



**October meeting is on Monday October 1, 2018.** Meeting starts at 7:30 pm but come early and visit and chat with the early birds. New officers will be elected at this meeting.

The speaker for the October Meeting is **Bill Montante**. Bill will be talking on “*Birds are Dinosaurs – a 150-year accumulation of discovery*”

Be sure to come and listen to this very interesting topic.

### President's Message

We had a great meeting this month with Kim Cochran giving a presentation of fossilized plants. I want to thank Kim for coming down from Atlanta and giving us the benefit of his knowledge and experience.

**Dendrite:** A dendrite is a crystal that develops with a typical multi-branching pattern. Like a fractal, it forms the same patterns as it gets smaller. Dendritic crystal growth is common and is often similar to the patterns of snowflakes and/or frost patterns on windows. Dendrite comes from the *Greek* word dendron, which means “tree”. Dendritic mineral crystal forms are

sometimes mistaken for fossils. These pseudo fossils form when naturally occurring fissures in the rock are filled by percolating mineral solutions. They form when water rich in *manganese* and *iron* flows along fractures and bedding planes between the layers of limestone and other rock types. They deposit dendritic crystals as the solution flows through.

A variety of manganese oxides and hydroxides are;

birnessite- ( $\text{Na}_4\text{Mn}_{14}\text{O}_{27} \cdot 9\text{H}_2\text{O}$ )

coronadite- ( $\text{PbMn}_8\text{O}_{16}$ )

cryptomelane- ( $\text{Kmn}_8\text{O}_{16}$ )

hollandite- ( $\text{BaMn}_8\text{O}_{16}$ )

romanechite- ( $(\text{BaH}_2\text{O}) \text{Mn}_5\text{O}_{10}$ )

todorokite-

( $(\text{Ba}, \text{Mn}, \text{Mg}, \text{Ca}, \text{K}, \text{Na})_2\text{Mn}_3\text{O}_{12} \cdot 3\text{H}_2\text{O}$ )

A three-dimensional form of dendrite develops in fissures in quartz, forming *moss* agate. Dendrites have been described as *Brownian trees* due to their patterns. This is where they form a tree type structure by branching from the main branch in branches and stems that imitate a tree. Due to our limited technology, as lapidaries, we can only see the dendrite in two dimensions.

Dendrites are desired and collected by many because of their uniqueness. Dendrites are used by NASA to study microgravitational fields by studying how the dendrites form on a given plate. When materials crystallize or solidify under certain conditions, they freeze unstably, resulting in dendritic forms. Scientists are particularly



interested in dendrite size, shape, and how the branches of the dendrites interact with each other.

Dendrites are fascinating to look at and to know how they are formed is even more intriguing. It just goes to show how porous some minerals are and how what seems to be solid is full of holes that allow for the invasive minerals to seep through in their own methods and fractal patterns to give us the wonderful pictures we see on the slabs and finished surfaces.

### **September Meeting Minutes**

The meeting was called to order at 7:37 PM by Jim Souter with 23 members/ guests present.

### **Old Business**

The treasurers' report was read and approved.

June meeting minutes were read and accepted.

Everyone is reminded that the setup for the Perry Fair is on September 29 beginning at 10am. Takedown is scheduled for October 16 at 10am.

The mineral of the month for September was apatite and several nice specimens were brought in and discussed.

### **New Business**

The nominating committee will consist of the following members: Tina Perkins, Tuell Walters and Blade Davis.

Everyone is reminded that the state fair is upcoming {October 4th-14th} and volunteers should contact our treasurer Susan Hargrove as soon as possible.

There is a discussion on October 2 at 7pm at the museum with guest speaker Dr Julia Reece. The topic of her talk will be "Mud and Bugs Under Stress." Cost is \$5.00 to general public.

Kim Cochran was our speaker this month and he gave a talk on Plant Fossils. Fossils are remains or evidence of a creature or plant that once lived on earth. They are formed in different ways: freezing, distillation, desiccation, asphalt and the most common permineralization. Petrified wood is formed using this method. This occurs when solutions rich in minerals permeate porous tissues such as bone or wood and fill in the voids. They may be displayed in the form of either direct or indirect evidence. Amber is fossilized sap or resin and also preserves animals in perfect condition at times. A number of fossils can be traced back to coal beds or coal fields. Coal forms in four stages: Peat, Lignite, Bituminous and Anthracite or hardened coal. He had brought in and discussed many nice specimens that he passed around.



A question/ answer session was provided at the end of his talk. The meeting was adjourned at 8:43 PM

Excerpts of above include Geology.com, Petrified Wood Museum and Fossil Facts and Finds.

By Richard Arnold



<https://www.mindat.org/loc-69683.html>

Outjo, Outjo District, Kunene Region Namibia

### Mineral of the month: Pietersite

Pietersite is a variety of chalcedony belonging to the Oxide Group with the chemical formula  $\text{SiO}_2$ . Another name for Pietersite is tempest stone according to mindat.org. It resembles tiger's eye, but does not have the same structure. Pietersite has embedded fibers of amphibole minerals with varying degrees of alteration. Blue-gray, brown and yellow colors. The fibers cause a chatoyancy similar to that seen in tiger's eye, a microcrystalline quartz. Pietersite was discovered by Sid Pieters in 1962 in Namibia, and named in his honor. It is usually translucent, having a white streak, a specific gravity of 2.65 and a hardness of 6.5-7.0 on Mohs scale



<https://www.mindat.org/loc-147011.html>

Ashburtonshire, Western Australia  
Riebeckite with Pietersite

### SHOWS NEARBY

**October 5-7, 2018**  
**Central Florida Mineral and**  
**Gem Society**  
**Florida National Guard Armory**  
**2809 South Fern Creek Avenue**  
**Orlando, Florida**

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**October 12-14, 2018**  
**Huntsville, Gem and Mineral**  
**Society**  
**51<sup>st</sup> Annual Gem, Jewelry, and**  
**Mineral Show**  
**Jaycee Community Center**  
**2180 Airport Road**  
**Huntsville, Alabama**

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**October 21-22, 2018**  
**Kanawha Rock and Gem Club**  
**45<sup>th</sup> Annual, Gem, Mineral,**  
**Fossil and Jewelry Show**  
**South Charleston Community**  
**Center**  
**601 Jefferson Rd.**  
**South Charleston, West Virginia**

**UPCOMING EVENTS**

**Georgia National Fair**  
**Perry, Georgia**  
**October 4-14, 2018**

Set Up for the fair is September 29. If you have anything you would like to display at the fair, contact Jay Batcha. If you would like to help man the table at the display, contact Susan Hargrove as soon as possible. Jim, Jay and Blade will be doing demos during the week. Check out the gem tree below:



Graves Mountain,  
Lincolnton, GA  
Collecting Rutile, Kyanite, Lazulite, Iridescent  
Hematite, Pyrophyllite, Pyrite, Ilmenite,  
Fuchsite, Barite, Sulfur, variscite,  
woodhouseite, crandallite, strengite,  
phosphosiderite, cacozenite, blue quartz, quartz  
crystals, etc.  
Rock Swap & Dig

8 am to 6 pm, Friday, October 5, 2018  
8 am to 6 pm, Saturday, October 6, 2018  
8 am to 6 pm, Sunday, October 7, 2018

"You are invited to field collect minerals at Georgia's premiere mineral location!". All participants must stop at the welcome table in the Hospitality tent to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type, four wheeled vehicles available to transport those participants who have trouble walking long distances. The dig will cease and everyone is expected to be off the mountain by around 6 pm each day. Participants will be allowed to park in a designated area on the mountain.

Rock Swap and Hot Food/Drinks:  
Junior will set aside an area in the upper parking lot for tables to be setup for daily rock swaps. Anyone who would like to setup a table(s), please contact Junior at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of these events.

**Contact Information:**

Clarence Norman Jr. (Junior) - 706-359-1544  
(his business) or 706-401-3173 (his cell)  
THESE DIGS ARE OPEN TO ALL  
NO NEED TO SIGN-UP, JUST SHOW UP  
FOR ALL "ROCK SWAP AND DIGS"!  
Mark your calendar and tell all your friends  
about these two great events!



**DIRECTIONS:** From Atlanta's I-285, take I-20 east to the exit for Washington, GA SR 78 (SR 10, SR 17) and turn left. Travel north to Washington, turn right onto SR 378 and drive 11 miles to the Graves Mountain area. The entrance to Graves Mountain is on your right about 8/10 mile past the Lincoln county line sign.

**DIRECTIONS:** From Macon, Ga. Starting at I-75 and I-16, take I-16 east to Spring St. exit (less than 1 mile). Turn left on to Spring St. (Highway 129) towards Gray Ga., Stay on 129 until you get to Eatonton Ga. (around 40 miles). Once you get to the square turn right onto highway 16, turn left on to highway 44 (around 1 mile). Stay on highway 44 until you get to Washington Ga. (around 54 miles) turn right onto highway 78 business and go through town (highway 47 will merge in with 78 from the right, Don't turn here. (around 2 miles). Take highways 47 / 378 towards Lincolnton Ga. (about 12 miles) The entrance to Graves Mountain is on your right about 8/10 mile past the Lincoln county line sign. The entrance is a paved road that goes through a gate and up a hill.

The entrance is a paved road that goes through a gate and up a hill. Please park along the access road and then proceed to the "Welcome Tent" at the end of the pavement to obtain a liability release form and to make a donation for the portable bathrooms, etc.

Graves mountain is accessible and open for mineral collecting by colleges, universities, and gem and mineral societies. Groups as small as two INDIVIDUAL mineral collectors can now reserve the mountain!

In order to gain access, (except for the two yearly "Rock Swaps and Digs") you will need to contact the caretaker, Clarence Norman, Jr (Junior). Give him a call and he can reserve the mountain exclusively for your group. All of the mineral societies that come here to collect, offer the caretaker a donation for his trouble

and effort in keeping the mountain open and assessable to them. Please consider what it is worth to your mineral society to be able to field collect minerals at Georgia's premiere mineral location!

**Graves Mountain code of conduct!**

Park your vehicle in the designated area(at the end of the paved access road but not much beyond the woods to the right of this road). NO child under the age of 12 years old is to be allowed on the mountain because of all the dangers involved. **ALL CHILDREN WILL BE ALLOWED DURING THE"Rock Swap and Digs"IF EACH CHILD IS UNDER STRICT ADULT SUPERVISION!**

ALL pets must be kept under control and on a leash. The caretaker, Junior Norman, has final and absolute say as to where you may safely work. Ladders or power tools of any kind will not be allowed. **(HAND TOOLS ONLY!)** **STAY AWAY FROM ALL HIGH WALLS!!** **NO RAPELLING OFF OF ANYTHING!** **NO ONE IS ALLOWED TO DRIVE THEIR VEHICLE ON ANY PART OF GRAVES MOUNTAIN BEYOND THE PARKING AREA!** (The caretaker must accompany anyone driving beyond the parking area!) **EVERYONE NEEDS TO BE OFF THE MOUNTAIN BY DUSK.** (Absolutely no one is allowed on Graves Mountain after dark.)

Please protect our ability to field collect at Graves Mountain!

Report violations to:

Clarence Norman, Jr  
Norman C E Wrecking Co  
3333 C E Norman Rd  
Lincolnton, GA 30817-3110  
706-359-1544 (his business)  
or  
706-401-3173 (his cell)

All reported violations will be held in strict confidence.

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**An Official Field Trip of the  
Montgomery Gem & Mineral Society  
(Montgomery, AL)**

Saturday, October 20, 2018  
Hogg Mine  
Troup County, GA  
9:00 AM - 5:00 PM  
Fee Site: \$35.00 17 and up  
16 and under free

**TRIP:** The Hogg Mine started out as the Oxford Mine in 1942 to mine beryl to produce beryllium. Commercial operations shut down in 1960. The site has been opened off and on since then for specimen mining and is currently managed by Chris Painter. The site is a surface mine pit approximately 650 feet long with an east – west orientation.

**COLLECTING:** The parking area is at the east end of the pit. As you enter the pit from the parking area there is a trench approximately 150 feet long and to your right. Large green Aquamarine beryl and pockets of green Aquamarine beryl have been found there. As you enter the main pit area, there is a tailing or spoil pile to your left that came out of the pit in front of you. There have been several large nice gemmy Aquamarine beryl specimens from this area. The main pit in front of you has a plethora of treasures, Rose, Smoky, and banded Quartz, Beryl in matrix with the quartz, Tourmaline in matrix with the quartz, etc. The last area of note is at the western end at the back of the pit.

There has been a new smaller pit dug in the last year and some very nice Blue Aquamarine Beryl has been found. The new pit was dug because an old drilling report indicated that Amethyst was found. There are pieces of Amethyst coming from the new pit.

**FACILITIES:** There is an outhouse available on site. The mine also cooks hamburgers and hot dogs and has drinks. Lunch plate is \$8.00

**TOOLS:** Bring all the tools you have: pick, shovel, screen, rock hammer, hand sledge, rock

chisel, bucket, hand cart, etc. The Hogg does sale some tools in limited quantities. It would be a good idea to bring an extra change of clothes. The pit can be muddy and wet.

**DIRECTIONS AND WHERE TO MEET:**  
McDonald's

2408 Whitesville St, LaGrange, GA 30240

This is at Exit 13 on Interstate 85 in LaGrange.

**When:** I would suggest arriving at McDonalds as early as 8:00 am, although you can arrive earlier. This will give you time to pay and fill out the required paper work. At 8:15 am the first caravan will be going to the mine. The first to arrive and sign in will be in the first caravan. The mine is approximately 3 miles from McDonalds. If you do arrive late and no one from the mine is at McDonalds, call the number in the contact information below.

**Directions and Drive Time:** The best way to determine driving directions and time is to enter the McDonalds address above into the directions destination block in Google Maps and enter your home address in the starting point block.

**CONTACT:** Jeff Edwards: 334-296-5034  
goldennugget@montgomerygemandmineralsociety.com

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**Museum of Arts and Sciences  
October 2, 2018 at 7:00 PM  
Costs: \$5.00 General Public**

**OCEAN DISCOVERY SERIES:  
MUD AND BUGS UNDER STRESS**





**Thoughts from:**  
**Chairman of Education Tuell C. Waters**

*“Rocks, Minerals, Gems and other crazy obsessions of the mind and the natural world: A Testament at age 72”*

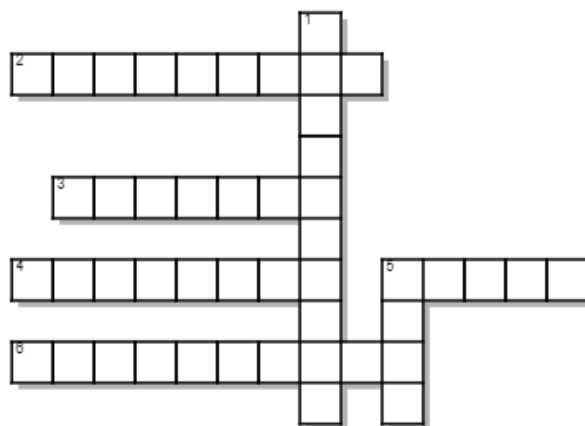
As a young lad of 16 having a nature loving, inquiring mind, I found myself in the Mid Georgia Gem and Mineral Society as a junior member. A Mr. Milton Reiner, a resident of wonderful Warner Robins, took me to the meetings with him. The club at that time met at Mercer University Student Center in Macon, Georgia. I also shared a ride with Theodore (Ted) Demarest. I attended meetings and field trips from 1963-1965 when I graduated from high school I departed from home and went into the waiting world outside thanks to the US Navy. The field trips were to a boy of my years and youthful passion, a magical excursion still remembered as the joy of my youth. I remember being awakened by mother to go on a trip to the Hogg Mine in Lagrange, Georgia to get rose quartz each blade of grass glistening in the pre-dawn hours. The spectacle of a solid wall of rose quartz in a clay mine cut shining in the early morning thrilled me. The effect would put to shame any human recreational park such as Disneyland (the only mega park at the time). A Hollywood movie would never replicate this peak experience. It has been a long journey, boyhood to man, yet despite all the pluses and minuses of rock hunting and the “hobby business” therein, the joy of nature still reaches me, still affects me. In my 72<sup>nd</sup> year of life, I find myself renewed! As your education chair person, I want to see a rebirth of this group in a true, real, lasting joy of rock hunting. Joseph Campbell a mythology teacher who inspired George Lucas of Star Wars Fame, said, “Follow your bliss and doors will open where none appeared before.” In other words, if you want a better group, it begins with you. Science

is very important. Our age would fall into oblivion without science. To many, beauty was more powerful more real even though I know science without beauty, one would only be half filled; a beautiful flower, a sunset, sunrise, or other manifestation of nature requires no understanding of science. To those of you who seek more, you and I will talk and try to rekindle the flame! This is my testament at 72.

**Something for our Junior Members or those who like crosswords from the editor.**

## Crossword #1

How well did you read?



### ACROSS

- 2 Beryl can be used to produce
- 3 Where pietersite was discovered
- 4 Multibranching crystal pattern
- 5 County location of the Hogg Mine
- 6 Variety of chalcedony

### DOWN

- 1 Type of mine like Hogg Mine
- 5 Dendron means



**Club Officers:**

**President / Web Master:** Jim Souter,  
 ph. 478-454-7273, [jgsouter@windstream.net](mailto:jgsouter@windstream.net)

**Vice President:** Bill Mayer,  
 ph. 678.621.3457, [orebilly@gmail.com](mailto:orebilly@gmail.com)

**Secretary / Photographer,** Richard Arnold,  
 ph. 678-682-9860 [rarnold216@charter.net](mailto:rarnold216@charter.net)

**Treasurer:** Susan Hargrove,  
 86 Clear Branch Rd, Butler Ga. 31006,  
 cell. 478-837-5327, [susanbphilh@pstel.net](mailto:susanbphilh@pstel.net)

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 4220 Cyndy Jo Circle, Macon, Ga. 31216,  
 ph. 478-784-1965, Cell 478-957-5002  
[rockyls@cox.net](mailto:rockyls@cox.net)

**Education Chairperson:** Tuell Walters,  
 ph. 478-922-7200  
[firecomet46@gmail.com](mailto:firecomet46@gmail.com)



**Dues are Due**

November starts a new club year. There is a grace period until February 1, 2019. Please send in dues to Susan Hargrove.

**Mid-Georgia Gem & Mineral  
 Society**  
**Application for Membership**

Name(s)\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

Address\_\_\_\_\_

\_\_\_\_\_

City\_\_\_\_\_

State\_\_\_\_\_ Zip Code\_\_\_\_\_

Phone\_\_\_\_\_

Adult (18+) \$10.00 Junior \$2.50

New \_\_\_\_\_

Renewal \_\_\_\_\_

E-mail \_\_\_\_\_

Address\_\_\_\_\_

\_\_\_\_\_

List your interests and reasons for  
 joining\_\_\_\_\_

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\_\_\_\_\_

Make checks payable to Mid-Georgia Gem &  
 Mineral Society

Mail to the Treasurer (above) or bring to a  
 meeting.



## **Mid-Georgia Gem Clips**

**Official Bulletin of Mid-Georgia Gem  
and Mineral Society  
Macon, Georgia**

**Member of Southeast Federation of  
Mineralogical and Lapidary Societies  
Member of American Federation of  
Mineralogical Societies**



## **Mid-Georgia Gem Clips**

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