



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

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

Art Worley Editor  
361-345-4425  
2561 Raintree Trail  
Ingleside, Texas 78362  
artleew@agates123.com

**Volume 49**

**Number 5**

**May 2010**

**Next Meetings**

Board Meeting  
1 June 2010  
Downtown Library  
6:00 PM– 9:00 PM

General meeting  
18 May 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 Chairlady



**Grey Plume Agate**  
**From The Woodward Ranch**  
**Brewster County Texas**

**INSIDE**

Notices ..... Pg 1  
Board Minutes ..... Pg 2  
Shop Keys & Rules ..... Pg 3  
April. Birthstone ..... Pg 4-6  
Reg Meeting Minutes ..... Pg 5  
Fossil Collecting..... Pg 7-8  
Agate Picture ..... Pg 9  
Info Page .....Pg10

**We are on-line**

[www.gcgms.org](http://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 May Board Meeting of the Gulf Coast Gem & Mineral Society

The meeting was called to order 6:35pm by President Kevin Schliecher on 5/4/10 at the Corpus Christi Main Library. Board members in attendance were Kevin Schliecher, Kyle Hinkle, Art Worley, Mark Walberg, Shanda Hinke, Gene Schade, Jerrold Simpson, Linda Simpson and Suzy Nick. Also attending were members Lois Pattillo and Bill Pattillo.

Membership Report – Shanda Hinkle gave the report and for 2010 we have 71 regular members, 9 junior members and 8 honorary members.

Minutes – Jerrold Simpson moved to approve the April General Meeting as published in the Cabs and Slabs. Mark Walberg seconded the motion. The motion was approved.

Treasurer Report – Gene Schade gave the treasurer's report. There was a discussion on why we give half of the proceeds from the silent auction to the Central South Federation and how the endowment fund is used. Kyle Hinkle moved to approve the report as given and Art Worley seconded the motion. The motion was approved.

Shop Report – Mark Walberg report the shop is doing great and the machines are in great shape. Linda Simpson said there lots of buckets of rocks that were donated by Mr. Holmes that needed to be gone through and sorted. A lot of them can be used for the silent auction. There are still lots of rocks that need to be picked up and brought back to the shop.

Field Trip Report – There was a discussion of why we were asked to leave the ranch where we had collected in the past and had permission to hunt there. There was not a change in the trust but there was a change in the management of the ranch. The new ranch management had hunters and was afraid of an accident while we were hunting for rocks.

Show Report – Jerrold Simpson there is nothing new at this time. We did show a slight profit this year over last year and we still have some presale tickets that have not been paid for yet. He will be sending out contracts for next year soon. The Larson's trailer was stolen last year with all of their show material. They have made the decision that they will only be doing shows closer to their home and will no longer be coming as far as Corpus for shows. We will miss them.

Education – Gene Schade wanted to know about the South Central Federation Scholarship fund and how we can get students to apply for it along with ours. He will contact them for more specific information.

Federation – Linda Simpson said there was nothing new to report.

Old Business – Kyle Hinke said the program for the May meeting will be Owen Hopkins. We are looking forward to his presentation as Owen is always a great speaker with lots of good information.

New Business – We discussed the process for making a member an honorary member.

A motion was made to adjourn by Jerrold Simpson and seconded by Mark Walberg. The meeting was adjourned at 7:55pm.

Respectfully submitted,  
Suzy Nick,  
Secretary GCGMS 2009-2010

**Brazil Agate**

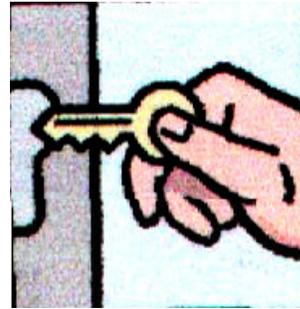


**GCGMS Lapidary Shop Rules**

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

**Any Articles, Minutes are other items not received by Thursday Morning 9:00 am After the Board Meeting. Will Not Be Published in That Months Newsletter The Editor**

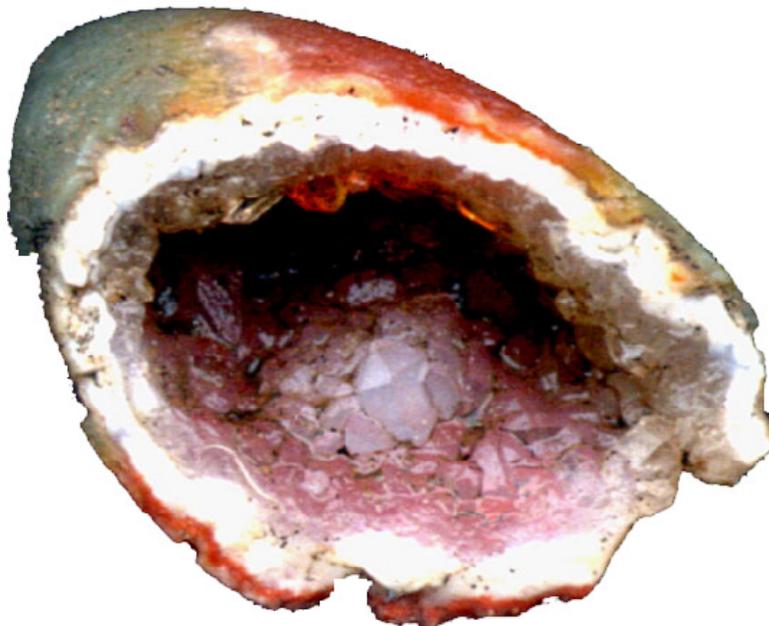


Those with keys to the Lapidary Shop are

Mark Walbrink 361-991-2495 Shop Supervisor  
 Jerrold Simpson—361-851-8788  
 Cell - 361-877-3073  
 Hank Swan—361-993-9861/361-857-2405

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.

**Geode**  
**Woodward Ranch**  
**Brewster County Texas**

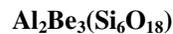


## May Birthstone, Emerald

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

Emerald is used to celebrate the 55<sup>th</sup> Anniversary according to the *World Almanac* and *Book of Facts*. It is probably suitable that such a rare gem as emerald is used for this event as few events or happenings, aside from birthdays, reach this many years. Fine emeralds are probably among the rarest of gems. They are probably rarer than fine diamonds (the 60<sup>th</sup> Anniversary Stone) but diamonds more strongly signify endurance than emeralds.

Emerald is a green to blue green variety of the mineral Beryl, which has a slightly complex chemical formula:



a silicate of Beryllium and Aluminum. Crystals are hexagonal, 7.5 to 8 hard, 2.65 to 2.75 in specific gravity. Emeralds, as all other beryls, can range from being opaque to transparent. Beryl has fairly low optical properties. The refractive index ranges from 1.57 to 1.60 with many gems falling in the 1.572 - 1.580 range. Beryl has a low birefringence and are only weakly doubly refractive. It would take a piece of beryl about 15 inches thick to show a double image. The dispersion of beryl is also quite low (0.014) and emerald, as other beryl gems, has to essentially make it on color and pleasing appearance without the brilliant flashes of light that we associate with diamonds or gems with a very high refractive index or dispersion.

When one is looking at beryl gems, there is really no firm boundary between emeralds with a heavy blue tint or aquamarine with a heavy green tint and there is no firm boundary between the green to blue green of emerald and the green of green beryl. This might have been problematical in years past; however, there are now standardized color sets that are available from Gemological Institute of America that every reputable jeweler should have as a tool of the trade. Emerald owes its color to a small percentage of Chromium Oxide in the crystal lattice---up to 3%. Strangely, this is the same oxide in the same percentage that imparts the red color to ruby when it is in the corundum lattice. In my gemology classes at the University of Nebraska, I utilize a small color set. These are available from GIA and are produced by Pantone. I suggest that the bG 6/4 or the vslbG 6/4 colors are the only two in the set that represent emerald. The vstbG 5/5 is too blue (it would be a superb aquamarine) and the G 5/5 hasn't enough blue (it would be a superb green beryl).

Emeralds are quite rare because of the rather limited geologic environment in which they can occur. Most emeralds form in contact metamorphic rocks---that is, the narrow, baked zone where a hot magma (lava) comes into contact with sedimentary rocks such as limestone or shale. Many emeralds come from contact metamorphosed black shale beds. Black shale is often the thinnest bed that is in a sedimentary rock sequence so there is little potential host rock for starters. Some emeralds form in limestone that has been subjected to contact metamorphism.

Emeralds are usually clouded by many inclusions. The nature of the inclusions is usually indicative of the source of the emerald. Emeralds from Colombia normally have three phase inclusions. These consist of a solid (usually a pyrite crystal), a liquid (salt water?) and a gas (usually CO<sub>2</sub>). Emeralds from India usually have "square," dark inclusions (biotite) whereas those from South Africa have dark needle-like inclusions and those from the Ural Mountains in Russia have actinolite needles that resemble bamboo poles.

In the United States, few emeralds have been found and most have been recovered from near Hidden, North Carolina. A very large emerald that became the subject of a bitter law suit was mined there in the 1980's. The tragi-comic outcome was that one of the miners involved sawed the very fine 14 inch crystal (valued at several millions of dollars) in half and destroyed much of the value of this essentially priceless item. Except for the North Carolina finds, no other state has had any significant emerald production.

Almost all emerald is mined from *in situ* localities or deposits that are very close to the mother lode. This is because the emerald is a very weak stone---it will not endure the abuse and rigor of transportation in streams or in glacial ice. This observation does not rule out micro-emeralds as one of the local collectors recently brought in



Continued on Page 6

**Minutes of the April Regular meeting of the CCGMS**

The General Meeting was called to order at 7:03pm by President Kevin Schleicher.

Kyle Hinkle gave the Membership Report in Shanda Hinkle's absence. We have 69 regular members, 9 junior members and 8 honoree members. No guests were present.

The minutes from the last Board Meeting were published in the Cabs & Slabs. Johnny French made a motion to accept the minutes as published and Lois Pattillo seconded the motion. The motion was approved.

Gene Schade said he E-mailed the Treasure's Report to everyone. We still do not have the final figures for the show but we made slightly more this year. We still have presale ticket money that needs to be paid. Bill Pattillo made a motion to accept the Treasure's Report as E-mail and Kyle Hinkle seconded the motion. The motion was approved.

Mark Wallbrink gave the Shop Report by saying they are repairing the older machines and doing maintenance on the newer ones. The shop has been very busy and at times there is a waiting line to use some of the machines. The shop is open on Saturday from 9am-12pm and on Monday nights from 6pm-9pm.

Mike McCraw gave the Field Trip Report by reporting on the field trip taken two week ends ago and it was a success. They did return early but everyone had nice specimens from the trip.

Kyle Hinkle gave the education report. The program for next month was going to be Owen Hopkins on the geology of South Texas and likely places to go collecting.

Jerrold Simpson said there was nothing new with the show but in a little while we will need to start getting ready for next year's show.

There was no old business.

There was no new business.

Door Prizes were won by Cecil Parker (a bolo tie with agate, donated by Dick Cline) and Fred Mitchell (an agate pin, donated by Dick Cline).

Art Worley made a motion to adjourn the meeting and Bill Pattillo seconded it. The meeting was adjourned at 7:13pm.

The auction was held –

A Vibrating Tumbler donated by Hank Swann was won by Christopher Irving.

Petrified palm broach donated by Dick Cline was won by Earl Schmiedekamp

Triangle agate from the Coconut Ranch in West Texas donated by Dick Cline was won by Suzy Nick

The program was to be presented by Gene Schade on the AGTA meeting in Tucson. However, due to unfortunate technical difficulties he was not able to show the program and it will be presented at a later date. Joe Grimes had a presentation on amethyst that he showed to us instead. It was extremely interesting to see the Amethyst mines and how it looks before it's cleaned up and polished.



**Two Virtual Cabochons  
From The Woodward Ranch  
Brewster County Texas**



Emeralds Continued from Page 4

an example of a micro-emerald crystal that was collected from sand in the Dakota Group of late Cretaceous age in southeastern Nebraska.

Australia has been a fairly important producer of emeralds. Several important sites in New South Wales and Western Australia have been described. Many of the emeralds that have been shown in colored prints are probably closer to green beryl but some fine blue green stones are known.

The low physical and optical properties of emerald make it easy to separate from other gems such as peridot (very strong double refraction); tourmaline (strong double refractions and thready inclusions); tsavorite garnet (singly refractive); and glass (bubbles, swirl marks, etc.).

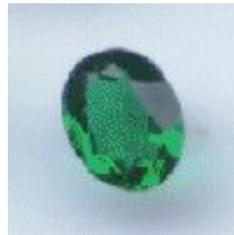
Separating synthetic from natural emeralds is a bit more difficult. There are many would be tests that are non-diagnostic and one has to be careful. Synthetic emeralds are usually produced by some hydrothermal process in which beryl is caused to recrystallize from a saturated, heated melt or solution in a bomb. The synthetic will usually contain tiny crystals of the flux that was used in the solution, or it may contain micro-phenakite crystals or micro-platinum crystals. Inclusions that are wispy or cob-web like also are seen in many synthetic emeralds.

Carroll Chatham, the first person to make synthetic emeralds was only 15 years old when he developed the process.

Chatham had a love for chemistry and did his first experiments with explosives. After destroying his laboratory, his father ordered research of a less violent nature. Other companies have followed and most synthetic stones are now called "created" stones.

#### References

- Bauer, M., 1896. Precious Stones. A popular account of their characters, occurrence, and applications, with an introduction to their determination, for mineralogists, lapidaries, jewellers, etc. Translated by Spencer, L. J., 1904. Reprinted by Charles E. Tuttle Company: Publishers, Rutland, Vermont & Tokyo, Japan, 647 p.
- Myatt, B., (Editor), 1972. Australian and New Zealand Gemstones. Paul Hamlyn Pty. Ltd., Sydney, 511 p.
- Perry, N. & R., 1967. Australian Gemstones in Colour. Charles E. Tuttle, Rutland Vermont and Tokyo, 112 p.
- Schumann, W., 1977. Gemstones of the World. Sterling Publishing Co., New York, 256 p.
- Shipley, R. M., 1971. Dictionary of Gems and Gemology. Gemological Institute of America, Los Angeles, CA, 227 p.
- Sinkankas, J., 1959. Gemstones of North America. Van Nostrand Reinhold Co., New York, 675 p.



## Fossil Collecting Doorway To The Past

Fossil collecting is a way to connect with the past. There's something mysterious and powerful about holding a 400-million-year-old creature in the palm of your hand. We connect to the vast time span of life on earth. We feel its magnitude and the greatness of creation. Our thoughts are inspired and imagination leaps into action.

Folks have countless reasons for fossil collecting:

- a love of modern nature and a desire to know and understand how it came to be
- a love of history
- a love of the Earth and the mystery of its creation
- a desire to inspire a child to learning and to share your passion for geology and earth science.
  - Even wanting a hobby, one that will keep you in good physical shape while exercising your mind, is a great reason for becoming a fossil collector.
  - Plus, **FOSSILS ARE COOL!**

### BEGINNING

It's easy to get started: just keep your eyes open the next time you walk along a dry creek bed or along a washed out ravine. Depending on your location, you might spot the remains of an ancient creature.

Don't want to leave your fossil finding to "Lady Luck?" Pick up a rock-hounding book for your locale. The authors of rock-hounding books let you in on lots of tips for success. They also let you know where you can hunt, how to ask permission of landowners and places to avoid.

Rock-hounding is fun! You can take a picnic and your kids! Make a day of walking and searching, getting to know one another. It's like shell hunting on an ancient sea...one that no longer has the lapping waters, but all the evidence of their presence is left behind.

### Tips

One of the best tips we got from a rock-hounding book had to do with safety. There were helpful reminders of appropriate clothing (especially the part about sturdy walking or climbing boots) and supplies. (Like a first aid kit for scrapes from slipping on the rocks! Nothing serious, but it makes an 'owey' go away faster!)

Don't forget to take your camera! Nothing beats the thrill of the find! You'll want to have at least a few pictures in the field to document the location and the moment



Mosasaur skeleton

Continued on Page 8

Continued from page 7



The Virtual Fossil Museum  
[www.fossilmuseum.net](http://www.fossilmuseum.net)

This is a tooth from the dinosaur *Megalosaurus bucklandi* from the Middle Cretaceous Bathonian Stage deposits of the Taynton Stone, Oxfordshire, United Kingdom. The tooth's fine serrations attest to the meat-eating habits of this dinosaur. *Megalosaurus* was the first dinosaur to be scientifically described. This was by William Buckland and W. D. Conybeare in 1824, making this a significant historical specimen. Originally, only the genus was assigned and some eight years later the species name was given in Buckland's honor.

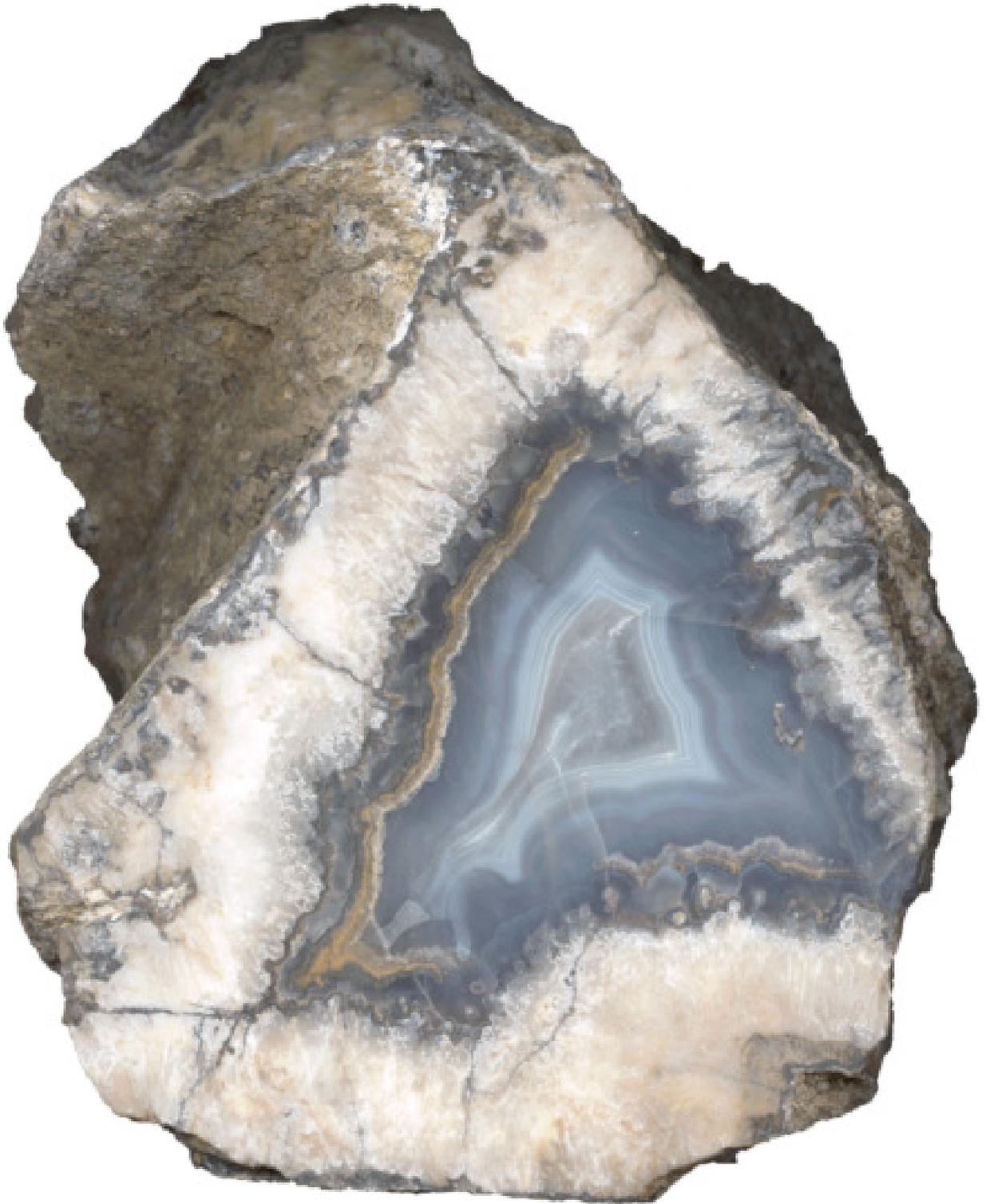
Richard Owen coined the term dinosaur, and recognized that *Megalosaurus* was indeed one of these "fearfully great reptiles" Like most dinosaur teeth found, this one was shed. Dinosaurs continually replaced their teeth so as to keep a sharp set always deployed. This *Megalosaurus* tooth came from a large animal. *Megalosaurus* is believed to have reached a maximum length of some eight meters making it a terror in its domain.



Reference: William Buckland. "Notice on the *Megalosaurus* or great Fossil Lizard of Stonesfield." Transactions of the Geological Society of London, series 2, vol. 1 (1824), pages 390-396.

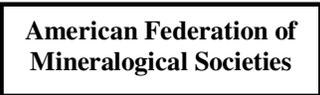
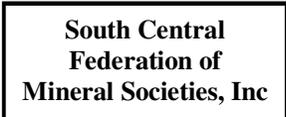


**Virtual Cabochon**  
**From The Woodward Ranch**  
**Brewster County Texas**



**Very Large Agate  
Approximately 6 X 9 in  
From Big Diggins  
South of Deming New Mexico**

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

<b>MEMBER of</b>					
	<b>Meeting</b>	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.			
	<b>Membership Fees</b>	Individual \$15.00 Couples \$20.00 Junior (under 17) \$5.00			
	<b>2010 Officers</b>	President: Kevin Schleicher Vice President: Kyle Hinkle Past President: Suzy Nick		Secretary: Suzy Nick Treasurer: Gene Schade gene@casadeoro.net	
	<b>Board Appointees</b>	Membership: Sandra Hinkle Education: Owen Hopkins Librarian: Linda Simpson Treasurer Gene Schade Show Chair: Jerrold Simpson		Show Publicity: Donna Grimes Shop coordinator: Mark Wolbrink Field Trip Coordinator: Mike McCraw Dealer Chair: Jerrold Simpson	
<b>Standing Committies</b>	Shop coordinator: Mark Wolbrink 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

Permission is granted to use any article in this publication, provided proper credit is given.