

ROCKHOUNDS HERALD

920 Yorktown Road, Dothan, AL 36301-4372

www.wiregrassrockhounds.com

January 2016

Garnet Almandine $\text{Fe}_3\text{Al}_2(\text{SiO}_4)_3$ **Garnet** Andradite $\text{Ca}_3\text{Fe}_2(\text{SiO}_4)_3$ **Garnet** Grossular $\text{Ca}_3\text{Al}_2(\text{SiO}_4)_3$ **Garnet**
Pyrope $\text{Mg}_3\text{Al}_2(\text{SiO}_4)_3$ **Garnet** Spessartine $\text{Mn}_3\text{Al}_2(\text{SiO}_4)_3$ **Garnet** Uvarovite $\text{Ca}_3\text{Cr}_2(\text{SiO}_4)_3$

Words from...

The President

Happy New Year everyone!! We had a good time at the Christmas party. We ate, chatted, and exchanged some great gifts. JoAn Lambert cooked a delicious ham, we had a bunch of salads and as usual, a ton of desserts. Jeff DeRoche made a small miner from a bunch of recycled parts like flashlight bits. He presented it to Arnie Lambert at the Christmas party. The miner was such a clever idea and he is just too cute. It just goes to show how really talented our club members are. There is a picture of Jeff, Arnie and the miner robot on the following page of the newsletter.

Due to technical issues, however, our usual two-page spread of photos from our monthly gatherings is absent from this issue. Look for it to return next month.

Just a reminder to everyone that the Panama City Gem and Mineral Show will be held on Saturday the 23rd of January from 9 till 5 and Sunday the 24th of January from 9 till 4. It will be at the Bay County Fairgrounds. A few of our club members will be vending there so make sure you pop by. The show is always well attended and they always have some fabulous stuff. A great place to stock up on shiny!!

Hope to see everyone at our meeting on the 24th but will understand if you are shopping at the Panama City show.

Pat

Announcement

Gem Tree Class Postponed – The first class gem tree class that was scheduled to take place immediately following our meeting on January 24th has been postponed. An alternative date will be announced soon.

Membership Dues – Diane Rodenhizer will be accepting checks and cash from now until the February 28 meeting. If you can't make it to at least one of the next two meetings, please send a check (no cash, please) to: Diane Rodenhizer, 478 Private Road 1106, Enterprise, AL 36330.

Upcoming Shows

January	23 – 24	Panama City Gem & Mineral Society	Panama City, FL
February	6 – 7	Central Brevard Rock and Gem Club	Merritt Island, FL
February	20 – 21	Treasure Coast Rock & Gem Society	Vero Beach, FL
February	27 – 28	Mississippi Gem and Mineral Society	Jackson, MS
February	27	Imperial Bone Valley Gem, Mineral & Fossil Society	Lakeland, FL
February	28	The Villages Gem & Mineral Society	The Villages, FL

Special Gift Presentation



Member and Show Chairman, Jeff DeRoche, has recently ventured into a new hobby of constructing robots from spare parts and miscellaneous pieces of hardware. In recognition for all the years of support, guidance and friendship shown him by Club Founder and longtime member, Arnie Lambert, Jeff took a few moments at the club's recent Christmas party to make a special presentation of a miner robot he built for Arnie with attributes that reflect various aspects of Arnie's life, career and personality. Of special significance is the helmet and headlamp, reminiscent of the gear often sported by Arnie during his rock collecting outings over the decades.

Learning Series Direction for 2016 – by Editor

So what can you expect to see in the *Learning Series* in 2016? With this issue, we finish up a year-long look at the Rocks of the Southeastern U. S. and the Minerals of the Southeastern U. S. based on materials obtained from *The Teacher-Friendly Guide to the Geology of the Southeastern U.S.* by J. E. Picconi.

This year I plan to do more standalone articles on a variety of topics. Think of it as a potpourri of rock-related information. Some articles will be on gemstones—the aspect of collecting that got me interested in rockhounding many years ago. Some will be on current news about rare finds from around the world. Some will be “how to” articles and tips on moving your rock, mineral, gemstone and fossil collecting to a new level.

As always, however, I'd welcome your suggestions and your submissions.

Joan

Rock Humor ?

Bubba and Rocky went mineral collecting in Canada for a week, and came back with only four poor quartz crystals. “The way I figure it, those crystals cost us \$400 each!” Rocky said.

Bubba replied, “Well, at that price, it's a good thing we didn't find any more of 'em than we did!”

Source: <http://mineralhumor.homestead.com/OldJokes.html>

Mineral Resources of the Coastal Plain: Region 3



Mineral Deposit Processes

The dominant processes taking place in the Atlantic Coastal Plain and Gulf Coast of the Southeastern United States are sedimentary, weathering and erosion processes. Erosion and deposition by modern and ancient rivers, and along shorelines during higher sea levels, formed numerous placer concentrations of heavy minerals along the inland margin, interior, and offshore of the Coastal Plain.

The Southeast has been largely tectonically inactive for about 150 million years. The dominant geologic processes operating during this time have been weathering and erosion. Most of the Coastal Plain region has eroded to a gently-tilted plain. Fluctuating sea levels in the Cretaceous, Tertiary, and Quaternary, left thick, extensive sedimentary deposits along the Coastal Plain.

Metallic Mineral Deposits

Although not mined commercially, numerous concentrations of heavy mineral sands have been identified in ancient river and beach deposits along the western margin of the Coastal Plain and offshore on the continental shelf. Deposits of rutile, ilmenite, monazite, zircon (ZrSiO_4), and gold have been investigated in North and South Carolina. Although minor production has occurred in the past, these deposits are currently considered not economical to mine, occur in environmentally sensitive or urban areas.

Non-Metallic Mineral Deposits

A residual product of weathering in the Cretaceous carbonate rocks is bauxite. Bauxite is a clay-like mixture of several minerals, but dominantly gibbsite ($\text{Al}(\text{OH})_3$). Mined primarily as an ore of aluminum, most bauxite ore contains 45-55% Al_2O_3 . Bauxite deposits are found in Georgia, Alabama, Tennessee, and Virginia. Small scale production has continued in Alabama to the present. Southeast bauxite deposits are generally small and of limited potential.

Phosphate is present in Coastal Plain sediment ranging in age from the mid-Tertiary through the Quaternary, and extends along the Atlantic coast from the Chesapeake Bay to Florida. The highest grade and most extensive deposits occur in the Miocene formations of North Carolina and Florida, which together account for about 95% of domestic production of phosphate and about half of global production. Phosphates are used primarily to make fertilizers, but are also used in the manufacture of phosphoric acid, detergents, food additives, pesticides, soft drinks, and other products. The Aurora phosphate operation at Lee Creek in Beaufort County, North Carolina is the largest integrated phosphate mining and chemical plant in the world (Figure 5.18).

There are thick salt (NaCl) sequences underlying much of the Gulf Coast related to early rifting of Pangea and the formation of the Gulf of Mexico during the Triassic and Jurassic periods. Salt is currently only mined, though, in Alabama. Bentonite is currently mined in Mississippi and

Alabama. Bentonite is an altered volcanic ash that originated from Cretaceous volcanoes in the central and western US. The ash was blown into the Southeast region by prevailing winds.

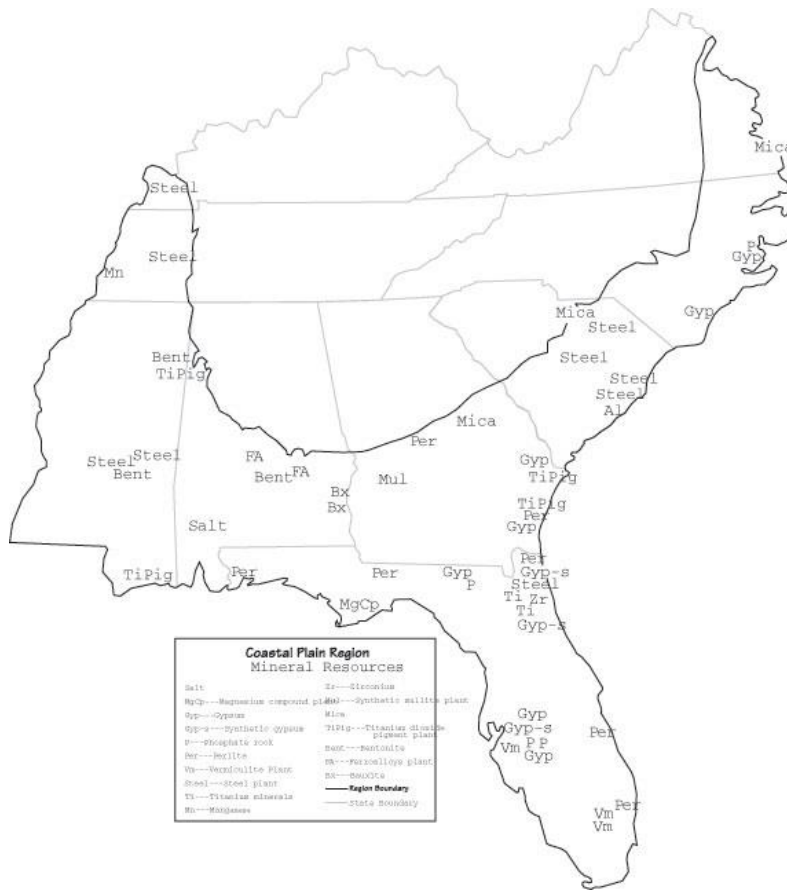


Figure 5.17: Principal current mineral-producing localities of the Coastal Plain region. Figure adapted from [1998 United States Geological Survey State Mineral Information](#).

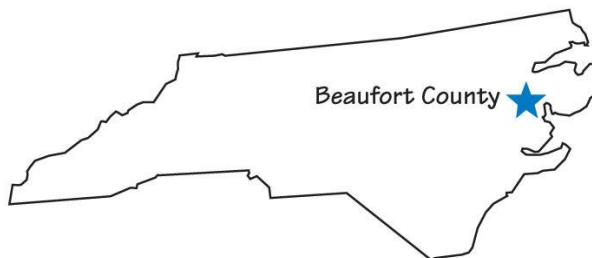


Figure 5.18: The largest integrated phosphate mine and chemical plant in the world is located in Beaufort County, NC.

Why are there Steel Plants in the Coastal Plain?

There are several reasons, depending on when and where you are looking. Southeastern iron foundries and steel mills of the 17th to 19th centuries were kind of all over the place, but many were fueled by iron ore mined from coastal swamps and Triassic basin coal. Steel mills of the late 19th and 20th centuries were more dependent on imported iron and coal, and tended to be near the ocean on navigable rivers. They also need lots of fresh water.

Source: <http://www.geology.teacherfriendlyguide.org/index.php/minerals-se/region-3-coastal-plain>



Mineral Hardness

The hardness of a mineral is a way of describing how easy or difficult it is to scratch the mineral. It is used, in combination with the other physical properties, to help identify a mineral specimen.

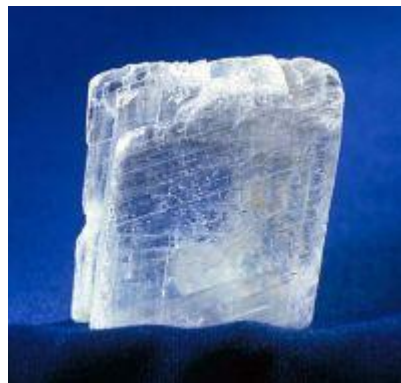
Mineralogists realized that a way to measure the hardness of minerals was needed. In 1824, a mineralogist from Austria named Friederich Mohs chose 10 common minerals and arranged them in order from softest to hardest. This is called the Mohs Scale of Hardness and today is used by mineralogists all over the world.

The Mohs Scale of Hardness:

1. Talc



2. Gypsum



3. Calcite



4. Fluorite



5. Apatite



6. Orthoclase Feldspar



7. Quartz



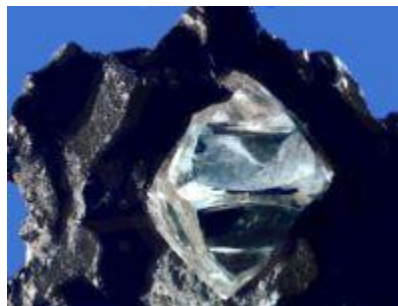
8. Topaz



9. Corundum



10. Diamond



Source: http://www.kidsloverocks.com/html/mineral_hardness.html

Who What Where When Why How

January Birthdays

JAN 1 Aida Ward

JAN 4 William Merino

JAN 12 Michael Merino

JAN 20 Joan Blackwell

Random Crystal Facts

The **monohedral** crystal form is also called a **pedion**. It consists of a single face which is geometrically unique for the crystal and is not repeated by any set of symmetry operations. Members of the triclinic crystal system produce monohedral crystal forms.

Source: <http://dave.ucsc.edu/myrtreia/crystal.html>

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
Tsavorite7@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

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
28 Lakeview Trail, Apt. C
Daleville, AL 36322
Phone: 334-503-0308
Email: Tsavorite7@aol.com

Annual Dues

Single \$15
Family \$20

Refreshments

JAN 24 – Potluck Refreshments

ROCKHOUNDS HERALD

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

www.wiregrassrockhounds.com



Where you might hear...

The discipline of crystallography has developed a descriptive terminology which is applied to crystals and crystal features in order to describe their structure, symmetry, and shape.

This terminology defines the crystal lattice which provides a mineral with its ordered internal structure. It also describes various types of symmetry.

By considering what type of symmetry a mineral species possesses, the species may be categorized as a member of one of six crystal systems and one of thirty-two crystal classes.

Source: <http://dave.ucsc.edu/myrtreia/crystal.html>

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