



SLABS & CABS
OFFICIAL BULLETIN OF THE
GULF COAST GEM & MINERAL SOCIETY

P.O. BOX 1817
CORPUS CHRISTI, TEXAS 78403-1817

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Volume 49

Number 3

March 2010

Next Meetings

Board Meeting
6 April 2010
Baptist Church
6:00 PM– 9:00 PM

General meeting
16 March 2010
Watergarden Room
Corpus Christi
Museum of Science &
History
1900 No. chaparral
Corpus Christi, Texas
6:30 PM

Membership Fees for 2010

Membership dues for 2010 are due in January 2010
We have 4 types of memberships and they are as follows:
Single \$ 15.00
Spousal \$ 20.00
Junior \$ 5.00
This is for any member from the age of 6-17 years Of age
Honorary
Sandra Hinkle , Membership chair lady



Aragonite Pseudomorph
Sierra Aguja South Brewster County Texas

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We are on-line

www.gcgms.org

Thanks to Chris Davis of Spurfire and Owen Hopkins
For getting us back up and running! Take a look.

Minutes of the March Board Meeting of the Gulf Coast Gem & Mineral Society

Held 3/2/2010 at the Corpus Christi Main Library.

Kyle Hinkle, Vice-President, called the meeting to order at 6:50 pm. Board members in attendance were Jerrold Simpson, Linda Simpson, Shanda Hinkle, Donna Grimes, Richard Cline, Mike McCraw and Gene Schade.

Membership report – Shanda Hinkle gave the membership report. There are 56 members on the roster: 44 regular members, 8 honorary members and 4 junior members.

Minutes – No minutes were read or approved.

Treasurer report –Gene Schade gave the Treasures report. The report included some 2010 show expenses that were expended in 2009. Jerrold Simpson made a motion to accept the report as presented and Mike McCraw seconded it. The motion passed

Shop report – Jerrold Simpson reported a sand blasting box and a compressor have been added to the lapidary shop to be used for cleaning fossils. The board voted to reimburse Jerrold & Linda Simpson for the expenses for the new equipment.

Dick Cline reported that there has been a lot of activity at the shop.

Jerrold Simpson has taught the Irving family the cab class.

Fieldtrip report – Mike McCraw reported that three people attended the recent field trip to McMullen County.

Old Business –Jerrold Simpson brought copies of the shop rules for review. Revisions were suggested and a copy will be made available at the next club meeting.

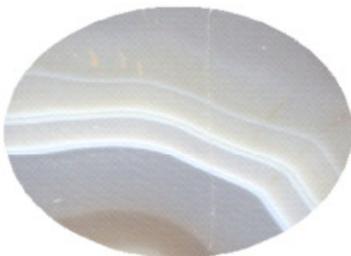
Waivers signed before members use the shop equipment were damaged in the last flooding of the building. All members who use the lapidary shop need to re-sign a waiver.

Education report – Kyle Hinkle reported he had been trying to contact someone from Texas A&M in Kingsville to give the program in March. Jerrold Simpson gave him a direct phone number to the professor he had been trying to contact.

New Business – The scholarship applications were reviewed and discussed. Gene Scotch, a 43 year-old student from Texas A&M University, Corpus Christi, was the winner of the annual scholarship. The award will be presented at the 2010 show.

The meeting was adjourned at 7:55PM.

Respectfully submitted,
Jerrold Simpson, acting secretary for this meeting



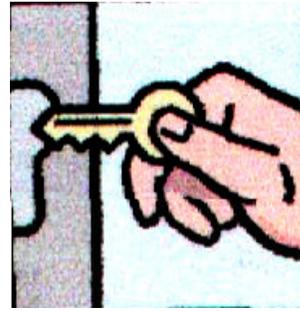
Virtual Cabachons



GCGMS Lapidary Shop Rules

1. The lapidary shop equipment may not be used by anyone who has not signed a liability waiver.
2. Shop equipment use flat fee is \$2.00 per hour. Sign in on arrival.
Pay Supervisor and sign out before leaving the shop.
3. "Open shop" hours are to be used only by those who have taken the cabochon class or have shown proficiency on the equipment.
4. All children under the age of 17 must be accompanied by an adult trained on the use of the equipment.
5. Supervisor must inspect rock "set-up" prior to anyone starting slab saw.
6. Long hair should be tied back, loose sleeve should be secured, and safety procedures followed.
7. Safety glasses are recommended and are the responsibility of the individual. Some are furnished by the GCGMS, or you may bring your own.
8. The last person to use a piece of equipment before the shop closes is responsible for cleaning that piece of equipment and the work area. This may include tabletop, sponges, aprons, catch trays, etc.
9. Shop Supervisor is the final authority on shop rules and usage.

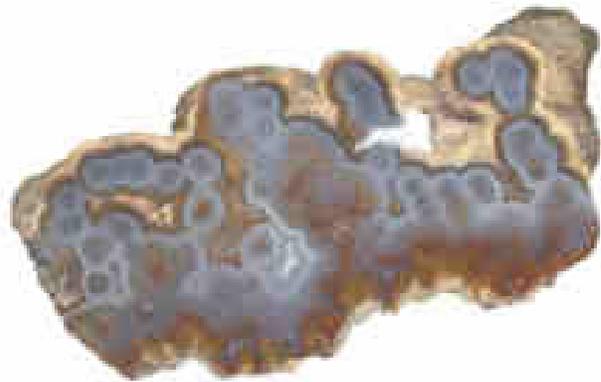
Revised May 2009



Those with keys to the Lapidary Shop are
 Mike McCraw—361-993-6425
 Jerrold Simpson—361-851-8788
 Cell - 361-877-3073
 Hank Swan—361-993-9861/361-857-2405
 Richard Cline—361-853-8084
 Please call one of these when you would like to use the shop. They will not all be available at the same time, and once in a while none of them will be available. Most of the time at least one of them should be able to work out a time and date the shop could be open for you. Remember the club has a lot of good equipment to use. Several different classes are being conducted on Monday evening from 6:00 PM to 9:00 PM. The shop is open during these times for use of the equipment even if you are not involved in a class. Shop is also open Saturday 9:00 Until Noon.



**Aragonite Pseudomorph
 Paso Lajatis
 Mexico**



**Cathedral Agate
 San Carlos
 Mexico**

March Birthstone, Aquamarine

Compiled by Roger K. Pabian, Research Geologist, Emeritus
School of Natural Resources, UNL

Aquamarine has been the traditional birth stone for the month of March although some jeweler's charts list bloodstone as an alternate. Aquamarine ranges from pale blues to light blues to yellowish blues. Aquamarine is the mineral Beryl, a Beryllium Aluminum Silicate with the general chemical formula $\text{Be}_3\text{Al}_2(\text{Si}_{16}\text{O}_{18})$. Beryl crystallizes in the hexagonal system, it ranges in hardness from $7 \frac{1}{2}$ to 8 on Moas scale; it has an imperfect cleavage and a vitreous luster. Optically, beryl is uniaxial negative; some specimens may be strongly diachronic; its refractive index ranges from about 1.57-1.58 or to 1.58-1.59.

Other beryl varieties that have been used for gems include **emerald** (blue green to green), **goshenite** (colorless), **morganite** (pink to violet), and **heliodor** or **golden beryl**. There is also a **red** beryl that comes from Utah.

Inclusions in aquamarine may include mica, hematite, liquid-filled (often salt-water) tubes and hoses. The liquid can expand considerably if the crystals become overheated, causing them to fracture badly, or in rare instances, to explode.

The name aquamarine has been used as a modifier for many other materials such as aquamarine tourmaline, aquamarine emerald, aquamarine chrysolite, aquamarine sapphire, aquamarine topaz, etc.

"**Aquamarine Emerald**" is a registered trade name that is used for a kind of triplet stone that has two layers of usually aquamarine or sometimes colorless beryl that are cemented together with a green cement to create the impression of a true emerald. This kind of stone might be difficult to detect by refractive index alone so magnification will help detect the squiggly flow lines of cement and immersing the stone in water will help detect the several layers that make it up.

Aquamarine glass is a term that is used for light blue to medium blue glass that may or may not include beryl as a constituent.

Aquamarine has also been used to describe the sea, the skies, some General Motors cars, or other pale to medium blue objects.

Old World sources of aquamarine include Madagascar, Russia, and Sri Lanka whereas New World sources include Brazil, Colorado, and North Carolina.

Aquamarine crystals are often elongated along the c-axis whereas emerald crystals are often blunted along the c-axis. This creates the effect of the former appearing wand-like or pencil-like whereas the latter may appear barrel-like.

Most gem beryl comes from a very coarse-grained rock that geologists call pegmatite. Pegmatite are formed late in the magmatic history of an igneous terrace and they represent the late stage vocatives that crystallize in hydrothermal deposits. Beryl crystals can often become quite large, some exceeding 25 feet or more in length along the c-axis.

Some aquamarines are chatoyant and can produce a nice eye. Asteriated aquamarines do not appear in any of the sources I have examined.

Most synthetic aquamarines are actually synthetic spinel. Flux-fusion processes yield a glass rather than a crystal when beryl is processed in them although the colors can be retained. Light blue is very difficult to produce in synthetic corundum. Some of the hydrothermal processes that are now available for synthesizing gems may yield decent synthetic aquamarines.

Aqua Aura is a registered trade name that provides an aquamarine substitute. It is produced by an essentially monomolecular thick coating of gold over a quartz crystal or other stone. The gold coating is achieved by vaporizing the gold in bell and allowing the gold to precipitate on the object to be coated. Such

Continued on Page 6

March 4–7—st. Petersburg, Russia. The World of Stones, International Mineral, Fossil & Jewelry Show. St. Isaac Square. Central Exhibition Hall “Manege.” Info.—Natalia Biezinsh, info@gemworld.ru; www.gemworld.ru.

March 5–7—Richmond, IN. Eastern Indiana Gem & Geological Society. Gem & Mineral Show. Wayne Cty. Fairgrounds, 801 N. Salisbury Rd. Info.—John LaMont, 765/647-4503, or 765/647-4894.

March 6-7 Robstown Texas Gulf Coast Gem & Mineral Society 48TH ANNUAL SHOW SAT. 10-6 ** SUN. 10-5 -- JEWELRY-MINERALS-FOSSILS BEADS AND MORE! RICHARD M. BORCHARD REGIONAL FAIR-GROUNDS 1213 TERRY SHAMSIE BLVD, ROBSTOWN TX
Contact Jerrold Simpson, (361) 851-8788
ADMISSION \$5.00 TWO DAY PASS Under 12 FREE WITH ADULT PURCHASE

March 6–7—Newark, DE. 47th Annual Earth Science Gem & Mineral Show. Delaware Technical and Community College, Churchmans Rd., Newark, DE. Info.—Wayne Urion, 302/998-0686 or wurion@aol.com.

March 6–7—Ventura, CA. Ventura Gem & Mineral Society. 48th Annual Gem, Mineral, Lapidary & Fossil Show. Seaside Park (Ventura County Fairgrounds), 10 W. Harbor Blvd. Info.—Andy Anderson, 805/987-0043, vgms_editor@roadrunner.com, www.vgms.org, Kathryn Davis, kathrynsgems@yahoo.com.

March 13–14—Macomb, IL. Geodeland Earth Science Clubs, Inc. 30th Annual Show. Gem Mineral & Fossil Show. Western Illinois University, Student Union Ballroom on Murray St. Info.—Dennis Bomke 217/546-4096, or dbomke@comcast.net, or Jim Travis 309/645-3609, or boatnick@aol.com.

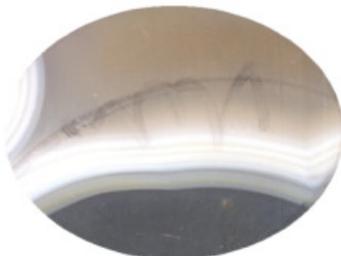
March 13–14—Menasha, WI. Weis Earth Science Museum. Fox Rocks Mineral, Gem, Fossil and Jewelry Show. University of Wisconsin-Fox Valley, 1478 Midway Rd. Info.—Joanne Kluessendorf, 920/832-2925 or joanne.kluessendorf@uwc.edu.

March 13–14—Turlock, CA. Mother Lode Mineral Society Show. Stanislaus County Fairgrounds, 900 N. Broadway. Info.—Bud & Terry McMillin, 209/524-3494, or www.turlockgemshow.com.

March 19–21—Rome, GA. 32nd Annual Valley and Ridge Gem and Mineral Show. The Forum, 2 Government Plz. Info.—Tim Biggart, 706/232.7143, or tbiggart@berry.edu, or Bob Madden, 706/295.3912, or rjmc canoe@aol.com.

April 9–11—Raleigh, NC. Tar Heel Gem & Mineral Club. 34th Annual Capital Area Gem & Mineral Show. Kerr Scott Bldg., NC State Fairgrounds, Blue Ridge Rd. Info.—Kenny Gay, 919/604-2376, or kenny.gay@ncdenr.gov.

April 9–11—Ogden, UT. Golden Spike Gem & Mineral Society, 59th Annual Gemstone Junction, Golden Spike Event Center, Weber County Fairgrounds, 1000 N 1200 W. Info.—Cindy, 801/648-5060, or club@goldenspikegem.org, or www.goldenspikegem.org.



Virtual Cabachons



Aquamarine Continued from Page 4

coatings are used when one is preparing micro- or nanofossils or micro crystals for imaging in a scanning electron microscope.

Because of a fairly low refractive index, aquamarine needs a fairly deep pavilion with angles of about 43° to assure maximum internal reflection. Too shallow a pavilion will cause the stone to appear empty and too deep a pavilion will cause the center to become dark. Best results are often obtained with an emeralds style cut to take advantage of the double refraction and low birefringence.



Aquamarine crystal, length about 3".



Rough and faceted aquamarine.



PomPom Green Moss Agate
Sierra Aguja
South Brewster County Texas



Red Moss Agate
Paso Lajatis
Mexico

General Meeting on 16 February 2010

The General Meeting was called to order at 7:05pm by President Kevin Schleicher.

The Board Meeting Minutes and the January Meeting Minutes were published in the Cabs and Slabs. Bill Patillo made the motion to accept the minutes as published and Jerrold Simpson seconded the motion. The motion was approved. Shanda Hinkle gave the Membership Report and we have 43 regular members, 4 junior members and 8 honoree members. We had one guest, Lance Pate who is a part time teacher at A&M in the Geology Department. He moved down here from Alaska.

There was no Treasure's Report because Gene Schade was not in attendance.

Dick Cline gave the Shop Report by saying the shop is going strong with lots of people being there during operating hours. All three saws have been cleaned and oiled. He has ordered a barrel of oil and it will take about two weeks to arrive. Jerrold Simpson reported he has taught several Cabochon classes with the last one being a family of five.

Mike McCraw gave the Field Trip Report by saying we are planning a February 20th trip to McMullen County to an area that has petrified wood. We will meet at 9am at the Five Points Denny's in the Wal Mart parking lot.

Kyle Hinkle gave the Education Report. We have two scholarship applications that will be reviewed by the board at their next meeting. Jerrold and Linda Simpson will be giving the program today on Fossil ID.

Jerrold Simpson gave the Show Report. We have 29 dealers with most of those having paid in full and those left to pay will do so at the show. Joe Grimes will be doing the floor plan. Donna Grimes has the presale tickets and if you need any, please contact her. The advertising has been done we are on the radio KOUL, TV KRIS at the 6 and 10pm news and in the Newspaper the Caller-Times. On the Thursday before our show at 6:30am on Channel 3 TV, Keith Harman will crack a geode and Bill Patillo will speak about our show that week end. We still need volunteers to help set up, work the show and tear down the show. Sign up sheets were at the rear table.

Linda Simpson turned over the Federation Report to Bill Patillo. Next year the South Central Federation Meeting will be in Louisiana and the American Federation Meeting will be in June at LaHarbor California.

There was no old business.

There was no new business.

Door Prizes were a piece of petrified opal wood, won by Joe Grimes and a cross pendent with a Montana Agate won by Renita Brakin.

Linda Simpson made a motion to adjourn the meeting and Kyle Hinkle seconded it. The meeting was adjourned at 7:24pm.

The auction was held –

Art Worley donated 4 agate slabs which were won by Butch Harris.

Art Worley donated a mixed up rock that was won by Linda Simpson.

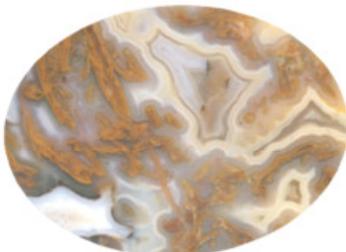
Dick Cline donated a Blue Tiger Eye Pendant that was won by Mark Brakin.

The program was presented by Linda and Jerrold Simpson on Fossil ID. They had three tables with fossils and a hand out sheet of how fossils are formed. Linda gave a brief presentation on the hand out sheet and then each person was given a numbered sheet and had to match the fossil name with the numbered specimens on the tables. It was a lot of fun and most of us were amazed at how much and also how little we knew about the fossils.

Respectfully submitted by:

Suzy Nick

Secretary Gulf Coast Gem & Mineral Society



Virtual Cabacchons



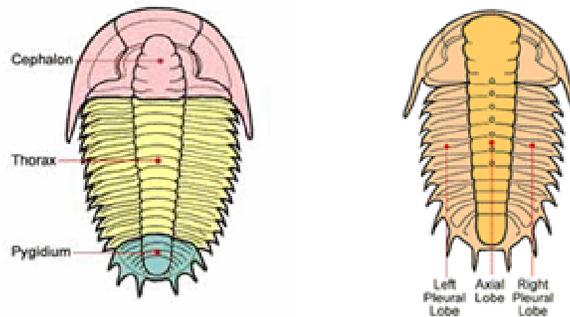
Trilobites

Trilobites, existing today only in fossil form, was an early arthropod. When life exploded into animal form marking the beginning of the Paleozoic, it was this prolific arthropod that became the signpost for the Era. It came into existence approximately 450 million years ago at the beginning of the Paleozoic Era in the Cambrian Period. It flourished in the ancient seas for close to 300 million years. So, what was this ancient arthropod and what about it inspires such fondness among students of all ages? Could it be its unusual body armor that allowed for unique defense mechanisms? Perhaps it's the almost friendly appearance, with its prominent "face." Or is it simply because of its broad diversity among the remnants of a long extinct species? A close look at this ancient creature reveals a certain familiarity, sharing characteristics with modern-day species known to us all.

I've already mentioned that it was one of the first arthropods. Arthropods still exist today, of course; they are those creepy, crawly bugs that invite themselves to our picnics (ants, spiders, mosquitoes, and the like) or the crusty seafood delicacy that occasionally graces our tables. (Take your pick, shrimp, lobster or crayfish: all arthropods!) The trilobite earned its place among the arthropods because it had a hard exoskeleton, a body that had at least a couple of sections, and jointed legs.

It's pretty easy to observe the hard exoskeleton in a trilobite fossil. It's the part that turned to stone! That process is another whole story, but the important part is that in this arthropod, the exoskeleton was so distinctive that paleontologists use the characteristics to help place the trilobites into different groups for classification. More on that a little later... For now, let's look at the segmented body.

There are three easily identifiable sections: the head or cephalon, the thorax, and the pygidium or posterior section. One might suspect the trilobite to be named for these three sections, but it was not. Its name, means three-lobed, referring to the three lobes that run head to tail: an axial lobe through the center and two pleural lobes on either side, left and right. This 3-lobed characteristic is common to all species of trilobite, even though the appearance of the three body sections can vary greatly.



Illustrations by Dr. Sam Gon III

The matter of jointed legs was not as easily determined. The legs were softer than the exoskeleton, even if they were somewhat crunchy, so they didn't tend to preserve well. Luckily, there have been a few specimens found that showed those legs and some antennae, too.² There are only a couple of places on earth (so far) where trilobites were fossilized showing their legs: the Burgess Shale in western Canada and the Chengjiang in China. Something about the circumstances of burial must have been similar for these two distant places to have made such detailed preservations.



**Olinoides serratus preserved in
of Per Hansson**

the Burgess Shale Photo courtesy

Trilobite Fossil Classification A Challenge Based on Shear Numbers

Trilobite fossil classification is challenging based on the sheer numbers of species alone. Saying that trilobites were prolific in their heyday is rather an understatement. Assuming that there are still many undiscovered trilobite species lurking below the surface of our planet, paleobiologists have already organized the class of known trilobites into nine orders, over 150 families, approximately 5000 genera and more than 15,000 species! This widely diverse class of arthropods ranged in size from as small as a millimeter in length to close to 70 centimeters, but size alone is not worthy of creating these sorts of distinctions. There are differences in body shape, exoskeleton texture, the sutures that jointed the exoskeleton plates, and the eyes. The eyes alone have so many variations that one could make an entire study of just that aspect of trilobitism!



With so many variations, trilobite fossil classification is truly a complicated affair. In its most simple form, the trilobites are a class of the phylum Arthropoda of the Animal Kingdom. They are on the same classification level as present-day insects, crustaceans, and arachnids.

Kingdom: Animalia

Phylum: Arthropoda

Class: Trilobita

Separation into particular orders is based, at least in part, upon the size and shape variations of the three body segments: cephalon, thorax and pygidium. Below are two examples of body variation.



agnostus trilobite



redlichiida trilobite

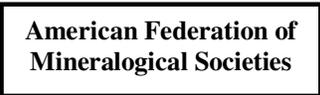
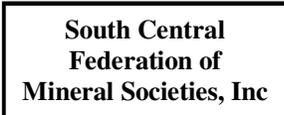
But size and shape alone are not the only considerations for trilobite fossil classification. One order, the Lychidia, takes into consideration the quality of the exoskeleton: granulate (granules on the outer exoskeleton) or tuberculate (tubercles on the outer skeleton.) Then there is the pattern the tubercles makes on the body: rows of two, or single, or random...you get the idea, each of these 15,000 species has some unique identifying characteristic. And for that characteristic to be labeled, in a fossil, no less, there would need to be some pretty close scrutiny taking place!

Surprisingly, the greatest variation and largest numbers of species were present toward the beginning of the geologic time span in which the trilobites lived. Trilobites came into existence approximately 540 million years ago during the Cambrian Period of the Paleozoic Era. These geologic time periods are classified in a similar manner to the classification of trilobites. For an in depth look at this geological classification system, go to our web pages called The Clock of Eras.

<http://www.trilobites.info/>

[A special thanks to Per Hansson for the use of his trilobite pictures. Visit his site for an excellent photo gallery of trilobites arranged by trilobite classification](#)

GULF COAST GEM & MINERAL SOCIETY, INC.
P.O. BOX 1817, CORPUS CHRISTI, TEXAS 78403-1817

MEMBER of					
	Meeting	Held the third Tuesday of each month at 6:30 pm at the museum of Science & History 1900 North Chaparral September through May, and at the Lapidary Shop 3933 Timon Blvd., Corpus Christi TX for June through August.			
	Membership Fees	Individual \$15.00 Couples \$20.00 Junior (under 17) \$5.00			
	2010 Officers	President: Kevin Schleicher Vice President: Kyle Hinkle Past President: Suzy Nick		Secretary: Suzy Nick Treasurer: Gene Schade gene@casadeoro.net	
	Board Appointees	Membership: Sandra Hinkle Education: Owen Hopkins Librarian: Linda Simpson Audit: Gene Schade Show Chair: Jerrold Simpson		Show Publicity: Donna Grimes Shop coordinator: Richard Cline Field Trip Coordinator: Mike McCraw Dealer Chair: Jerrold Simpson	
Standing Committies	Shop coordinator: Richard Cline Field Trip Coordinator: Mike McCraw Federation Liaison: Linda Simpson Historiorn: Frances Marten Librarian Linda Simpson Communications: Suzy Nick Refreshment Hostess; Letty Rodriguez		Bulletin Editor; Art Worley Webmaster: Art Worley E-mail artleew@agates123.com Door Prizes; Gilbert Rodriguez		

Slabs & Cabs
 Art Worley
 2561 Raintree Trail
 Ingleside, TX 78362

Slabs & Cabs Awards
Small Bulletins

2003 4th place




PUBLICATION
 2nd 2002 2001 1st
 2001-4th place AFMS
 2000 9th place SCFMS
 1999-8th place SCFMS
 1999- 9th place (new editor) AFMS

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