

Tar Heel Tailings

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

Special Interest Articles:

- Prez Sez
- January Door Prize
- Name Tag Door Prize
- Panera Box Supper Form

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Prez Sez

It is Show Time People!

This will be a fun meeting preparing for the March show. One group will make grab bags and the other group will adhere address labels & stamps to post cards for our show mailing list.

Enclosed in the newsletter were all the volunteer opportunities during the show. If you haven't already signed up, please do so at the meeting. If you cannot attend the meeting but would still like to volunteer, please give the area chairperson a call as I will turn over the roster to them at the meeting's end.

The show is a lot of fun. Besides being able to talk to like-minded people about our hobby, if you volunteer at least 8 hours between Thursday and Sunday, you get a chance of winning a week of paid instruction at Wildacres or William Holland. We have 2 drawings for this opportunity. These are valued up to \$525. That is some reward for volunteering at the show!

Hope to see you soon,

Cyndy Hummel

President, Show Chairperson

January Door Prize - CHALCOPYRITE - COPPER PYRITE By Eileen Breckstein

QUARTZ
CALCITE
GALENA
CHALCOPYRITE -
COPPER PYRITE

QUARTZ appears to be the most prevalent mineral of the prize. This is the mineral upon which the Stone Ages were based. With few exceptions, most early stone tools were fashioned of quartz. Outcrops of quartz that were suitable for tool manufacturing were targeted by some of the earliest known mining activities and the mined quartz was traded across vast distances, even before humans began to establish agricultural societies. In our modern world, quartz is one of

the most widely used minerals, though few people are aware of its many contributions. It is the source of most of our society's glass - from window panes and crystal goblets to eyeglasses and cathedrals' stained glass windows. Quartz occurs in a wide range of varieties under a bewildering array of informal names, such as jasper, flint, tiger's eye, amethyst, citrine, chalcedony, onyx, opal and

agate. Each depends on chemicals that have been 'mixed' with the quartz and subjected to differing conditions when forming.

Because quartz is relatively stable at surface temperatures and pressures, it can be concentrated by weathering processes to be even more abundant in sedimentary rocks than it is in igneous rocks.

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Tar Heel Gem & Mineral Club, Inc.

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We're on the Web!

See us at:

www.tarheelclub.org

Program & Refreshments

REFRESHMENT SCHEDULE:

Coordinator: Need Volunteer

March TBD

PROGRAM SCHEDULE:

March Post Cards and Grab Bags

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

March Treasurer's Report

No Report Available due to the Treasurer's medical issues.

March B-Day Members

- Clare Anderson
- Lily Janowsky
- Bill Chapman
- Amanda Dean
- Wesley A. Jacocks
- Fredora Jones
- Sorin Lazareanu
- Fred Lentz
- Bruce Norcross
- Joseph Stephens
- Joey Stephens
- Cathy Stephens



Membership applications may be mailed to:

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

January Door Prize

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Quartz sand grains are a significant component of most sandstones and siltstones, and some detrital sedimentary rocks are almost exclusively composed of quartz grains. Metamorphism of these sedimentary rocks produces quartzite, a metamorphic rock composed almost entirely of quartz.

Quartz' stability, even under harsh chemical conditions, was aptly demonstrated by some dinosaurs that swallowed stones to aid in the digestion of land plants. These gizzard stones, called gastroliths, are almost always composed solely of quartz. Other stones the dinosaur may have swallowed broke down in the swirl of its strong stomach acids, only leaving quartz rocks to survive as working gastroliths. This beautiful specimen is primarily Quartz and comes from Daye, China.

The 2nd most visible Mineral is Calcite

All natural waters contain dissolved calcium and carbon dioxide, and their concentration is especially high in seawater. Many marine animals including corals, snails, clams, algae, and microscopic plankton use calcite and aragonite to form their shells and hard parts. Microorganisms can also indirectly lead to the precipitation of calcite as they alter the chemistry of the fluids in which they live. Once formed, calcite is easily dissolved and its component ions released to precipitate elsewhere.

As a consequence, calcite is not only the main mineral of limestone rocks and marble (metamorphosed limestone), but also a common accessory component of sandstone and siltstone rocks. Calcite forms cave decorations, hot spring travertine, and hydrothermal mineral deposits. Because it is easily precipitated and dissolved at the Earth's surface temperatures and pressures, calcite is one of the more common fracture-filling vein minerals found in other rocks. Calcite even precipitates in soils, particularly those in arid environments where calcite precipitation can form hard layers called caliche.

GALENA is the next most visible. Against the lighter colors of the quartz and calcite the Galena appears deep gray to black. Sometimes it is also called lead glance, Galena is the natural mineral form of lead sulfide. It is the most important ore of lead process and an important source of silver and has been since ancient times. Because of its somewhat low melting point, it was easy to liberate by smelting.

In some deposits galena contains about 1-2 percent silver, a byproduct that far outweighs the main lead ore in revenue. Galena deposits often also contain significant amounts of silver as included silver sulfide mineral phases or as limited solid solution within the galena structure. These argentiferous galenas have long been the most important. One of the oldest uses of galena was as kohl. In Ancient Egypt, Kohl was applied around the eyes to reduce the glare of the desert sun and to repel flies, which were a potential source of disease.

Galena is the most abundant lead containing mineral, has been mined for millennia, and remains our major source of that metal. It is a metallic, lead-gray mineral with cubic cleavage and a distinctly high density that makes galena samples feel much 'heavier' than expected for their size. Because it melts at a relatively low temperature and is so easily worked, lead was one of the first metals to be extensively used by many societies. Over centuries, lead use has led to the historic development of coins, bullets, batteries, televisions, and computers. Its use pervades past and present societies providing many benefits, but also raising some serious health issues.

The least apparent mineral in the specimen is Chalcopyrite. In fact a casual observer may not see it. Just a few cubes of Fools Gold. Once seen, the eyes return to it again and again.

Throughout human history, chalcopyrite has been our leading source of copper. This is despite having a relatively low copper yield (only 25% of its atoms are copper) compared to other copper minerals such as chalcocite and cuprite (both with 67% yields), or bornite and covellite (that have 50% yields). However, chalcopyrite is much more abundant than the other copper-bearing minerals and is far more widely distributed so it remains our most important copper source.

In many societies copper was the first known metal to be widely worked, and for over six thousand years copper mining has remained a crucial industry. Copper is easily worked and can be mixed with zinc to make brass, or with tin to make chalcopyrite bronze. Before people learned to smelt iron, bronze was the most durable, widely worked and economically important metal. From its earliest civilizations to the Roman era, political and military strength in the Mediterranean revolved around the control of vast copper and other metal deposits in uplifted ancient seafloor rock. Some Spanish chalcopyrite and pyrite deposit sites have been continuously mined for over three thousand years to produce copper and sulfur, along with other associated minerals such as gold.

More recently, copper's high conductivity, softness, and resistance to corrosion, have given it a critical role in generating and distributing electrical power. Copper is easily worked and relatively cheap so it is used for the bulk of the wiring that connects our society's electrical systems. Although this is currently its most important contribution, copper has also been in demand for uses ranging from coinage to building decorations. Medical uses for chalcopyrite range from ancient healing methods to modern acupuncture.

According to archaeologists, copper mining and smelting was conducted at Daye's Tonglūshan Mine as early as the 6th century B.C. The place that this beautiful specimen was mined. Tonglūshan Mine is located just southwest of the modern city,

Nametag Door Prize - Citrine

By Charles Weil

CITRINE - a transparent variety of Quartz (SiO_2) with the following properties:

Color	Yellow to yellow-orange or to yellow-green. Transparent and color may grade to colorless. Yellow-green crystals may contain smoky phantoms.
Hardness	7 (Moh's Scale)
Luster	Vitreous (glassy)
Cleavage	None
Fracture	Conchoidal

Citrine is characterized by its color and hardness; it takes a high polish and is used as a semi-precious gem when faceted or cabbed for use in jewelry.



An amethyst geode cut into 2 halves, the right one was heated to turn the amethyst into "citrine".

Natural citrine is very rare and its origin is still under debate. Apparently, it owes its color to a submicroscopic distribution of colloidal ferric hydroxide. However, identity problems may arise because Amethyst and Smoky Quartz can when heated can turn yellow or orange and such products of heat treatments are often sold as "citrine". Yellow glass, thin

coatings of iron oxides on colorless quartz, and quartz with inclusions of yellow iron oxides (limonite) may simulate citrine but technically, quartz colored by inclusions of any kind is not citrine. Natural and heat-treated citrine may be sold in the market as Topaz, Bohemian Topaz, Citron, Kundalini Quartz and Lemon Quartz.

from <http://www.mindat.org/min-1054.html>



At the January meeting, I won a mineral specimen which clearly shows the development of rich golden orange citrine from milky quartz crystals. At the base of the 8 cm. layer of quartz crystals, the crystals are clear to milky but the color of these same quartz crystals changes to light golden orange and darkens toward the top of the layer. Small pyrite crystals (1 mm) are also present and appear to be associated with the color changes of the quartz. The color change of the quartz and occurrence of the pyrite (FeS_2) suggest the development of these citrine was caused by late stage changes in physical conditions or water chemistry while the crystals were still growing.

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

Tuesday, Feb 17th, 2015

No Meeting due to weather.

Respectfully Submitted

Walt Milowic,

Secretary, Tar Heel Gem and Mineral Club, Inc.

Panera Boxed Supper Form

Complete this form and return it with your deposit and cost of meal(s). Panera will deliver our boxed suppers on Friday at 5PM. Your name will be placed on the box.

Cost for each boxed Panera supper is \$10

Participant (print name) _____

Participant (print name) _____

Participant (print name) _____

Participant (print name) _____

Total Fees \$ _____

Check one line below and then circle your sandwich, salad & cookie choices

_____ Sandwich box (with potato chips, pickle & cookie)

_____ Salad box (with whole grain baguette & cookie)

_____ Half sandwich, half salad box (with whole grain baguette & cookie)

Sandwich choices

_____ Napa Almond Chicken Salad

Chicken, diced celery, seedless grapes, almonds & our special dressing, with lettuce & tomato, on Sesame Semolina bread.

_____ Italian Combo

Seared steak, smoked turkey, ham, salami, Swiss cheese, peperoncini, lettuce, tomatoes, red onions & our special sauce, on Ciabatta.

_____ Bacon Turkey Bravo

Smoked turkey breast, bacon, smoked Gouda, lettuce, tomatoes & our signature dressing, on Tomato Basil bread.

Salad choices

_____ Greek

Romaine lettuce, tomatoes, feta cheese, peperoncini, red onions, Kalamata olives, pepper & our Greek dressing.

Cookie choice

_____ Chocolate Chip

_____ Double Chocolate



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so members can use the Panera Boxed Supper Form,
without losing any information in the Newsletter.



2015 Show Chairpeople

If you are unable to make the meeting, contact these people to volunteer in their areas.

Hospitality	Marion Broadway	(919) 612-0721	thewirenut@charter.net
Geode	Greg Dillon	(919) 772-3164	wgygunsmoke@aol.com
Silent Auction	Jack Fried	(919) 761-9390	jacklfried@aol.com
Display Cases	Jack Fried	(919) 761-9390	jacklfried@aol.com
Demonstration	Obsidian Harris	(919) 674-0243	foxivy@nc.rr.com
Refreshments	Gerald Beck	(919) 848-3319	gbeck23@nc.rr.com

UPCOMING SHOWS

March 27-29, 2014: Raleigh, NC - 39th Annual Capital Area Gem & Mineral Show. Tar Heel Gem and Mineral Club, Inc. Kerr Scott Building, NC State Fairgrounds, Raleigh, NC. 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;

April 30 - May 3, 2013: Spruce Pine, NC – 3rd Annual Spring Grassy Creek Gem and Mineral Show. Parkway Fire and Rescue Department at 12966 Hwy. 226 South, Spruce Pine, NC, halfway between US 19E and the Blue Ridge Parkway (exit 331). There are 30 dealers who have all kinds of gemstones, mineral specimens, jewelry, beads, fossils, and lots more. Mine tours available. Admission is FREE. Parking is FREE. Hours are from 8 to 6 all days. Contact Donna Collis: 828 765 5519; collisdonna@yahoo.com for information.

Vugsites

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

<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
March 17, 2015 @ 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

