Mid Georgia Gem Clips
Official Bulleting of the Mid Georgia Gem and Mineral Society
www.midgagms.org **Vol. 21, Issue 2, March 2021**

March 1, 2021
7:00 PM

Come early and join the early birds to chat. The meeting this month will be March 1, 2021 at 7:00 at Museum of Arts and Sciences. The speaker for the evening will be Jay Batcha who will be speaking on "Minerals and Fossils of South Dakota's Badlands and Black Hills." Don't forget to bring a sample of the mineral of the month (feldspar) and the rock (limestone) of the month. Hope to see you there.

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Upcoming Events

March 6 Trip with PAG postponed from last month. See information under digs.
April 5 Ryan Roney will be guest speaker.

Prez. Box

Hello, I hope all is well with everybody and staying safe during this pandemic. It's hard to imagine that it has been a whole year that this thing started and it is still with us. All of our lives have been changed and altered in ways we never dreamed of.

Is opportunity knocking on our club door? The late Jack Jones grandson has offered us an opportunity to honor the legacy of his rock hounding grandfather and at the same time give the club a building to use. The store would have all of Jack's rock equipment in it and at the same time let the club use it as a center for education, classes and equipment use.

There a lot of questions surrounding this issue but the biggest one facing us is how the club will respond to using the facility. It will take effort and commitment on our part to pull this off. How much are you willing to put into this venture? The question is large and we all have to dig deep into what we are able to do. We are going to have a scouting trip to the store soon to look it over and ask questions. This should help us a lot to determine our direction. In the meantime, please think of what we need to consider and what each of us is willing to do and let our board members know your thoughts.

I would like to thank Jim Souter for his dedication and effort on our website these last few years. Circumstances now have us rebuilding our website from scratch. Pam is going to lay down the ground work to get started and then we are going to need input from you. This is a club project and will need support from the entire membership. What type of content would you like to see on the pages? Our website is the face of the club and will be viewed by many. It can help with bringing in new members and improve communication amongst the existing membership. Once again, I am asking for you to pass on your thoughts to the board concerning our new look. This will be an ongoing period of development as we massage the site to achieve on final look.

Special thanks to George Ruff for his presentation on meteorites to us at the last meeting. It is astounding and a little bit scary to think of the quantity of meteors that enter the earth's atmosphere every day. When looking for rocks, big

is usually better, but in the case of meteors, it is the big one we don't want to find.

Stay safe everyone Prez Bill

Mid Georgia Meeting Minutes

February 1, 2021

Bill Mayer called the February monthly meeting to order at 7:28 P.M. with 10 members present.

Adoption of the Minutes: The reading of the minutes from the previous meeting to be taken from the newsletter. A motion was made and the members approved.

Treasury Report: Susan mentioned dues were slow coming in. She said the Insurance was paid and the clubhouse rent was coming up. She also gave the bank checking and C.D. balances.

Programs: Jay said George Ruff was the speaker for tonight and no one for March yet. He talked about the PAG field trip scheduled for Feb 6 was cancelled and is being rescheduled for March 6, 2021, saying anyone interested could contact him.

Newsletter: Bill congratulated Tina for doing a great job on the newsletter. Tina mentioned the deadline for newsletter entries was February 12.

Old Business: None

New Business: Bill opened discussion for monthly club meeting to start at 7 P.M. Motion was made and members approved meeting time change to start at 7 P.M. He also asked if the March meeting should be Physical attendance or Internet Zoom meeting. Members shared their thoughts and the decision was put on hold for now. He also stated that Jim was not doing the Web Site now and asked for suggestions. Pam said she has helped with setting up web sites and would volunteer to start the clubs. Bill mentioned Jack Jones grandson had offered the club the use of a building in Dry Branch, GA. With Jack's equipment. Some ideas mentioned was using the building on weekends for Lapidary work classes. It was determined that Bill and Jay would take a field trip to investigate potential and report back.

Mineral and Fossil of the Month: Tourmaline was the mineral of the month and Cephalopods was the Fossil of the month. Eddie came up a gave information on both. Many members specimens were on display and a ticket drawing for prizes followed.

Speaker: Club Member George Ruff was speaking tonight on Meteorite's. He is a retired teacher and member of local astronomy club. There was a slide show, books and many specimens on display. He talked about documented hits and near misses on humans and the history of many famous finds. He explained the types and composites of meteors saying also that many sightings are man-made space junk falling to earth.

Meeting was adjourned at 9:05 P.M.
Respectively submitted by
Al Steffanini

Mineral of the Month- Feldspar

Feldspar is a system of minerals that generally fall into two series: alkali feldspars and plagioclase feldspars. All feldspars contain Aluminum, Silicon, and Oxygen. The other constituents determine whether they are alkali or plagioclase feldspars. The alkali feldspars, also referred to as K-feldspars, additionally contain Potassium and/or Sodium. The plagioclase feldspars additionally contain Sodium or Calcium. Basically, the concentrations of sodium represent the transition from alkali to plagioclase feldspar. The different varieties of feldspar are determined by: chemical concentration (presence of potassium, sodium, and calcium), temperature at formation, and intrusive or extrusive nature of formation (which determines the rate of cooling). All feldspars have a hardness of 6 and a Specific Gravity of 2.54-2.76. The Specific Gravity may be one of the distinguishing characteristics of the

various varieties of feldspars. Their colors can be wide-ranging with a vitreous to pearly luster. Feldspars fall within two crystallographic systems: Monoclinic or Triclinic. Additionally, their cleavage, which can range from imperfect to perfect, as well as their ability to twin are also characteristics that may be used in determining the variety. The presence or absence of striations on certain cleavage planes distinguish some varieties. Often the specific variety can only be determined through x-ray, physical, or optical analysis. Feldspars are found wherever igneous and metamorphic rock types exist. The word "feldspar" comes from the German word *feld* for field.

Alkali feldspars include:

Microcline – Triclinic with a Sp.G. of 2.54-2.57, good to perfect cleavage, vitreous luster, color of white to pale yellow, rarely red or green (Amazonstone), microcline "tartarn" twinning which usually can only be identified under microscope. Microcline is found in igneous rocks (granites and syenites) that cooled slowly at great depths. The word "microcline" comes from the Greek words for "little" and "inclined", referring to the slight variation of the cleavage angle from 90 degrees.

Orthoclase – Monoclinic, Sp.G of 2.57, imperfect to perfect cleavage, vitreous luster, color of white to gray to flesh-red, rarely yellow or green. Usually distinguished from other feldspars by its color, hardness, right angle cleavage, and lack of striations on best cleavage faces. Found in granites, granodiorites, and syenites that cooled quickly at moderate depths. The word orthoclase comes from the right-angle cleavage possessed by the mineral.

Sanidine – Monoclinic, Sp.G. of 2.56-2.62. good to perfect cleavage, vitreous luster, Color is colorless and often transparent. Sanidine contains both potassium and sodium. It is usually determined only by optical or x-ray techniques. Found as phenocrysts in extrusive igneous rocks (rhyolites) that cooled quickly from high temperatures. The word "sanidine" comes from the Greek words *sanis* for tablet and *idos* for appearance for its typical tabular shape.

Alkali feldspars are used in the manufacture of porcelain, in the manufacture of glass, and as an ornamental material (Amazonstone)

Plagioclase feldspars include in the order of increasing change from sodium phase feldspars to calcium phase feldspars, and increasing Specific Gravity:

Albite – Triclinic, Sp.G. of 2.62, good to perfect cleavage, vitreous to pearly luster, color is colorless to white, gray, less often greenish, yellowish, flesh red. Albite possesses albite twin striations. Albite can only be determined by chemical, physical, and optical analyses, especially Sp.G. It is found in igneous, metamorphic and sometimes sedimentary rocks.

Oligoclase – Sp.G. of 2.65, color is clear to pale blue to blue, may be reddish gold found in granodiorites and monzonites.

Andesine – Sp.G. of 2.68, found in andesites and diorites, rare

Labradorite – Sp.G. of 2.71, color is blue to purple and may have red or green tints, found in gabbro and basalt.

Bytownite – Sp.G. of 2.74, found in gabbro, rare

Anorthite – Triclinic, Sp.G. of 2.76, good to perfect cleavage. Vitreous to pearly luster, color is colorless to white, gray, less often greenish, yellowish, flesh red. Possesses albite twin striations. Anorthite can only be determined by chemical, physical, and optical analyses, especially Sp.G. it is found in igneous, metamorphic and sometimes sedimentary rocks, it is very rare.

Plagioclase feldspars are used in ceramics, polished as ornamental stone (those with a nice display of colors), as gemstones (those that show opalescence, such as moonstone). Plagioclase feldspars get their name from the Greek meaning oblique, an illusion to the oblique angle between the cleavages.
Eddie Williams

Rock of the Month – Limestone

The rock of the month is limestone. Limestone is a sedimentary rock with grains that may range in size from small (mudstone, generally formed in a deeper, further from shore, environments) to large (fossiliferous packstone, generally formed in a shallower, near shore environment). Of all sedimentary rock, about 20% are limestone. It is composed of calcium carbonate, therefore containing calcium, carbon, and oxygen. It readily reacts (effervesces) with acid. Most cave systems and karst terrain form in sedimentary limestone rock as the rock is dissolved via rainwater migration. The calcium carbonate can exist within the rock as particles of calcium carbonate, derived from the decomposition of calcium carbonate-bearing aquatic organisms, and as calcium carbonate cement, holding the rock together. Many limestones in the country contain fossils. The oldest limestone has been dated to about 2.7 billion years old. Limestone has many uses, including: aggregate in road building, a primary ingredient in toothpaste, an essential ingredient in concrete (Portland Cement), as a white pigment or filler in paints, as construction building blocks, as decorative landscaping gravel, as a soil conditioner to neutralize acidic soils, to suppress explosions in underground coal mines, and for increasing the alkalinity of purified water, among many.

Limestone is the primary aggregate used in Florida, due to its abundance. Georgia has had commercial mining of limestone in multiple counties. It can be found in a majority of the states in the United States as well as numerous countries. Some of the best fossil collecting can be accomplished in limestone beds.
Eddie Williams

Shows

***** Due to Covid-19 shows may be cancelled. Check before you go!!! Many of the Tucson shows have moved to April.**

The 5th Annual Athens Rock, Gem, Mineral, Fossil and Jewelry Show
(note: this may be moved to April 30-May 2 since I have seen both dates given)
March 5-March 7, 2021
Friday-Saturday: 10-6
Sunday 11-5
300 N Thomas Street
Athens, Georgia 30606
The Classic Center, Grand Hall 8
Mark Woods: 706-296-9467

Digs

All DMC digs for 2021 have been cancelled and at this time there are no club digs scheduled.

PAG DIG
March 6, 2021 (rescheduled)

Hank and Thomas invite the Mid-Ga Gem and Mineral Society on this PAG (Paleontology Association of Georgia) field trip. No charge for this field trip to us, but you do have to sign a release form. **Please RSVP to Jay Batcha at 478-957-5002** so I can pass this on to Thomas. This is a multi-stop fossil field trip. Hank and Thomas are very knowledgeable on these fossils and you can learn a lot on this trip.

Blast from the past

As I have been trying to put a scrapbook of newsletters together for the club, I often read the information which is how "Blast from the past" got started. So, this time I found a unique article written by Tony Antonio entitled "How I became a Rockhound" and could not resist putting it in here. I love personal stories.

December 1986

In 1955 after completing the Air Force Instructor Course in Mississippi, I was assigned to Lowry Field in Denver, Colorado. Upon reporting to Lowry, I was further assigned to the smallest Division of Technical Training on the base, The Department of Special Instruments. The I found out that I would be instructing in Seismic technology.

One might ask "why was the Air Force in Seismic work?" A short digression- in 1949 the Department of Defense decided that some means of determining Russian capability in the field of Atomic Energy was required. As I was told, the Army decided to listen for the big bang of an explosion. The Navy decided to collect rain water for particles of matter an explosion would put into the atmosphere. The Air Force decided to fly through atomic clouds caused by an explosion to collect particles and analyze them. The Air Force method proved successful and subsequently they were given the responsibility for monitoring all atomic explosions. The original method of collecting particles was dubbed the "A" system. The next system was dubbed the "B" system and was the Seismic System of which I became a part.

So now here I am beginning to learn earth sciences at a later stage in life, never having been interested in sciences of that nature before. Ince this responsibility of the Air Force was highly classified; I could not openly start studying earth sciences and confined myself to on-the-job study.

An atomic explosion (or any explosion) on or below the surface produces shock waves very similar to shock waves produced by earthquakes. There fore it was necessary to understand the earth's geology and action of shock waves through the earth. In establishing courses, lesson plans, etc., for teaching I became more and more interested in geology. Having been in the electronics field for years, my prime interest became geology. In the late 50's a series of underground tests were planned for the test site in Nevada. In order to collect information and gather specifics of shock waves from atomic explosions, the organization decided to set up eight mobile units locating them throughout the United States to monitor explosions. I was given the job of setting up these units and was instrumental in designing and installing the equipment required. This was completed in the spring of 1958 and units were dispatched that summer. I sent seven units out and took the eighth unit out myself. Each unit was given specific areas for location but each had to select the exact spot for the Seismic equipment. For the seismometer to operate at peak efficiency, it has to be located on bed rock, consequently a good knowledge of geology was required.

(TO BE CONTINUED)

Fossil Hunting in Ohio

My father, sisters and I used to hunt the stream beds of Adams and Clinton counties, Ohio for Devonian to Ordovician age fossils in the 1960s. One-gallon buckets in hand, we would walk the stream beds looking for colonial corals, horn (solitary) corals, crinoids, brachiopods, gastropods, cephalopods, and the occasional trilobite. It was always in the Summer when we visited our grandparents for two weeks on their farm outside of Martinsville, OH. While the stream beds included rocks loaded with fossils, we were always picking up the ones that had washed out of the rocks. At the end of the trip (usually a couple of hours), our buckets would be full of horn corals, brachiopods, crinoid stems and some of the other fossil types. If we did find a trilobite, it was a big deal. We were also proud of the brachiopods that we found that had both valves intact. All of the cephalopods were of the straight varieties. I remember two finds specifically, one when I was following my Dad along the stream bed and picked up a 10" cephalopod that my Dad had just stepped over. It was complete and unbroken. I couldn't understand how he could have missed it (or did he leave it for me to find). But as I have aged, I have realized the same as younger people now walk behind me and pick-up things that I have overlooked. The other time was when my Dad and I were hunting along a dry ditch bed next to a recently completed highway. We picked up lots of pieces of the same kind of fossils, but could not identify them at the time. Since we didn't know what they were, we only took one for future reference. It wasn't until I started college and asked the Paleontology professor what the fossil was that I found out it was the basal head or tail plate of an Isotelus trilobite, which grew to about 1 foot in length. I know that my Dad marked all of the places on a highway map, but the maps are long gone. I took my sons fossil hunting there in the early 2000s, concentrating on smaller, less accessible streams than what we had previously walked (most of the big streams have been picked clean, some even bulldozed to quicken the collection of fossils). They did find some nice brachiopods and cephalopods. Before my parents moved from their house to a retirement community, I noticed that Dad had a pile of those fossils in the back yard. I took every one of those before they moved. Over the years, I have given away 90% of those finds, mostly to kids like I was, to take to class or just for their own enjoyment. Those were some of the best times with my Dad.

Eddie Williams

RESOURCES

Two books that you might find interesting from the Hound's Howl. Thanks for sharing!!!

On the **Trail of Stardust** puts the heavens in your hands—in the form of cosmic dust, or micrometeorites. With this handy guide from the author of the international bestseller In Search of Stardust, Jon Larsen, you will learn how to find micrometeorites in your own neighborhood!

-Voyageur Press, 144 pages, 04/16/2019

A Beachcomber's Guide to Fossils by Bob, Pam, and Ashby Gale with foreword by Rudy Mancke. A definitive guide for amateur collectors and professionals.

-University of Georgia Press, Wormsloe Foundation Nature Book Series, #36, 544 pages, 12/15/2020

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Macon, Georgia

The Club meets on the First Monday of each Month, at The Museum of Arts and Sciences, in Macon, Georgia.
Except: No meeting January, July, and August. The annual Christmas Party is the first Monday in December. September the first Tuesday of the Month

Purpose: To promote the earth sciences, the lapidary arts, and the collection, study and display of rocks, minerals, and fossils; to promote the public awareness of these efforts in educational and recreational activities.

Club Officers:

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Mid Ga. Gem and Mineral Society
Application for Membership

Name(s) _____

_____

Address_____

_____

City _____

State _____ Zip _____

Phone_____

Adult (18-64) $15.00 Junior $ 5.00
Family (2 adults and 2 children under 18) $25.00
Additional children $5.00
Seniors (65+) $10.00 Newsletter mailed $5.00
New _____ Renewal _____
E-mail
Address_____
List your interests and reasons for joining

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Make checks payable to:
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Mail to the Treasurer (listed on this page) or bring to a meeting.

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Macon, Georgia

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