



ROCK-N-ROSE



NEWSLETTER OF THE EAST TEXAS GEM & MINERAL SOCIETY

PAGE 1 VOLUME 37 TYLER, TEXAS ISSUE 9 SEPTEMBER 2011

Coming Shows, 2011

Oct. 08 - 09
TEMPLE, TX
Tri-City G&MS
Mayborn Civic Ctr.

Oct. 14 - 16
VICTORIA, TX
Victoria G&MS
Community Ctr.
2905 E. North St.

Oct. 21 - 23
AUSTIN, TX
Austin G&MS
Palmer Event Ctr.

Oct. 22 - 23
DENISON, TX
Texoma Rockhounds
Denison Senior Ctr

Oct. 29 - 30
GLEN ROSE, TX
Paleo. Soc. of Austin
Somervell Expo Ctr.
Hwy 67

PRESIDENT'S MESSAGE

Good meeting this month. Lightly attended but good program by Don Campbell on the Sunnyside Mine in Colorado, as well as information on other mines in the area. Very nice specimens of quartz and rhodonite. I was glad to get back to see folks. I went to California last month for a "long weekend" that turned into a three-week stay due to a death in the family. Really appreciate the support I received from all involved and appreciate Don stepping up and running the meeting. Rockhounds are such great folks to know !!!!

As most you are already aware, the State of Texas is in a budget crunch and had to make a lot of funding cuts to it's various agencies to balance the budget. My employer, UTMB-CMC, was no exception to that and took over a 100 million dollar budget cut for the biennium. We just had another "Reduction in Force" (had one last year) and over 300 folks lost their jobs. My duties have been expanded (more work, same money) but at least I still have a job. I've been working more hours and have to go to other units (some more than three hours away from Tyler), which is making it difficult for me to get to the monthly meeting since I have almost no control over which unit I'm at on any given day. The November meeting is when we usually elect new officers and I think everyone should be thinking about electing a new president this year. I think Becky would do an outstanding job, as she has served as the vice-president this past year and done well at it. I have enjoyed being your president but can no longer perform this function in the manner you all deserve. I intend to remain an active member of the ETGMS and will consider running for an office again in the future (once I retire in 2 - 5 years).

Remember, the October meeting is the auction. Bring something to auction off and bring money to buy something. We usually have a good time and folks pick up some nice specimens and completed items. Hope to see you all there.

Rip Criss

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ANNUAL AUCTION

OCTOBER 3RD

More info on page 2



OCTOBER 3RD MEETING PROGRAM

Our October 3rd. club meeting program will be our annual club auction. We are asking everyone to bring to the meeting donations of rocks, mineral specimens, fossil specimens, lapidary cutting material, finished lapidary items, jewelry, earth science related books, tools, equipment, etc. We will auction off each donation to the highest bidder present at the meeting. This is one of our main fundraisers for the club. So please bring plenty of items to be auctioned off, and plenty of money for bidding.

Call Don Campbell @ 903-520-4085 if you have any questions.



On September 12, 2011 at 6:50, President Rip Criss called the meeting of the East Texas Gem & Mineral Society to order. All present were welcomed and there being no guests or new members, a motion was made by Colleen Hayes and 2nd by Becky Whisenant to adopt the minutes from the previous meeting as mailed. This passed.

There was no treasurer's report nor any old business. Under new business, Don Campbell informed the club that the Discovery Science Place will be holding a docent meeting on September 27th and he asked for any volunteers who might be able to go. Sandy & Bill Robertson volunteered to attend the meeting and represent our club. Thanks, Sandy & Bill.

A flier was read announcing the annual field trip/rock sale at the Harmon's to be held this year on Saturday, Sept 24th beginning at 9:00. A preview sale will be held on Friday afternoon, Sept 23rd, beginning at 3:00 for club members.

A reminder announcement was made about our annual club auction coming up at the next meeting, in October. All members are urged to bring plenty of spending money and items to donate! Next was door prize drawings followed by a break for refreshments.

The program was on the Sunnyside Mine located approximately 8 miles north of Silverton, Colorado. Don explained the historical geology of the San Juan caldera area, including its 'recent' mining history beginning in 1873 when gold was first discovered there. Historical photos, combined with present day photos, including a few of Don with rocks, fish, and modeling a new jacket, made up a very informative and interesting presentation on the mineral deposits and mining operations around the Sunnyside Mine and Lake Emma area. Thanks, Don, for your time and efforts.

Meeting adjourned approximately 8:30.

Minutes submitted by Becky Whisenant



The Goldstone Story

Author unknown

For hundreds of years men everywhere have tried to turn base metals into gold. In Medieval Times monks of a northern Italian monastery were engaged in this task. For many years these monks labored to recover the precious metal in their retorts.

About 1590, after years of effort monks happened to make a very beautiful sparkling material with innumerable gold stars. They failed in making gold but they did succeed in producing a marvelous specimen which they properly named "Goldstone." (In reality it is a glass not a stone.) Goldstone was used for

decorative purposes until, having been suitable for cutting and polishing for jewelry, it was imported into the United States in 1890. The monks called goldstone "adventuring stone," as it was impossible to foretell the success of a mixture for many weeks. To this day due to the lack of modern production methods, a batch can turn out unsuitable for use due to variations in the heating and cooling process. The production of goldstone has been a closely kept secret for the past three centuries. Many have tried to duplicate goldstone.

After the goldstone is removed from the retorts, the bathtub sized masses are broken into convenient sizes and shipped to the major stone cutting centers throughout the world, Germany, Holland, Austria and some to Mexico and Japan. Goldstone has a Mohs hardness of 5.5 (comparable to the hardness of turquoise). It is often carved into jewelry and ornaments such as spheres or sitting Buddhas.

Goldstone will not fade or discolor or lose its beauty over many years, so that it is most suitable for costume jewelry and for specially designed pieces. Variants of the original color have lately come on the market—a rich blue which is supposed to glow in the dark after exposure to bright sunlight; a green, made by a different process which cuts well into flat top gems but has given trouble in high cabochons, and also a black, called sometimes "Midnight Stone." The metallic flecks are copper, but the method of producing them is a secret of the process. The Japanese imitation uses copper fillings but the result is not the same as the Italian material. The aventurine quartz takes its name from the resemblance of the metallic flecks in it to the monks Adventuring Stone."

From The RockCollector
9/11 Adapted from articles
from Michigan Gem
News; VIA Stoney State-
ments 09/11




TOPO MAPS

I have some topo maps for the area around Big Bend, Texas, that I don't need. They are on the southwestern border with Rio Grande. Let me know if anyone wants them. whiznat@netzero.net
Becky Whisenant

Dallas Gem & Mineral Society

54th Annual Show



The Crystal Craze

Saturday, November 19th 10 am-6 pm

Sunday, November 20th 10 am-5 pm

Rodeo Center Exhibit Hall

1800 Rodeo Drive, Mesquite, Texas 75149


(I-635 @ Military Parkway, Exit 4)

Adults: \$8.00 12 & under: \$3.00 3 & under: FREE!

Family of 4 or more: \$20.00 Scouts & Leaders in uniform FREE!

Rocks / Mineral Specimens • Polished / Faceted Gems • Fossils • Lapidary Equipment
Jewelry Supplies • Games & Demonstrations • Fluorescent Display • Prizes & Silent Auction

Photography by Bill Henderson - 2011 © Member of Dallas Gem & Mineral Society





AGATE FORMATION



The mysteries surrounding the formation of agates have long been debated and argued over for thousands of years, as long as they have been collected and fashioned into beautiful Jewelry. It has only been in the last 200 years however that serious investigative attempts have been made to explain their formation. We will not attempt in this page to cover all the detail as you will probably drift off into another world well before getting half way through the explanation!! but we will cover the basics which are interesting and never ceases to

amaze us Agate is chemically a form of micro crystalline quartz called chalcedony. Chalcedony in it's purest form is colorless to pale grey so Agate essentially is an impure form of Chalcedony. The distinguishing features of agate is the colored bands which are caused by natural impurities such as iron (red/brown color) or manganese & cobalt Agates occur mainly in small rounded nodules (lumps) within volcanic rock (lava). The agates essentially just occupied the sites of gas bubbles which formed as the lava cooled over millions of Years research has shown that agates do not form in the final cooling stages of volcanic rocks but only after complete cooling and burial of the flows to a depth of 100 to 200 meters. When this occurs, silica bearing solutions penetrate the lava and fill the bubbles with agate forming material.

Agates are found throughout the world mainly occupying gas cavities in basalt rocks aged between 3,480 million [Pilbara, Western Australia] and 13 million [Yucca Mt] years old. The formation of lava flows and the formation of agates are not contemporaneous or even connected events. Lavas contain gases held under pressure before being erupted on to the earth surface. At the time of eruption as the pressure is reduced the space this gas occupies increases and gas bubbles form. The gases mainly involved include water vapor, carbon dioxide, sulphur dioxide, chlorine and even hydrogen sulphide. Many of these bubbles burst to the surface and the gas is vented but as the outer lava layer cools some of the gas bubbles are trapped. These bubbles are called vesicles when the lava cools and later when filled with celadonite or agate become amygdaloids. Amygdaloidal [from the Latin "amygdula", an almond] lava is so called because the original vesicular lava contained almond-shaped cavities. As well as almond shapes these cavities can be totally misshapen, round, oval, almost flat or most commonly bun shaped. The viscosity of the fluid rock through which the bubble is ascending may determine this shape. Heddle described amygdale shapes as round, rod-shaped, pear- or balloon- shaped, as axe-shaped and even wine bottle shaped.

These subsequently become filled with agate forming materials. Agates can also occur in fissures within the rock called veins, or as long filaments, similar to but more numerous than veins, called stringers. Agates can also form within sedimentary rocks as nodules that are the result of the replacement of a former mineral or some organic material such as coral.

The feature that most agates have in common at least is the region of banded chalcedony. This banding occurs as two distinct and perhaps not connected parts. There are the so-called growth ring bands of chalcedony and those of the colored bands that are the result of the chemical deposition of mainly iron oxides. To the naked eye the width of these second bands may vary randomly in the mm range. However by examining thin sections of agates with the polarising microscope visual banding is resolved into a concentric succession of zones on a micron to sub-micron scale.

An interesting characteristic that is almost universal within agates is a distinct band of "first generation" chalcedony. This band is in immediate wall contact and may vary from 1-2 mm thick. It usually has a distinctly different morphology to the inner layer.



Continued from page 4

The outside of the agate nodule is commonly covered by a soft green mineral called celadonite that is a breakdown product of the lava. This green outer coating is particularly well seen in agates newly removed from the host rock. Occasionally this outer coating can be red, brown or white but all of these thin outer coatings are composed of material from the chlorite group of minerals.

The banded region itself consists of layers made of fine crystalline and untwisted quartz fibers that alternate with layers made of even finer and twisted fibers. This twisting can be seen under the polarizing microscope by a change of birefringence along any one fibre. The fibers can range in thickness up to about 0.5 microns and can be up to a few centimeters in length. The fibrous chalcedony is intergrown with variable amounts of another form of silica called moganite. In agate, moganite cannot be observed by the optical microscope but can easily be detected by powder X-ray diffraction. The presence of moganite, which rarely occurs as a pure mineral has been confirmed by powder X-ray diffraction within agate samples. The moganite: quartz ratio is often not uniform but shows a cyclical pattern that correlates with the observed cathodoluminescence (color and intensity) pattern.

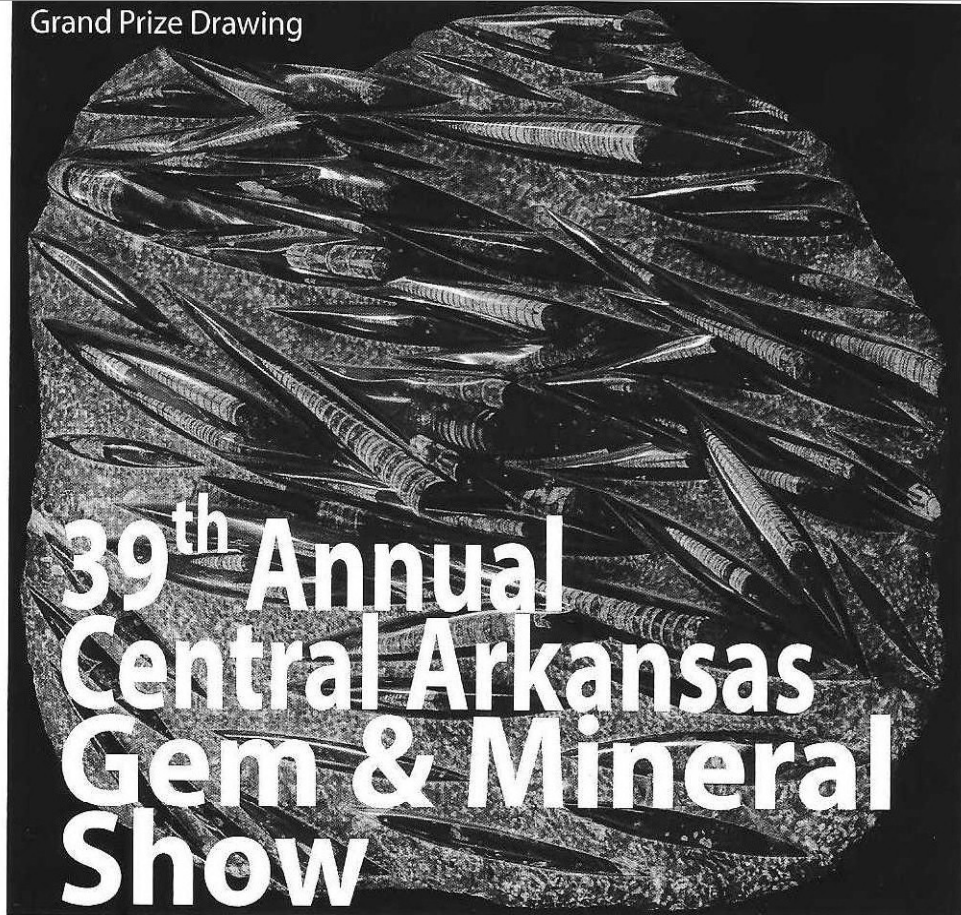
Agate structure can therefore probably be interpreted as alternating formation of fine-grained, highly defective chalcedony inter-grown with moganite, and coarse-grained low defective quartz. It could therefore be hypothesized that cyclical variation in the moganite content must be a general feature that is connected to the mechanism of agate genesis. The coarse visual color banding seen in agates is an independent feature imposed on the compositional zonation by relatively long-term variations in the deposition of pigmenting impurities. Although agates are composed almost entirely of SiO₂ it is the trace quantities of various other elements that give agates their colors and lead to their characteristic banding. Most agates are red and blue, although in reality the "red" will vary from pale pink through orange to pillar-box red, whilst the "blue" will vary from grey-blue to cornflower blue through to almost black. Other rarer colors include yellow and green, or white bands standing out from the background hues. Dark browns, even blacks and combinations of all of the above can produce a whole range of strong to pastel shades, each agate being either subtly or completely different from its neighbor. Almost all of these great varieties of color are due to oxidized iron.

Trace element composition of agates varies widely from location to location but some trends are common to almost all agates of igneous origin. Trace element data are similar for agates from both acidic and basic volcanic hosts. Germanium and Boron are the only elements beside Silicon, which is enriched in almost all agates compared to the Clarke values of the lithosphere (1.4ppm for Germanium, 12ppm for Boron). Unusually high concentrations of uranium are also sometimes detected in agates. Agates contain impurities less than p.p.m. [parts per million] level for most of the elements except Sodium, Potassium and Iron. Nonetheless, even red chalcedony bands often have relatively low concentrations of substitutional Iron, indicating that the color is caused by fine dispersed iron oxides not incorporated into the structure of the fibers. Iron oxides therefore occur in all the colors, which are met in agates including even the rarer green and purple tints. [from the Internet] via stoney Statements 05/10





Grand Prize Drawing



39th Annual Central Arkansas Gem & Mineral Show

October 1-2, 2011

9am-5pm

Jacksonville Community Center

5 Municipal Drive

Jacksonville, Arkansas

(Hwy 67/167 Exit 9 Main Street)

***Minerals - Fossils - Beads
Lapidary Materials - Jewelry***

Sponsored By

Central Arkansas Gem, Mineral & Geology Society

For Information: Lenora 870-255-3679 lenoramur@aol.com



BENCH TIPS BY BRAD SMITH

PICKLE PROBLEMS

Dropping a hot item into the pickle after soldering causes a hiss that sends small droplets of the acid pickle into the air. This will rust your nearby tools and can't be all that good to breathe either. My solution is to use a coffee cup of water next to my solder block to quench the piece before dropping it in the pickle.

Also, a hot pickle pot gives off fumes that bother me in my home workshop. I get around that by using my pickle cold. I mix it a little stronger than with a hot pot so that it works about as quickly. I keep it in a large-mouth peanut butter bottle and cap it off whenever I'm done using it.

MODIFY TOOLS FOR PRONG SETTING

When setting stones in a prong mount avoid slipping by grinding a groove in the face of your prong pusher or one jaw of your flat-nose pliers. Easiest way to cut the slot on the pusher is with a file., and the easiest way to cut the slot on your pliers is with a cutoff wheel in the Foredom.

SOLDERING AN EARRING

Soldering an earring post will always soften the wire a bit. Easiest way to harden it is to grip the end of the post with your flat-jaw pliers and twist it a couple half turns. This works to harden the wire and at the same time tests your soldered join.

More Bench Tips by Brad Smith are at:

Yahoogroups.com/group/BenchTips/

or

Facebook.com/BenchTips/



OTHER TIPS

Unknotting Knotty Chains

A fine chain can be very frustrating when it knots. Put a drop or two of salad oil on a piece of waxed paper. Lay the knot in the puddle and work at it with two straight pins. The knot should come apart quickly.

Snoopy Gems, 7/2010; Canaveral Moonstone 9/2010; via Stoney Statements 09/11

Remove Carbonates

One way to remove carbonates, such as calcite, from quartz and amethyst is to cover the specimen with fresh vinegar and allow it to stand overnight. Repeat if necessary. Wash and then place crystals in washing type ammonia for 8 to 12 hours. Remove, rinse thoroughly, wipe and air dry. Snoopy Gems, 7/2010; Canaveral Moonstone 9/2010; via Stoney Statements 09/11

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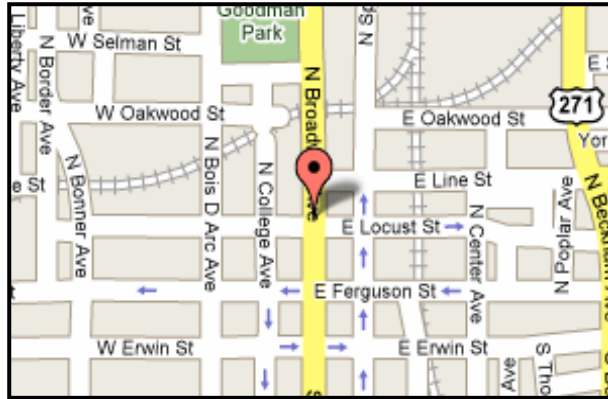
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FIELD TRIP CHAIRMAN: Your name could be HERE!!!
Volunteer Today!

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P. O. BOX 132532
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THE EAST TEXAS GEM AND MINERAL SOCIETY MEETS ON THE FIRST MONDAY OF EACH MONTH, UNLESS THAT DAY IS A HOLIDAY, THEN THE MEETING IS MOVED TO THE SECOND MONDAY. WE MEET AT THE DISCOVERY SCIENCE PLACE, 308 NORTH BROADWAY, JUST NORTH OF DOWNTOWN TYLER, TEXAS. MEETINGS BEGIN AT 6:45 P.M.

NOTE TO EDITORS

Feel free to use contents and graphics for non-profit newsletters. Give credit when and where due.

Purpose of the East Texas Gem & Mineral Society

Is to promote the study of geology, mineralogy, fossils and the lapidary arts. The public is always invited to attend all club meetings.

Annual dues are \$10.00 for adults and \$2.50 for juniors.

Please send any info or articles to be included in the newsletter to the Editor by the 15th of the month. Please keep your address, phone and email information up-to-date, so that we can get the newsletter to you in a timely manner. Out-of-date information costs the club time and money in returned newsletters.

Thank you... SB



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