Mid Georgia Gem Clips
Official Bulleting of the Mid Georgia Gem and Mineral Society
https://midgeorgiagemandmineral.com Vol. 21, Issue 5, June 2021

JUNE MEETING

Come early and join the early birds to chat. The meeting this month is June 7, 2021 at 7:00 PM. This meeting is dedicated to your favorite Specimen, Rock, Gem, and Mineral ID, Rock Swapping, and fellowship. There will be snacks and drinks available. Don't forget to bring a sample of the mineral and fossil of the month…

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Upcoming Events

June 12	Dig near Buena Vista
August 6-7	Peaches to Beaches
September 7	Next Club Meeting
October 7-17	Georgia National Fair

Prez. Box

Greetings everyone! We are heading into summer fast and furious. Here we are trying to rush back into our normal routines and yet battling the virus that is still present. The dual threats of the virus and economic ruin is tearing at our very fabric. Everyone is anxious and eager to get on with our lives and summer plans, me included. Camping and rock hunting go hand in hand when it comes to beating our current dilemma. My wife and I intend on doing just that this summer.

Dr. Bill Witherspoon's program last month was definitely informative and intriguing. It has taken decades of research to compile all the data gathered to draw these conclusions of mountain building and continental shifts. It still is going on right now, but at a pace we cannot relate to. It shows if you don't like it the way it is now, wait a million years and things will be different.

Attendance at our meeting has been slim these last few covid months. We have been hanging in there with a solid base of members. I am hoping the main reason for our turnout is all based upon our current covid situation. We still continue with having great programs, field trips and plenty to look forward to in the future. June will be our last meeting until next September. Our June meeting promises to be an informal affair with lots of rock talk and sharing of stories and useful tips.

I wish everyone a safe and enjoyable summer and see you in September. Prez Bill

October Elections

September will be here sooner than we know as summer will go by unfortunately too quick. Which means first on the agenda is the elections. I am bringing this up now as we need a major realignment of our offices and duties. Many current positions have been filled for many years now and they need a change and a breath of fresh air. We are asking for new volunteers to step up and help guide the club into the future. You might ask, does it take time? Yes, it does some, a few hours here and there. Is it rewarding? Yes, very much so. You will be glad you did. Take time this summer and give it a good thought on what and where

you may be willing to do to help with the future of our club and membership.

Mid Georgia Meeting Minutes

The meeting was called to order at 7:04 by President Bill Mayer.
Program: Jay introduced Bill Witherspoon, co-author of Roadside Geology of Georgia. He spoke about the fall line, plate tectonics and continental drift. One of the most interesting items was a map of the southeastern US with the fall line mapped. He said there were fossilized dinosaur bones between Columbus and Americus. He also looked at the mound builders and why they built where they did. After the program, there was a break for people to get their books signed and to purchase books.
Minutes were adopted.
Treasurer: Susan stated that the museum had reduced the rent for the next year which starts in June since we did not meet much last year. She also stated that the new website was paid. She gave the balance for the checking and the CD.
Newsletter: Deadline would be May 12 for the June newsletter.
Field Trips: Jay is working on one for June to an area 11 miles south of Buena Vista and for a trip to Martin Marietta in the fall if Covid-19 numbers stay down.
Programs: Jay said the June meeting was more of a social event with bringing your favorite Specimen, Rock, Gem, and Mineral ID, Rock Swapping, and fellowship. There will be snacks and drinks available.
Website: new web address for the club and an awesome job by Pam Mayer.
https://midgeorgiagemandmineral.com/
Old Business: Banner was brought up and we are waiting to get a good copy of the patch so that we can have it digitalized and then order a banner in the fall before the fair.
New Business: Peaches to Beaches will be in August this year on the 6th and 7th. If you want to bring something for the club to sell or you would like to come help, sell, or donate, let Bill Mayer know. Tina, Bill, Pam, and Jay will again be in Perry.
The fall festival was discussed and two dates were addressed as possible for the event; September 11 or October 30. All information will be sent out in the September newsletter.
Fair News: There will be a fair this year. Jay said that we have been selling bags at the Museum and may need to add an additional 100 bags to our supply. Tina will make the bags and we will have a bag stuffing party the last Saturday, August 28, 2021 at 10:00 at Jay's house. Jay says at this time he has plenty of material.
Classes: There was a discussion on the survey about classes for gem trees and cabochons. Jay is ready to the classes and the dates and times will be announced through e-mail when everything is set up.
Mineral of the month: Eddie talked about the mineral of the month (limonite) and the rock of the month (basalt). The specimens on the table were discussed and door prizes and specimen prizes awarded.
Next meeting is June 7, 2021. See you there.
Bill dismissed the meeting close to 9:00 PM.

Respectfully Submitted,
Tina Perkins for Al Steffanini

Resources

Wild Acres
The Wild Acres Workshops for August and September are still planned.
www.sfmsworkshops.org for descriptions and instructor bios.

Comparing Knoop / Mohs Hardness Scales

Most of us are familiar with the Mohs Hardness scale but for myself, I had not heard of the Knoop Scale until recently and thought I would share it with you. According to Wikipedia,

"*the Knoop hardness test is a microhardness test used particularly for very brittle materials or thin sheets, where only a small indentation may be made for testing purposes. A pyramidal diamond point is pressed into the polished surface of the test material with a known (often 100g) load, for a specified dwell time, and the resulting indentation is measured using a microscope.*" It was developed in 1939 and a comparison of the two scales is shown below.

HARDNESS SCALES		
MOHS SCALE	MINERAL	KNOOP SCALE
1	Talc	12.3
2	Gypsum	61
3	Calcite	141
4	Fluorite	181
5	Apatite	483
6	Orthoclase	621
7	Quartz	788
8	Topaz	1190
9	Corundum	2200
10	Diamond	8200

Mineral of the Month

Chrysocolla

Chrysocolla is an amorphous (non-crystalline) "mineral" that contains copper, hydrogen, silicon, and oxygen. Aluminum and/or iron can be present in small amounts. It is considered to be a hydrogel or gelatinous precipitate, thus making it primarily a secondary mineral. It can be green to greenish-blue or brown to black, when impure. The luster is vitreous to earthy. Chrysocolla has a hardness of 2 to 4 and a specific gravity of 2.0 to 2.4. Chrysocolla is recognized by its color and conchoidal fracture. Its hardness is inferior to that of turquoise. It forms in oxidized zones of copper deposits (i.e., porphyry copper ores) that are associated with malachite, azurite, cuprite, or native copper.

Chrysocolla is found in the copper districts of Arizona and New Mexico and in Chile. Chrysocolla is a minor ore of copper.

The word Chrysocolla is derived from two Greek words, *chrysos* for gold, and *kolla* for glue. It was also the name of a similar-appearing material used to solder gold.

Fossil of the Month

Fern fossils

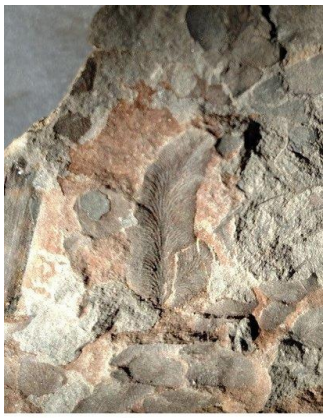
Ferns are a very old group of vascular plants often with complex leaves that may bear spore cases on the back for reproduction. Ferns became common in the Pennsylvanian and are very common today. By the Triassic modern varieties began to appear. During the Carboniferous when great coal deposits formed, steaming tropical swamps covered much of the land. Sometimes if you are hunting in coal deposits, a piece of coal will split along natural bedding plane to reveal fern shapes. Some ferns may be found in shale or other sedimentary rocks.

Fossilized ferns in coal from Morocco. It is estimated to be 350 million years old. – Wiki-commons picture

Mesozoic ferns like Phlebopteris survived from the Triassic through the Cretaceous. It is one of the most common fern-like leaves found in the Petrified Forest National Park in Arizona.

Wikipedia picture of fern from Petrified Forest in Arizona

If you haven't read anything about Georgia Fossils, you should take a look at georgiafossils.com. From one of Thomas Thurman's entries: "In the abandoned coal fields of Dade and Walker Counties, plant fossils are commonplace in shale and sandstone slag in the coal mine dumps around Durham, Georgia. (Plant fossils are always found in association with coal.) This was major coal producing area in the early 20th century, but most production had ceased by the 1950s, and the coal fields are all abandoned now. These fossils date to approximately 315-323 million years ago and are part of the Vandiver Member of the Crab Orchard Mountain Formation, dating from the early Pennsylvanian period.



Neuroptis
Collected by Hank Josey

During the Pennsylvanian period, Northwest Georgia was covered by swamps near a river delta. Georgia lay south of the equator, part of the supercontinent of Pangaea, which formed 335 million years ago by the collision of Euramerica and Gondwana. To the east lay the newly formed Appalachian Mountains. During this period, the climate of the Southeastern United States was much wetter and warmer. Oxygen levels were much higher, around 28 percent or greater. (Today the Earth's atmosphere stands at 20.9% oxygen.) Pangaea was covered by immense forests."

Shows

Highlands Road Gem Show
Franklin, N.C.
July 21-25, 2021
Highlands Road, Franklin,
North Carolina 28734
Remember to check before you go due to Covid-19 changes

DIGS

Mid-Georgia Field Trip
Saturday June 12, 2021
9:00am
Buena Vista, GA. to collect Iron Minerals

Trip: To south of Buena Vista, we will be digging/ looking along a dirt road for Goethite,

Hematite, and Limonite be sure to fill in any holes and pickup your trash.

Meeting Location: At the south side (East 6th Ave) of courthouse in the square in Buena Vista at 9:00am Georgia time on Saturday June 12, 2021. Will wait no later than 9:05am before heading to dig site. Call Jay if running late.

Fee: Free

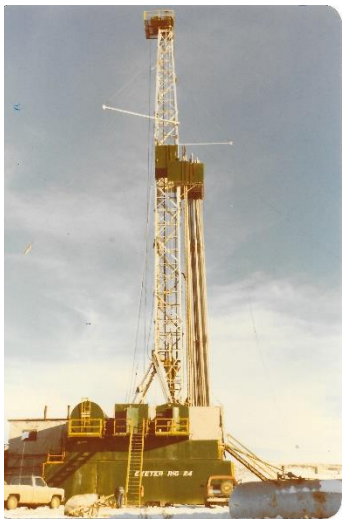
Bring: Hammers, chisels, scratching tools, pry bar, buckets, paper to wrap specimens, hat, sunscreen, food and drinks, safety glasses, and gloves (most of the material is laying in the ditches along the dirt road so tools are not required).

Directions: At Byron, Ga. Take Exit 149 off of I-75. Turn left onto GA-49 and continue towards Fort Valley. Turn right onto GA-49 Connector W/GA-540 (Fort Valley bypass). Continue on Ga-540/Ga-96 west to Butler, Ga.; Turn left onto Ga-137W to Buena Vista. In Buena Vista turn right onto E 3rd Ave. Then turn left onto Broad St. Turn left onto E 6th Ave. and park at court house. ***Travel time from Byron to meeting location is 58miles and 1hr 5 minutes.*** We will then drive about 11 miles to the collecting site south of Buena Vista, GA.

Please RSVP to Jay if you are planning on coming.

In the Oil Patch

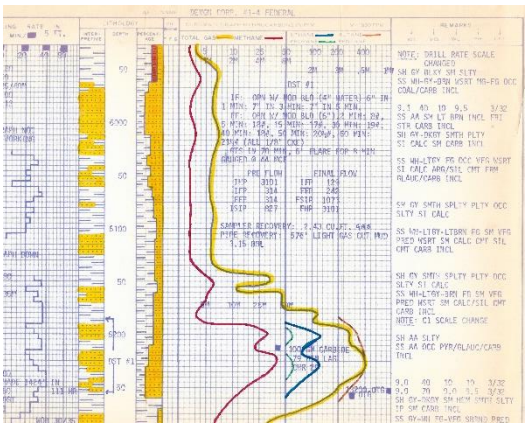
Upon graduation from College in June 1980, my professor encouraged me to "Go West" to find a job. At the time he was referring to jobs in the Uranium industry out West. In the Fall, after realizing that retail sales were not going to make my career, I traveled out west with a friend in search of employment in a geology-related field. We quickly found out that the uranium industry had taken a nose dive. So, we pursued anything and everything, but came back empty-handed. Around Thanksgiving I got a call from Rocky Mountain Geo-Engineering (now defunct) in Grand Junction Colorado. I traveled out there in my Pinto Wagon and within a week, I was on a wildcat well outside of Craig, Colorado doing mudlogging.



My first oil rig

I was paired with a well-site geologist whom I nicknamed "Samurai Geologist". He was a survivalist at heart, wearing the camo pants with knives in his boots. He drove a Toyota Land Cruiser that was equipped with water tanks and K-rations, in case the world came to an end. He slept with a loaded 9-mm pistol under his pillow, of which I always verified the barrel position before bedding down in the twin bed across the aisle from him. Our home away from home (if anybody in the oil and gas industry could call anything a home during that time period) was a 40' trailer, equipped with cooking, music, and sleeping quarters, as well as the equipment and instrumentation to do the work we were hired to do.

The mudlogging job lasted 6-weeks straight, 12-hour shifts. It involved monitoring the gas chromatograph readings and taking "mud" samples from the shaker screens that were attached to the mud discharge outlet of the well bore hole. The drilling mud carried the bit cuttings to the surface and over the shaker screens. There you grabbed cuttings samples which you took to the trailer and examined under a microscope and UV light.



Mudlog from the drill stem test area

You then hand logged the rock type, grain size, color, fluorescence, and any other distinguishing characteristics on a "mudlog". You also paid close attention to the chromatograph readings for gas "shows". Depending on the rock type that was being drilled, you had to collect samples every few minutes (drilling sand) or more than an hour apart (dense dolomite). Sometimes it was faster than you could keep up with and other times, it was all you could do to stay awake. As the drilling bit wore down, the sampling intervals would increase as well.

If the well had a significant enough "show", you would bring in others (like Schlumberger) to conduct tests on the well called DSTs (drill stem tests). Those would seal off the wells by temporarily capping them and, under controlled conditions, allow gas to be vented and flared. This well in Colorado had a DST, however, it was not deemed significant enough to produce. In the end the well was plugged as a "dry hole". The location was interesting in that it was in the Winter when the well was drilled and snowshoe hare were everywhere. Samurai Geologist brought some hare back with him, recently shot, on a return trip from Craig and we ate them for dinner. Adjacent to the location was an abandoned gold placer mine and an old saw mill, both of which I frequented when our responsibilities were not needed during the times when the rig was tripping (pulling out of the hole to replace a drill bit and returning back into the hole), which could take from 6 hours to 2 days, depending on the depth of the hole at the time.

I stayed with that company until July 1982, working in Colorado, Utah, and Wyoming and took my first single prop plane trip over the mountains in the Winter of 1981 (that's a whole other story) to land in a grassy field in a town where the gas station sold questionable ground beef and the post office was a trailer. During that time, the oil and gas drilling industry in the United States was at its peak, with the highest ever active daily rig count of 4,530 occurring on December 28, 1981. Today the rig count is a paltry 344.

Blast from the Past

First published in May 2009.

I love reading the older newsletter to see what was interesting all those years ago, but this month I decided to pick the year I joined the club for the Blast from the Past. Thanks to Sharon Milner, I found some interesting information and cute sayings.

I don't do windows because…
I love birds and don't want one
To run into a clean window
and get hurt.

Fossil Cleaning (From Maps Digest 7/9/95, author unknown via Diggins From Dakota 8/98)

In most cases, when a fossil is cleaned the surface is usually left with a dull o chalky look, even if you're very careful. This is caused by the abrasion of the tool against the fossil's surface. In an effort to make the fossil look better, some collectors use the quick method, and cover their specimen with clear plastic sprays to bring out the details and lessen the scratchy appearance. These collections are easy to recognize because every specimen looks as if it is wet of dipped in plastic. The trouble with this method is that it puts an unnatural, glossy appearance on the fossil, as well as the matrix giving your specimen poor contrast.

In their natural state, fossils are not usually glossy, and professional museum preparators will tell you that making a fossil something it never was, is poor practice. Clear sprays have a tendency to become cloudy over time, and the temptations to spruce up the collection by re-spraying specimens becomes a habit, which only puts more cloudy layers on the specimen. The coatings make photographing fossils difficult. They are very hard to remove and will sometimes render specimens useless for scientific study. A simple and common-sense way to get around these problems is to use an alcohol soluble, clear shellac. Just mix two parts shellac to eight parts alcohol. The mixture will leave a pleasing, natural, matte finish. When using this method, make sure the fossil is clean of dust. With a small artist brush, carefully coat only the fossil which will allow the fossil to stand out against the natural matrix giving it excellent contrast. The more attention you give to coating delicate structures, the more beautiful the specimen will be.

***** There are products available for this process already mixed which will last longer on the market today. If you want to coat a fossil, talk to Jay who showed me what he used.**

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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

_____

_____

Make checks payable to:
Mid-Georgia Gem & Mineral Society
Mail to the Treasurer (listed on this page) or bring to a meeting.

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Macon, Georgia

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