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

Rockhounds Herald

920 Yorktown Road, Dothan, AL 36301-4372

www.wiregrassrockhounds.com

November 2016

Topaz $Al_2SiO_4(F,OH)_2$ Topaz $Al_2SiO_4(F,OH)_2$ Topaz $Al_2SiO_4(F,OH)_2$ Topaz $Al_2SiO_4(F,OH)_2$ Topaz $Al_2SiO_4(F,OH)_2$
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Words from…

The President

The club has had quite a month. First, we were invited to help celebrate JoAn & Arnie Lambert's 50th wedding anniversary. It was a lovely event filled with some heartfelt and some hilarious moments. Next, the Lambert's invited the members of the Dothan & Panama City clubs to their house for a "dig" in the famed Rock Corral; their intention being to eventually turn their backyard into a backyard again. After giving away a literal ton of amazing rocks collected from various locations over the years, they even fed everyone who showed up!

The October meeting ended up being cut very short because JoAn and Arnie invited everyone there to come over for a 2nd day of rock collecting. Rockhounds being rockhounds, and way more interested in collecting rocks than attending a business meeting, we quickly grabbed a bite to eat, adjourned and reconvened at the Lambert's to sort through the remaining treasure-trove of specimens. Thanks, JoAn and Arnie! Your generosity defies comprehension, but we have certainly all been blessed by it.

Garry Shirah, our Field Trip Chair, arranged a club dig in Marianna, FL. We had about a dozen folks show up and we found some great stuff. You can check out the pictures on our website.

For anyone who is looking for something to do over Thanksgiving weekend besides eat leftovers, the Mobile club is having their 22nd Annual Rock & Gem Show. Their website and Facebook page have all the details. If you go, though, be sure to get back in time for our meeting on Sunday, November 27th and please bring any of your recent finds or purchases for Show & Tell. One topic of discussion at the meeting will be the plans for the Christmas party. Hope to see everyone there.

Pat

Announcement

Death in the Rock Club Family - Condolences are sent out to Abbey Pollan and her extended family due to the recent death of her mother, Lynda Lee Merrill, who passed away on October 29, 2016. Please remember the Pollan family in your thoughts and prayers.

Upcoming Shows

NOV 25 – 27	**Mobile Rock & Gem Society**	**Mobile, AL**
NOV 25 – 27	**Roanoke Valley Mineral & Gem Society**	**Salem, VA**
DEC 2 – 4	**Withlachoochee Rockhounds, Inc.**	**Hudson, FL**
DEC 2 – 4	**Montgomery Gem & Mineral Society**	**Montgomery, AL**
DEC 10 – 11	**Mid-Tennessee Gem & Mineral Society**	**Franklin, TN**

Source: http://www.amfed.org/sfms/club-shows-10-11-12.html

Meeting Minutes – October 2016 – by Secretary

The meeting was called to order on 10/23/2016 at 14:08 by our president, Pat LeDuc. There were 14 club members and 1 guest in attendance. Our guest was Elliott Whitton's cousin, Ann Dykes. Those members celebrating birthdays this month were acknowledged.

INTRODUCTORY REMARKS: Pat gave a report on the "dig" at Arnie and JoAn Lambert's house that took place the previous day. She announced that today's meeting would be briefer than usual so that those wishing to go back over to Arnie's could do so, as there are lots of good pieces left for collecting.

There is another club dig scheduled for next Saturday outside of Marianna. No fee. Garry Shirah will send out the details and location info via email. It is at a quarry and mining operation that some folks have been to in the past. Anyone participating can expect to find marine fossils and calcite.

CORRESPONDENCE: AFMS Newsletter. Flyer for the upcoming show in Cobb County Georgia.

MINUTES & TREASURER'S REPORT: Minutes from the September meeting were approved/seconded. Diane Rodenhizer's Treasurer's Report was greeted with smiles. The club is in good shape to be starting the various payments needed for the 2017 show expenses.

OLD BUSINESS: The matter of the overhead projector was revisited and Arnie said we do not need to buy one for the club. He offered to take refresher lessons on the church's system and show Jeff DeRoche how to do the setup. Unfortunately, the selection of viewing material will be somewhat limited since the AFMS only has video tapes, and the church's system accommodates DVDs.

SHOW BUSINESS: Invites to regular dealers are going out as we speak. Current plans are to stuff 100 grab bags to sell at the show. JoAn Lambert and Anne Trice will be working on these. This year we will be charging $2 each for the grab bags. Not sure how that will go over.

Members were encouraged to bring in donations for the grab bags as well as items for use as door prizes and the silent auction. Jeff will be taking care of the balloon matters.

NEW BUSINESS: JoAn and Arnie thanked the club members for coming to their 50th Anniversary bash the previous weekend. Elliott Whitton informed us of ongoing events in Columbia, AL, throughout the month of November and December. There will be history walks and other area-related events in town and at the local schools. He plans to hand out the club's show flyers during the festivities. Dates for the events in Columbia are November 7th and 8th, 15th and 16th and December 15th and 16th.

PROGRAM & SHOW AND TELL: No Show and Tell items and no program due to early adjournment to Arnie's Dig, redux.

The meeting wrapped up with food and the presentation of a door prize, which went to JoAn.

Respectfully submitted by B. Fizzell

What Colors Are Geodes Naturally?

From the outside, geodes resemble common rocks, but when they are broken open they reveal a hollow cavity lined with a layer of agate and filled with crystals. Most geodes are hollow, although crystal growth can fill all of the interior volume, and they range in size from 2 to 30 inches in diameter. The color of a geode depends on the agate layer and the type of crystal inside, both of which come in a variety of colors themselves. Most geodes are brown or white: geodes that are very brightly colored are likely artificially dyed.

Agate – *Most* of a geode's color is supplied by the agate layer that surrounds the hollow crystal center. The color of an agate depends on the distribution of various minerals within the stone. Often, this color appears in concentric bands. Different minerals contribute different colors. For example, iron oxides and cobalt create a red color, titanium is blue, nickel or chromium is green, manganese is pink and copper can make the stone appear red, blue or green depending on if it has been combined with other minerals.

Quartz – The most common geodes are lined with transparent or white quartz crystals, but quartz comes in other colors as well. Amethyst is the name for a purple variety of quartz, and amethyst geodes appear purple on the inside. Very large amethyst geodes are found in Brazil and other South American countries.

Chalcedony – Chalcedony is the name for quartz crystals that are too small to be seen with the naked eye. Chalcedony layers can cover the interior walls of geodes with a variety of colors, including white, gray, blue, yellow or orange. The color of chalcedony that is deposited on the inside of the geode depends on the location. For example, California is famous for its blue chalcedony.

References **(CTRL + Click to follow links)**

- The Mineral and Gemstone Kingdom: Geodes
- Iowa Department of Natural Resources: Geodes
- The Rock Collector: Agates
- Mineralogy Database: Chalcedony
- The Mineral and Gemstone Kingdom: Amethyst
- USGS Mineral Resources Program: Chalcedony

How to Buy Geodes

While buying a geode is always a guessing game, there are a few simple tricks you can use to increase your odds of finding one that is filled with beautiful crystals. Rather than randomly hunting and picking through a pile of geodes, use a more careful method of elimination. Since geodes that contain crystals are usually lighter than those that contain solid agate--and the color of the exterior sometimes corresponds to the color of the interior--you can eliminate those geodes that are unlikely to contain what you want and increase your chances of going home with a geode you love.

Things You'll Need

- Scale
- Pick up several different geodes, comparing their weights and choosing the lightest one. Continue comparing weights, setting aside any that feel somewhat light for their size until you've set aside about a dozen lighter geodes.
- Weigh the small pile of geodes you have set aside, eliminating the ones that are heaviest for their size.
- Inspect the remaining geodes for size and shape, eliminating any that are not the size you are looking for or that are not an eye-pleasing shape. They do not necessarily need to be perfectly round, but if you dislike the shape, eliminate that geode.
- Set aside geodes that are extraordinarily light for their size. Inspect the light geodes for signs that they may contain mud rather than crystals. Although there are not always obvious signs, mudballs will often have brown or black streaks on the exterior and may have pieces of the exterior chipped away, revealing an ugly brown interior. Eliminate any geodes that are likely to be mudballs.
- Examine the exteriors of the remaining geodes. If the exterior is completely white, without a blue or black undertone, the geode is likely to contain white quartz crystals or light-colored banded agate. If it has black, blue or purple undertones, it may contain amethyst or other colored quartz crystals or blue banded agate. Keep the geodes with exteriors that match what you hope to find inside.
- Check the exterior for any chips or cracks that reveal the interior. Although it's not common, some geodes will have small openings that will reveal their inner contents. If you see a hole or crack that reveals something you like, hang on to that geode.
- Weigh the remaining geodes, choosing the ones that are lightest.

Tips & Warnings

- If a scale isn't handy or available, use a simple method of comparison by hand, looking for the geodes that are the lightest for their size.
- Don't toss the geodes against each other in an attempt to break or chip them. Small flying pieces are sharp and can easily get embedded in your skin or your eyes.

References **(CTRL + Click to follow links)**

- eBay guide to choosing geodes
- Rocks4u.com geode collecting guide

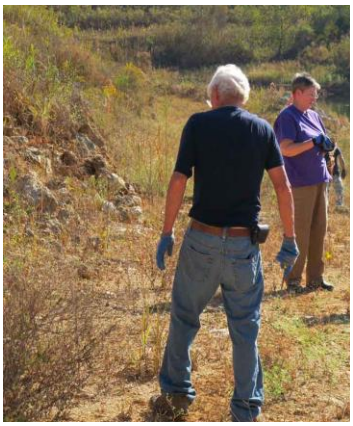
Club Meeting – October 2016

Photos by Pat & Bruce

A small group of members had a short, but productive meeting—followed, of course, by refreshments—so any who were of a mind to could return to the Lambert's for another round of rock picking from the bounty of specimens housed in Arnie and JoAn's backyard.

Limestone Quarry Dig – October 2016

Photos by Pat



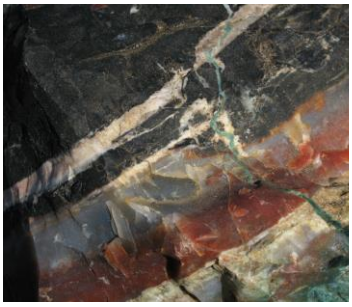
An abundance of fossils and calcite were the finds during this dig.

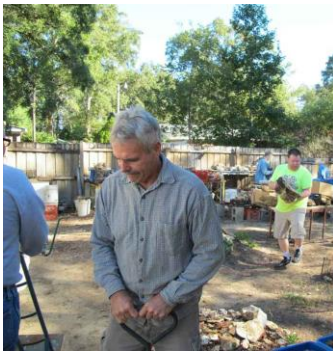
Lambert Rock Pick – October 2016 *Photos by Pat & Bruce*

The Collector | **The Collection**

…and the lucky folks who benefitted from his generosity.

Lambert Rock Pick – October 2016 *Photos by Pat & Bruce*





We bought his equipment, hauled away wagonloads of treasures…<u>and</u> he fed us lunch!!! He said he wanted to reclaim his backyard and we joyfully did our best to make that possible.

Kid's Corner

Effects of Chemical Weathering on Rocks

Weathering is a set of physical, chemical and biological processes that alter the physical and chemical state of rocks and soil at or near the Earth's surface. **Chemical weathering** is the process by which rocks are decomposed, dissolved or loosened by chemical processes to form residual materials. Chemical reactions break down the bonds holding the rocks together, causing them to fall apart into smaller and smaller pieces. Weathering causes **erosion**, the process of these rock particles being carried away and deposited in other level places. Chemical weathering is much more common in locations where there is a lot of water, because water is important to many of the chemical reactions that can take place. The most common types of chemical weathering are **oxidation**, **hydrolysis** and **carbonation**.

This project focuses on the carbonation weathering process by which dissolved carbon dioxide in rainwater or moisture in surrounding air forms carbonic acid which reacts with the minerals (**calcium carbonate**) in some rocks, softening them and making it easier for other forces to break the rocks apart.

Carbonated water is simply water that has had pressurized carbon dioxide forced into it. The liquid is usually kept pressurized in its container to prevent the carbon dioxide from escaping the liquid, but once the pressure is gone (i.e., the container is opened) the carbon dioxide escapes, causing the liquid to bubble. Carbonated water is used in soft drinks, club soda, and seltzer water.

Problem: Measure and compare effects of chemical weathering, specifically carbonation, on several rock samples.

Materials

- Package of plastic 8 oz drinking glasses or cups
- 1-liter bottle of club soda or seltzer water
- Masking tape
- Clock or watch
- 3 fragments of each of the following rock samples: limestone, marble, granite, and sandstone

Procedure:

1. Fill four cups or glasses three-fourths full of carbonated water (club soda or seltzer water).

2. Fill the remaining four cups three-fourths full of tape water.

3. Place masking tape on the cups and label them: "limestone and tap water," "limestone and carbonated water," "marble and carbonated water," "marble and tap water," "granite and carbonated water," "granite and tap water," "sandstone and carbonated water," and "sandstone and tap water."

4. Place the appropriate rock sample fragments into each labeled cup. Set aside a fragment of each type of rock for a control.

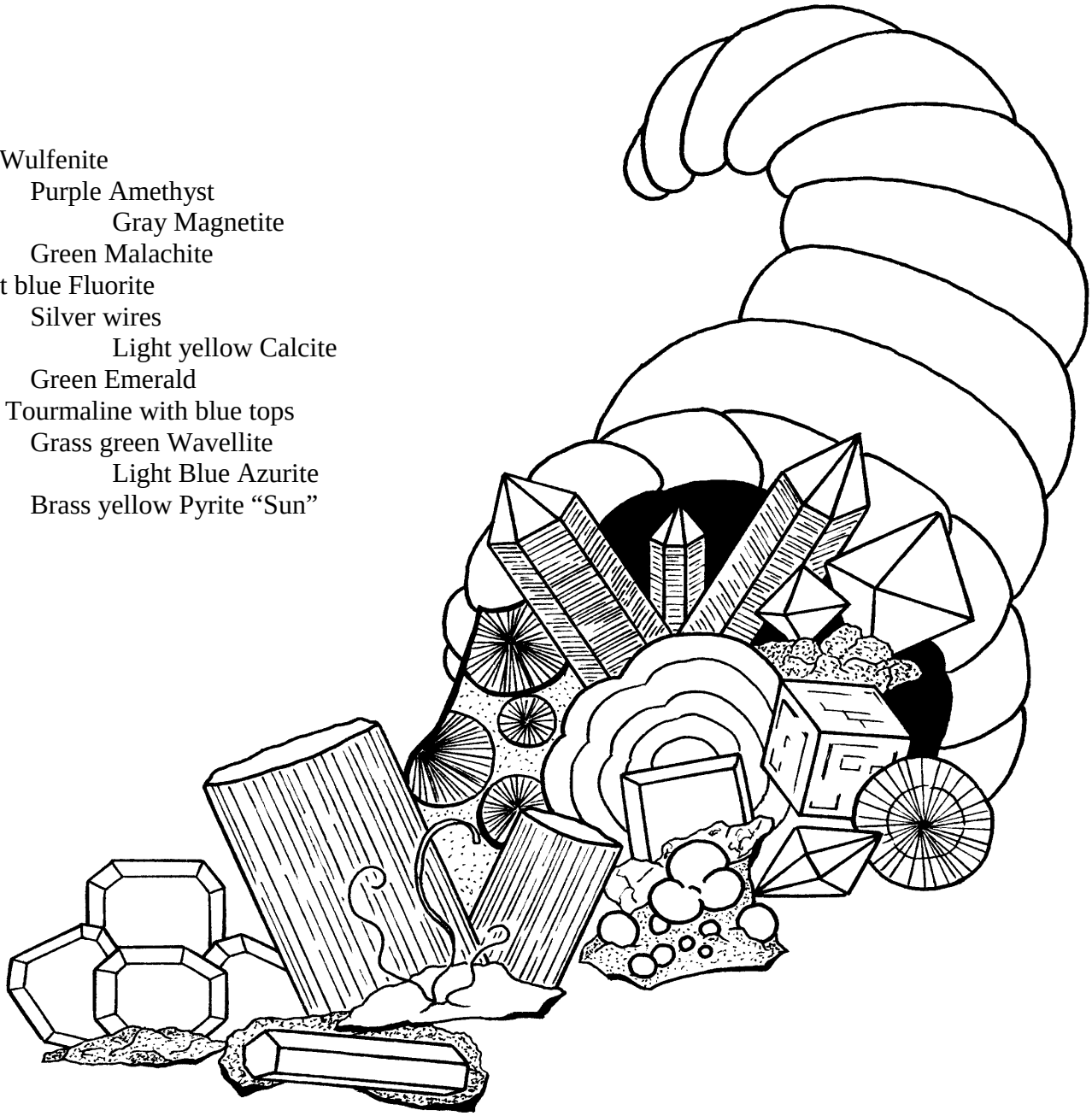
5. Allow the jars to stand for about a 3-4 days.

6. Remove the rocks from the jars and perform the Mohs Hardness Test on each, including your control fragments. Were the fragments that had been immersed in carbonated water softer than the others? Record your results.

Source: http://www.education.com/science-fair/article/effects-of-chemical-weathering-on-rocks/

MINERAL CORNUCOPIA

Red Wulfenite
Purple Amethyst
Gray Magnetite
Green Malachite
Light blue Fluorite
Silver wires
Light yellow Calcite
Green Emerald
Pink Tourmaline with blue tops
Grass green Wavellite
Light Blue Azurite
Brass yellow Pyrite "Sun"



The Cornucopia is also called "The Horn of Plenty." At Thanksgiving time, a cornucopia is traditionally overflowing with food from the harvest, like apples, grapes, squash, potatoes, and all sorts of fruits and vegetables. Here is a cornucopia overflowing with minerals for you to color and identify. In this picture are the following minerals: wulfenite, emerald, tourmaline, silver, azurite, malachite, amethyst, fluorite, pyrite "sun," calcite, magnetite, and wavellite.

Who What Where When Why How

November Birthdays

NOV 4 Chris Bokenfohr
NOV 4 Patti Wilson
NOV 9 Janie Schings
NOV 19 Ken Wilson
NOV 22 Brooke Holderith

Random Rock Facts

Most geodes have interiors made of either **quartz** or **calcite**. Quartz crystals are silicates. Calcite's main ingredient is **calcium carbonate** ($CaCO_3$) which is dissolved calcium and carbon with some of the oxygen from the water thrown in.

Add in a trace of iron, magnesium or copper and you'll have a color variation. Calcite with magnesium and a trace of manganese forms a nice pink dolomite layer, while iron in silicate accounts for the purples of amethyst.

Exposure to heat can also make a difference. An amethyst that gets a lot of heat loses its purple color and becomes a soft yellow, also known as citrine.

Source: http://www.rocksandminerals4u.com/geodes.html
Reprinted with permission from Doug Mann

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

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.

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Annual Dues

Single $15
Family $20

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Show Chair – Jeff DeRoche
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Field Trips Chair – Garry Shirah
334-671-4192

Hospitality Chair – Vacant

Club Hostess – Vacant

Club Liaison – Garry Shirah
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Refreshments

NOV 27 – Potluck Refreshments

ROCKHOUNDS HERALD
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Where you might hear…

In the field of Gemmology the presence (or absence) of various natural inclusions - which are frequently quite “characteristic” of a specific gemstone and/or locality - are regularly used to differentiate between natural and synthetic gemstones. In many instances they can also be used to determine “where" a specific gemstone came from.

Source: https://www.cigem.ca/inclusion/inclusions.html
Quote from Patrick C. Murphy in “Inclusions in Gems and Minerals”

Member of
Southeast Federation of Mineralogical Societies, Inc.
American Federation of Mineralogical Societies