STONEY STATEMENTS

A monthly publication of the Clear Lake Gem & Mineral Society

VOLUME 50 | September 2024 | NUMBER 9

NEXT MEETING: **Tuesday, September 17, 2024**

TIME: **7:00 p.m.**

LOCATION: Helen Hall Library
100 W Walker St.
League City, Tx 77573

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September MONTHLY MEETING

This month we are going to have another awesome speaker, Doug Walser, owner of Angel's Rocks and Fossils. He will be presenting a very interesting topic on How to Start your own business.

Please come and join us for a fun and educational event.

http://www.clgms.org/

MINUTES OF THE August CLGMS GENERAL MEETING

A total of 38 (2 Zoom) members/guests attended our general meeting. This was the largest number of people attending our meeting in a long time.

Since we had so many members attend the meeting Cindy, our President, went over our membership dues, scholarships, school library grants, and other benefits to join the club.

Our field trip will be rescheduled to later in the year.

Our picnic will be on Saturday, November 9th, 2024 from 10-1. The location will be Walter Hall Park on Hwy 3, in League City.

Next month speaker Doug Walser from Angel's Rock Shop: How to Start and Open Your Own Business.

Christina - Birthstone of the Month - August: Peridot.

MINUTES OF THE September CLGMS BOARD MEETING.

The date for our CLGMS Picnic will be on November 9, 2024, Saturday from 10-1pm. At Walter Hall Park in League City, TX. 807 State Hwy 3 N, League City, TX 77573. There will be games for the kids and lunch will be provided. Please plan to attend. The weather should be much cooler and we will have a good time.

Our 50th Anniversary club pin: 1.25 inch size, 3D ribbon, 300 pieces will be ordered. The colors of the pin are Royal Blue background and Maize Yellow for the writing.

We were also discussing to have a generic club's pin made.

Upcoming show dates:
2025/22-23 Feb.
2026/28 Feb.-1 Mar.
2027/20-21Feb

Sandy will confirm the 2027 dates will the Convention Center.

We will make new signs for the show to point out where to purchase the tickets, tickets prices and also we will have some feather signs for the outdoors.

Field Trips Announcement

If you have a good location for our club field trip – please contact:

annabel.brownfield@gmail.com or call/text: 281-486-1866.

Upcoming events - We are looking forward to the following programs.

We are looking forward to hearing an exciting presentation from Doug Walser on How to start your own business. Doug is the owner of Angel's Rocks and Fossils shop in the Houston area. He and his family have been running a successful business for a long time. It is our honor to have this opportunity.

Please check out our Facebook page: **Clear Lake Gem and Mineral Society.**

Our next show will be February 22-23, 2025.

September birthstone: The many colors of Sapphire.

GIA

Sapphire is one of the Big three of jewelry-colored gemstones—the other two are ruby and emerald. A durable stone that's designated as a birthstone for September, it captures jewelry buyers with its practicality and aura of romance. Corundum is the mineral species that includes both sapphire and ruby as varieties. Red corundum is known as ruby and all other colored corundum (including colorless, or white sapphire as it is known in the trade) is sapphire, although blue is the most well-known.

COLORS OF SAPPHIRE

Sapphire is generally known as a blue gemstone but surprisingly it comes in a wide range of colors and quality variations. In general, the more intense and uniform the color is, the more valuable the stone. Sapphires that are not blue are known as fancy sapphires and may be any color—except red (which is a ruby). The fancy sapphire colors are pink, orange, yellow, green, purple, and violet. There truly is a different color of sapphire to suit anyone's taste!

Blue Sapphires

Color has the greatest influence on a sapphire's value, and preferred sapphires have strong to vivid color saturation. The most valued blue sapphires are velvety blue to violet blue, in medium to medium-dark tones. Sapphires with these qualities command the highest prices per carat. Less valuable blue sapphires might also be grayish, too light, or too dark.

What is a Padparadscha Sapphire?

An extremely rare and collectible variety that is a mix of pink and orange is known in the trade as padparadscha. Such gems typically have a high value—much higher than many other types of fancy sapphires. Their color can be hard to describe. Some people say padparadscha sapphire colors should be called salmon or sunset. But the word padparadscha itself derives from the Sanskrit language and refers to the rich color of a lotus blossom. Those who deal in these gemstones usually agree that padparadscha sapphires should range from light to medium pinkish orange to orange-pink.

Pink and Purple Sapphires

Pink sapphires range from light red (pink) to light purple with weak to intense color saturation which fall out of the color ranges for ruby or purple sapphire. Purple sapphires always have purple as the dominant color. They range from medium to dark reddish purple to violet purple with weak to vivid color saturation. The major fancy sapphire color categories are padparadscha, pink and purple, orange and yellow, green, and colorless and black. Each category has its own color range, causes of color, and market.

Yellow to Orange Sapphires
Yellow sapphire is also available in a variety color saturations from yellow to orange yellow and in light to dark tones, while orange sapphires have deep golden, to mandarin, and deep orange colors. Yellow sapphires may be affected by other colors within the same gem and can range from light to dark greenish yellow to orange yellow with weak to intense color saturation. The finest yellow sapphire is yellow to orange yellow with vivid saturation. Orange sapphires range from yellowish orange to reddish orange. The finest orange sapphires are strong, pure orange to red orange with medium tone and vivid saturation.

Green Sapphires
Commercial-grade sapphires may contain a less desirable greenish blue color or strong greenish blue that is visible as you view the gem. Uniformly green sapphires that are saturated in color are actually rare and many collectors prize them. In green sapphires, a mix of yellow and blue sapphire accounts for the color a person sees.

Color Change Sapphires
Color-change sapphires are corundum's chameleons—stones that change color under different lighting. Under daylight equivalent (fluorescent or LED daylight-balanced) light, the typical color-change sapphire's basic color ranges from blue to violet. Under incandescent light, it ranges from violet purple to strongly reddish purple. Some rare color-change sapphires change from green in daylight to reddish brown in incandescent light. When gem experts judge color-change sapphires, they describe the color change as weak, moderate, or strong. The strength of the stone's color change is the most important quality factor affecting its value.

The color of star corundum has a great effect on its value, though it is understood that miniscule inclusions are the cause of the asterism. They can affect transparency and color, and only very rare, exceptional gems exhibit transparency, depth of color and asterism. As such, the best star corundum has a crisp, distinct star against strongly saturated color. If the color is too light, it doesn't provide enough contrast for the star's rays, and the star will be less visible. Star corundum can be red, pink, blue, black, gray, brown, purple, or yellow—practically every color under the sun. The term "star sapphire" encompasses all colors of star corundum except red, which is called star ruby. Naturally, some colors of star corundum are valued more highly than others. In general, the most prized colors are the same as the colors most valued in non-phenomenal corundum: red and blue. Trade terms based on sources can represent certain colors and qualities that are associated with a stone's source, generally they refer to the finest stones from that source. But a single source never consistently yields gems that are all the same color and quality. In fact, the descriptive term might represent only a small percentage of its production.

SAPPHIRE CLARITY

Blue sapphires typically have some inclusions, but they generally have better clarity than rubies. Blue sapphires with extremely high clarity are rare, and very valuable. Several types of inclusions are found in sapphires. Among these are long thin mineral inclusions called needles. Fine needles are called silk when they occur as the mineral rutile in intersecting groups. Other clarity characteristics in sapphire are included mineral crystals, partially healed breaks that look like fingerprints, color zoning, and color banding.

Generally, inclusions make a stone less valuable. Price can drop substantially if the inclusions threaten the stone's durability. Even so, inclusions can actually increase the value of some sapphires. Many of the most valuable Kashmir sapphires contain tiny inclusions that give them a velvety appearance. They scatter light, causing the coveted visual effect without negatively affecting the gem's transparency.

STAR SAPPHIRE

Star sapphires and star rubies belong to the phenomenal corundum category. The star effect is called asterism. It's caused by reflections from tiny, needle-like inclusions that are oriented in several specific directions. Stars are usually made up of 2, 3, or 6 intersecting bands, resulting in 4, 6, or (rarely) 12 rays.

Star sapphires usually have stars have 6 rays, and 12-rayed stars are quite rare. Two different sets of inclusions—one of rutile and one of hematite—oriented in slightly different directions can cause a 12-rayed star. Hematite inclusions cause asterism in black star sapphires. The sapphire's color is actually yellow, green, or blue, but the inclusions make it appear dark brown or black. The finest star is distinct, centered on the top of the stone, and visible from a reasonable distance, about arm's length. The star's quality should be the same when viewed from all directions. Ideally, the rays should be uniform in strength, reach from girdle to girdle on the cabochon, and intersect at the top center of the stone. The best stars are straight, not fuzzy, wavy, or broken. The reflective stars should contrast strongly against the gemstone's bodycolor. The star should also have elegant "movement." This means that, as you rock the stone, the star should appear to move smoothly across the surface. The best and most expensive star corundum is semi-transparent, with just enough silk to create a well-defined star. Too much silk can harm transparency and also lead to poor color, lowering the value of the stone considerably.

SAPPHIRE CUT

Oval shapes with triangular and kite-shaped facets on the gem's crown (top portion) and parallel rectangular facets on the gem's pavilion (bottom portion) are very common for corundum of all colors. Photo: Robert Weldon/GIA. Courtesy: Lewis Allen

The shape of a rough sapphire crystal influences the finished stone's shape and size. Rough sapphire's most common crystal form is a barrel- or spindle-shaped hexagonal pyramid. To achieve the best overall color, maintain the best proportions, and retain the most weight possible, cutters focus on factors like color zoning, pleochroism, and the lightness or darkness of a crystal to best determine how to orient the gem during cutting.

Color zoning—areas of different colors in a stone—is a common sapphire characteristic. Blue sapphire often has angular zones of blue and lighter blue. To accommodate color zoning in some sapphires, cutters orient the concentrated color in a location that offers the best visible color in the cut stone. In Sri Lankan sapphires, the color is often concentrated close to the surface of the crystal. If a cutter can orient the culet within the concentrated area of color, the stone will appear entirely blue in the face-up position. Pleochroism refers to different body colors in different crystal viewing directions. Blue sapphires often have greenish blue and violet blue pleochroism. It's most desirable to orient the cut so the stone shows the violet blue color when it is set in jewelry.

Star Sapphire Cut

Star corundum must be cut as a cabochon to display asterism. A finished stone's attractiveness depends on the star's orientation and the cabochon's symmetry, proportions, and finish. The cabochon must have an appealing appearance, with the star properly centered when the gem rests on its base. The stone's outline should be symmetrical. For most stones, the dome should be high—about two-thirds of the stone's width—to focus the star sharply. If it's too high, the phenomenon loses its graceful motion when the stone is tilted. Excessive height also makes the stone difficult to mount. If the dome is cut too shallow, the star will be visible only from directly above. Black star sapphires, however, are prone to parallel breaks, so they're usually cut very flat to reduce the risk of damage. A stone should not have excess weight below the girdle that doesn't contribute to the optical effect or reinforce color.

SAPPHIRE CARAT WEIGHT

Blue sapphires can range in size anywhere from a few points to hundreds of carats, and large blue sapphires are more readily available than large rubies. However, most commercial-quality blue sapphires weigh less than 5.00 carats.

Fine-quality blue sapphires in larger sizes are rare, but they're still more available than ruby. The incredible blue sapphire in the center of this ring weighs 18.79 carats. - Vagabonde Bleue Ring

Large commercial-quality blue sapphires are rare, but more available than large fine-quality ones. As a result, size makes more of a difference in the price of fine-quality sapphire.

Taken from the website:

https://www.upi.com/Top_News/2020/04/08/Mapping-of-basement-destroying-mineral-could-lead-to-repair-payments/7661586286315/

Mapping of basement-destroying mineral could lead to repair payments

By Jean Lotus

DENVER, April 8 (UPI) -- A nationwide geological mapping of a mineral that eats away concrete foundations from within might help property owners obtain help from Congress for expensive repairs. A new map report, released by the U.S. Geological Survey in March, shows the extent that iron-based pyrrhotite is found throughout geological regions of the country.

More than 35,000 homes in Connecticut and Massachusetts are thought to have basement foundations that contain cement-eating pyrrhotite, an iron-sulfide material quarried near the ancient volcanic geological area called the Brimfield Schist in Connecticut. Homeowners have described hearing loud explosions or discovering cracks overnight in their basements as concrete foundations fail.

Discovering pyrrhotite in the basement of his 20-year-old home in 2005 led to months of repairs and a bill for $200,000, not covered by insurance, for Jim Okun, of Ellington, Conn. "The cracks in the basement walls got bigger, faster than I would have expected," Okun said.

An electron-microscope lab analysis showed pyrrhotite had been present in the coarse aggregate gravel used in the foundation's cement, said Okun, an environmental scientist for an engineering firm. A quarry in Willington, Conn., was the source of mineral-laced gravel used in basement foundations for decades all over the region. Homes nearby are affected, and a local school had to be demolished because of foundation failure, Okun said.

"Contractors had to dig a moat around our house, support the house with iron beams and tear out the foundation in pieces," he said. Pyrrhotite hits concrete with a double punch that can cause foundations to fail quickly years after they were poured. When exposed to water and air, a rusty sulfuric acid reacts over time with the calcium oxide in concrete, which dissolves the cement paste, scientists say. At the same time, a chemical reaction creates iron oxide that expands, cracking the concrete from within.

In the eastern United States, the map shows pockets of pyrrhotite in New England, as well as the Appalachian mountains, northern Wisconsin and the Upper Peninsula of Michigan. In the West, pyrrhotite is concentrated in northern California, northern Washington and upper Idaho. A sprinkling of sites are dotted in the Rocky Mountains.

The USGS Denver-based Geology, Geophysics and Geochemistry Science Center released the report funded by an amendment to the 2019 Consolidated Appropriations Act, sponsored by U.S. Reps. Joe Courtney and John Larson, both Connecticut Democrats. "This map makes clear that pyrrhotite is present throughout the United States, and much work is needed to ensure that other states and localities are not unknowingly utilizing aggregate containing pyrrhotite in construction involving concrete," Courtney said in a statement.

The congressmen are working to make basement foundation repairs eligible for a federal Casualty Loss Deduction tax break, and to make repairs eligible for grants and loans from three federal agencies.

An engineer removes a core sample from a Connecticut home where the pyrrhotite-tainted concrete foundation was found to be cracking. Photo courtesy of Jim Okun

Connecticut's Crumbling Foundations Assistance Fund distributes special state "captive insurance" claim money to help cover failed foundations. A November 2019 state Supreme Court ruling found that ordinary homeowners insurers were not liable for crumbling foundations unless a home was on the verge of collapse.

In Massachusetts, a task force in January estimated that repairing 2,000 crumbling foundations in western part of the state would cost $350 million.

"We've made some progress toward making [homeowners] financially whole, but we've got to make sure that the resources being pulled together for them at the municipal, state, federal and private levels are in step with the true scale of this catastrophe," Courtney said in a statement last week.

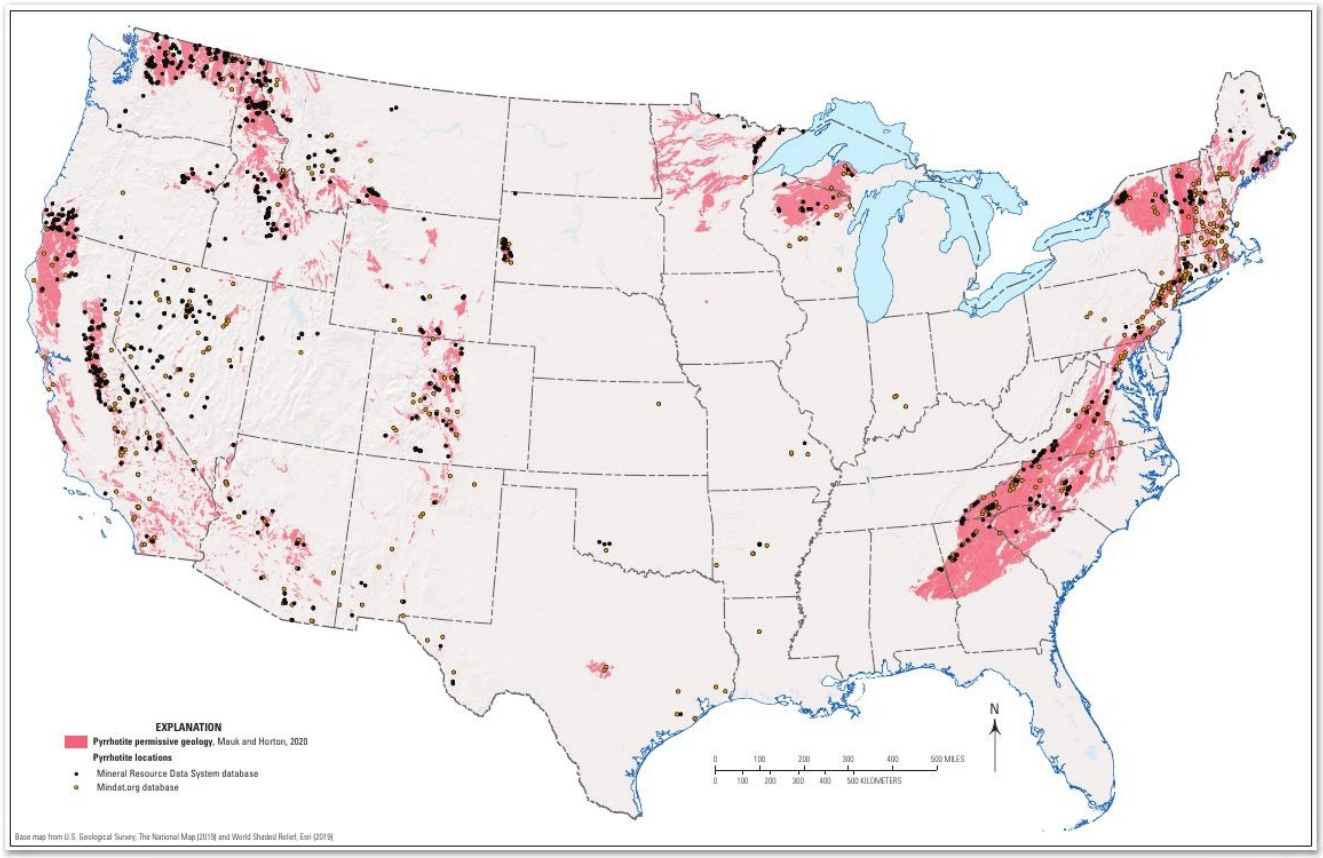

Figure 2. Conterminous United States showing the location of rock units that may contain pyrrhotite (Mauk and Horton, 2020); locations of pyrrhotite from the USGS Mineral Resources Data System database (U.S. Geological Survey, 2019); and locations of pyrrhotite from the Mindat.org database (Mindat.org, 2019).

Distribution of pyrrhotite in the United States.

Quartz at the 2021 Show

SCFMS and MEMBER CLUB GEM SHOWS			
St Petersburg Gem Show; 8/30/2024 - 9/01/2024 10:00 AM - 5:00 PM The Coliseum Ballroom 535 4th Ave N; St Petersburg, FL 33701 https://hrgemshows.com	**Colorado Mineral and Fossil Fall Show 9/06/2024 - 9/14/2024 10:00 AM - 6:00 PM Crowne Plaza DIA 15500 E 40th Ave Denver, CO 80239 http:// www.coloradomineralandfossilshows**	**Lubbock, TX Show and sale; Lubbock Gem and Mineral Society; Lubbock Memorial Civic Center, 1501 Mac Davis Lane; Sat. 9/28/2024 10-6, Sun. 9/29/2024 11-4; Email: walt@lubbockgemandmineral.org; Website: www.lubbockgemandmineral.org**	**Albuquerque, NM Annual show; 10/4-6/2024 Expo NM State Fairgrounds, 300 San Pedro NE; Fri. 9-5, Sat. 9-5, Sun. 9-5; 70 dealers, mineral specimens, rough, slabs, jewelry, cabochons, beads Email:jaypenn246@gmail.com Website: abqfallshow.wix.com/abq-fall-show**
Houston Gem, Mineral, Jewelry & Fossil Show December 10-12, 2024 Humble Civic Center http://www.hgms.org	**Austin, TX Annual show; Austin Gem and Mineral Society (AGMS); Palmer Events Center, 900 Barton Springs Rd; 10/18 – 10/20/2024; Fri. 9-6, Sat. 9-6, Sun. 10-5; Email: showchariman@austingemandmineral.org; Website: www.agms-tx.org**	**51st Annual Gem & Mineral Show. – Hosted by the Gem and Mineral Society of Louisiana. December 21- 23, 2024 Alario Center 2000 Segnette Blvd. Westwego, LA 70094. www.gmsofla.org**	

STONEY STATEMENTS
Clear Lake Gem and Mineral Society, Inc

PO BOX 891533
Houston, Texas 77289

Meeting 3rd Tuesday of the Month
7:00 P.M.
League City Library
100 W Walker St, League City, TX 77573

Member of

Next Annual Show
February 22-23, 2025
Pasadena Convention Center

CLGMS is on the Web:
http://www.clgms.org

FACEBOOK: CLEAR LAKE GEM AND MINERAL SOCIETY.

American Federation of Mineral Societies

South Central Federation of Mineral Societies

Clear Lake Gem and Mineral Society, Inc

MEMBER: American Federation of Mineralogical Societies and South Central Federation of Mineral Societies

PURPOSE: To promote education and popular interest in the various earth sciences; in particular in those hobbies dealing with the art of lapidaries and the earth sciences of minerals, fossils and their associated fields.

2024 OFFICERS:	President	Cynthia McGowan	281-546-2662
	Vice President	David Tjiok	832-423-4802
	Secretary	Christina Rankin	281-723-5408
	Treasurer	Monica Duran	281-705-7875
	Program Director	Christina Rankin	
	Board of Directors:	Sandra Christiansen	Jim Hawkins
		Jeff Mills	John Caldyne
	Newsletter Editor	Donna Nelson	
		David Tjiok	

Annual Show 2024 …….. Sandra Christiansen
Constitution & Bylaws……..Jim Hawkins
Community Benefits……..Charlie Timme
Historian……David Tjiok
Publicity……..…… Annabel Brownfield
Facebook……Cynthia McGowan

Membership……Mike Flannigan
WWW System Admin.. …….Mike Flannigan
Refreshments……..Lori Westerman
Education/Field Trips…….Annabel Brownfield
Casey Renner

Membership Dues Jan. to Dec. 2024: Adult $15:00, Family Dues $20.00 (4+) at same address. Send Dues to CLGMS, PO BOX 891533, Houston, TX, 77289