

ROCKHOUNDS HERALD

920 Yorktown Road, Dothan, AL 36301-4372

www.wiregrassrockhounds.com

October 2014



Words from...

The President

Did you celebrate National Fossil Day on October 15? Whether you did or didn't, you can probably pick up a fossil or two for your collection at one of the many gem and mineral shows occurring in "our neighborhood" in the next few weeks. There's so many, you literally can't throw a rock without hitting one (pun intended).

As you read through this issue, you'll see below that we've had a new member born into the club since the last meeting. What a cutie! Congratulations to the Rockwell family.

Speaking of the last meeting, it was a great start for the fall season. We had a very informative program from the Pollans and some fascinating items for Show & Tell. This month's meeting should be equally interesting. Hope to see you all on **Sunday, October 26th**.

Jeff

Announcements

Birth Announcement – April and Allen Rockwell were blessed by the arrival of Addison Patricia on September 8. She weighed 11 pounds, 7 ounces, and was 22 inches long. As you can see from the attached picture, she's quite the beauty, AND she already has that "rockhound-looking-up-under-a-ledge" posture down cold. Welcome to the rock club, little lady!



Upcoming Shows

October 17 – 19	Knoxville Gem & Mineral Society	Knoxville, TN
October 17 – 19	Treasures of the Earth, Inc.	Virginia Beach, VA
November 1 – 2	Tampa Bay Mineral & Science Club	Plant City, FL
November 6 – 8	Kingsport Gems & Minerals Society	Gray, TN
November 7 – 9	Mississippi Gulf Coast Gem & Mineral Society	Pascagoula, MS
November 8 – 9	Canaveral Mineral & Gem Society	Melbourne, FL
November 21 – 23	Columbia SC Gem & Mineral Society	Columbia, SC
November 21 – 23	Cobb County Gem & Mineral Society	Marietta, GA
November 22 – 23	Gem & Mineral Society of the Palm Beaches	West Palm Beach, FL

Meeting Minutes – September 2014 – by Secretary

Our first fall meeting was called to order by President Jeff DeRoche at 2:12 PM. There were 23 club members in attendance for the meeting. Jeff wished a happy birthday to all the club members born in September and also announced the birth of our newest rockhound, Addison Patricia Rockwell, born on September 8.

CORRESPONDENCE: The club received the usual newsletters from our fellow rock clubs. We also received the AFMS newsletter and two catalogs for Heritage Auctions. Jeff circulated the catalogs so we could all see the types of specimens for sale.

OLD BUSINESS: Jeff asked that the few remaining show signs be returned so the dates can be changed for next year's show. As we have not had a meeting since May, the May meeting minutes were approved at this meeting, without changes. Diane Rodenhizer presented the June-September treasury report.

NEW BUSINESS: Grady and Esther Dunn's daughter, Linda, notified the club that Esther had a hip replacement, but has had some difficulties and is back in the hospital. She asked that we keep Grady and Esther in our thoughts. Jeff told the club we will need a new club host/hostess. Laural Meints is no longer able to fill the position, so we will all have to pitch in until someone volunteers to fill that spot.

Since dates for next years show are set, it is time to get our advertisements in to the various magazines. Diane will take care of getting the notices sent. The club will also be mailing postcards out to our list of vendors so that they will have the dates for the show well in advance. Jeff will be the chair for next year's show, so club members should let him know if they want to reserve tables. Chris Wisham bought several pounds of prairie agates to tumble for the Kids Corner and several members volunteered to help get them tumbled.

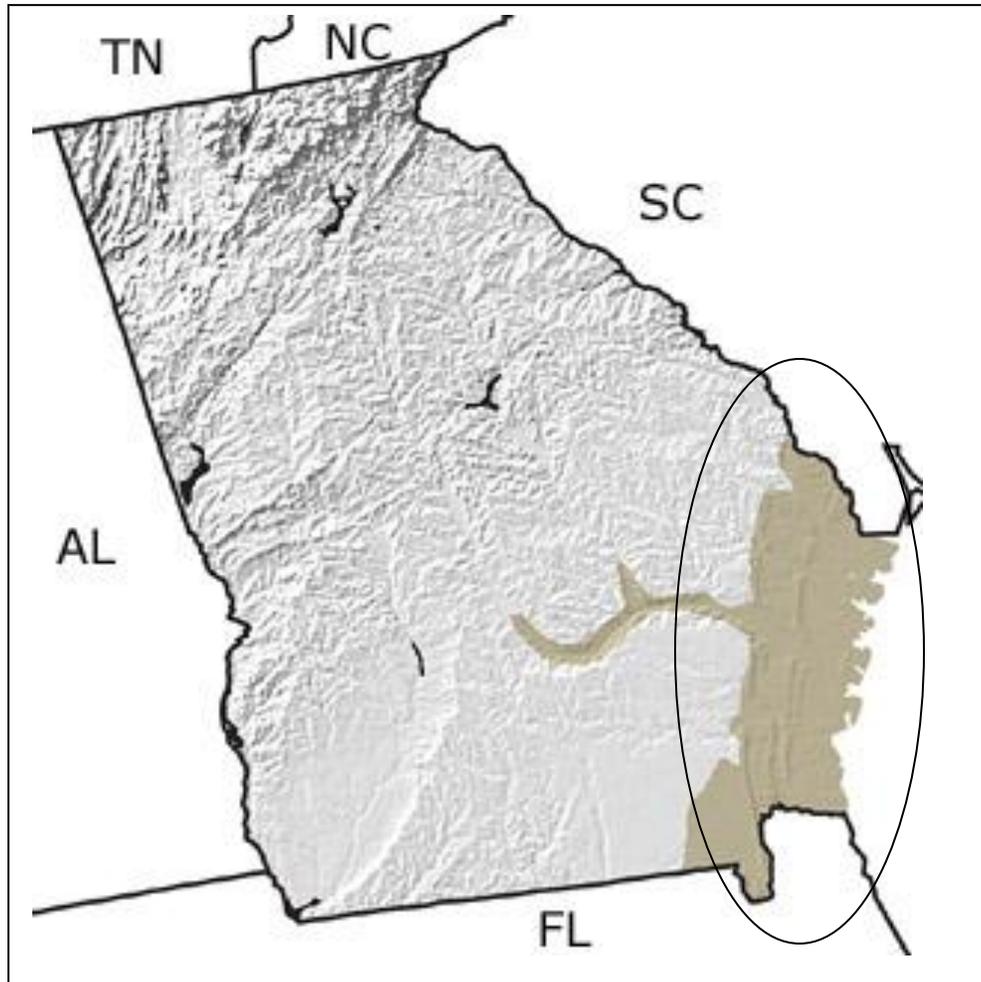
PROGRAM: Today's program, Geology & Paleontology, was presented by Neil and Abbey Pollan. Neil described how he collected and made casts of many fossils while working on his degree. He and Abbey brought several boxes of fossils and a bunch of books for us to look over. There were bones and teeth from Big Bend, TX, and fossils from the Birmingham area. They also showed us a small armor plate from a dinosaur, amber with insects, petrified wood, agatized coral and dino bones. Neil was also able to make casts of teeth and bones from a museum in South Dakota. The club broke for refreshments and regrouped to look over Neil and Abbey's extensive collection.

SHOW & TELL: As usual, we had a great Show & Tell. Arnie Lambert brought some cabochons he cut from dinosaur bone. He also displayed crystals and snake vertebra that he had mounted on the heads of pins. I brought a quart of garnets and a pint of staurolites that I collected during my William & Holland Mineral Identification class recently. Joe and Margie Cody took a vacation out west and, of course, did some collecting on the trip. They brought petrified wood from the DoBell Ranch near the Petrified Forest National Park and trilobites from Utah, some of which Joe later traded to Ben Childress for arrowheads. Joe said that the Bug House in Delta, Utah is the place to go for petrified bug specimens. Margie and Joe also had a huge pine cone they found in San Bernardino, CA.

Ken Wilson showed some of the cleaned up petrified wood he collected on our last outing. He told us he got stuck on a berm on the way out that day and that Arnie had to pull him out. (Looks like BMWs are not the only vehicles that are too low for that road ☺.) Anne Trice passed around a carved cabochon she got from Diane and suggested that we might need a carver to give us some lessons. Door prizes went to George White, Ellen Webber, Garry Shirah and Roger Boon.

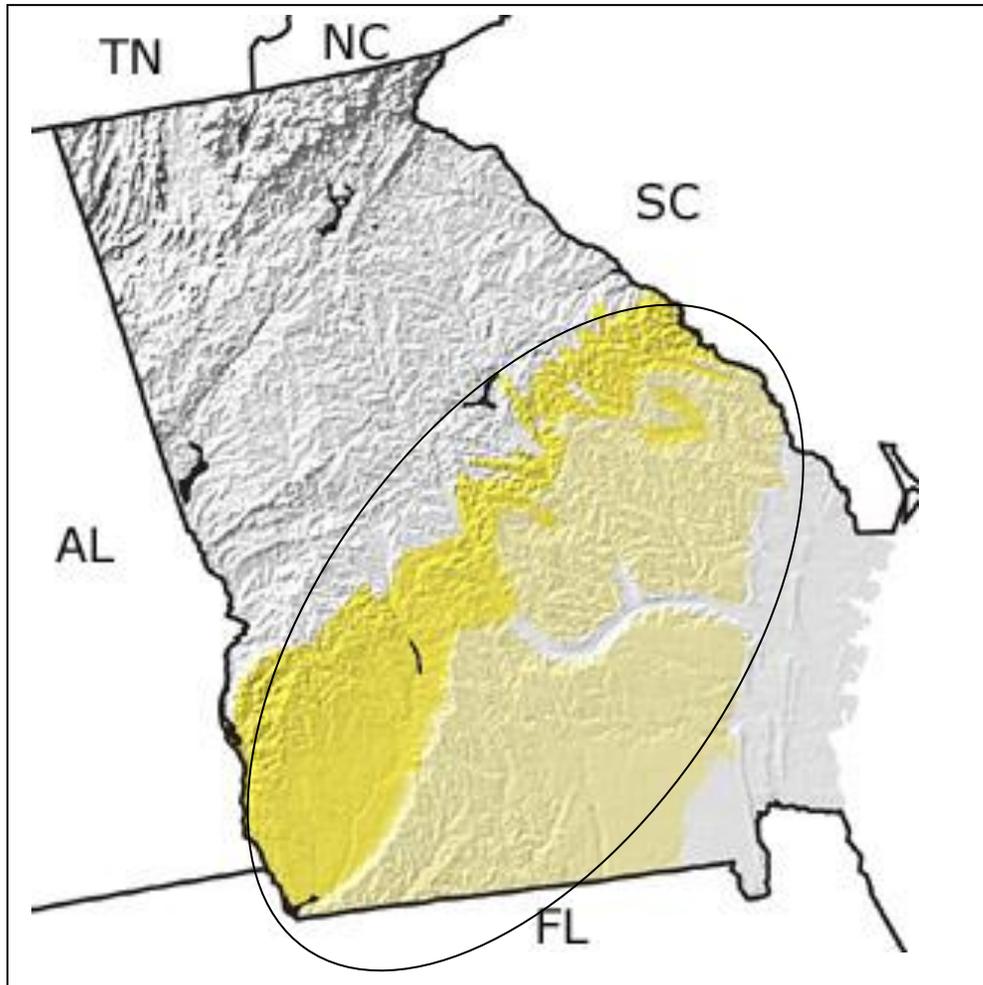
Respectfully submitted by Pat Leduc

Georgia – Cenozoic Eras



Quaternary

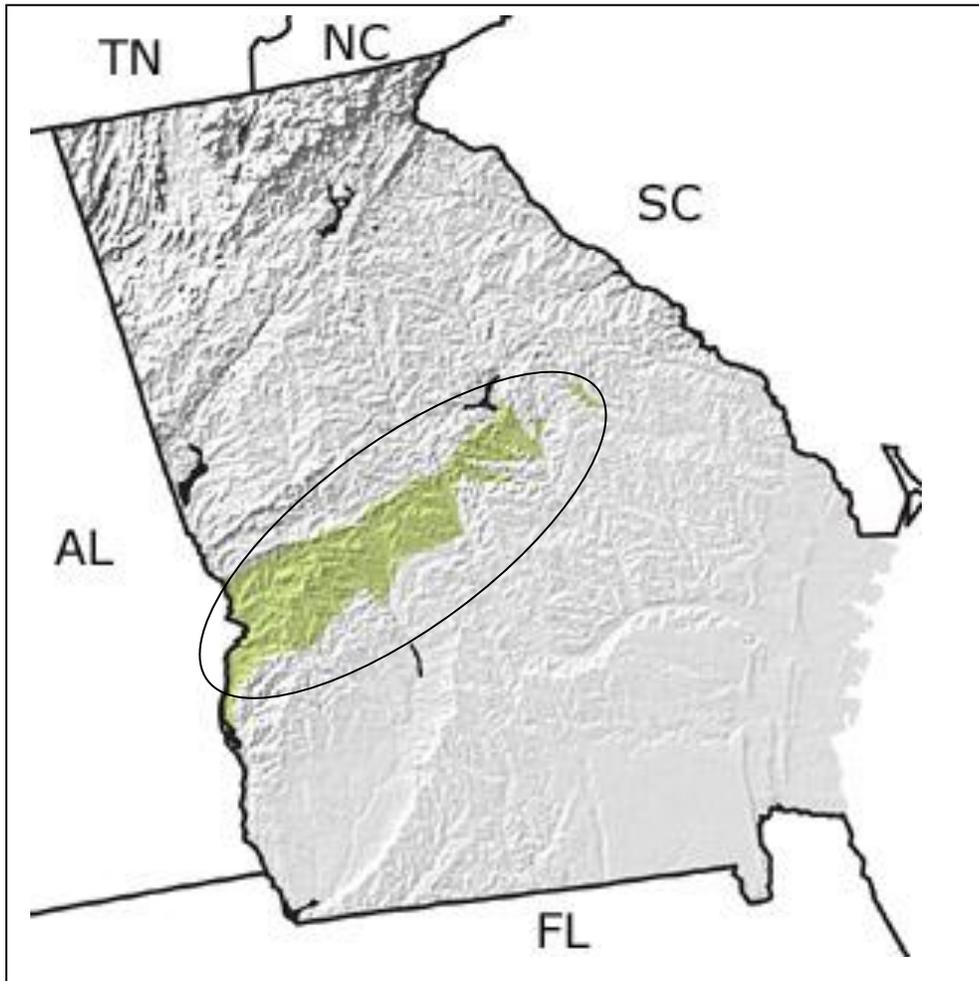
Most of Georgia remained high and dry as Early Quaternary (Pleistocene) ice sheets expanded and contracted causing sea level to fluctuate. Barrier islands formed along the present day coast and shifted position as sea level changed, leaving behind sandy sediments as a record of their migration. Estuaries associated with the barrier islands left deposits as well. Forests and grasslands developed throughout much of Georgia, and many large mammals, such as mammoths and giant ground sloths, lived in these environments.



Tertiary

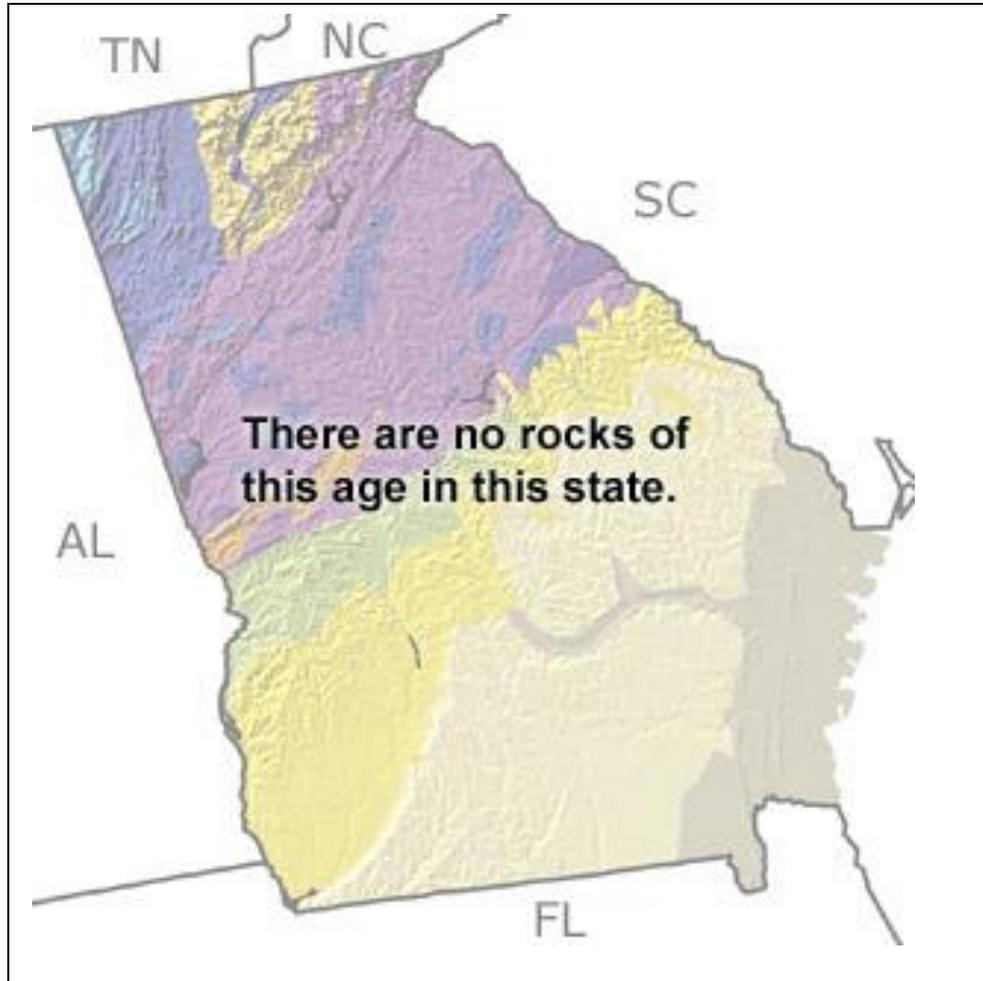
During the Tertiary, sea level decreased from the high mark it reached during the Cretaceous, but much of the southern half of the state still consisted of shifting shallow coastal marine environments. Rivers brought in large amounts of mud and sand from the eroding Appalachian Mountains to the north. The muds were deposited in estuaries and other coastal environments in thick layers that later became economically valuable clay deposits. Small reefs formed in marine environments where there was little mud or sand being deposited. Fossils from the Tertiary include corals, sea urchins, whales, and the giant shark, *Carcharodon megalodon*.

Georgia – Mesozoic Eras



 **Cretaceous**

With sea level high throughout much of the Late Cretaceous, most of Georgia was under water, and shallow marine environments developed over its southern half. Sand from the eroding Appalachian Mountains in the north was carried by rivers southward into these waters, creating sandy and muddy shorelines in places. Large crocodiles and fish lived in the coastal environments, along with shellfish and burrowing shrimp. Dinosaurs roamed the upland environments, and their remains sometimes washed out to sea. This map indicates a band of Cretaceous rocks across the central part of the state.



 **Jurassic**

No Jurassic deposits are known in Georgia.

 **Triassic**

Few Triassic deposits are exposed at the surface in Georgia. Although not shown on this map, some igneous intrusions are seen in the region around Stone Mountain, just east of Atlanta. These intrusions formed when splits in the crust, caused by tectonic activity, filled with molten material. No Triassic fossils are known from Georgia.

Club Meeting – September 2014

Photos by Pat



Nice crowd for the first meeting of the fall. Excellent program, too.

Club Meeting – September 2014

Photos by Pat



Wow!



Amber The Mystery Stone

Amber's rock-hard consistency doesn't quite fit with the deep transparent yellow characteristic. The fact that it often contains the remains of ancient bugs adds another challenge to classification. Is this animal, vegetable or mineral? Is it a fossil or does it simply contain fossils? Many debates continue to rage over the classification of this beautiful, ancient gift of nature, but for us amateurs who love the natural clarity and beauty, just understanding a bit about how it came to be does not warrant all the controversy. Suffice it to say, we just want to know a little about what it is and how it came to be.



What is Amber? And How Did It Get Here?

Amber is neither a crystal nor a mineral. It is the hardened sap of an ancient tree. It started out as resin secreted to heal a wound. The resin protected the tree from a certain death by making a sticky, protective barrier against fungus. When the tree eventually fell and began to decay, the sap remained. Buried under layers of vegetation, earth and, sometimes, water, the sap continued to harden from the pressure and heat that naturally builds up in such conditions. This fossilized resin is the final product of millions of years of slow processing.

Picture this scenario:

A fly lands on a tree branch in an area that is now the Baltic sea. While looking for food it steps in sticky sap that the tree has made to protect itself from fungal infection. As the fly struggles to escape it becomes more and more entombed in the sap until it is completely engulfed and suffocates. The tree eventually dies and falls into the swampy water from which it grew. Over the course of millions of years the tree along with countless others becomes a coal deposit and the sap with our fly inside is polymerized and hardened into amber. As more time passes the coal bed is submerged as the sea level rises. Eventually the currents uncover the coal bed, slowly eating into the Surface, little by little. When the erosion reaches the amber it floats to the surface because it is lighter than the salty water. It is then washed ashore where it can be found.

In Glass Houses

Being a sticky sap in its beginnings, fossil resins often contains the remnants of both plant and animal parts. If you're lucky, you may find a perfectly preserved specimen. Such specimens have allowed scientists to determine that amber is produced by both conifers and deciduous trees.

Don't Rush Me Like other minerals and rocks, this fossil is the end result in a slow process that creates other fossil forms. If the secretions are very young or undeveloped, they may simply be a hardened resin; Copal is the next stage of development. Copal may be large and may also have remnants of insects or small sea animals present. But copal is not usually as clear as true amber and may be treated to help cure some of these imperfections.

Uses

It has long been used for jewelry because of its natural beauty. As far back as the ancient Greeks, it has been written of, many times referencing claims to promote good health or ward off evil spirits. Today, this stone continues to be prized for jewelry and it is used in the construction of smoking devices as well.

For a collector, it is important to find a reputable dealer who can carefully help you see the difference between true amber, copal and even plastic imitations.

Amber's Geographic Dispersion

Amber comes from throughout the world, even the Arctic. However, in terms of commercial availability, the Baltic area of Europe produces vast amounts, followed by the Dominican Republic in a distant second, with minor amounts coming from Central and South America, and more specifically, Mexico and Colombia, respectively. Amber from other localities is miniscule.

Baltic Amber

An enormous amount of fossil resin is extracted on the shoreline of the Baltic Sea, and these strata are dated to be Eocene in age, give or take a few million years, thus making it some of the oldest amber that is available in commercial quantity. The largest Baltic amber mine is in Kaliningrad, Russia, but Baltic amber is also found in Lithuania, Latvia, Estonia, Poland, Russia, and sometimes washes ashore far away in Denmark, Norway, and England. Fossil inclusions are relatively rare, almost always in isolation and usually tiny, and the amber is normally occluded with botanical debris and bubbles; for this reason, fossil specimens are best made viewable in pieces cut to small size prior to polishing, and pictures many times require a trinocular microscope.

Dominican Amber

Geological data for amber from sedimentary deposits in the Dominican Republic predict an age dating to the Oligocene, in the range of 20 to 30 million years old, presuming the resin is a primary *in situ* deposit, and not a secondary deposit by transport/erosion etc.

Dominican amber from Cotui, however, is Pliocene or Pleistocene, has larger and more insects, and is otherwise indistinguishable from older material from the dated sedimentary deposits. Since resin-producing trees are still abundant in this tropical island area, resins of any age are possible. The older fossil resins are from deep mines in the hillsides, and the extraction can be a dangerous proposition, with risk of being buried in a cave in. The insect inclusions in Dominican amber are fairly abundant, the insects larger, and the amber of higher clarity than found in Baltic amber. Though uncommon, fossil associations are found more frequently in Dominican amber.

Colombian Amber

Far and away the most fossiliferous amber originates in Colombia, albeit it has become fairly widespread that all fossil resin from Colombia is called copal. The amber versus copal distinction is lost on many geologists and paleontologists that are aware that scientific data is unavailable to determine the age of fossil resins from this region. The consensus age estimate seems to be Pleistocene (up to 2 million years old), but estimates range to the Lower Miocene (about 20 million years old). Though geological studies are unlikely soon in this region that is controlled by drug cartels, it seems safe conjecture that there is a large range of age across different deposits, similar to that of the Dominican Republic. In the Dominican Republic, mine cave-ins are a danger for some of the older deposits; in Colombia the danger might be AK47's of the drug producers. Whether amber or copal, young or old, the fossil insects and other arthropod inclusions and their associations are truly sublime in Colombian amber. Perhaps the most impressive aspect of Colombian amber to those with a scientific propensity is the wonderful fossil associations. So many species are often in association that the specimen will represent an ecological cross section of an ancient rainforest.

Source: http://www.fossilmuseum.net/Tree_of_Life/FossilAmber.htm

Who What Where When Why How

October Birthdays

OCT 2 Pat Leduc
OCT 8 Maxine Johnson
OCT 17 Gary Meints
OCT 19 Anne Trice

Random Fossil Facts

Forty million years ago, whales looked very different than they do today--as witness, the 12-foot-long *Georgiacetus*, which possessed prominent arms and legs in addition to its sharp-toothed snout. *Georgiacetus* was named after the state of Georgia, but its fossil remains have been found in Alabama and Mississippi as well.

Georgiacetus was discovered in 1983 during the construction of the nuclear power plant Plant Vogtle in Burke County, Georgia (in the Lutetian Blue Bluff Formation).

Sources: <http://en.wikipedia.org/wiki/Georgiacetus>
<http://dinosaurs.about.com/od/Dinosaurs-by-State/tp/The-Dinosaurs-And-Prehistoric-Animals-Of-Georgia.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

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 – Bruce Fizzell
334-577-4353

Hospitality Chair – JoAn Lambert
334-792-7116

Club Hostess – Vacant

Club Liaison – Garry Shirah
334-671-4192

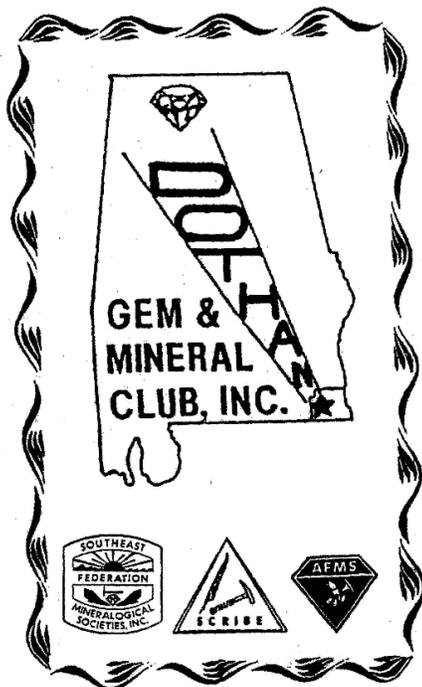
Refreshments

OCT 26 – Club Potluck

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Where you might hear...

The Southeast can be characterized as a "smorgasbord of fossil seafood" because many of the rocks contain fossils of marine invertebrates such as brachiopods, echinoderms, bivalves, and gastropods.

There are a few fossil remains of dinosaurs and other land-dwelling animals in the Southeast, but these are relatively rare.

Most of the Southeast reflects inland sea level rise and fall throughout the Paleozoic, or sea level changes affecting the Southeast Coastal Plain from the Cretaceous to the Quaternary. Therefore it should not be surprising that marine organisms dominate the fossil record of much of the Southeast.

Source:

http://geology.teacherfriendlyguide.org/index.php?option=com_content&view=article&id=181:fossils-of-the-northeastern-us-a-brief-review&catid=55:fossils&Itemid=197

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