



A monthly publication of the Clear Lake Gem & Mineral Society

VOLUME 43

DECEMBER 2017

NUMBER 12



NEXT MEETING: December 18, 2017
TIME: 6:30 p.m.
LOCATION: Clear Lake Park Building
 5001 Nasa Parkway
 Seabrook, Texas

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December Meeting Monthly Meeting Minutes	1- 2	DECEMBER MONTHLY MEETING Annual Christmas Dinner and Meeting
Board Meeting Minutes	3	The Clear Lake Gem & Mineral Society will hold its monthly meeting on Monday, December 18 th , at 6:30 p.m. at the Clear Lake Park Building located at 5001 Nasa Parkway. Table setup and decorating will start at 5:30 PM with Dinner served at 6:30 PM. The club will furnish the main dish (Ham, Brisket, rolls, and drinks).
Bench Tips Tourmaline Upcoming Workshop	4- 8	Bring a side dish, salad, desert, etc. to add variety to our feast!!
Loupes Citrine	8- 11	
Upcoming Shows	11	Feel free to bring rock specimens or appropriate table centerpiece decorations. Bring your family and friends. (more)

Join us for a fun and festive time!!**Remember:**

There is an oven in the kitchen, so you can keep your food warm as you help with setup. If you bring food, don't forget to bring your own serving spoons since there are none at the Park Building. (Please put your name on items) Elections for new officers will be held during the meeting.

MINUTES OF THE NOVEMBER 20, 2017, MONTHLY MEETING

Our program was presented by John Caldyne this month. He created a video to show us how he polishes chains. He explained the products (polishes) he uses as well as the machines he uses. He warned us to be very careful using machines to make sure the chains don't get twisted up in the machine.

John also told us which metal will be popular next year in jewelry making- bronze! He passed around some beautiful samples of bronze jewelry.

A big thank you to John for sharing your knowledge with us!

Vice President David lead the business portion of our meeting after the break.

Sara handed out pads and flyers for our upcoming show. She will continue to hand them out.

Charlie gave a report on the dichroic glass class he recently conducted. Everyone had a great time and received an A+ on their work. Well, everyone but Trina. She received an A++ for her work. Way to go Trina!

Charlie would like feedback on what type of classes we would like for him to teach next year. He's thinking about a class on soldering. Please let him know what you would like.

We talked about our upcoming Christmas dinner. Pam will pick up a group meal for 30 from Rudy's Bar-b-que. Members are asked to bring a salad or a dessert. David suggested if your last name starts with A-L, bring a salad. If you are M-Z, bring a dessert. If you have a specialty dish, you are welcome to bring that. Remember, your families are also invited.

Sandy attended the SouthCentral Federation meeting. She said it was quite long and she will write up a report to share with us. Thank you Sandy!

Show talk: Trina would like for someone to step up and take over doing the scout talks. She's been doing it for quite some time (and doing an amazing job), but would like to do

something else. Sandy reported we have 16 vendors (74 tables) signed up thus far. Charlie and Bernice are going to be at the show the entire time doing demonstrations and have decided to pay the vendor's fee so they can also sell their jewelry.

Pam took 10 vests home to sew patches on. Sandy has quite a few more that need to be done. Please let her know if you can help out.

Vince had a show and tell set up on a side table. There was a cave bear jaw and a tortoise shell. Everyone is welcome to bring a show and tell any time you like.

The photography workshop has been rescheduled to Jan.

Respectfully submitted by Pam Dudley, Secretary

MINUTES OF THE DECEMBER 4, 2017, BOARD MEETING

Meeting began at 7:30pm. Vince touched base on the show planning progress. He let us know that we still do not have a lunar sample locked in for our show. Trina is trying to get that worked out for us. He does have an astronaut speaker confirmed. He will talk about meteorites and space rocks.

Sandy reported we now have 22 paid vendors (106 tables), so that is moving along smoothly. We have one new vendor so far and Jerry will be making the sign for his booth.

Vince brought up the subject of a nominating committee. He would like to run for president. We hope David will continue to be vice president. Jerry is undecided on being the treasurer for next year and the secretary position is open. Jim and Sandy have agreed to be board members. Please think about stepping up and taking a position.

Don't forget the meeting on Dec. 18th is our Christmas dinner and we will start at 6:30pm.

If you can help set up tables and chairs, the meeting room should be open at 5:30. Pam will pick up the food at 6:00. Thank you!

Meeting adjourned at 8:45pm

Respectfully submitted by Pam Dudley, Secretary

BENCH TIPS

MARKING YOUR TOOLS

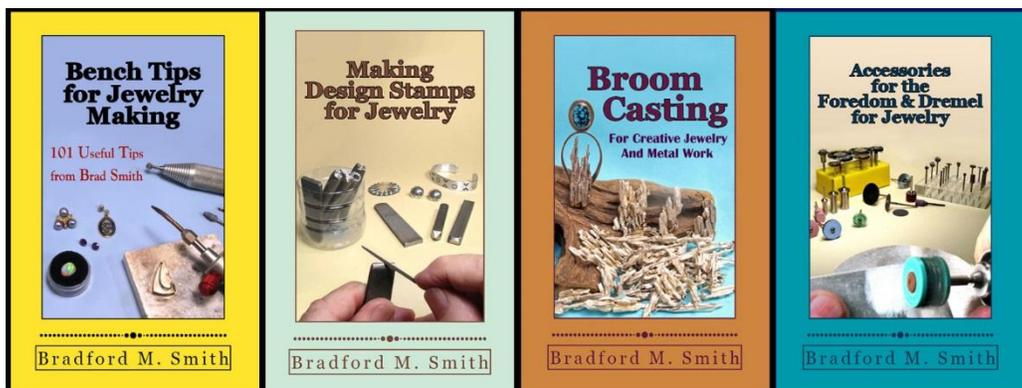
It makes sense to mark your tools if you ever lend them to friends or take them out to classes or workshops. Question is how to mark them permanently. For metal tools, I use a very small ball bur running fast in the Dremel or Foredom to "engrave" my initials. Other times I'll form the initials with a number of hits with a center punch.

But for hammer handles and other wooden tools, the country boy in me came back and thought "Why not make a branding iron?" If you'd like to try one, all you need is a little scrap copper or nickel about 22-24 gauge, a piece of heavy brass or copper for a base, about 6 inches of metal rod and a piece of wood for the handle.

I formed my initials from a couple 4mm wide strips of sheet nickel. The "S" was one piece, but the "B" was three pieces soldered together with hard. (Remember to form the letters backwards). I then soldered the letters with medium onto a piece of 1/8 inch thick brass bar to act as a heat sink. Finally, I soldered a piece of 1/8 round rod on the back of the brass bar as a shaft to join to a wooden handle.



With the holidays upon us soon, we're all making our lists. If you need a present for someone who does jewelry, consider a book that teaches new skills. See a selection at [Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith).



TOURMALINE

Wikipedia

Tourmaline (/ˈtʊərməliːn/ ***TOOR**-mə-leen*) is a crystalline boron silicate mineral compounded with elements such as aluminium, iron, magnesium, sodium, lithium, or potassium. Tourmaline is classified as a semi-precious stone and the gemstone comes in a wide variety of colors. According to the Madras Tamil Lexion, the name comes from the Sinhalese word "Thoramalli" (තොරමලි) or "tōra- molli", which is applied to a group of gemstones found in Sri Lanka. According to the Madras Tamil Lexicon, the Tamil "tuvara-malli" (துவரமலி) and Toramalli are also derived from the Sinhalese root word. This etymology is also given in other standard dictionaries including the Oxford dictionary.

History

Brightly colored Sri Lankan gem tourmalines were brought to Europe in great quantities by the Dutch East India Company to satisfy a demand for curiosities and gems. At the time it was not realised that schorl and tourmaline were the same mineral (it was only about 1703 that it was discovered that some colored gems were not zircons. Tourmaline was sometimes called the "Ceylonese [Sri Lankan] Magnet" because it could attract and then repel hot ashes due to its pyroelectric properties.

Tourmalines were used by chemists in the 19th century to polarize light by shining rays onto a cut and polished surface of the gem.

Species and varieties

Commonly encountered species and varieties:

Schorl species:

Brownish black to black—schorl

Dravite species: from the Drave district of Carinthia

Dark yellow to brownish black—dravite

Elbaite species: named after the island of Elba, Italy

Red or pinkish-red—rubellite variety

Light blue to bluish green—Brazilian indicolite variety (from indigo)

Green—verdelite or Brazilian emerald variety

Colorless—achroite variety (from the Greek "ἀχρωμος" meaning "colorless")



The most common species of tourmaline is **schorl**, the sodium iron (divalent) endmember of the group. It may account for 95% or more of all tourmaline in nature. The early history of the mineral schorl shows that the name "schorl" was in use prior to 1400 because a village known today as Zschorlau (in Saxony, Germany) was then named "Schorl" (or minor variants of this name). This village had a nearby tin mine where, in addition to cassiterite, black tourmaline was found. The first description of schorl with the name "schürl" and its occurrence (various tin

mines in the Saxony Ore Mountains) was written by Johannes Mathesius (1504–1565) in 1562 under the title "Sarepta oder Bergpostill". Up to about 1600, additional names used in the German language were "Schurel", "Schörle", and "Schurl". Beginning in the 18th century, the name *Schörl* was mainly used in the German-speaking area. In English, the names *shorl* and *shirl* were used in the 18th century. In the 19th century the names *common schorl*, *schörl*, *schorl* and *iron tourmaline* were the English words used for this mineral.



Dravite, also called brown tourmaline, is the sodium magnesium rich tourmaline endmember. Uvite, in comparison, is a calcium magnesium tourmaline. Dravite forms multiple series, with other tourmaline members, including schorl and elbaite.

The name **dravite** was used for the first time by Gustav Tschermak (1836–1927), Professor of Mineralogy and Petrography at the University of

Vienna, in his book *Lehrbuch der Mineralogie* (published in 1884) for magnesium-rich (and sodium-rich) tourmaline from village Dobrova near Unterdrauburg in the Drava river area, Carinthia, Austro-Hungarian Empire. Today this tourmaline locality (type locality for dravite) at Dobrova (near Dravograd), is a part of the Republic of Slovenia.^[7] Tschermak gave this tourmaline the name dravite, for the Drava river area, which is the district along the Drava River (in German: *Drau*, in Latin: *Drave*) in Austria and Slovenia. The chemical composition which was given by Tschermak in 1884 for this dravite approximately corresponds to the formula $\text{NaMg}_3(\text{Al,Mg})_6\text{B}_3\text{Si}_6\text{O}_{27}(\text{OH})$, which is in good agreement (except for the OH content) with the endmember formula of dravite as known today.

Dravite varieties include the deep green chromium dravite and the vanadium dravite.



A lithium-tourmaline elbaite was one of three pegmatitic minerals from Utö, Sweden, in which the new alkali element lithium (Li) was determined in 1818 by Johan August Arfwedson for the first time.^[8] Elba Island, Italy, was one of the first localities where colored and colorless Li-tourmalines were extensively chemically analysed. In 1850 Karl Friedrich August Rammelsberg described fluorine (F) in tourmaline for the first time. In 1870 he proved that all varieties

of tourmaline contain chemically bound water. In 1889 Scharitzer proposed the substitution of (OH) by F in red Li-tourmaline from Sušice, Czech Republic. In 1914 Vladimir Vernadsky proposed the name *Elbait* for lithium-, sodium-, and aluminum-rich tourmaline from Elba Island, Italy, with the simplified formula $(\text{Li,Na})\text{HAl}_6\text{B}_2\text{Si}_4\text{O}_{21}$.^[8] Most likely the type material for elbaite was found at Fonte del Prete, San Piero in Campo, Campo nell'Elba, Elba Island, Province of Livorno, Tuscany, Italy.^[8] In 1933 Winchell published an updated formula for elbaite, $\text{H}_8\text{Na}_2\text{Li}_3\text{Al}_3\text{B}_6\text{Al}_{12}\text{Si}_{12}\text{O}_{62}$, which is commonly used to date written as $\text{Na}(\text{Li}_{1.5}\text{Al}_{1.5})\text{Al}_6(\text{BO}_3)_3[\text{Si}_6\text{O}_{18}](\text{OH})_3(\text{OH})$.^[8] The first crystal structure determination of a Li-rich tourmaline was published in 1972 by Donnay and Barton, performed on a pink elbaite from San Diego County, California, United States.

[MACRO PHOTOGRAPHY WORKSHOP](#)

Sunday, January 21, 2018 – Macro Photography. In the first photography class, we learned about lighting and photographing small objects.

Rocks can be a bit bland in a photograph just by themselves so on this class we will explore Macro Photography.

By some definitions, a macro photograph is one in which the size of the subject on the negative or image sensor is life size or greater. However, in other uses it refers to a finished photograph of a subject at greater than life size.

Some of the tools we used last time will be needed here along with a few add-ons to take highly magnified images of extremely small subjects. You could begin by slipping a diopter lens to the front of the existing standard lens. This would impart a degree of magnification; you could also install extension tubes between your normal lens and the camera body and finally, you could invest in a fairly expensive — and optically superb — macro lens that was dedicated to macro shooting.

A Close-Up Macro Filter Set such as a Vivitar Series 1- 1 2 4 10 Close-Up Macro Filter Set can be purchased for a very reasonable cost on Amazon for most cameras that accepts screw on filters. Make sure you get the correct size for your lens and camera.

This will obviously leave out many, inexpensive point and shoot cameras, but you can get good results with a non DSLR camera such as a Canon PowerShot with a Lens/Filter Adapter Ring to attach close up/ macro filters, or a Nikon CoolPix with the Lens/Filter Adapter Ring.

There are other adaptors to achieve macro photography so do your research!
Of course if you already have a good DSLR camera, you can't beat a good macro lens!

All can be found on Amazon.com

We will also will be using a flash both on and off camera for lighting.

If you need advice on cameras, lens or lighting, feel free to write me at the address below.

Gary A. Chelette
gachelette@att.net

LOUPES 101 (Excerpted)

Loupes come in several varieties. Gemologists prefer the hand loupe. For gemologists, the 10X loupe (with ten-power magnification) is the standard for hand-held gem identification. Although you'll find more powerful loupes, the depth of field (the area that's in focus) is so small above 10X that they're hard to use. With lower-powered magnification, you just can't see as much detail.



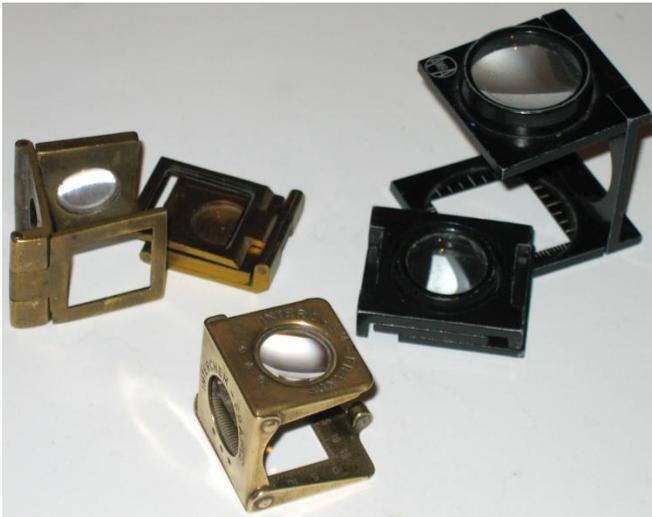
How to Use a 10X Loupe

Using a loupe gracefully takes some practice but soon becomes second nature. Before you focus on anything, consider the light around you.

To evaluate cutting and polishing, you need to see the gem surface. Shine your light down on the stone. This is simple in a room with overhead lighting. If your best source is a

window, position yourself so the light comes over your shoulder. Most importantly, avoid casting your shadow on the stone. To see the inclusions in a gem, you need to see the interior. Place your light behind the stone and shining through it.

With minimal adjustments and a little thought, you can often see both the surface and interior of a gem. Having too little light to see well is usually the only limitations. When you open a loupe, the cover becomes a handle. To focus your loupe, slide your index finger through the opening, then rest your hand against your cheek to steady the loupe. Now, you only have one hand to move for focusing.



Keep both eyes open to reduce eye strain. Position the gem in front of the loupe. Next, move it slowly upwards and away from the loupe until it comes into focus. Practice adjusting the focus from the top surface to the far side. On a smaller gem, you can get the entire stone in focus at once. On a larger gem, you'll have to focus on one area at a time.

To judge the quality of a gem's lapidary work, you need to study its surface. A

smooth, glass-like surface is the sign of a perfect polish. You may see pits or scratches. However, if they are few and invisible without magnification, they'll have little effect on the beauty of the gem.

Sometimes, you'll see a stone with small pits covering its entire surface. Although invisible to the naked eye, they do affect the gem's brilliance. If you compare the stone to non-pitted stones of the same species, you'll see the reduction in brilliance more readily. Occasionally you'll have trouble distinguishing whether marks are on the surface or inside the gem. To resolve this, rotate the gem so the light reflects off the facets. When a facet acts as a mirror inclusions beneath it disappear. However scratches on the surface remain visible.



An unpolished girdle reveals the gem cutter was in a hurry (A custom gem cutter would finish this off). Diamonds are an exception. Gem cutters cut them differently than colored stones because of their extreme hardness. Rounded, unpolished girdles are common in diamonds.

To further evaluate cutting quality, look at the facet meets. On a well-cut gem, they form sharp corners. All the facets in a row will be the same size and shape. You'll frequently see facets vary in size and corners that don't meet or overlap. If the differences are small, they won't affect a gem's beauty significantly. However as the problems increase the brilliance of the gem suffers. Due to diamond's hardness they have the sharpest edges. This clue helps identify them. The edges of harder colored stones, such as rubies and sapphires and cubic zirconia come in a close second. Softer gems (below a nine in hardness) usually have slightly rounded facet edges. Once in a while you'll encounter a custom-cut gem with exceptionally sharp edges in a material of only 7 or 8 hardness. Although you may be unable to appreciate all the subtle decisions made cutting a gem like this you can spot the workmanship by the polish, meets and facet edges.

Next, turn the gem upside down and look at the culet. Sometimes gems carried together in paper wrappers suffer chips on the culet. This is called paper damage. Again, if invisible without magnification, this won't impact the gem's beauty significantly.

To read the entire article follow the link below:

<https://www.gemsociety.org/article/10x-loope-the-gemologists-best-friend/>

(Source: Agate Explorer 02/17; via WGMS the Rockhouser 09/17; Glacial Drifter 11/17)

CITRINE

Citrine /'sitri:n/ is a colour, the most common reference for which is certain coloured varieties of quartz which are a medium deep shade of golden yellow. Citrine has been summarized at various times as yellow, greenish-yellow, brownish yellow or orange.



The original reference point for the citrine colour was the citron fruit. The first recorded use of *citrine* as a colour in English was in 1386. It was borrowed from a medieval Latin and classical Latin word with the same meaning. In late medieval and early modern English the citrine colour-name was applied in a wider variety of contexts than it is today and could be "reddish or brownish yellow; or orange; or amber (distinguished from yellow)". In today's

English citrine as a colour is mostly confined to the contexts of (1) gemstones, including quartz, and (2) some animal and plant names. E.g., the citrine wagtail (*Motacilla citreola*), an Asian bird species with golden-yellow plumage.

"Citrine" is used in the names of birds and other lifeforms with such colouring to describe their appearance, including the citrine wagtail, citrine warbler, citrine canary-flycatcher and citrine forktail.

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



Member of:

Next Annual Show
 February 24-25, 2018
 Pasadena Convention Center

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



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.

2017 OFFICERS:	President	Raul Montelongo	832-341-0416
	Vice President	David Tjik	281-423-4802
	Secretary	Pam Dudley	281-814-1235
	Treasurer	Jerry Newberry	713-705-1030
	Program Director	Vince Barrows	
	Board of Directors:	Shannon Oliver	Jim Edwards
		Mary Wells	John Caldyne
	Newsletter Editor	Annabel Brownfield	

Annual Show 2018	Vince Barrows	Library.....	Vacant
Constitution & Bylaws.....	Sara Chelette	Membership.....	Victoria Faulkner
Community Benefits.....	Vacant	WWW System Admin.....	Mike Flannigan
Historian.....	David Tjik	Refreshments.....	Doug Dann
Publicity.....	Eddie Dove	Education/Field Trips.....	Annabel Brownfield

Membership Dues Jan. to Dec. 2017: 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

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