



A monthly publication of the Clear Lake Gem & Mineral Society

VOLUME 36 FEBRUARY 2010 NUMBER 02


	<p><b>NEXT MEETING:</b> February 15, 2010  <b>TIME:</b> 7:30 PM  <b>LOCATION:</b> CLEAR LAKE PARK BUILDING          5001 NASA ROAD ONE          SEABROOK, TEXAS</p>
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**The PROGRAM FOR February...**

**The program will be announced:** As Trina said we are having rough times getting new program presenters lately. We would like all members to give us their top two ideas for material they would like to hear and have us reach out to the community to get more speakers.

**SHOW and TELL**

Share a report of our latest field trip or your own special dig. Bring in your prize specimens and educate us. Bring us your rockhounding finds and let us see how you did.

INSIDE THIS ISSUE		Stoney Statements Spotlight	Editorial
December Minutes	2	 <p>Stoney Statements Salutes some of the hard working dealers having some fun at the 2009 Show. Come crack a Geode!</p>	Time to prep for the next show and we will be talking about some of the preparations at the next general meeting. Ed Tindell will need 6 – 8 volunteers to load up the trailer on Thursday night before the show, unload and setup on Friday morning and break down on Sunday at the end of the show. They need to bring a pair of gloves.
PLATINUM	3		I will have the sign-up sheet for work areas for the show at the meeting so <b>everyone</b> that can, should show up at the general meeting.
ARTIFICIAL WEATHERING	3		<p><b>GEM SHOW – GEM SHOW</b>            Hey you all it is that time again! The CLGMS Show is on February 27, 28 at the Pasadena Convention Center, 7902 Fairmont Parkway            The Rock Food Table is Back! Tell your Friends!</p>
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**\*\* Happiness isn't something you experience; it's something you remember. \*\*** Oscar Levant

**Minutes of the Clear Lake Gem and Mineral  
January 18, 2010**

President Bob Brock called the meeting to order and opened the meeting with the Pledge of Allegiance. Secretary Annabel Williams presented the Treasurer's Report as prepared by Treasurer Loyce Pennington. Ben Duggar audited the records and suggested the certificate of deposit maturity dates be added to the Treasurer's Report. President Bob Brock asked for approval of the meeting minutes and Ben Duggar called to our attention that Lester Gary is the fourth Board Member. The meeting minutes were approved with that correction.

Committee Reports:

Historian: Nothing to report.

Library: Cataloguing the books should be completed by February.

Education: Need committee chairperson. Purpose of committee is for members to give five minute presentations to educate the club.

Community Service: Schools recommended to receive donations for books related to the earth sciences are Pasadena ISD- Fisher Elementary, Milstead Middle School, Morris Middle and Jensen Elementary; La Marque ISD-Westlawn Elementary; Clear Lake ISD- League City Elementary, Margaret Whirtier Elementary; Texas City ISD-Block Middle; and La Porte ISD-La Porte Elementary. Chairperson Nancy Duggar requested \$300 per school for nine schools for a total of \$2,700. Al Pennington made the motion to accept and Bob Brock seconded it. Face plates printed with Donated by CLGMS were discussed.

Auditing Committee: Chairperson Ben Duggar presented the Audit Report. He did a complete review of transactions, deposits and withdrawals. Everything reconciled.

Public Relations: Buying ads in the Houston Chronicle and the local newspapers was discussed.

Membership: Membership Dues are due this month with a grace period until March.

Old Business:

Al Pennington reported on the purchase of a club laptop which will be approximately \$1,000.

The purchase of boxes for the storage unit and library were discussed. Trina Willoughby suggested the boxes be acquired in time for the club annual show to pack up using the new boxes.

New Business:

None

Al Pennington reminded everyone that the minutes are the official record of approving dispersals and board of director's approvals. The official document is retained in the Stoney Statements.

Field Trip Leader Ed Tindell gave a report on possible, future field trip locations. Trina Willoughby suggested day trips in the spring and it was the consensus of the group that day trips are recommended. Liability insurance protection was also discussed.

Program – Annual Show Update presented by Al Pennington

Mike Burns presented the dealer layout. Confirmation regarding the Rock Food Table has been received. Scott Singleton with the HGMS will conduct the petrified wood identification. San Jacinto College students will work at Hands On only. The need for someone to sell swap dollars and man the swap table was discussed. Lester Gary volunteered along with Leslie Gary to handle both. They will also participate in Admissions. New tables at the convention center were discussed. Mike Burns will speak to the Scouts regarding their special area. Admission is \$5.00 and Scouts enter free. No changes from last year. Media are admitted free. Information and Membership are the same. Al presented a layout of the Pasadena Convention Center. The Gem Mine and demonstrations were discussed. Setup and tear down was also discussed.

Door prizes were awarded and the meeting was adjourned by President Bob Brock.

Respectfully submitted

Annabel Williams

Secretary



## PLATINUM By Cheri Rodger,

Platinum is a silver-white metallic element that occurs worldwide. It is ductile (may be drawn into wire shapes) and malleable (can be pounded into thinner shapes), and does not oxidize in air. Its atomic number is 78, with a melting point of 1772 deg. C and a boiling point of 3827 deg. C. It is chemically inactive, therefore resists corrosion. It is soft and easy to carve, and is often carved into quite intricate designs.



The word platinum comes from New Latin, from Spanish *platina*, means "Silver." It was not recognized as a chemical element until 1735. Of the most precious metals, it is the rarest and the most valuable.

Platinum forms in igneous rocks, as ores in which the grains of Platinum are so minute they cannot be seen without a chemical test or a microscope. It can also occur in streams as river sands and gravels, and as nuggets. It is found in meteorites. Current mining production usually has ore which contains 44% Platinum, 52% Palladium, & 4% other, it takes 10 tons & 5 months for 1 ounce of Platinum to be produced.

Platinum and its alloys have been known since antiquity. It has only been worked since the technology became available to reach its high melting point, somewhere in the 1920s. Platinum and its alloys are used in surgical tools, laboratory utensils, electrical wires, contact points, jewelry, dentistry, and very powerful magnets. Also used as a catalyst in automobile catalytic converters for anti pollution devices. Found in S. Africa, Canada, Alaska, Russia, Australia, Colombia and Peru.

from **The Southwest Gem 10/01 via ROK TOK 12/98**

## ARTIFICIAL WEATHERING

It is always a thrill to find a cracked concretion that separates cleanly in the field with the light tap of a rock hammer to reveal a beautiful fossil. More often, however a promising looking concretion is not already cracked and resists being broken. When it finally breaks under blows of a rock hammer, there is some shattering or uneven breaking which can damage the enclosed fossil, and even then, there is a chance that the enclosed fossil is not exposed. With a little patience, there is another way to expose the fossil. Artificial weathering is a simple alternative that may lead to collection of fine undamaged fossils, if the matrix material is suitable.

Freezing and thawing causes accelerated mechanical weathering of a rock. If water can seep into pores or micro cracks in the rock, the rock will become saturated. When the water expands during the freezing cycle, pressure is exerted on the rock, leading to cracking or exfoliation. If the fossil is a carbon film, then the fossil is a natural weak spot in the concretion, and with luck, the subtle pressure of freezing will open the concretion so that the fossil is perfectly exposed and undamaged.

The process is very simple for any rock that will take up water. A container (other than glass, which might break during the freezing process) suitable for the specimen's size is selected, and the concretion is covered with water and allowed to soak for several days. Then a series of freezing and thawing cycles are achieved by using the freezer in the summer or the back porch in the winter. By achieving a freeze thaw cycle every day, the process is accelerated. It is important that loosened residue from each cycle be removed and examined because if there are any fossils revealed, the next freeze cycle could destroy them.

If you live in a northern climate, and there is no hurry, the suitable rocks could be placed in a container of water and simply left outdoors all winter where the daily temperature swings would do all the work. It has been reported that thousands of Mazon Creek, Illinois fossils have been exposed using accelerated artificial weathering this way.

In Iowa, fossil collectors are on the lookout for blade shaped nodules of limy shale in Pennsylvanian exposures and streambeds. With any luck and some artificial weathering, a well preserved, beautiful fern frond is likely to join your fossil collection.

Source: "Freezing and Thawing of Fossils;" J. Pojeta and Balanc, U.S. Geological Survey, Reston, Virginia, undated.

By Chuck Safris, Central Iowa Mineral Society, via Roanoke Valley Mineral & Gem Society Newsletter, 02/99, via THE STONE CHIPPER, 02/99.

**A February HAPPY BIRTHDAY**

Lewis Hall	3
Timothy Burns	9
Dick Rathjen	21
Julia Owens	29

**Amethyst** (sincerity).  
From the Greek  
*amethystos*, meaning  
“without drunkenness.”  
Has been used to signify  
Christian humility.

**February Anniversary includes:**

Ray Jones 28

**2010 DUES ARE DUE**

GOODIE GETTERS...For February



Main Goodies provided by club.

**Lapidary Corner** (Special request from a new member)**TUMBLING**

By Bob Hicks

**GENERAL INFORMATION**

Two methods of tumbling being discussed will be with the rotating tumbler. For both methods the grinding medium is silicon carbide.

**The grits:** (anything under Rough grit 100) is used for the first stage. Medium grit (120 to 300) is used in the second stage. Fine grit (400 to 600) is used for the third stage.

**Estimating cost:** As a “rule of thumb,” silicon carbide, 220 to 400 grit weighs approximately 0.8 ounces per tablespoon. Fine grits 400 to 600 and polishing powders weigh approximately 0.5 ounces per tablespoon.

**Weigh your stones** when you get your tumbler 2/3 to 3/4 full. For example, a six-pound tumbler does not always hold six pounds of rocks. As a rule of thumb, use 1 tablespoon of grit per pound of stones, or 1 tablespoon per two pounds of the manufacturer’s weight rating of the tumbler. Most tumbling books suggest more grit and polish than is really necessary.

**Volume shrinkage:** Roughly 25 percent of the beginning volume tumbled in step one will turn to mud, so run two loads of step one. This will provide the filler material to replace those that were ground away or thrown away from the first step.

**Size and hardness of stones:** A superior polish requires a variety of sizes, with emphasis on lots of small chips that help polish the larger stones. All stones in a load should be of the same approximate hardness. Softer stones will not polish and may be gouged by harder stones.

**A handy hint:** Have a note pad next to the tumbler to record the date, time, and condition of the stones during the various steps and grit changes.

**Polishes:** There are many different polishes for the final stage. The best one for you will be determined by experimenting. Some of them are: Rapid 61, Aluminum Oxide, Cerium Oxide, Tin Oxide, Chrome Oxide, and Tripoli. Suggestion: Rapid 61, Cerium, or Tin Oxide.

**Burnishing:** Use a soap rinse between the 3<sup>rd</sup> cycle and polish, then after the final polish. Bar Ivory soap is the only pure soap we know of. Chemical additives in other soap and detergents seem to leave a residue on the stones. The dark color when this soap rinse is poured off shows how much grit were still on what you thought were clean stones. Shave the bar with a knife or whatever method you wish. The water-soap combination reaches a balance when little bubbles appear on the surface of the moving material and should remain this way throughout the soap cycles. The soap bubbles provide a cushion for the stones. Excess water slows down the process.

**CAUTIONS:**

**Do not let the slurry mud dry on the material in any cycle.** If you goof and you have hardened mud, fill the tumbler with water and let it run until the mud has washed off or is soft enough to wash off with a hose or faucet.

**DO NOT POUR SLURRY DOWN THE DRAIN.** (Unless you can afford lots of plumbing bills.)

Some materials like jade or obsidian require different procedures.

*From The Rockhound Gazette, 02/97*

**Field Trips (2010)** by Ed Tindell

Name your Field trip

We will be discussing various destinations for our field trips this year at the next club meeting. I threw out several ideas and now we need to begin working toward some goals. Hope to see you there for ideas.

\*\*\*\*\*



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

**CARVING A SIMPLE PROJECT**

by Henry Hunt

Once you know how to cut cabs, you are ready for carving. Very little machinery is needed. Let's follow through on a simple design. You have cut a large oval cab and wish to carve a zigzag line a thunder bolt symbol, diagonally across the top.' This groove will have 2 zigs and 1 zag at a 45-degree angle.

First, you need an old motor, either 1725 or 3450 rpm, plus a 1/4 inch Jacob's chuck like the one on your electric drill. An adapter is used on the 1/2-inch motor shaft and the chuck is screwed onto it. These adapters can be obtained at jewelry supply stores. This is all you need in the way of machinery.



A V-shaped groove looks best for this design So you will need a V-shaped diamond tool, not a tapered wheel, but a straight wheel with a V-shaped cutting edge. A 1/4 inch or 3/8 inch wheel will work best. First, scribe the zigzag line with an aluminum pencil, then lightly trace the line with the diamond tool. This will leave a shallow groove. Be careful where the long zig meets the 45-degree zag. Once you have a light groove, then you can go back and run over the line again making it deeper each time. The outer ends of the two long lines can be made wider by rocking the tool against the sidewalls.

Make your grooves as neat as possible, but do not strain, the next step will clean up the line. You use the knife-edge Cratex wheels to sand down the walls and edges. These wheels are abrasives mixed with a rubber substance and work exceptionally well with the quartzes. Pick the medium grade if you buy only one grit. They are made in four different grit sizes. The groove will be smooth and nicely frosted when you finish Next you go to a V-shaped wood wheel the same size as your diamond tool. These are easy to make using any hardwood available. Maple for instance. Saw out an 1/8 inch slab and cut 1/2 inch circles from these thin slabs. You will mount these wheels on the same 1/8 inch mandrels you are using with the Cratex wheels, so drill a center hole that fits the attaching screw of the mandrel.

Then, with a very sharp file, shape the wood wheel to a knife-edge; keep the wheel straight and taper the cutting edge. Make several of these. You will use them.

You use diamond compound on the wood wheels. The cheapest way to go is to buy a one-cc vial of 600-grit diamond powder and mix it with 2 level tablespoons of Vaseline. This is your sanding compound. Apply it sparingly, you don't need much. Go back and forth over the groove with the wood wheel until you have a very delicate frosting. Be especially careful with the edges. I like to use a second wood wheel with 1200 grit diamond powder, just to make doubly sure that I have a perfect surface. Now you are ready to polish. There are two methods for polishing. Cerium oxide on a felt buff is the preferable one for the quartzes, but it is very difficult to reach the bottom of those grooves with a felt buff Use either a rock hard knife-edge or the sharp edge of a small straight wheel. The other method is a wood wheel with 50,000-grit diamond. If you go this route, you should use the 1200 grit diamond to complete the sanding stage. Then, after finishing with the 50,000-grit diamond, it is nice to conclude a quartz piece by working it against the felt buff wherever you can Cerium, for some reason, puts a brighter glitter on quartz than anything else.

While you are working on this carving, especially with the Cratex wheels, you will probably slip a few times, leaving bird tracks on the surface of the cab. The only way to remove these marks is to resand with 600 grit and then repolish. For this reason, I like to process the cab through the 600 sanding stage, then carve it, and then polish everything. That way avoids any duplication. So now you have a beautiful cab with the lightning bolt symbol carved across the surface They say such a stone gives you the speed of Mercury and the power of Zeus.

(Article from Hale Sweeney's Lapidary Digest. Noncommercial republish permission granted)

## CORUNDUM

By Janice Erickson, G.G. (GIA)

Corundum, from the Hindu word “kurand” or “kuruvinda”, is the family name for both rubies and sapphires. The word ruby comes from the Latin word “ruber” meaning red. The word sapphire comes from the Greek word “sappheiros” denoting lapis lazuli. Similar words are found in Persian and Hebrew, possibly derived from Sanskrit. It wasn’t until 1802 that rubies, sapphires and fancy sapphires were formally united under the same mineral species heading of “corundum”. Mineralogist Count de Bournon published a paper that described the analogies of these stones and gave them the general name of corundum. Red corundum stones are known as rubies, although some give the ruby name to what others may call pink sapphires. The word sapphire denotes the blue sapphire. If you wish to describe a sapphire of any color other than blue (i.e., a fancy sapphire), include the color of the stone as well (for example, yellow sapphire, white sapphire, green sapphire).



Corundum is a mineral made up of aluminum and oxygen (aluminum oxide) and pure stones would be perfectly colorless. The cause of the red color is chromic oxide as an isomorphous replacement of some of the aluminum atoms. Sometimes iron and titanium are present as color modifiers. Blue sapphires are colored by iron and titanium as replacements for some of the aluminum atoms. Corundum which occurs with rutile and hematite may result in asterisms in highly domed cabs resulting in a 6 (rutile) or 12 (rutile and hematite) rayed star. Chatoyancy in corundum is very rare, but color change sapphires are available.



Corundum crystallizes in a hexagonal or trigonal system. The hardness is a 9 on the Mohs scale, just below diamond with a hardness of 10. The specific gravity is about 4.00. Corundum is doubly refractive and shows dichroism; ruby is purplish red and orangey red; blue sapphire is violetish blue and greenish blue; other colors of sapphires have their own dichroic colors. Because of the strong dichroism, cutters must orient the stone carefully before faceting or capping to have the most desirable color appear face-up in the finished stone. Stones may be

transparent to opaque. Fine rubies often compare to diamonds in price. Some of the finest rubies come from Mogok, Myanmar (Burma), Thailand and Sri Lanka.

One of the most valuable sapphires is the Padparadscha sapphire. This is a light to medium toned, orange-pink to pinkish orange found in Sri Lanka. You may see orange stones defined as a Padparadscha, but the pink color must be present to be correctly called Padparadscha. Kashmir sapphires are often regarded as the finest quality blue sapphires, with other fine sapphires coming from Myanmar (Burma), Sri Lanka, Thailand and Australia. Of course, quality corundum stones may be found in other locations around the world.

Corundum stones have been valued since ancient times and have often been associated with royalty in coronation rings and engagement rings as well. There is much folklore and mythology associated with these stones.

*Taken from THE GLACIAL DRIFTER October 2002 via GEMS and STONES by Janice Erickson, G.G. (GIA), the Editor of KGeMS Newsletter, 7/2002*

### *Trivia:*

Even though there are only twelve months, there are seventeen modern birthstones.

RockCollector 2/2010

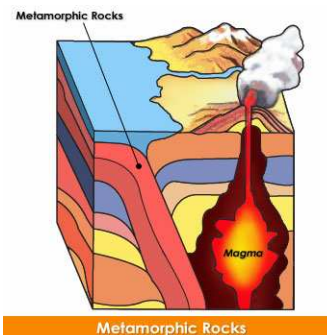
## Diagenesis vs Metamorphism

### By Eric Fritzsich

Most (if not all) sedimentary rocks have undergone some heat and or pressure (H+P). Sand on a beach will rarely become a consolidated sandstone if it re-mains at surface conditions. In order for sand to become sandstone it must typically be buried, and, at depth, the geothermal gradient (it gets hotter as you go deeper) heats the sand and the weight of the sediment above creates pressure. This process (in combination along with water, and sometime ions) is enough to cement the grains of sand together. Typically, a rock may be subjected to temperatures up to 200 degrees Centigrade and pressures of up to 2 Kb and still be classified as sedimentary. These relatively low temperatures and pressure may change the rock slightly but typically do not recrystallize the rock. This is referred to as diagenesis.

Coal is a sedimentary rock that has undergone diagenesis change. Coal originates as plant material which becomes peat or peat-like. H+P change the peat slowly into lignite coal, bituminous coal, and eventually anthracite coal. At high enough pressures and temperatures the coal will metamorphose (recrystallize) into graphite.

You can see the effect of diagenesis on the limestone at the Cathedral in Omaha. The floor is made of a common limestone, (sedimentary rock), that contain black lines that resemble a graph. These lines are called stylolites and are formed by pressure dissolving missing layers of limestone.



Most agates form as a result of diagenetic alteration in limestone. Slightly heated and basic (Ph+7) silica-rich water flows thru limestone until it encounters a pore space where a chemical reaction lowers the Ph, dissolving the limestone and precipitating silica in bands as an agate. Excessively hot water, which changes, adds silica, and recrystallizes the limestone produces a skam. Metamorphosing a limestone recrystallizes the calcite grains in the limestone to form new grains and a metamorphic rock called marble. It may be difficult to determine if a rock is metamorphic or diagenetic. Geologists may differ in opinion as to whether a rock is a diagenetic shale or a low shale.

*(From trilobite May 2002 - Notes of a talk by Dr. Watkins at the February meeting of the Nebraska Mineral & Gem Club from the Rear Trunk)*

### SAFETY:

**PROTECT YOURSELF** We are learning that deafness can be attributed to the noise of our lapidary equipment, As we use facemasks and goggles to protect our lungs and eyes from dust, so we should use ear plugs to protect our ears from the noise of our grinders and saws. Ed. Note: We also need be aware of the dangers of buffing machines used in our jewelry making. If there is no fan directly connected to the buffer, be certain that the area is well ventilated and that you wear a face mask. Protect your eyes too from flying debris from the buffer and from that occasional “slip” and the metal being polished flies off.

SCFMS and MEMBER CLUB GEM SHOWS			
January 16-17 Fredericksburg, TX Fredericksburg Rockhounds Lady Bird Johnson Municipal Park	January 22-24 Tyler, TX East Texas G&MS Rose Garden Center	February 20-21 Georgetown, TX Williamson Co. G&MS San Gabriel Park	February 20-21 Plainview, TX Hi-Plains G&MS Ollie Liner Center
February 27-28 Pasadena, TX Clear Lake G&MS Pasadena Convention Center	March 6-7 Big Spring, TX Big Spring Prospectors Club Howard Co. Fair Barn	March 6-7 Robstown, TX Gulf Coast G&MS Regional Fairground	March 20-21 Live Oak, TX (San Antonio) Southwest G&MS Live Oak Civic Center 8101 Pat Booker Rd.

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.  
 February 15, 2010, Clear Lake Park Building  
 5001 NASA Road One, Seabrook, Texas



Member of:

**Next Annual Show**  
 February 27 & 28, 2010  
 Pasadena Convention Center



CLGMS is on the Web: (new location)  
<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

2010 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
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Annual Show 2010.....	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. 2010: 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 2010 – 11326 Sagetrail Houston, TX 77089-4418**  
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**Deadline for March Issue is February 28, 2010**