STONEY STATEMENTS

A monthly publication of the Clear Lake Gem & Mineral Society

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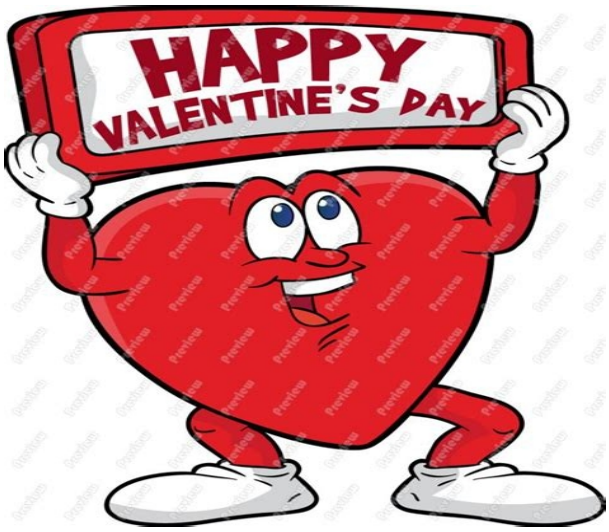

NEXT MEETING: **Tuesday, February 15, 2022**

TIME: **7:00 p.m.**
LOCATION: Helen Hall Library
100 W Walker St.
League City, Tx 77573

INSIDE THIS ISSUE

February MONTHLY MEETING

We will be discussing our plan for our annual show.

Please come and join us. We always need new ideas and suggestions so our show can run better.

Please also fill out the volunteer schedule sheet – We really need more volunteers to load, unload and helping on the floor during the show. http://www.mflan.com/temp/clgmsjobs.htm e-mail Mike Flannigan to get on the volunteer list.

MINUTES OF THE January CLGMS GENERAL MEETING

Guest Speaker: James a long- time member spoke about Agate hunting in Texas and showed some of his finds from a recent hunt in Ladonna Fossil Park. He also gave us a site for field trips.

David: Printed 1,000 more postcards and flyers for the upcoming show from February 25-27. He also has some business cards printed up for some of the members needed them.

Morgan: Said all the forms have been signed for the show and we had an issue with the mailbox. He is seeing if he can get it fixed, so that the club can get out mail.

Sandy: Was out, but she emailed her information about the show. We have 200 tables with 41 vendors and $16,403.00 collected as of today.

John: Spoke about the show and that we need volunteers to help with the show. Mike Flannigan will email the show schedule again for members to sign up. Please sign up and show up for the show. We still need people to sign up to help set up and tear down after the show is finished.

Christina: Will reach out to Texas Rockhounds to see if they can help with a field trip. Help with getting information on a new place to meet. She also showed some of her jewelry that she has made.

MINUTES OF THE February CLGMS BOARD MEETING.

UHaul for transporting show supplies has been booked.

Security for the show provided by PPD is all set.

Postcards had been mailed out, 50 sheet pads and 8x11 posters are ready and I will bring these to the February general meeting so members can start distributing them to promote our show.

Club's business cards are also available.

Currently we have 44 vendors and 220 tables are sold, and still waiting for a few more vendors to confirm. Once the vendors are finalized, the floor plan will be drawn.

2024 and 2025 PCC contract are ready and down payments have been paid.

Large shopping bags to be given out during the show are received and ready.

The Voters Registration Group will be present at our show and located in the lobby.

Please sign up for volunteering time slots at our show and we also need volunteers to load/unload show supplies on Thursday and Sunday evenings. Dinners will be provided.

Our next show will be February 26-27, 2022.

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

Final discussion on the 2022 Annual Show.
Please check out our Facebook page: **Clear Lake Gem and Mineral Society.**

Field Trips Announcement

Currently – no field trips are scheduled.

If you have a good location for our club field trip – please contact:
annabel.brownfield@gmail.com or call/text: 281-486-1866.

Minerals and Gemstones found in Texas

www.rockseeker.com/minerals-found-in-texas/ and Wikipedia.

1. Beryl. Taking on a range of stunning colors and names, beryl is a gemstone of remarkable beauty. Two of its notable forms are emeralds and aquamarines. **Beryl** (/ˈbɛrəl/ *BERR-əl*) is a mineral composed of beryllium aluminium cyclosilicate with the chemical formula $Be_3Al_2Si_6O_{18}$.[6] Well-known varieties of beryl include emerald and aquamarine. Naturally occurring, hexagonal crystals of beryl can be up to several meters in size, but terminated crystals are relatively rare. Pure beryl is colorless, but it is frequently tinted by impurities; possible colors are green, blue, yellow, and red (the rarest). Beryl can also be black in color. It is an ore source of beryllium.[7]

2. Zinc. The 30th element can be found in many ores within Texas. Zinc is a slightly brittle metal at room temperature and has a silvery-greyish appearance when oxidation is removed. It is the first element in group 12 (IIB) of the periodic table. In some respects, zinc is chemically similar to magnesium: both elements exhibit only one normal oxidation state (+2), and the Zn^{2+} and Mg^{2+} ions are of similar size.[note 1] Zinc is the 24th most abundant element in Earth's crust and has five stable isotopes. The most common zinc ore is sphalerite (zinc blende), a zinc sulfide mineral. The largest workable lodes are in Australia, Asia, and the United States. Zinc is refined by froth flotation of the ore, roasting, and final extraction using electricity (electrowinning).

The element was probably named by the alchemist Paracelsus after the German word *Zinke* (prong, tooth). German chemist Andreas Sigismund Marggraf is credited with discovering pure metallic zinc in 1746. Work by Luigi Galvani and Alessandro Volta uncovered the electrochemical properties of zinc by 1800. Corrosion-resistant zinc plating of iron (hot-dip galvanizing) is the major application for zinc. Other applications are in electrical batteries, small non-structural castings, and alloys such as brass. A variety of zinc compounds are commonly used, such as zinc carbonate and zinc gluconate (as dietary supplements), zinc chloride (in deodorants), zinc pyrithione (anti-dandruff shampoos), zinc sulfide (in luminescent paints), and dimethylzinc or diethylzinc in the organic laboratory.

3. Augite. This dark green mineral can be hard to describe due to its widespread nature. **Augite** is a common rock-forming pyroxene mineral with formula $(Ca,Na)(Mg,Fe,Al,Ti)(Si,Al)_2O_6$.
The crystals are monoclinic and prismatic. Augite has two prominent cleavages, meeting at angles near 90 degrees.

Augite is a solid solution in the pyroxene group. Diopside and hedenbergite are important endmembers in augite, but augite can also contain significant aluminium, titanium, and sodium and other elements. The calcium content of augite is limited by a miscibility gap between it and pigeonite and orthopyroxene: when occurring with either of these other pyroxenes, the calcium content of augite is a function of temperature and pressure, but mostly of temperature, and so can be useful in reconstructing temperature histories of rocks. With declining temperature, augite may exsolve lamellae of pigeonite and/or orthopyroxene. There is also a miscibility gap between augite and omphacite, but this gap occurs at higher temperatures. There are no industrial or economic uses for this mineral.[5][6]

4. Chalcedony. Chalcedony is a catch-all that refers to several semi-precious gemstones with a microcrystalline silica structure. **Chalcedony** (/kælˈsɛdəni, ˈkælsədoʊni/) is a cryptocrystalline form of silica, composed of very fine intergrowths of quartz and moganite.[2] These are both silica minerals, but they differ in that quartz has a trigonal crystal structure, while moganite is monoclinic. Chalcedony's standard chemical structure (based on the chemical structure of quartz) is SiO_2 (silicon dioxide).

Chalcedony varieties are Agates, Carnelian, Heliotrope, Chrysoprase and Onyx to name a few.



5. Amber. This burnt orange gemstone is actually fossilized tree resin, rather than carefully crafted silica and minerals. **Amber** is fossilized tree resin that has been appreciated for its color and natural beauty since Neolithic times.[1] Much valued from antiquity to the present as a gemstone, amber is made into a variety of decorative objects.[2] Amber is used in jewelry. It has also been used as a healing agent in folk medicine.


6. Uranium. Known for being radioactive, uranium is an interesting find in the Lone Star State. It was first discovered there in Karnes County in the 1950's.

Uranium is a chemical element with the symbol **U** and atomic number 92. It is a silvery-grey metal in the actinide series of the periodic table. A uranium atom has 92 protons and 92 electrons, of which 6 are valence electrons. Uranium is weakly radioactive because all isotopes of uranium are unstable; the half-lives of its naturally occurring isotopes range between 159,200 years and 4.5 billion years. The most common isotopes in natural uranium are uranium-238 (which has 146 neutrons and accounts for over 99% of uranium on Earth) and uranium-235 (which has 143 neutrons). Uranium has the highest atomic weight of the primordially occurring elements. Its density is about 70% higher than that of lead, and slightly lower than that of gold or tungsten. It occurs naturally in low concentrations of a few parts per million in soil, rock and water, and is commercially extracted from uranium-bearing minerals such as uraninite.[3]

In nature, uranium is found as uranium-238 (99.2739–99.2752%), uranium-235 (0.7198–0.7202%), and a very small amount of uranium-234 (0.0050–0.0059%).[4] Uranium decays slowly by emitting an alpha particle. The half-life of uranium-238 is about 4.47 billion years and that of uranium-235 is 704 million years,[5] making them useful in dating the age of the Earth.

Many contemporary uses of uranium exploit its unique nuclear properties. Uranium-235 is the only naturally occurring fissile isotope, which makes it widely used in nuclear power plants and nuclear weapons. However, because of the tiny amounts found in nature, uranium needs to undergo enrichment so that enough uranium-235 is present. Uranium-238 is fissionable by fast neutrons, and is fertile, meaning it can be transmuted to fissile plutonium-239 in a nuclear reactor. Another fissile isotope, uranium-233, can be produced from natural thorium and is studied for future industrial use in nuclear technology. Uranium-238 has a small probability for spontaneous fission or even induced fission with fast neutrons; uranium-235 and to a lesser degree uranium-233 have a much higher fission cross-section for slow neutrons. In sufficient concentration, these isotopes maintain a sustained nuclear chain reaction. This generates the heat in nuclear power reactors, and produces the fissile material for nuclear weapons. Depleted uranium (^{238}U) is

used in kinetic energy penetrators and armor plating.[6] Uranium is used as a colorant in uranium glass, producing lemon yellow to green colors. Uranium glass fluoresces green in ultraviolet light. It was also used for tinting and shading in early photography.

Uraninite, also known as pitchblende, is the most common ore mined to extract uranium.

7. Garnet. In West Texas, at the end of the Rocky Mountains lay small caches of garnets. **Garnets** (/ˈgɑːrnɪt/) are a group of silicate minerals that have been used since the Bronze Age as gemstones and abrasives.

All species of garnets possess similar physical properties and crystal forms, but differ in chemical composition. The different species are pyrope, almandine, spessartine, grossular (varieties of which are hessonite or cinnamon-stone and tsavorite), uvarovite and andradite. The garnets make up two solid solution series: pyrope-almandine-spessartine (pyralspite) and uvarovite-grossular-andradite (ugrandite).

8. Lignite. Lignite is a moist brown coal. It contains 20-35% carbon by mass. This makes lignite the ideal coal for use at a steam-electric power station. **Lignite**, often referred to as **brown coal**,[1] is a soft, brown, combustible, sedimentary rock formed from naturally compressed peat. It has a carbon content around 25–35%,[1][2] and is considered the lowest rank of coal due to its relatively low heat content. Lignite is mined all around the world and is used almost exclusively as a fuel for steam-electric power generation.

The combustion of lignite produces less heat for the amount of carbon dioxide and sulfur released than other ranks of coal. As a result, environmental advocates have characterized lignite as the most harmful coal to human health.[3]

Lignite briquette

Lignite stockpile.

9. Amethyst. A mystical, purple quartz, amethyst has been used across cultures for its beauty and metaphysical attributions. **Amethyst** is a violet variety of quartz. The name comes from the Koine Greek αμέθυστος *amethystos* from α- *a*-, "not" and μεθύσκω (Ancient Greek) *methysko* / μεθώ *metho* (Modern Greek), "intoxicate", a reference to the belief that the stone protected its owner from drunkenness.[1] Ancient Greeks wore amethyst and carved drinking vessels from it in the belief that it would prevent intoxication.

Amethyst, a semiprecious stone, is often used in jewelry and is the traditional birthstone for February.



10. Gold. The 79th element and historically hunted mineral, gold has helped define local economies and townships. **Gold** is a chemical element with the symbol **Au** (from Latin: *aurum*) and atomic number 79, making it one of the higher atomic number elements that occur naturally. In a pure form, it is a bright, slightly orange yellow, dense, soft, malleable, and ductile metal. Chemically, gold is a transition metal and a group 11 element. It is one of the least reactive chemical elements and is solid under standard conditions. Gold often occurs in free elemental (native) form, as nuggets or grains, in rocks, in veins, and in alluvial deposits. It occurs in a solid solution series with the native element silver (as electrum), naturally alloyed with other metals like copper and palladium and also as mineral inclusions such as within pyrite. Less commonly, it occurs in minerals as gold compounds, often with tellurium (gold tellurides).

Gold is resistant to most acids, though it does dissolve in aqua regia (a mixture of nitric acid and hydrochloric acid), which forms a soluble tetrachloroaurate anion. Gold is insoluble in nitric acid, which dissolves silver and base metals, a property that has long been used to refine gold and to confirm the presence of gold in metallic substances, giving rise to the term *acid test*. Gold also dissolves in alkaline solutions of cyanide, which are used in mining and electroplating. Gold dissolves in mercury, forming amalgam alloys, and as the gold acts simply as a solute this is not a chemical reaction.

A relatively rare element,[6][7] gold is a precious metal that has been used for coinage, jewelry, and other arts throughout recorded history. In the past, a gold standard was often implemented as a monetary policy, but gold coins ceased to be minted as a circulating currency in the 1930s, and the world gold standard was abandoned for a fiat currency system after 1971.



SCFMS and MEMBER CLUB GEM SHOWS			
Jan: **Fredericksburg Rockhounds, Fredericksburg, TX** **01/15-16/22, Lady Bird Johnson Park** **East Texas Gem & Mineral Society, Tyler, TX** **01/21-23/22, Tyler Rose Garden Center**	**Feb:** **Williamson County Gem & Mineral Society, Georgetown, TX. 2nd weekend in Feb., San Gabriel Park Community Center** **Clear Lake Gem & Mineral Society, Houston, TX** **02/26-27/22, Pasadena Convention Center** **Hi Plains Gem & Mineral Society, Plainview, TX**	**Mar:** **Gulf Coast Gem & Mineral Society, Corpus Christi, TX** **03/05-06/22, R.M. Borchard Fairgrounds, Robstown, TX** **Big Spring Prospectors Club, Big Spring, TX** **Usually 1st weekend in Mar., Howard Co. Fair Barn** **Southwest Gem & Mineral Society, San Antonio, TX** **03/12-13/22, venue to be announced.**	

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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 26-27, 2022
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.

2022 OFFICERS:	President	John Caldyne	832-282-4270
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Education/Field Trips…….Annabel Brownfield

Membership Dues Jan. to Dec. 2021: Adult $15:00, $5.00 per additional adult at same address, Junior $5.00, $5.00 per member with adult at same address, Family Dues $20.00 (4+) at same address. Send Dues to CLGMS, PO BOX 891533, Houston, TX, 77289