



ROCK-N-ROSE



NEWSLETTER OF THE EAST TEXAS GEM & MINERAL SOCIETY

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MARCH 2012

Coming Shows, 2012

Apr. 14 - 15

ABILENE, TX

Central TX G&MS
Abilene Civic Ctr.
North 6th & Pine

Apr 20 - 22

ALPINE, TX

Chihuahuan Desert G&MC
Alpine Civic Center

Apr. 30 - May 01

LUBBOCK, TX

Lubbock G&MS
Lubbock Civic Ctr.

May 26 - 27

FORT WORTH, TX

Ft. Worth G&MS
Will Rogers Mem. Ctr.

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PRESIDENT'S MESSAGE

We had a nice crowd at our March meeting, and several new members were present. Let's all go out of our way to make our new members feel welcome. We are always looking for volunteers to present programs at our monthly meetings. Please consider sharing with the group what you like to do in regards to our hobby. It could be about field collecting, crafting lapidary items, demonstrations, or sharing information about earth science related topics. Also, we need folks to consider organizing and leading field trips to collecting sites within our general area. If you know of any good potential sites, please provide the information and contacts, and we'll try to organize a trip. Recently one of our members, Laura Wilson took the initiative and put together a topaz collecting trip to Mason, Tx. It was a great trip. So we need others to step up and contribute in this area. I'm will to help in any way to make these actives a reality. I'll help members put together a power point program to use at the meeting for a program if you will provide the photos and basic information. One person cannot do all of these things, but working as a team or group we can accomplish much, like we did recently at out Gem & Mineral Show. So thank you all for your help.

Don Campbell





MARCH MEETING MINUTES

Minutes were not available at time of printing



APRIL 2ND MEETING PROGRAM

Will be a slab grinding and polishing demonstration by Don Campbell. He will have a small lapping machine and several small slabs on hand to grind flat and polish. It's been a long time since we had a demonstration program, so it's a good opportunity to come learn how to do something in regards to our hobby.



Amethyst Cathedrals

Bridget Joubert

Do you ever wonder how the fabulous amethyst cathedrals we see at rock shows are formed? Well, let me tell you! On the Brazilian / Uruguay border is a huge lava field that was formed over 130 million years ago. For 11 million years during that time, repeated lava flows overlaid the land and several of those flows contained large amounts of gas. Like bubbles in a soft drink, these bubbles coalesced into larger bubbles and formed big oblong cavities (vugs) in the hardening lava. Now that the "cathedral" was formed, it was ready to start the crystal lining formation. Radioactive analysis showed that they sat empty for 60 million years until 70 millions years ago, when an uplift process tilted the land. The underlying 'Botucatu aquifer' was opened and water flowed out into the lava beds. This silica rich water formed the green 'celadonite rinds' of the cathedrals and filled all of the cathedral vugs. Slowly the quartz crystals began to form within the chambers as the temperature lowered. The mineral composition varied from one area to another and in general, Brazil had less iron / titanium, etc so the amethyst was lighter in color than the Uruguayan amethyst. After the quartz crystals formed, secondary mineralization resulted in hematite, calcite, gypsum, and other crystals developing upon the amethyst points. This specific geological process is seldom repeated so there are no cathedrals of this size seen elsewhere on earth! Mini versions of this are seen in the geodes of various countries, especially in the area of Chihuahua, Mexico. Via Huntin' & Diggin' 3/12.





By the time the newsletter goes out the first trip will be in progress or be past...here is the rest of the info from the January Stoney Statements, not sure if they are opening up to other clubs too, you might give Ed a call if interested:

...I am playing phone tag with the other quarries trying to add one for the afternoon, etc. I may add additional trips just to go to the other quarries. I'll keep you posted.

MSHA rules apply: hard hat, safety glasses, closed toed shoes, long pants. It will probably be cold which is better than being hot!

What to bring: hammer, bucket, packing material for delicate specimens, drink

What to look for: fossils, pyrite, calcite, etc.

The trip is limited to 25 people but if we go over a few I don't think they will notice.

Plan to double up in cars as they do count cars!

Meeting Place: Whataburger in town located at 1320 E Highway 287, Midlothian, TX 76065, 972-775-2323.

Meeting Time: 9AM

If you want to go let me know as soon as possible.

I will offer all unused spots to members of the Texas Rockers.

Thanks, Ed Tindell 2012 CLGMS Field Trip Coordinator a.k.a. "The Official Cat Herder"

Hi All –

Due to the overwhelming response for the 3/24 trip I requested that the rain date of 3/31 be turned into a second trip and that a third trip for 4/7 be added.

I just heard back from TXI and field trips for 3/24, 3/31 and 4/7 from 10AM-12PM are now approved!

I must attend each trip as field trip coordinator and so I can take 24 additional people per trip.

- No children, no pets, no cameras.
- Bring personal protective equipment (PPE): hard hat, closed toed shoes (preferably steel toed), safety glasses, gloves, long pants.
- Bring 5 gallon bucket, geology pick, crack hammer/chisel, packing materials, bags, food/water, sun block.

We will meet at the Whataburger in town as previously announced at 9AM. You will need to sign a waiver.

I am working to get us into the other quarries as well and will keep you posted. Sunday sites are possible.

If you want to go let me know which day(s).

I will allow people to go on multiple trips provided there is room. Let's fill these trips up!



January
Garnet



February
Amethyst



March
Aquamarine



April
Diamond



May
Emerald



June
Pearl



July
Ruby



August
Peridot



September
Sapphire



October
Opal



November
Citrine



December
Topaz

A Brief History of Birthstones

Birthstone is a gift of a precious stone that symbolizes the month of birth in the Gregorian calendar. It is sometimes also called birthday stone.

Traditional Birthstones

Often combined with modern birthstone lists, traditional birthstones are older society-based birthstones. Since many different cultures had their own list, jewelers' lists are often inconsistent over what constitutes a traditional birthstone. The Gregorian calendar has poems matching each month with its birthstone.

These are traditionally the stones in English-

speaking societies. It is not known whether these verses below originally are of the Gregorian calendar or not. In fact Tiffany & Co. published these poems "of unknown author" for the first time in a pamphlet in 1870.

By her who in this month (January) is born
The February-born shall find
No gem save garnets should be worn;
Sincerity and peace of mind,
They will ensure her constancy,
Freedom from passion and from care,
True friendship, and fidelity.
If they an amethyst will wear.
Who in this world of ours their eyes
She who from April dates her years,
In March first open shall be wise,
Diamonds shall wear, lest bitter tears
In days of peril firm and brave,
For vain repentance flow; this stone,
And wear a bloodstone to their grave.
Emblem of innocence, is known.
Who first beholds the light of day
Who comes with summer to this earth,
In spring's sweet flowery month of May
And owes to June her hour of birth,
And wears an emerald all her life
With ring of agate on her hand
Shall be a loved and happy wife.
Can health, wealth, and long life command.
The glowing ruby shall adorn,
Wear a sardonyx or for thee,
Those who in July are born;
No conjugal felicity;
Then they'll be exempt and free
The August-born without this stone,
From love's doubts and anxiety.
Tis said, must live unloved and lone.
A maiden born when September leaves
October's child is born for woe,
Are rustling in September's breeze,
And life's vicissitudes must know,
A sapphire on her brow should bind
But lay an opal on her breast,
Twill cure diseases of the mind.
And hope will lull those woes to rest.
Who first comes to this world below
If cold December gave you birth,
In drear November's fog and snow,
The month of snow and ice and mirth,
Should prize the topaz's amber hue,
Place on your hand a turquoise blue;
Emblem of friends and lovers true.
Success will bless whate'er you do.

Author Unknown



Continued from page 3.

That was satisfactory and the “customer” wrote down a bid and departed. I gave little thought to the exchange until a few days ago (in June), the thought returned, “Exactly what is unakite and how does it form?” Unakite or unakyte, as it originally was spelled, was identified and named in 1874 by Professor Frank H. Bradley, a geologist at East Tennessee University.

He named it from its location in the Unaka Range in the Blue Ridge Physiographic Province which also contains the better-known Great Smoky Mountains and described it in the American Journal of Science as “an epidotic rock...on the borders of Tennessee and North Carolina.” It since has been identified in many places around the world, occurring in metamorphosed granite and in glacial outwash or stream gravel derived from granitic areas. Since it contains both feldspar and quartz, essential minerals which define granite, unakite may be classified as a type of coarse-grained granite. Quartz is a minor constituent in unakite and usually is colorless to gray or bluish-gray. In some Virginia unakite deposits, the feldspar is red to orange. Thomas L. Watson in *Granites of the Southeastern Atlantic States* (U.S.G.S. Bulletin 426) published in 1910 amplified Bradley’s description, noting that “Unakite is composed of nearly equal parts of orthoclase and microcline, a little plagioclase [all feldspars], quartz, a little biotite, zircon, apatite, rutile and magnetite. Secondary minerals are a colorless and a green mica, epidote, chlorite and kaolin.” Biotite, zircon, apatite and magnetite are fairly common accessory minerals in granite. Chlorite often occurs in metamorphic rocks and in igneous rocks where it is formed by the alteration of pyroxenes, amphiboles or biotite. Kaolin (a clay which principally is the mineral kaolinite) is always a secondary product formed by the hydrothermal alteration of aluminum silicates, very often feldspars. Much of the granite in the Unaka region is gneissic; that is, it has been subjected to intense folding with accompanying high pressures, temperatures and injection of super-heated water. The hot water altered any plagioclase feldspar and probably introduced or mobilized a bit of ferrous iron, converting the feldspar to epidote. The iron, a necessary part of epidote, accounts for its green color.

Quartz likely was present in the original granite. John Sinkankas in *Gemstones of North America* identified unakite localities in Page, Madison and Rockbridge counties, Virginia and in Madison and Yancey counties, North Carolina and adjacent Sevier County, Tennessee. It is to be found in glacial drift around the shores of Lake Superior. The writer has found unakite pebbles in river gravel from the Ohio River and Arkansas River and in drainage from mountainous areas in eastern

California. Unakite may be cut into attractive cabochons. The feldspar is 6.0 in Mohs hardness and the epidote ranges from 6.0 to 7.0. Any quartz present is 7.0 in hardness. Proper attention during cutting should be adequate to avoid any tendency of the stone to undercut. Quick and Leiper recommend polishing with cerium oxide on a felt buff. The contrasting pinks and greens make a pretty combination for spring and summer wear.





NEWS ITEMS ~~~ Two recent news items you may find interesting:

Charles Lewton-Brain

Charles Lewton-Brain is one of the most popular writer-innovators in the jewelry/metalworking field. In this video he shares some of the principles that shape his philosophy.

http://www.youtube.com/watch?v=Hq_OTqF3u3k

Gold, Silver & Gemstone Motor

Hans Meevis shows off a miniature, working motor he built from scratch. It's about 60mm tall and contains 50 grams of silver and 12 grams of gold. Major parts of the assembly are cut and faceted from cubic zirconia. Hans and his wife Anne run Meevis Jewelry in Simpson Bay, St Maarten where he creates unique, fine designer jewelry.

<http://ganoksin.com/blog/meevis/2012/02/19/miniature-cz-motor-finished-and-running/>

BenchTips for the Month

DRILLING SMALL ITEMS

Small pieces need to be held securely while drilling or burring to prevent them from spinning if the drill catches. A quick solution is to hold the workpiece with a pair of pliers or your ring clamp. Another alternative is to clamp your piece to the bench pin or a thin board. If using pliers, you can avoid scratches by putting a little tape over the jaws.



DRILLING A STONE



One of the things my students often ask to do is drill a hole through a piece of gemstone. The usual thought is to get a diamond drill, but I've found these often break or burn up. The reason I think is that the drill pivots on the piece of diamond on the drill tip. By pivoting the diamond does not cut. When it doesn't cut, you tend to add more force, and the drill is damaged by excess heat.

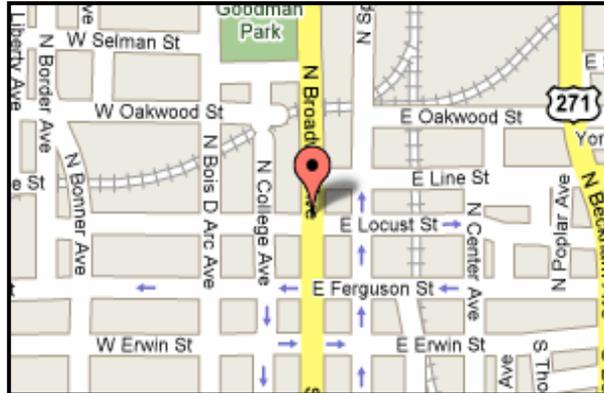
A much better approach is to use a core drill. This is a small hollow tube with a coating of diamond grit at the business end. The diamonds easily carve out a circular arc without undue pressure or heat buildup. Core drills are readily available from lapidary and jewelry supply companies. They come in sizes as small as 1mm and are reasonable in price, for instance \$6 for 2mm diameter.

Chuck up the core drill in a drill press or a Foredom and be sure to keep the drilling zone wet to cool the tool and to flush out debris. Also, if you're drilling a through hole, go very easy on the pressure as the drill is about to break through. Otherwise you will usually chip off some of the stone surface around the hole.

More BenchTips by Brad Smith are at groups.yahoo.com/group/BenchTips/ or facebook.com/BenchTips

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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 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

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.



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