

Tar Heel Tailings

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

Special Interest Articles:

- President's Report
- Grab Bags
- Guatemalan Jadeite

Individual Highlights:

President's Report	1
Break out the Grab Bags	
Grab Bags	1
Treasurer's Report	2
October's Business Meeting Minutes	3
Pictures from October's Program	3
Guatemalan Jadeite (Jade)	4
Upcoming Shows:	7
Vug Sites:	7

President's Report

Hello everyone,
We have a big meeting coming up on the 16th. Not only do we have a grab bag -making "party", but we also have our annual elections!

I wanted to take a minute to let you all know that it has been a lot of fun being the president over the past year and I hope the jokes I told at the meetings

Continued on page 4

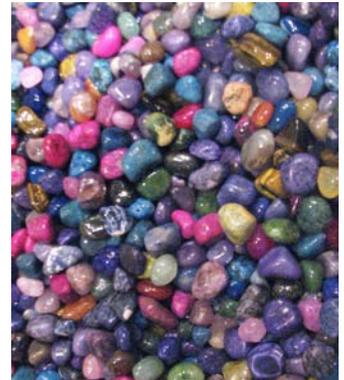


Break out the Grab Bags

Grab Bags will be the Program for November. Bring all of your items that you want to contribute to the Grab bags for the show. If there are any items left over, they can be stored in the club's storage unit.

Also, during the business meeting, we will be having Elections. So if you want to run for a position as one of the Club's officers, or want to decline any positions nominated for, make sure to be at the November meeting.

The 2011 TGM&C Show Dates will be, Friday-Sunday, April 1-3, with access Thursday. You can also bring items for the Silent Auction.



Tar Heel Gem & Mineral Club, Inc.

10609 Chelsea Drive
Raleigh NC 27603

Walt Milowic – President
wmilowic@nc.rr.com
(919) 327-3227

Joe Moylan – V-President
jmoylan1002@nc.rr.com
(919) 556-3175

Obsidian Harris – Secretary
foxivy@nc.rr.com
(919) 674-0243

Corinne Hummel – Treasurer
mchummel@mindspring.com
(919) 779-6220

Bob Bendelow – Librarian
& Committee Member
r.bendelow@earthlink.net
(919) 552-8175

Cyndy Hummel – Committee
Member
mchummel@mindspring.com
(919) 779-6220

George Harris – Newsletter Editor
GeorgeFHarris@yahoo.com
(919) 674-0243

Tom Todaro – Field-Trip Coord.
caribtomt@yahoo.com
(919) 639-7798

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

Program & Refreshments

REFRESHMENT SCHEDULE:

Coordinator: Jeanette Baugh
villagegems@yahoo.com

Nov: OPEN

PROGRAM SCHEDULE:

Nov: Election and Grab Bags

September @ October Treasurer's Report

Beginning Balance	\$14,737.85
No Deposits	
Expenses Name Badges	30.70
Storage	86.00
Newsletter	162.92
Speaker	75.00

Closing Balance	\$14,383.23
Beginning October Deposits	60.00

sub total	\$14,443.23
Expenses newsletter	162.92
Food	60.00
Storage	86.00
Show sign IMP	35.79
CPA for 2009 IRS Taxes	795.00

Closing Balance Oct 31, 2010	\$13,300.52

November B-Day Members

- Heather Chrisey
- Zachariah Fletcher
- Elizabeth Chesnut
- Mark Bloom
- Deborah & Jerry Miller
- Ron Wheeler
- Jonathan Starke
- Scott LaBorde
- Tristan Barbour
- Tom Bapple
- Jason Boyd
- Daniel Cathey
- Valerie Eakley
- Gerald Knight
- Melissa Ellis
- Matthew Smith
- Jan Schetzina



Membership applications may be mailed to:

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

Tar Heel G & M Club October Meeting Minutes

Tuesday, October 19, 2010

Attendance: 36

Walt called the meeting to order at 7:35pm

A new young member talked about his interest and how he got started.

Walt inquired about people who have a Birthday.

The program started first instead of club business.

Mike Franklin

And proceeded to talk about the differences in meteorites.

Samples of meteorites were from two sites. One in Texas and the other in Arizona.

Walt began with the business part afterward.

Walt asked about approving the minutes in the newsletter. The motion was made and seconded. The motion was carried. Nothing to note about the Treasurers report.

Jeannette talked about the display windows.

And about the Raleigh convention center and the display there.

The fieldtrip chairperson was not present.

Bob proceeded to describe about the trip with the Pyrite in matrix and loose. New Business.

Bob brought about the three microscopes for people to utilize.

Jeannette inquired about whom would like to bring munchies to the November meeting.

Jeannette also inquired about the storage meeting and people making use of it.

Walt noted that the program for November is the production of "Grab Bags".

*** Remember to bring material and get ready to "Rock those bags!"

There was also talk about office positions being open for the club.

Cyndy & Corinne brought the Munchies! Thank you!

Mike Franklin was the Door Prize winner! He chose the orange Wulfenite sample from Arizona.

Walt closed the meeting.

Happy Rock Hounding
Obsidian Harris

Pictures from October's Program



Pictures of stones Mike Franklin collected from American Stone Quarry. Center = the typical granite which is crushed and used for roads, building, etc.

Starting at 2:00 and going clockwise:

epidote (calcium-aluminum-iron sorosilicate);

jasper (silicon dioxide-iron);

granite with small iron pyrite crystals included (with a large separate "fool's gold" crystal under it);

white quartz (with granite inclusion).

President's Report

Continued from page 1

weren't too bad. Although I enjoyed my year in office, I don't feel that I am able to give the position the time it deserves. Therefore, I will not be running for President again in 2011 although another position may be a possibility. That means we have to have someone else step up to take the reins. Obsidian also mentioned at the last meeting that she would not be running for secretary so we will need some help there as well. Please think about giving a little bit of your time for the club.

Guatemalan Jadeite (Jade)

By William E. Smith, Major General USAF (Retired),

Carlos Reyes, Antigua, Guatemala

[Originally printed in the SFMS Lodestar, November 2010](#)

Carlos Reyes, Antigua, Guatemala

Sometime during the last century several beautiful stones began receiving a lot of negative press. Some because they were of a certain color, others because of their heavy or light weight, and some because they contained poisons. Two of these "black listed" rocks were opal and jade. Today, in part due to efforts by the Australian government, opal has moved on with most people disregarding these superstitious attitudes. Prejudices against Jade, on the other hand, still linger to a considerable degree. This article addresses the form of Jade found in Guatemala and describes, in part, its long history in the lapidary arts within the Mesoamerican region.

Jade is the generic name of rocks in the metasilicate type of silica minerals. To elaborate, jade refers to two mineralogically distinct rocks. One being "nephrite", a silicate of calcium and magnesium. The other, "jadeite", is a silicate of sodium and aluminum. The big difference between these two (easily determined with a ten-power loupe) is that nephrite has tightly bonded, interlocked masses of needle-like

You can actually run for any of the positions in the club. It might even be nice to have some competition for a change instead of just approving a slate of officers as we have done many times. There are many important things that need to be accomplished in the club, not the least of which is rewriting the By Laws and that will be a big and very important job.

We will be making grab bags for next year's show. Please bring any extra material you have from field trips to

help us make the grab bags. Usually, some of the nicer things are set aside for the silent auction. This is a very popular part of our show and we will need to make at least 1000 before next April.

Is there someone who would like to bring the food for the next meeting? The last time I looked, the month of November was open.

December gets very busy so this will be our last meeting for the year.

Walt Milowic

crystals, (i.e., very fibrous) whereas, jadeite is clearly crystalline. The former, more common than jadeite, is found in various locations around the world to include Japan, China, Alaska, and California, while jadeite is only found in Myanmar (formerly Burma), California (San Benito County), and Guatemala.¹

There are other more complicated, identifying tests for jadeite to include refractive index readings, specific gravity measurement, ultra-violet light tests, hardness tests, and X-ray diffraction.

Jadeite's refractive index is about 1.66 with a reported range of 1.652-1.688.² However, should the jadeite be a finished stone with a round surface, a refractometer reading is difficult to obtain.³

- Jadeite has a specific gravity in the range of 3.33-3.35. As an alternative to testing in distilled water, Field suggests that "most jadeite...will remain suspended or very slowly sink in methylene iodide (di-iodomethane) that has a density of about 3.32-3.33 at normal room temperature."⁴ Hobbs also recommends using methylene iodide when testing for jadeite but notes that while three common jadeite simulants (grossularite, zoisite, and idocrase) have specific gravity values that can be confused with jadeite's all of them have

refractive indices that are a good deal lower than jadeite's.⁵

- Under long-wave ultra-violet light the paler colored green and the yellow, mauve and white jadeite shows a whitish glow of low intensity; however, the darker colored green or black jadeite is unresponsive.
- Hardness tests are rarely used for jadeite. Hobbs remarks that such tests are not very useful for jadeite and "would only help separate materials that have a hardness value that is significantly lower than jade, such as serpentine, calcite, and talc."⁶
- Both Hobbs and Walker note that the most precise test for jadeite identification involves X-ray diffraction by the powder method. However, as both point out, this method is feasible only for sophisticated laboratories.^{7,8}

All three major components of jadeite (sodium, aluminum, and silica) are white. Therefore, any color of jadeite other than white is caused by trace amounts of other minerals. For example; if the trace element is chromium, the jade will be green, cobalt and nickel together produce a bluish-green, manganese and iron yield black, and cobalt, by itself, produces blue. In

present-day Guatemala some thirty different colors ranging from white to black can be found. In addition, some of the black contains pyrite, which is really a beautiful stone. Finally, the imperial green color is simply magnificent and worth an untold amount.



Figure 1: Jadeite boulder just cleaned after pulling from the rio Tambor

As early as 1200 BCE, Olmec culture trading-centers near what is now Guatemala City were commercial sources for jadeite. All the ancient Mesoamerican jadeite came from quarries located in "La Sierra de Las Minas" and the "Motagua" River valley in the Eastern Highlands of Guatemala (see map at Figure 2). Jadeite material in natural colors ranging from a bright, intense green to soft lilac, blue, pink, white, black and yellow were available only in Guatemala, and then exported to all Mesoamerica. The black jadeite from the Motagua Valley area is believed by some to represent the creamiest, richest, and best black jadeite in the world. Jadeite production in Mesoamerica came to a virtual halt with the coming of the Spanish in the early sixteenth century.

The Olmec and (later) Maya civilizations used jade in four ways: as tools, for jewelry, as ritual instruments, and for burial adornment. The most widely known tool was the celt which was formed to fit the hand and used for digging, chopping, or as a hand held weapon. Jade being the hardest rock in the area was the primary choice for this tool. Both civilizations held rituals which carry over to the modern day Maya. The ritual focus was sacrifice along with the magical aspects of this stone. Jade

representations of deities and shamans were jaguars, effigy axes, carved spoons, dragons, celts, and other figurines. The Maya used every conceivable form of jade adornment, including inlaying jade in their teeth. Funerary adornment started with the Olmec but reached its peak during the classic Maya Period, 300 - 600 CE.

The first opulent use of jade as funerary adornment included life size jade burial or death masks with a jade coin inserted into the mask's mouth to act as payment for the individual's entry into their heaven. This funeral practice began around 450 CE and concluded by 800 CE.

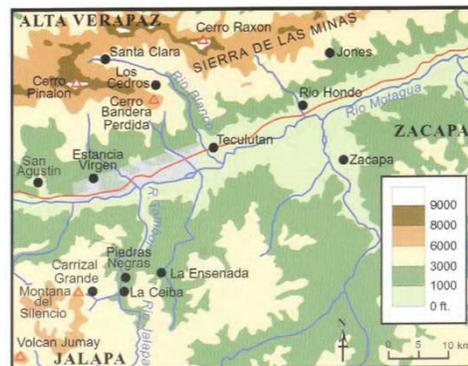


Figure 2: Map of Central Motagua Valley, including Río Blanco and Río El Tambor tributaries (from Seitz et al.)

The Mesoamerican jadeite industry was revived in 1974 with the founding of Jades, S.A., in Antigua, Guatemala, which was established following the rediscovery of jadeite deposits in the Motagua River Valley (see www.jades.centroamerica). During the mid-seventies, very large quantities of jadeite were found in Guatemala and soon thereafter others began commercializing the stone. Several universities were invited to Guatemala to verify that the stone was indeed jadeite. With this verification complete, the jadeite field was discovered to be larger than the state of Rhode Island. The jadeite field is physically located in the Las Minas mountains and the Motagua River valley, all in the province of Zacapa, a high desert area. This jadeite rock structure is believed to lay as deep as ten to fifteen kilometers beneath the

surface and requires some 1,000 to 1,200 years for exposure to the surface.

Jadeite is not the hardest stone, but it is probably the toughest to polish. Ancient lapidarist attempted to polish with the use of a very early version of sand paper and a braided hemp type of rope. Needless to say, the polish they achieved falls far short of what can be done today using diamond abrasives of graduated grit-size.

Jades, S.A., has devised a system for grading Guatemalan jadeite color and quality.

In its Catalog 2000, the company presents a color chart with forty-two categories, ranging from A to G across the top of the chart and from 1 to 6 down the chart (with 6 being of higher quality than 1). These are divided by color and quality and include various shades of green, white, lavender, black, and so forth. The top green stones appear on the left side of the chart under the A and are largely referred to as types of Maya imperial jadeite.

Among these categories, an A4 stone is described as semi-translucent, an A5 as "medium bright semi-translucent", and an A6 stone as "intense and translucent". Within the B category is "Maya semi-Imperial" green jadeite. Other greens include "intense apple green" (which is translucent) and "pale apple green" as well as "dark green" (which is not translucent). There is also a "bright blue" that is really a bright blue-green (which is given a high grade) as well as translucent "dark Olmec blue-green" and "light Olmec blue-green" (these are graded lower). Lilac categories include "intense translucent lilac" at the top, down to "very pale lilac with white mottling" at the bottom. The top grade of black jadeite is characterized as including "galactic gold" coloring, whereas the lowest grades are merely gray, charcoal, and black.⁹

Coupling the Maya culture mystique with today's finished product makes the jade tourist trade an important aspect of Guatemala's current economy. In addition to finished jadeite, organized

guided tours from Antigua into the jade fields are offered where participants are welcome to return with as much jadeite as they can carry.



Figure 3: Lower Río El Tambor near Agua Caliente. After Hurricane Mitch, many prospectors began discovering alluvial cobbles of translucent blue jadeite in this area.

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Seitz, Russell, George Harlow, Virginia Sisson, and Karl Taube (2001), " Olmec Blue" and Formative Jade Sources: New Discoveries in Guatemala. Antiquity, Vol 75, pp. 687-8.

Editor' s note: For additional information contact William Smith via e-mail at blackmarketjade@yahoo.com or by phone at Country Code 502, cell number 5197 9620. The co-author of this article. Carlos Reyes, is a jadeite trader and artisan who can be reached via e-mail at kingbrothersjade@yahoo.com . Mr. Reyes will be teaching jadeite etching and sculpture at the William Holland School in the fall of 2011.

American Stone Quarry



Aerial view of the American Stone Quarry from Google Earth

UPCOMING SHOWS

Nov 12-14, 2010: Pascagoula, MS - Mississippi Gulf Coast Gem & Mineral Society. 20th Annual Magnolia State Gem, Mineral and Jewelry Show, Civic Center Building, Jackson County Fairgrounds. Hours: 12th & 13th 10-6; 14th 10-5. Free admission. Contact John Wright (228) 875-9192 or osjbw@datasync.com

Nov 20-21, 2010: West Palm Beach, FL. 44th Annual Gem, Mineral, Jewelry, Bead, and Fossil Show, Americraft Expo Center East, 9067 Southern Blvd. Hours: Sat 9-6, Sun 10-5. Over 60 dealers, door prizes, fossil dig. Free parking. Adults \$7, children under 12 free. Contact Barbara Ringhiser at bar5678@aol.com.

Nov 26-28, 2010: Mobile, AL. Annual Gem, Jewelry, Mineral, and Fossil Show. Greater Gulf State Fairgrounds, Cody Road and Zeigler Blvd. Hours: Fri 2-7, Sat 9-6, and Sun 10-5. Contact Show Chair Jerry Shirey at (251) 458-2867 or e-mail rockhoundjs@aol.com.

Nov 26-28, 2010: Salem, VA - Roanoke Valley Mineral and Gem Society. 31th Annual Gem, Jewelry, & Mineral Show and Sale, Salem Civic Center, 1001 Roanoke Boulevard. Hours: Fri 2-7, Sat 10-6, and Sun 12-5. Admission \$3 (all 3 days), under 16 free. Contact Jeff McFalls at e-mail rocky@rvmgs.com or www.rvmgs.com



Jan 14-16, 2011: Largo, FL - The Pinellas Geological Society. 35th Annual Gem, Jewelry and Mineral Show and Sale, Largo Cultural Center, 105 Central Park Drive. Hours: Fri & Sat 10-6, Sun 12-5. Free admission. Contact Hugh Sheffield (727) 894-2440.

Jan 15-16, 2011: Deland, FL - The Tomoka Gem & Mineral Society. 40th Annual Jewelry, Gem, Minerals & Fossils Show and Sale, Volusia County Fairgrounds, Tommy Lawrence Bldg, State Route 44 (1 mile east of I-4, Exit 118). Hours: Sat 10-6, Sun 10-5. Admission: \$4 children under 12 free. Contact Florence Nordquist (386) 226-4032 or fnesign@aol.com.

March 11-13, 2011: Augusta, GA - Aiken Gem, Mineral & Fossil Society. 23rd Annual Aiken-Augusta Gem, Mineral and Fossil Show, Julian Smith Casino, 2200 Broad St. Hours: Fri & Sat 10am-7pm, Sun 10am-4 pm. Admission: \$3 Adult, children under 16 FREE with an adult. Contact: www.aikengmfs.org or www.augustagemandmineralsociety.org.



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.

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.

