

Special Interest Articles:

- Prez Sez
- History of Garnets
in North Carolina
- First Ever
Diamond inside
Another Diamond

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

Prez Sez By Anthony Andreoli

Reminder!!! This month's meeting will be the first meeting starting at our new time, 7pm!!!! We will be making grab bags for our annual show in April. This year our club goal is 1000 bags!!!! So, we need all of your help to bring in as many specimens that you can to put into the grab bags. Check your collections and bring in anything you can that can fit into the grab bags, nothing too big.

Remember the more colorful the better!!! Also, if anyone has any extra cardboard flats to put the bags in after we finish please bring them to the meeting. We will also be having our yearly nominations for our club officers for our election in November. So, if there is anyone who would like to see nominated please bring it up at the meeting. Pizza and beverages will be brought by Beverly. Thank you, and see you all on October 15th!

Anthony Andreoli, President
Tar Heel Gem and Mineral Club, Inc.

History of Garnets in North Carolina and Where to Find Them Today

Garnet is a mineral that is used both in industrial applications and as a gemstone. The 2006 report, U.S. Industrial Garnet, specifies certain areas of North Carolina in which garnet have been mined for abrasives. They add that while garnet is present all along the "central and southern Appalachian Mountains," it is only in minable quantities in North Carolina. Garnet abrasives and gems were produced in Burke, Clay, Jackson, Macon and Madison Counties from 1900 to 1926, primarily using the almandite and rhodolite varieties. They continue, "the two largest deposits are at Penland Bald on Buck Creek and on Shooting Creek in Clay County." These deposits were not developed in 1922 due to "rough topography," despite the fact that the "almandite-rich hornblende gneiss" produced crystals up to 6cm in length. The other area with larger deposits was Jackson county, around Sugarloaf and Doubletop Mountains. This area presents a

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<https://geology.com>
"This 6.6 carat, plum-colored, rhodolite garnet was cut from material found in North Carolina. It measures approximately 12 millimeters x 10 millimeters x 4.5 millimeters. It is a very shallow stone but is still very dark. The dark tone and abundant inclusions are typical of garnets found in North Carolina."

Tar Heel Gem & Mineral Club, Inc.

PO Box 33783,
Raleigh, NC 27636-3783

Anthony Andreoli- President
fossilguy9494@yahoo.com
(919) 803-4899

George Harris - V-President
GeorgeFHarris@yahoo.com
(919) 674-0243

Linda Searcy - Treasurer
ljs0928@gmail.com
(919) 909-0750

Beverly House - Secretary
beverlyhouse@yahoo.com
919-389-1821

Lindsey Bradsher - Newsletter
Editor and Committee Member
littlebluelama@gmail.com
(919) 451-9158

Katelyn Hennessey - Field-Trip
Coord.
katelynphennessey@gmail.com

Cyndy Hummel-Show Chairperson
and Committee Member
mchummel@mindspring.com
919-779-6220

We're on the Web!
See us at:
www.tarheelclub.org

Program & Refreshments

REFRESHMENT SCHEDULE:

Coordinator: Open

September: Beverly
Beverages: Beverly

PROGRAM SCHEDULE:

January - Tom Todaro- Safety Briefing
February - Michael Frankilin
March - Grab Bags / Postcards
April - Post-show Discussion
May - Jeff Schlottman-Digging the Guibault Claim
June - The Challenger Family- Mineral Identification
July - Smithsonian Collection
August - Cathy Young-Collecting Fossils from the Ordovician to the Pleistocene Ages
September - Paul Byrne- Icy Satellites
October - Grab Bags
November - Election

Remember, the club will reimburse you for up to \$85 (bring your receipts to the treasurer).

October B-Day Members

- Barbara Reyes
- Louis Cerny
- Dana Goodnight
- Mary Beth San Filipo
- Kay Swenson
- Nile Mueller
- Glen Cutting
- Stacey Jo Vaughn
- Mary Armstrong
- Mike Craythorn
- Gerald Beck
- Melissa Whitfield
- Eugene Homme
- Brian Gray
- Thomas Beach
- Jason Harris

September Treasurer's Report

TGMC Treasurer Report - September 2019			
Beginning Balance:	9/1/19		5,707.32
Income:			
	Membership Dues	120.00	
	Total Income:		120.00
Expense:			
	New checks	81.00	
	Meeting Refreshments	65.04	
	Trailer Registration/Taxes	41.50	
	Newsletter Printing	96.04	
	Stripe Fees (August)	5.28	
	Total Expenses:		288.86
Ending Balance:	9/30/19		5,418.46
CDs			
	32-90 day		5,377.88
	91-181 day		5,701.39
	Total CDs		11,079.27



Membership applications may be mailed to:

Tar Heel Gem & Mineral Club, Inc.
Attention: Treasurer
PO Box 33783,
Raleigh, NC 27636-3783

Tar Heel Gem and Mineral Club, Inc. – September Meeting Minutes

Minutes 09/17/2019

Attendees (Members): 21

Visitors: 4

New Members: 1

TOTAL Attending: 26

Birthdays:

Membership table:

Food: Pizza- Beverly House

Drinks- Beverly House and Renny Young

Meeting called to order at 7:30 pm by Anthony Andreoli president

Presentation: Icy Moons of Jupiter and Saturn

Dr. Paul Byrne did a slideshow presentation on the icy moons of Jupiter and Saturn. He shared insights on how they study the moons, theories about the compositions based on these studies and what the future holds for proving these theories.

Reminders:

- 1). Beginning with the October 2019 meeting, the meetings will begin at 7:00 pm
- 2). October Meeting topics: Nominations for the board and creating grab bags for the April 2020 show
- 3). November Meeting- elections for the board will take place.
- 4). Field Trips: We will be collecting material for the 2020 THGMC show—one-gallon buckets will be distributed and members are encouraged to fill the buckets with grab bag material. Anthony is looking at October to do the first round of grab bags for the show.
- 5). THGMC Show 2020—the date is set—April 3-5, 2020. Mark your calendars. We are already working on the show, to improve and expand our offering. Volunteers (LOTS of THEM) will be needed.

Door Prize Winner—Sue Heneghan

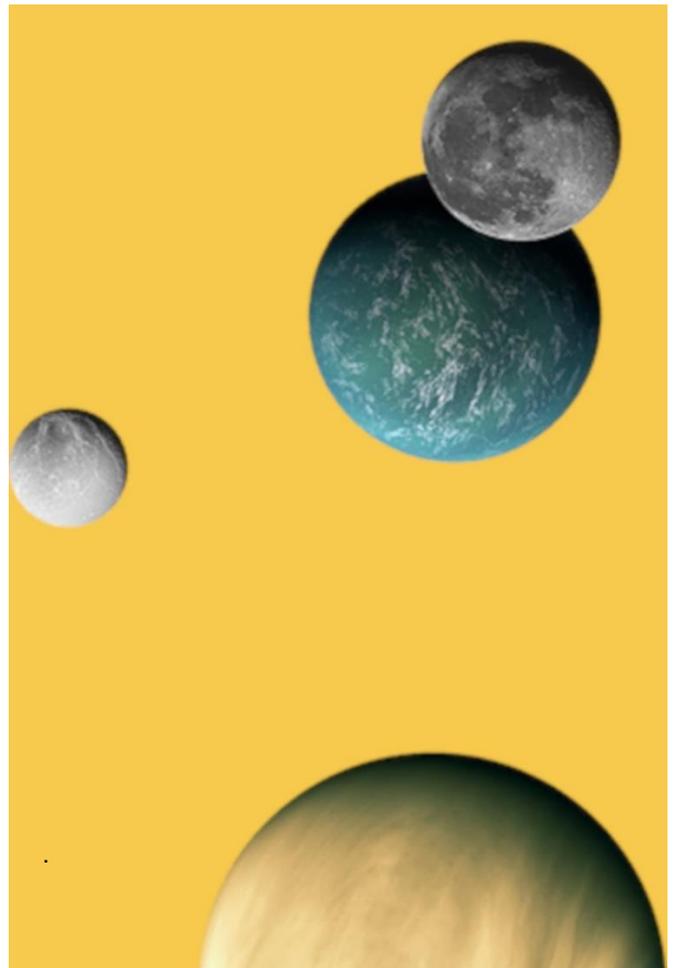
Next Meeting: Tuesday, October 15, 2019 7:30 pm

Respectfully submitted,
Beverly L. House, Secretary
Tar Heel Gem and Mineral Club, Inc.



Above: Dr. Paul Byrne describes how the crust of a planet or moon is layered like a candy bar.

Below: You can learn more about Dr. Byrne's research at <https://www.planetaryresearchgroup.com/>



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“quartz-biotite gneiss” that was 25-50% garnet, with crystals measuring up to 3.5cm. Garnets continued to be mined around the state, sometimes as a byproduct of kyanite mines, until about 1944. After that time, only gem and mineral specimens of garnet have been collected in NC, rather than products for industry.

Joseph Hyde Pratt describes 6 types of North Carolina garnet in his 1933 American Minerologist article: “grossularite (essonite), pyrope, rhodolite, almandite, spessarite, and andradite (demantoid),” with none of the spessarite and andradite producing gem quality stones. Essonite garnet, which was also known as cinnamon-stone or hyacinth when set in jewelry, was found in Bakersville mica mines. Its crystals were flat and transparent, sandwiched between mica plates. Some of these gems weighed a carat or more after cutting. The most common variety, almandite, was found in colors ranging from pinkish to deep brownish red. It may be commonly found, Pratt says, “in Burke, Caldwell, Catawba, Jackson and Mitchell counties.” Mineral-specimen-quality garnets of up to 20lbs were found in these areas! Also, in “Avery, Mitchell and Yancey Counties,” transparent garnet was found within “blocks and sheets of mica.” Pyrope garnet, also called Bohemian garnet (due to the fact that they are famously mined in the Eastern European area historically known as Bohemia) was found in “Burke, McDowell, and Alexander Counties.” This

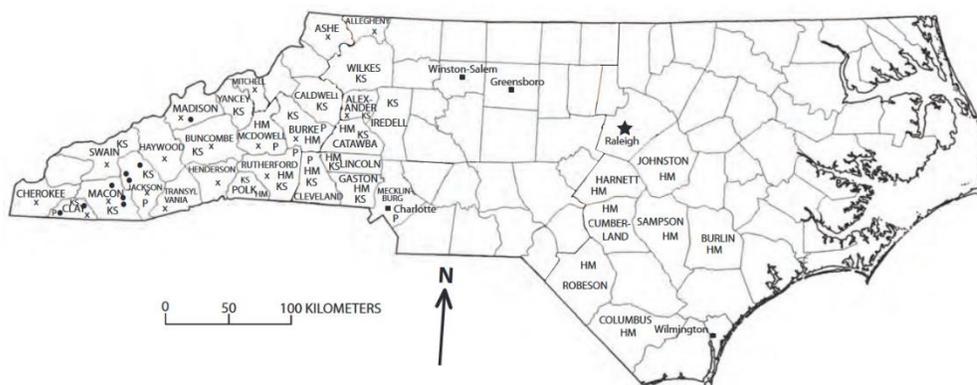


<https://www.mastercutgems.com>

Rhodolite Garnet: “This gem was cut by Paul Burton from material he mined himself. No treatment in any way on this fine gem... Origin: Cowee Valley, North Carolina USA”

blood-red or fiery-red garnet gets its color from chromium and manganese, and in North Carolina was found “in sands of the gold washings.” Rhodolite garnets, called “the most unique variety” by Pratt, were discovered in North Carolina in the 1800’s, and are not found anywhere else in the U.S. More recently, they have been found in Africa, Brazil and India. This purplish-pink garnet was compared to “the delicate rose-like tint of one of the rhododendrons,” and also prized for its unique refractive qualities. It was mistaken for a type of ruby until analysis proved it was garnet. The small area in which rhodolite garnets were found as of 1933 includes: gravelly streams on Mason Mountain in Macon county, and gneiss deposits on that same mountain. Cut gems were obtained up to a size of 13 3/8 carats, with uncut stones up to 43 1/2 carats.

Today, garnet of varying quality may be found in many locations around the state (see 2006 geological survey map below), including “Garnet



<https://pubs.usgs.gov/bul/b2209-l/b2209l.pdf>—County map of North Carolina, showing county boundaries and locations of counties (names in all caps) with garnet deposits or occurrences. Squares, cities and towns; star, State capital; dots, mines (inactive); Xs, garnet-collection localities (French, 1968), as of 1968. HM, in western North Carolina, streams with heavy-mineral suites that contain more than 5 weight percent garnet (Overstreet and others, 1968), and in southeastern North Carolina, garnet occurrences in heavy-mineral suites (Larsen, 1993) ; KS, kyanite and sillimanite production; P, large placer deposits that may include garnet (Gair and others, 1989).

Hill” on the side Route 98 in Wake forest. A note about Garnet Hill—reports online suggest you will need to find public parking nearby, and walk up—parking by the side of the road may now be discouraged. In Madison county, there is a paid location: Little Pine Mine. The mine states that you may find almandine garnets in a “chlorite/mica schist.” They also state while these are generally mineral-specimen-quality stones, the crystal shapes are “excellent” and some are “unusual,” “elongated” and “distorted” which makes them popular with collectors. It should also be noted that even tiny garnets in matrix can be polished into an attractive specimen.

If you decide to search for garnets in any of the counties or areas described above, check to be sure you are on public land (or get permission on private land) and checking with the Bureau of Land Management is recommended (see: <https://www.blm.gov/basic/rockhounding>).

Rockhounding is allowed on most public land, but there are exceptions for national monuments and national wilderness areas such as Linville Gorge. There may also be restrictions on where you can park. Usually, in public areas, collection is limited to less than 10-25lbs of material.

Sources:

<http://web.archive.org/web/20070807144412/http://hkentcraig.com/GarnetHill.html>

<https://books.google.com/books?id=OhgtAAAAIAAJ&pg=PA226&hl=en#v=onepage&q&f=false>

<http://mayerandwatt.com/gemipedia/gemipedia-a-to-z/rhodolite-umbalite>

<http://www.thepracticalgemologist.com/gemstones-2/2016/1/11/bohemian-garnets>

<https://pubs.usgs.gov/bul/b2209-l/b2209l.pdf>

<http://www.wncrocks.com/resources/Collecting%20site%20little%20pine%20mine.htm>

<https://www.mindat.org/loc-5516.html>



Above: <https://www.mindat.org/loc-5516.html>
Rough Garnet found at Little Pine Mine

Below: Collector displays garnet crystals at Little Pine Mine
<http://www.wncrocks.com/resources/Collecting%20site%20little%20pine%20mine.htm>



See The First-Ever Diamond Found Trapped Inside Another Diamond

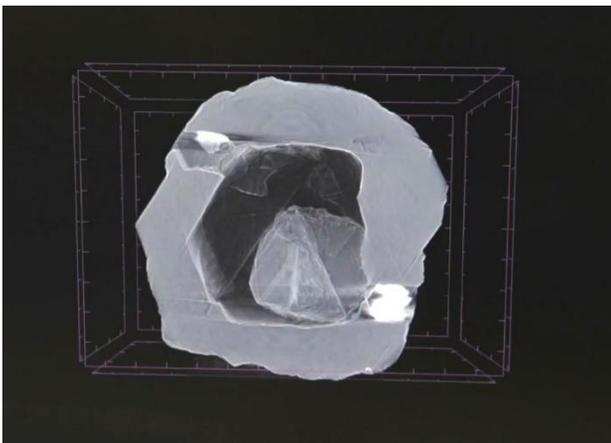
By Eric Mack

A very unusual pair of diamonds has been unearthed in Siberia, where Russia's Alrosa claims to have found the first-ever diamond trapped inside another diamond.

The so-called "Matryoshka" diamond, so nicknamed for the famed Russian nesting dolls, is small at just .62 carats and 4.8 x 4.9 x 2.8 mm.

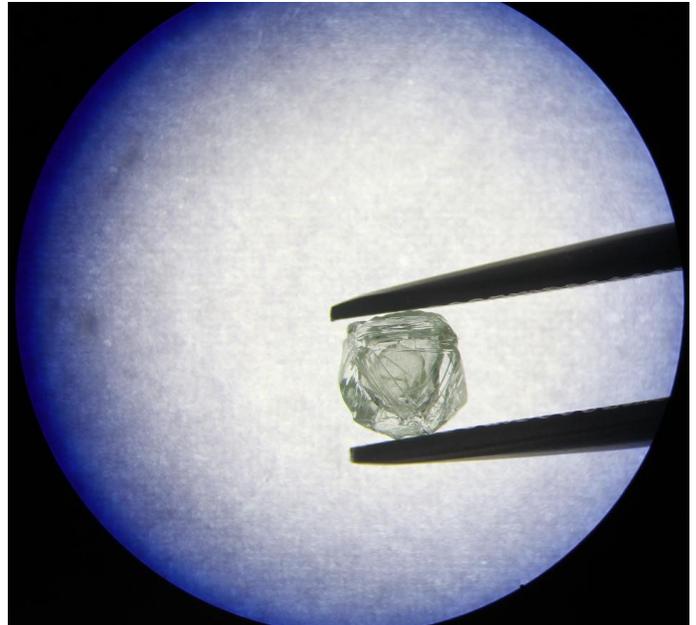
The internal diamond is inside a closed cavity where it can move freely. That void in the bigger diamond has a volume of just 6 cubic mm and the tiny "nested" crystal has an estimated weight of just .02 carats and dimensions of 1.9x2.1x0.6 mm.

The below x-ray view shows a cross-section of the diamond within a diamond:



The unusual double diamond was discovered while being sorted from other diamonds at the Siberia hub of Yakutsk.

Scientists working for Alrosa, which is a leading diamond-mining company partially owned by the Russian government, hypothesize that the internal diamond formed first and was then enclosed by the larger crystal later in the formation process.



An unusual diamond with another diamond moving freely inside was mined in Siberia. According to the experts who have studied the find, this is the first such diamond in the history of global diamond mining. *Alrosa*

"As far as we know, there were no such diamonds in the history of global diamond mining yet," said Alrosa's Oleg Kovalchuk. "This is really a unique creation of nature, especially since nature does not like emptiness. Usually, some minerals are replaced by others without cavity formation."

There's no information yet on what the Matryoshka diamond pair might be worth.

Alrosa is the same company that recently revealed a 14.8-carat pink diamond valued at over \$60 million.

Source:

<https://www.forbes.com/sites/ericmack/2019/10/04/see-the-first-ever-matryoshka-diamond-inside-another-diamond/#177cfcd33647>

Announcements

Mineralogy has opened a new location at Southpoint Mall in Durham (in addition to their Triangle Town Center location in Raleigh). Both decorative specimens and rough slabs were available at my visit, and the proprietor reported that they are to have more slabs coming in in the next few months. Tarheel Gem and Mineral Club, Inc. members who bring their badge will receive a 10% discount on their purchase.



Holiday Gem, Mineral & Fossil Show –

Start Date: 12/13/2019

End Date: 12/15/2019

Hours: Fri/Sat 10:00-6:00 Sun 10:00-4:00

Contact: Richard Jacquot

Venue: WNC Agriculture Center

Address:

1301 Fanning Bridge Rd

Fletcher, NC 28732

Website: <http://www.americanrockhound.com/>



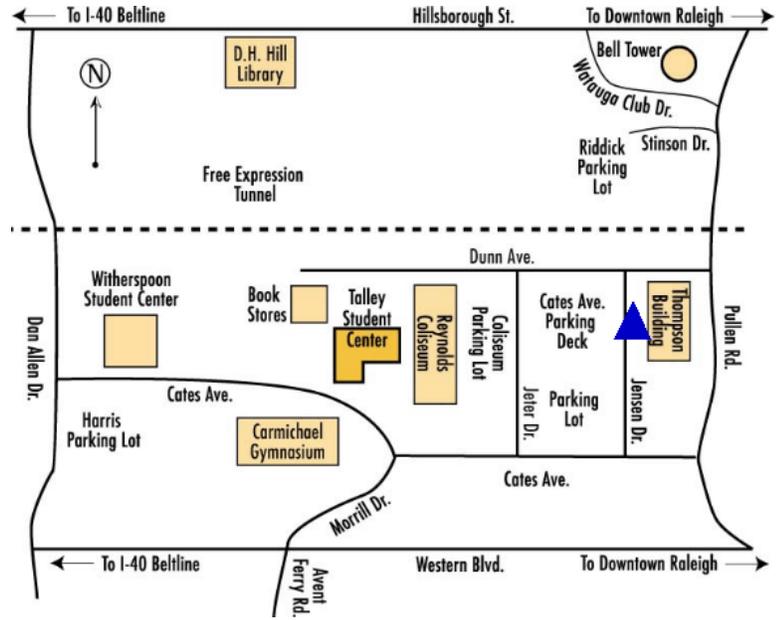
Park in the Cates Ave. Parking Deck off Jensen Dr. Enter Thompson Building directly across from the parking lot.

**Our Next Meeting is
October 15, 2019 @ 7:00PM
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 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, demonstrations, and other activities.

Come and be a part of the Fun!



TAR HEEL GEM & MINERAL CLUB
PO Box 33783,
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