



Lake George Gem & Mineral Club

January 2025

---Content---

- [About Us](#)
- [Club Officers](#)
- [To Join Our Club](#)
- [Next Meeting](#)
- [Upcoming Events](#)
- [Meet Our Neighbors](#)
- [Mineral of the Month Quiz](#)
- [A Communion of Discovery](#)
- [Interesting Reads](#)

About Us

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, fossils, lapidary work, 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 Charter School gym, located on the south side of US Highway 24 approaching the town of Lake George from Florissant. A link to a map of the meeting location is provided on the sidebar under "Contact Us". Between Oct – Mar, our meetings start at 10 AM. From Apr-Sep, our meetings start earlier, 9 AM, to allow for more time for any subsequent field trips.

---Contact Us---

Postal Address:

Lake George Gem & Mineral Club
PO Box 171
Lake George, CO 80827

Website:

[LGGMC website](#)
[LGGMC on Facebook](#)

Meeting Location:

Lake George Charter School
38874 Hwy 24
Lake George, CO 80827

[Map to Lake George Community Center](#)

Club Officers

2025 introduces a new face to our club management team. Please welcome our new Field Trip Coordinator, Corey Miller. Following are the LGGMC Officers for 2025. Please reach out if you need any help.

President	Dave Bruess	david@bruess.me
Vice President	Bart Zobel	bezobel@gmail.com
Secretary	Steve Kahler	pipprophet@gmail.com
Treasurer	Karen Vogl	bigmabe@hotmail.com
Newsletter Editor	Betty Bowles	bbowles2@gmail.com
Field Trip Coordinator	Corey Miller	corythevaulter@gmail.com
Show Coordinator	Carol Kinate	kinatec@aol.com

To Join Our Club – (2025 Annual Membership Applications are being accepted through March)

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 gather monthly as a club to share information including guest speaker presentations, workshops, and rock specimen show and tell discussions. We coordinate and supervise amazing field trips for club members that cover a broad spectrum of geological, archeological, rock, and mineral interests. We also sponsor the annual Gem and Mineral Show at Lake George, where collectors and others may purchase or sell rocks, minerals, fossils, gems, or jewelry.

Annual Membership

Current year membership application and/or renewal occurs only during **January 1-March 31, 2025**. Membership for 2025 is closed after this time. Last year's membership list will be purged on April 1. Please note that all memberships must be current in order to participate on any field trip or to use any club claim.

How to Apply

The quick and easiest way for one to join our club is online. Visit [OUR CLUB WEBSITE](#) and follow the Register option. If you are already registered and want to pay your membership dues online for 2025, follow the Login option.

One may also apply for membership in person at our monthly meetings or by mailing in the application and fee. The application can be downloaded in PDF format from [HERE](#). The application will need to be filled out and submitted to the club along with the appropriate membership dues. The mailing address to submit the application is provided in the newsletter sidebar, ---**Contact Us**--- under **Postal Address**. Remember to get your application in before April 1, 2025!

Annual Membership Fee

Annual membership dues are collected (Jan. 1 through Mar. 31). They are as follows:

LGGMC Annual Membership Dues 2024		
\$15.00	Individual	Age 18 and over
\$25.00	Family	Parents + kids under age 18

Look Forward to Jan Meeting (10 AM Jan 11, 2025 @ [Lake George Community Center](#))

First, Summary of December Meeting

Our December 2024 meeting wrapped up the year with our Annual Towel Show, silent auction, holiday spread.

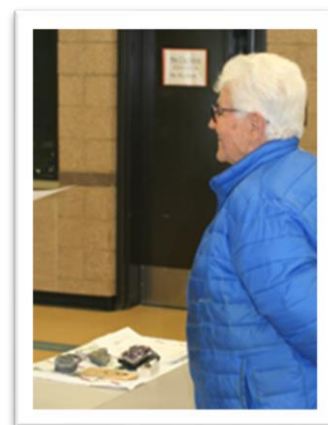


1 Dave Bruess' minerals

Here is a glimpse of members enjoying the spread.



2 Cory Miller



3 Betty Merchant



4 Betty Bowles' rock screens



5 Dave Alexander



10 UV light box



6 Richard Kawamoto & Valerie Babbitz



7 Connie Holcomb



8 John Rakowski & Paul Combs



9 Alexander, Vogl & McLaughlin



41 Bruess, Zobel, & Vogl

January 2025 Meeting

For our January meeting, two events will occur. First, we will get a glimpse of geologic sites from the ancient country of Armenia. Betty Bowles, a member of our club will share her adventures in this area of the world from last summer. She brought back a unique form of obsidian (volcanic glass) called moonstone for its beautiful aqua blue hue. Along with a few rock specimens and pictures of fascinating volcanic geological structures visited, she will also share a glimpse into another world, another way of life.

The latter part of this meeting will be devoted to discussions surrounding our field trips in 2025 with Bart Zobel. As a club, we are interested in providing excursions that pique the interests of our

membership. So come and join in the discussion with ideas for your rock hounding bucket list.

Upcoming Events

Gila County AZ Gem and Mineral Society Annual Gem and Mineral Show (Jan 10,11, 12, 2025)

This show's flyer can be found [SHOW FLYER HERE](#).

Scholarship Opportunity 2025 (Apply Jan-Mar 2025)

This opportunity for a \$1000.00 scholarship is offered by the Hell Creek Paleontological Society. It is designed to support individuals pursuing their education in paleontology, geology, or related fields. For more information visit [SCHOLARSHIP PAGE HERE](#).

Fire Prevention at Home (Jan 25, 2025)

Florissant Public Library 334 Circle Dr, Florissant, CO 80816
The free informational sessions give insight into reasons why

some homes survived and others burned in recent fires like the Marshall fire. The session also presents many ideas to make homes safer in case of wildfires.

Tucson Gem & Fine Mineral Show 2025 (Jan 31 – Feb 15, 2025)

Crystal Classics was able to acquire one of the most celebrated and visited gold collections in the world, the Kirby Siber Worldwide Gold Collection. This gold collection consists of 18 different display cabinets showing gold specimens, of all varieties, from all around the world. Nugget gold, wire gold, crystalized gold and MORE!! In this [VIDEO DOCUMENTARY HERE](#), you'll get a sneak peek at some of the truly outstanding gold specimens that will be on display at Tucson Fine Mineral Gallery.

Meet Our Neighbors

Here is a list of nearby gem, mineral, fossil, and geology club meetings 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 at United Methodist Church, Cañon City.

Pueblo Rockhounds

Meets on the 3rd Thursday of each month at 6:30PM at Westminster Presb. Church, 10 University Circle, Pueblo

Columbine Gem & Mineral Society

Meets on the 2nd Thursday of each month, 6:30PM at meeting room, Mt. Shavano Manor, 525 W. 16th, Salida

Colorado Springs Mineralogical Society

Meets on the 3rd Thursday of each month at 7PM Colorado Springs Christian School, 4855 Mallow Rd, Colorado Springs.

A Communion of Discovery

Dedicated to Estella Leopold, conservationist.¹

Melting ice washed gravels down,
burying the mammoth—hiding it through the ages.
And I found a rock at its grave,
with secrets deep inside.
I broke it, crushed it, sifted it;
dissolved it in a beaker,
spun it by a centrifuge,
and peeled back layers of time.

Now only hidden fossils remain:
Pollen grains and mossy spores—
once floating on an Ice Age breeze.

Now in that communion of discovery
these small fossils yield
the deepest glimpse through time
to the world before we came, and warn
of a future we must face—

while just outside forests change,
species die,
and life recedes.

By Steven Wade Veatch



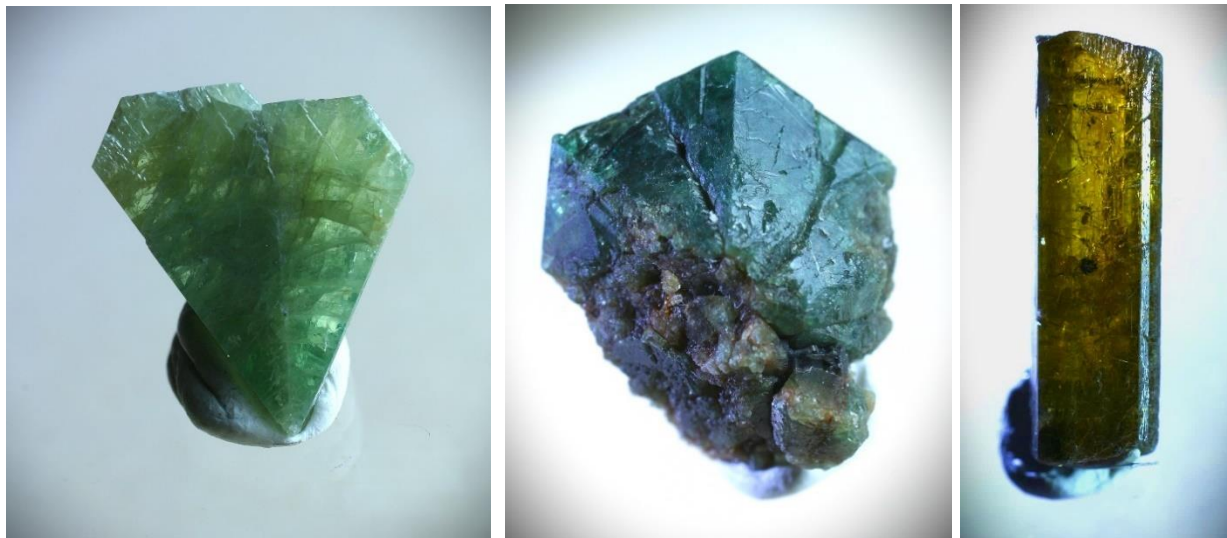
An imagined scene of the Ice Age mammoth found at the Florissant Fossil Beds created by the author using AI.

¹ Estella Leopold assisted me in the actual paleontological research mentioned in this poem. A sediment layer associated with the burial site of a Columbian Mammoth at the Florissant Fossil Beds National Monument was found to contain Ice Age pollen and spores. This research resulted in a paper presented at the Geological Society of America in Denver in 2013. Estella was one of the original “Defenders of Florissant” and was

instrumental in the Florissant Fossil Beds in becoming a national monument. Estella is the daughter of Aldo Leopold, who wrote the *Sand County Almanac*. Estella passed away February 25, 2024. She was 97 years old.

Note: this poem is an expanded version of an earlier poem entitled “Mammoth” by the author.

Monthly Mineral for January, 2025 (Carnein photos and collection)



If you like red and green minerals, this one sometimes can be both, depending on the lighting. In incandescent light, some chromium-containing specimens are a rich raspberry red, while its color in transmitted light is normally green. It's a beryllium mineral that is relatively common in complex granite pegmatites (Mindat.org lists 15 localities in Colorado). Although it's orthorhombic, crystals are commonly twinned and may be pseudo-hexagonal (middle photo) when 3 crystals interpenetrate. The right-hand photo is a relatively rare untwinned crystal. Because of this mineral's very high hardness ($8\frac{1}{2}$), color change, occasional "cats-eye" effect, and transparency, it is often a very valuable gemstone. Although it has a good cleavage, so does diamond—the hardness is, in both cases, more important. What do you think the identity of this important gem mineral is?

Last Month's Mineral: Orpiment As_2S_3

Arsenic sulfide comes in two forms: orpiment and realgar. Realgar is, when fresh, a beautiful, vibrant red color. With exposure to light, it gradually converts to orpiment. The specimen to the left shows some of the typical properties of

orpiment, including its cleavage and pearly luster. Unfortunately, it does not capture the color, which is bright yellow without a hint of green. Note, again, the low hardness, moderate specific gravity, and sectility as typical properties. Because of its arsenic content, you should probably wash your hands after handling specimens.



Interesting Reads

In this section, we provide unique submissions from our club members and fun rock, mineral, and geology news and information to enjoy from several of our favorite magazines.



How to Identify Tanzanite

Tanzanite, discovered in 1967 in the Merelani Hills of Tanzania, is prized for jewelry making. Its color complements various metals allowing versatile designs.

[Read More](#)



Exploring Turquoise Color Inclusions

While natural turquoise color with no inclusions is prized, most turquoise exhibits a multitude of beautiful inclusions. Learn more about how these inclusions affect color.

[Read More](#)



Turquoise: Fingerprinting Origins

Turquoise fingerprinting is still in its formative stages but has already provided new insight into pre-Columbian cultural and economic relationships.

[Read More](#)



How to Make a Turquoise Cabochon

Turquoise, in general, is one of the most prestigious stones used in lapidary. Here's how to make a cab along with first-timer tips.

[Read More](#)



2025 Rockhound Holidays

People say there's a holiday for everything, and they're right. Here's a handy list of rockhound holidays to jot on your calendar and enjoy throughout the year.

[Read More](#)



How to Store a Rock Collection Properly

Wondering how to store a rock collection? What's your collection worth or how you can insure against theft or damage? Here's your guide to collection storage.

[Read More](#)



Repurposing Heirloom Jewelry

Repurposing heirloom jewelry is a way to create a new piece and keep the sentimental value. Jewelers are getting better at techniques and designs to do it.

[Read More](#)

Bench Tips for January

DEPTH GAUGE FOR DRILLING

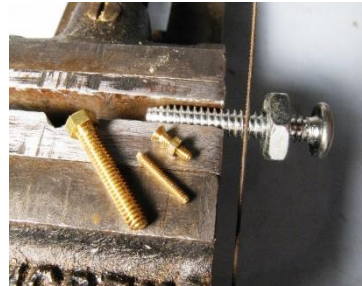


Sometimes you need to drill a number of holes all to the same depth. One quick and easy way to do this is to wind some tape around the drill bit so that the tape just touches the part surface when the hole is deep enough. You

can set the depth either by measuring from the tip of the drill to the tape or by drilling to the correct depth, leaving the bit in the hole, and wrapping tape around the bit at the surface level.

Note that a little extra tape left free on the end will blow away debris from the drilling.

CUTTING A BOLT



Whenever you have to cut a threaded bolt shorter, it's often difficult to get the nut to thread back onto it. And the smaller the bolt, the more difficult it is to restore any distorted threads. The problem is

easily solved with the use of a nut. Here's how I do it.

First, screw a nut onto the bolt before cutting it. Grip the bolt by the threaded section that is to be sawed off. Then saw the bolt to the desired length, taper the end with sandpaper or file, and unscrew the nut from the bolt.

Unscrewing the nut over the freshly cut end of the bolt will straighten out any damage that sawing and filing did to the threads. Gripping the bolt by the piece to be sawed off localizes any crushing damage to the piece that will be thrown away.



Was 'Snowball Earth' a global event? New study delivers the best proof yet

Date: November 11, 2024

Source: University of Colorado at Boulder

Summary:

A series of rocks hiding around Colorado's Rocky Mountains may hold clues to a frigid period in Earth's past when glaciers several miles thick covered the entire planet.

Geologists have uncovered strong evidence from Colorado that massive glaciers covered Earth down to the equator

hundreds of millions of years ago, transforming the planet into an icicle floating in space.

The study, led by CU Boulder, is a coup for proponents of a long-standing theory known as Snowball Earth. It posits that from about 720 to 635 million years ago, and for reasons that are still unclear, a runaway chain of events radically altered the planet's climate. Temperatures plummeted, and ice sheets that may have been several miles thick crept over



every inch of Earth's surface. "This study presents the first physical evidence that Snowball Earth reached the heart of continents at the equator," said Liam Courtney-Davies, lead author of the new study and a postdoctoral researcher in the [Department of Geological Sciences](#) at CU Boulder.

Reddish-brown bands of Tava sandstone cut through other rocks. (Credit: Liam Courtney-Davies)



A slope along Arapaho Pass in Colorado's Front Range where orangish Tava sandstone pokes up to the surface.

(Credit: Christine Siddoway)

The team will [publish its findings the week of Nov. 11](#) in the Proceedings of the National Academy of Sciences. Co-authors include Rebecca Flowers, professor of geological sciences at CU Boulder, and researchers from Colorado College, the University of California, Santa Barbara and University of California, Berkeley.

The study zeroes in on the Front Range of Colorado's Rocky Mountains. Here, a series of rocks nicknamed the Tavakaiva, or "Tava," sandstones hold clues to this frigid period in Earth's past, Courtney-Davies said.

The researchers used a dating technique called laser ablation mass spectrometry, which zaps minerals with lasers to release some of the atoms inside. They showed that these rocks had been forced underground between about 690 to 660 million years ago—in all likelihood from the weight of huge glaciers pressing down above them.

Courtney-Davies added that the study will help scientists understand a critical phase in not just the planet's geologic history but also the history of life on Earth. The first multicellular organisms [may have emerged in oceans](#) immediately after Snowball Earth thawed.

"You have the climate evolving, and you have life evolving with it. All of these things happened during Snowball Earth upheaval," he said. "We have to better characterize this entire time period to understand how we and the planet evolved together."

Searching for snow

The term "Snowball Earth" dates back to a paper published in 1992 by American geologist Joseph Kirschvink.

Despite decades of research, however, scientists are yet to agree whether the entire globe actually froze. Geologists, for example, have discovered the fingerprints of thick ice from this time period along ancient coastal areas, but not within the interior of continents close to the equator.

Which is where Colorado enters the picture. At the time, the region didn't sit at the northern latitudes where it does today. Instead, Colorado rested over the equator as a landlocked part of the ancient supercontinent Laurentia. If glaciers formed here, scientists believe, then they could have formed anywhere.

Going deep

The search for that missing piece of the puzzle brought Courtney-Davies and his colleagues to the Tava sandstones. Today, these features poke up from the ground in a few locations along Colorado's Front Range, most notably around Pikes Peak. To the untrained eye, they might seem like ordinary-looking yellow to brown rock running in vertical bands less than an inch to many feet wide.

But for geologists, these features have an unusual history. They likely began as sands at the surface of Colorado at some point in the past. But then forces pushed them underground—like claws digging into the Earth's crust.

"These are classic geological features called injectites that often form below some ice sheets, including in modern-day Antarctica," Courtney-Davies said.

He wanted to find out if the Tava sandstones were also connected to ice sheets. To do that, the researchers calculated the ages of mineral veins that sliced through those features. They collected tiny samples of the minerals, which are rich in iron oxide (essentially, rust), then hit them with a laser. In the process, the minerals released small quantities

of lead and the radioactive element uranium. Because uranium atoms decay into lead at a constant rate, the team could use them as a sort of timekeeper for the planet's rocks. It was a Eureka moment: The group's findings suggest that the Tava sandstone had been pushed underground during Snowball Earth. The group suspects that, at the time, thick ice sheets formed over Colorado, exposing the sands to intense pressures. Eventually, and with nowhere else to go, they pushed down into the bedrock below.

"We're excited that we had the opportunity to unravel the story of the only Snowball Earth deposits that have so far been identified in Colorado," Flowers said.

The researchers aren't done yet: If such features formed in Colorado during Snowball Earth, they probably formed in other spots around North America, too.

"We want to get the word out so that others try and find these features and help us build a more complete picture of Snowball Earth," Courtney-Davies said.