

Minutes of the Clear Lake Gem and Mineral

August 15, 2011

President Bob Brock called the meeting to order and opened the meeting with the Pledge of Allegiance. Treasurer Loyce Pennington presented the Treasurer's Report for July, 2011. Trina Willoughby made the motion to approve the Treasurer's Report. It was seconded by David Tijok and passed unanimously. There were no changes to the July Meeting Minutes.

Field Trips

Field Trip Chairperson Ed Tindell made a report on the field trip to Llano, TX, with the Texas Rockers Meetup Group. The group met at The Slab on the Llano River on Saturday, July 16. Ed reported he found some gold and a topaz. An arrowhead was found in Sandy Creek near the serpentine quarry. Ed found a peridot vein. Dinner was at Cooper's BBQ. On Saturday night, there was a hunt for fluorescent minerals using ultra violet lights. The Battery Hill pegmatite quarry was visited on Sunday. On September 10 in the Austin area, there will be a share rocks meet. Ed also announced a field trip to Graves Mountain in Georgia on October 29. The Walker Ranch field trips were also discussed.

Committee Reports

Historian – Nothing to report.

Library – Chairperson was absent.

Community Service – Chairperson was absent.

Education – Nothing to report.

Publicity – The October 15 Workshop was discussed. Jim Wines will teach how to make a cabochon. Ads will be placed in the local newspapers two weeks prior to the workshop. The workshop will begin at 1:00 p.m.–5:00 p.m. Jim will begin the setup at 11:00 a.m. The equipment and needed supplies was discussed. Ed Tindell made the motion to allow Jim \$500 for supplies and to fix the equipment. The motion was seconded by David Tijok and passed unanimously. We further discussed conducting workshops on a regular basis.

Secretary Anna Williams reported she has been in contact with the county and has reserved the building for 2012. She is waiting for the contract. Treasurer Loyce Pennington reported she received a call from someone who would like to be a dealer at our show. Al Pennington reported Doug Wilson has passed and his family would like to donate his lapidary equipment to the club.

Membership – Chairperson Mike Flannigan reported we have 72 members.

Show – Jim Wines will be sending out the dealer contracts. He recommends the same price structure. Al Pennington will start some of the printing for the show.

Program

Laray Caverns in the Shenandoah Valley

The mountains in the Shenandoah National Park are 500 million years old and were formed when the Blue Ridge Mountains were pushed up forming caverns. The park has 195,000 acres with 500 miles of hiking. There is a display of 100 antique cars at the park. The caverns are a registered national landmark and were discovered on August 18, 1878. They were formed 100 million years ago by an underground river. There was a tour of the caverns with stalactites and stalagmites. Those that are wet are still forming while those that are dry are inactive. One cubic inch is formed every 120 years. Human bones were found in the caverns embodied in calcite. The relative humidity in the caverns is 87%.

No door prizes were awarded and the meeting was adjourned.

Respectfully submitted,
Anna Williams, Secretary

Please Note this is a reprint of last month – I will reissue this newsletter with the minutes when they become available – The Editor

Manganese

Manganese (chemical symbol Mn, atomic number 25) is a gray-white metal that occupies the space between Chromium and Iron in the Periodic Table of elements. In nature, it occurs mainly in the form of a black-brown oxide (MnO₂), which was used as a paint pigment as far back as 17,000 years ago. Manganese is part of the iron group of elements that are thought to be synthesized in large stars shortly before supernova explosion.

Manganese is a little-known element other than to a small circle of technical specialists who are predominantly metallurgists and chemists. Yet it is the fourth most used metal in terms of tonnage, being ranked behind iron, aluminum and copper, with in the order of 46 million tons of ore being mined annually (2008). Manganese has numerous applications which impact on our daily lives as consumers, whether it be of objects made of steel, of portable batteries, or of aluminum beverage cans. In each case manganese plays a vital role in improving the properties of the alloys and compounds involved in each specific application. One vital feature of manganese, which is not widely appreciated, is its role as an essential element in maintaining human health. Recommended daily dietary intake levels have been established by US regulatory authorities in an effort to ensure the maintenance of good health.

The greatest demand for manganese is for the production of iron and steel. In addition, it is a key component of low-cost stainless steel and certain aluminum alloys. About 90% of all manganese consumed annually goes into steel as an alloying element. No satisfactory substitute for manganese in steel has been identified which combines its relatively low price with outstanding technical benefits. At low concentrations, it is used to decolorize glass, while at higher concentrations, it is used to make violet-colored glass.

Manganese dioxide, besides being a useful pigment, is a catalyst and a component of certain dry cell batteries. Potassium permanganate is a potent oxidizer and disinfectant. Manganese (in the form of manganese ions) is an essential trace nutrient in all known forms of life. On the other hand, excess manganese is toxic. Manganese has no satisfactory substitute in its major applications. In minor applications, (such as manganese phosphating), zinc and sometimes vanadium are viable substitutes.

Manganese occurs principally as the mineral pyrolusite (manganese(IV) oxide, MnO₂), and to a lesser extent as rhodochrosite (manganese(II) carbonate, MnCO₃). Land-based resources are large but irregularly distributed; those of the United States are very low grade and have potentially high extraction costs.

<http://www.newworldencyclopedia.org/entry/Manganese> American Manganese Inc is currently working with Kemetco Research Inc. of Richmond B.C. to continue the development of a hydrometallurgical process which is intended to yield high purity manganese metal and/or manganese dioxide at low cost from North American known resources, which they believe will be applicable to the Artillery Peak manganese deposits in western Arizona. Reported by www.geology.com From The Trilobite 10/11

Cabs Always Fall off the Dop.

Well a couple of possible reasons, first, if you are using old dop wax, or wax that has been heated many times, you may have to recharge it to get its tackiness back. Do this by melting some real beeswax in with the dop wax.

Second, if you left the dopped cabs in the shop overnight, and the temperature dropped, that is just like putting them in the freezer to detach them. You will have to redo the cab, or bring the dopped cabs inside so they stay warm.

A October HAPPY BIRTHDAY

Michael Vanderbles 5
 Ruth Hansen 6
 Steve McCaleb 7
 Loyce Pennington 24

Opal (hope). Sudden changes in temperature can cause this fragile stone to shatter, which may have led to the superstition that it can bring the wearer bad luck unless it is one's birthstone

October Anniversary includes:

None

Adopt the pace of nature: her secret is patience. Ralph Waldo Emerson

GOODIE GETTERS...For October



Main Goodies provided by club.

Lapidary Corner (Special request from a new member)

How Many Beads in a Strand?

As there are 25.4 millimeters in an inch and as beads are often measured in millimeters, this is only a matter of math. A common length for a strand of beads is 18 inches and there are approximately 460 millimeters in such a strand, thus, the average 18 inch strand will contain about the following number of beads;

4mm – about 115 beads
 6mm – about 79 beads
 8mm - about 58 beads
 10mm – about 46 beads

from *Roadrunner* 6/2011
via Greater Cincinnati Lapidary

What Makes Petrified Wood Colorful?

Author unknown

It is not wood that makes petrified wood colorful, but the chemistry of the petrifying groundwater. Minerals such as manganese, iron, and copper were in the water/mud during the petrification process. These minerals give petrified wood a variety of color ranges. Quartz crystals are color-less, but when iron is added to the process the crystals become stained with a yellow or red tint.

Following is a list of minerals and related color hues:

Copper-green/blue; Cobalt-green/blue Chromiumgreen/blue; Manganese-pink; Carbon- black; Iron Oxides-red, brown,

Via the Rock Collector 10/11

Ball Burs

I use ball burs quite a bit for carving and for cleaning up bits of solder that need to be removed. Ball burs seem to be more controllable than other cutting burs. They're less apt to grab and walk over your piece leaving nasty scars. And I've found that size matters. The large 8-10 millimeter size is a useful size for carving off bulk material while the small half-millimeter or less size can be used at high speed for signing your name on the back of the piece.

Cleaning Steel Shot

Steel shot in a vibratory or rotary tumbler works great to burnish up your finished silver pieces. Surfaces are shined and hardened by the shot impinging on it. Carbon steel shot can get rusty, and even stainless steel can develop a blackish coating that's hard to remove. My solution of choice to clean the shot is Classic Coke. Just pour an ounce or two over the shot and let the tumbler run for an hour or so. A bad case might require a second cleaning. I'm no chemist, but I've heard that it's the phosphoric acid in Coke that does the trick. While you're waiting for the shot to clean up, just settle back and enjoy the rest of the Coke.

Deburring a Hole

When you drill a hole, there's usually a burr produced on the underside of the metal. Typically you would then file or sand this smooth, but doing so will put scratches on your piece that will take time to polish off. A quick way to remove the burr is to grab a drill that's about three times as large as your hole. Simply twist it in the hole to cut off the burr. I usually do this by hand, but if you have many holes to do, put the drill into a holder like a pin vice.

Via Backbender's and The RockCollector

More BenchTips by Brad Smith are at groups.yahoo.com/group/BenchTips/Ball Burs or facebook.com/BenchTips

Field Trips (2011) by Ed Tindell**Pyrite from Hydrothermal Vents
Nourishes Ocean Life**

Pyrite nanoparticles from hydrothermal vents are found to be a rich source of iron in the deep sea. Black smokers at hydrothermal vents exhale large volumes of pyrite nanoparticles that remain in suspension for long periods of time. They are transported long distances by ocean currents and can serve as an important source of iron for ocean life. Because the nanoparticles are so small, they are dispersed into the ocean rather than falling to the sea floor. These particles have long residence times in the ocean and can travel long distances from their sources, forming a potentially important food source for life in the deep sea.

Pyrite, which consists of iron and sulfur as iron disulfide, does not rapidly react with oxygen in seawater to form oxidized iron, or "rust," allowing it to stay intact and move throughout the ocean better than other forms of iron. As pyrite travels from the vents to the ocean interior and toward the surface ocean, it oxidizes gradually to release iron, which becomes available in areas where iron is depleted so that organisms can assimilate it, then grow."

Iron Sulfides from Black Smokers Fertilize the Ocean Condensed from a May, 2011 press release by the National Science Foundation.

Reported by www.geology.com via The Trilobite

Who has a field trip notion? Any place you all want to go?



Thanks,
Ed Tindell 2010 CLGMS Field Trip Coordinator
a.k.a. "The Official Cat Herder"

**Graves Mountain "Rock Swap and Dig"**

8 am to 6 pm, Friday, October 7, 2011

8 am to 6 pm, Saturday, October 8, 2011

8 am to 6 pm, Sunday, October 9, 2011

"You are invited to field collect minerals at Georgia's premiere mineral location!"

The caretaker in charge of Graves Mountain, Clarence Norman Jr., has announced plans to hold two three day digs and rock swaps on the Mountain during 2011. He will have the mountain open to collecting from 8 am to 6 pm each day.

All participants must stop at the welcome table in the Hospitality tent to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type, four wheeled vehicles available to transport those participants who have trouble walking long distances. The dig will cease and everyone is expected to be off the mountain by around 6 pm each day. Participants will be allowed to park in a designated area on the mountain.

Rock Swap and Hot Food/Drinks:

Junior will set aside an area in the upper parking lot for tables to be setup for daily rock swaps. Anyone who would like to setup a table(s), please contact Junior at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of these events. Don't forget to bring some extra money to buy the special "Graves Mountain Rock Swap and Dig" T-shirt!

Mark your calendar and tell all your friends about this great event!

THIS DIG IS OPEN TO ALL. NO NEED TO SIGN-UP, JUST SHOW UP!

Contact Information: Clarence Norman Jr. (Junior) - 706.359.3862 (his business) or 706.359.2381 (his home)

DIRECTIONS: From Washington Georgia, drive 11 miles on SR-378, or from the Hardee's in Lincolnton, Georgia, drive approximately 5-1/2 miles west on SR-378. Look for a sign at the entrance to Graves Mountain on the south side of the road.

Opal By John Zentz for Star-O-Lite

October's child is born for woe, And life's vicissitudes must know, But lay an opal on her breast, And hope will lull those woes to rest. [Author unknown]

The traditional birthstones for October are tourmaline and aquamarine. The modern birthstones are tourmaline and opal. Since our unknown author chose opal for October's child, I will start there.

Technically, there are many forms or types of opal. Some categories are boulder, black, light, precious, common, potch, resin, synthetic, transparent, peacock, harlequin, flame, fire, and even opalized fossils. It is a usually transparent or translucent mineral consisting of hydrous silica. It can occur in almost any color but is most often pinkish white. While chemically similar to quartz, opal is softer and less dense and usually contains from 3% to 10% water. It forms at low temperatures from silica-bearing water in fissures and cavities of any rock type. Unlike many minerals, it is not found in dense concentrations, but instead is found in small quantities dispersed over large areas.



Sometimes an opal will have regularly packed tiny spheres of amorphous silica arranged in a way that causes light to reflect and refract into beautiful colors resulting in what we term —precious opal. These spheres are only a few tenths of a micron in diameter. For comparison, a human hair is about 100 microns wide, and a red blood cell is about eight microns in diameter. The tiny spheres are small enough to interfere with the wavelengths of light which is how they produce the remarkable play of colors we love so much.

While some types of opal are found in many places around the world, the vast majority of precious opal is found in only a few places, primarily the Coober Pedy and Andamooka fields in southern Australia. Australian opal did not reach the world's markets until the very late 1800's. Prior to that, precious opal was very rare indeed.

Throughout history opal has been regarded as a lucky stone. Some believed it enhanced psychic abilities, held magical powers, improved eyesight, amplified desires, protected against disease, and even bestowed the gift of prophecy. But, everyone believed it was a lucky stone, at least until the late 18th and 19th centuries when it fell out of favor as it became associated with famine and disease. Walter Scott's novel *Ann of Geirstein* and a few other fiction works of the time caused some people to think of opal as an unlucky stone. Fortunately, this is no longer the case.



Opal has regained its rightful place.

An opal requires special care by its owner. It should never be placed in an ultrasonic cleaner, or exposed to acids or solvents. Clean an opal with mild soapy lukewarm water and a very soft toothbrush. It should also never be exposed to very cold or dry conditions. Prolonged exposure to strong light can even cause the water to dry out and the stone to crack or craze. Crizzling is the formation of tiny surface cracks in a pattern similar to that seen in dried mud. Many people believe opals should be worn frequently so they can absorb moisture and oils from the body to help keep them hydrated and prevent crazing. However, wear them carefully. Most references classify opals with a hardness of 5 ½ to 6 ½ Mohs, but some can be as soft as 4 ½.

More so than most gemstones, precious opal is unforgiving of its cutter. To get the most intense fire the cutter must remove intervening translucent material without removing the source of the fire. Once cut, the fire is lost forever. Knowing when to stop comes only from experience for which the cutter must pay dearly. It takes a practiced, bold and steady hand to unveil one of nature's most beautiful displays so the world can appreciate it. October's child owes her wondrous treasure to both nature and a talented craftsman. Fm Star-O-Lite 10/2010

Geodes

Geodes are the mysterious treasure-boxes of the geological world. Undistinguished lumpy balls of rock from the outside, they often reveal crystal-lined interiors when cut or broken open. The crystals are most often clear quartz, although they are sometimes amethyst or calcite. Rarely, crystals of pyrite, sphalerite, and other minerals may also be found. Geodes may be less than an inch in diameter, though some, like the Brazilian amethyst cathedrals, can be several feet across. But some geodes, commonly referred to as duds, are empty. Others are solid crystal, or nearly so; these are called nodules.



There's no way of telling what you will find in a particular geode from looking at the outside, although nodules are noticeably heavier than hollow geodes. Geologists don't agree on the exact processes involved in the formation of geodes. Given that geodes form in both volcanic and sedimentary rocks under very different conditions, the subject is a complex one. But the most common theory is that geodes form inside already existing hollows within the rock. In the case of

volcanic rock these hollows are the result of gas bubbles in the molten flow. Cavities in sedimentary rock may be the result of concretions, of an expansion in the rock due to internal fluid pressure, or of the dissolving out of earlier material by groundwater—or any combination of these causes. Groundwater laden with silica and other minerals fills these hollows. Over hundreds to thousands of years minerals precipitate out of the water, leaving a silica gel on the interior walls of the cavity that hardens into rock as it dries.

The first layer is usually chalcedony, a strong, crypto-crystalline form of quartz. As this process of mineral precipitation reoccurs over and over, later layers form distinct, inwardly pointing crystals. Geodes that are empty missed these later cycles. When a number of geodes are found together in a layer of rock, often it's the ones at the top—ones that were often above the level of the groundwater—that are duds. A similar process of mineral precipitation can create crystal-lined cavities called vugs. The difference between one of these cavities and a geode is that the outer layer of a vug is not durable enough to survive weathering, so it disintegrates when exposed rather than forming a ball or rock with a crystalline mystery at its heart.



From Rollin' Rock 6/11 via Rock Rattler 4/07

SCFMS and MEMBER CLUB GEM SHOWS			
Oct. 08 - 09 TEMPLE, TX Tri-City G&MS Mayborn Civic Ctr	Oct. 14 - 16 VICTORIA, TX Victoria G&MS Community Ctr. 2905 E. North St.	Oct. 21 - 23 AUSTIN, TX Austin G&MS Palmer Event Ctr.	Oct. 22 - 23 DENISON, TX Texoma Rockhounds Denison Senior Ctr.
Oct. 29 - 30 GLEN ROSE, TX Paleo. Soc. of Austin Somervell Expo Ctr. Hwy 67			

STONEY STATEMENTS
 Clear Lake Gem and Mineral Society, Inc
 PO BOX 891533
 Houston, Texas 77289

(Postage)

Meeting 3rd Monday of the Month – 7:30 P.M.
 October 17, 2011, Clear Lake Park Building
 5001 NASA Road One, Seabrook, Texas



Member of:

Next Annual Show
 February Feb 25-26, 2012
 Pasadena Convention Center



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			
2011 OFFICERS:	President	Bob Brock	281-338-2252
	Vice President	Ed Tindell	281-930-0698
	Secretary	Annabel Williams	
	Treasurer	Loyce Pennington	281 481-1591
	Program Director	Trina Willoughby	
	Board of Directors:	Trina Willoughby	Lester Gary
		Cheryl Tindell	David Tjiok
	Newsletter Editor	Al Pennington	281 481-1591
Annual Show 2012.....	Al Pennington	Library.....	Lester Gary
Const & bylaws.....	Dick Rathjen	Membership.....	Mike Flannigan
Community Benefits.....	Nancy Dugger	Publisher.....	Mike Flannigan
Historian.....	David Tjiok	Refreshments.....	David Tjiok
Membership Dues Jan. to Dec. 2011: Adult \$10:00, \$5.00 per additional adult at same address, Junior \$5.00, \$2.50 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			
Granvil A. "Al" Pennington, Editor 2011 – 11326 Sagetrail Houston, TX 77089-4418			
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Deadline for November Issue is October 28, 2011			