

The official bulletin of the Dothan Gem & Mineral Club, Inc.

ROCKHOUNDS HERALD

920 Yorktown Road, Dothan, AL 36301-4372

www.wiregrassrockhounds.com

June 2016

Alexandrite Moonstone Pearl

BeAl₂O₄

(Na,CA)Al₁₋₂Si₃₋₂O₈ and KAlSi₃O₈

(CaCO₃ and H₂O)

Words from...

The President

I am sure everyone can tell that summer is here. It is getting well up into the 90s so it is time to keep summer safety in mind. If you are going on digs or working on projects in your shop or yard, make sure you are staying hydrated. If you are planning on attending any digs, it may be time to head up north. My 40th high school reunion is coming up so I will be digging for Herkimer Diamonds later this summer. It should be fun. My older sister and her husband are going to come along. Hopefully, it will not be as hot in upstate NY.

We voted to hold our Summer Socials on the 4th Saturdays in June, July & August. See announcement below for more detail. Please be sure to bring any items you would like to donate for Bingo prizes for the June social or for the club auction in July. It's a good time to get rid of your extra specimens and potentially parlay them into something you don't already have.

I would like to encourage everyone to keep their eyes & ears open for collecting opportunities. Also, if you have a suggestion for speakers we might schedule for our 2016/2017 season, please bring the info to a social.

Hope to see everyone at the 1st Summer Social on June 25th.

Pat

Announcements

Summer Socials – Mark your calendars. Our three socials have been scheduled for June 25, July 23 and August 27. Please note that each date is the Saturday immediately preceding what would have been our normal meeting day. As with our regular meetings, the gathering time at the church is from 2:00 to 4:00 PM.

Aside from enjoying our usual bounty of delicious potluck refreshments each month, we will play Bingo at the June social. Everyone is asked to bring small items to donate for prizes. The July social will feature an auction to benefit the club and the August social will feature an auction where members can bring items to sell and pocket the cash.

Upcoming Shows

June 24 – 26	Treasures of the Earth Gem & Jewelry Show	Fishersville, VA
June 25 – 26	Intergalactic Bead Show	Pompano Beach, FL
July 15 – 17	Treasures of the Earth Gem, Mineral & Jewelry Show	Virginia Beach, VA
July 28 – 30	United State Faceters Guild	Franklin, NC
July 28 – 30	Gem & Mineral Society of Franklin	Franklin, NC

Source: <http://www.the-vug.com/educate-and-inform/mineral-shows/#june>

Meeting Minutes – May 2016 – by Secretary

The meeting was called to order on 5/22/16 at 14:02 by our president, Pat LeDuc. There were 16 club members and one sister of Laurel Meints in attendance. Birthdays were acknowledged.

CORRESPONDENCE: AFMS Newsletter was received, as per usual. Pat brought in some material relating to classes at William Holland Lapidary School, Wild Acres and the Campbell Folk Art School. The Montgomery club said some nice things about our show when they mentioned having visited us in their recent newsletter.

MINUTES & TREASURER REPORT: Minutes from the fabulous April meeting were approved and seconded, and why not? Diane Rodenhizer, dressed in a shimmering evening gown, presented the latest in the saga called The Treasurer's Report. Looks like we are doing well for this time of year. There was some discussion regarding items that we might want to buy for the club, such as a DVD projector and maybe a burned out van for touring this great land. As it turns out, there is a projector at the church, right-over-our-heads...and Arnie Lambert thinks he can get it working again. The question of the van or a microbus was tabled for now, and this is for the better in my opinion.

OLD BUSINESS: Pat will be considering donations to be made in LJ Ward's name. See "New Business" below. As a reminder, the gem show at Tannehill will be June 4th and 5th. No other Old Business, per se, was pending or discussed.

NEW BUSINESS: We are told that Aida Ward is doing as well as can be expected after LJ's passing. Pat mentioned the idea of setting up a scholarship fund for deserving kiddos in memory of LJ and/or in the name of the club. Info is to be gathered and this will be a topic for later discussion. Question: Does the club want to be in the position of processing applications and awarding scholarships? There are legal quandaries involved here. JoAn Lambert suggested a donation to SFMS. Pat will ask Aida for ideas of where to make donations, such as knapping or garden groups. LJ had many interests.

We are directed by Neil to a Facebook entry called Rockhound Connection, as a place to find info about local and regional events and digs.

Summer Social Season is here! Our three meets are planned to take place at the church from 2:00 – 4:00 PM on the 4th Saturday of each month, (i.e., June 25, July 23 and August 27). June will be Bingo, with winners choosing from items donated for the occasion by members. July will be an auction of member donated items to benefit the club, and August will be an auction of items to benefit he/she who brings the items.

Say, what about a baby gift for Brooke and Chris? Sure! A gift card? Great idea!

SHOW & TELL: Lots of Show & Tell pieces. Pat had some of her hand-crafted intarsia pieces and some of the raw pieces wrested from the jaws of Mother Earth over in Georgia. Joe Coody had a display piece with arrowheads and such. Arnie showed some cabs and a display card that had been Grady Dunn's. Ken Wilson showed some cabs and some interesting raw pieces with bits of fossil. JoAn had a necklace made by Janie May Schings – a glass vial with bits of actual live opal bits, all wire wrapped. Garry Shirah had some pieces he gathered on the last dig over in Georgia.

The meeting wrapped up with food and the presentation of Door Prizes. The Door prize went to Diane, who chose wisely.

Respectfully submitted by B. Fizzell

HOW THINGS BECOME PETRIFIED



Petrified Logs, Photo Courtesy of Jonathan Zander

Petrifaction (also known as petrification) is a type of fossilization which leaves living organisms preserved as a type of stone. In order for this to happen, a specific set of circumstances has to be present when the organisms cease to live.

When any living thing dies and begins to decay, an oxygen rich environment is usually present. This environment is full of microorganisms, insects and fungi that begin to colonize and break down the organic matter into unrecognizable material. The stuff left over, like cellulose and lignin for trees, or bones and cartilage for animals, is further broken down and has its chemical composition changed by other microorganisms. The end result of this process is the carbon rich organic goodness that award winning gardeners everywhere use as fertilizer.

When an organism dies in an environment that lacks oxygen, for instance if it was covered by ash from a volcano, it is deprived of an environment that is conducive to normal decay. This leads to the organism remaining mostly intact for long periods of time, which in turn encourages the very slow degradation process that allows for the wonder that is petrification.

Ground water rich in minerals will start to impregnate all of the pores and cellular spaces inside the organic material. These minerals will crystallize and settle into the shapes of the cells and other structures that are slowly breaking down. When the last remnants of organic material finally changes their chemical composition, all that is left is the stone-like fossil of the original living organism, created by the crystallization of the minerals present. Not all of the organic material is lost, however. Although most petrified plants are rock-like in weight and density, about 1%-15% of the material is still organic.

Wood is one of the most common types of things to become petrified. In fact, there are several known petrified forests throughout the world, including petrified forests in 11 of the 50 states in the U.S. and 19 other countries worldwide. The structure of these petrified fossils depends on the minerals present in the ground water that penetrated the wood. The most common are silica based, as silicate minerals make up about 90 percent of the Earth's crust and therefore are the most prevalent in groundwater. Some common silica minerals involved in petrification include: quartz, calcite, pyrite, siderite (iron carbonate), and apatite (calcium phosphate).

The process of petrifying wood ultimately takes millions of years. For instance, the petrified forest in Arizona is believed to have been created by trees that grew over 225 million years ago. Geologists say that the trees fell in a rain forest almost 100 miles away. Streams containing sediment and volcanic silica ash carried the logs downstream and quickly covered them. The process of petrification then began its slow magic. After millions of years, the tectonic uplift that formed the Rocky Mountains, combined with erosion, uncovered these wonders of evolution's wizardry. Currently there is about 100 feet of uncovered petrified trees populating this forest. Every year rainwater exposes additional petrified trees.

A way to quickly petrify wood has been discovered by Dr. Yongsoon Shin and his colleagues from the Department of Energy, at the Pacific Northwest National Laboratory. Using their method, they can petrify wood in a matter of days. The process starts by taking wood and soaking it in a bath of acid for about a day. Next, it gets soaked in a tub filled with a silica solution. Once air-dried, they bake the wood in argon gas at temperatures of up to 1,400 centigrade for 2 hours. When cooled, the process yields perfectly petrified wood (silicon carbide). It is thought the large surface area created by the vast number of pores in plant material will yield new types of ceramics that will help in filtering processes similar to those that filter out pollutants from different types of gases.

The rare set of circumstances that allow living things to become stone are special indeed. Whether your wood takes millions of years to become hard, or you prefer just several days of manual manipulation, petrification is one process that surely excites geologists everywhere!

Bonus Facts:

- Petrified wood weighs between 160-200 pounds per cubic foot. It's also a very hard material, rating between 7 and 8 on the Moh's Hardness Scale. For reference, talc rates a 1 and diamonds are a 10.
- Petrified material is only one type of fossil. There are several different types known. No matter the process that yields a fossil, all require two things: an environment that lacks oxygen and the presence of a hard part of the organism.
- Petrified matter can be many different types of colors depending on the minerals involved. This is why no petrified material is exactly alike. Iron will yield reds and yellows. Blues and greens will come from manganese and copper. Crystals like quartz will give the fossil a glittery appearance.
- The Petrified Forest National Park in Arizona was first created as a National Monument by Theodore Roosevelt in 1906. It wasn't until 1962 that it was designated as a National Park. There are over 800 archeological and historic sites within the park, and it's the only national park that contains a segment of the historic Route 66.

- Ancient Pueblo Native Americans, the peoples that inhabited the land where the current Petrified Forest sits, used petrified wood to build their homes. One of them, known as Agate House, still stands today. It is thought that it was built from 1100 to 1150 A.D.
- It is illegal to remove any petrified wood from the National Park. Despite this, it is known that tons of it is removed annually. Conveniently enough, you can purchase it from rock shops that are near the park. But don't accuse the shop owners of thievery, they collect it from private land outside the park borders. Or so they would have us believe! Wake up Sheeple! 😊
- The second largest petrified tree specimen is in Amphoe Ban Tak, Thailand. It's 65.6 feet long and 6.5 feet in diameter. The largest petrified tree is on display at the Geronimo Trading Post in Arizona. The tree itself is in several sections and is reported to weigh nearly 80 tons.
- The largest field of petrified wood is located in the Puyango Petrified Forest. Encompassing approximately 2658 hectares. It's found south of the city of Loja in Ecuador. Don't think, however, that it's just south. This petrified forest is actually very remote and although Loja is the nearest city, it's still about a 4 hour drive away.

References:

Petrified Forest - <https://www.nps.gov/pefo/index.htm>

The Petrified Forest Of Puyango - <http://www.vivatravelguides.com/south-america/ecuador/ecuador-articles/the-petrified-forest-of-puyango/>

Petrified Wood Forest Tak Thailand - <http://milkblitzstreetbomb.com/thailand/the-petrified-wood-forest-tak-thailand/>

Instant Petrified Wood - <http://phys.org/news/2005-01-petrified-wood-days.html>

The Mineral Gallery - <http://www.themineralgallery.com/>

Permineralization - <https://en.wikipedia.org/wiki/Permineralization>

Petrified Forest Facts - <https://www.nps.gov/pefo/planyourvisit/fast-facts.htm>

Source: <http://www.todayifoundout.com/index.php/2012/05/how-things-become-petrified/>

Available from the *Today I Found Out – Feed Your Brain* website (<http://www.todayifoundout.com/>)

Club Meeting – May 2016

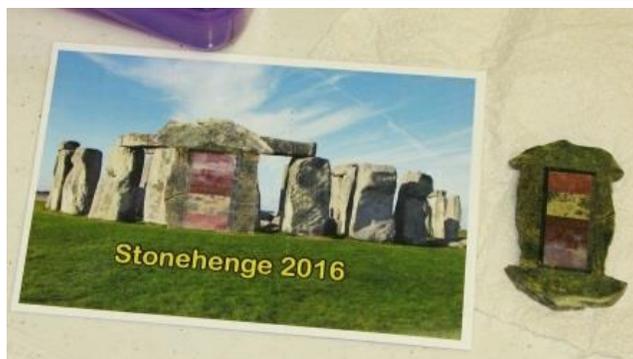
Photos by Pat & Bruce



Lots of excitement over the recent finds brought in for Show & Tell.

Club Meeting – May 2016

Photos by Pat & Bruce



**Intarsia
Jewelry
Rocks
Minerals &
Flint-knapped
points**

Rocks in Your Mom's Kitchen?

Granite is one of the most popular kitchen countertop options due to its undeniable beauty. Forged by the earth, granite has a signature look that can't be duplicated. Do you know what goes into making these one of a kind countertops? In this article, we're going to delve into the composition of granite.

Mineral Composition

Granite is comprised primarily of two consistent minerals, quartz and feldspar. Overall, the combination of these two minerals gives granite a pale color.

- **Quartz:** It is very resistant to weathering, which is why it's so commonly found. It is a very popular choice for jewelry and carvings. It is a 7 on the Mohs scale of hardness.
- **Feldspar:** It is the most abundant mineral in earth's crust. It has many properties that make it good for making glass and ceramics. It is a 6 on Mohs scale of hardness.

Accessory Minerals

Though granite is mostly made up of quartz and feldspar, there are other accessory minerals responsible for giving granite its signature salt and pepper look. The most popular accessory minerals are biotite and hornblende, but they just scratch the surface of all the possible minerals in a slab of granite.

- **Biotite:** This mineral is a member of the mica group. It is referred to as "black mica," as opposed to "white mica," due to its appearance.
- **Hornblende:** It is a mixture of a series of minerals, not identifying with one individual mineral. It's a general term used to refer to dark-colored, inosilicate minerals.

What This Means

The result of granite's composition means it is an eye-catching countertop choice. Due to the variety of minerals involved in making up granite, it comes in a wide range of colors. Every slab is unique because each part of the world has different accessory minerals that work their way into the granite. The saying "as hard as rock" had to come from somewhere. With all the interlocking minerals working together, granite is a strong countertop option.

Mineral Stuff

Here's a word search with all sorts of words about minerals and mineral collecting. How many can you find?

S	T	R	E	A	K	P	O	P	R	E	T	S	U	L
C	P	H	A	R	D	N	E	S	S	Z	I	L	E	M
E	M	E	I	S	O	M	E	T	R	I	C	B	L	O
P	O	R	C	L	E	A	V	A	G	E	A	F	F	W
T	N	U	D	I	G	A	L	S	K	L	C	V	O	Q
E	O	T	J	N	F	C	I	N	I	L	C	I	R	T
R	C	C	L	A	D	I	O	Y	R	T	O	B	M	H
X	L	A	E	K	U	F	C	H	A	N	N	A	U	E
L	I	R	M	P	A	O	F	G	J	L	E	I	L	V
A	N	F	A	S	L	S	U	O	R	B	I	F	A	I
T	I	B	N	O	I	M	E	R	A	A	U	S	T	S
S	C	I	R	A	P	R	W	E	S	M	V	I	T	S
Y	A	L	P	S	I	D	P	Y	R	A	M	I	D	A
R	T	E	T	R	A	G	O	N	A	L	B	Y	T	M
C	F	I	L	L	I	F	O	R	M	H	O	L	L	Y

Find These Words (left to right, right to left, down, up or diagonally):

Specific Gravity Fracture Streak Hardness Cleavage Luster Color
 Fibrous Isometric Tetragonal Monoclinic Triclinic Botryoidal Crystal
 Massive Prism Filliform Scepter List Display Dig Label
 Formula Pyramid

Who What Where When Why How

June Birthdays

JUN 6 Roger Draughon
JUN 19 Abbey Pollan
JUN 25 Ben Childress

Random Rock Facts

Chert is a fine-grained, hard sedimentary rock composed of cryptocrystalline fibrous chalcedony, lesser amounts of microcrystalline and cryptocrystalline quartz, and amorphous silica. It is the product of organic and inorganic precipitation. Two major types of cherts are found in the geologic record: bedded (primary) and nodular (replacement).

Source: <http://geology.uprm.edu/Classes/GEOL4046/Chert.pdf>

Meeting Information

Time: 2:00 PM
Date: Fourth Sunday of each month (except June, July and August)
Place: Fellowship Hall – Tabernacle United Methodist Church
4205 S. Brannon Stand Road
Dothan, AL

Officers

President – Pat LeDuc
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Vice President – Garry Shirah
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Show Chair – Jeff DeRoche
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Hospitality Chair – Vacant

Club Hostess – Vacant

Club Liaison – Garry Shirah
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Website: www.wiregrassrockhounds.com

Objectives

To stimulate interest in lapidary, earth science and, when necessary, other related fields.

To sponsor an educational program within the membership to increase the knowledge of its members in the properties, identifications and evaluations of rocks, minerals, fossils and other related subjects.

To cooperate and aid in the solution of its members' problems encountered in the Club's objectives.

To cooperate with other mineralogical and geological clubs and societies.

To arrange and conduct field trips to facilitate the collection of minerals.

To provide opportunity for exchange and exhibition of specimens and materials.

To conduct its affairs without profit and to refrain from using its assets for pecuniary benefit of any individual or group.

Classified Ads

Looking for an item to round out your rock collection?

Got a specimen, tool or handicraft for sale or trade?

Submit the pertinent details to me by the 10th of each month and your inclinations will be made known to the membership in the next bulletin.

N. J. Blackwell
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Email: Tfavorite7@aol.com

Annual Dues

Single \$15
Family \$20

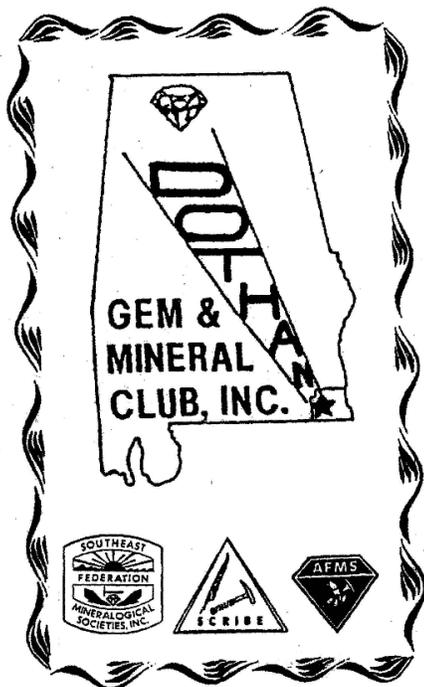
Refreshments

JUN 25 – Social

ROCKHOUNDS HERALD

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Where you might hear...

Impurities cause color in gems.

Impurities are elements (e.g., Ti, V, Cr, Mn, Fe, Co, Ni, Cu, etc.) that can occur in low concentration in the gemstone and that are not present in the pure compound. If we take one mineral, for instance beryl, and add different impurities, we get different colors:

Beryl containing iron (Fe):

Fe⁺⁺ = Blue (Aquamarine)
Fe⁺⁺⁺ = Yellow (Heliodor)
Mix of Fe²⁺ and Fe³⁺ = Green beryl

Beryl containing Manganese (Mn):

Mn⁺⁺ = Pink (Morganite)
Mn⁺⁺⁺ = Red beryl

Beryl containing Chromium (Cr):

Cr⁺⁺⁺ = Green (Emerald)

Source: <http://nature.berkeley.edu/classes/eps2/wisc/Lect7.html>

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