



ROCK-N-ROSE



NEWSLETTER OF THE EAST TEXAS GEM & MINERAL SOCIETY

PAGE 1 VOLUME 40 TYLER, TEXAS ISSUE 11 NOVEMBER 2014

PRESIDENT'S MESSAGE

Coming Shows, 2014

NOVEMBER 21-22

ENID, OKLAHOMA

Annual show
Enid Gem & Mineral Society
Garfield County Pavilion Bld.
111 W. Purdue

MESQUITE, TEXAS

Annual show
Dallas Gem & Mineral Society
Rodeo Center Exhibit Hall
1800 Rodeo Dr

DECEMBER 5-7

EL PASO, TEXAS

Annual show
El Paso Mineral & Gem Society
El Maida Auditorium
6331 Alabama

Coming Shows, 2015

JANUARY 23-25

TYLER, TEXAS

Annual show

East Texas Gem &

Mineral Society

Rose Garden Center

420 S. Rose Park Dr.

INSIDE THIS ISSUE

2. November Meeting Minutes
3. Ash Grove Quarry Report
4. Petrified Wood
5. Petrified Wood Continued
6. Petrified Wood Continued
7. Bench Tips by Brad Smith
8. Officers and Directions

Well another month has passed, the weather is starting to cool off, and leaves are starting to change. It's time to think about the upcoming holidays and time to start preparing for our Annual Show coming up in January. Show dates are January 23rd, 24th, & 25th, show setup is January 22nd. We will have a pre-show workshop January 10th. I will have the signup sheets at the December meeting for members to sign up to work at the show. Also I will have the signup sheet for those of you that want to fill one of our 15 display cases. If you won't be able to make the meeting, and want to sign up, call or drop me an email.

I am pleased to announce that we finally received a letter from the IRS concerning our 501 (C) (3) application. Contributions to ETGMS are now tax deductible. Our application was approved.

For those of you that missed the November meeting, I had some technical difficulties and could not show the program on the Mayflower Mill. This is a very interesting and education video that I will reschedule at a future date.

I want to thank Becky Whisenant for lining us up the fieldtrip for November. I really enjoyed it, even though I had to leave early. There was that auction a few miles away, and a facet machine calling my name. And wouldn't you know, it came home with me.

I also want to thank those members that have given me suggestions on items that should be included in a new members welcome letter. I think this info will help new members better understand how our club works and what activities are available. Now all I have to do is get it all put together.

The program for the December meeting will be our Christmas Gift Exchange. Some call it a Chinese Gift Exchange or White Elephant Gift Exchange, personally I don't care what you call it. It's my favorite program of the year. Just bring a gift, we suggest a \$10.00 limit, club related (minerals, fossils, lapidary, etc.). And don't forget sweets and finger food. This is the one meeting you don't want to miss.

I have been sending out emails from time to time with information that might be of interest to club members. We try to keep our members list information current and up to date as possible. If you aren't receiving my update emails, please call me so I can eliminate any mistakes or omissions.

Yearly membership dues were due in October, so if you haven't paid your dues please get them in as soon as possible. Kinney Polve

ROCK GARDENING—All I can say is Vicky Polve is one talented gardener. She brought my half alive gem tree, that I started months ago at our lapidary meeting, into full bloom. She completed it and got it potted. Does she have a green thumb or what? Thanks, Kinney Polve





NOVEMBER MEETING MINUTES

The meeting was call to order on November 3, 2014 at 6:55 pm by President Kinney Polve. There was one new member and no visitors.

Minutes were approved as printed in the newsletter. The motion was made by Keith Harmon and seconded by Jack Shull.

Colleen Hayes gave the treasurer's report. An audit was conducted covering the last two years. The accounts were found to be in good order.

Dues were due in October. Please take care of this if you have not already done so.

Door prize tickets were sold four for \$1.

Lapidary Arts Sub Group: Terry Roberts announced that the lapidary arts sub group meeting is Saturday, November 8th. The meeting will be at 2:00 pm at the home of Bill Faulkner. The program will be on making cabs and wire wrapping. Please let Terry know what work you would like to do so that he can have the equipment ready.

Field Trips: Fifteen people attended the trip to the Midlothian Quarry. Several different types of material were found. Everyone had a good time. A volunteer is still needed to be Chairman of the Field Trip Committee. Several members are working on trips that will interest the group. If you have pictures from past field trips please email them to Kinney so they can be used on the club display at the annual gem show.

Newsletter: Susan Burch would like to have your help with the newsletter. You could send her pictures, articles about your work in the hobby, or poetry. Think about how you can help her.

Old Business: The projector that is used to present programs was not projecting clear pictures with accurate colors. Kinney made some adjustments to it and it is now working much better.

New Business: Two outdoor signs are being ordered to replace ones that have been used for a long time. Kinney will send proofs to the board before the order is placed. These are used at the street intersections to direct people to the annual gem show.

Keith suggested that some of the money in the main bank account should be moved so that it can be earning better interest. Kinney will check with Bill Faulkner for information that he gathered. Signatures on the account need to be brought up to date. This will be further discussed at the January Board Meeting.

Sign up sheets for volunteers needed to manage the annual gem show were available. Everyone is needed to help. Please sign up for several time slots.

A show workshop will be held on January 10th. This is a correction to the date. There will not be a workshop on January 3rd.

Minutes Continued...

The December meeting will be a social event. On December 1st bring goodies to snack on and a \$10 gift related to the club's interest. A Chinese Gift Exchange will be the program.

Keith made a motion to close the business meeting. Colleen seconded the motion.

After refreshments and door prizes, Kinney presented a program on setting up a show case. These show cases are a very important part of the annual gem show as it provides the public an example of the work of the club members. It is a good way to interest new members. A video on the Mayflower Mill was shown.

Respectfully submitted,

Carolyn Davis



NOVEMBER LAPIDARY/JEWELRY GROUP MEETING

Eight members of the Lapidary/Jewelry Group met at the home of Bill Faulkner to discuss any topics or questions that they had. Terry Roberts and John Schultz brought some cabs that they had recently completed for the group to admire. Colleen Hayes brought copies of the IRS letter for Kinney Polve, Terry Roberts, and Bill Faulkner that stated the ETGMS has been granted 501(c)(3) status as a public charity. This means that any donations to the club will be tax deductible.

John Schultz brought an article that he clipped out of a lapidary magazine that explained how to cut and polish rainbow obsidian. Bill was able to make one copy of it before his copier ran out of ink. Terry will scan the article into his computer and send it out to the entire Group by e-mail later. Terry then completed a wire wrapping course for two of the Group members while Bill and Kinney worked on the Club's website. Everyone had a good time and learned more about the lapidary and jewelry hobby. The December L/J Group meeting has been cancelled since everyone will be busy preparing for the Christmas holiday season. The January meeting will be held in conjunction with the club's workshop on January 10 at the Bullard Church of Christ meeting hall to work on material to be used in the Club's annual Rock and Gem Show.

Terry Roberts



ASH GROVE CEMENT QUARRY FIELD TRIP By Becky Whisenant

To kick off the month of November in the best possible way, 15 members of the East Texas Gem & Mineral Society rendezvoused at the Ash Grove Cement quarry in Midlothian for a day of digging on Saturday, Nov. 1st. More accurately, there was little digging needed, but some searching and rock bustin' was sufficient.

The day started off cold and windy (and somebody forgot a coat) but warmed up as the day progressed. Company employee Francisco Pinto met us on the parking lot and collected signed forms, pointed out the facilities and led us out to the quarry, wasting no time.

The group consisted of Kinney, Vicki & David Polve, Pete Keiser, Colleen Hayes, Jack Shull, Fred Mahaffey, Scotty & Teresa Johnson, Becky Whisenant and Traci Sawyer with four junior members in tow: Avery, Aliyah, Kolton and Jaden.

Lots of shark teeth were collected with Jack taking the prize for the prettiest. Everyone collected rocks with pyrite clusters on the outside and at least one small ammonite was found. All kinds of septarian chunks were found with bright yellow to chocolatey brown calcite lining and cavities. Towards the end of the day, someone pulled out a 10 pound hammer and got busy, exposing beautiful clean dogtooth calcite crystals and even a few large, translucent blades.

Fred, Becky & Pete collected a few pyrite "balls" of tightly clustered crystals on the surface near the parking area, some deep red in color. At the end of the day, when there was not enough time to carefully rescue it from the matrix, some crazy rockhound (Becky?) stumbled upon a 9" fish fossil, embedded in a rock sadly too large to get in the back of a truck. Oh, well, gotta' leave something for the next guy. A big thank you to the Ash Grove Cement company for allowing our club access to the limestone quarry.



Jack Shull looking for sharks teeth



Best find of the day, Jack Shull found a complete shark tooth



At right, Concretion with pyrite. All photos on this page by Colleen Hayes.



HEXAGONAL FRACTURING IN SOUTH TEXAS PETRIFIED WOOD By Scott Singleton

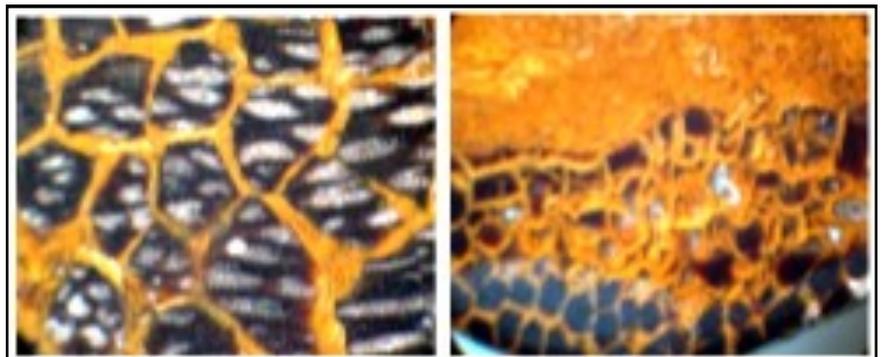
Karnes County, Live Oak County, and surrounding areas are popular petrified wood hunting grounds because the late Eocene to Oligocene sediments have undergone extensive primary and secondary mineralization, producing wonderfully colored and patterned specimens. In fact, this same mineralization is responsible for the leaching and subsequent concentration of uranium at the unconformity between the uppermost Jackson Group (Eocene) and the Oligocene Catahoula Formation. Because of the importance of uranium mining, the geology of this area has received considerable attention in the literature. Alan Cherepon of the Austin G&MS has written a great summary of this from a collector's point of view (Cherepon, 1996). Some of the petrified wood specimens from this area are truly outstanding. These specimens have superb patterning and wonderful color contrasts (Figures 1 and 2). Because of these attributes, this specific type of fossil replacement makes truly wonderful cutting material and is highly desired among lapidaries. Although it may not be visible in the reduced figures in this article, the specimens in both Figures 1 and 2 show clear indication of palm vascular bundles (i.e. "straw") in the center portions of the specimens. This clearly identifies them as *Palmoxylon*. In Figure 1, the hexagonal patterning is only present in the outer portions of the specimen, but in Figure 2 the hexagonal patterning is present throughout the entire piece. In both specimens, the vascular bundles should be present throughout the trunk of the palm. The reason you cannot see them in the outer portion of either specimen is because extreme silicification in this area has wiped out all of the original plant cell structures, leaving only the secondary mineralization in the hexagonal fractures.

Figure 1: Cut and uncut specimens of hexagonally fractured petrified wood from the George West area in Live Oak County. (Specimen is from the Johnny French Collection). Figure 2: Cut and polished top of a hexagonally fractured specimen of petrified wood from the Choke Canyon area in Live Oak / McMullen counties. (Specimen is from the Robert Herring Collection).



This can be observed easily by viewing a cut section of this material with a hand lens. Look closely at the polygonal patterning and note how it interacts with the features we know to be fossil cell structures (in this case palm vascular bundles). You will see fairly easily that the polygonal patterning sometimes intersects with cell structures. When this happens, the cell structure is cleanly split into two parts and each part is located in adjacent polygons (Figure 3). This cannot be the result of original growth, but instead must be the result of subsequent mineralization after the plant was fossilized.

*Figure 3: Microscope image of *Palmoxylon* vascular bundles and hexagonal fractures. Several vascular bundles are cleanly split by the hexagonal fracturing. Magnification is about 20x. Figure 4: Microscope image of a hexagonally fractured specimen that shows the hexagonal pattern distorting and eventually collapsing in the upper half into a mass of orange agate. Magnification is about 6x.*



Continued on page 5



In actual fact, what has happened is that the previously fossilized specimen was subject to a stress that broke it up into columnar, polygonal sections, somewhat similar to the shape mud cracks take on a dry lake bottom or the shape that basalt columns take after rapid cooling of magma (compare Figure 5 to Figure 6). These fractures were then filled with a golden-colored silica material. You can actually see this in agates from this portion of Texas: They have a characteristic dendritic pattern filled with this same golden material. Careful inspection of many of these hexagonally fractured specimens will reveal portions where the hexagonal structure breaks down. Figure 4 shows the polygonal patterning collapsing into a mass of golden-colored silica. When the original silicified fossil material no longer exists because it is replaced by variously patterned and colored chalcedony silicification, we say that the fossil has been “agatized”.

Figure 5: Devil’s Tower National Monument, Wyoming. Fracture patterns seen in the basalt are known as “columnar jointing” and form when magma is cooled rapidly. Devil’s Tower is an exposed volcanic neck, or “plug”. Figure 6: Weathered exterior of a hexagonally fractured specimen. The hexagonal pattern shows striking similarity to columnar jointed basalt. (From the Robert Herring Collection).



This polygonal patterning is not restricted to Palmoxylon from this portion of Texas. It is common in Palmoxylon because this plant type is common in this area. However, I have observed it in other wood types from this area (Figures 7 and 8). This again demonstrates that this type of patterning is a secondary mineralization feature that is unrelated to the actual fossil material. A common perception among collectors of minerals and fossils in eastern and southern Texas is that the presence of this type of hexagonal fracturing indicates the specimen is a fossil cycad. While these two types of fossils might superficially resemble each other, a more detailed analysis shows that they are unrelated (compare Figures 2 and 9, ref: Singleton, 2006). In actual fact, the only resemblance is that they both have polygonal patterning. Careful observation shows that the differences are numerous:

Figure 7: Microscope image of a fractured specimen from the Karnes County area. Fracture fill is a white chalcedony agate. The wood is a dicot (“hardwood”), although silicification may make species ID unlikely. Magnification is about 6x. Figure 8: Microscope image of a fractured specimen from the Karnes County area. Fracture fill is a clear to white chalcedony agate with an enclosed band of orange agate. The wood is a dicot, but cell structure is unrecognizable due to extreme silicification. Magnification is about 6x.



1. Cycads have rhombohedral patterns verses predominantly hexagonal patterns in the South Texas specimens.
2. Cycads only have the rhombohedral patterns in the armor section, and can only be seen when viewed perpendicular to the exterior (this is because the rhombs are actually leaf traces that grow outward from the center of the trunk, Singleton, 2006), whereas the South Texas specimens may have polygonal patterning throughout the specimen, and these polygonal sections are columnar and oriented approximately parallel to the axis of the

Continued on page 6



Hexagonal Fracturing Continued from page 4

trunk. 3. Microscopically, the interior of the polygons in South Texas specimens consist of original fossil cell structures. The patterns of these cell structures indicate that the original tree type can be any of the species that are normally found in that area. Conversely, the interior of fossil cycads contain only cycad cell structures.

4. The fracture fill in South Texas specimens consists of agate (banded chalcedony). The region between leaf traces in the armor of cycads consists of ramentum (protective scales on the exterior of the trunk that become imbedded between leaf traces as the cycad grows, Singleton, 2006).



Figure 9: Portion of external armor of a Jurassic Cycadeoidea specimen from Patagonia (southern Argentina). Rhombohedral patterning of leaf traces is the most prominent feature.

References: Cherepon, A, 1996, Minerals of the Karnes Uranium District – The Franklin of Texas, abstract, Mineralogical Record, Vol. 27, #1, p. 26. Cherepon, A, 1996, Minerals of the Karnes Uranium District – The Franklin of Texas, <http://www.wma-minelife.com/uranium/papers/karnes.htm>. Singleton, S, 2006, Ancient and Modern Cycads, unpublished document.



CALLING ALL UNPAID MEMBERS

Hi all, if you've not taken the chance to renew your dues, now is the time. December will be the last issue unpaid members will receive. Don't miss out on club news, interesting articles, photos, show dates, etc. The newsletter is one of the information vehicles of the club, and it's never been better. We now offer it in full gorgeous color via email along with the snail mail version in black and white for those of you without email. Send the original or a copy of the registration form below along with your dues to Colleen Hayes at 19849 Highland, Whitehouse, TX 75791.

**EAST TEXAS GEM & MINERAL SOCIETY
MEMBER REGISTRATION FORM**

Name(s): _____ Anniversary _____ Birth Date: _____ Adult: ___ Jr. ___

Address: _____

City: _____ State: _____ Zip: _____

E-mail: _____ Newsletter via e-mail? Y ___ N ___

Special Interest in the hobby: _____ Date Paid: _____

Home Phone: _____ Work Phone or Cell: _____ Dues Paid: \$ _____



BENCH TIPS BY BRAD SMITH

TAKE BETTER PHOTOS-Most digital cameras these days have the ability to take a good picture of your small jewelry items, but set-up is important. There are four major items to control - background, lighting, camera motion and focus control.

Lightly colored papers from an art store make reasonable starter backgrounds. Try experimenting with other products later like glass or colored plastics. Avoid fabrics because the weave can often be distracting at high magnification.

Outside lighting is the easiest. In fact for close-ups, flash never works well. Turn off your camera's flash. Choose a bright but overcast day or a lightly shaded area when the sun is full. For inside use, two gooseneck desk lamps can be used with 75 watt bulbs. Whatever you use, be sure to set the camera to match the type of lighting you use or else the color will be off.

You'll be shooting up close, so turn on the Macro mode. Now at this range, if the camera moves even a little bit during the shot, the picture will be blurry, so it's essential to use a tripod. Used ones are available inexpensively from eBay, yard sales or some camera shops. And even with a tripod, I put the camera on the self-timer mode so that any vibration from when you click the button settles down before the camera takes a picture.

In order to get the largest part of your jewelry in focus, you have to close the lens down to the minimum aperture (highest F-Stop number). This is done by taking the camera off of "Auto" mode and selecting Aperture Priority, usually denoted by "Av" and then setting the aperture to the largest number, which is F-8 on my camera. You'll probably have to get out the book or go back to the store to ask about this, but it's really worth it.

That's it. In recap, here are the camera settings I use:

1. Set the lens to Macro for a close-up shot.
2. Move the camera in close enough for the item to cover at least $\frac{3}{4}$ of the frame.
3. Look for adverse reflections from the jewelry surface.
4. Try to minimize reflections with changes of light position, camera angle or white background paper.
5. Carefully check for any fingerprints or dust that might be on the piece.
6. Make any final tweaks with light and arrangement.
7. Turn the camera's flash off.
8. Select "Av" for aperture priority mode.
9. Set the lens opening to the highest number for max depth of field.
10. Set the lighting to match what you're using (daylight, overcast, light bulb, fluorescent, etc).
11. Set the timer to delayed shooting, either 2 seconds or 10 seconds, to avoid camera movement. The delay also gives you time to hold up a piece of white paper to reduce any final reflections.
12. Take the shot.

GIFT FOR THE HOLIDAYS-It's often difficult to find a nice gift for a friend who makes jewelry. The Bench Tips book has earned over 25 Five Star reviews, was ranked Number One in Amazon's Top 100 list for Jewelry, and named by Amazon as one of the Best Books in 2014. Get a copy at www.amazon.com/dp/0988285800/

"Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" on Amazon"

and if you publish as a pdf, I'd appreciate Amazon to be a live link to www.amazon.com/dp/0988285800/



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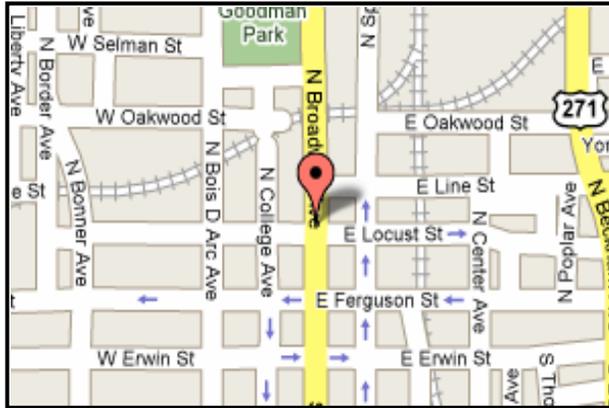
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THE EAST TEXAS GEM AND MINERAL SOCIETY MEETS ON THE FIRST MONDAY OF EACH MONTH, UNLESS THAT DAY IS A HOLIDAY, THEN THE MEETING IS MOVED TO THE SECOND MONDAY. WE MEET AT THE DISCOVERY SCIENCE PLACE, 308 NORTH BROADWAY, JUST NORTH OF DOWNTOWN TYLER,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

Please send any info or articles to be included in the newsletter to the Editor at the address or email listed below 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. If you need an issue dealt with quickly, don't hesitate to call, as that is the best way to reach me. Thank you... Susan Burch

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, \$2.50 for juniors, or \$20 for a Family.



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