

# ROCKHOUNDS HERALD

920 Yorktown Road, Dothan, AL 36301-4372

[www.wiregrassrockhounds.com](http://www.wiregrassrockhounds.com)

## January 2018



### Words from...

#### The President

We ended last year and began this year with sad news. The club lost one of our founding members, Esther Dunn, on December 22nd. We also lost one of our long time club members, Maxine Johnson, on January 2nd. They were both very special ladies who will be missed by all who knew them. See inside for a brief recollection about each of them from our newsletter editor, Joan Blackwell.

We will be continuing our rhodochrosite program at the January meeting. Hopefully, we can convince Arnie Lambert to bring in his rhodochrosite sample collected from the same area where the video was filmed. We also need to discuss filling our soon to be vacant, officer positions. As always, the meeting will be held on the 4<sup>th</sup> Sunday, January 28<sup>th</sup>, at our regular meeting time and place. I hope to see everyone at the first meeting of the new year!

Pat

### Know your stone?

*The birthstone for **January** is **Garnet**. Pictured in the banner above are various forms of this silicate mineral. From R to L: Almandine, Pyrope, Rhodolite, Spessartite, Grossular, Hessonite, Tsavorite, Demantoid, Topazolite, Melanite, Uvarovite.*

Source: [http://www.minerals.net/gemstone/garnet\\_gemstone.aspx](http://www.minerals.net/gemstone/garnet_gemstone.aspx)

### Announcement

Our sister club in Panama City is having their annual gem and mineral show on Saturday and Sunday, January 20 – 21 from 9 to 5 and 9 to 4, respectively. The event will be held at the Central Panhandle Fairgrounds, 2230 E. 15<sup>th</sup> St., Panama City. Check it out!



### Upcoming Shows

January 20 – 21	Panama City Gem and Mineral Show	Panama City, FL
January 20 – 21	Tomoka Gem & Mineral Society	Deland, FL
February 24 – 25	Mississippi Gem and Mineral Society	Jackson, MS
February 24	Bone Valley Gem, Mineral & Fossil Society	Lakeland, FL

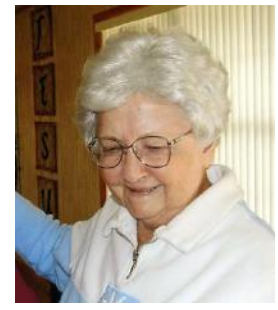
Source: <http://www.amfed.org/sfms/club-shows-123.html>

# Remembering Esther & Maxine – by Editor

Truth be told, I didn't know Miss Esther or Miss Maxine very well. When I joined the club six years ago, both ladies had already started experiencing the health problems that would eventually end their lives. We'd exchange pleasantries at club meetings, but I never got to see them out on a dig, up to their ears in dust and dirt, or fording a stream to get to where "the good stuff is." I've heard stories from some of their adventures, though...



I didn't know much about rocks when I joined the club. I didn't know much about writing a newsletter either, but that didn't stop the members from nominating and electing me while I was hauling stuff to my car. (Lessons learned? Always watch out for falling rocks and never leave the room at a rock club meeting.)



That first year I decided I'd do two things. To start, I'd research and write about birthstones for a section of the newsletter I called the Learning Series, and second, I'd interview all the club members during their birth month and ask how they came to be a rockhound.

**Esther Dunn**

December 21, 1926 – December 22, 2017

In October 2011, I spoke with Miss Maxine. When the newsletter went to press, here's the essence of what she told me during our conversation: *"Pretty rocks, that's what I like. It doesn't matter what kind. I buy most of my pieces now, but we did some field collecting when my boys were little. One time in north Alabama we loaded our RV so full of petrified wood that our headlights were shining up at the treetops instead of the road."*

Then in December that year, I spoke with Miss Esther. *"I have many wonderful memories of collecting fossils from a high embankment near my childhood home in New York state, and, given the choice, I'd rather be on a field trip than doing just about anything else. Though I later developed an interest in minerals and stones, my favorite piece is still an agate snail I found on that embankment all those years ago before my family moved into town. Most of my collection is on loan to the local college there, but I always keep some inventory on hand to use when talking to school children about the joys of collecting."*



Clearly, both Miss Esther and Miss Maxine were avid rockhounds, but they were so much more than that. They raised a family and kept *home and hearth* while their military husbands, Grady and Ken, served their country around the world. And as the song says, they "loved deeply and spoke sweetly." I was fortunate enough to see some of that firsthand. Each couple displayed a genuine caring and attentiveness toward their respective life partner.

Reading their obituaries, I learned that Grady and Esther were married 70 years, and Maxine's said Ken was the love of her life. Also mentioned in Miss Esther's notice was an anecdote that made me smile; it recounted a practice of hers I think could easily sum up the warmth of both hers and Miss Maxine's personalities.



When ending a visit, Esther is said to have waved at the front door and blinked the porch-light off and on, as a "come back soon". Then she'd say, "Bye bye for now!"

I think I speak for the whole club in saying these two lovely ladies will truly be missed. Indeed, Miss Esther and Miss Maxine, bye bye for now.

**Maxine Johnson**

October 8, 1939 – January 2, 2018

## Learning Series: Tools for the Rockhound

### Simple Metamorphic Identification Keys and Charts

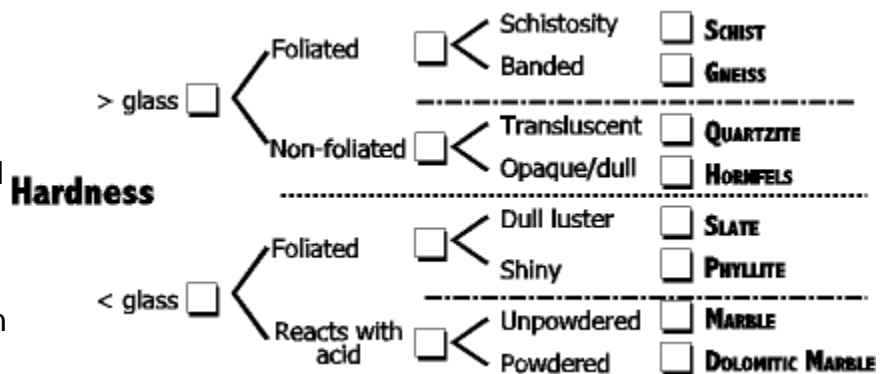
Rocks are identified by making a series of decisions about their properties, such as texture, composition, hardness, etc. This requires the ability to observe and recognize these properties. Two of the most common properties to determine classification of a rock are hardness and reaction with dilute hydrochloric acid (see [Hardness And Acid Reaction Tests](#)).

The [Key To Common Metamorphic Rocks](#) allows identification of a rock based on its physical properties. We are able to do this because the properties do not overlap completely. You can see this on the key through the color coding for the properties. None of the colors overlap completely.

For example, the [Key](#) has eight rocks; four of these scratch glass and four do not, so immediately we can divide the rocks into two categories. But also notice that four of the rocks are foliated, and of these two are harder than glass and two softer than glass. Thus, if we have a foliated rock harder than glass it can only be one of two rocks - schist or [Gneiss](#). We distinguish them further based on their texture.

#### Observation Chart One

This chart leads a person systematically through a series of observations and decisions. Its organization is extracted directly from the key, and if done correctly will lead a person to the single correct identification.



(Click on picture for a full page version - [Pdf Version](#)).

#### Observation Chart Two

This chart does not have as many forks in it (i.e. dichotomous decisions) and at the end requires

returning to the key for descriptions to make the final decision. It will connect better the use of the observation chart and the key.



(Click on picture for a full page version - [Pdf Version](#)).

### Observation Chart Three

A variation on chart two.

(Click on picture for a full page version - [Pdf Version](#)).

<b>Harder than glass</b> <input type="checkbox"/>	➔	<b>Foliation</b> <i>circle correct rock</i>	
		Yes <input type="checkbox"/>	➔ <b>SCHIST or GNEISS</b>
		No <input type="checkbox"/>	➔ <b>QUARTZITE or HORNFELS</b>
<b>Softer than glass</b> <input type="checkbox"/>	➔	<b>Foliation</b>	
		Yes <input type="checkbox"/>	➔ <b>SLATE or PHYLLITE</b>
		No <input type="checkbox"/>	➔ <b>LIMESTONE or DOLOMITIC MARBLE</b>

### Observation Chart Four

This chart lets you take organized notes for further identification.

(Click on picture for a full page version - [Pdf Version](#)).

<b>Hardness</b>	<b>Foliation ?</b>	<b>Acid Reaction</b>
<b>Other Properties</b>		<b>Rock Name</b>

### Observation Chart Five

A more complex observation table.

(Click on picture for a full page version - [Pdf Version](#)).

<b>Rock Texture</b> <input type="checkbox"/> Foliation ( <i>layering</i> ) <input type="radio"/> Smooth, flat surfaces <input type="radio"/> Schistose - coarse, rough <input type="radio"/> Slate or muscovite dominated <input type="checkbox"/> Mineral Banded <input type="checkbox"/> Granular <input type="radio"/> Visible grains <input type="radio"/> Fine grained	<b>Hardness</b> <input type="checkbox"/> > Glass <input type="checkbox"/> < Glass <input type="checkbox"/> < Fingernail	<b>Mineral Identification</b> <i>Description</i> <i>Name</i> <hr/> <hr/> <hr/>	<b>Other</b>  Metamorphic Facies  Rock Name	
	<b>Acid Reaction</b>  <hr/>	<b>Color</b>  <hr/>		

Contributed by Lynn Fichter  
Thursday, October 23, 2014

Source: <http://www.sepmstrata.org/page.aspx?pageid=682>

Reprinted with permission from Hayley Cooney - SEPM – Society for Sedimentary Geology



# Christmas Party – December 2017

Photos by Pat & Bruce



Smaller party than normal due to illness among our ranks and throughout the community, but those of us healthy enough to brave the day enjoyed good fellowship, fine food and a gift exchange that held some twists, turns and highly coveted prizes...who knew a slab of smoked salmon would be such a hit?



# Christmas Party – December 2017

Photos by Pat & Bruce





## Reservoir Capacity of Igneous, Sedimentary, and Metamorphic Rocks

**Task:** Determine which category of rock (igneous, sedimentary, metamorphic) has the ability to hold oil and by implication natural gas.

### Materials

Sandstone, limestone, marble, and shale rock samples

Disposable plastic plates

Eyedropper

Watch or clock

Mineral oil



### Procedure

1. Place each rock sample in separate dishes.
2. Fill the medicine dropper with the mineral oil. Place 5 drops of oil on each rock sample.
3. Observe and record the time required for the oil to be soaked up by each of the rock samples.

Name of Rock Sample	Time required to Soak up the Oil
<b>Sandstone</b>	
<b>Limestone</b>	
<b>Marble</b>	
<b>Shale</b>	

### Research Questions

- Which rock sample soaked up the oil the fastest?
- Which rock held the least oil?
- Which type of rock would probably make the best oil reservoir?
- Based on the results of this experiment, if you were a petroleum geologist which rock strata would you look for reservoir rock that might contain deposits of oil and natural gas?
- Why is porosity (pore space) in rock layers important to oil and natural gas accumulation?
- Why is oil and natural gas called fossil fuels?

**Things to Remember:** Some sedimentary rocks are **porous**, like a sponge. Tiny particles of sand are held together with rock "cement." Pressure, time and sediments create this natural type of "cement."

Oil and natural gas form from decayed plant and animal material. Over time, the many layers of sand and sediments are compacted into **sedimentary rock**. Tiny spaces, or **pores**, exist between the particles that enable the rock to hold a liquid. Petroleum oil is frequently mixed with water underground and, since oil floats on water, the oil tends to migrate upward. Sometimes, though, it comes up against **impermeable rock**, through which it cannot pass. Then it becomes trapped and slowly accumulates, forming a reservoir between the particles that form rock.

Sedimentary (sandstone & limestone) rocks are the most common **reservoir rocks** because they have more porosity than most igneous and metamorphic rocks. In summary, a rock with pores is referred to as porous. This means it has tiny holes through which oil and gas may flow. Reservoir rocks must be porous, because oil and natural gas can only become trapped inside the pores.

# Letter Scramble

Unscramble the letters of these mineral names.



**oretufl** \_\_\_\_\_

**evlsri** \_\_\_\_\_

**rpjsae** \_\_\_\_\_

**ytierp** \_\_\_\_\_

**dlog** \_\_\_\_\_

**rmealde** \_\_\_\_\_

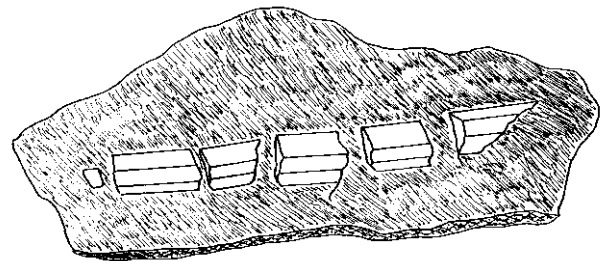
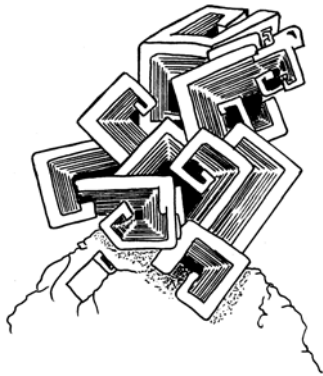
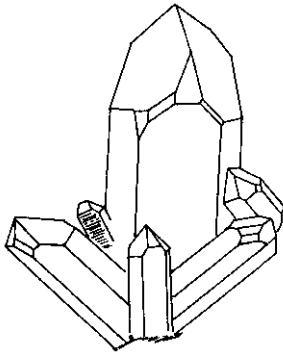
**zuqatr** \_\_\_\_\_

**cclatei** \_\_\_\_\_

**amsytteh** \_\_\_\_\_

**gmypus** \_\_\_\_\_

**Inagea** \_\_\_\_\_



Source: <http://www.kidsloverocks.com/pdf/Activity01.pdf>

Answers: flourite, silver, jasper, pyrite, gold, emerald, quartz, calcite, amethyst, gypsum, galena.



# Who What Where When Why How

## January Birthdays

**JAN 20 Joan Blackwell**

## Random Rock Facts

**Lithification** is the processes by which sediment is converted into sedimentary rock. These processes include **cementation** and **compaction**.

***cementation** – the process by which clastic sediment is lithified by precipitation of mineral cement, such as calcite cement, among the grains of the sediment.*

***compaction** – tighter packing of sedimentary grains causing weak lithification and a decrease in porosity, usually from the weight of overlying sediment.*

Source: <http://imnh.isu.edu/digitalatlas/geo/basics/geology.htm>

## 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**  
334-806-5626

**Vice President – Garry Shirah**  
334-671-4192

**Secretary – Bruce Fizzell**  
334-577-4353

**Treasurer – Diane Rodenhizer**  
334-447-3610

**Bulletin Editor – Joan Blackwell**  
334-503-0308  
Tfavorite7@aol.com

**Webmaster – Pat LeDuc**  
334-806-5626

**Membership Chair – Diane Rodenhizer**  
334-447-3610

**Show Chair – Jeff DeRoche**  
334-673-3554

**Field Trips Chair – Garry Shirah**  
334-671-4192

**Hospitality Chair – Vacant**

**Club Hostess – Vacant**

**Club Liaison – Garry Shirah**  
334-671-4192

**Website:** [www.wiregrassrockhounds.com](http://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 10<sup>th</sup> of each month and your inclinations will be made known to the membership in the next bulletin.**

**N. J. Blackwell**  
28 Lakeview Trail, Apt. C  
Daleville, AL 36322  
Phone: 334-503-0308  
Email: Tfavorite7@aol.com

## Annual Dues

Single \$15  
Family \$20

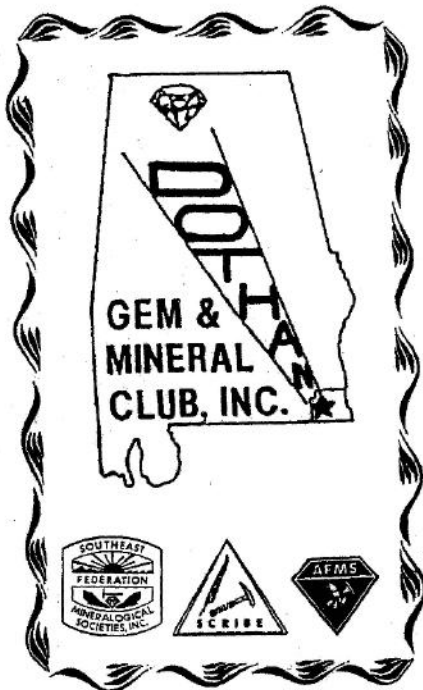
## Refreshments

**JAN 28 – Potluck Refreshments**

# ROCKHOUNDS HERALD

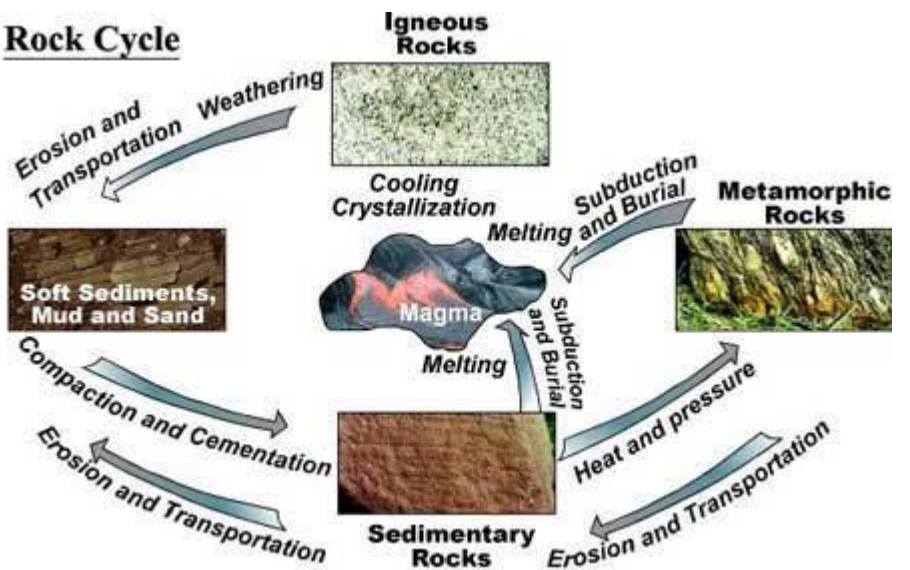
Editor – N. J. Blackwell  
28 Lakeview Trail, Apt. C  
Daleville, AL 36322

[www.wiregrassrockhounds.com](http://www.wiregrassrockhounds.com)



## Where you might hear...

### Rock Cycle



Source: <http://imnh.isu.edu/digitalatlas/geo/basics/geology.htm>

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