

# Tar Heel Tailings

## Special Interest Articles:

- Prez Sez
- Largest Ruby Ever Found in the World
- Upcoming Field Trips
- Insider's Guide to the Ruby Gemstone
- Colored Gemstone Mining in Tanzania

## Individual Highlights:

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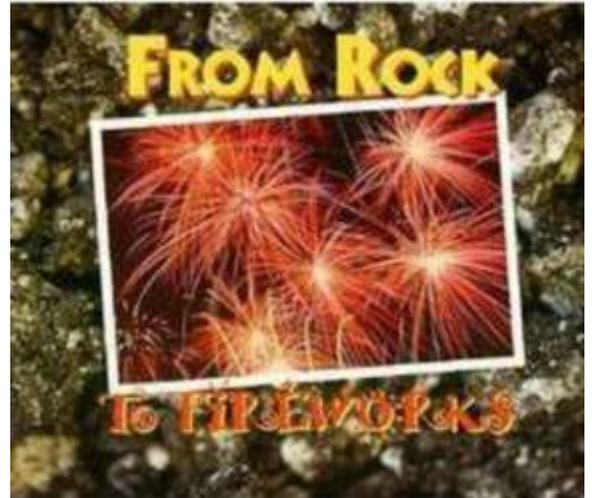
A newsletter for Gem and Mineral enthusiast in and around the Raleigh, North Carolina area.

## Prez Sez By Linda Searcy

Tom will be acting president for July's meeting.

We need a volunteer for refreshments!

Linda Searcy  
President, Tar Heel Gem and Mineral Club



## Largest Ruby Ever Found in the World

By Peter Suchy

Man Claims Biggest Ruby!

A Report in 2012 from Al Arabiya.net says, "The uncut 150 kilogram ruby, believed to be one of the largest in the world, was bought by 81-year-old Muhammad Jethra" over 20 years ago. Where did this huge ruby come from? According to Al Arabiya.net, this gem came from miners in Tanzania.

Jethra is a retired businessman from Emirati and although he has had this uncut ruby for over 20 years, he's ready to sell! As of this writing there are no takers but one can only imagine the cost. Gemologists haven't put

a price on this 300-pound ruby.

After its discovery and recovery by Jethra he moved to Canada and then 18 years later, had the rock shipped to Dubai. Why Dubai—the no tax laws seemed attractive to Jethra and his daughter remains in

charge of this gemstone—at least until someone makes an offer.

Jethra thinks this largest-in-the-world-ruby would be "hard to cut" but could make "a very beautiful shape

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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](http://www.tarheelclub.org)

**Program & Refreshments**

REFRESHMENT SCHEDULE:

Coordinator: Open

July Snacks – TBD  
Drinks – TBD

PROGRAM SCHEDULE:

July TBA  
August Dr. Tacker / Ice Cream Social  
September Paul Byrne  
October Officer Nominations, Grab Bags  
November Elections

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

**July B-Day Members**

- Mike Allsbrook
- David Baltzegar
- Lindsey Bradsher
- Ruth Challeuer
- Becky Davenport
- Maria Gonzalez
- John Guerriero
- Sabrina Hanson
- Katelyn Hennessey
- P.D. Hill
- Michele Rosar
- Penny Rosser
- Eric Schaufler
- Barbara Todaro
- Susan Violon
- Jeff Wilson

**April Treasurer's Report**

Mar. Ending /	
Apr. Beginning Balance	\$18,588.88
-----	
Deposits (+)	
Dealers	\$7,713.00
Federation	785.00
Geode Booth	6,336.50
Hosp. Booth	2,013.00
Silent. Auction	931.00
Members	120.00
Shirts & Other	25.00
Square card	5,319.47
-----	
Sub total	\$23,242.97
-----	
Checks Written (-)	
Space rental NC Agric	\$11,174.00
New Geodes	3,156.21
Federation Nat'ls	4,553.77
Tee Shirts	625.00
Upstairs Food	959.44
Equip Repair	117.00
IMP Printing	97.61
Nat'ls expense	2,363.94
Field trips	30.00
Meeting Food	44.25
Cash set-up for Booths	540.00
-----	
Sub Total	\$23,661.22
-----	
Apr. Ending /	
May Beginning Balance	\$18,170.63



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 19, 2018

Attendees = 20

### Opening of Club Meeting:

Linda opened the meeting at 7:31 pm.

### Program:

Rachel L. Smith presents Interstellar Travel and the Fermi Paradox

Rachel studies carbon chemistry around forming stars. Highlights of the presentation include:

- Hawaiian telescopes (10 meter dish) not too affected by volcanic activity.
- Possibilities of various spacecraft-chemical rockets, solar sails, ion engines, nuclear engines.
- Colonizing mars?

### Visitors:

Visitor Sean is a geology student.

### Birthday:

Seward Shaddock got into cabbaging in Vietnam, until the rock shop got bombed. He continued his interest when he got back to the US.

### Business:

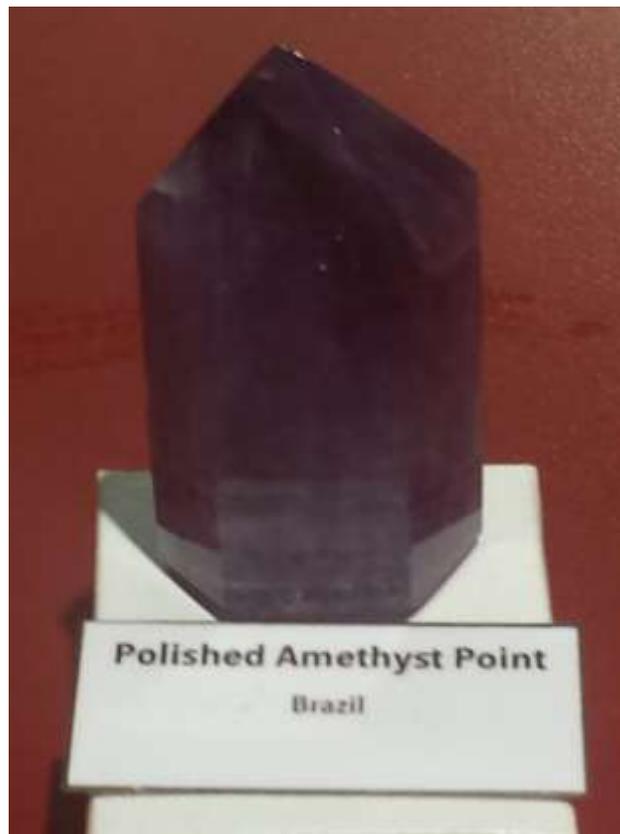
- Attention Silent Auction Volunteers—what is your name, what are the days and hours that you worked at the show? ASAP please reply to Cyndy Hummel so you can be entered in drawing.
- First milestone for website—payment due.

### Refreshments:

Thank you to Seward Shaddock for providing drinks, food provided by Linda Searcy.

### Door Prize:

Winner: Lilliana picked a amethyst point for the door prize.



### Close of Meeting:

Closed meeting at 9:20 pm.

Respectfully Submitted

Lindsey Bradsher,

Secretary, Tar Heel Gem and Mineral Club, Inc.

## Upcoming Field Trips

### By Katelyn Hennessey

There are no current field trips at this time. Please keep your eyes on your email for upcoming trips.

Katelyn Hennessey

Field Trip Coordinator

Tar Heel Gem & Mineral Club

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## Largest Ruby Ever Found

### Continued from Page 1

which could be put on a stand to decorate a house or office." Jethra also told reporters at his age he's ready to part with the gem and is confident buyers will come forward due to its uniqueness.

Another tidbit offered by Al Arabiya.net is a story of a ruby in possession of an England firm and valued it at \$17.36 million. Later in 2010, however, after the gemstone was reevaluated, it was discovered the valuation was "forged." The gemstone

was subsequently sold for a fraction of its original value for a little over \$12,600!

### Resources:

<http://blog.petersuchyjewelers.com/2013/08/what-is-the-largest-ruby-ever-found-in-the-world/>

## The Insider's Guide to the Ruby Gemstone

By Peter Suchy

The ruby is the July birthstone. Famous for its red color, this gemstone is easy to recognize by newcomers to jewelry collecting. But even here, there are differences when it comes to quality and cost. What do you need to know before buying your first ruby? Our insider's guide to rubies spells it out.

### Why is a Ruby Red?



When you get right down to chemistry, a ruby is a stone featuring corundum. It is the same material as a sapphire. The difference is the presence of chromium, which gives the stone its iconic red color.

### How Red is Red Enough?



The price of the stone relates directly to the shade of red your chosen ruby possesses. At the top of the scale is the deep red ruby with purple overtones. Jewelers refer to the purest color as "pigeon blood red," and it sells at startling prices. At the bottom, you notice the reddish stone with distinct purple or orange qualities. When the color features too much pink, we like to refer to the stone as a sapphire rather than a ruby. Buyers should beware when sourcing stones directly from producing nations since in these regions even the pink specimens are considered rubies.

### Untreated or Enhanced?



Enhancing the natural qualities of a gem is not unusual. Untreated gems, those that are only cut and polished but do not undergo any further treatments, command the highest prices. Heat treatments can improve the natural good looks of the stone, but retailers should take care to disclose them. At the other end of the spectrum are gems that we would typically reject but that manufacturers have treated with a variety of methods to imitate the look of a high-quality ruby. For example, it is possible to inject fillers into a stone and add reddening color additives that easily fool novice buyers.

### What Should the Stone Look Like?



Now that we have covered the color palette, it is time to focus on the secondary feature of a jewelry-grade ruby. For

starters, consider the presence (or absence) of inclusions. Although these are critical to the values of some stones, they detract from the beauty of rubies. Ideally, there should be few inclusions, and they are not easily visible. The higher the count of these impurities, the lower the value of the stone. The one exception would be the presence of inclusions that result in the formation of asterism, which presents as a star effect at the surface of the stone.

#### Resources:

<http://blog.petersuchyjewelers.com/2016/06/the-insiders-guide-to-the-ruby-gemstone/>

## Colored Gemstone Mining in Tanzania

By Vincent Pardieu and Wim Vertriest

A team of GIA field gemologists visited Tanzanian mines in the summer of 2016 to collect ruby and sapphire for GIA's reference collection and explore new sources of colored stones. The field expedition, led by these authors, visited many known Tanzanian gem localities as well as new deposits at Loolera, Kibuko (figure 1), Lutela, Amani Makoro, and Ngapa. The trip was made possible by the support of Mark Saul of Swala Gem Traders (Arusha, Tanzania), Tanzanian gem broker Justin Mmbaga, and several regional mining officers. We found that the most active colored gemstone mining area is still Merelani, which produces tanzanite and green grossular garnet. Ruby and sapphire output has been relatively low since the 2009 discovery of the ruby deposit in Montepuez, Mozambique, as confirmed by our Tanzanian sources.

Tanzanian miners supply stones to licensed brokers, who are allowed to buy and transport gems within the country. These brokers sell to licensed master dealers, who are allowed to export internationally. These master dealers are mainly located in Dar es Salaam and Arusha. While we met Thai and Sri Lankan buyers in Mahenge, Songea, and Tunduru, foreigners must have approval from regional mining officers and possess a proper business visa to visit the deposits. This is particularly enforced in southern Tanzania; around Songea, we met immigration officers who were "hunting for foreigners."

Our journey started in Longido, where rubies were discovered about 100 years ago (D. Dirlam et al., "Gem wealth of Tanzania," Summer 1992 G&G, pp. 80?102). The main operation in the Longido area is the Mundarara ruby mine, currently Tanzania's largest, with a workforce of 78 people. The gems are extracted from an underground tunnel about 200 meters deep crossed by several horizontal tunnels that host most of the production. The mine yields ruby in

zoisite (suitable for carving), as well as some cabochon- and facet-grade material of a very deep red color. The color is reminiscent of rubies from Mozambique.

We continued to the Uмба River, where Tanzanian sapphire production began after World War II and a ruby-bearing area was discovered by Georges "Papas" Papaeliopoulos in the 1950s (again, see Dirlam et al., 1992). The situation has changed significantly since author VP visited in 2005 and 2009. At the time there was a dispute between the company working the deposit, called "Amazon," and local communities. The dispute ended with the government revoking Amazon's license. During our 2016 expedition, we witnessed about 40 small-scale local miners using hand tools to work the primary deposit discovered by Papaeliopoulos, as well as secondary deposits scattered along the banks of the Uмба. Most of the production is traded each evening around the Mississippi Hotel in Uмба.

In the Kilindi area, about halfway between Uмба and Winza, a new ruby deposit has been discovered near the Maasai village of Loolera. This site, located atop a hill, produces gems very similar to those found near Winza in 2007. We visited the area with the support of the village leader, who said the first rubies were found about 10 years ago, but the quality of the stones was low. A few miners were working the deposit sporadically using hand tools. But in April 2016, some good-quality material was found in amphibole matrix, attracting considerable interest. About 25 mining licenses were issued during the summer of 2016, but there is a sense that the area is under the control of a few major players.

The deposit where the first rubies at Loolera were found is owned by a miner called Dr. Ozu. The mining pit appeared to be about 90 meters deep, but we could not inspect the tunnel as Dr. Ozu was not present. We studied the entrance and

looked through the tailings near the pit. In these rejects we found many small fragments of rubies associated with garnets, amphibole, mica, and feldspar. Although the material we saw resembled Winza ruby, the stones contained minute particles that gave them a milky aspect.

Our next stop was Winza, where an important gem rush occurred in 2007-2008 (D. Schwarz et al., "Rubies and sapphires from Winza, central Tanzania," Winter 2008 G&G, pp. 322-347; V. Pardiou, "The Winza ruby and sapphire mining area, Mpwapwa district, Dodoma province, Tanzania," www.fieldgemology.org, 2009). The main mining area at Mtakanini was nearly deserted. An old rusted washing plant was visible, but due to mechanical problems it had not washed any stones in more than a year. We estimated that a handful of people were still mining around Mtakanini, mainly at primary deposits in underground tunnels, some of which were over 100 meters deep. Working conditions are difficult, as the rock is hard and the tunnels are prone to flooding. We learned that several brief ruby rushes occurred nearby at Godegode, Makutop, Magaseni, Singonali, and Berega. In Morogoro Province, two ruby and spinel mining areas have been exploited since the 1980s. One is located just east of Morogoro in the Uluguru Mountains, and the second is about 150 km south near Mahenge. Most of the gem trade in the Uluguru Mountain region is in Mkuyuni, while the mining takes place near Matombo, Ngongolo, Mwaraze, and Kibuko. In Matombo we witnessed about 30 people retrieving pink spinel and rubies from a secondary deposit near Kiswila. Near Ngongolo, we visited four small-scale operations where locals with hand tools were mining small rubies in marble associated with pyrite, graphite, and mica.

Near Kibuko, a new pink sapphire deposit was worked by about 10 miners on a site owned by Luciano Kipanzi, who took over the area in 2015. Pink sapphires up to 100 carats are associated with carbonates and pyrite in a primary deposit (figure 2). Most of the stones were the milky "geuda" type, but there was some transparent facet-grade material with very fine crystallization. The mine had evidently yielded about 20 kg of sapphire, from cabochon- to facet-grade, during the previous six months. Nearby, three groups of small-scale miners were uncovering a limited amount of similar stones from secondary deposits.

The Mahenge district, known for spinel and ruby, is the second most active gemstone mining area in Tanzania. Recent discoveries of graphite near Ipanko and garnet near Lutela (the latter in February 2016) have kindled interest in the area. The new alluvial deposit produces an interesting range of attractive garnets (figure 3), from light "champagne" to deeper saturated rhodolite, including some color-shifting stones. We saw some clean stones weighing up to 20 ct and heard about others as large as 60 ct. About 100 miners were still working the alluvial deposit. Activity was already slowing;

we were told that a few months earlier, up to 300 miners were in the valley. This secondary deposit is rapidly depleting, and so far no primary deposit has been located.

Ipanko is still the main spinel deposit in the region. Author VP noticed that the pits were much larger than in 2012, meaning that the area had been mined since then. Nevertheless, the activity seemed slow compared to 2012: Several excavators were working secondary deposits, whereas small-scale miners once worked individual plots, called "boxes" by the locals. The nearby primary spinel deposit was still active, with about 400 people mining red spinel and only a few working on rubies. We then visited several small-scale ruby deposits along the Lukande River, including three operations working either primary or secondary deposits. As in the Uluguru Mountains, the rubies from these areas come from marble-type deposits. We saw about 50 miners working around Lukande, Kwam Somali, Mayote, Chipa, Ibogoma, Gombe, and Kitonga during the dry season, retrieving cabochon-grade rubies along with smaller facet-grade material. During the rainy season, these workers focus on gold mining or farming.

Our last visit was the region around Songea and Tunduru, where sapphire production began in the 1990s. The Songea deposit, discovered in 1992, was quite productive until the discovery of fine blue, yellow, and pink sapphires near Tunduru in 1994. The deposit was nearly inactive until the early 2000s, when the newly developed beryllium diffusion treatment was able to turn Songea's muddy green and brownish purple stones into attractive yellow to orange sapphires. In Songea, we heard of a new discovery at Amani Makoro, close to the old diggings around Ngembambili and Masuguru. In Amani Makoro, we witnessed about 200 miners in a swampy area using hand tools. The aspect and quality of the stones was similar to those from Ngembambili and Masuguru. Overall, about 300 people are still mining or trading gems around Songea. According to the regional mining officer, nine Thai merchants are registered buyers here. Songea still seems to be Tanzania's most active sapphire mining area.

The region east of Tunduru, located along the Muhuwesi, Lumesule, and Ruvuma rivers and up through Ngapa and Kitowelo, is known to produce blue, yellow, green, pink, and purple sapphires, and rarely rubies. The deposits, discovered by Swiss gem merchant Werner Spaltenstein in 1994, were very active until 1999, when buyers left Tunduru for the newly discovered sapphire deposits of Ilakaka, Madagascar.

**Resources:**

<https://www.gia.edu/gems-gemology/fall-2016-gemnews-update-colored-gemstone-mining-tanzania>

## UPCOMING SHOWS

**March 29 - 31, 2019: Raleigh, NC – 43<sup>rd</sup> 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](mailto:mchummel@mindspring.com); [www.tarheelclub.org](http://www.tarheelclub.org);

**August 2-5, 2018: Spruce Pine, NC - NC Mineral & Gem Festival.** Thursday 10-6 (Senior Citizens Day...Seniors \$1 admission); Friday-Saturday 10-6; Sunday 12:30-5 (Mitchell County Day \$1 admission for residents). Spruce Pine Commerce Center; 12121 State Hwy 226, Spruce Pine, NC, United States. Admission: \$3 (kids under 10 free); Handicapped accessible; Plenty of free parking; Shuttles provided; Free Concert Friday August 5th 6 PM Downtown Spruce Pine. Grassy Creek Gem Show at Parkway Fire Department, Hwy 226 South just a couple of miles from the NC Gem Fest. Contact: [ncgemfest@mitchellcountychamber.org](mailto:ncgemfest@mitchellcountychamber.org); <http://www.ncgemfest.com/>



The large amount of ruby produced by MRM allowed Gemfields to offer goods in a wide variety of qualities at their recent Singapore ruby auction. Photo by Andrew Lucas/GIA.



All these rubies from the Maninge Nice area have sharp edges and corners. The surfaces of some still feature amphibolite matrix. Their brighter color is caused by the limited amount of iron content compared to rubies from other areas. Photo by Vincent Pardieu/GIA.

## 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](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](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](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](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 17, 2018 @ 7:30PM**

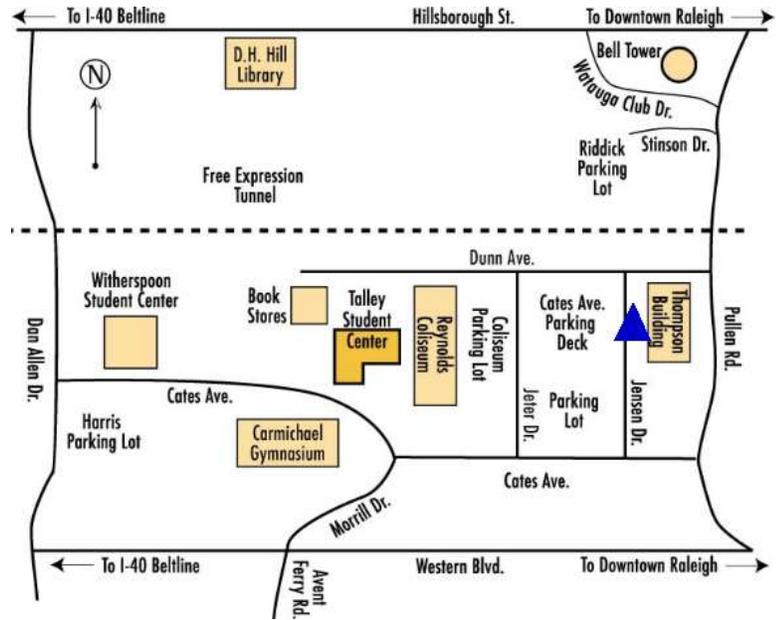
**NC State Crafts Center**

**210 Jensen Dr, Raleigh, NC 27606**

### *About Our Organization...*

The Tar Heel Gem and mineralogy, paleontology, Mineral Club, Inc. was earth sciences, and formed in 1974 as a lapidary techniques, nonprofit educational organization for people 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

