

Special Interest Articles:

- Prez Sez
- May Door Prize - Fire Opals
- Upcoming Field Trips
- May Board Meeting
- June Birthstone - Alexandrite

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

Prez Sez By Linda Searcy

Be sure to come hear our guest speaker, Rachel Smith, North Carolina Museum of Natural Sciences, and her talk on "Interstellar Travel and the Fermi Paradox".

We need a volunteer for refreshments!

Linda Searcy
President, Tar Heel Gem and Mineral Club



May Door Prize - Fire Opals

By Lindsey Bradsher

I picked the bag of fire opal rough for my door prize. Fire opal is a form of silica which is hydrated, meaning water makes up 3% to 21% of its weight. It is also amorphous, meaning it has no crystalline structure. This lack of structure makes it a mineraloid, rather than a true mineral. Opal has a Mohs hardness of 5.5-6, which means it may be easily scratched or chipped, and should be placed in a setting that can protect it.

Opal is most famous for its 'play of color,' spectral flashes of color produced by light scattering through silica spheres within the opal, and these colors may be different than the pigmented color of the

stone. Stones like diamonds may have 'fire' if faceted, which is spectral color created in a prism-like effect called dispersion. Opal, lacking crystalline structure, does not have dispersion...so, ironically, fire opal does not technically have fire!

How does fire opal get its name then? The iron oxide in this stone gives it fiery red, orange, or yellow hue, which may or may not have the play of color of precious opal. If it has no play of color, it may be called 'jelly opal.'

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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: Open

June Snacks – TBD
Drinks – TBD

PROGRAM SCHEDULE:

June Rachel Smith
July Dr. Tacker
August 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).

June Treasurer's Report

Feb. Ending /	
Mar. Beginning Balance	\$14,237.00

Deposits (+)	
Nationals	\$3,580.00
Dealers	\$1,192.00
Members	\$310.00
Shirts & Other	\$215.00
Square D	\$4.14

Sub total	\$5,301.14

Checks Written (-)	
IMP Show Flyers	\$218.36
Geodes (new)	289.15
Nationals Refunds	300.00
Nationals Expense	80.00
Meeting Food	61.74
Charge by Square D	0.01

Sub Total	\$949.26

Mar. Ending /	
Apr. Beginning Balance	\$18,588.88

June B-Day Members

- Tommy Armstrong
- Mitzi Broadway
- Christina Child
- Daniel Davis
- Clea Gallian
- Socorro Gonzalez
- Vanessa LaPiana
- Wade Rosar
- Melissa Schaufler
- Seward Shaddock
- Angie Tunney
- Loretta Turcotte
- Bryan Wilson



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. - May Meeting Minutes

Tuesday, May 15, 2018

Attendees = 17

Opening of Club Meeting:

Linda opened the meeting at 7:37 pm.

Introduced new visitors, some of whom came from NC State's geology department, some were familiar with our show, and had a general interest in stones and geodes.

Program:

No program this month.

Discussion:

- Linda detailed our opportunities for show volunteers to win classes at Wildacres, and how she got started making jewelry and then teaching jewelry making skills. She showed us her cold connections class examples.
- Lapidary room of Craft Center—classes can be registered online, and can be used by club members.
- Report on May 10 Board Meeting
- Discussion of how we operate as a non-profit, scholarships and charitable endeavors.

Member and visitor questions:

- Faceting vs Cabbing
- Field trips and safety review
- Discussed possibility of overnight field trips, program ideas
- Geology question about how volcanic crystals form in Hawaii

Refreshments:

Thank you to Seward Shaddock for providing drinks, food provided by Lindsey Bradsher

Door Prize:

Winner: Lindsey Bradsher chose fire opal rough.

Close of Meeting:

Meeting closed.

Respectfully Submitted

Lindsey Bradsher,
Secretary, Tar Heel Gem and Mineral Club, Inc.

Upcoming Field Trips

By Katelyn Hennessey

There is currently 1 field trip scheduled.

June 29th - Castle Hayne - Trip Is Currently Full

More trips coming soon. Please keep an eye on your email for Field Trip Alerts and if you have any questions, contact Katelyn Hennessey, the field trip coordinator.

Katelyn Hennessey
Field Trip Coordinator
Tar Heel Gem & Mineral Club
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FireOpals

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While traditional opal is traditionally cut in a rounded cabochon to show its play of color, fire opal may sometimes be faceted. This can give it a little sparkle if it has no play of color. My batch of fire opal rough ranges from very clear pieces to heavily pigmented, some jelly, some with play of color. One is striped, and one piece even has some sort of rutile-like inclusions! I am excited to cut them in a variety of styles. Thanks, Tarheel Gem and Mineral Club!

Resources:

- <https://geology.com/gemstones/opal/fire-opal.shtml>
- <https://www.gemaffair.com/Fire-Opal-Jewelry.htm>
- <https://en.wikipedia.org/wiki/Opal>

May Board Meeting

Board meeting May 10, 2018

Participants:

Linda Searcy

Tom Todaro

Lindsey Bradsher

Corinne Hummel

Cyndy Hummel

Melissa Whitfield

Katelyn Hennessey

Tyler Hennessey

Linda opened the meeting at 6:42pm.

Discussion of Newsletter:

- Proposed 3-date monthly deadlines for officer reports:
 - 1. Reports due: 2 Fridays before meeting
 - 2. Edits or corrections due: the following Monday (week before meeting)
 - 3. Final date to be sent to printer: Wednesday (week before meeting)
- Officers will send in reports with standardized subject line "Newsletter officer reports" to avoid any confusion with other club communications
- About 40 letters will be printed, 30 mailed, and the remaining 10 available for meeting.
- Field trip info should not be detailed in newsletter, as this is available to the general public online.

Website:

- Tyler and Melissa described proposed features of new website, which will centralize information, and be more interactive:
 - **Membership application and renewal**, with renewal reminders and online payment (option for auto-renewal)
 - Members will be able to update their info at any time
 - Member profile will be generated from their application, access will expire 1 year after payment unless renewed
 - Admins will be able to enter info from paper applications
 - **Regarding applications**, paper application will match online application, with a line for each member's age
 - Members will be promoted to review their information each time the renew—rather than just saying "no changes"

- **Membership list and email lists** automatically generated from online applications
 - These lists can be filtered by the interests selected on application
 - Members can opt out of receiving emails
- **Newsletters** will be easily uploaded
- **Picture gallery** will allow admins or members to upload trip photos without having to know how to code
- **Forum** will allow a central place for discussions, member questions, etc
- **Upcoming dates** of next meeting and show will be displayed
- **Field trip section** will display details of upcoming trips to paid members, trip reports, and have ability to RSVP to field trips and check which trips one is signed up for
 - Under-18s will be unable to sign up for inappropriate trips
 - Admins can manually add/remove members from a trip
 - Add safety powerpoint/video if possible
- **Officers can update content** as needed, without having to know how to code
 - Distinction between Webmaster and other officers in terms of site permissions
- Site will have **mobile version**

Items to be added in a future version of new website:

- Club Library and Club Equipment rentals
- Logs of which admin has made what changes
- Club Calendar (rather than listing soonest upcoming

Steps to move forward with new website:

- Continue to use GoDaddy for domain name, and Heroku for hosting—this will allow for the features we want
- Determine content for 3 main parts of site: General public, Members, and Admins
 - Milestones will be reviewed by board
 - Migration of current site content
 - Contract for site-building reviewed by officers
 - Down-payment to be made at next meeting.

Meeting closed at 8:47pm

June Birthstone - Alexandrite

By George Harris

Smithsonian Alexandrite

Record: The World's Largest-Faceted Alexandrite

The Smithsonian Alexandrite was unearthed in Sri Lanka, and holds a cushion mixed cut. Typical of most alexandrite, the Smithsonian jewel is red and green in color, and weighs 65.08 carats. It is currently one of the rarest, and most valuable, jewels in the world.



Its status as the world's largest alexandrite, however, is very much up for debate. In 2011, it was suggested that an alexandrite gemstone named the Naleem Alexandrite weighs over 112 carats, but this can't be confirmed. It has also been written that a private owner in Japan has a 141.92 carat alexandrite that was certified by the State Gem Corporation. Very little information can be found about the gemstone, but it is listed as the largest cut alexandrite by the Guinness Book of Records website. At 141.92 carats, the alexandrite would be worth over \$100 million.

However, until any of these can be confirmed, the Smithsonian remains the verified champion of alexandrite gemstones.

Other alexandrites of notable size include in the following:

- British Museum of Natural History (London): 43 and 27.5 cts (Sri Lanka).
- Institute of Mines (St. Petersburg, Russia): cluster of three crystals, 6 x 3 cm (Urals).
- Fersman Museum (Moscow, Russia): crystal group, 25 x 15 cm, crystals up to 6 x 3 cm (Urals).
- Private Collections: stones up to 50 cts have been reported.
- The largest uncut gem-quality alexandrite specimen ever found is the Sauer Alexandrite that weighs 122,5400 carats and was found in Bahia, Brazil in 1967.

Alexandrite is one of those gemstones that everyone would love to own, but few people do because it's so rare

and expensive. If you inherited a large alexandrite stone, get it tested because it's possible it's a synthetic stone.

These 21 alexandrite facts will shed some more light on why June's birthstone is so valuable:

What is Alexandrite?

Alexandrite is part of the chrysoberyl family along with chrysoberyl cat's eye.

Alexandrite appears blueish green in sunlight and reddish purple under artificial light like a light bulb.

The color-change quality in alexandrite is due to trace amounts of chromium. Chromium is also the trace element that makes beryl emerald's green.

When was Alexandrite Discovered?

French mineralist Nils Gustaf Nordenskiöld discovered alexandrite in the Ural mountains of Russia in 1834. However, some accounts suggest the stone was found as early as the late 1700's.

When Nils Gustaf Nordenskiöld first found alexandrite in Russia, he thought the stone was an emerald.

The gem was named after Russian Czar, Alexander II, who was assassinated in 1881.

Even though this gemstone doesn't have a very long history, it has been strongly associated with good fortune and is said to enhance creativity and focus.

The mines in the Ural region of Russia no longer produce large amounts of gem quality alexandrite.

Alexandrite is now mined in parts of Africa, Brazil, and Sri Lanka though the gem is still extremely rare and valuable.

Most large scale alexandrite gemstones are found in antique Russian period pieces from the Victorian era. Victorian jewelry from England also featured alexandrite gemstones, but they were usually much smaller.

How Rare is Alexandrite?

Natural alexandrite is rarer than diamonds and more costly than emerald, ruby, and sapphire.

Any alexandrite over 3 carats is highly uncommon. Smaller stones are more readily available to commercial jewelers.

Top quality natural Alexandrite can cost more than \$30,000 per carat.

Pricing of Alexandrite is based primarily on the strength of the color change and the purity of the hue.

Unlike many other gemstones, natural alexandrite is often left untreated.

Not only does alexandrite change colors, but in extremely rare cases it can also exhibit chatoyancy, or the cat-eye effect. This is when a white line shines down the center of the gemstone and moves around as the stone moves under a light source.

Because of the intense color change in alexandrite, color changing abilities in other gemstones have become known as the alexandrite effect.



This 5.25-ct. alexandrite, here shown in daylight (left) and incandescent light (right) is an example of the finest of this gem variety. It comes from Tunduru, Tanzania, and was recently sold by Pala International.

(Photo: [John McLean](#); Gem: [Pala International](#))

History

According to a widely popular but controversial story, alexandrite was discovered by the Finnish mineralogist Nils Gustaf Nordenskjöld, (1792 -1866) on the tsaravitch Alexander's sixteenth birthday on April 17, 1834 and named alexandrite in honor of the future Tsar of the Russian Empire.

History and mystery, fiction and reality, still the story of alexandrite is forever linked to the last of the Russian Tsars. More than any other gemstone, alexandrite has captured and captivated the interest of collectors and connoisseurs since its discovery in the Ural mountains almost 200 years ago. And despite its short history, this remarkable and very scarce gemstone has already been ascribed with a variety of magical properties, stories and a noble history.

Destiny sometimes treats people strangely, not only during their lifetime, but also after their death. The true events behind a story can be distorted by gossip or slander or intentionally modified to influence their historical context. Precious stones have had their own role in the shaping of history and destiny. Jealousy and greed conspire to obscure the truth and the stories behind many of the most remarkable gems are often a mixture of truth and lies.

And one gem in particular, more rare than diamond, a stone that magically changes color was the inspiration behind many of these stories. History and mystery, fiction and reality,

the story of alexandrite is forever linked to the last of the Russian Tsars. More than any other Russian gemstone, alexandrite has captured and captivated the interest of collectors and connoisseurs since its discovery in the Ural mountains almost 200 years ago.

It was from the Urals that Russia's architects obtained the red jasper and green malachite used to decorate the Winter Palace in St Petersburg. This is where the world's most famous jeweler, Carl Faberge, acquired many of the gems for his jewelry and objects d'art. The most important occurrence of Russian gems and minerals, this is where the alexandrite story begins.

The Ural Mountains form the traditional boundary between Europe and Asia, East and West. They extend 2500 km from the Kazakh steppes along the northern border of Kazakhstan to the frozen coast of the Arctic Ocean. The Urals are among the world's oldest extant mountain ranges. They were formed in the late Carboniferous period, when a continent consisting largely of Siberia collided with the supercontinent that contained much of the world's land at the time. Europe and Siberia have remained joined together ever since.

Known to medieval Russia as the Stone Belt, the Urals were reached in the twelfth century by colonists and fur traders from Novgorod. Rich in ores and minerals, the area developed rapidly and the first ironworks were established in the 1600s.

Although it was Nordenskjöld who discovered alexandrite, he could not possibly have discovered and named it on Alexander's birthday. Nordenskjöld's initial discovery occurred as a result an examination of a newly found mineral sample he had received from Perovskii, which he identified it as emerald at first. Confused with the high hardness, he decided to continue his examinations. Later that evening, while looking at the specimen under candlelight, he was surprised to see that the color of the stone had changed to raspberry-red instead of green. Later, he confirmed the discovery of a new variety of chrysoberyl, and suggested the name "diaphanite"(from the Greek "di" - two and "aphanes", - unseen or "phan", to appear, or show).

Perovskii however had his own plans and used the rare specimen to ingratiate himself with the Imperial family by presenting it to the future Tsar and naming it Alexandrite in his honor on April 17, 1834.

Resources:

<http://www.toptenz.net/top-10-record-breaking-gemstones.php>

<https://www.gemsociety.org/article/alexandrite-jewelry-and-gemstone-information/>

<https://www.thesprucecrafts.com/alexandrite-history-2042966>

<http://www.alexandrite.net/chapters/>

UPCOMING SHOWS

March 29 - 31, 2019: Raleigh, NC – 43rd 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;

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; <http://www.ncgemfest.com/>

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

June 19, 2018 @ 7:30PM

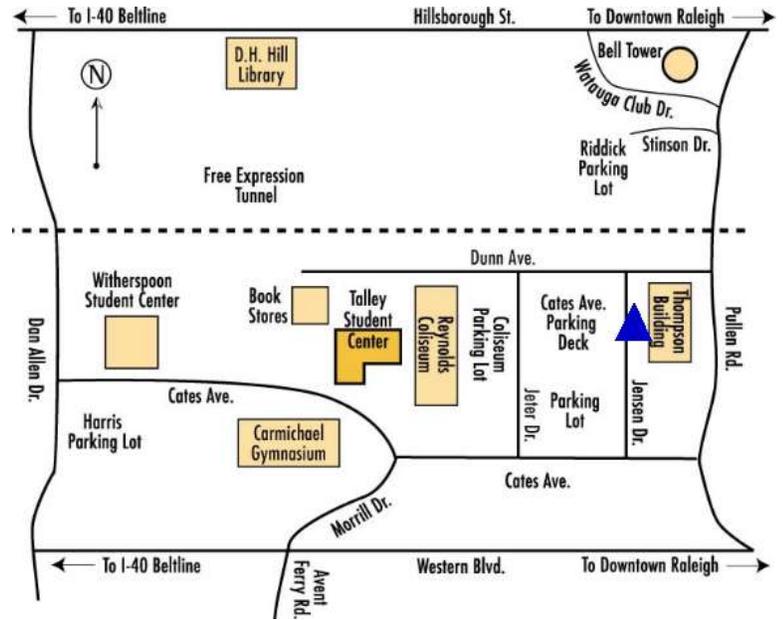
NC State Crafts Center

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

