

ROCK-N-ROSE

THE EAST TEXAS GEM & MINERAL SOCIETY NEWSLETTER



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VOLUME 44

TYLER, TEXAS

ISSUE 3

MARCH 2018

Upcoming Shows

MARCH 30-APRIL 1

**CHIHUAHUAN DESERT
G&M CLUB
ALPINE CIVIC CENTER
ALPINE, TX**

APRIL 7-8

**NORTHWEST G&M
SOCIETY
SILOME SPRINGS
COMMUNITY BUILDING
SILOME SPRINGS, AR**

**CENTRAL TEXAS G&M
SOCIETY**

**ABILENE CONVENTION
CENTER
ABILENE, TX**

MAY 5-6

**LUBBOCK G&M SOCIETY
SCFMS CONVENTION
LUBBOCK MEMORIAL
CIVIC CENTER
LUBBOCK, TX**

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THE PRESIDENT'S MESSAGE

I would like to say thank you to everyone who has volunteered on all the different projects, it is much appreciated. I want to remind everyone that March 24th is our work day at the clubhouse. Even if you do not have the skills to help build the wall in the front room there are still things you can do to help out. We still need to organize all of the show boxes and inventory the show supplies. I would like to say thank you to Daniel Rhoades for the PA System.

There was a great turnout for our March club meeting. Those of you that couldn't make it you missed an excellent program given by David Russ on "How to Display Your Mineral and Fossil Specimens." It's always good to have someone with a lot of experience in different specimens to learn from their experience. With that being said, we don't have a program scheduled for the April meeting as of yet. If you are willing to present the program, please contact me.

ETGMS is setting up a booth at the Tyler Mini Makers Faire at the Discovery Science Place again this year on April 28th. If you are interested in helping out and working in our booth, contact me, and I will put you on the list. It is always better when we have plenty of help. Let's get enough members signed up so we don't have any problems this year.

Fred Mahaffey

VOLUNTEERS ARE NEEDED!

We are in need of some volunteers to help with Friday School Day for next year's show. I have noticed that there are a few of our members who would be perfect for the job. They're very knowledgeable in the home school area, but I would rather they volunteer on their own. The task will involve working with Carolyn Davis and other members making contacts and scheduling children for next year's show. You will be working as a group on this task. She would like to meet in June at the clubhouse and discuss the best ways to accomplish this goal. To keep from overloading and overwhelming any of our members, I suggest several members volunteer. Call Carolyn Davis at (214) 212-0421 if you think you can help out or if you would like more information.

MARCH MEETING MINUTES

The East Texas Gem & Mineral Society met for its monthly meeting on March 5, 2018. The meeting was called to order at 6:55. We had one new member present. Fred Mahaffey, President and Colleen Hayes, Treasurer were absent. Kinney Polve made a motion to approve the minutes as written in the Newsletter and Gene Goar seconded. The motion carried. Terry Roberts, Vice-President read the Treasurer's report. There were two items for the silent auction and many door prizes.

ANNOUNCEMENTS:

- Lapidary group (Terry) – The next meeting will be March 10 at 2 PM. Bring your current projects and questions. There will be examples of cabbing materials.
- Field Trip (Terry) – We will be going to Mason, Texas in search of topaz and Indian artifacts. There will also be a geology professor along to explain the geology of the area.
- Mineral group (Amy Long) – The next meeting will be March 13 at 6 PM. Amy will show her new Rainbow Sunstone and Charles Creekmur will be bringing his UV light.
- Fossil group (David Russ) – The Dallas Mineral group will be going to a location near Jacksboro. He will be offering classes on various subjects like the North Sulphur River.
- Newsletter – (Kinney Polve) - He requested that we send in articles and would like to see some educational articles.
- Web Master – Holly Ingram has taken this position. Give her things you think are appropriate.
- Program – David Russ will be speaking on fossils and mineral formation.
- Please donate items that will be useful to the Clubhouse. We need 3 clocks. As for shelving, Kinney prefers Baker's racks.
- The partition wall is to be constructed in the front room to the right on March 24 beginning at 8AM.
- Carolyn Davis spoke on the Earth Science scholarship.
- Maker's Faire – April 28 at the Discovery Science Place

NEW BUSINESS:

- AFMS Scholarship – Carolyn Davis made a motion to send \$500. Alicia Carpenter seconded. The motion carried.

Amy Long made a motion to adjourn the business meeting. Karen Nance seconded and the motion carried. We proceeded to door prizes, refreshments, and visiting prior to the program.

Submitted by
Julia Toombs, Secretary



Marcia Graham made this custom quilt for the clubhouse.

A ROCKHOUND'S TREASURE

BY: FRED MAHAFFEY

I WENT ON A SEARCH
 I TRAVELED HERE, I TRAVELED THERE, I TRAVELED EVERYWHERE,
 I TOOK A WALK, I TOOK A BIKE, I EVEN TOOK A HIKE,
 AND THEN I SAW IT LYING ON THE GROUND,
 I PICKED IT UP AND TURNED IT AROUND,
 WAS IT BRIGHT, OR WAS IT SHINY
 OR WAS IT GREEN, OR WAS IT BLUE?
 I WISH I REALLY KNEW!
 AS IT CHANGED COLOR IN THE LIGHT,
 TURNED OUT IT WAS ONLY CHALCOPYRITE.
 A COPPER ORE IT MAY BE,
 BUT FOR ME IT WAS A TREASURE FOR ALL TO SEE.

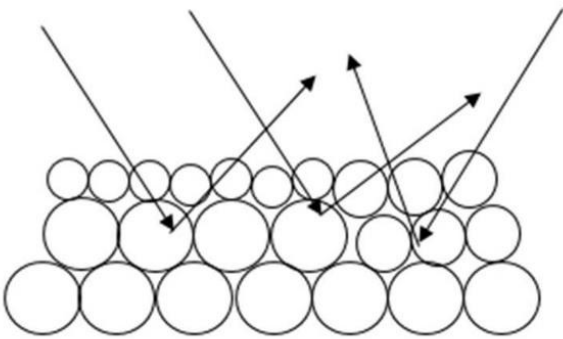
March/April

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	12	13 Mineral Group Meeting 6:30 PM	14	15	16	17 Field Trip
18	19 Fossil Group Meeting 6:30 PM	20	21	22	23	24 Clubhouse Workday
25	26	27	28	29	30	31 Field Trip
April 1	2 Monthly Meeting 6:45 PM	3	4	5	6	7
8	9	10 Mineral Group Meeting 6:30 PM	11	12	13	14 Lapidary Meeting 2:00 PM



Just a few of the many precious opals on the market today.

Light goes in and color comes out.



The illustration shows the orderly arrangement of spheres in the precious opal.

area and the water evaporates, gradual forming layer upon layer of microscopic silica spheres. The spheres form by silica bonding to other particles which form around it. These spheres are arranged in an orderly arrangement. The spheres of range in size from 1500 to 3500 angstroms (1 angstrom is .0000001 millimeter). Small spheres produce the blue color only, this is the most common. The largest spheres in an opal produce the red or orange colors, with red being the rarest color. All the other colors are produced by spheres in between these sizes. There are tiny gaps left between these spheres that a water and silica solution remain. The spheres in gem quality opal are uniform in size and are stacked in a very orderly arrangement (as shown in the diagram). The microscopic spheres and gaps are what causes the opal's color.

White light (or light) is composed of wavelengths, easily seen when separated using a prism. The light waves enter an opal and are refracted and bounce around inside the opal. When they passing through all the microscopic spheres and the gaps, the light is diffracted, the same as with a prism. The white light is split into different colors of the spectrum, and it is eventually refracted back out the top of the opal. These beautiful colors are what you see, and this is what causes the colors to move around as the opal is moved and the light angle is changed. The color play in opal can be observed; when the stone is moved, when the light source is moved or when the angle is changed.

PRECIOUS OPAL

By Kinney Polve

Have you often wondered why those beautiful colors jump around and change colors in a Precious Opal? I will try to give you a better understanding. Opal is a hydrous silicon dioxide ($\text{SiO}_2 \cdot n\text{H}_2\text{O}$), is amorphous, with no crystalline structure and no definite chemical composition. It is also a common material that is found in many locations throughout the world, but most is common opal, also known as potch opal. Its milky or pearl luster is called opalescence. Less common is Precious Opal, which produces beautiful flashes of color when moved around in the light. All the colors of the rainbow can be found in Precious Opal. With patterns of red, green, blue, yellow, purple, aqua, orange, or any other color you might imagine. The movement of color across the face of a stone is known as color play (play of color or flash). The color is caused by the diffraction of light. This is similar to a prism, which can diffract white light and produce a rainbow effect. An opal diffracts the white light which is coming into it, causing amazing colors, and will be discussed in depth later. This is caused by the microscopic structure of opals.

Let us take a minute to understand how opals are formed from a silica solution. The silica solution forms when water, combined with an acid, seeps through a silica rich material. The acidic water dissolves the silica, creating a silica rich solution. There is also a belief that the presence of aluminum oxide, ferric oxide or magnesium oxide; and the presence of sodium chloride or sodium sulphate is also need; irobes may even be involved in the process. This solution is deposited in voids and crevices, in layers inside the earth, and the opal begins to form. This process takes a long period of time. The solution settles into the



A Precious Opal triplet pendant made by the author.

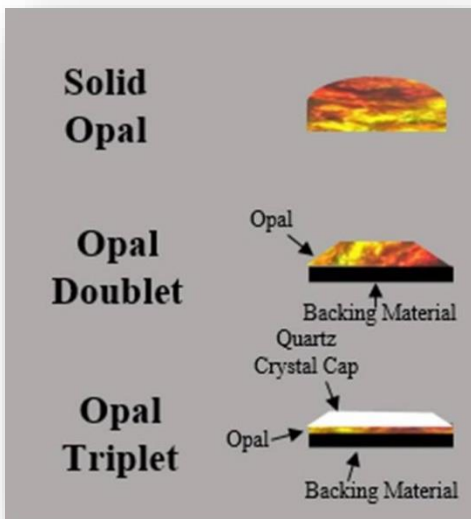


Illustration of some of the methods used to finish opals.

Some colors are rarer than others. Starting with blue being the most common, then green, yellow, orange, with red being the least common. Opals displaying red can also display all the other colors of the spectrum. For this reason, the presence of red in an opal can greatly add to its value, since it is the least common.

Top quality opals are spectacular gemstones and will demand a higher price. A quality opal can flash every color of the spectrum with the intensity and quality of color that can rival other expensive gemstones. Opal is a very popular and beautiful stone for earrings, pendants, brooches and rings, but it is softer than most other gemstones. Opal has a hardness of about 5.5 to 6.0 on the Mohs hardness scale. Because of softness, opal works best in earrings, brooches and other jewelry that rarely encounter scuffs and impacts. If it is used in a ring, it should have a bezel that doesn't expose the stone to damage.

Precious opal is rare and is found in a limited number of locations worldwide. About 90% of the precious opal is mined in Australia. The rest comes from other sources, such as the United States, Mexico, Brazil, Canada, Honduras, Indonesia, Zambia, Guatemala, Poland, Peru, New Zealand and Ethiopia.

There are three main aspects to determining the quality of an opal. The first is color, the background color and color play, this is the most important aspect. The second would be the pattern, the arrangement of the color play. And third is clarity, how transparent and how many inclusions there are. Let me clarify a little more on each of these aspects. The strength of the color play is very important, as well as the range of colors. If an opal's color play is bright, and also a wild range across the entire spectrum, it is rare and valuable. How much surface area of the opal containing color flash is also a major factor. Not every precious opal sparkles with every color of the spectrum. Some opals contain only one main color and two or more secondary colors. Some colors are more desirable. Traditionally red is considered the best color, then orange, followed by green, but in the end, it comes down to personal preference. The pattern that the color takes is also important. It can take many different forms. Some common terms used to describe color play are; pinfire, mosaic, flame and peacock. Clarity is also important. A dead spot in an area of the opal, which no color play is seen, detracts from opal's value. The clarity can range all the way from completely transparent to opaque. There are different levels of clarity for different opal types, but a cloudy or milky background color lowers the value of any opal. Inclusions, such as fractures, fragments of the host rock,

pits, crazing and other blemishes will decrease the value.

The lapidary artisan considers color, pattern, and clarity before planning cutting the rough opal. As with many expensive stones, exceptional opals may not be cut to standard sizes and shapes. The rough will be cut to maximize the size, and to best capture the play of color in the piece, but the color is more important than the size. Because of this, most of the spectacular opals are cut in irregular shapes, to minimize waste. Calibrated cabochons are usually cut from less expensive white opal. The method for cutting would also be a determining factor. Opals are cut for gemstones using four different methods. In the first method, the entire cabochon or faceted stone is cut from a single piece of rough.

Continued on Page 6.

Some opal rough has a thinner but fantastic color play layer. The lapidary artisan will cut the rough down to the color layer and epoxy it to a backing plate, consisting of a slab of Jet or some other material, then cut a finished cabochon. This is referred to as an opal doublet. Some opals have very thin, but spectacular layers of color play, or may have inadequate hardness. To make the opal more durable, and to protect the soft opal from scratches and impacts, a thin slab of opal will be epoxied to a backing plate and capped with quartz crystal epoxied to the top. Then it would be finish into a cabochon. This three-part cabochon is known as an opal triplet. You can see examples in the diagram on page 4. The fourth method is inlay. The inlay method allows the artisan to use small pieces that would not be large enough for the first three methods. In this method, a border is first built, then the small pieces are precisely cut to fit the border. Once all the pieces are cut, they are inserted in the border using epoxy resin.

Safety is always an important facture to consider before cutting any stone, because opal contains silica, and silica is known to cause problems in the lungs. Always use plenty of water when cutting any opal to avoid silica dust. I recommend never cutting any stone dry. I hope this has given you a better understanding of the beautiful and mysterious color found in this wonderful material.

FOSSIL GROUP

We had a good turnout for the fossil group tonight with twelve members attending. Gene Goar, Charles Creekmur, Darby Spears, Robert Secrest and I brought specimens for viewing and discussion. Members were polled regarding individual interests.

The usefulness of geological and topographic maps in locating collecting sites was pointed out. Members were encouraged to start using online resources to build their own geology libraries. Members were very attentive and provided feedback that created great interaction. Our next meeting will again be the third Monday of the month (March 19th). The topic for the meeting is on how to display minerals and fossils safely and correctly. I am looking forward to this being a great group. David Russ - dbruss50@gmail.com



INDIAN PENNY

At the last meeting there was a door prize that was a Dolomite Pseudomorph after Aragonite Cyclic Twins, also known as an "Indian Penny." I was asked what it was, but its name escaped me at the time.

Kinney Polve

LAPIDARY GROUP

Twelve members of the Lapidary/Jewelry Group attended the March meeting at the new ETGMS clubhouse. New member, Larry Shoemaker, brought examples of rocks he collected while living in Oregon for the members to sort through and take home with them, including some nice Gary Green slabs. Richard Armstrong, Gene Goar and Elsa Jerger also brought some nice cabs, gems and wire-wrap pendants to show the group.

For the main presentation, Terry Roberts brought two buckets of rocks and slabs to show the group some examples of rocks that are most commonly slabbed, cabbed and polished for various uses. He also showed them two articles from club newsletters that offered guidelines for achieving the best polish for many different types of rocks, using different polishing pads and polishing compounds. He also brought some slabs for the group to sort through and take home with them.

At the end of the meeting, Marcia Graham presented a beautiful quilt that she made for the club to hang on a wall in the clubhouse (see photo on page 2). The quilt had a rockhound theme and will make a wonderful decoration on the clubhouse wall.

The next L/J Group meeting will be at 2:00 PM on Saturday, April 14 at the ETGMS clubhouse.

Terry Roberts - terry.roberts45@yahoo.com



If the Boot Fits

By Becky Whisenant

We are the sum of our experiences -- both intentional and accidental, even catastrophic. Lying on my belly stretching off a rock ledge underneath the fence at Dead Horse Point, feet held by my friend, I once snatched an elusive rock that I no longer have 40+ years later. No matter. I can still feel the dry, hot wind of the Canyonlands, the gritty rasp of sandstone and the tension in my friend's grip. I still feel the thrilling fear, not just of falling, but of my parents' discovery, both these concerns overruled by the elation of stepping out of sanity for a moment to meet with the expanse, the terra firma.

If people were color coded according to intensity and strangeness, I would be found on the periphery of the spectrum. But I suspect there would be familiar faces there to keep me company, friends most often met at gem and mineral events.

At club meetings, there are smiles and conversations, exchanges, plans made, all the usual social niceties. But beneath the surface of many of us lies that wacky, out-of-the-box mentality which just may lead us to find ourselves in similar situations like the adventure above.

Hopeless rock hounds, by their very nature, go beyond the pale, or actually, beyond the pail, to the edge, so to speak, time after time. And though the prize, the specimen retrieved, may have long since been lost, given away, misplaced or passed on, the lasting effect is the same.

It is the process, the adventure, the journey, that makes our life rich, that feeds the attitude and pushes us a little further down that color spectrum.

But, hey, we're in good company. When our physical worlds shrink to one abode, in our minds we can still step out on that ledge or down that mine shaft or scramble over the tailings one more time.

ROCK HUNTING HEADQUARTERS

SECOND FIELD TRIP FOR MARCH

In search of Selenite clusters... The February field trip is rescheduled for March 31, 2018 at 9:00 AM. We will meet at McCoy's Building Supply, Hwy 79 at Loop 256 South, Palestine, TX. The group will caravan approximately fourteen miles to dig destination from meeting point. The terrain is sloped but not too difficult to climb. You will want a small shovel, wide brush, spray water bottle, newspaper and box. When we finish, we will proceed approximately five miles to the Trinity River for Indian artifacts. There is a steep slope to climb down/up to the river bed, where the finds most likely are. You will need a bag to carry specimens. When we finish, we will proceed to El Toro Mexican Restaurant for a late lunch. Be sure to wear good shoes and bring plenty of water. If you have questions, contact Kelly Ford - kellyjeanford@gmail.com.

The photo to the right was taken by Kelly Ford on the 2017 field trip to this location.



Addiction

By Kinney Polve

There once was a rockhound near Tyler.

He was more than just a rock piler.

He joined the local club,
to do what he loved.

Now he doesn't tumble rocks in his dryer.

ADVERTISING WORKS

This could be your ad, and you
could be helping ETGMS.

Yearly rates are available on
request. Monthly rates are:

\$25.00 for a 3.5" X 4"

\$12.50 for a 3.5" X 2"

Contact the Editor for ad approval or more information.

Cab of the Month



I made three cabs from a slab of Rainbow Obsidian a friend sent me in the mail a while back. I had to wait until Sunday to take a picture of the "best" cab since we haven't seen the sun in a week. While all three cabs showed the rainbow effect to some extent, it was not equally displayed in all three cabs. Thus, the need to select the best cab to show you. Unfortunately, I didn't see the lint on the cab until I viewed it on the computer, but it still shows the rainbow pattern and what appears to me to be a chatoyant-like effect somewhat like a moonstone. Terry Roberts.

It finally stopped raining here for a while, and the temperature rose into the mid-fifties. So I decided I would try to do some capping out in the workshop while the weather was cooperating. I completed three Wendover Plume Agate cabs that I collected last year in the Silver Island Mountains near the Bonneville Salt Flats just north of I-80. I think they look more like Flame Agate, but who am I to argue with the local name?

The only problem is that the sun never came out today, so I had to take the pictures in the house using artificial light. Of course, the picture is not very good due to the light, but you can still see some of the variations in the patterns that can be found in the agate seams in the mountains in Utah. Terry Roberts



The clubhouse workday will be on the 24th of March. We will plan to try to start around 8 AM. I was thinking we could do a potluck for lunch if everyone is interested. We can eat then get back to building the wall. If you would like to help, but don't think you could help with the wall construction, we need volunteers to help organize all of the show stuff and label the contents of the boxes so everything is easy identified. please let me know someone would organizing the potluck. We can start a list of who would like to bring what.

Thanks, Fred Mahaffey



THE ROCK FOOD TABLE HITS THE ROAD

By Kinney Polve

The Rock Food Table took a road trip to Kansas City, Missouri. The Association of Earth Science Clubs of Greater Kansas City requested the exhibit attend their show, so Vicky and I decided to make the trip. So we loaded the truck and made the ten-hour drive to Kansas City. When we arrived to set up the exhibit, everyone seemed to be excited to have it at their show. It had been almost a decade since the last time it attended one of their shows. There were many visitors that had seen the exhibit in the past and were glad to see it return. I can't count the times that I heard, "I saw it on TV and just had to come and see it." I think the phrase I heard the most was, "That's so cool!" We had a great time in Kansas City, and we met a lot of nice rockhounds from all the clubs that are part of the association. Even Reggie Rockhound made a new friend. I thought Vicky was a goner when a dinosaur went to bite her head off. But luckily, it eyed a young tender morsel and spit her out. I think it is a great opportunity for our club to be able to share the exhibit with others and show them an entirely different way to look at rocks.



DON'T MISS KEITH'S BACKYARD ROCK AND EQUIPMENT SALE

CONTACT: KEITH HARMON - 903-316-2967 - keithharmon19@yahoo.com

- WHEN: SATURDAY, APRIL 7, 2018, START AT 9AM
- WHERE: 9116 US Hwy 84 West, Rusk, TX 75785
- WHO: KEITH AND TONI HARMON
- WHAT: OVER 50 TONS OF ROCK OF VARIOUS TYPES – INCLUDING BUT NOT LIMITED TO: agates, jaspers, obsidians, Jade, palm wood, Arizona wood, tumbling rough, large rock, Cutting material. USED EQUIPMENT: SAWS, GRINDERS, POLISHING UNITS VIBRATING LAPS, FLAT LAPS, SPHERE MACHINE, TUMBLERS
- COST: ROCK: FROM \$0.50 TO \$4.00 PER POUND AVERAGE
- EQUIPMENT: INEXPENSIVE FOR WHAT IT IS.
- PLEASE - NO EARLY SALES.

NEWSLETTER CONTENT: Please send any original info or articles to be included in the newsletter to the Editor at the address or email listed below by the 10th of the month. Please keep your address, phone and email 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. AFMS & SCFMS Newsletters will be emailed to members, as to not duplicate that information here, unless it needs to be repeated. Board meeting minutes are not published in the newsletter. If you would like to see a copy, contact an officer on the Board. The information in this newsletter may be reproduced for nonprofit use, as long as credit is given to the source. Thank you, Kinney Polve

Check us out on the web: WWW.ETGMS.COM

THE EAST TEXAS GEM AND MINERAL SOCIETY

Purpose of the East Texas Gem & Mineral Society: Is to promote; the study of Geology, fossils and the Lapidary Arts. The public is always invited to attend regular monthly club meetings.

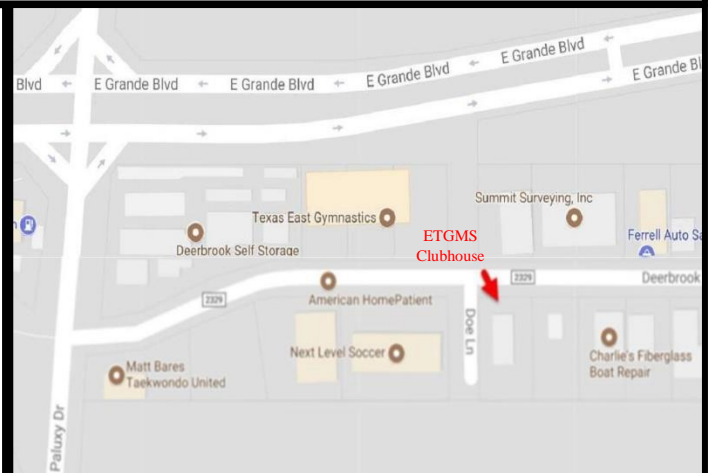
ANNUAL DUES:

Single: \$10.00 - Family: \$20.00

MONTHLY MEETING:

WHEN: First Monday of the month unless it's a holiday, then the second Monday, at 6:45 p.m.

WHERE: ETGMS Clubhouse, 2015 Deerbrook Drive, Tyler, Texas



PRESIDENT: Fred Mahaffey
903-978-0268
frederickmahaffey@gmail.com

VICE PRESIDENT: Terry Roberts
903-881-5108
terry.roberts45@yahoo.com

TREASURER: Colleen Hayes
903-343-2714
chayestx@suddenlink.net

SECRETARY: Julia Toombs
903-882-5809
jtoombs@suddenlink.net

FIELD TRIP
CHAIRMAN: Kelly Ford
903-647-0878
kellyjeanford@gmail.com

CHAIRMAN SHOW: Keith Harmon
903-795-3860
keithharmon19@yahoo.com

WEBMASTER: Holly Ingram
214-794-7736
holly.ingram369@outlook.com

NEWSLETTER
EDITOR: Kinney Polve
903-646-3189
rockrosenewsletter@gmail.com

SHOW SCHOOL DAY
CHAIRPERSON: Carolyn Davis
214-212-0421
emugems0@gmail.com

CLUB ADDRESS AND TO SEND DUES

East Texas Gem & Mineral Society
P. O. BOX 132532
Tyler, TX 75713-2532