

Tar Heel Tailings

A newsletter for Gem and Mineral enthusiasts in and around the Raleigh, North Carolina area.

Special Interest Articles:

- Prez Sez
- Geological History Of The Yellowstone National Park
- Field Trip Report

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Prez Sez By Cyndy Hummel

Come visit Yellowstone Park in Wyoming with Fred Booth. Sounds like a very interesting program for the hot, humid month of July.

See you soon,

Cyndy Hummel
President,
Tar Heel Gem and Mineral Club,
Inc.



Geological History Of The Yellowstone National Park By Arnold Hague, United States Geological Survey

The purpose of this paper is not so much to elucidate any special problem connected with the many interesting geological questions to be found in the Yellowstone Park, as to offer such a general view of the region as will enable the tourist to understand clearly something of its physical geography and geology.

The Yellowstone Park is situated in the extreme northwestern portion of Wyoming. At the time of the enactment of the law establishing this national reservation the region had been little explored, and its relation to the physical features of the adjacent country was little understood. Since

that time surveys have shown that only a narrow strip about 2 miles in width is situated in Montana and that a still narrower strip extends westward into Idaho.

The area of the park as at present defined is somewhat more than 3,300 square miles.

The Central Plateau, with the adjacent mountains, presents a sharply defined region, in strong contrast with the rest of the northern Rocky Mountains. It stands out boldly, is unique in topographical structure, and complete as a geological problem.

Continued on Page 4



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We're on the Web!

See us at:

www.tarheelclub.org

Program & Refreshments

REFRESHMENT SCHEDULE:

Coordinator: Need Volunteer

July TBD

PROGRAM SCHEDULE:

July Fred Booth: Geology Trip to
Yellowstone, Wyoming
August Ice Cream Social AND Auction
September Scott LaBorde: Quartz Collecting
October Grab Bags AND (short) Program
November Elections & Thank You from The
Club

Remember, the club will reimburse you for up to \$75 (bring your receipts to the treasurer).

July Treasurer's Report

July Treasurer's Report

May Ending /		
June Beginning Balance	\$1,448.14	

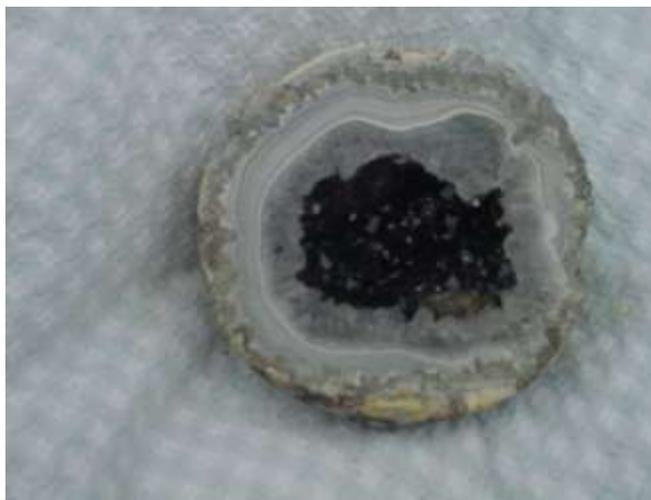
Deposits (+)		
Membership deposit	\$70.00	

Sub total	\$70.00	

Checks Written (-)		
Newsletter	\$138.08	
Trailer DMV Tag	21.39	

Sub Total	\$159.47	

June Ending /		
July Beginning Balance	\$1,358.67	



July B-Day Members

- Cosmo Cappelletti
- Samuel Coxson
- Bob Crocker
- Becky Davenport
- John Guerriero
- Bill Layne
- Penny Rosser
- Mike Welker
- David Willick



Membership applications may be mailed to:

Tar Heel Gem & Mineral Club, Inc.
Attention: Treasurer
10609 Chelsea Drive
Raleigh, NC 27603

Tar Heel Gem and Mineral Club, Inc. - June Meeting Minutes

Tuesday, June 21, 2016

Attendees = 35 (including 3 kids under 12!)

Opening of Club Meeting:

The meeting was called to order by President Cyndy Hummel at 7:45pm.

Program:



Triassic Fossils presented by Vince Schneider, Curator of Paleontology at the NC Museum of Natural Sciences.

Vince first talked about the Triassic Period. The Triassic period was roughly from 252 to 201 million years ago. It is during the Mesozoic Era and lies between the Permian and Jurassic periods. This period began and ended with major extinction events. These events allowed for the 1st mammals to appear.

After some discussion about the period, Vince discussed his excavations. While he couldn't reveal some of the NC sites he had successfully dug at, he did talk in length about quarries in Arizona. A large number of specimens from the Triassic were found there. Some specimens have been found in NC (but not too many). He also discussed the process for wrapping and preserving the fossil in a 'jacket' of tin foil and plaster.

Many of the specimens are at the museum and some can be viewed. Vince went through slides showing some amazing specimens.

For more information he recommended the following:

Book recommendation: Geology of the Carolinas

Club recommendation: Carolina Geographical Society

Old Business:

If anyone wants a club t-shirt please email Cyndy. She has the current burgundy t-shirts for \$10 and the blue ones from previous year for \$5.

A black and white ad will be placed in Rocks and Minerals magazine in the fall editions advertising for dealers next year's gem show. The show itself will be advertised in color in there in January. There was some discussion about what photograph to use for the ad.

Erin, a guest brought by Linda Searcy, has a June birthday. She says that it was Linda who got her into minerals.

New Business:

Walt Milowic says that a person is donating a very large boulder with amethyst crystal expose all over for free to whoever can move it. It will take equipment since its estimate to weigh several hundred pounds. Please email Walt at wmilowic@gmail.com for more information. It is in Wilson, NC.

Door Prize:

The door prize was won by Kerry Sappie who will provide more information about their choice in a future newsletter.

Close of Meeting:

The meeting closed at 9:34 pm.

Respectfully Submitted

Melissa Whitfield,

Secretary, Tar Heel Gem and Mineral Club, Inc.

July Field Trip

By Tom Todaro

**TAR HEEL GEM & MINERAL CLUB
FIELD TRIP NOTICE
Saturday, July 30, 2016
Martin Marietta Pomona Quarry**

Note: Sorry but do not show up wearing sneakers and expect to go down into the quarry.
6. Everyone must have safety goggles or glasses.
7. Everyone must sign in at the quarry office and signoff on the safety rules

FIELD TRIP DATE	SATURDAY, JULY 30, 2016
TIME:	09:00 am – 2:00 pm <i>(or as directed by quarry manager)</i>
QUARRY OPERATOR	Martin Marietta
QUARRY NAME	Pomona Quarry in Greensboro
QUARRY ADDRESS:	825 Marietta Rd, Greensboro, NC 27410
QUARRY TELEPHONE:	336-299-2211
QUARRY IN-CHARGE	Mr. David Thorn
TAR HEEL TRIP COORD	Shirley Green 919 848-1085 Esteemed helper <i>Tom Todaro</i>

EXTRA STUFF:

1. Feel free to bring buckets, picks, hammers, shovel, hand cart, rags, crow bar, etc.
2. **Sorry**, but children under 18 years are not permitted per the quarry manager
3. Bring a change of clothes in case you get wet.
4. Dress according to the weather, expect it to be cold. It is always easier to take clothes off then put stuff on that you don't have.
5. Camera
6. Magnifying glass or eye loop
7. Food, snacks
8. Drinking water to stay hydrated
9. Ask for help to load your take home rocks, as we don't want to see anyone hurt their back
10. Please be prompt as the quarry operator is coming in on his day off to host our club.
11. Be sure to thank the quarry operator upon leaving as we want to leave a good impression so so as we can come back.
12. Temperatures in the quarry will be excessive **MAKE SURE** you bring plenty of fluids. It also doesn't hurt to bring a small cooler with water to dip a face towel into for cooling.
13. Be sure to arrive around 08:45 AM so as we can be safety briefed.
14. It will be hot, scorching, frying, boiling, etc. bring a closed bucket of water and a rag so as you can cool yourself.....take it from me there is nothing like wiping your face down with water. J
15. Have Fun and Rock On.....

IF YOU ARE INTERESTED IN ATTENDING THE ABOVE FIELD TRIP PLEASE REPLY BACK TO **Shirley Green ASAP WITH YOUR NAME AND TELE # INDICATING HOW MANY WILL BE IN YOUR GROUP.**

NOTES

1. A copy of this email is enclosed as a pdf file that contains some visual pictures.
2. Let **Shirley Green** know ASAP if you are able to attend.
3. Sorry, the plant manager said no one under <18 will be permitted in the quarry.
4. If you bring snacks sure not to simply throw your trash on the ground...I state this cause I have seen this happen before.
5. If you need a ride I suggest you sync up with other club members so as to share expenses, etc.
6. Remember we are guests.....

"REQUIRED"

1. Everyone must comply with any and all safety requirements set forth by Martin-Marietta
2. Everyone must stay away from quarry edges
3. No climbing on rock face's
4. Everyone must have and wear a hard-hat
5. Everyone must have work boots with steel toe would be better.

Directions

To: Martin Marietta Pomona Quarry, 825 Marietta Rd, Greensboro, NC 27410

HAVE FUN !
PRINT THIS AND BRING WITH YOU

Geological History Of The Yellowstone National Park

Continued from Page 1

The central portion of the Yellowstone Park is essentially a broad, elevated, volcanic plateau, between 7,000 and 8,500 feet above sea level, and with an average elevation of about 8,000 feet. Surrounding it on the south, east, north, and northwest are mountain ranges with culminating peaks and ridges rising from 2,000 to 4,000 feet above the general level of the inclosed table-land.

A topographic map of the park on a scale of 2 miles to the inch may be purchased from the Director of the Geological Survey, Washington, D.C., for 20 cents.

For present purposes it is needless to confine ourselves strictly to legal boundaries, but rather to consider the entire region in its broader physical features.

South of the park the Tetons stand out prominently above the surrounding country, the highest, grandest peaks in the northern Rocky Mountains. The eastern face of this mountain

mass rises with unrivalled boldness for nearly 7,000 feet above Jackson Lake. Northward the ridges fall away abruptly beneath the lavas of the park, only the outlying spurs coming within the limits of the reservation. For the most part the mountains are made up of coarse crystalline gneisses and schists, probably of Archean age, flanked on the northern spurs by upturned Paleozoic strata. To the east of the Tetons, across the broad valley of the Upper Snake, generally known as Jackson Hole, lies the well-known Wind River Range, famous from the earliest days of the Rocky Mountain trappers. The northern end of this range is largely composed of Mesozoic strata, single ridges of Cretaceous sandstone penetrating still farther northward into the regions of the park and protruding above the great flows of lava.



The Absaroka Range Along The Eastern Edge Of The Park.

Along the entire eastern side of the park stretches the Absaroka Range—so called from the Indian name of the Crow Nation. The Absaroka Range is intimately connected with the Wind River Range, the two being so closely related that any line of separation must be drawn more or less arbitrarily, based more upon geological structures and forms of erosion than upon physical limitations.

The Absarokas offer for more than 80 miles a bold, unbroken barrier; a rough, rugged country, dominated by high peaks and crags from 10,000 to 11,000 feet in height. The early trappers found it a forbidding land; prospectors who followed them, a barren one.

At the northeast corner of the park a confused mass of mountains connects the Absarokas with the Snowy Range. This Snowy Range shuts in the park on the north and is an equally rough region of country, with elevated mountain masses covered with snow the greater part of the year, as the name would indicate. Only the southern slopes, which rim in the park region, come within the limit of our investigation. Here the rocks are mainly granites, gneisses, and schists, the sedimentary beds, for the most part, referable to the pre-Cambrian series.

The Gallatin Range encloses the park on the north and northwest. It lies directly west of the Snowy, only separated by the broad valley of the Yellowstone River. It is a range of great beauty, of diversified forms, and varied geological problems. Electric Peak, in the northwestern corner of the park, is the culminating point in the range, and affords one of the most extended views to be found in this part of the country.



The Gallatin Range In The Northeastern Portion Of The Park.

Archean gneisses form a prominent mass in the range, over which occur a series of sandstones, limestones, and shales, of Paleozoic and Mesozoic age, representing Cambrian, Silurian, Devonian, Carboniferous, Trias, Jura, and Cretaceous. Immediately associated with these sedimentary beds, are large masses of intrusive rocks, which have played an important part in bringing about the present structural features of the range. They are all of the andesitic type, but show considerable range in mineral composition, including pyroxene, hornblende, and hornblende-mica varieties. These intrusive masses are found in narrow dikes, in immense interbedded sheets forced between the different strata, and as laccolites, a mode of occurrence first described from the Henry Mountains in Utah, by Mr. G. K. Gilbert, but now well recognized elsewhere in the northern Cordillera.

We see then that the Absarokas rise as a formidable barrier on the eastern side of the park, the Gallatins as a steep mural face on the west side, while the other ranges terminate abruptly, rimming in the park on the north and south, and leaving a depressed region not unlike the parks of Colorado, only covering a more extended area with a relatively deeper basin. The region has been one of profound dynamic action, and the center of mountain building on a grand scale.

It is not my purpose at the present time to enter upon the details of geological structure of these ranges, each offering its own special study and field of investigation. My desire is simply to call attention to their general features and mutual relations. So far as their age is concerned, evidence goes to

show that the action of upheaval was contemporaneous in all of them, and coincident with the powerful dynamic movements which uplifted the north and south ranges, stretching across Colorado, Wyoming, and Montana. This dynamic movement blocked out, for the most part, the Rocky Mountains, near the close of the Cretaceous, although there is good reason to believe that in this region profound faulting and displacement continued the work of mountain building well into the Middle Tertiary period.

Throughout Tertiary time in the park area, geological history was characterized by great volcanic activity, enormous volumes of erupted material being poured out in the Eocene and Middle Tertiary, continuing with less force through the Pliocene, and extending into Quaternary time. Within very recent times there is no evidence of any considerable outburst; indeed the region may be considered long since extinct. These volcanic rocks present a wide range in chemical and mineral composition and physical structure. They may all, however, be classed under three great groups—andesites with basalts, rhyolites, and basalts—following each other in the order named. In general, the relative age of each group is clearly and sharply defined, the distribution and mode of occurrence of each presenting characteristics and salient features frequently marked by periods of erosion.

Andesites are the only volcanic rocks which have played an important part in producing the present structural features of the mountains surrounding the park. As already mentioned, they occur in large masses in the Gallatin Range, while most of the culminating peaks in the Absarokas are composed of compact andesites and andesitic breccias. On the other hand, the andesites are not confined to the mountains, but played an active role in filling up the interior basin. That the duration of the andesitic eruptions was long continued is made evident by the plant remains found in ash and lava beds through 2,000 feet of volcanic material.

In early Tertiary times, a volcano burst forth in the northeast corner of this depressed area not far from the junction of the Absaroka and Snowy Ranges. While not to be compared in size and grandeur with the volcanoes of California and the Cascade Range, it is, for the Rocky Mountains, one of no mean proportions. It rises from a base about 6,500 feet above sea level, the culminating peak attaining an elevation of 10,000 feet. This gives a height to the volcano of 3,500 feet from base to summit, measuring from the Archean rocks of the Yellowstone Valley to the top of Mount Washburn. The average height of the crater rim is about 9,000 feet above sea level, the volcano measuring 15 miles across the base. The eruptive origin of Mount

Washburn has long been recognized, and it is frequently referred to as a volcano. It is however simply the highest peak among several others, and represents a later outburst which destroyed in a measure the original rim and form of an older crater. The eruptions for the most part were basic andesites. Erosion has so worn away the earlier rocks, and enormous masses of more recent lavas have so obscured the original form of lava flows, that it is not easy for an inexperienced eye to recognize a volcano and the surrounding peaks as the more elevated points in a grand crater wall. By following around on the ancient andesitic rim, and studying the outline of the old crater, together with the composition of its lavas, its true origin and history may readily be made out. It has been named the Sherman volcano. This old volcano of early Tertiary time occupies a prominent place in the geological development of the park, and dates back to the earliest outbursts of lava which have in this region changed a depressed basin into an elevated plateau. We have here a volcano situated far inland, in an elevated region, in the heart of the Rocky Mountains. It lies on the eastern side of the continent, only a few miles from the great Continental Divide, which sends its waters to both the Atlantic and Pacific.

After the dying out of the andesitic and basaltic lavas, followed by a period of erosion, immense volumes of rhyolite were erupted, which not only threatened to fill the crater but to bury the outer walls of the volcano itself. On all sides the andesitic slopes were submerged beneath the rhyolite to a height of from 8,000 to 8,500 feet. This enormous mass of rhyolite, poured out after the close of the andesitic period, did more than anything else to bring about the present physical features of the park tableland. A tourist visiting all the prominent geyser basins, hot springs, Yellowstone Lake, and the Grand Canyon and Falls of the Yellowstone, is not likely to come upon any other rock than rhyolite, excepting, of course, deposits from the hot springs, unless he ascends Mount Washburn. A description of the rhyolite region is essentially one of the Central Plateau. Taking the bottom of the basin at 6,500 feet above sea level, these acidic lavas were piled up until the accumulated mass measured 2,000 feet in thickness. It completely encircled the Gallatin Range, burying its lower slopes on both the east and west sides; it banked up all along the west flanks of the Absarokas, and buried the outlying spurs of the Teton and the Wind River Plateaus.

Resources:

https://www.nps.gov/parkhistory/online_books/yell/hague/sec1.htm

UPCOMING SHOWS

Sep. 30 - Oct 2, 2016: Dallas, NC - 38th Annual Gaston Gem & Mineral Show. The show is located at Gaston County Park on Hwy 279(1303 Dallas-Cherryville Hwy). It is located 1/2 mile off 321. There is a sluice. We sell buckets of sand with minerals and great other items in them. Hours: Sep. 30 - Oct 1: 9:00-6:00; Oct 2: 9:00-5:00. Admission is free. hourly raffles, Grand prize drawn Oct. 2 at 5:00. We offer geodes, wire wrapping, quality gemstones, fossils, minerals, faceted stones, makings, cutting material, jewelry. Our website is <http://gastongemclub.weebly.com/>

Nov. 18 - 20, 2016: Columbia, SC - The Columbia, SC Gem & Mineral Society will hold its 49th Annual Gem, Mineral, & Jewelry Show. Jamil Temple, 206 Jamil Rd., Columbia, SC 29210. Jewelry, beads, loose stones, fossils, minerals, gold, silver, & tools for sale, Geodes sold & cut; Club member's rock collections on exhibit & lapidary demonstrations. Lots of fun for the whole family. South Carolina amethyst on display. Sponsored by The Columbia Gem & Mineral Society. Hours: Fri. 10:00 - 6:00; Sat. 10:00 - 6:00; Sun. 12:00 - 5:00. Admission: \$5.00 for adults, Sixteen & under free with adult. All military & their dependents free. Contact: Sue Shrader 803-736-9317; ashtrader@mindspring.com. Dealers; Sharon Sterrett 803-356-1472; ssterrett@sc.rr.com. <http://www.cgams.org>

March 31 - April 2, 2017: Raleigh, NC – 41st Annual Capital Area Gem & Mineral Show. Tar Heel Gem and Mineral Club, Inc. Kerr Scott Building, NC State Fairgrounds, Raleigh, NC. The show is sponsored by the Tar Heel Gem & Mineral Club and includes 29 dealers. The Hospitality area sells grab bags with mineral specimens. Buy a rock at the Geode booth and be the first to see what is inside. The on-going Silent Auction has new items every hour. Dealers provide minerals, fossils, finished jewelry, gemstones, findings and beads for sale.. Hours: Fri 3-8; Sat 10-6; Sun 10-5. Admission: Free and Free Parking. Contact: Cyndy Hummel; 919-779-6220; mchummel@mindspring.com; www.tarheelclub.org;

Vugsites The following are some links to Web-Sites that may interest some of our members:

<http://www.tarheelclub.org> / <https://www.facebook.com/tarheelgemandmineralclub/> These are the official sites for the Tar Heel Gem & Mineral Club. I would strongly urge all members to check them out on a regular basis.

<http://www.amfed.org> / <http://www.amfed.org/sfms> These are the official sites for the organizing body that the Tar Heel Gem & Mineral Club is founded under. I would strongly urge all members to check them out on a regular basis.

http://www.amfed.org/sfms/lodestar_newsletter.html The SFMS Lodestar Newsletter

<http://www.carolinageologicalsociety.org/CGS/Home.html> This site provides numerous downloadable field-trip guide books, maps, and charts of the Carolinas. It will prove to keep any avid rock hound busy for years. Great Site!

http://www.ncminerals.com/ncmineralswebsite_files/page0011.htm And while we are on the subject, try this link. Its titled: Links of Interest to Rock hounds in NC. It will take you to a list of links for North Carolina gems and minerals.

<http://www.rocksforkids.com/> Just like the name says, a nice place to steer the younger members.

Information & photographs of over 6300 specimens from the Glenn & Martha Vargas Gem & Mineral Collection.

<http://www.rockhoundlounge.com> Scott Laborde, a club member maintains his own web site that might be of interest to people collecting in and around Wake County.

http://www.msnbc.msn.com/id/29726500/ns/technology_and_science-science This site highlights a half dozen of the most recent significant fossil finds.

<http://appmodo.com/13971/mole-quest-for-the-terracore-gem-app-review-for-the-iphone-and-ipod-touch/> If you have an iphone or an ipod touch, this rock-hounding may be the game for you.

http://diamonddanpublications.net/index_files/page0009.html Diamond Dan's Mini Miner's Monthly

I would like to encourage all members of the THG&MC that maintain their own presence on the internet to send me a link to their site to be published in future Vugsites so that other club members may learn and enjoy the craft, the art, the interests that many of us have in common.

Park in the Cates Ave. Parking Deck off Jensen Dr. Enter Thompson Building directly across from the parking lot.

**Our Next Meeting is
July 19, 2016 @ 7:30PM
Thompson Building / NCSU Campus.**

About Our Organization...

The Tar Heel Gem and Mineral Club, Inc. was formed in 1974 as a nonprofit educational organization for people who enjoy the lapidary arts, earth sciences, and related subjects. The main objectives of the club are to investigate, preserve, and share knowledge of rocks, minerals, and precious stones, and to promote interest in mineralogy, paleontology, earth sciences, and lapidary techniques, among club members and among the general public. The club pursues these goals through publications, meetings, lectures, field trips, exhibits, demonstrations, and other activities.

Come and be a part of the Fun!



TAR HEEL GEM & MINERAL CLUB
10609 Chelsea Drive
Raleigh, NC 27603

