STONEY STATEMENTS

A monthly publication of the Clear Lake Gem & Mineral Society

VOLUME 45 May 2020 NUMBER 5

NEXT MEETING: **June 15, 2020**
TIME: **7:00 p.m.**
LOCATION: Clear Lake Park Building
5001 Nasa Parkway
Seabrook, Texas
https://tinyurl.com/y9tzjqnv

No need to be a member to attend our meetings.

INSIDE THIS ISSUE

May Monthly Meeting (CANCELLED)

The May meeting has been canceled since the Clear Lake Park is closed throughout the month of May. But we have a video for you to watch: https://www.youtube.com/watch?v=UmrvLFb2LiM

It's a good video. Have fun.

We plan to meet 6/15/2020. We will keep you informed via e-mail. You can also check the Facebook site for information.

The May 30 field trip to Oglesby, TX has been cancelled. The trip was to collect turritella fossils.

Minutes of the April 2020 CLGMS General Meeting

There was no April meeting due to the pandemic.

Minutes of the May 4, 2020 CLGMS Board Meeting

We have two applications for the CLGMS scholarship. One is fully applied and one is missing some information. Applications for the scholarship close 7/1/2020.

Officers and other positions for the club are as follows:

Office	Holder
President	John Caldyne
Vice President	Available
Treasurer	Morgan Davies
Secretary	Trina Willoughby
Program Director	Available
Board of Directors1	John Caldyne
Board of Directors2	Jim Edwards
Board of Directors3	Sandra Christiansen
Board of Directors4	Sara Tanner
Board of Directors5	Donna Nelson
Board of Directors6	Jim Hawkins
Membership	David Tjiok
Newsletter Editor	David Tjiok
Publicity	Cynthia McGowan
Refreshments	John Caldyne
Education/Field Trips	Annabel Brownfield
Immediate Past President	David Tjiok
Show Chair:	Sandra Christiansen

Respectfully submitted,

David Tjiok

Moonstone

Moonstone is the best-known gem variety of orthoclase feldspar, being potassium aluminum silicate KAlSi3O8. It is usually polished as a cabochon, and is often carved with a moon face. Its importance as a gemstone arises because of its schiller, which in moonstone has been given the name adularescence. This is caused by a feature of its crystal structure. Orthoclase feldspar and albite are present in close association, arranged in layers. This causes an interference effect of light. The color of this schiller regarded as most desirable is blue, which usually occurs in a white or grey body color. If the albite layers are too thick this schiller appears whitish which is less attractive.

Moonstone was very popular early in the 20th century and was extensively used in Art Nouveau jewelry. Moonstone has a hardness of 6 and a specific gravity of 2.57. It is monoclinic; it has one two-fold axis of symmetry. Adularia is a common type of moonstone. Oligoclase is another type of moonstone; Labradorite and albite are rare forms.

Inclusions:

Moonstone contains a number of typical inclusions that appear to be stress cracks. These give the appearance of centipede type insects, Chinese "aeroplanes" looking like characters from Chinese writing, negative cavities looking like rectangular crystals, and needle-like shapes. If present in large numbers, the needle shaped inclusions can cause a cat's eye chatoyancy effect.

Color:

The most desirable color of moonstone is blue, but it also occurs in grey, white, pink, green and brown.

Mythology:

All qualities related to the moon-- sensitivity, intuition, and clairvoyance -- are also connected to moonstone. Even its appearance is subtle. It's not a brilliant stone; all specimens, from the peach and gray hues to the gem-quality blue-, and rainbow-colored pieces, cast a light which is soft and translucent.

The physical appearance of a stone often suggests its spiritual qualities, and moonstone's foremost attribute is the ability to assist us in calming and soothing the emotions. When one has achieved a state of emotional calmness, this stone may be used to open people to an intuitive understanding of spirituality. Hence, Moonstone: Soothes & balances the emotions; helps eliminate fear of "feeling"; encourages inner growth & strength; aids peace & harmony & psychic abilities; aligns vertebrae; digestive aid.

Lore:

Probably the most famous moonstone of all was not a moonstone but a diamond. In the well-known classic book "The Moonstone" by Wilkie Collins, a large diamond was stolen from an Indian shrine, and a retired policeman is hired as a private detective to investigate a murder and robbery. Wilkie Collins is recognized as the inventor of the English detective novel, and was a friend and colleague of Charles Dickens. Although "The Moonstone" was written in 1868, it remains to this day a masterpiece of English literature. The book is clearly based on a number of stories about famous diamonds that have disappeared and reappeared over the centuries.

Moonstone is the anniversary gemstone for the 13th year of marriage. Moonstone is the US State Gemstone of Florida and New York. Moonstone is said to balance yin/yang.

Author Unknown

The Footprint of a Giant

Modified from a Jan 2005 The Glacial Drifter article.

From USGS, courtesy of Bob Horning from the Obsidian Observer. October 2001, the publication of the Los Alamos Geological Society, Los Alamos, NM

North Ponil Canyon dinosaur footprint:

The only undisputed fossilized footprint of a Tyrannosaurus Rex dinosaur is in North Ponil Canyon on the Philmont Scout Ranch near Cimmaron, New Mexico. The track, made by the dinosaur's left hind foot, was discovered in northeastern New Mexico in 1983 by Charles Pillmore, a research geologist with the U.S. Geological Survey in Denver, CO. It was identified 10 years later as a footprint made by the giant T-rex, and presently is recognized as the

only known fossilized track made by the creature. Although several nearly complete fossil skeletons of the large dinosaur have been found, until 1993 no tracks attributable to this creature had been reported.

Discovery:

Pillmore recalls chancing upon the track while he was mapping geology and tracing the K/T boundary in north Ponil Canyon. He noticed an unusual shape on a large block of sandstone a short distance above the creek and observed that it resembled the footprint of a large three-toed animal, probably a dinosaur. The block appeared to have fallen from a ledge higher up on the slope and to have rotated as it moved down the hill, so that the bottom of the block now faces upward. He noted the discovery in his field notebook and took same samples of the sandstone, but didn't suspect it was anything particularly "unusual'.

Identification:

Several years later Pillmore showed pictures of the Philmont track to Dr. Martin Lockley, a dinosaur track specialist at the University of Colorado at Denver. Lockley agreed that it was the footprint of a dinosaur and proposed that the animal that made the track was probably a large hadrosaur. He agreed to accompany Pillmore to the Philmont site and confirm the identification. In late summer of 1993 the two men made the trip to New Mexico to examine and make a mold of the track. As they began to clear away the leaves and dirt that partly covered the track, Lockley noted that it was too big for a hadrosaur and that its heel was much larger than any hadrosaur heel he could recall. He then noticed a distinctive shape on the side of the track and speculated that it might have been made by a fourth digit call a hallux. (Editor's note: a hallux as described in Webster's as "the innermost digit (as in the big toe) of a hind or lower limb.) He then proposed that the size and shape of the track and the presence of the fourth digit were convincing evidence that they were looking at possibly the first Tyrannosaurus Rex track ever seen. After sketching an outline of the track on clear plastic the scientists made a latex mold of the track.

Position in the Rocks:

Dr. Parley Fleming, then a USGS fossil pollen specialist, helped to establish the relative age and stratigraphic position of the track layer. He determined that the track was made in Late Cretaceous time 65 - 70 million years ago, the proper age for a T rex, and that the dinosaur

was walking across a vegetated wetland mudflat, dominated by palm trees and ferns.

A Youtube video of a trip to the site is here:
https://www.youtube.com/watch?v=XqJ1aqGYUus
Skip to 1:30 in the video.

Since then the Hell Creek Montana print shown to the left was discovered. It is debatable whether either footprint counts as an undisputed fossilized footprint of a Tyrannosaurus Rex dinosaur.

Hell Creek Montana dinosaur footprint

Test for Topaz with a Drop of Water

Quartz and topaz are not easy to separate by eye, and are sometimes impossible when the quartz is a true topaz color. There is a big difference in price between the two and anyone describing quartz as “topaz”, however innocently, may well be in trouble. Topaz is quite a different mineral, which is harder than quartz. Because of this, a drop of water will not spread on topaz but will spread on quartz. Clean the stone as effectively as possible with a cloth or handkerchief to remove all trace of grease. It must be dry before the test. Then place a spot of clean water on it with a thin glass or metal rod.

On stones with a hardness of less than 7 on the Mohs scale, the water is dispersed. Oh harder stones it will remain a globule. The harder the stone the more rounded will be the globule.

from Rock Chipper via Rock Chip Reporter 11/97 via The Rollin Rock, 11/10

925 Silver

By Tony Orzano

Pure silver (.999) is very soft, 2.5-3 on the Mohs hardness scale. It is very malleable and is a very good conductor of electricity. To make it workable and improve its hardness and durability, alloys have been added.

In the United States sterling silver must contain 92.5% pure silver and the other 7.5% must be another alloy. Most often copper is added, which makes the alloy harder and stronger than pure silver. It is the best silver for making silver wire jewelry and standard silver jewelry. The 92.5% standard for silver was started in England, but in 1851 Tiffany and Co. made it the standard for the United States and the rest of the world followed.

All "sterling silver" in the United States and the rest of the world must have the number 925 stamped on an item. The 925 stands for 92.5% silver content. Any other number less than 925, and it is not sterling silver. The only bad thing about silver is that it tarnishes when it contacts oxygen. Recent developments in the jewelry industries have come up with a silver alloy called Argentium; it is 925 sterling with a trace amount of germanium. It helps the silver retard the tarnishing process. Argentium silver is more expensive than regular sterling silver. Silver is a beautiful metal and is gorgeous when in jewelry, and it makes a very affordable alternative to gold.

From The RockCollector 11/10 via Monongahela Rockhound News 11/10

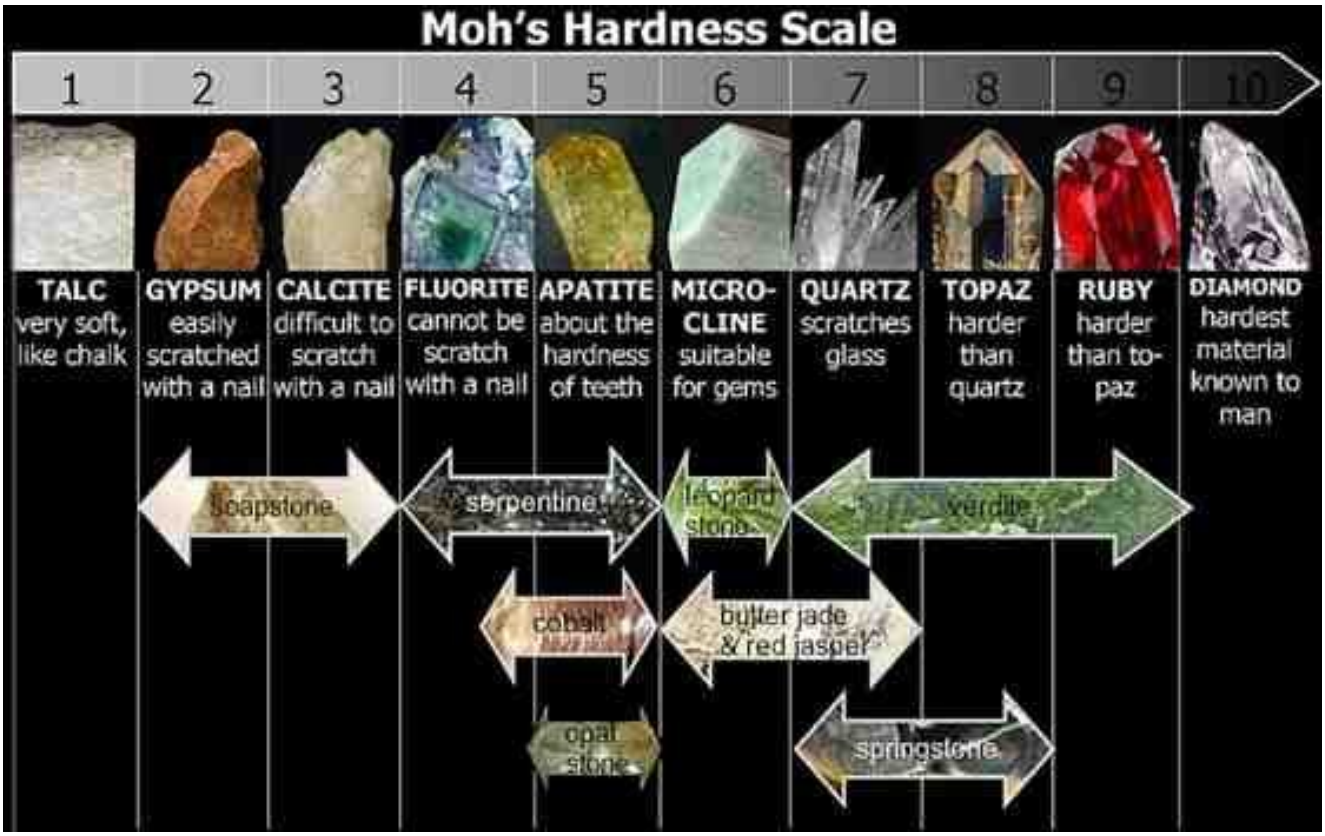
What is Mohs Hardness Scale?

by Mary Harbison

(Originally from the January 2016 edition of the "Tar Heel Tailings" newsletter by the Tar Heel Gem & Mineral Club of Raleigh, NC)

The Mohs scale of mineral hardness characterizes the scratch resistance of various minerals through the ability of a harder material to scratch a softer material. It was created in 1812 by the German geologist and mineralogist Friedrich Mohs and is one of several definitions of hardness in materials science. The method of comparing hardness by seeing which minerals can scratch others, however, is of great antiquity, having been mentioned by Theophrastus in his treatise On Stones, c. 300 BC, followed by Pliny the Elder in his Naturalis Historia, c. 77 AD.

The Mohs scale of mineral hardness is based on the ability of one natural sample of matter to scratch another mineral. The samples of matter used by Mohs are all different minerals. Minerals are pure substances found in nature. Rocks are made up of one or more minerals.



Making Hardness Comparisons

"Hardness" is the resistance of a material to being scratched. The test is conducted by placing a sharp point of one specimen on an unmarked surface of another specimen and attempting to produce a scratch. Here are the four situations that you might observe when comparing the hardness of two specimens:

1. If Specimen A can scratch Specimen B, then Specimen A is harder than Specimen B.
2. If Specimen A does not scratch Specimen B, then Specimen B is harder than Specimen A.
3. If the two specimens are equal in hardness then they will be relatively ineffective at scratching one another. Small scratches might be produced, or it might be difficult to determine if a scratch was produced.
4. If Specimen A can be scratched by Specimen B but it cannot be scratched by Specimen C, then the hardness of Specimen A is between the hardness of Specimen B and Specimen C.

Mohs Hardness Testing Tips

A list of minerals in order of hardness can be a handy reference. If you determine that a specimen has a hardness of Mohs 4 you can quickly get a list of potential minerals.

Practice and experience will improve your abilities when doing this test. You will become faster and more confident.

If the hardness of the unknown specimen is about 5 or less, you should be able to produce a scratch without much exertion. However, if the unknown specimen has a hardness of about 6 or greater, then producing a scratch will require some force. For those specimens, hold the unknown firmly against the table, place the standard specimen against it, press

firmly with determination, then holding pressure slowly drag the standard specimen across the surface of the unknown.

Don't be fooled by a soft standard specimen producing a mark on a hard unknown. That mark is like what a piece of chalk produces on a blackboard. It will wipe off without leaving a scratch. Wipe your finger across the tested surface. If a scratch was produced there will be a visible groove. If marks wipe away then a scratch was not produced.

Some hard materials are also very brittle. If one of your specimens is breaking or crumbling rather than scratching, you will have to be very careful while conducting the test. Testing tiny or granular specimens can be difficult.

Some specimens contain impurities. If the results of your test are not visibly conclusive, or if the information from your test does not conform with other properties, do not hesitate to do the test again. It is possible that a small piece of quartz (or another impurity) was embedded in one of your specimens.

Don't be wimpy! This is a very common problem. Some people casually rub one specimen back and forth against another and then look for a mark. That is not how the test is done. It is done with a single, determined motion with the goal of cutting a scratch.

Be careful. When you hold the unknown specimen against the table, position it so that the known specimen will not be pulled across one of your fingers.

This test should be done on a lab table or work bench with a durable surface or a protective covering. Don't do this type of testing on fine furniture.

Test tiny particles or grains by placing them between two pieces of an index mineral and scraping them together. If the grains are harder than the index mineral scratches will be produced. If the grains are softer they will smear.

Hardness Variations in a Single Mineral

Most minerals have a fairly consistent hardness. For example, the hardness of calcite is always about 3. However, some minerals have a range of hardness. Minerals that are part of a solid solution series can change in hardness as the composition varies.

Atomic bonds between some elements are stronger than others. An example is garnet which has a composition of X3Y2(SiO4)3 where X can be Ca, Mg or Fe and Y can be Al, Fe or Cr. Garnets with different compositions have different hardness. Garnets range in hardness from 6.5 to 8. Minerals such as kyanite have different hardness in different directions. Kyanite is a mineral that frequently occurs in blade-shaped crystals. These crystals have a hardness of about 5 if they are tested parallel to the long axis of the crystal and a hardness of about 7 if they are tested parallel to the short axis of a crystal. Weathering can also influence the hardness of a mineral. Weathering usually changes a mineral's composition with the weathering product usually softer than the original material. When testing the hardness or streak or other property of a mineral, the best way to test is on a freshly broken surface that has not been exposed to weathering.

Some Notes on Spelling

Mohs Hardness Scale is named after its inventor, Friedrich Mohs. This means that an apostrophe is not needed when typing the name of the test. "Moh's" and "Mohs' " are incorrect. Google is really smart about these names. You can even type "Moe's Hardness Scale" as a query and Google knows to return results for "Mohs Hardness Scale".

SCFMS and MEMBER CLUB GEM SHOWS			
May 23-24, Ft. Worth, TX, Fort Worth G&MC Will Rogers Memorial Center, www.forworthgemandmineralclub.org	May 30-31, Lubbock, TX, Lubbock G&MS, Lubbock Memorial Civic Center, www.lubbockgemandmineral.org	June 6-7, Summer San Francisco Crystal Fair, Mason Center for Arts & Culture, 2 Marina Blvd, San Francisco, CA 74123, jerry@crystalfair.com	June 19-21, Carlsbad Gem and Mineral Society, Living Desert State Park, 1504 Miehls Drive N. Living Desert State Park, Carlsbad, NM 88220, www.carlsbadgms.org/
June 29-30, Arlington Gem and Mineral Club, Grapevine Conv Center 1209 South Main St, Grapevine TX 76051 www.agemclub.org	July 11-12, TRMS Gem Mineral and Jewelry Show, Tulsa Fairgrounds, 4145 E 21st St, Tulsa, OK 74114 www.tulsarockandmineralsociety.org/	July 17-19, Conroe, TX Lone Star Convention Center, 9055 AirportRd www.rmgmpromotions.com	Aug 8-9, Baton Rouge Gem & Mineral Society Show, Lamar-Dixon Expo Center, 9039 S Saint Landry Ave, Gonzales, LA 70737 www.brgemandmineral.org/
Sept 11-20, Denver Coliseum Mineral, Fossil & Gem Show, Denver Coliseum, 4600 Humboldt St, Denver, CO 80216 www.coliseumshow.com/		Oct 9-11, Greater Detroit Gem, Mineral & Fossil **Show**, Macomb Community College Expo, (313) 255-7774 www.michmin.org/show-info	Oct 9-11, Big Sur Jade Festival Los Padres National Forest, 69325 Highway 1, Big Sur, CA 93920 https://bigsurjadefestival.com/
Oct 24-25, Akron Mineral Society Show, Emidio & Sons Banquet Center, 48 E Bath Rd, Cuyahoga Falls, OH 44223, www.gemboree.org/	Oct 31-01, **OK Mineral and Gem Society Show**, State Fair Park, 608 Kiamichi Place, Oklahoma City, 73107, http://omgs-minerals.org/		
			April 10-11, 2021, Central Ohio Mineral, Fossil, Gem & Jewelry Show, Northland Performing Arts Center, 4411 Tamarack Blvd, Columbus, OH 43229, 614-436-4511

STONEY STATEMENTS
Clear Lake Gem and Mineral Society, Inc

PO BOX 891533
Houston, Texas 77289

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

Member of

Next Annual Show
February 20-21, 2021
Pasadena Convention Center

CLGMS is on the Web:
http://www.clgms.org
2/20-21, 2021

S.C.R.I.B.E.

AFMS

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.

2020 OFFICERS:	President	John Caldyne	832-282-4270	
	Vice President	VACANT		
	Secretary	Trina Willoughby	713-815-0275	
	Treasurer	Morgan Davies	281-224-2444	
	Program Director	VACANT		
	Board of Directors:	Sandra Christiansen		
		John Caldyne		
		Jim Edwards		
		Donna Nelson		
		Sara Tanner		
	Newsletter Editor	David Tjiok		

Annual Show 2020 …….. Sandra Christiansen
Constitution & Bylaws……..Sara Tanner
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WWW System Admin.. …….Mike Flannigan
Refreshments……..John Caldyne
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Membership Dues Jan. to Dec. 2020: 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