



ROCK -N- ROSE



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VOLUME 33

TYLER, TEXAS

ISSUE 7

JULY 2007

LOCAL SHOWS 2007

**AUGUST 11-12
BATON ROUGE, LA
BATON ROUGE G & M SO.**

**AUGUST 18-19
BOSSIER CITY, LA
ARK-LA-TEX G & M SO.
Bossier City Civic Theater**

**AUGUST 25-26
JASPER, TX
PINE COUNTRY G & M SO
VFW Hall, 7 miles W of
Jasper, FM 2799 & 1747**

FIELD TRIP INFO

Due to the continued summer heat, no field trips are scheduled for the month of August.

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President's Message

New Meeting Location in September!!

Starting with the September 10th meeting (September 3rd is a Holiday), our Club will start meeting at a new location in Tyler. We will meet at the Discovery Science Place, 308 North Broadway, just north of downtown Tyler. The meeting time will still be 6:45 PM.

August 6th will be our last meeting at the UT Tyler Library. Please pass the word about the new location. Maps will be available at the August meeting.

Don gave us an interesting program about the origin of mineral names at the last meeting. I saw a related news article that is unusual so I thought I'd pass it on. Scientists in Serbia have actually discovered Kryptonite. This new mineral discovery has a chemical makeup almost identical to the fictional mineral in the film *Superman Returns*. In the Superman stories, Kryptonite was an alien mineral that would sap the super hero's strength.

In real life, the new mineral is sodium lithium boron silicate hydroxide, a hard white mineral with only five-micron crystals. It was discovered by mining company geologists looking for borates in Serbia. The mineral's chemical formula is the same as the formula listed on a box of Kryptonite stolen by Lex Luther in the Superman movie.

Unfortunately, the new mineral cannot officially be called Kryptonite. There is an element in the periodic table called krypton. According to the rules of the International Mineralogical Association, which governs the naming of new minerals, calling the new mineral Kryptonite would imply it contained krypton. Since it does not contain krypton, it cannot be called Kryptonite. Instead, the mineral has been named jadarite after the area where it was discovered.

So, we all have a new mineral to add to our collections. And Don has a new piece of trivia for his mineral name program.

See you at the next meeting – August 6th at 6:45 pm.

Jon L. Laverty
President



August Meeting Program

Keith Harman will be presenting the program at the August 6th club meeting. He will be doing a program on "The Gemstones of the Bible".

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July Meeting Minutes

The East Texas Gem and Mineral Society meeting was called to order by President Jon Lavery at 6:48 pm, Monday, July 9, 2007 in room 422 of the UT-Tyler Library. Guest Eddy Longacre was recognized and when asked about his hobbies, he drew laughter with the quip that his hobby was collecting money. He also admitted to being a friend of Keith Harmon's.

A motion to accept the minutes of the June 4, 2007 meeting as published in the Rock-N-Rose Newsletter was made by Laura Wilson and seconded by Bob Jamison. Jon gave brief details on the tragic loss of their home to fire by Club Secretary, Becky Whisenant. Becky's husband, Charles, and children Jasmine and Jared are also club members. The home was believed to be struck by lightning during a severe storm July 8 while the family was at church. They were unable to get home for several hours due to flooded roads and when they did get there, the home had been reduced to ashes. A basket was placed on the registration table for anyone wishing to make a donation to the Whisenant family and notepaper was passed around for personal condolences. Several members asked how to get in touch with Becky and were advised that she can check her email at the address on the club membership list.

Treasurer Colleen Hayes was not present so no treasurer's report was given.

Lots of interest has been expressed in field trips according to Trip Chairman, Marilyn Austin. A review of the proposed sale of the land near Jasper, TX where petrified wood is collected was put forth. It has been noted that the site may be closed to collecting by the new owners and a tentative date of Oct. 6 was put forth for perhaps the last gathering trip there. Pete Keiser mentioned a wider creek in the vicinity with better color in the specimens. Marilyn noted that now would be a good time to go to White Mound (near Ardmore, OK) for fossils, due to the recent heavy rains. She asked that a minimum of 6 people need to participate and asked anyone interested in going to call or email her. Other trips mentioned for possible consideration were Lake Brownwood and Wilson Clay Pit for lots of different varieties of fossils. Gene Goar said he is still working on leads for a barite rose trip to OK. Marilyn had brought samples of different kinds of gypsum, selenite, desert rose and others for examination. Bob had a brief synopsis of a recent trip he and Marilyn had taken to Bedias, TX, to look for tektite.

Jon asked for any old business and there being none, he moved on to a brief review of a class to train exhibitors and judges, March 8 & 9, 2008 as detailed in the club June newsletter.

Gene, Keith and Don Campbell have been very actively searching for a new location for club meetings and one has been found that seems to meet all the criteria. Don and Keith participated in a discussion on merits of the Discovery Science Place, one block north of the square on Broadway Street in Tyler. There will be no time limits on meetings and ample parking is available. It will be an excellent facility for the children's programs the club is in the process of developing with great tie-ins to programs at the Place. A general discussion on the merits of the location was held among club members. Gene said he



Meeting Minutes Continued

would be willing to put things from his collections on display, including Indian artifacts, arrowheads, etc. A motion by Club President Laverty was made to approve the new club meeting location, seconded by Travis Phillips; with a unanimous approval vote. The meeting date for September 10 was set due to the Labor Day Holiday falling on the first Monday. The September meeting is tentatively set for the new location with more details in the August newsletter.

Jon discussed the proposed programs for kids with Gene offering to do the first one on fossils and dinosaurs. Laura Wilson put forth the idea to do certificates with stars for each class/meeting the kids attend. The certificates can be framed and presented at the end of each set of classes.

No other club business was put forth. Keith mentioned the Roswell meeting of the American Federation where the idea of raising dues will be considered and that the local club may need to also raise yearly dues slightly. Other members stated that the dues have remained constant for quite some years and that a slight increase could be entertained. Twenty-five members were present at the opening of the meeting with several more coming in later. Rip Criss mentioned an upcoming trip to Oregon (to see his grandson) and asked if anybody needed anything from that area; a loud chorus of, "thunder eggs!" greeted his announcement.

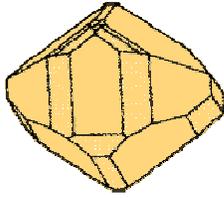
Door prizes were awarded with several folks winning multiple times amid much laughter. There were quite a few nice prizes donated by club members so the choice was difficult for the first few winners. A break for refreshments was followed by the evening's program.

Don Campbell gave an interesting insight into the origin of mineral names. He was not only imparting information but fielding questions from the audience. He had brought several excellent reference books on the subject and explained the merits of each, including the field guide by the Audubon Society. The tag of "lite" and "ite" was explained with "ite" saved for true minerals. He described the process for new minerals to be named. Keith said that over 5,000 are currently named with 70-80% of them being calcium and sodium, but that the number changes constantly. Gene mentioned that agate can have other names, i.e. moss agate. The periodic table was discussed with the first listing being gold whose symbol "au" comes from Latin. There was much audience participation and laughter as Don was pelted with comments and queries. In addition to books, there is much information on the subject on the internet.

Silent auction items were displayed, among them an awesome specimen donated by Pete from a recent trip to Colorado, which generated spirited bidding.

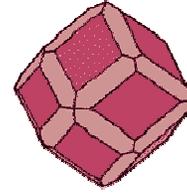
Meeting was adjourned at 8:50 p.m. by the president.

Respectfully submitted by Penny Hawkins for Becky Whisenant, Secretary



What is a Mineral?

by Chuck DeFlorin
Minnesota Mineral Club



A mineral, from the "Manual of Mineralogy," by Klien and Hurlburt, is defined as the following: "naturally occurring homogenous solid with a definite (but generally not fixed) chemical composition and a highly ordered atom arrangement. It is usually formed by an inorganic process."

This definition sounds complicated but when broken down piece by piece it starts to make a lot of sense. Naturally occurring means nothing made by man. It must occur naturally in the earth's crust. If you break apart a piece of pyrite and analyze it, we would have two pieces of pyrite. However, if you break apart a piece of granite the pieces would vary from piece to piece. Solid excludes gases and liquids and defined chemical composition means that whatever the appearance, a mineral should always have the same composition, expressed in a chemical formula. They should also have well defined physical properties. Highly ordered atomic structure is a way of saying that a mineral is a crystalline solid.

Minerals have an internal structure of atoms linking together in a perfect ordered lattice which is what forms a crystal. Usually formed by an inorganic process, which is saying that all living organisms are excluded from the mineral kingdom. However, like the work "usually" notes, there are some exceptions to the rule. So substances like bones, shells, pearls and ivory are not minerals but amber, aragonite, melanophogite, mellite, oxammite and wheatleyite are. The key here is that minerals are the result of geological activities and not the results and not directly the products the products of organisms. All minerals have physical properties which are determined by their chemical and structural compositions. There are exceptions to this rule also. Many minerals exhibit certain properties that others do not, such as fluorescence, radioactivity and magnetism. There are nine physical properties that all minerals possess: hardness, tenacity, color, specific gravity, cleavage and fracture, crystal form, diaphansity and streak.

Hardness is the resistance of a crystal surface to scratching. The geologic community has been using "Moh's Hardness Scale" for the past 150 years. This scale consists of ten minerals of varying hardnesses:

- (1) Talc, 0.03 absolute hardness, can be scratched with a fingernail.
- (2) Gypsum, 1.23 absolute hardness, can also be scratched with a fingernail.
- (3) Calcite, 4.25 absolute hardness, can be scratched with a copper coin.
- (4) Fluorite, 5.0 absolute hardness, can easily be scratched with a knife.
- (5) Apatite 6.5 absolute hardness, can easily be scratched with a knife.
- (6) Orthoclase, 37.0 absolute hardness, can be scratched with a steel file.
- (7) Quartz, 120.0 absolute hardness, can scratch window glass.
- (8) topaz, 175.0 absolute hardness.
- (9) Corundum 1,000
- (10) Diamond, 140,000.0 absolute hardness

Moh's scale is only a relative hardness scale and cannot be used as a truly scientific test because it is too inexact. But it is close enough for identifying hardness in the field for determining minerals.

Tenacity is the resistance of a mineral to breaking, crushing, bending or tearing. Minerals may be brittle malleable, ductile, flexible or elastic. Some minerals may also be sectile, capable of being cut.

To identify their **color** you don't need any complicated devices, just some real good light. Colors will vary from sample to sample depending on the impurities that are present. Some minerals, like fluorite, range from colorless, white, pink, yellow, brown, blue and blue-black, so can't be identified by their color alone. Other minerals have an oxidation layer, so be sure you are looking at the true color.

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What is a Mineral Cont.?

be sure you are looking at the true color.

The **cleavage and fracture** are the form of the fragments obtained by breaking the mineral with a hammer. The fragments tend to break along planes of weak bonds in the crystal structure. Galena, for example, will break up into small cubes. **Luster** originates from the light reflected at the surface of the specimen. There are eight different kinds of luster a mineral can have:

- Vitreous luster corresponds to the luster of simple window glass.
- Pitchy luster is seen, for example, in freshly broken lumps of tar.
- Silky luster displays a rippling gleam like that seen in raw silk.
- Pearly luster reminds us of the inner layer of many shells that have a whitish shimmer with a colored gleam.
- Adamantine luster is the radiant luster that comes from cut diamonds. When minerals of this brilliance are colored yellow or brown they produce
- Resinous luster.
- Greasy luster reminds us of shimmering spots of grease on waxed paper.
- Metallic luster corresponds to the luster of polished metal like aluminum foil.

Minerals are made of crystals and these crystals are categorized into crystal systems:

- Isometric, cubes.
- Hexagonal, six sided or 12 sided
- Tetragonal, 4 sided with two sides of equal lengths.
- Orthorhombic, three sides of different lengths at right angles.
- Triclinic, three sides of unequal lengths that incline to each other.

All minerals have a **specific gravity or density**. This is the weight of the mineral in relation to the weight of the same volume of water. For example, quartz with a specific gravity of 2.65, is 2.65 times as heavy as the same volume of water. The specific gravity of minerals varies between one and twenty. Values under two are considered light (amber) and anything over 2.9 are considered heavy minerals (galena). **Diaphansity or transparency** is the degree to which a specimen allows light to pass through it. There are minerals which are transparent (semi-transparent), and non-transparent, which is known as opaque. For most precious stones, transparency is the key factor which influences their value.

Last of the physical properties of minerals are their **streak**. Whereas the recognizable coloring in a mineral is caused by slight traces of impurities, the streak color always produces a unique color to the whole mineral. For example, for fluorite the streak is always white, regardless of whether the fluorite looks yellow, blue, green or black. In order to obtain the streak color, the specimen has to be rubbed on an unglazed porcelain plate which is called a streak plate. For the streak test, always use fresh fracture surfaces and avoid oxidation coatings and tarnished material.

If you check each specimen for the different physical properties, you should be able to identify what mineral it is or where to look it up in your reference books.

From the San Francisco Gem and Mineral Society's online archives.





The Richness of COLOR in Minerals

By Chuck DeFlorin, Minnesota Mineral Club Member 12/99

Color is the most obvious and attractive feature of any mineral. The intense red of cinnabar, the rich green hues of malachite and the vivid blue of lapis always deserve a second look. Generally speaking though, color is not a very good property when identifying a mineral. Many minerals have several different colors and it is important to understand what causes color in minerals in order to understand minerals themselves.

Agents in minerals responsible for their color are called chromophores or transition elements. These elements contain atoms with electrons that produce the color. Some minerals are always a certain color because these elements are part of a the mineral's chemical makeup.

When a mineral's own structure and composition are the sole agents of its colors, it is said to be idiochromatic or self colored. Examples of this are peridot, which is always green, and gold, which is always a golden color. Minerals of variable color caused by trace amounts of transition elements are referred to as allochromatic or other colored. It is the infusion of different impurities that allows fluorite to come in every hue of the rainbow. Even tiny amounts of these elements can deeply color minerals. Some people think that certain elements or impurities cause only certain colors, but a single transition metal can be responsible for a variety of colors based on its oxidation state.

Minerals can also get their color from minute air bubbles which cause different colors to be seen. Some minerals are referred to as pseudochromatic or false colored when neither their mineral nor atomic properties are responsible for their colors. Instead they contain layers or films which create colors by light interference. Moonstone and opal are good examples of this effect. Another color effect is pleochroism which occurs among minerals that demonstrate refraction. This effect causes a light beam to split in half and directs the two halves into different directions. As a result, each part is subjected to different amounts or types of color absorption depending on the path and vibration of the light. When viewing from different angles against a light, you'll notice a change in either the color or the depth of color. When there is a difference between the colors, the phenomenon is referred to as dichroism. Other minerals, such as smoky quartz and blue halite, owe their color to radioactivity which distorts the crystal the crystal lattice and permits the absorption of light that would otherwise be transmitted.

The deep Prussian blue of azurite, bornite with its spectacular iridescent purple-blue, the shining green translucency of chrysacolla, blue-green of malachite; all get their colors from the transition metal, copper.

Cobalt gives erythrite its violet-red color, calcite a pretty pink color and roselite a delicate pink luster. The hyacinth orange-red of crocoite and the emerald green of uvarovite are both produced by chromium. Reddish-brown hematite, yellow ochre of limonite and even the violet color in amethyst are due to iron. Manganese gives rhodochrosite its brilliant deep pink color and is also responsible for the pastel pink of rose quartz and the purplish-red color of richterite. The apple green color of annabergerite and emerald green of garnierite come from the element nickel. Uranium gives us the yellow-green color of autunite, the canary yellow of carnotite and the pearly emerald green of tobernite. Vanadium produces the fine red color of vanadinite and the butterscotch color of wulfenite.

There are many more elements that could cause color in different minerals. The next time you pick up a pretty mineral, try to determine what element contributed to its color. It is easier to find related minerals if you know what caused the coloring.

From the San Francisco Gem and Mineral Society's online archives.



Club Member Tragedy

Becky Whisenant's home burned Sunday, July 8, in the storms, to the ground. They were at church and lost everything. Absolutely everything! They are staying at a neighbor's so they have a roof over their heads for now.

Pete Kieser spoke to Becky just before lunch on July 9, they were taking kitten to vet (it got it's face singed and nose burned). Becky's 2 house cats died in the fire; the dogs and mother cat with kittens are ok and Charles had gone to feed them this morning.

Becky said they were going to Wal-mart for basics like toothbrushes and contact lens for Jared Pete found them at Wal-mart and talked a few minutes. Becky was so worried about the club minutes and membership roster but he told her we have copies of all that. She said to tell you'all that she had been so looking forward to tonight's meeting after missing the last 2. One of the things she is most upset about is losing all of her rocks – the big ammonites she had on the front porch exploded from the heat. He told her that "I'll bet the club members can help get her started on a new collection"....maybe bring rocks to the next meeting? Right now they are staying with a neighbor who has a big house and insisted they stay there. The fire marshal is at their place today trying to figure out what happened – but lightning was dancing all over Cherokee County yesterday. Pete's house was hit but they only have electrical things ruined.

So, Becky and family are ok for now; stunned but functioning. They do have homeowner's insurance and were going to see their agent next. Their grown son, Jared, is living with them right now and he lost everything, too. Jasimine is working in Wyoming for the summer so she won't need any clothes, etc. until she gets home next month. Becky can use the computer at her office in Rusk so personal messages can be sent to whizgnat@netzero.net. She said she will get there in the next few days to check emails.

Thanks Pete for forwarding this information to us.

Perhaps as individuals or as a club we can do something to help.

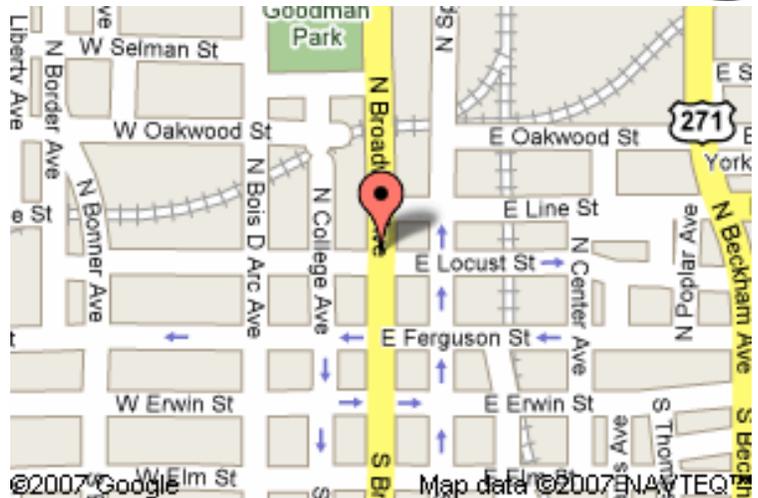
Thursday, July 19, Becky sent me an email asking that I pass a message on to you:

"It really made me feel good to hear from my rock buddies. I got the notes some people sent from the last meeting and collection y'all took up. please put a thank you in the newsletter to everyone and a big collective hug with my love to all of y'all. The prayers and thoughts and notes (and the \$) meant a lot."



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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.

**New meeting location beginning with the September 10th club meeting--
Discovery Science Place
308 North Broadway
Tyler, TX**

THE EAST TEXAS GEM AND MINERAL SOCIETY MEETS ON THE FIRST MONDAY OF EACH MONTH. MEETING BEGINS AT 6:45 P.M.,

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