

The Lake George Gem and Mineral Club -

Club News

May, 2018



Program for the month: Saturday May 12, 2018, 9:00AM.

Paul Combs, 'The Bone Wars': Were Professors Marsh and Cope respected paleontologists out to study Colorado dinosaur fossils, or is this story much more dramatic with gun violence, theft and bribery?

Two American college students became friends in Berlin while they were dodging the Civil War draft. Upon their return, one turned on the other without warning and attacked him in the press. The problem was that they were two of America's first paleontologists, and the one at Harvard thought there wasn't enough room on the continent for both of them. It didn't take long for the second one to return the insults, and pretty soon the war was on -- *and on!* The fight only ended with their deaths, 30 years after it had begun. By that time, both of them were down to their last dimes, but the one in Pittsburgh tried to carry the rivalry beyond the grave! While it was disastrous for professors Marsh and Cope, the so-called "bone wars" were a great benefit for the rest of the world, because all that publicity made DINOSAUR a household word to this very day. Books have been written about their feud, and PBS recently ran a special program about it. Come and hear how two Victorian-era professors tried to destroy each other's careers and accidentally created a worldwide billion-dollar industry. The rivalry really shifted into overdrive at two famous Colorado dinosaur sites: Garden Park near Cañon City and Dinosaur Ridge near Morrison.

The story features agents and secret codes, Native Americans, false teeth, a millionaire uncle, and dynamite, so you won't want to miss it.

On May 16's drive down Shelf Road, we'll visit two quarries in Garden Park. Despite all the interference and sabotage, many dinosaur species were first discovered there, including several that were featured in the "Jurassic Park" film series.

Note time change; from April through October, we meet at 9AM.

We will also continue a **silent auction for some cool specimens** and other items donated by Club members. The specimens will be displayed at the back/side of the room with "bid sheets". Each item will have a minimum starting bid. You write your bid and initials in a blank space on the sheet and then watch to see if others outbid you. You can keep on bidding until the President says bidding is closed. So, bring some CASH and be prepared for the fun!

✓ ✓ Here's a message President, **Robert Baker**:

FROM THE PRESIDENT

When asked by someone to identify a rock or mineral, help **identify** the specimen. Answer to the best of your ability, but also tell them about the references that are available, such as National Audubon Field Guide to North American Rocks and Minerals and other good books on identification. For locations and additional information on field collecting techniques, Mitchell and Voynick have great books about Rockhounding in Colorado and mindat.org is a good online source. When asked about specific locations, remember that there are many claims throughout our region and caution them to be aware of property which has been claimed and to obtain permission from private property owners.

Upcoming talks include:

June- **Bob Carnein**, Mineral Associations: What minerals do and do not commonly occur together? Would you expect to find garnet with amazonite? How about amazonite with baryte? Knowing the reasons why can help you with your mineral-identification skills.

July- **Loren Lowe**, Gold Panning in the Pikes Peak Region: "There's **GOLD** in them thar hills." But where? And how do you get it?

?? Mineral Cleaning. We are in the process of arranging a talk on this subject later this year.

Coming Events

✓ ✓ Several mineral, fossil, and geology clubs meet relatively nearby and encourage visitors. These include:

>**Cañon City Geology Club**, meets on the 2nd Monday of the month at 6PM in the United Methodist Church, Cañon City;

>**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;

>**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;

>**Pueblo Rockhounds**, meets on the 3rd Thursday of each month at 6:30PM in the Westminster Presbyterian Church, 10 University Circle, Pueblo.

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✓ ✓ **Pete Modreski** and others suggest the following upcoming events:

Tues., May 1, 10:30 a.m., USGS Rocky Mountain Science Seminar, Building 25 Lecture Hall, Denver Federal Center, **“Exploring sedimentary environments in Gale Crater with the Mars Science Laboratory Rover”**, by Lauren Edgar, USGS – Flagstaff.

Thurs., May 3, 7:00 p.m., First Thursday lecture series of the Friends of the Colorado School of Mines Geology Museum, **The Colorado-Wyoming State Line Kimberlite District**, by Philip Persson. All are welcome. Expected location: Ben H. Parker Student Center, Ballroom “E”, Maple Street, Golden.

Sat., May 5, 11 a.m. – 2:45 p.m., **Colorado Mineral Society Silent Auction**, Holy Shepherd Lutheran Church, 920 Kipling St. (3 blocks north of West 6th Ave.) Lakewood. All welcome.

Tues., May 8, 6:00-8:00 p.m., “Golden Beer Talks”: Johanna Kovarik, U.S. Forest Service, National Cave and Karst Program Coordinator, **“A Life Underground: Studying and Stewarding the Magical Subterranean World of Caves”**. Windy Saddle Café, 1110 Washington Avenue, Golden. “Golden’s grassroots version of TED talks, Expand your mind with a beer in your hand”, see <http://goldenbeertalks.org/>. (Talk begins at about 6:35.)

Tues., May 8, 7:00 p.m., annual Emmons Lecture sponsored by the Colorado Scientific Society, **High drama at the Paleocene/Eocene boundary in the Bighorn Basin; implications for today**, by Will Clyde, University of New Hampshire. On the CSM campus, exact location TBA (I believe it will be in the Ben H. Parker Student Center Grand Ballroom).

Thurs., May 10, 7:30 p.m., Friends of Mineralogy, Colorado Chapter, bimonthly meeting, at Lakeview Event Center, 7864 W. Jewell Ave.: **“The W-Sn-Be deposit of Xuebaoding, Sichuan Province, China: current research, past, and future of a world class mineral locality”**, by Markus Raschke, CU.

Sat., May 12, Dinosaur Discovery Day, featuring **Boy Scout Day** at Dinosaur Ridge, Morrison, CO. See www.dinoridge.org for full information.

Mon., May 14, 7:00 p.m., DREGS (Denver Region Exploration Geologists’ Society) annual Distinguished Lecturer, Dr. William A. (Bill) Rehrig, **“New Discoveries, New Questions – 60 Years in Exploration Geology”**. Berthoud Hall Room 241 at Colorado School of Mines; social hour with refreshments beginning at 6:00 p.m.

Sun., May 20, 12 noon to 4 p.m., **Friends of Mineralogy, Colorado Chapter, Silent Auction**, at Clements Community Center, 1580 Yarrow St., Lakewood. All are welcome.

Fri.-Sat.-Sun., June 1-3, Pikes Peak Gem & Mineral Show, sponsored by the Colorado Springs Mineralogical Society; at the Norris-Penrose Event Center [new location], 1045 Lower Gold Camp Road #3, Colorado Springs.
June 7-10: Fairplay Gem, Mineral, and Jewelry Show, Platte Drive, Fairplay, CO.

June 15-17: Victor Gem and Mineral Show, downtown Victor, CO.

Sun., June 17, I was going to publicize the date of the once-yearly **Geology Train** on the Cumbres & Toltec Scenic Railroad, Antonito, CO, but I’ve learned that this train trip is **booked full up**. Make reservations early next year! See their website, <http://cumbrestoltec.com/>.

August 9-13, 2018: Contin-Tail outdoor show, Buena Vista Rodeo Grounds.

August 17-19: 19th Annual Lake George Gem & Mineral Club gem and mineral show. Details to come!

✓ ✓ **Dan Alfrey** sent this note about our Club Library:

In the last 3 years, our LGGMC Library **listing** of Books & DVDs has grown from 3 pages to Over 7!
*Many Thanks to **Maury & Grace Hammond** and **The Mark Stephens Family**, among others !!!!* Thanks, too, to **Norma Engelberg**, who has organized the library holdings in their new home at the Pikes Peak Historical

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Society Museum in Florissant and updated the list of items available. Club members can check out library holdings when the Museum is open or by arrangement with one of the Club officers.

✓ ✓ Here's an article from **Steve Veatch** about a Pikes Peak Pebble Pup:

Pikes Peak Pebble Pup and Earth Science Scholar Ben Elick Presents Paper at Iowa State University

By Steven Wade Veatch

Ben Elick, who has been a member of the Pikes Peak Pebble Pups for more than five years, was the presenting author of a paper on repeat photography he co-authored at the 52nd Annual Meeting of the Geological Society of America's North-Central Section. The meeting was held at the Iowa State University Conference Center in the Scheman Building, on the campus of Iowa State University, in Ames, Iowa. Ben has been conducting field investigations and working on this project since the summer of 2017.



Ben Elick stands in front of his conference room prior to his presentation at the Geological Society of America. Photo by S.W. Veatch.

Ben presented the paper on Tuesday, April 18. According to Ben, "This is a real project with real value. I am very proud of it." Ben had a time limit of 20 minutes to discuss his image-rich PowerPoint slides. He finished with 45 seconds to spare for questions. One professor shouted from the audience, "Good stuff. This is important work." The room erupted into a round of applause for Ben. Ben participates in the Colorado Springs Mineralogical Society's section of the Pikes Peak Pebble Pups. Ben recently presented a program to the Lake George Gem and Mineral Club on high graded minerals from the Cripple Creek Mining District. The CSMS provided a travel grant that covered Ben's registration for the conference, hotel accommodations, and travel to and from Ames, Iowa.

In addition to being a member of the CSMS, Ben maintains a membership in the Society for Mineral Museum Professionals. Ben is also a volunteer with the Western Museum of Mining and Industry

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where he works on the mineral collections. Ben is also working on a project to conserve the historic photos in the Cripple Creek District Museum's collection.

Editor's note: Ben will work as a volunteer at the Western Museum of Mining and Industry over the next year. I received the following note from **Steve Veatch**, forwarding a request for support from **Rick Saures**, Executive Director at WMMI. We will consider this request at the May meeting.

Dr. Rick Saures, the executive director of the Western Museum of Mining and Industry, wants to apply for the funding the Lake George Gem and Mineral Club offers to support a student intern to work on museum mineral collections. He is recommending Ben Elick. I have attached is letter for your consideration of the grant. For more than 5 years. His accomplishments are seemingly endless. Ben is known to several officers of the Society for Mineral Museum Professionals. Ben is a member of that organization, and remains in contact with those officers as he advances his work in museum mineral collections. Ben can bring much to the Western Museum of Mining and Industry and their mineral collection.

I also recommend Ben, and hope that you will consider either a full or partial funding of his work at the museum. Ben is a perfect fit for Western Museum's program. Ben will be starting his work at the museum this summer after ends. He will be working on a part-time basis through the fall and winter. His work is scheduled to end around April of 2019.

✓ ✓ We were pleased to hear that several Club members recently won awards for articles submitted in the Editors' contest at the American Federation of Mineralogical Society's annual meeting this spring. Awards included:

Bev Keith (6th place, Adult Articles) "Stromatolites in Fremont County"

Paul Combs (8th place, Adult Articles) "Spruce Grove "Mudfest" yields a herd of topaz for Dave Gilliam and a trophy smoky quartz for Katie Meier"

Bob Carnein (4th place, Advanced Adult Articles) "Mining miniatures of the Victor Trading Company"

All articles appeared in the LGGMC newsletter in 2017.



Lykins stromatolites settling in on the time trail outside of Cañon City (FremontHeritage.com)

✓ ✓ Field-trip coordinator **Billy Bell** is working on a great schedule of trips for this spring and summer. So far:

5	April 28 - Sat	Harvey Blue Barite Mine			Easy	Linda W
6	May 2 - Wed	Baculite Mesa - Fossils			Easy/Med	Billy B
7	May 12 - Sat	Tourmaline - Mothers Day Weekend			Easy	
8	May 16 - Wed	Shelf Road			Easy	Paul
9	May 19/20 - Sat/Sun	Patience/Piety - Smky Qtz/Flourite - OVERNIGHT TRIP			Easy	John S / BB ??
10	May 23 - Wed	Harvey Blue Barite Mine			Easy	Linda W
11	May 26 - Sat	Bob Carnein Florissant Fossil Beds Tour/Fossil Quarry Dig (\$17.00)			Easy	Bob C
12	June 6 - Wed	Badger Flats - Magnetite/Fluorite/Barite/Malachite			Easy/Med	Linda W
13	June 9 - Sat	Smoky Hawk Claim - Amazonite/Smky Qtz (Dorris Claim)			Med/Hard	Linda W
14	June 16 - Sat	Blue Moon - Smoky Quartz/Amazonite - (Karen Vogl claim)			???	Linda W
15	June 20 - Wed	Trinidad Lake State Park - \$7.00 Entrance Fee - (K-T Boundary)			Easy	Bob B
16	June 23 - Sat	Texas Creek - Meteorites			Easy/Med	Richard W / Billy B
17	June 27 - Wed	St. Peters Dome - Flourite/???			Easy	Linda W
18	June 30 - Sat	McGraw Park Bailey/ ????			Easy	Linda W
19	July 7 - Sat	Eureka mine - Fluorescent Zircon/Riebeckite/Astrophyllite			Easy/Med	Dick L / Billy B
20	July 14 - Sat	Topaz Mountain - Topaz/Smoky Quartz) - (Dorris claim)			Easy	
21	July 21 - Sat	Gold Panning - Gold			Easy	Loren L / Bob B
22	July 25 - Wed	Houselog Creek - Geodes			Easy	Paul H
23	July 28 - Sat	Midway Springs - Banded Aragonite/Actinolite/Peacock/Opal			Easy	Billy B / ??
24	Aug 4 - Sat	Leadville Co - Galena/Pyrite/Peacock/Silver			Easy	
25	Aug 11 - Sat	Badger Flats - Magnetite/Fluorite/Barite/Malachite			Easy/Med	Linda W
26	Aug 15 - Wed	Spruce Grove - Topaz (moderate hike at 9000 ft.)			Med	
27	Aug 18 - Sat	Sedalia Copper mine - Almandine Garnet/other minerals			Steep	Steep
28	Aug 24/26 - Fri-Sun	Creede Co - Silver/Sowbelly Agate/Barite/Pyrite/Galena			Easy/Med	Easy/Med
29	Aug 29 - Wed	Petrified Wood - Tallahassee Rd Area??				
30	Aug 31 - Sept 2	Great Salt Plains - Gypsum Crystals) - Oklahoma - OVERNIGHT TRIP			Easy	
31	Sept 15 - Sat	Calumet mine - Epidote/Quartz xls./Magnetite/Corundum			???	Easy
32	Sept 22/24 - Fri-Sun	Grand Junction - Barite/Calcite/Amethyst			Easy	???
33						Easy
34	*****	Red = Setup Trip		*****		
35	*****	Black = Still Working on Permissions or Locations				

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

POLISHING WHEELS

In the finishing sequence, there’s a step called pre-polishing, between sanding and buffing, and one of the most effective tools I’ve found to help here is the little silicone wheels used in a Freedom or Dremel. They come in several different abrasive levels and several different shapes. The wheels are color coded to denote their abrasive level. Different shapes (coin, knife, cylinder, point, etc.) are available to match the geometry of the area being cleaned up.

For a starter, I’d suggest a medium, a fine, and an extra fine wheel in both the coin shape and the knife-edge shape. Be sure to get a few extra mandrels so you’ll have one of each wheel shape mounted and ready to go. (See photo at the end of this article.)

The thicker coin shapes are particularly handy. Cylinder shapes are nice for doing the inside of rings, and knife-edge shapes quickly clean up the solder joint around the outside base of your bezels.

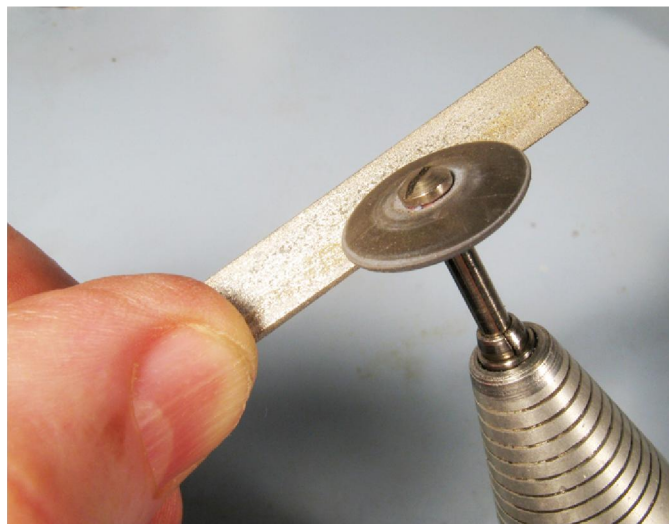
Most jewelry catalogs carry these wheels, but often the color codes don't match between different manufacturers.

RESHAPING SILICONE WHEELS

Silicone polishing wheels in the Dremel or Foredom are a great time saver, but after using them a bit they often need to be reshaped. This is particularly true with the knife-edge wheels.

The natural thought is to grab one of your files and hold it up against the rotating wheel to reshape it. But this gives you a problem. The grinding grit in the silicone wheel is much harder than steel, meaning that you end up grinding down the teeth of your file.

The best way to reshape your polishing wheels is to use a diamond file or a separating disk. If you don't have one and must use a steel file, I sacrifice the area of the file that is closest to the handle. That's an area which is not used in normal bench work.



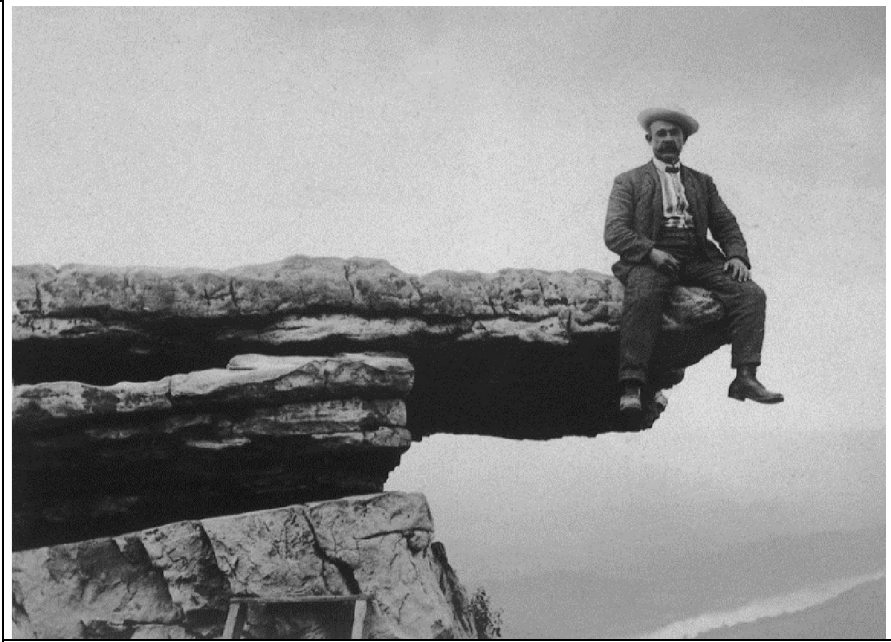
See all Brad's jewelry books at [Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)

Notes from the Editor

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Thanks to our President, and one of our many Bobs, **Bob Baker**, for the following article about a nearby locality that exhibits some interesting geologic features.

CONCRETIONS AT LAKE PUEBLO STATE PARK

By Bob Baker,

While camping and hiking in Lake Pueblo State Park I discovered a band of concretions within a shale formation.



Concretions form around a nucleus, sometimes a fossil, leaf, or even a grain of sand. A carbonate cement, usually calcite, precipitates within the spaces around the nucleus, creating spherical or ovoid shapes within a sedimentary rock (most frequently shale, sandstone, or limestone). The concretions form before the enclosing sedimentary layers solidify.

The concretions I found are **septarian nodules**. Septarian means “partition”, in reference to the cracked/partition shape of the interior. As the concretion forms, it dries and shrinks, creating cracks and voids within. These voids are then filled with calcite crystals giving the septarian its unique appearance. Calcite from septarian nodules often fluoresces/phosphoresces in UV.

A study by scientists at Colorado College and other schools, titled “Stable carbon and oxygen isotope evidence of Cretaceous sea-level fluctuations recorded in septarian concretions from Pueblo, Colorado” (Coniglio, Myrow, and White, 2000), was based on the discovery of several concretion sites on the north side of Lake Pueblo, in Rock Canyon. This study showed that there were at least 5 periods of sea-level fluctuations in this area in the Late Cretaceous Epoch.

The area of my discovery is on the south side of the lake, to the west of Arkansas Point Campground. A bluff rises over 100 feet above the surrounding land and is composed, in ascending order, of Blue Hills Shale, Codell Sandstone, and Ft Hayes Limestone. The concretions, ranging from 8 to 30 inches in diameter, are located within the Blue Hills Shale formation about 100 feet above the campground and on both sides of the bluff. I was unable to determine whether the concretions were also within the Codell Sandstone as I was unable to get close enough to examine the rocks.





Further exploration of the trails on the south shore of the lake provided additional discoveries of unique rock formations. The following picture shows layered rock in unusual patterns located along Stonehenge Trail.



References:

Coniglio, M., P. Myrow, and T. White, 2000, Stable carbon and oxygen isotope evidence of Cretaceous sea-level fluctuations recorded in septarian concretions from Pueblo, Colorado": *Journal of Sedimentary Research*, vol. 70, no. 3, p. 700-714.

"Concretions" Wikipedia

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Monthly Mineral Quiz

Answer to last month's quiz: Lapis Lazuli (Lazurite) Lapis lazuli is a metamorphic rock consisting of the mineral *lazurite* (a complex silicate), usually mixed with pyrite, calcite, and other minerals. It was ground to make the blue pigment *ultramarine*, used by Leonardo DaVinci and other Renaissance painters, especially when they were working for wealthy clients. More recently, artists have used a chemically identical synthetic to achieve the characteristic ultramarine color. A rare mineral in the U.S., lazurite occurs at the Blue Wrinkle mine and Truebe prospect, located above tree line on Italian Mountain, near Crested Butte, Gunnison Co., Colorado. Mined sporadically from the 1940s to the 1990s, the deposit produced some of the best lazurite in the world, including a 37-pound slab in the Denver Museum of Nature and Science.

This month's unknown: The mineral shown in photos below can be found accompanying mixed sulfide minerals (e.g. galena, sphalerite, chalcopryite, and pyrite) in many world-wide ore deposits. It sometimes occurs in septarian nodules and other concretions, especially on the western slope. It's very common as a gangue (non-ore) mineral at many Colorado localities. At a few, it's the main mineral present. One such occurrence is located near Tarryall, in Park County, where the mineral occurs with fluorite, chalcopryite, malachite, and a few other associates. We will have a field trip to this locality this summer.

This month's mineral is soft ($H = 3$); has one perfect cleavage and two imperfect ones; exhibits a vitreous to resinous to pearly luster (pearly on the cleavage); and has a very high SG for a light colored mineral (4.5). Color is very variable, ranging from colorless or white to gray to tan to blue. It is mined as a source of chemicals and as an important component of drilling muds used in the oil and gas industry. What is it?



(Carnein collection and photos)

Lake George Gem & Mineral Club
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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).

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