NEXT MEETING: December 17, 2018
TIME: 6:30 p.m.
LOCATION: Clear Lake Park Building
5001 Nasa Parkway
Seabrook, Texas

INSIDE THIS ISSUE

| December Meeting | 1 |
| Board/General Meeting Minutes | 2-3 |
| Upcoming events | |
| December Birthstones | 3-9 |
| Upcoming Programs | 9 |
| Upcoming Shows | 10 |

**DECEMBER MONTHLY MEETING**

The December general meeting will be the Christmas Dinner to celebrate the holidays. Remember of the time change. **Dinner will start at 6:30 pm** – one hour earlier than the regular meeting time. Set up will be at 5:30 pm. Main course will be provided by the club. Please bring some of your favorite salad, side dish or desserts to share.

You can bring some of your findings or creations for tables’ center pieces and let us know the short history on how you acquired them.

http://www.clgms.org/
MINUTES OF THE November CLGMS GENERAL MEETING

The October’s Stoney Statements was accepted.

Treasurer’s report was accepted.

Membership number was no change – It is time to pay dues for fiscal year 2019.

It’s a start for our library - Charlie Timme brought a book and Donna borrowed it.

2019 Annual show:
Postcards and Flyers need to be sent out.

Thank you to Sara Tanner who gave a presentation on her agate hunting trip to Alpine, Texas. Also thank you to John Caldyne on his presentation on the effect of metal impurities on the common jewelries and for bringing the refreshments.

We did quite a lot of rocks painting (I think it was rocks labelling) for the show advertisement. Make sure you put them out so they can be found and hopefully the founder will show up at our show.

MINUTES OF THE December CLGMS BOARD MEETING

SCFMS will be having their 2019 Annual meeting on January 19, 2019 in Fredericksburg, Texas. Charlie and Bernice Timme will be representing our club. They will be compensated by the club for their travel and accommodation.

Flyers and Postcard will be mailed soon to several dealers.

Bandit signs – there are some left over signs from last years and they are in the locker, however, we might need to order some more.

2019 main attraction will be the Dino Guy (Still needs to be contacted).

We might do another Facebook advertisement to attract more attendance.

2019 Show report:

We have a confirmed of 29 dealers with a total of 138 tables. There will be more to come as the time passed.
We are trying to get a Credit Card machine from Chase so we can accept CC for our ticket sales.

Just a reminder – Our club is in need of officers for 2019 – please keep in mind that this is OUR club and we need you help to maintain the club running smoothly. Please contact one of our officers for a specific duty (it is not hard at all) – Thank You.

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

There are so many different holidays packed in the month of December and we will be truly busy with all the activities whether in school or at the office and most likely shopping. December is the time that we reflect and thankful for all the happenings in our lives, but most importantly is to be together in the joyful holidays. We will not have a formal program but we will celebrate the holidays with a simple Christmas dinner.

The dinner will be at our regular general meeting place on Monday, Dec. 17th, 2018 at 6:30 pm (1 hour earlier than the regular meeting time) and the set up will be around 5:30 pm. Similar to last year, the club will provide the main course (BBQ – brisket and sausage), side dishes, condiments, drinks (teas) and all the plates/utensils. Please bring your favorite dish, dessert or salad enough to share with other members and also please bring your own serving utensils. The county building has a working oven if you need to warm up the food.

Also, you can bring some of your findings or creations for tables’ center pieces and let us know the short history on how you acquired them.

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**December’s Birthstones:**

**Tanzanite:**
*(From Wikipedia- all references refer to the website)*

Tanzanite is the blue and violet variety, caused by small amounts of vanadium,[3] of the mineral zoisite (a calcium aluminium hydroxyl sorosilicate) belonging to the epidote group. The gemstone was discovered by Manuel de Souza in the Mererani Hills of Manyara Region in Northern Tanzania in 1967, near the city of Arusha and Mount Kilimanjaro. Tanzanite is only found in Tanzania, in a very small mining area (approximately 7 km (4.3 mi) long and 2 km (1.2 mi) wide)[4] near the Mirerani Hills.[5]

Tanzanite is noted for its remarkably strong trichroism, appearing alternately blue, violet and burgundy depending on crystal orientation.[6] Tanzanite can also appear differently when viewed under different lighting conditions. The blues appear more evident when
subjected to fluorescent light and the violet hues can be seen readily when viewed under incandescent illumination. In its rough state tanzanite is colored a reddish brown to clear, and it requires heat treatment to remove the brownish "veil" and bring out the blue violet of the stone.[7]

The gemstone was given the name 'tanzanite' by Tiffany & Co. after Tanzania, the country in which it was discovered. The scientific name of "blue-violet zoisite" was not thought to be consumer friendly enough by Tiffany's marketing department, who introduced it to the market in 1968. In 2002, the American Gem Trade Association chose tanzanite as a December birthstone, the first change to their birthstone list since 1912.

Commercial History:

Manuel de Souza, a Goan tailor and part-time gold prospector living in Arusha (Tanzania), found transparent fragments of blue and blue-purple gem crystals on a ridge near Mirerani, some 40 km (25 mi) southeast of Arusha.[9] He assumed that the mineral was olivine (peridot) but, after soon realizing it was not, he concluded it was "dumortierite" (a blue non-gem mineral). Shortly thereafter, the stones were shown to John Saul, a Nairobi-based consulting geologist and gemstone wholesaler who was then mining aquamarine in the region around Mount Kenya. Saul, who later discovered the famous ruby deposits in the Tsavo area of Kenya, eliminated dumortierite and cordierite as possibilities, and sent samples to his father, Hyman Saul, vice president at Saks Fifth Avenue in New York. Hyman Saul brought the samples across the street to the Gemological Institute of America who correctly identified the new gem as a variety of the mineral zoisite. Correct identification was also made by mineralogists at Harvard University, the British Museum, and Heidelberg University, but the very first person to get the identification right was Ian McCloud, a Tanzanian government geologist based in Dodoma.[10][11]

Scientifically called "blue zoisite", the gemstone was renamed as tanzanite by Tiffany & Co., who wanted to capitalize on the rarity and single location of the gem, and thought that "blue zoisite" (which might be pronounced like "blue suicide") wouldn't sell well.[12] Tiffany's original campaign advertised that tanzanite could now be found in two places: "in Tanzania and at Tiffany's".

From 1967, an estimated two million carats of tanzanite were mined in Tanzania before the mines were nationalized by the Tanzanian government in 1971.

Recent tanzanite mining developments:

In 1990, the Tanzanian government split the tanzanite mines into four sections: Blocks A, B, C and D. Blocks A and C were awarded to large operators, while Blocks B and D were reserved for the local miners. In 2005 the government renewed the lease of Block C mine
to Tanzanite One, who paid 40 million dollars for their lease and mining license.[citation needed]

In June 2003, the Tanzanian government introduced legislation banning the export of unprocessed tanzanite to India (like many gemstones, most tanzanite is cut in Jaipur). The ban has been rationalized as an attempt to spur development of local processing facilities, thereby boosting the economy and recouping profits. This ban was phased in over a two-year period, until which time only stones over 0.5 grams were affected.[citation needed] In 2010, the government of Tanzania banned the export of rough stones weighing more than one gram.[13]

Tanzanite One Mining Ltd is owned by Richland Resources, but a 2010 law in Tanzania required them to cede 50% ownership of their mining license to the Tanzanian State Mining Company (Stamico). Production in 2011 amounted to 2.4 million carats, earning them $24 million.[14]

The world's largest rough tanzanite was a 16,839 carat (3.38 kg, or 7.46 lb) stone mined by TanzaniteOne in 2005.[15]

Turquoise:
(From Wikipedia- all references refer to the website)

Turquoise is an opaque, blue-to-green mineral that is a hydrated phosphate of copper and aluminium, with the chemical formula CuAl6(PO4)4(OH)8·4H2O. It is rare and valuable in finer grades and has been prized as a gemstone and ornamental stone for thousands of years owing to its unique hue. In recent times, turquoise has been devalued, like most other opaque gems, by the introduction onto the market of treatments, imitations and synthetics.
The gemstone has been known by many names. Pliny the Elder referred to the mineral as callais (from Ancient Greek κάλαϊς) and the Aztecs knew it as chalchihuitl.[4] The word turquoise dates to the 17th century and is derived from the French turquois for "Turkish" because the mineral was first brought to Europe through Turkey, from mines in the historical Khorasan Province of Persia.[2][3][4][5]

Properties:

The finest of turquoise reaches a maximum Mohs hardness of just under 6, or slightly more than window glass.[2] Characteristically a cryptocrystalline mineral, turquoise almost never forms single crystals, and all of its properties are highly variable. X-ray diffraction testing shows its crystal system to be triclinic.[3][6] With lower hardness comes lower specific gravity (2.60–2.90)[3] and greater porosity; these properties are dependent on grain size. The lustre of turquoise is typically waxy to subvitreous, and its transparency is usually opaque, but may be semitranslucent in thin sections. Colour is as variable as the mineral's other properties, ranging from white to a powder blue to a sky blue, and from a blue-green to a yellowish green. The blue is attributed to idiochromatic copper while the green may be the result of either iron impurities (replacing aluminium) or dehydration.

The refractive index of turquoise (as measured by sodium light, 589.3 nm) is approximately 1.61 or 1.62; this is a mean value seen as a single reading on a gemological refractometer, owing to the almost invariably polycrystalline nature of turquoise. A reading of 1.61–1.65 (birefringence 0.040, biaxial positive) has been taken from rare single crystals. An absorption spectrum may also be obtained with a hand-held spectroscope, revealing a line at 432 nm and a weak band at 460 nm (this is best seen with strong reflected light). Under longwave ultraviolet light, turquoise may occasionally fluoresce green, yellow or bright blue; it is inert under shortwave ultraviolet and X-rays.

Turquoise is insoluble in all but heated hydrochloric acid. Its streak is a pale bluish white and its fracture is conchoidal,[3] leaving a waxy lustre. Despite its low hardness relative to other gems, turquoise takes a good polish. Turquoise may also be peppered with flecks of pyrite or interspersed with dark, spidery limonite veining.

Cultural associations:

In many cultures of the Old and New Worlds, this gemstone has been esteemed for thousands of years as a holy stone, a bringer of good fortune or a talisman. The oldest evidence for this claim was found in Ancient Egypt, where grave furnishings with turquoise inlay were discovered, dating from approximately 3000 BCE. In the ancient Persian Empire, the sky-blue gemstones were earlier worn round the neck or wrist as protection against unnatural death. If they changed colour, the wearer was thought to
have reason to fear the approach of doom. Meanwhile, it has been discovered that the turquoise certainly can change colour, but that this is not necessarily a sign of impending danger. The change can be caused by the light, or by a chemical reaction brought about by cosmetics, dust or the acidity of the skin.[11]

The goddess Hathor was associated with turquoise, as she was the patroness of Serabit el-Khadim, where it was mined. Her titles included "Lady of Turquoise", "Mistress of Turquoise", and "Lady of Turquoise Country".[12]

In Western culture, turquoise is also the traditional birthstone for those born in the month of December. The turquoise is also a stone in the Jewish High Priest's breastplate, described in Exodus 28. The stone is also considered sacred to the indigenous peoples of the Southwestern United States[13] Zuni and Pueblo peoples of the American Southwest,[14] The pre-Columbian Aztec and Maya also considered it to be a valuable and culturally important stone.[15]

Zircon:
(From Wikipedia- all references refer to the website)

Not to be confused with zirconia, cubic zirconia, or zirconium.

Zircon (/ˈzɜːrkoʊn/ or /ˈzɜːrkən/) is a mineral belonging to the group of nesosilicates. Its chemical name is zirconium silicate, and its corresponding chemical formula is ZrSiO4. A common empirical formula showing some of the range of substitution in zircon is (Zr1−y, REEy)(SiO4)(OH)4. Zircon forms in silicate melts with large proportions of high field strength incompatible elements. For example, hafnium is almost always present in quantities ranging from 1 to 4%. The crystal structure of zircon is tetragonal crystal system. The natural color of zircon varies between colorless, yellow-golden, red, brown, blue and green. Colorless specimens that show gem quality are a popular substitute for diamond and are also known as "Matura diamond".
The name derives from the Persian zargun, meaning "gold-hued".[9] This word is corrupted into "jargoon", a term applied to light-colored zircons. The English word "zircon" is derived from Zirkon, which is the German adaptation of this word.[10] Yellow, orange and red zircon is also known as "hyacinth".[11] from the flower hyacinthus, whose name is of Ancient Greek origin.

Properties:

Zircon is ubiquitous in the crust of Earth. It occurs as a common accessory mineral in igneous rocks (as primary crystallization products), in metamorphic rocks and as detrital grains in sedimentary rocks.[1] Large zircon crystals are rare. Their average size in granite rocks is about 0.1–0.3 mm, but they can also grow to sizes of several centimeters, especially in mafic pegmatites and carbonatites.[1] Zircon is also very resistant to heat and corrosion.

Because of their uranium and thorium content, some zircons undergo metamictization. Connected to internal radiation damage, these processes partially disrupt the crystal structure and partly explain the highly variable properties of zircon. As zircon becomes more and more modified by internal radiation damage, the density decreases, the crystal structure is compromised, and the color changes.

Zircon occurs in many colors, including reddish brown, yellow, green, blue, gray and colorless.[1] The color of zircons can sometimes be changed by heat treatment. Common brown zircons can be transformed into colorless and blue zircons by heating to 800 to 1000 °C.[12] In geological settings, the development of pink, red, and purple zircon occurs after hundreds of millions of years, if the crystal has sufficient trace elements to produce color centers. Color in this red or pink series is annealed in geological conditions above temperatures of around 400 °C.[13]

Applications:

Zircon is mainly consumed as an opacifier, and has been known to be used in the decorative ceramics industry.[14] It is also the principal precursor not only to metallic zirconium, although this application is small, but also to all compounds of zirconium including zirconium dioxide (ZrO2), one of the most refractory materials known.

Other applications include use in refractories and foundry casting and a growing array of specialty applications as zirconia and zirconium chemicals, including in nuclear fuel rods, catalytic fuel converters and in water and air purification systems.[15]

Zircon is one of the key minerals used by geologists for geochronology.

Zircon is a part of the ZTR index to classify highly-weathered sediments.
Occurrence:

Zircon is a common accessory to trace mineral constituent of most granite and felsic igneous rocks. Due to its hardness, durability and chemical inertness, zircon persists in sedimentary deposits and is a common constituent of most sands. Zircon is rare within mafic rocks and very rare within ultramafic rocks aside from a group of ultrapotassic intrusive rocks such as kimberlites, carbonatites, and lamprophyre, where zircon can occasionally be found as a trace mineral owing to the unusual magma genesis of these rocks.

Zircon forms economic concentrations within heavy mineral sands ore deposits, within certain pegmatites, and within some rare alkaline volcanic rocks, for example the Toongi Trachyte, Dubbo, New South Wales Australia[16] in association with the zirconium-hafnium minerals eudialyte and armstrongite.

Australia leads the world in zircon mining, producing 37% of the world total and accounting for 40% of world EDR (economic demonstrated resources) for the mineral.[17] South Africa is Africa’s main producer, with 30% of world production, second after Australia.[18]

Upcoming Programs:

January and February - We will discuss about the upcoming 2019 show – the final preparation and personnel assignments. Volunteer sheet, CC machine, etc.
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>January 11-13, 2019</td>
<td>Largo, FL: Show and sale; Pinellas Geological Society; Central Park Performing Arts Center, 105 Central Park Drive; Fri. 10-5, Sat. 10-5, Sun. 12-5.</td>
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<td>January 20 - 21, 2019</td>
<td>Fredericksburg, TX: Fredericksburg Rockhounds and SCFMS Convention, Lady Bird Johnson Park</td>
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<td>February 8-10, 2019</td>
<td>Quartzsite, AZ: Annual show; Quartzsite Gold, Treasure and Craft Show; QIA Building, 235 N. Ironwood; Fri. 9-4, Sat. 9-4, Sun. 9-3; $5 Admission; Vendors, inside and out.</td>
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<td>February 23-24, 2019</td>
<td>Houston, TX: Jewelry, Gem and Mineral Show at the Pasadena Convention Center; 7902 Fairmont Parkway, Pasadena, TX Sat. 10-6, Sun. 10-5</td>
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<td>March 7-10, 2019</td>
<td>Deming, NM: Annual show; Deming Gem &amp; Mineral Society, Inc.; SWNM State Fairgrounds in Deming, 4300 Raymond Reed Blvd.; Thu. 9-5, Fri. 9-5, Sat. 9-5, Sun. 9-5; Free admission; 54th Annual Rockhound Roundup.</td>
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<td>March 15-17, 2019</td>
<td>Albuquerque, NM: Abq. Gem &amp; Mineral Club; Expo NM State Fairgrounds, Creative Arts Bdg., 300 San Pedro NE, 87108; Fri. 10-6, Sat. 10-6, Sun. 10-5; $3, Kids under 13 are free.</td>
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<td>May 4-5, 2019</td>
<td>Waco, TX: Waco Gem and Mineral Show; Extraco Exhibits Building; 4601 Bosque Blvd.; Waco, Texas</td>
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STONEY STATEMENTS
Clear Lake Gem and Mineral Society, Inc
PO BOX 891533
Houston, Texas 77289
Meeting 3rd Monday of the Month
7:30 P.M.
Clear Lake Park Building
5001 NASA Parkway, Seabrook, Texas

Next Annual Show
February 23-24, 2019
Pasadena Convention Center

CLGMS is on the Web:
http://www.clgms.org
2/23-24 2019

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.

2018 OFFICERS:
President          David Tjiok          832-423-4802
Vice President    VACANT
Secretary         Trina Willoughby      713-815-0275
Treasurer         Jerry Newberry       281-333-2113
Program Director  VACANT
Board of Directors: Sandra Christiansen
                  John Caldyne
                  Jim Edwards
                  Sandra Christiansen
Newsletter Editor VACANT

Annual Show 2018 ………………... VACANT
Constitution & Bylaws…………..Sara Tanner          Membership………………..Mike Flannigan
Community Benefits……………Charlie Timme            WWW System Admin. ……Mike Flannigan
Historian…………………David Tjiok               Refreshments………………John Caldyne
Publicity………………….VACANT                      Education/Field Trips………Annabel Brownfield
Facebook…………………..Trina Willoughby

Membership Dues Jan. to Dec. 2018: 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