

# Tar Heel Tailings

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

## Special Interest Articles:

- President's Report
- NC Ticks and Risks
- North Carolina Emeralds and the North American Emerald Mine

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## President's Report

There's always something rockin' in the wide wild wonderful world of gems and minerals!

I am looking forward to the report of the club's fieldtrip to the North American Emerald Mine AND seeing all the specimens found by club members! I have not heard of any emeralds being found but I

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## NC Ticks and Risks (Typical tick types)

by Mike Franklin, PhD

An adult engorged ticks contain 2,000-18,000 eggs.

**Rocky Mountain Spotted Fever** (from dog and lone star ticks)

• Symptoms: fever >102F, chills, nausea, vomiting, muscle pain, headache

• Later Stages: rash (on bottoms of feet & wrists first), abdominal pain, fatigue, light sensitivity, appetite loss, aches/pain

• Fatality rates-- untreated: 30%, for elderly 70% treated: 3-5%

**Southern Tick-Associated Rash Illness (STARI) from Lone Star Tick**

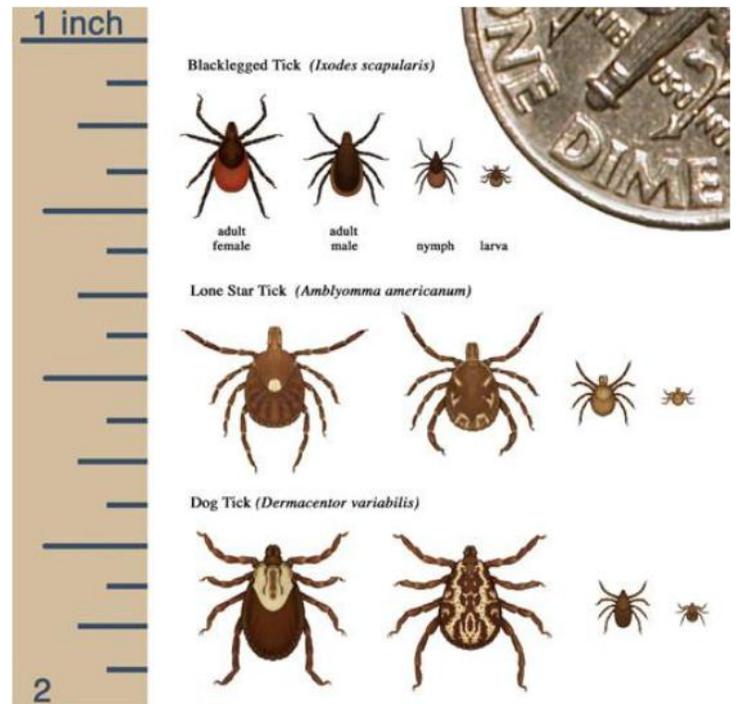
• Symptoms: fatigue,

fever, headache, muscle, and joint pains

• CDC wants info-- Physicians call (970) 221-6400, may be a less

aggressive or muted strain of Lyme disease

More on Ticks - page 4



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**We're on the Web!**  
See us at:  
[www.tarheelclub.org](http://www.tarheelclub.org)

**Program & Refreshments**

REFRESHMENT SCHEDULE:

Coordinator: Jeanette Baugh (919) 522-9044  
[villagegems@yahoo.com](mailto:villagegems@yahoo.com)

May	Marion Broadway
June	Open
July	Jack Fried
August	Ice Cream Social
September	Walt Milowic
October	Cyndy and Corinne Hummel

PROGRAM SCHEDULE:

May	Stone tool making materials – Joe Moylan
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We still need someone to sign up for the June and Nov. meetings. Remember, the club will reimburse you for up to \$40 (bring your receipts to the treasurer).

Thank you, Jeanette Baugh

**April Treasurer's Report**

Feb. Ending /	
Mar. Beginning Balance	\$13,392.11
-----	
Deposits (+)	
Members	\$380.00
Tee Shirts	25.00
Auction	191.00
Dealers	687.50
-----	
Sub Total	\$1,283.50
-----	
Checks Written / Expenses (-)	
Show	\$5,532.01
Club	703.27
Cancelled check	40.00
-----	
Sub Total	\$6,275.28
-----	
Mar. Ending /	
Apr. Beginning Balance	\$8,480.33

- May B-Day Members**  
 Corinne Hummel  
 Emily Carabello  
 Jim Davenport  
 John Heinz  
 Josh Chrisey  
 Mickey Broadway  
 Graham Cawthorne  
 Gregory Stone  
 Jeanette Baugh  
 Audrey King  
 Mark Higgs  
 Ron & Erika Gron



Membership applications may be mailed to:

Tarheel Gem & Mineral Club  
 Attention: Treasurer  
 10609 Chelsea Drive  
 Raleigh, NC 27603

## Tar Heel G & M Club April Meeting Minutes

Tuesday, April 17, 2012

Attendees = 31

At 7:44 Joe Moylan called the meeting to order. Joe noted that the Tar Heel Gem and Mineral Club Show had gone very well and had heard nothing but good comments including that the show had been secure and very thorough in its coverage of gems and minerals.

Joe then called our attention to the poster about the different types and lifecycle stages of area ticks along with the diseases they carry (Lyme, Rocky Mountain Spotted Fever, etc.) put together by Mike Franklin, PhD. Doc. Franklin gave us a very thorough presentation on the subjects after the close of our meeting including an overseas manufacturer of doxycycline (one of the most commonly prescribe antibiotic for Lyme Disease). <http://magicpharma.com/>. For a good refresher on the information Doc. Franklin presented, see <http://www.ces.ncsu.edu/depts/ent/notes/Urban/ticks.htm>

Joe then welcomed several newcomers to our meeting and I believe I saw a least a couple of them filling out the membership forms.

Joe then opened the floor to Barbra, who mentioned that in the April 2012 issue of the National Geographic Magazine that there was an article titled "Gemstone DNA". The article talked about how new tests and databases are being developed to dependably tell if a gemstone is real and from what part of the world it came from. These tests will also help prevent fraudulent sales of prohibited stones, such as blood diamonds and fake stones such as the dyed quartz that some booths sold as Canadian Jade at the last Tucson Gem and Mineral Show. Other instances of fraud were discussed such as:

Nancy talked about someone who had recently purchased ~5 African diamonds and had claimed that he had dug them up at the Crater of Diamonds State Park in Murfreesboro, Arkansas.

Another mentioned how peach colored sapphire (padparadscha) typically found in Sri Lanka had been hoaxed by heat treating cloudy white (low grade) sapphire with beryl. This beryl heat treatment not

only clarified the inclusions of the low grade sapphire but also turned them the once desirable peach color. He also stated that padparadscha were originally keenly sought after (especially in Japan) but since the hoaxing, the prices for padparadscha had been driven down dramatically.

Finally Joe suggested that the subject of fraud within the precious and semiprecious stone markets would be a good subject for a program and encouraged us to research and present on an associated topic.

George Thomas, Director of the NC Craft Center, was next given time to speak. George spoke about the upcoming Fall Programs including a work shop for stone setting with Larry Seigars, Co-President of the North Carolina Society of Goldsmiths. For the full list of summer classes, times and dates, at NC Craft Center see <http://www7.acs.ncsu.edu/crafts>

George Harris noted that it would be good to start lining up presentations for the club meetings this year and suggested Jeff Schlotzman, Director of Forsyth Gem and Mineral Club, since his presentation on emeralds was such a hit last year. <http://www.forsythgemclub.com/fgmcmmain.html>

Tom Todaro was given time to talk about the upcoming field trip to the North American Emerald Mine (Alexander Quarry), 531 Duncan Lane, Hiddenite, NC 28636 on Saturday, 28-Apr-12 from 8:00 AM to 2:00 PM. Tom stressed that the mine rules were enforced strictly and for participants to be on their best behavior. Tom also mentioned that this quarry had not been open to the public for 40 years and that we would be the 3rd or 4th group allowed access in since it's re-opening to the public and the draining of the main quarry floor.

Tom Todaro was also the winner of our door prize and selected a gorgeous malachite egg.

The meeting was closed by unanimous acclaim at ~8:06 PM and all enjoyed the pot-luck dinner.

Respectfully Submitted

Michael Troutman, Secretary

## President's Report

Continued from page 1

know many other beautiful specimens must have been. I also know it is not as easy as just showing up, opening your bag or bucket, and having all the minerals jump in, but I'm sure all will agree that it is quite the extraordinary opportunity to visit a mine or quarry of this caliber and notoriety with all the many varied minerals possible to be found. Jamie Hill is nothing short of a living legend in the rockhounding world and we wish him all the best with his new business venture of allowing clubs like ours in to visit and collect. I'm sure our club will be wanting to schedule another trip to NAEM in the future but for any of you who would like to make a return visit before then, the mine will be open to any and all members of federation clubs Friday and Saturday, May 11 and 12, at \$35.00 per person per day. I'm sure there will be more such weekends planned by NAEM and we will try and keep you posted.

I could not attend the club fieldtrip to NAEM as I was already scheduled to give a program on the stone tool making materials used by prehistoric Native Americans of North Carolina and the Southeast at Archaeology Day in Warrenton, NC that day. Since I

have the materials "organized" all ready I will be giving the same presentation to the club for the program for the May meeting. This program is more about the stone materials used for making the tools than trying to identify the many different artifact types, but, along with your specimens found during the NAEM fieldtrip, if you would like to bring in any Native American artifacts you may have to be identified we can try and take a look at all of them.

Thanks to everyone who brought a dish to our potluck dinner last month! This club can definitely cook! Everything was delicious! For desert Dr. Mike Franklin gave a very timely and informative talk on ticks. Because of the mild winter we have just had it is projected to be a very active season for them this year. What to look for and the proper way to remove them was very helpful information and a link to this information will be provided in this newsletter. So have a happy and safe time out collecting this summer!

Hope to see everyone at the next meeting,,

Joe Moylan, President

## NC Ticks and Risks (Typical tick types)

By Mike Franklin, Phd  
Continued from page 1

### Lyme Disease from Deer Tick

- Symptoms: fever, headaches, muscle soreness, malaise, bullseye rash - Erythema Migrans (EM) > 50%
- Later Stages: severe headaches, neck stiffness, swollen lymph nodes, joint pains, sleep disturbance, mood swings, depression



- Estimated 1 million US cases @ 20k/yr

### The Best Way to Remove a Tick

- Removed 50 out of 50 American Dog Ticks intact & undamaged. Removed most of the cement attached. (an irritating adhesive the tick uses to secure itself at the feeding site)
- Lone Star tick removal was tested-- an aggressive tick having a longer mouthpart--more difficult to remove.
- Nymph ticks (the small versions that do much of the disease transmission) were tested -- Pro-Tick successfully removed 72% of the nymph ticks--tweezers removed 4%
- Conclusion: tweezers should never be used for the removal of nymph (small) ticks.



Pro-Tick Remedy available at REI

### Tick Infections Antibiotic Treatments

- Doxycycline --prescribed for the treatment of Rocky Mountain Spotted Fever, Lyme Disease, (STARI), ehrlichiosis, anthrax, and bubonic plague. Used as a malaria preventative. Typical adult dose is at least 100 mg BID (twice a day). Available from an off-shore pharmacy [www.magicpharma.com](http://www.magicpharma.com)
- For men only: Minocycline (has reduced arthritis pain as indication)-- Dose at 75 mg BID (> 60% of women experience dizziness and vertigo)
- Physicians may add Augmentin (amoxicillin/clavulanate potassium) 250mg BID to treat co-infections of Ehrlichia, Staphylococcus aureus (MRSA), Babesia (protozoa), etc.
- Tetracycline Skin sensitivity: exposure to the sun is not recommended!
- Inactivated by calcium ion, not to be taken with milk, yogurt, & other dairy
- Inactivated by aluminum, iron, and zinc or antacids

### Advice given above assumes no legal or medical responsibility!

#### Acknowledgement

- CDC, Atlanta, GA tick identification chart
- wikipedia.org (the free encyclopedia)
- tickinfo.com (Pro-Tick removal tool)
- Mayo Clinic Staff, 2006 RMSF Symptoms
- Centers for Disease Control (CDC) Atlanta, GA
- Research Triangle Institute (RTI) International
- [mikefranklinconsulting.com](http://mikefranklinconsulting.com) Cary, NC

## North Carolina Emeralds and the North American Emerald Mine

By Carl Talbott, SFMS Editor

Of the 300+ minerals found in North Carolina, few are more valuable by weight than emerald. A form of beryl crystal, usually colored green by chromium, emerald was designated as the official North Carolina State Precious Stone in 1973. Perhaps this recognition was associated with the 1969-1971 discoveries of nine large emeralds in the Hiddenite District of Alexander County, North Carolina. These nine included the largest emerald ever discovered in North America at the time (found by Michael 'Butch' Finger at what is now the North American Emerald Mine) weighing 1,438 carats. Finger's record has since been surpassed by the 1,869 carat 'Hill Emerald' discovered in 2003 by James K. 'Jamie' Hill owner of the North American Emerald Mine (NAEM) not far from the city of Statesville, NC. This large emerald, valued at over \$1 million, is now on display at the Houston Museum of Natural Science in Houston, Texas. According to Speer 1, "the total production of the Hiddenite district (1880-2007) is estimated to be 60,000 carats [of] emerald ..."

Speer notes that local farmers in the 1800s often found 'green bolts' crystals in freshly plowed fields at first thought to be caused by lightning strikes. In 1875, Statesville (NC) naturalist, John Adlai D. Stephenson (b.1825, d.1897), began acquiring these crystals and later introduced mineralogist William Earl Hidden (b.1853, d.1918) to emerald discovery sites in Alexander County. Hidden had been in North Carolina searching for platinum to supply Thomas Edison's electric light bulb with filament material. Hidden subsequently purchased a mining lease of Alexander County's Warren Farm property and mined emeralds there from 1880 until 1888. An emerald twin crystal of 1,270 carats found there in 1881 is now in the Smithsonian Museum collection.

Although Hidden's mining operation closed in 1888 as a result of property disputes, it reopened in the 1970s as a prospect-for-fee mine and is known today as the Adams mine. Although other small mining operations started at various times in the twentieth century, only the Rist mine (now the North American Emerald Mine), located several miles northeast of Hidden's operation, continues as a dual-production mine. It produces road & construction gravel by crushing bedrock from a 6 acre open-pit mine while emerald-bearing quartz veins in the pit walls are carefully explored prior to destruction and incorporation into bedrock crushing. As Jamie Hill 2 explained, his process of emerald mining is a stripping away of pit wall bedrock material (using explosives) between visible vertical seams of quartz and hand-tool searches for cavities (known as 'pockets') in the quartz seams. On average, one out of three of these cavities will contain emerald crystals, sometimes in large numbers. The emerald crystals and any other valuable minerals are carefully removed before the exploration process resumes. If

the demand for gravel declines, then the emerald exploration process slows because the two are linked in that profit from gravel production in turn finances exploration of possible emerald locations.

In addition to the Adams Mine and the NAEM, both of which are closed to the public, the Hiddenite District encompasses the Emerald Hollow Mine where the public can dig for gem stones, sluice in the local creek, or purchase buckets of unsalted or salted mine ore for various fees. Much further to the west (in the Spruce Pine Mining District), near Spruce Pine, North Carolina, the 100+ year-old Crabtree Emerald Mine offers the public fee-based access to old mine-ore dump sites that likely contain a variety of gem stones including emerald. The mine shaft itself is now flooded, and thus, the dump sites are not being renewed.

Other green-colored minerals and crystals, sometimes mistaken for emerald, include green corundum (known as "oriental emerald"), green garnet (known as demantoid), hiddenite, diopside, alexandrite, green tourmaline, and perhaps also chrysolite and diopside. Each of these minerals has a higher specific gravity than the emerald. Moreover, the "oriental emerald" is much harder while the demantoid (the color of which has usually a yellowish tinge though sometimes very similar to that of the emerald) is singly refracting. Hiddenite is very rare and is considered to be more valuable than the emerald. Diopside is much more of a bottle-green color than is the emerald. Alexandrite is distinguished from emerald by its hardness and its remarkable dichroism. The color of green tourmaline, though often not dissimilar to that of pale emeralds, is frequently distinctly bluish in character; this mineral is easily distinguished from emerald, however, by its specific gravity, which is 3.07 g/cm<sup>3</sup>. Chrysolite is yellowish-green, and can be distinguished from emerald by its color and its faint dichroism. Finally, diopside is always of a very dark emerald-green color; it is only semi-transparent and far softer than the emerald.

Speaking of color, some enterprising marketers are selling Morganite as pink emerald. Morganite is pink beryl colored so by the presence of manganese. Using this marketing logic, we could have aquamarine peddled off as blue emerald; but this would be an illegal misrepresentation to the more ignorant of us gemstone buyers.

### References:

1. Speer, Wade Edward (2008, revised 2011), Emerald Crystal Pockets of the Hiddenite District, Alexander County, North Carolina, Fieldtrip Guidebook, Geological Society of America, Southeastern Section 57th Annual Meeting April 2008, Charlotte, North Carolina, USA
2. Hill, James K. (2012), personal communication with the author.

Note: Originally published in April 2012 Lodestar

# Piedmont Open Air Gem and Mineral Sale

Saturday, June 23<sup>rd</sup> 2012  
Hagan Stone Park  
Shelter #4  
10 a.m. to 6 p.m.



Vendor set up at 8 a.m.

Be part of our premier outdoor event! Free Admission, Free Parking. BBQ concessions, door prizes, fun for young and old, rock collectors and the curious. Vendor fee \$25. Contact Steve Smith [pteradon@triad.rr.com](mailto:pteradon@triad.rr.com) for application. Phone 336-454-8872

For directions please visit [www.haganstonepark.com](http://www.haganstonepark.com)



Visit our website [www.ggmc-rockhounds.com](http://www.ggmc-rockhounds.com)

## UPCOMING SHOWS

**May 3-6, 2012: Charlotte, NC** - Charlotte Gem & Mineral Society. Annual show (coincides with the International Antiques & Collectibles Show), Metroline Tradeshow Expo; 7100 Statesville Rd., Bldg. B, Charlotte, NC. Hours: Thu. 9-6, Fri. & Sat 9-5, Sun. 10-4; Admission Fee: adults \$5 (4-day pass). Contact Kay Jones (704) 864-3748; e-mail: [kjones557@att.net](mailto:kjones557@att.net); [www.ICASHOWS.com](http://www.ICASHOWS.com)

**May 5-6, 2012: North Charleston, SC** - Lowcountry Gem & Mineral Society. Annual Jewelry, Gem, Mineral and Fossil Show, "Art by Nature". Charleston Area Convention Center; Exhibit Hall A. Hours: Sat.& Sun 10-5. Free admission; hourly door prizes, demonstrations, fossil dig, geode cracking. Contact Karen Havenstein, Charleston, SC 29412, (843) 795-2956; e-mail: [fossils@comcast.net](mailto:fossils@comcast.net); Web site: [www.lowcountrygemandmineralsociety.org](http://www.lowcountrygemandmineralsociety.org)

**May 11-13, 2012: Marietta, GA** - The Georgia Mineral Society. Gem & Mineral Show & Auction, The Cobb County Civic Center, 548 S. Marietta Parkway & Fairground Street, Marietta, GA. Hours: Fri & Sat 10-6, Sun 12-5. Auction on Sat @1. Contact Tom Batcha (678) 407-4224 or <http://www.gamineral.org/may-show.htm>

**June 2-3, 2012: Tannehill Ironworks State Park, AL** - Alabama Mineral and Lapidary Club. 39th Annual Rock, Gem, Mineral, and Lapidary Show. Hours: Sat & Sun 9-5. Admission is free with paid admission to the park.

**Sept 21-23, 2012: Jacksonville, FL** - Jacksonville Gem & Mineral Society. 24th Annual Show, Morocco Shrine Auditorium, 3800 Saint Johns Bluff Road, Jacksonville. Hours: Fri 1-6, Sat 10-6, Sun 10-5. Admission \$4. Contact: Karen Olson (904) 448-5182 or e-mail [jgmsnews@gmail.com](mailto:jgmsnews@gmail.com)

**October 6-7, 2012: Lexington, KY** - Rockhounds of Central Kentucky (ROCK). 22nd Annual Gem, Mineral, & Jewelry Show, Kentucky National Guard Armory, 4301 Airport Road, Lexington, KY. Show includes minerals, jewelry, equipment dealers, club sales, exhibits, KY Agate, fluorescent displays, hourly prizes, and Grand Prize drawing. Admission: \$1 adults, \$0.50 children, \$3 max family; Scouts in uniform free. Hours: Sat 10-6, Sun 12-5. Contact: Allen Ferrell, 859-277-2469 or [kyrock2010kentucky@yahoo.com](mailto:kyrock2010kentucky@yahoo.com).



Food from the Pot Luck Dinner

## 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](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.

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.

