A monthly publication of the Clear Lake Gem & Mineral Society

VOLUME 45 | December 2019 | NUMBER 12

NEXT MEETING: **January 20, 2019**
TIME: **7:00 p.m.**
LOCATION: Clear Lake Park Building
5001 Nasa Parkway
Seabrook, Texas

INSIDE THIS ISSUE

December MONTHLY MEETING

DECEMBER - CLGMS ANNUAL DINNER AND ELECTIONS –

ONE SIDE DISH FROM EACH FAMILY (enough to feed your family plus extras for other members and friends).

A - M bring vegetables or bread and butter
N - Z bring dessert or salad (with dressing)

Don't forget to bring your own serving spoons since there are none at the Park Building. Put your name on these, too. The December meeting starts with dinner at 6:30 PM so COME EARLY (5:30) to set up tables, chairs and decorations. Bring your special centerpiece for your table. There is an oven in the kitchen, so keeping your food warm will let you help with the table set-up. Bring your family and friends to this enjoyable dinner.

MINUTES OF THE 11/18/2019 CLGMS MEETING

Pledge of allegiance.
Welcome of guests – Jim and Georgiana Kramer

The December meeting will start at 6:30. Door opens at 5:30.
We will have Rudy's BBQ for 30 – 40 people. Briquette and sausage, plus 3 sides, bread, utensils, and 2 gallons of tea.

2 batches of typed up tickets were turned in to Morgan Davies.

The November newsletter was approved.

Office 365 is not working. We may change our ISP to fix it.

We have 59 members.

David Tjiok may add 3 books to the library.

The alpine field trips are listed in the newsletter.

Charlie and Bernice Timme are traveling.

So far we have 31 vendors who have rented 156 tables. Cost of the tables is $15,780. So far we have collected $13,555. We are ahead of last year collections at this date.

We have 1 new vendor, and 2 vendors that have changed their company name.

Last year we rented 214 tables during the show.

We have the Rock Food Table and the Dinosaur guy.

Theresa Lowdermilk may run children's activities at the show. Darlene Hennings may help.

Many of the club jobs are open, such as Webmaster and Membership.

Bruce showed his extensive arrow head and sharks teeth collection. He had 7 cases of arrow heads and about 20 huge sharks teeth.

Becky Kadel showed geodes from Keokuk, Larimore from the Caribbean, Elait from Isreal, and pumice from Iceland.

Jim Hawkins showed several big slabs, thunder eggs from OR, gold moss agate, picture jasper, and opal from Richardson OR.

Pierce and Cindi McGowen showed their collection of rocks, which are mostly unidentified.

CLGMS Board of Directors Meeting Minutes, Oct-Nov 2019:

No minutes were submitted.

Pictures from the Christmas Party:

ZIRCON – The December Birthstone

Compiled 2003 from many articles by Al Pennington, CLGMS

Zircon comes from the word zargoon, meaning vermilion in Arabic or zargun meaning golden-colored in Persian. Zircon is Zirconium silicate $ZrSiO_4$, often with some hafnium and occasionally with some uranium, thorium, and yttrium. It can contain up to 20 percent of hafnon in its structure; if it exceeds that, it is scientifically a different mineral. Zircon is found in most igneous rocks and some metamorphic rocks as small crystals or grains, mostly widely distributed and rarely more than 1% of the total mass of the rock. It is also found as alluvial grains in some sedimentary rocks due to its high hardness. Zircon has a high index of refraction and, where crystals are large enough, is often used as a gemstone.

Hindu poets tell of the Kalpa Tree, the ultimate gift to the gods, which was a glowing tree covered with gemstone fruit with leaves of zircon. Zircon has long had a supporting role to more well-known gemstones, often stepping in as an understudy when they were unavailable. In the middle ages, zircon was said to aid sleep, bring prosperity, and promote honor and wisdom in its owner.

Natural zircon today suffers for the similarity of its name to cubic zirconium, the laboratory-grown diamond imitation. Some don't realize that there is a beautiful natural gemstone called zircon.

Zircon occurs in a wide range of colors but for many years, the most popular was the colorless variety which looks more like diamond than any other natural stone due to its brilliance and dispersion. Today the most popular color is blue zircon. Most blue zircon, which is considered an alternate birthstone for December, is a pastel blue, but some exceptional gems have a bright blue color. Zircon is also available in green, dark red, yellow, brown, and orange.

The wide variety of colors of zircon, its rarity, and its relatively low cost make it a popular collector's stone. Collectors enjoy the search for all possible colors and variations. Almost all Zircon gems are artificially colored by heat-treatment. Many of its gem colors are rarely found naturally in such color. An interesting and strange habit exhibited in only few zircons is that their color darkens and their luster dulls upon prolonged exposure to sunlight. This effect can be reversed by giving the stones a second heat-treatment.

Zircon is one of the heaviest gemstones, which means that it will look smaller than other varieties of the same weight. Zircon jewelry should be stored carefully because although zircon is relatively hard, it can abrade and facets can chip. Dealers often wrap zircons in individual twists of paper so that they will not knock against each other in a parcel. Zircon is somewhat soft so avoid scratches and sharp blows. Avoid hot water and household chemicals.

The typical simple crystal of zircon is a tetragonal prism terminated with four sided pyramids at each end. The prism may be lacking and the crystal can look octahedral. More complex crystals have faces of a less steeply inclined prism that taper the terminations. Also a secondary prism may truncate the primary prism by cutting off its edges and producing an octagonal cross-section through the crystal. There is even an eight-sided pyramid (actually a ditetragonal dipyramid) that may modify the four sided pyramids.

PHYSICAL CHARACTERISTICS:

- **Color** - Colorless, white, gray, black, brown, brownish-red, orange, pink, yellow, light blue, light green, light purple.
- **Luster** - Greasy to adamantine. Radioactive Zircon has a pitchy luster.
- **Transparency** - crystals are transparent to translucent.
- **Crystal System** - tetragonal; 4/m 2/m 2/m
- **Crystal Habits**: - dipyramidal and prismatic. Most often as short, stubby, prismatic crystals, which are almost always terminated. Crystals also occur in elongated, terminated prisms. Doubly terminated crystals are not uncommon. Radioactive zircon is characterized by rounded crystal faces. Zircon also occurs as grains, as fibrous aggregates, and as rounded, water worn pebbles. Twinned Zircon crystals are uncommon
- **Cleavage** - indistinct in two directions, prismatic. 3,2
- **Fracture** - Conchoidal to uneven
- **Hardness** - 7.5
- **Specific Gravity** is 4.6-4.8
- **Streak** - colorless
- **Tenacity** - Brittle
- **Other Characteristics:** is sometimes orange-yellow fluorescent and darker crystals may be radioactive due to impurities of rare earth elements.
- **Index of refraction** is 1.92 - 2.01
- **Varieties**:
    - **Cyrtolite** - unstable variety of Zircon with traces of radioactive elements in its chemical structure
    - **Hyacinth** or **Jacinth** - yellow, orange, brown, or red variety of Zircon
    - **Jargon** or **Jargoon** - colorless to pale gray or pale yellow variety of Zircon
    - **Starlite** - blue variety of Zircon
    - **Matarua** or **Matara** - colorless Zircon used to resemble Diamond
- **Zircon is mined** in Cambodia, Sri Lanka, Thailand, Myanmar, Australia, Seiland, Norway; Pakistan; Russia; Bancroft and Sudbury, Ontario, Canada and New Jersey and Colorado, USA.

References: Web sites - Amethyst Galleries, International Colored Gemstones, The Mineral and Gemstone Kingdom.

GOLD – Reality to Legend

Gold Reality

Gold is a native element and precious metal. Gold has long been prized for its beauty, resistance to chemical attack and workability. As it is found as a native element, gold has a relatively low melting point (1,945 Deg F) and is malleable. It has been used by mankind for thousands of years. Gold is used as a standard for international currency and is also widely used in jewelry, electronics (where its superb properties as a conductor help offset its tremendous cost), dentistry and in photographic processes. Gold is found as usually as disseminated grains in Quartz veins with Pyrite and other sulphides, or as rounded grains, flakes or nuggets in placer deposits and in streams and rivers. Gold is one of the heaviest minerals, and therefore can be panned easily because the Gold sinks to the bottom, below the other substances. In addition, it can be easily separated from other substances due to the weight differences.

The mineral Gold is almost always mixed with a small amount of silver, and sometimes contains traces of copper and iron. A Gold nugget is usually 70 - 90 percent gold, and the remainder mostly silver. The color of pure Gold is bright golden yellow, but the greater the silver content, the whiter the color.

Most Gold is mined from ore, containing tiny amounts of Gold in the ore. The ore is brown, iron-stained rock or massive white Quartz. To extract the gold, the ore is crushed, then the gold is separated from the ore by various methods.

Gold is less commonly found as nuggets. Nuggets are formed when erosion causes a large piece of Gold to separate from its mother rock, and then gets carried away into a stream or river. The flowing water tumbles the Gold, giving each specimen a distinct shape. The Gold eventually settles at the bottom of the water, and due to its heaviness remains there. Other nuggets also get caught in the same area, forming a placer deposit.

An even rarer form of Gold is as crystals, which are cubic, octahedral, and dodecahedral. Even when the Gold occurs in crystals, they are distorted or are almost microscopic.

The finest Gold specimens that have been found since early times have been smelted for production. Nice specimens, therefore, are regarded very highly, and are worth much more than the standard gold value.

Gold is the most malleable and ductile substance known. It can be flattened out to less than .00001 of an inch (less than .000065 cm) and a 1 oz. (28 gram) mass can stretch out to a distance of over 50 miles (75 kilometers)!

Gold is also one of the most resistant metals. It won't tarnish, discolor, crumble, or be affected by most solvents. This adds on to the uniqueness of this mineral.

Gold is usually associated with Pyrite and other sulfides, and many times cannot be noticed because of the association with these resembling minerals. In certain localities, minerals that contain these sulfides are heated high enough for the sulfides to depart, enabling the Gold to remain intact on the matrix. Such Gold is known as "Roasted Gold", and is occasionally sold in "rock shops".

Gold Mythology

So deep ingrained in the human psyche is the lust for Gold that nearly every culture has its own myths associated with Gold. Phaethon, son of Helios in Greek myth, lost control of his father’s golden chariot, which created the Libyan Desert. Jason, leader of the Argonauts in Greek Mythology, searched for, and eventually found, the fleece of a golden ram in order to claim his inheritance. The Greek and Roman Myth of Midas is about a king (Midas) who wished everything he touched would turn to gold but when Dionysus granted the wish, Midas soon saw the foolishness of his wish and asked Dionysus to release him the curse. To do so, Dionysus had Midas wash in the Pactolus River (in modern day Turkey). This is the mythological source of the real gold present in the river.

Beyond the normal greed and racism that drove the Spanish Conquistadors to commit the acts they did in the new world, was the search for the legendary City of Gold, El Dorado. In the 1500s, they searched for the city, expecting to find it with each exploration, and then changing its location to drive their men into new regions. By the middle of the 1500s they had pillaged and plundered all the way to Western New Mexico.

It was written by Pomponius Mela, that a certain area was uninhabitable, "because the Griffons (a cruel and eager kind of wild beast) do wonderfully love the gold, which lies discovered above the ground, and do wonderfully keep it, and are very fierce upon them that touch it." Gryphons have always been depicted as guardians of treasure. Gryphons themselves depict gold, as they represent the wealth of the

sun at dawn, the gold in the east. They are also said to line their nests, called Eyries, with pure gold, woe be to the traveler looking to steal it.

Gold legends abound in the American West. Typically, they reveal and feed upon the fears of residents of the area. One typical story is the legend of a group of prospectors in the Wind River Mountains who found large nuggets of gold in a stream. Marauding natives killed two of the men and the third fled the area. When he returned to the area months later to search for the cabin where they had hidden their gold, he could not find it. Legend has it that the gold is still at its original hiding place.

Gold is associated with the Fall Equinox in Wiccan Religion. The Fall Equinox signals the time of harvest and the approach of darker days. It is a time of celebrating the harvest and thankfulness for the Wicca.

Gold's long history of use by mankind has given rise to a great number of healing myths. No doubt, its monetary value, which wells from a human lust for gold that is almost archetypal, has amplified the powers that healers attribute to the metal. That New Age healers call gold, "the Master Healer" is of little surprise considering how the desire that gold inspires approaches worship of the metal. Gold's lack of toxicity and its scientific properties of incredible malleability and ability to conduct energy, while remaining resistant to wear and corrosion, make it highly useful for Medical Science. Medical uses based on science have included the treatment of Arthritis, dental fixtures, and more.

Gold is associated with the number 2. Gold symbolizes the 50th anniversary in western culture

Name Origin: Anglo Saxon, of uncertain origin
Crystal System: Isometric - Hexoctahedral
Cleavage: None
Color: Yellow, Pale yellow, Orange, Yellow white, Reddish white.
Density: 16 - 19.3, Average = 17.64
Diaphaniety: Opaque
Fracture: Hackly - Jagged, torn surfaces, (e.g. fractured metals).
Habits: Arborescent - "Tree like" growths of branched systems (e.g. silver)., Platy - Sheet forms (e.g. micas)., Granular - Generally occurs as anhedral to subhedral crystals in matrix.
Morphology: Usually crude to rounded octahedral, cubes and dodecahedra to 2 cm. Often elongated on 100 or 111 forming herring bone and dentritic twins. Flattened plates with triangular octahedral faces. Rarely as wires(111 elongation)
Hardness: 2.5-3 - Finger Nail-Calcite
Luminescence: None.
Luster: Metallic
Magnetism: Nonmagnetic
Streak: yellow
RL Color: Gold-yellow when pure, silver white to copper-red when impure, blue and green in transmitted light

---

Rockhunt Schedule for Winter and Spring 2020

Aaron Thomas and I are happy to present the Big Bend rockhunt schedule for Winter and Spring, 2020.

Aaron has added a new ranch: The Stieg Ranch, near Balmorhea. The Stieg Ranch is an alluvial fan, which is relatively flat terrain, with a creek bed running through it. Both the alluvial fan and the creek bed have every type of agate that eroded out of the surrounding hills. You can find the Balmorhea Blue agate, banded agate, jasper, petrified wood, chert and artifacts. The fee will be $50 per person, and that

will entitle you to a 5-gallon bucket full of collectible rocks.

Aaron will be leading field trips every weekend from January 4th through the end of April. I will be gone for January, February, and the beginning of March, and will begin my weekday hunts on Monday, March 16. I'll have hunts every weekday during the two weeks that constitute spring break for most Texas schools, so there will be hunts each day from Saturday, March 14 through Sunday, March 29. Then there will be rockhunts Thursdays through Mondays for the next several weeks until Monday, April 27. This will give y'all the longest possible time for rockhunting on your trip out to the Big Bend, and you can pick and choose which days you'd like to hunt. You can sign up for Aaron's field trips the same way you sign up for mine: send me an email with the days you wish to attend, and make sure to include the phone number for a cell phone you'll have with you. Both Aaron and I will be leading trips to the South Larremore Ranch. All of Aaron's field trips will be limited to 12 people, and there's still no limit to the number than can attend my field trips.

All field trips this year will begin at Tri-la-Bite, which is at the corner of Holland Avenue and Garnett Street in Alpine. It's on the left side of the street, across from the Sonic Drive-In.

So here's the schedule. Be sure to look at the start time for your field trip because they vary depending upon the ranch. I love y'all, but I'm tired of getting emails and calls for questions that are answered in this email, and available on my website.

Regards,

Teri and Aaron

Date	Location	Leader	Cost	Start Time	Requirements
Sat. 12/28	Needle Peak	Aaron	$50	6:30	Limit of 12 people. Cash only
Sun. 12/29	South Larremore Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sat. 1/4	South Larremore Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sun. 1/5	Needle Peak	Aaron	$50	6:30	Limit of 12 people. Cash only
Sat. 1/11	Stieg Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sun. 1/12	South Larremore Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sat. 1/18	South Larremore Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sun. 1/19	Needle Peak	Aaron	$50	6:30	Limit of 12 people Cash only
Sat. 1/25	Stieg Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sun. 1/26	South Larremore Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sat. 2/1	South Larremore Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check
Sun. 2/2	Needle Peak	Aaron	$50	6:30	Limit of 12 people. Cash only
Sat. 2/8	Stieg Ranch	Aaron	$50	8:00	Limit of 12 people. Cash or check

More trips extending to 4/27/2020 will be published in the future.

agatehunter@sbcglobal.net

Our mailing address is:
Teri Smith Rockhunts
509 N 8th St
Alpine, TX 79830-3401

UPCOMING SHOWS AND PROGRAMS

SCFMS and MEMBER CLUB GEM SHOWS			
Jan 19 - 20, 2019, Fredericksburg, TX, Fredericksburg Rockhounds and SCFMS Convention, Lady Bird Johnson Park	***Jan 25 – 27, Tyler, TX, East Texas G&MS, Tyler Rose Garden Center, www.etgms.com/annual_show.html***	***Feb 16-17, Georgetown, TX, Williamson County G&MS, Georgetown Comm. Cntr., sparkaustin@outlook.com***	***Feb 23, Plainview, TX, Hi-Plains G&MS, Ollie Liner Center, bobcat22@suddenlink.com***
Feb 23-24, Pasadena, TX, Clear Lake G&MS, Pasadena Convention Center, http://www.clgms.org/index.html	***Mar 2-3, Big Spring, TX, Big Spring Prospectors Club, Howard Cty Fair Grounds, lolabellelamb@yahoo.com***	***Mar 2-3, Robstown, TX, Gulf Coast G&MS, Richard M Borchard Fairgrounds, www.gcgms.org***	***Mar 9-10, San Antonio, TX, Southwest G&MS, San Antonio Event Center, www.swgms.org***
Mar 23-24, Cedar Rapids, IA, Cedar Valley R&MS & AFMS CONVENTION, Hawkeye Downs Expo Center, www.cedarvalleyrockclub.org	***Apr 13-14, Abilene, TX, Central TX G&MS, Abilene Convention Center, kmcdaniel23@suddenlink.netApr 19-21, Alpine, TX, Chihuahuan Desert G&MC, Alpine Civic Center, ocoent895@gmial.com***	***Apr 19-21, Alpine, TX, Chihuahuan Desert G&MC, Alpine Civic Center, ocoent895@gmial.com***	***May 4-5, Waco, TX, Waco G&MC, Extraco Events Center, https://wacogemandmineral.org***
STONEY STATEMENTS Clear Lake Gem and Mineral Society, Inc PO BOX 891533 Houston, Texas 77289		***May 25-26, Ft. Worth, TX, Fort Worth G&MC, Will Rogers Memorial Center, www.forworthgemandmineralclub.org***	***Jun 1-2, Lubbock, TX Lubbock G&MS, Lubbock Memorial Civic Center, www.lubbockgemandmineral.org***

Meeting 3rd Monday of the Month
7:00 P.M.
Clear Lake Park Building
5001 NASA Parkway, Seabrook, Texas

Next Annual Show
February 22-23, 2020
Pasadena Convention Center

American Federation of Mineral Societies

South Central Federation of Mineral Societies

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

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.

2019 OFFICERS:	President	David Tjiok	
	Vice President	John Caldyne	
	Secretary	Trina Willoughby	
	Treasurer	Morgan Davies	
	Program Director	Vince Barrows	
	Board of Directors:	Sandra Christiansen	Sara Tanner
		John Caldyne	Donna Nelson
		Jim Edwards	Jim Hawkins
	2020 Annual Show	Sandra Christiansen	
	Newsletter Editor	Cindi McGowan	

Show Chairman ……... John Caldyne

Constitution & Bylaws……..Sara Tanner
Community Benefits…….Charlie Timme
Historian……David Tjiok
Publicity……..……. Cyndi McGowen
Facebook……Trina Willoughby

Membership……Mike Flannigan
WWW System Admin.. …….Mike Flannigan
Refreshments……..John Caldyne
Education/Field Trips…….Annabel Brownfield
Hands On……Theresa Lowdermilk

Membership Dues Jan. to Dec. 2019: 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