

VOLUME 49 August 2023 NUMBER 8

NEXT MEETING: **Tuesday, August 15, 2023**
7:00 p.m.
TIME: Helen Hall Library
LOCATION: 100 W Walker St.
 League City, TX 77573

INSIDE THIS ISSUE		
August Meeting	1	<u>August MONTHLY MEETING</u> Henry Marek will be presenting "Locating, Digging, and Cleaning Arkansas Quartz". Arkansas is such a great place to go searching for quartz. You won't want to miss this discussion!
Board/General Meeting Minutes Upcoming events Field Trips	2	<hr/> Sept Meeting: Hands-On Fossils Meeting.
Peridot	3-7	Casey Renner went on a 17-day fossil hunting trip with her son, Mike. They traveled and camped through N. Texas, New Mexico, Colorado, Utah, and Wyoming. Along the way, she found geodes in N.Texas, Eocene insects and plants in Colorado, Trilobites in Utah, and Eocene fish from the Green River Formation in Wyoming. Casey will be sharing the highlights, and a few lows, from the trip and sharing some of the fossils she found for her home collection.
Citrine	7-8	Casey also brought home a bin of rocks from Utah and Wyoming for the club to split and, hopefully, find a fossil or two. No tools needed, just come and have fun splitting rocks.
Gem and Mineral Shows	9	<hr/>
Club Officers	10	The club is looking to purchase small-sized shark's teeth for the gem mine. If anyone knows of a supply, please get with us.

MINUTES OF THE JULY CLGMS GENERAL MEETING

The meeting was held at League City Library on 07/18/2023. 23 members attended the meeting with two new members.

Three out of the five scholarship winners attended the meeting and received their checks and photos of them, and their family members were taken too.

The newsletter was approved by members.

Treasury report will be given at the next board meeting in September.

No field trips are scheduled for the summer months, because of the very high heat that we are experiencing.

Trina asked if we would get LCD microscopes for the group, she also said that she would see how much they cost and report back to the board.

A teacher in the group spoke about a geology mini course for 4th and 5th graders she will get back with all the details for us to consider.

Guest speaker: Christina Rankin from Designsbychristina to speak about what she does and how she makes her jewelry. She also brought some of items that she sells.

MINUTES OF THE AUGUST CLGMS BOARD MEETING.

There was no August board meeting.

Sophia LaRochelle (center) her mother (left), and her sister (right) accept the \$2,000 CLGMS scholarship she won in our Scholarship Application Contest

7/18/2023



Taken from the February 1975 "Arizona Highways" magazine:

Peridot – Arizona's Green Gem

by Robert W. Jones

The treasures of the Southwest Desert have attracted mankind since the days of the Spanish Conquistadors and before. After more than four centuries people are still being attracted to the desert in search of mineral wealth and they are finding it.

Agate, jasper, chalcedony, fire agate, petrified wood, amethyst, turquoise, dumortierite, and peridot are just some of the gem materials found in the desert and elsewhere in the state.

Of these, one of the most valuable is the gem peridot. The name comes from the French, hence the last syllable is pronounced "doe." Peridot is formed in the fires of a volcano, making it almost unique in the gem world. The most famous gem, diamond, is also formed in the same type environment but has never been found in the



peridot occurrences of the state since conditions for its formation differ somewhat from those required for peridot. At least one massive volcanic outcrop of peridotite, a rock composed mostly of peridot, has been identified between the border of Arizona and the San Juan River to the north but no diamonds have been found.



Peridot is a green gem, its color ranging from a bright yellow green to a deep lustrous green. Scientists say it is an idiochromatic, or self-coloring, gem since it has variations in the amount of iron and magnesium which create the subtle changes in hue.

There are only three major sources of supply for this beautiful gem, an island in the Red Sea, the gem gravels of Burma, and Arizona, with two good deposits. There are many other occurrences for peridot. It may be found as microscopic grains in any basic lava formation. However, for gem grade crystals to form the lava must experience a change in phase, becoming watery enough for the molecules of peridot to migrate toward each other to form grains sufficiently large to be of commercial value. The larger gems have come from foreign deposits but the bulk of the gem market today is being supplied from Arizona sources, primarily the lava formation known as Peridot Mesa on the San Carlos Indian Reservation. The second



Arizona deposit is is Peridot Ridge and is located north of Fort Defiance, near Canyon de Chelly. Scattered amounts can be found elsewhere, particularly where volcanoes have thrown large masses of basaltic lava into the air to cool and harden before hitting the ground. These “bombs,” as they are called, often contain jummy grains of peridot, often too small to cut but beautiful nonetheless. As the forces of weathering work on basaltic lava containing grains of peridot, the grains are released and scattered along the washes and slopes where diligent collectors seek them out.

Ultra-sonic drilling techniques have opened new markets for the attractive Arizona peridot beads . . . strung alone or with gold, silver, and other adornment.

Peridot has been a popular gem throughout history. It was prized by the Egyptians who worked the Red Sea deposits. There is some evidence that

MARKOW PHOTO

the Breastplate of the high priest Aaron may have contained peridot as one of its twelve stones.

The second stone was called, "Pjtdah," a green stone most think now was topaz while others still feel was peridot. These same twelve stones were later described as being embedded in the twelve foundation stones of



Jerusalem. Named for the twelve apostles, these apocalyptic gems were credited with showing true spiritual preaching accompanied by miracles. Peridot was later endowed with the ability to ward off the thirst of fever when carried under the tongue and, when powdered, to be a remedy for asthma.

Apache women building a wickiup at Peridot, Arizona, on the San Carlos Reservation. — WESTERN WAYS PHOTO

Though many people suffering from respiratory ailments come to the desert and seek its gems it is for the beauty of the stones not their mystical powers. There is still a trace of these ancient beliefs still reflected in our culture today as we prize peridot as the birthstone of August.

Currently, peridot is emerging as a marketable gem in Arizona. The current world's supply is limited with Arizona producing the greater amount of gem material for baroque jewelry. Large sized crystal grains suitable for large stones are rare in Arizona. The majority of what is found produces marvelously bright yellow green to green stones under five carats in weight. The National Gem Collection in the Smithsonian boasts a fine large Arizona gem weighing 22.9 carats.

The significant increase in interest in Indian jewelry has provided an outlet for the gems being found on the San Carlos Reservation. Gem rough is collected by free-lance diggers, all Indians. This they sell off to two major markets. The Peridot Mining and Marketing Project, under the direction of Mr. Joseph Goombi, on the Reservation is one outlet. The other, off the Reservation processors who pick up the rough stones to polish, cut and drill for world-wide distribution. Since Hawaii is so well known as a volcanic region, peridot has long been prized there. The volcanics of the Islands, however, do not produce large grains of peridot in sufficient quantity to satisfy demands so quantities of Arizona material fill the bill. Known as "Pele's Tears" in Hawaii, Arizona peridot jewelry is readily available throughout the islands.

More interesting is the government sponsored self-help project now in its fourth year on the San Carlos Reseryation Over thirty people, not including the free-lance diggers, are employed in the project. In that short time the program has become self-sustaining, wholesaling several thousand dollars worth of Indian jewelry of all types every month. The jewelry is made by apprentice craftsmen learning the trade under the direction of qualified staff. Output ranges from bolas, to rings, bracelets, belt buckles, and almost any type jewelry normally made by Indian silversmiths. The peridot is tumble polished for some jewelry. The better gemstones are exported for faceting and mounting in fine settings. Since scientists have estimated that perhaps as much as one-third of the rock volume of peridot mesa is



Rough tumbled peridot by the hundreds.

Insert — Peridot and other precious gem stones in designers gold settings. Courtesy Fifth Avenue Gallery, Scottsdale. — NEIL KOPPEs

peridot, the mesa being some two miles long, it seems obvious there will be sufficient raw materials to maintain and even expand this interesting gem market.

Peridot has been prized by the Indians for years. As they work to develop their project, the ancient gem of the Bible, whose soft velvet green Joveliness is unmatched, should become more and more fashionable. Arizona peridot may not cure asthma as the Ancients believed but the search for it will be beneficial and the pleasure of obtaining an Arizona native gem will be unique!

EDITOR'S NOTE:

Peridot like gold and diamond is not worth much in the ground. Unlike gold and diamond it is not as simple to process, polish and drill. Because it has not been so precious and highly profitable, peridot has been one of the lesser known gem Stones.

Today one man more than anyone we know is responsible for the phenomenal popularity of Arizona's world traveling green gem stone.

Elliott Glasser, internationally known mineral processor and gem dealer, has created an industry through the development of modern devices to tumble, polish and drill the delicate tumble bead. In drilled bead form and in the rough polished state, Arizona's peridot is used by the world's finest stone faceters and bead stringers.

Glasser's headquarters at 4234 Craftsmen's Court, Scottsdale is the hub of a new and growing international peridot industry. Because of the Glasser process and the market horizons which stretch around the globe, buyers come from foreign lands to seek the best of Arizona's green gem from the San Carlos Apache Indian Reservation.

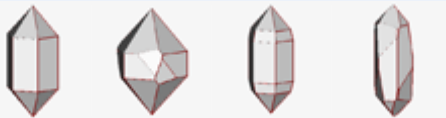
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THE MINERAL & GEMSTONE KINGDOM

Citrine is the yellow to brownish-red variety of the mineral [Quartz](#). It is a widely used as a gemstone, and after [Amethyst](#) it is the most popular Quartz gem. Most Citrine is formed by [heat treating](#) purple [Amethyst](#). Citrine may also be produced by heat-treating [Smoky Quartz](#) from certain localities. In some Amethyst deposits, the Amethyst has been partially or fully changed over to yellow Citrine by natural means of heating.

Natural Citrine, which is rare, is yellow to orange-yellow, and occurs in much lighter hues than the heat-treated material, which is dark orange-brown to reddish-brown. Virtually all heat-treated material has a reddish tint, whereas the natural specimens do not. Natural light-yellow Citrine is often called "Lemon Quartz" on the gemstone market. Sometimes Citrine has a "smoky" hue to it, and can be borderline between Citrine and [Smoky Quartz](#), with either definition being correct.

For additional information, see the gemstone section on [Citrine](#).

<u>Chemical Formula</u>	SiO ₂
<u>Composition</u>	Silicon dioxide
<u>Color</u>	Yellow, yellow-brown, orange, dark orange-brown, reddish-brown
<u>Streak</u>	White
<u>Hardness</u>	7
<u>Crystal System</u>	Hexagonal
<u>3D Crystal Atlas</u>	
<u>Crystal Forms and Aggregates</u>	Most often as protruding clusters of pyramids on a geode base. Also occurs as short, stubby , terminated crystals, either singular or in drusy aggregates, and occasionally as long prismatic crystals and groupings. Also occurs massive and crusty .
<u>Transparency</u>	Transparent to translucent
<u>Specific Gravity</u>	2.6 - 2.7
<u>Luster</u>	Vitreous
<u>Cleavage</u>	Indiscernible
<u>Fracture</u>	Conchoidal
<u>Tenacity</u>	Brittle
<u>Complex Tests</u>	Soluble in hydrofluoric acid
<u>In Group</u>	Silicates ; Tectosilicates ; Silica Group
<u>Striking Features</u>	Color and crystal habits
<u>Environment</u>	Occurs in all mineral environments , especially igneous environments.
<u>Rock Type</u>	Igneous , Sedimentary , Metamorphic
<u>Popularity (1-4)</u>	1
<u>Prevalence (1-3)</u>	3
<u>Demand (1-3)</u>	1

NOTEWORTHY LOCALITIES

Natural Citrine is not common and occurs sparingly in many large [Quartz](#) deposits. Most commercial gem-grade material comes from Rio Grande do Sul and Minas Gerais, Brazil, but almost all of the Brazilian material is [heat treated Amethyst](#).

A classic exhausted locality for natural Citrine is Olkhovka in the Northern Ural Mountains, Russia. Other locations where natural Citrine is found is San Cristobal, Santander, Colombia; Lubumbashi in Katanga (Shaba), Congo (Zaire); Antananarivo Province, Madagascar; Salamanca, Spain; and Dauphine, France. In Boekenhoutshoek (Magaliesberg), Mkokobola district, South Africa, a unique form of natural Citrine is found together with Amethyst that has a spiky overgrowth of small crystals popularly called "Cactus Quartz".

SCFMS and MEMBER CLUB GEM SHOWS			
<p>August 17-18 – Grapevine, TX – Arlington GMS</p>	<p>Tulsa Rock Gem Mineral & Jewelry Show Start Date: 07/15/2023 End Date: 07/16/2023 Hours: Sat 9:00-6:00 Sun 10:00-5:00 Exchange Center at Expo Square Address: 4145 E. 21st St. Tulsa, OK 74114 http:// www.tulsarockandmineralsociety.org</p>		<p>Tri-City Gem & Mineral Society Show - 10/14-15 Sat 9:00-6:00 Sun 10:00-5:00 Frank W Mayborn Civic & Convention Center 3303 N Third Street, Temple, TX https://www.facebook.com/groups/194934397585497/</p>
<p>51st Annual Gem & Mineral Show. – Hosted by the Gem and Mineral Society of Louisiana. October 21- 23, 2023 Alario Center 2000 Segnette Blvd. Westwego, LA 70094. www.gmsofla.org</p>	<p>Fossilmania - 10/27-29 Fri 8:00-6:00 Sat 9:00-6:00 Sun 9:00-4:00 Somervell County Expo Center 202 Bo Gibbs Blvd, Glen Rose, TX 76043 https:// www.dallaspaleo.org</p>	<p>Oklahoma Mineral and Gem Show - 10/27-29 Fri/Sat 9:00-6:00 Sun 10:00-5:00 State Fair Park - Modern Living Bldg 608 Kiamichi Place, OK City, OK 73107 http://omgs-minerals.org</p>	<p>Dallas Gem & Mineral Show - 11/18-19 Sat 10:00-6:00 Sun 10:00-5:00 Mesquite Conv. Center 1700 Rodeo Drive, Mesquite, TX 75149 http:// www.dallasgemandmineral.org</p>
	<p>Deridder Rock & Gem Show - 12/09-10 Sat 9:00-5:00 Sun 10:00-4:00 Vernon Parish Fairgrounds 276 H M Stevens Blvd, Leesville, LA 71446 https:// www.rockngemswla.com</p>		
<p>STONEY STATEMENTS Clear Lake Gem and Mineral Society, Inc</p> <p>PO BOX 891533 Houston, Texas 77289</p>			
<p>Meeting 3rd Tuesday of the Month 7:00 P.M. League City Library 100 W Walker St, League City, Tx 77573</p>			



Member of

Next Annual Show
February 24-25, 2024
Pasadena Convention Center



American Federation of Mineral Societies

South Central Federation of Mineral Societies

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

FACEBOOK: CLEAR LAKE GEM AND MINERAL SOCIETY.

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.

2023 OFFICERS:

President	Cynthia McGowan	281-546-2662
Vice President	David Tjiok	832-423-4802
Secretary	Christina Rankin	281-723-5408
Treasurer	Morgan Davies	281-224-2444
Program Director	VACANT	
Board of Directors:	Sandra Christiansen	Jim Hawkins
	Jim Edwards	John Caldyne
Newsletter Editor	Donna Nelson	
	David Tjiok	

Annual Show 2024	Sandra Christiansen	
Constitution & Bylaws.....	Jim Hawkins	Membership.....Mike Flannigan
Community Benefits.....	Charlie Timme	WWW System Admin..Mike Flannigan
Historian.....	David Tjiok	Refreshments.....Vacant
Publicity.....	Annabel Brownfield	Education/Field Trips.....Annabel Brownfield
Facebook.....	Cynthia McGowan	

Membership Dues Jan. to Dec. 2023: Adult \$15:00, Family Dues \$20.00 (4+) at same address. Send Dues to CLGMS, PO BOX 891533, Houston, TX, 77289