Springs where there are lots of rocks to spark your interest. After school, run all over the place with your rock hammer collecting rocks. Go to Ackley's rock shop on North Nevada Avenue with your dad on Saturday mornings. Look at Pikes Peak and wonder what minerals and gemstones are there.
2. Join the Colorado Springs Mineralogical Society (CSMS) at a young age (10). Attend their meetings. Listen to the speakers present programs in the days before PowerPoint—just slides in carousel trays and Kodak projectors. Meet member Richard M. Pearl. Buy all of his books on rocks and minerals (30 of them). Read all of his books. Go on club field trips to Crystal Peak, Spruce Grove Campground, and the Calumet mine near Salida. Become a life member.
3. Have Chris Christensen, a CSMS member, teach you lapidary arts at Palmer High School in the evenings in their adult education program. Repeat the classes over and over so you have access to the machines and Christensen's expertise and jokes (School District 11 will think you have learning issues). Ask Chris to advise you about teaching the Pebble Pups.
4. Meet Mike Nelson (a member of the CSMS); he will give you a cast of a short-face bear skull. This animal once lived in a drafty cave during the Ice Age. This fossil will inspire you. Read all of his articles in the *Pick and Pack* and try to keep up with his output of manuscripts to the newsletter editor.

5. Take Earth science classes late in your life at Emporia State University. Go to field camp with students 25 years younger than you. Map sedimentary rocks under the hot Kansas sun. Graduate with a degree in Earth science. Invite all your friends and relatives to a party at the Garden of the Gods.
6. Volunteer to work with Herb Meyer at the Florissant Fossil Beds National Monument. He will ask you to contribute chapters to two books published by the Geological Society of America (GSA). He will help you coauthor abstracts presented at several GSA annual meetings. Herb will also take you to a fossil symposium in New Mexico, where you will present a paper.
7. Go on intense field trips with Jo Beckwith from the fossil beds. Crawl through deep chambers of Porcupine Cave and take one week on the couch to recover from exposure to extreme exertion. Meet with Jo for breakfast over many years and discuss archaeology and geology.
8. Submit articles and poems to Bob Carnein of the Lake George Gem and Mineral Club. He publishes one of the finest rock club newsletters in the West. He will edit an endless number of your papers for over a decade. Learn how to improve your writing through Bob. Join him on a multi-year project at the Cripple Creek District Museum to document their mineral collection. Prepare an abstract and make a presentation at a mineral symposium at the Colorado School of Mines that Bob will invite you to.
9. Listen to John Rakowski talk about geology. He will help you with Pebble Pups and take them on field trips. John will show you that what you thought was topaz was really quartz if you use Moh's scale of hardness. He will help you and Bob Carnein on the mineral documentation project at the Cripple Creek District Museum. Attend meetings of the Lake George Gem and Mineral Club with John.
10. Write articles, essays, features, and poems, all of which will deepen your knowledge of Earth science. Submit these manuscripts to John Emery (CSMS member). He publishes the *Pick n Pack*, also one of the finest rock club newsletters in the American West. He takes pride in his work and makes you want to do the same.



Image courtesy of Microsoft's Bing AI Image Creator.

Monthly Mineral Quiz

The Monthly Mineral for July (Carnein photos and collection)



This specimen is a mixture of several minerals, including pyrite. However, the monthly mineral is the one that's iridescent. The reason for the iridescence is the presence of iron in its composition. The iron oxidizes on broken surfaces to form a thin coating of goethite, which causes the "peacock" colors. On a fresh surface, this mineral is bronze colored. When weathered, it breaks down to form malachite, azurite, chrysocolla, and dozens of other minerals. It's common in mixed sulfide mineral deposits, where it's an important ore of a base metal. It's opaque, has a hardness of 3 and SG of about 5, and has a poor cleavage. Crystals are rare, so don't expect to find any, though this mineral is reported from about 150 Colorado localities. What is this important ore mineral?



Last Month's Mineral: Turquoise, $\text{CuAl}_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4\text{H}_2\text{O}$. This important gemstone forms as a secondary mineral in copper deposits and as a vein filling in aluminum-rich volcanic or sedimentary rocks, especially in arid regions. Substitution of iron causes the color to be more green, and the color varies from one locality to another (the piece to the left came from the Bertis mine in Cripple Creek). Although the hardness is 5 to 6, it often occurs in crumbly aggregates that are "stabilized" by injection of epoxies or other plastics. Some tests for treatment include rubbing the stone with a swab dipped in acetone (if the color comes off, it's treated) and touching the stone with a heated needle (look for an acrid smell due to melting plastic). Cripple Creek is currently an important source in the US. Crystals are

very rare; most of the crystallized specimens in collections came from Lynch Station, VA. Excellent stones are produced synthetically and have properties just like the "real" thing—beware of fakes and synthetics.



The Lake George Gem and Mineral Club is a group of people interested in rocks and minerals, fossils, geology 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 normally 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). New memberships and renewals are only accepted Jan 1 through March 31 each year.

Our Officers for 2023 are:

Richard Kawamoto, President
7584 Cedar Mountain Rd.
Divide, CO 80814
719-748-8152
rmkfishalot@gmail.com

John Rakowski, Vice President
PO Box 608
Florissant, CO 80816
719-748-3861
rakgeologist@yahoo.com

Lorrie Hutchinson, Secretary
10915 Grassland Rd.
Colorado Springs, CO 80925
719-330-2795
4lohutch@gmail.com

Cathy McLaughlin, Treasurer
11595 Owls Nest Rd.
Guffey, CO 80820
702-232-3352
cathy_mclaughlin@hotmail.com

C.R. (Bob) Carnein
Newsletter Editor
507 Donzi Trail
Florissant, CO 80816
719-687-2739
ccarnein@gmail.com