



**July 2009
Volume 48
Number 7**

Next Meetings

General meeting
21 July 2009
At the Shop
Timon Blvd
Board Meeting
4 August 2009
Main Library 6:30 PM

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

**P.O. BOX 1817
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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
Dona Grimes, Membership chair lady

**Agate ME Ranch
Brewster County Texas
Agate & Picture By
Art Worley**



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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 June 2009 Board Meeting of the Gulf Coast Gem & Mineral Society

Held 06/02/09 at the Corpus Christi Main Library. The meeting was called to order at 6:45 p.m.

Board members in attendance were Gene Schade, Dick Cline, Suzy Nick, Kevin Schleicher, Jerrold Simpson, Donna Grimes, and Mike McCraw.

Also present was member Joe Grimes

Membership report – Donna Grimes reported there are 118 members on the roster: 84 regular members, 8 honorary members and 22 junior members.

Minutes – Jerrold Simpson moved to approve May regular and board meeting minutes and Suzy Nick seconded. Approved

Treasurer report –Gene Schade gave treasurers report. Jerrold Simpson moved and Kevin Schleicher seconded, Treasurer's report approved.

Shop report – Dick Cline repaired sink, saw blade still bent. Donna Grimes moved and Dick Cline seconded to authorize spending up to \$350.00 for a new slab saw blade. Approved.

Fieldtrip report – Jerrold Simpson reported still looking for a date for trip to Bandera where woman is selling rocks.

Show report –Jerrold Simpson passed out a revised cover letter for show dealers.

Education – Jerrold Simpson moved, Gene Schade seconded, to award scholarship to be presented at September regular meeting.

Federation – Joe Grimes gave report, will attend in Billings, Mo.

Old Business – Bylaws revision-board members will review and bring suggestions to next meeting.

New Business – Linda Simpson has inquired whether non-profits get a discount on postage. It will be investigated.

Motion to adjourn by Jerrold Simpson, second by Suzy Nick, meeting adjourned at 8:25 p.m.

Respectfully submitted,
Kevin Schleicher,
Secretary GCGMS 2008-2009

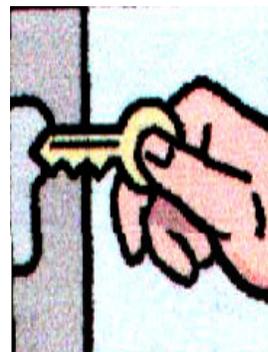
**Australian Agate
Agate & Picture By
Art Worley**



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.

**Agate Big Diggins
New Mexico
Agate & Picture By
Art Worley**

EMERALD Birthstone For July

Emeralds are a variety of the [mineral beryl](#) ($\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$), colored [green](#) by trace amounts of [chromium](#) and sometimes [vanadium](#). Beryl has a [hardness](#) of 7.5 - 8 on the 10 point [Mohs scale of mineral hardness](#). Most emeralds are highly [included](#), so their toughness (resistance to breakage) is classified as generally poor. The word "emerald" comes from [Latin](#) *smaragdus*, via [Greek](#) *smaragdos*, its original source being a [Semitic](#) word *izmar-gad* or the [Sanskrit](#) word, *marakata*, meaning "emerald" or "green"

Properties determining value

Emeralds, like all colored [gemstones](#), are graded using four basic parameters, the four Cs of Connoisseurship; *Color, Cut, Clarity* and *Crystal*. The last C, *crystal* is simply used as a synonym that begins with C for transparency or what [gemologists](#) call *diaphaneity*. Prior to the 20th Century jewelers used the term *water* as in "a gem of the finest water" to express the combination of two qualities, color and crystal. Normally, in the grading of colored gemstones, color is by far the most important criterion. However, in the grading of emerald, crystal is considered a close second. Both are necessary conditions. A fine emerald must possess not only a pure verdant green [hue](#) as described below, but also a high degree of [transparency](#) to be considered a top gem.

Color

Scientifically speaking, color is divided into three components: [hue](#), [saturation](#) and [tone](#). Yellow and blue, the hues found adjacent to green on the spectral color wheel, are the normal secondary hues found in emerald. Emeralds occur in hues ranging from yellowish green to bluish green. The primary hue must, of course, be green. Only gems that are medium to dark in tone are considered emerald. Light toned gems are known by the species name, *green beryl*. In addition, the hue must be bright (vivid). Gray is the normal saturation modifier or mask found in emerald. A grayish green hue is a dull green hue.

Clarity

Emerald tends to have numerous inclusions and surface breaking [fissures](#). Unlike diamond, where the [loupe](#) standard, i.e. 10X magnification, is used to grade clarity, emerald is graded by eye. Thus, if an emerald has no visible [inclusions](#) to the eye (assuming normal visual acuity) it is considered flawless. Stones that lack surface breaking fissures are extremely rare and therefore almost all emeralds are treated, "oiled", to enhance the apparent clarity. Eye-clean stones of a vivid primary green hue (as described above) with no more than 15% of any secondary hue or combination (either blue or yellow) of a medium-dark tone command the highest prices. This relative crystal non-uniformity makes emeralds more likely than other gemstones to be cut into [cabochons](#), rather than faceted shapes.

Treatments

Most emeralds are oiled as part of the post [lapidary](#) process, in order to improve their clarity. [Cedar](#) oil, having a similar [refractive index](#), is often used in this generally accepted practice. Other liquids, including synthetic oils and polymers with refractive indexes close to that of emerald such as *Opticon* are also used. The [U.S. Federal Trade Commission](#) requires the disclosure of this treatment when a treated emerald is sold. The use of oil is traditional and largely accepted by the gem trade. Other treatments, for example the use of green-tinted oil, are not acceptable in the trade. The laboratory community has recently standardized the language for grading the clarity of emeralds. Gems are graded on a four step scale; *none, minor, moderate* and *highly* enhanced. Note

Show Dates

July 2009

17-19 - KENNER, LA: AKS Gem Shows; Pontchartrain Center, 4545 Williams Blvd; Fri 10-6, Sat 10-6, Sun 10-4; Adults \$5; Classes in beading, PMC, Chainmaille, and more; contact Kay Schabilion, (504) 455-6101; e-mail: info@aksshow.com; Website: www.aksshow.com

30-2 - BILLINGS, MT: AFMS/NFMS Show and Convention; Billings GMC; Holiday Inn Trade Center, 5500 Midland Rd; Thu - Sat 10-6, Sun 10-5; Adults \$5 (2 days \$8, 4 days \$15), Under-12 free w/adult; 35+ dealers, jewelry, gems, minerals, fossils, lapidary supplies, demons, edu displays, moon rock, dinosaurs, Yogo sapphires, cave bear, auctions, live& silent, field trips after the show; contact Doug True, (406) 670-0506; e-mail: dtruefossils@yahoo.com; Website: www.amfed.org/nfms/nfmsshow

31-2 - CREEDE, CO: 8th Annual Show; Rare Things; Underground Mining Museum, N. Canyon Rd; Fri 10-5, Sat 10-5, Sun 10-5; Free Admission; gems, minerals, local rocks, jewelry, programs; contact Jenny Inge, PO Box 371, Creede, CO 81130, (719) 658-2376; e-mail: rarethingsgallery@yahoo.com

August 2009

8-9 - BATON ROUGE, LA: Annual Show; Baton Rouge Gem & Mineral Society; Fraternal Order of Police Baton Rouge Lodge Number One, 10777 Greenwell Springs Rd; Adults \$3, Children \$2; Sat 10-6, Sun 10-5; contact Paul Broussard, (225) 687-3864 or (225) 939-3293; e-mail: paul_broussard@msn.com

21-23 - HOT SPRINGS, AR: AKS Gem Shows; Hot Springs Convention Center, 134 Convention Blvd; Fri 10-6, Sat 10-6, Sun 10-4; Adults \$5; classes in beading, PMC, chainmaille, and more; contact Kay Schabilion, (504) 455-6101; e-mail: info@aksshow.com; Website: www.aksshow.com

22-23 - MOUNTAIN HOME, AR: Annual Show; Ozark Earth Science Gem, Mineral & Fossil Club; Cooper Park, 1101 Spring St; Sat 10-6, Sun 10-5; Free Admission; Door Prizes, Mineral and Gem Displays, Interactive Children's Events, Mineral, Fossil, hand-made jewelry; contact Edward Hakesley, 821-1 Alexis Cir, Mountain Home, AR 72653, (870) 424-0956; e-mail: edscamp3@yahoo.com; Website: www.ozarkearthscience.org

September 2009

5-6 ARLINGTON, TX: 51st Annual Show, "Nature's Kaleidoscope"; Arlington Gem & Mineral Club; Arlington Convention Center, 1100 Ballpark Way; Sat 10-6, Sun 10-5; Adults \$6, Seniors & Children \$3; dealers, jewelry, beads, gems, minerals, fossils, Kids' Korner, Rock Food Table, professional gem identification, silent auctions, hourly door prizes; contact Karen Cessna, 1408 Gibbins Rd, Arlington, TX 76011, (817) 277-2286; e-mail: cessnak@ont.com; Website: www.agemclub.org

5-7 - SILVER CITY, NM: 26th Annual Show; Grant County Rolling Stones Gem & Mineral Society; Silver City Recreation Center, 11th St and Gold St; Sat & Sun 10-5, Mon 10-4; Free Admission; 60+ dealers from US, Mexico and Asia, free daily field trips, silent auction, Wheel of Fortune, raffles; contact L. Lett, (575) 538-3216; e-mail: show09@stockmanfamily.net; Website: <http://rollingstonesgms.blogspot.com/>

12-13 - SILOAM SPRINGS, AR: Annual Fall Swap; Northwest Arkansas Gem & Mineral Society; Clubhouse, Hwy 43, just north of Siloam Springs; Sat

that these categories reflect levels of enhancement not *clarity*. A gem graded *none* on the enhancement scale may still exhibit visible inclusions. Laboratories tend to apply these criteria differently. Some gem labs consider the mere presence of oil or polymers to constitute enhancement. Others may ignore traces of oil if the presence of the material does not materially improve the look of the gemstone.

Given that the vast majority of all emeralds are treated as described above, and the fact that two stones that appear to be similar in quality may actually be quite far apart in treatment level, a consumer considering a purchase of an expensive emerald is well advised to insist upon a treatment report from a reputable gemological laboratory. All other factors being equal, a high quality emerald with an enhancement level graded *moderate* should cost 40-50% less than an identical stone graded *none*.

Emerald localities

Emeralds in antiquity were mined by the [Egyptians](#) and in [Austria](#), as well as [Swat](#) in northern [Pakistan](#).

A rare type of emerald known as a [trapiche](#) emerald is occasionally found in the mines of [Colombia](#). A trapiche emerald exhibits a "star" pattern; it has raylike spokes of dark carbon impurities that give the emerald a [six-pointed radial pattern](#). It is named for the *trapiche*, a grinding wheel used to process [sugarcane](#) in the region. Colombian emeralds are generally the most prized due to their transparency and fire. Some of the most rare emeralds come from three main emerald mining areas in Colombia: Muzo, Coscuez, and Chivor. Fine emeralds are also found in other countries, such as [Zambia](#), [Brazil](#), [Zimbabwe](#), [Madagascar](#), [Pakistan](#), [India](#), [Afghanistan](#) and [Russia](#). In the US, emeralds can be found in [Hiddenite, North Carolina](#). In 1998, emeralds were discovered in the [Yukon](#).

Synthetic emerald

Emerald is a rare and valuable gemstone and, as such, it has provided the [incentive](#) for developing synthetic emeralds. Both hydrothermal and *flux-growth* synthetics have been produced, and a method has been developed for producing an emerald overgrowth on colorless beryl. The first commercially successful emerald synthesis process was that of [Carroll Chatham](#). Because Chatham's emeralds do not have any water and contain traces of vanadate, molybdenum and vanadium, a lithium vanadate flux process is probably involved. The other large producer of flux emeralds was [Pierre Gilson Sr.](#), which has been on the market since 1964. Gilson's emeralds are usually grown on natural colorless beryl seeds which become coated on both sides. Growth occurs at the rate of 1 mm per month, a typical seven-month growth run producing emerald crystals of 7 mm of thickness. Gilson sold his production laboratory to a Japanese firm in the 1980s, but production has ceased since, so did Chatham's, after the San Francisco earthquake in 1989.

[Hydrothermal](#) synthetic emeralds have been attributed to [IG Farben](#), Nacken, [Taurus](#), and others, but the first satisfactory commercial product was that of [Johann Lechleitner](#) of [Innsbruck, Austria](#), which appeared on the market in the 1960s. These stones were initially sold under the names "Emerita" and "Symeralds", and they were grown as a thin layer of emerald on top of natural colorless beryl stones. Although not much is known about the original process, it is assumed that Lechleitner emeralds were grown in acid conditions. Later, from 1965 to 1970, the [Linde](#) Division of [Union Carbide](#) produced completely synthetic emeralds by hydrothermal synthesis. According to their patents (US3,567,642 and US3,567,643), acidic conditions are essential to prevent the chromium (which is used as the colorant) from precipitating. Also, it is important that the silicon-containing nutrient be kept away from the other ingredients to prevent nucleation and confine growth to the seed crystals.

Growth occurs by a diffusion-reaction process, assisted by convection. The largest producer of hydrothermal emeralds today is [Tairus](#) in Russia. They have succeeded to synthesize emeralds that have similar chemical composition as emeralds in alkaline deposits in Colombia, hence they are called "Colombian Created Emeralds" or "Tairus Created Emeralds."¹

Luminescence in [ultraviolet light](#) is considered a supplementary test when making a natural vs. synthetic determination, as many, but not all, natural emeralds are inert to [ultraviolet light](#). Many synthetics are also UV inert.

Synthetic emeralds are often referred to as "created", as their chemical and gemological composition is the same as their natural counterparts. The [U.S. Federal Trade Commission](#) (FTC) has very strict regulations as to what can and what cannot be called "synthetic" stone. The FTC says: "§ 23.23(c) It is unfair or deceptive to use the word "laboratory-grown," "laboratory-created," "[manufacturer name]-created," or "synthetic" with the name of any natural stone to describe any industry product unless such industry product has essentially the same optical, physical, and chemical properties as the stone named.

Wispy veil-like inclusions are common in flux-grown synthetic emeralds.

Emerald in different cultures, and emerald lore

Emerald is regarded as the traditional [birthstone](#) for May, as well as the traditional gemstone for the [astrological signs](#) of [Taurus](#), [Cancer](#) and sometimes [Gemini](#). One of the more quaint anecdotes on emeralds was by the 16th-century historian [Brantome](#), who referred to the many impressive emeralds the Spanish under [Cortez](#) had brought back to Europe from Latin America. On one of Cortez's most notable emeralds he had the text engraved *Inter Natos Mulierum non sur-rexit mayor* (Among them borne of woman there hath not arisen a greater Man. XI, 11) which referred to [John the Baptist](#). Brantome considered engraving such a beautiful and simple product of nature sacrilegious and considered this act the cause for Cortez's loss of an extremely precious pearl (to which he dedicated a work *A beautiful and incomparable pearl*) and even for the death of King [Charles IX](#) who died soon after.

In some cultures, the emerald is the traditional gift for the 55th [wedding anniversary](#). It is also used as a 20th and 35th wedding anniversary stone.

The [Authorized King James Version](#) of the [Bible](#), in [Exodus](#) 28:18 and 39:11, lists "emerald" as one of the precious stones in the [breastplate](#) of the [high priest](#) of the Jews; but modern consensus is that this is probably a mistranslation. (See [Hoshen](#).)

[Ireland](#) is often referred to, especially in [America](#), as the "Emerald Isle".

**Agate Big Diggins
New Mexico
Agate & Picture By
Art Worley**



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

MEMBER	American Federation of Mineralogical Societies		South Central Federation of Mineral Societies, Inc	
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			
2009 Officers	President: Suzy Nick Vice President: Mike Mendenhall Past President: Mike McGraw	Secretary: Kevin Schleicher Treasurer: Gene Schade gene@casadeoro.net		
Board Appointees	Membership: Donna Grimes Education: Owen Hopkins Librarian: Linda Simpson Audit: Gene Schade	Show Chair: Jerrold Simpson Shop coordinator: Richard Cline Field Trip Coordinator: Mike McCraw Membership chairperson: Donna Grimes		
Standing Committees	Shop coordinator: Richard Cline Field Trip Coordinator: Mike McCraw Membership chairperson: Donna Grimes Federation Liaison: Bill Pattilo Historiorn: Frances Marten Communications: Suzy Nick Refreshment Hostess: Letty Rodriguez	Dealer Chair: Jerrold Simpson Bulletin Editor: Art Worley Webmaster: Art Worley E-mail artleew@agates123.com Door Prizes: Gilbert Rodriguez		

Slabs & Cabs
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**Slabs & Cabs Awards
Small Bulletins
2003 4th place SCFMS**



**AFMS
TROPHY**



**BULLETIN
AWARD
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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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