



BROCHANTITE

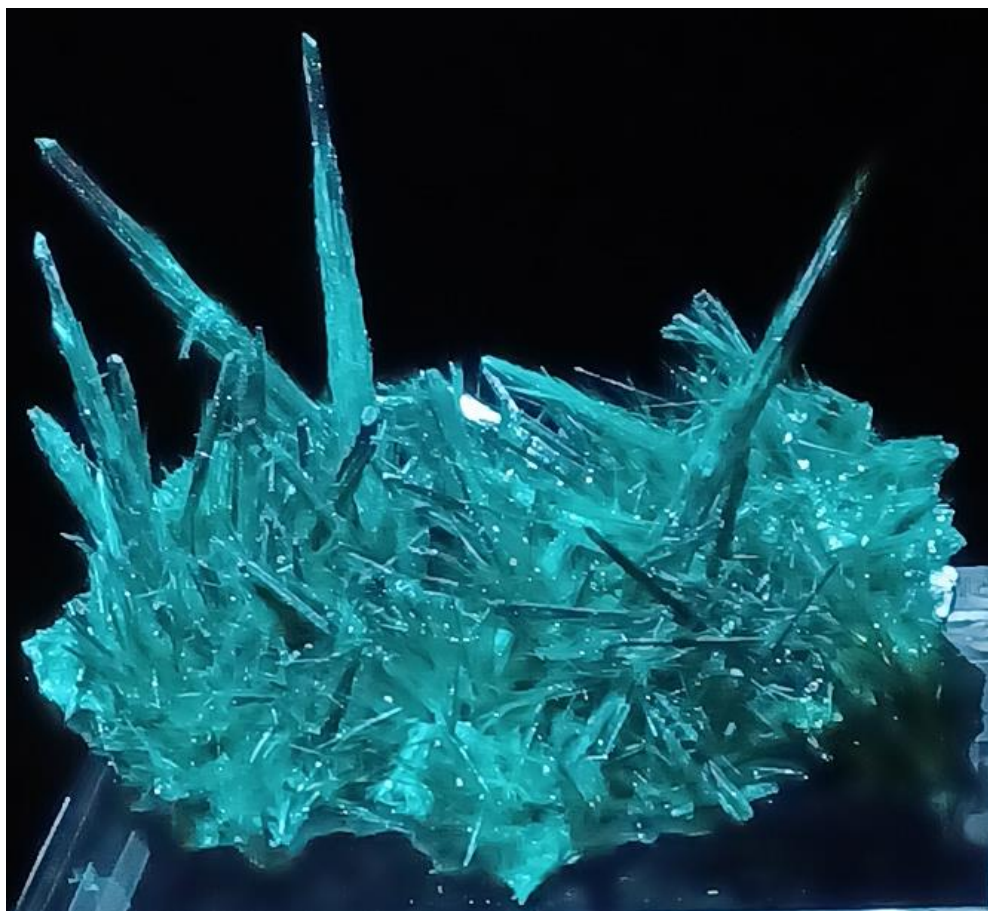
Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas

Recently a new display opened in the Perot Museum of Nature and Science's Lyda Hill Gem and Mineral Hall dealing with the properties of minerals. In one of the display cases, there was a mineral I had not previously encountered. The mineral was Brochantite, a copper sulfate with a chemical formula of $\text{Cu}_4\text{SO}_4(\text{OH})_6$. Its crystal habitats include prismatic, acicular (needle-like), and druse. It has a Mohs hardness of 3.5 to 4.0. The color of Brochantite is green, emerald green, black, and blue-green. Brochantite is found in association with malachite, azurite, and chrysocolla.

Brochantite is one of the two primary corrosion products that form on bronze structures. In the area where the bronze is exposed to weathering, brochantite is likely to form; in protected areas, antlerite (another copper sulfate) is more likely to form.

Until recently, Brochantite was primarily a mineral for display. However, recent research has been using man-made Brochantite as a pigment for creating an artificial patina. Also, Brochantite is being studied for use in a green copper-containing pesticide.

Finally, like any mineral, it seems to have a long list of mystical and healing properties. Included are help in connecting to higher realms, aids in your intuition, and healing of lung-related issues.



References:

- Wikipedia, <https://en.wikipedia.org/wiki/Brochantite>
- Rak, P.; Fink, D.; Bureš, R.; Stoullil, J. Novel Procedure for Brochantite Based Pigment Production and Its Immobilization for Restoration of Historical Copper Objects. *Coatings* **2020**, *10*, 972. <https://doi.org/10.3390/coatings10100972>
- *ACS Sustainable Chem. Eng.* 2019, *7*, 3, 3213–3221, Publication Date: December 3, 2018, <https://doi.org/10.1021/acssuschemeng.8b05135>, Copyright © 2018 American Chemical Society
- Healing Crystals for you, Brochantite, <https://www.healing-crystals-for-you.com/brochantite.html>

Picture:

- Picture by Don Shurtz of a mineral Specimen on display at the Perot Museum of Nature and Science

Federation News

AFMS President's Message

Margaret Kolaczyk, AFMS 2022 president
From the June 2022 AFMS Newsletter

Hi everyone, I just returned from the CFMS Convention and Show hosted by the Antelope Valley Gem & Mineral Club in Lancaster California. Due to starting a new job, I was only able to attend on Saturday. So up at 4 am and drive for 3 1/2 hours. It has been some time since there was a CFMS Convention and Show and the Antelope Valley Gem & Mineral Club did not disappoint. They did a fantastic job. Hats off to the club—their hard work showed. This year there were 20 display cases in competition. I was unable to attend the banquet, so I



do not know the final results. I can say that having display cases at any show is great and helps bring awareness to the public about what one can learn by joining a society/club. Some years back, Joe Goetz came up with the “Club Central” booth. This booth has information on the societies/clubs within the CFMS. Individuals are able to get information on what society/club is near where they live. The only downside is when a society/club does not update their information. As for me, it is always great to be able to see friends and make new friends when attending a show. I had hoped to be able to purchase some soapstone but no luck. The good side is that there will be more shows and one never knows what treasure is waiting around the corner. Happy hunting to one and all - be it on a field trip and/or at a show.

An American First: Rockhounding & Fossil Collecting in a National Monument

Jennifer Haley, AFMS Historian
From the June 2022 AFMS Newsletter



Rockhounding and fossil collecting, as you know, are not allowed in the United States' national monuments. However, when the BLM's initial planning process began for the Mojave Trails National Monument in California, Rockhounds got involved. Rockhounds were very aware this was their one and only chance to possibly keep their collecting sites accessible within the new monument.

Rockhounds showed up, got involved, and stayed involved during the initial planning process. Rockhounds learned how to submit public comments in the articulate way BLM management needed them presented, so the comments could be included in the official planning. Rockhounds submitted more public comments than any other organization or category of individuals involved in the planning process.

This was and is, amazing feedback for all Rockhounds. Many thought their aspirations too high a hill to even try to climb. Many thought the environmental groups already had the BLM planning “in the bag,” given the amount of lobbying money and attorneys they have at their use. Others leaned on their hope, hoping they could still collect in what has been one of their favorite collecting areas for more than 100 years. Rockhounds

realizing last chances can be huge opportunities for success, worked together with American Lands Access, their societies, federation, the AFMS, and the BLM. Rockhounds realized entitlement wouldn't get them anywhere, but doing good work and working together would.

What's up next? Although rockhounding and fossil collecting are currently allowed in the Mojave Trails National Monument, the next phase of planning the monument is coming up this year. Rockhounds will be showing up, getting involved, and staying involved again.

History is alive, always adding to its growth rings, as the future becomes our present and then our past. It will be up to Rockhounds to decide what our future will be. What Rockhounds have accomplished so far in the planning of the Mojave Trails National Monument, is monumental. If Rockhounds succeed in their efforts and establish the approval of rockhounding in the final phase of the monument, it will be a major breakthrough for Recreational Rockhounding's future.

For more information about the monument: Watch the Rockhounding in the Mojave Trails National Monument video. Mojave Trails National Monument | Bureau of Land Management (blm.gov) Additional information on the Marble Mountains trilobite fossils.

Shows and Activities – Upcoming Show and Activity Dates

Check with the show contact to verify the show status

May 2022

- 28–29 May, Fort Worth, TX, Fort Worth G&MS, Will Rogers Memorial Center, website: <http://www.fortworthgemandmineralclub.org>

June 2022

- 17-19 June, Carlsbad, NM, Carlsbad G&MS, Living Desert Zoo and Garden State Park, Website: carlsbadgms.org
- 18-19 June, Grapevine, TX, Arlington G&MC, Grapevine Convention Center, website: AGMC57.org

July 2022

- 1–3 July, Farmington, NM, San Juan County G&MS, McGee Park, Email: torycbonner@gmail.com
- 16–17 July, Tulsa, OK, Tulsa R&MS, Exchange Center at the Expo Square, website: www.tulsarockandmineralsociety.org

August 2022

- 20–21 August, Bossier City, LA, Ark-La-Tex G&MS, Bossier Civic Center, website: larockclub.com

September

- 24-25 September, Lubbock, TX, Lubbock G&MS, Lubbock Memorial Civic Center, website: www.lubbockgemandmineral.org
- 24-25 September, San Antonio, TX, Southwest G&MS, Wonderland of the Americas, website: www.SWGMS.org

October

- 8-9 October, Tri-City G&MS, Mayborn Civic and Convention Center, email: selovelace@showdirection.com
- 14-16 October, Westwego, LA, G&MS of Louisiana, The John A Alario Event Center. SCFMS & AFMS Show and Convention, Contact J. David Cope, (504) 214-6754.

November

- 5-6 November, Amarillo, TX, Golden Spread GM&TS, Amarillo Civic Center Complex, website: www.amarillotreasure.com
- 11-13 November, Humble, TX, Houston G&MS, Humble Civic Center, website: hgms.org
- 19–20 November, Mesquite, TX, Dallas G&MS, Mesquite Convention Center, website: dallasgemandmineral.org

Ref: Rock & Gem Show Dates, <https://www.rockngem.com/ShowDatesFiles/ShowDatesDisplayAll.php?ShowState=ALL>

Ref: January – February 2022 SCFMS Newsletter

Editor's Corner – Thanks to Rock & Gem Magazine

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas



In the April Chips and Chatter's Editor's Corner, I published a Thank You to Highland Park Lapidary for their Webinars and helpful videos. This month I would like to send a big SHOUT-OUT to Rock & Gem Magazine. Rock & Gem magazine is "The Official Magazine of the AFMS". I think it would be fair to say it is the official magazine of the rockhounding hobby. On their www.rockngem.com website, they are publishing a wealth of information for rockhounds. Want to read articles about minerals – they are there. The same goes for rocks, fossils, and just about anything hobby-related information you want. There are summaries of their magazines back to 2018, reprints of many of the "What to Cut" articles, and reprints of many of the magazine feature articles. They even had a 4 part series about "Illustrious Opals" and, more recently, a series titled "Glorious Gemstones". You can go to the website and search. Even better, you can go to the website and sign up for a weekly email that will take you to feature posts. I have been on their email list for probably two years and look forward to each new email. In all their articles and series you have to contend with advertisements, but the advertisements are hobby-related and often very informative.

Rock & Gem magazine and Highland Park Lapidary both rate a PLUS with me, but that is just my 2 ¢ worth.

Don

VISIT AN AREA CLUB

[Arlington Gem & Mineral Club](#), meets the 1st Tuesday of each month at 7:30 pm, 1408 Gibbins, Arlington, TX

[Cowtown Gem, Mineral, & Glass Club](#), meets the 2nd Tuesday at 7:00 pm, CERA 3300 Bryant Irvin Rd. Fort Worth

[Dallas Bead Society](#), meets 1st Saturday of each month at 10:00 am at The Point at CC Young, 4847 W. Lawther Dr., Dallas, TX

[Dallas Gem & Mineral Society](#) meets the 3rd Tuesday of each month at 7 pm, American Legion, 10205 Plano Rd, Dallas (next to their shop)

[Dallas Paleontological Society](#), meets 2nd Wed. of each month at 7:00 pm, Brookhaven College, Building H, 3939 Valley View Lane, 75244

[Fort Worth Gem & Mineral Club](#), meets 4th Tuesday of each month at 7:30 pm, 3545 Bryan Avenue, Ft. Worth

[Oak Cliff Gem & Min Soc.](#), meets the 4th Tuesday of each month at 7:30 pm, Unitarian Universalist Church, 3839 W. Keist Blvd, Dallas,

[Pleasant Oaks Gem & Mineral Club](#), meets the 1st Thur. of each month Bradfield Recreation Center, 1146 Castle Drive, Garland, 75040

[Wild West Bead Society](#), meets 3rd Tuesday of each month at 6:30 pm, Wild Beads, 1124 S. Bowen Road, Arlington, TX

June Birthstones: Pearl, Alexandrite, and Moonstone

Don Shurtz, Pleasant Oaks Gem and Mineral Club of Dallas
From the June 2014 issue of the Chips and Chatter

Not one, not two, but three recognized birthstones for June. Now that is way too many to write about, but here it goes.



Pearls are one of the few semi-precious gemstones that are not a mineral. Pearl is of organic origin, thus not a mineral. A natural (wild) pearl is formed by successive thin layers of nacre. The pearl starts as an irritant (sand, shell, organic matter, etc.) that gets trapped in the folds of the oyster or other mollusk. The nacre is secreted to coat the irritant. Nacre is composed primarily of calcium carbonate in the mineral form aragonite which is cemented together with the horn-like substance conchiolin. The successive, thin layers of nacre are what gives the pearl its translucent quality. Nacre is also the substance that lines the shells of the mother of pearl. A cultured pearl starts as a small round (or oblong) object placed in the folds of the oyster. The oyster treats this object in the same manner as a natural irritant; it secretes nacre to coat the object. Once the coating is completed, the pearl is harvested. When we think of pearls most will think of Japan. Japan is still the largest processing center for pearls, but the majority of the cultured pearls come from China and Australia.

Alexandrite is a variety of chrysoberyl that exhibits color change depending on lighting conditions. The favored alexandrite is red in daylight conditions and red when illuminated by incandescent light. Less favored varieties of alexandrite are yellow to pink in daylight and red with incandescent light. The least favored variety of alexandrite will be yellow in daylight and turn brown with incandescent light. Alexandrite may have been first identified by a Finnish mineralogist, Nils Gustaf Nordenskiöld, and named for the Russian Tsar Alexander II. It was so named as the royal colors of the Tsar are green and red.



The first deposits were from the Ural Mountains in Russia, but other sources have been found in other locations including India, Madagascar, Tanzania, Sri Lanka, Zimbabwe, and Brazil. As with many gemstones, synthetic Alexandrite is made in labs. However, and more often, synthetic corundum treated to change colors or color-changing spinel is used to simulate the real alexandrite.



Moonstone is a variety of feldspar, or more properly, the combination of two forms of feldspar – orthoclase and albite. The minerals are intermixed as the stone forms, but as it cools, the orthoclase and albite separate into alternating thin stacks of orthoclase and albite. The iridescence observed in moonstone is light reflecting from the alternating layers, a phenomenon known as adularescence. To some, it is the shimmering white light from the stone which reminds them of the moon, thus the name moonstone. Ancient civilizations used moonstone for jewelry. The Romans believed the stone was formed from solidified moon rays. Both the Romans and the Greeks associated the stone with their lunar deities. Sri Lanka and India are the major producers of moonstone, but it also has been found in the United States, Brazil, and Australia

References: •

- Wikipedia, <http://en.wikipedia.org/wiki/>
- American Gem Trade Association (AGTA), <http://www.agta.org/gemstones/variation-alexandrite.html>
- About dot com, <http://fengshui.about.com/od/Crystals/f/What-Is-Moonstone.htm>

Pictures:

- Alexandrite: Wikimedia, <http://commons.wikimedia.org/wiki/>, Photograph by David Weinberg for Alexandrite.net and released to the public domain
- Pearls: Wikimedia, <http://commons.wikimedia.org/wiki/>, photograph by "tanakawho" - <http://www.flickr.com/photos/28481088@N00/160781390/>, Free Content License
- Moonstone: Wikimedia, <http://commons.wikimedia.org/wiki/>, photograph by Wouten Hagens and released to the Public Domain

CLUB OFFICERS FOR 2022

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2nd VP, Field Trips: Judy Wilson
Secretary: Amy Vulk
Treasurer: Ling Shurtz
Editor: Don Shurtz
Contact us by e-mail: don.shurtz@gmail.com or
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Minutes of the May Meeting

There were no minutes for the May Meeting. For the May meeting, we celebrated Cinco-de-Mayo with a Taco Thursday potluck dinner. There were tacos, taco fixings, salads, chips and dips, desserts, and drinks. We did have to cut the festivities a little short of desired, but we had to get the room cleaned up within our allotted time.

Bench Tip from Brad Smith

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In preparing epoxy for use, the important things are to use exactly equal parts of the two components and to thoroughly mix them together. Coloring material can be added at any time. If I'm making just a small amount, I squeeze out equal-sized droplets onto a piece of scrap paper or aluminum foil and mix thoroughly with a toothpick.

To mix larger amounts of epoxy, I use a gram scale to weigh the first component. Then I zero the scale and weigh out the same amount of the second component, add coloring if needed, and mix.

If you are using 5-minute epoxy, the mixing needs to move quickly. But I like to work carefully when adding color. So I squeeze out equal-sized droplets side by side on the scrap paper. Then I work with just one of the droplets to add the colors. The 5-minute clock only starts when you mix in the second droplet.

More smart solutions for your jewelry making problems can be found in my metal arts books on Amazon at <http://amazon.com/author/bradfordsmith>

And if you enjoy these tips on jewelry making, take a look at the sample chapters from:

- > Bench Tips 1 - <http://amzn.to/1Z6hQ06>
- > Bench Tips 2 - <http://amzn.to/2KCygh4>

Work Smarter & Be More Productive With Brad's "How-To Books"



JUNE MEETING

June 2nd starting at 7:15 PM
Bradfield Recreation Center
1146 Castle Drive, Garland, TX
Presentation: Video – Surprise Title

July Meeting – July 7, Spring Creek Barbeque in Richardson starting at 7:00 PM

VISITORS ARE ALWAYS WELCOME

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PLEASANT OAKS GEM and MINERAL CLUB of DALLAS



Meetings
 First Thursday of each month. Next meeting on April 7 is at the Bradfield Recreation Center starting at 7:00 PM

Membership
 Single Adult: \$16.50,
 Junior: \$5.00, Family: \$27.50
 (Plus badge fee for new members)

PURPOSE

The Pleasant Oaks Gem and Mineral Club of Dallas is organized for charitable and educational purposes to promote interest in the various earth sciences, particularly those hobbies dealing with the art of cutting and polishing gemstones, the science of gems, minerals and metal crafts, as well as their related fields. Pleasant Oaks Gem and Mineral Club of Dallas is a Section 501(c)(3) not-for-profit organization

CHIPS AND CHATTER
 Pleasant Oaks Gem & Mineral Club
 PO Box 831934
 Richardson, TX 75083-1934

To

VISITORS ARE ALWAYS WELCOME

Meetings: First Thursday of each month. Our next meeting will be on **June 2, 2022, starting at 7:15 PM. at the Bradfield Recreation Center, 1146 Castle Dr., Garland, TX. Presentation: Video - Surprise Topic**

Features

Brochantite1-2
 Thanks to Rock & Gem Magazine 3
 June Birthstones: Pearl, Alexandrite, and Moonstone 4
 Bench Tip from Brad Smith 5

Monthly Columns

Club and Meeting Information 1,2, 5, 6
 Minutes5

Federation News

AFMS President’s Message 3
 An American First: Rockhounding & Fossil Collecting in a National Monument 3

Notices

Shows and Activities3
 Visit an Area Club3
 Copyright Notice5