

GEM & MINERAL JOURNAL

Official Monthly
Publication of the Gem &
Mineral Society of
Lynchburg, VA, Inc
www.lynchburgrockclub.org

July 2017

VOLUME 26~ ISSUE 7

President's Message:

Hi All,

Hope this finds you all doing good and are surviving the summer heat. Sorry that I missed last month's meeting but that thing called work stepped in and messed up my personal plans.

Natalie has lined up a couple of great speakers for the summer month's. I hope you had the opportunity to enjoy Ed Blackford and his lecture on Opals. Anyone that likes rocks or jewelry would like to see his presentation on Opals. We also have a program speaker for the July meeting.

We, the executive board, have discussed many topics and will start to get them out for your opinion at the meeting. Please be open and let us hear your thoughts and comments. We are trying to get the club headed in the right direction to try and reach more people but also

ensure the longevity of the club. One of those ways was found by Johnnie Knight. He has constructed a game that should bring more people to our club display and fund raise at the events that we attend. He has asked us to name the game- It is like the Wheel of Fortune but we cannot call it that. The game has a wheel that is spun and where the pointer is pointing when the wheel stops, that is the rock that you bought. We will have a better description at the meeting and would like the club to participate in naming the new game. The winner will win a prize and also be noted as being the one who named the game. More details at the meeting so please have your thinking caps on and help name the game.

That's all that I have so until then, keep looking down,
Steve

From The First VP:

Welcome to the dog days of summer- It sure has been hot in this part of the country over the last couple of weeks. Warren and I enjoyed a month long visit with our daughter, son-in-law and granddaughter from Istanbul. They have all gone back, and will likely visit again this winter. They always bring rocks and such from Turkey, which make for interesting additions to our ever-growing collection.

Club member Pamela Kline will present our July program- "Rising Sea Level: Fact of Fiction." Please join us on Wednesday, July 19, 2017 at 7:00 PM.

I would also like to share an article that Dave Woolley passed on to us by the International School of Gemology.

It is long but something I found very interesting and perhaps quite useful in the use of magnetism in gem identification. I encourage you to visit their website to view the graphics that go along with the study. There is also a You Tube video related to the article, link on page 9, where the article begins.

Enjoy and try to stay cool...
Natalie



June Meeting Minutes

Meeting: Wednesday, June 21, 2017
@ 7:00 PM

Attendance: 39

Hospitality: John & Nona Haskins were hosts for the June Meeting, Franklin & Jean Midkiff will be our hosts for July.

On Time Drawing Winners: Kate Staton (guest), Abby Deford, Jean Midkiff, Greg Lester, Cindy Mitchell, Eric Routon, Thom Noble, Don McIntyre, Lydia Kalyna, Warren Darling, Malcolm Parker, Tony Shields, Kendra Turner, Bernard Rivera, Nick Wilson, and Michael Staton (guest)

50/50 drawing winner of \$18.50 was Bernard Rivera.

President -Steve Gordon was away on business. Natalie Darling presided over the meeting.

First V.P. – Natalie Darling

Old Business:

Thanked all who helped with Uncle Billy's Day Festival. Encouraged everyone to consider helping at the workshops and festivals. Reviewed some items discussed at the board meeting: events, inventory and value of all club equipment, where to store club stuff if something happened to Dave and where we are heading as a club. Also talked about the possibility of more plaques for long time club members or someone who has contributed to the club. We will have a booth at the Roanoke show in November. Starting in July there will

be a sign up sheet for those who can help all day, or for a few hours. Help will be needed at the workshop to prepare clocks, bookends, gem trees, candles for sale at the show. Anyone wishing to sell personal items at the club tables, please contact Natalie Darling for details.

Second V.P. Dave Callahan– Upcoming field trips:

June 24 - Cancelled field trip to Dixie Mine due to predicted storms. Will reschedule.

July- Field trip (go on your own) to Natural History Museum in Martinsville Workshop will be open to club members to help prepare material to sell at Roanoke Show in November Please pick up T-Shirt orders tonight, remaining T-shirts not picked up will be sold

Anyone interested in flint Knapping with Errett Callahan please see Dave for schedule.

Treasurer: Cindy Mitchell -Uncle Billy's Day event brought in \$679 there were a total of 93 sluice buckets sold. And total of 286 hours donated by attending club members. The current balance is \$7,9465.45.

Program: Tonight's program is presented by Ed Blackburn on Opals.

Special thanks to Warren Darling for providing silent auction items and Dave Woolley and Bernard Rivera for providing on time drawing items.

**Minutes submitted by
Linda Noble, Secretary**

2017 ELECTED OFFICERS

PRESIDENT - Steve Gordon
(434) 929-1524
stevegordon@comcast.net

**First Vice President
Natalie Darling**
434-941-1899
natalie@sterlingflame.com

**Second Vice President
David Callahan**
(540) 297-1853
DBCALL1@aol.com

**Secretary
Linda Noble**
(434) 332-4869
linda-noble@hughes.net

Editor - Warren Darling
(434) 941-3784
darlingwarren@yahoo.com

Treasurer - Cindy Mitchell
(434) 283-3884
mitchell99@embarqmail.com

Members At Large-
Johnny Knight
Eric Routon

COMMITTEE CHAIR PERSONS:

Field Trips– David Callahan
Hospitality- Monthly Volunteers
News Articles– Natalie Darling
Silent Auction– Warren Darling
Website– Casper Voogt
Workshops– Dave Callahan
FRA Adult Liaison- OPEN
Membership- Thom Noble
Finance Committee- Natalie Darling



PROGRAMS



Sunshine News

Please keep the Baroch family in your thoughts and prayers, as we have learned that Debbie is experiencing some serious health problems at this time.

Special thanks to Roanoke club member Ed Blackford, for his presentation on Opals for our June program.

Please join us on Wednesday, July 19, 2017 at 7:00 PM when Lynchburg Club member Pamela Klein will share her research on Rising Sea Levels.



Bench Tips By Brad Smith

See all Brad's jewelry books at
Amazon.com/author/BradfordSmith

FANCY RIVET HEADS

For a nice looking rivet head, use brass escutcheon pins. You'll have perfectly rounded heads that are all the same size and shape. The pins are a little hard to find, so try the best hardware stores first.



Be sure to get solid brass pins, not brass plated steel. If unsure, test them with a magnet.

The pins are readily available online. Lee Valley Tools has them in 14 - 18 gauge and lengths from 1/4 inch to 1 inch. Go to <http://www.LeeValley.com> and do an item search on "brass escutcheon pin"

For best results, select a drill that gives you a hole with a close fit to the rivet. Trim the rivet to a leave a little less than one diameter sticking out the back side. Place the head on a scrap of hard plastic on the anvil so as to not flatten the head. I prefer a ball peen hammer (with a small 3/8 inch ball) for setting the rivet.

EASIER PRONG SETTING

When setting stones in a prong mount, the tool is less likely to slip off the prong if you grind a groove into its face or rough up the face a bit with sandpaper. Some folks prefer a prong pusher for doing this, and others like a set of pliers.

The easiest way to create a slot on the pusher is with a file, and the easiest way to create a slot on one jaw of your pliers is with a cutoff wheel. Then rough polish the slot with a medium grit, knife-edge silicone wheel.

FIELD TRIP REPORT...



The last field was canceled due to the early week weather report but as Saturday got here, it was sunny. We were concerned about the big creek we had to cross and rain in the mountains. We felt better be safe that sorry. I'll reschedule in cooler weather.

**Contact Information
for Field Trips**
David Callahan,
Field Trip Chairman
Home phone: 540-297-1853
Cell Phone- 540-874-5201
E-mail dbc11@aol.com

Up Coming Field Trips



An Official Field Trip of The Gem & Mineral Society of Lynchburg, VA. Inc. (GMSL) The Roanoke Valley Mineral & Gem Society, Inc. (RVMGS)

Virginia Museum of Natural History---Martinsville, VA.
(ADMISSION FEE) Museum Hours 9AM until 5PM
Fairy Stone State Park collecting area---Patrick County, VA. (FREE) Whenever you want to leave the Museum

Saturday, July 22, 2017
(weather permitting...you decide)
Arrival time at the museum, any time after 9AM

There is no limit or age requirement but sign-up is requested. Call me, e-mail or sign-up at the meeting.

Trip Overview: This is a drive on your own trip or you can arrange your own car pool. We will NOT try to drive as a group so plan your own route and we will meet at the museum.

We will visit the Virginia Museum of Natural History in Martinsville to view their many interesting mineral, fossil and other exhibits. They open at 9 AM so we should all plan to arrive between 9 and 10AM at the museum. Go

to their web site for additional information and a map. www.vmnh.net

Admission Fee: \$7 per adult (19-59), \$5 for children and youth (3-18), seniors (60+) and college students. Free for VNMH members and under 3

You can stay there as long as you want until they close at 5PM but if you decide to collect some fairy stones on your own, you can depart from the museum at any time. It might be handy to bring your own lunch or try to find a local restaurant.

It will be impractical for us to drive as a group so I will have a map available on a suggested route from the museum to the fairy stone collecting site which is NOT in the park. Just ask me for the map unless you are familiar with the area.

Location & suggested driving directions to the Museum: See their website for other driving directions. www.vmnh.net

continued on next page



Up Coming Field Trips



Continued from page 4...

The museum is located on Rt. 58 business at 21 Starling Ave in Martinsville between the YMCA and First Baptist Church. Free parking is available at the museum. Use this address to set your GPS.

From Roanoke: Take US Route 220 South into Henry County and take 220 business into Martinsville. Turn left onto Church Street, and then follows Church Street to Starling Ave. Turn right onto Starling Ave and the museum is on the left between the YMCA and First Baptist Church. (Estimated driving time from Roanoke is about 50 miles so allow at least 1 hour)

From Lynchburg: Take US Route 29 South to Chatham. Take Va. Route 57 West to Martinsville where it will join US Route 58 Bus West. Follow US Route 58 Business signs through the city. Turn left at Starling Ave. The Museum is on the left between the YMCA and First Baptist Church. (Estimated driving time from the airport in Lynchburg is about 76 miles so allow at least 1 hour and 45 minutes from there.)

Collecting Staurolite Crystals, also called Fairy Stones: There is NO collecting in the Fairy Stone State Park. You will be in the authorized collecting area outside the park.

Location & suggested driving directions to the collecting area: The driving time from the museum to the collecting area is about 18 miles and you should allow about 35 minutes.

The collecting area is on Va. Rt. 57 West of Martinsville and Bassett just over the Henry County line in Patrick County behind the old Haynes 57 store. The store is now closed and a different business is now there but it is a ¼ mile or less past the small county line sign on the right. Look for the small county line sign about 5 miles west of Bassett. There is a parking area and fairy stone

collecting rules sign to the left of the store. Read the sign and follow the regulations. Failure to do so can cause this free collecting site to be closed. They allow no digging, so only surface collecting is allowed.

You will be able to find many poorly formed crystals but persistent searching, off the beaten paths, under trees, bushes and leaves should reward you with nicely formed single and 60 degree highly collectable twin crystals. The 90 degree much sought after natural twins or crosses are extremely rare in this location. Most of these you see on the market are "manufactured". You may stay here as long as you want or leave at any time. Be sure to not leave any trash. There should be trash barrels in the parking area. Be aware of poison ivy and other little critters that live in the woods.

Collecting equipment: You should have a small bucket, bag or baggies to keep your finds.

Gloves will be handy and knee pads are handy as the best way to search is on your knees.

A small stick is handy for brushing away the leaves. Be sure to recover any area where you have been searching.

No digging tools are allowed so don't bring any! Park rangers do patrol here.

Bring snacks and water.

Wear appropriate clothing for the weather and collecting. Hard hats are not required.

There are NO facilities here so be prepared.

Children and pets are allowed but they must be supervised and always under your control.

Contact Information: David Callahan, Field Trip Chairman- info: top right on page 4.



Up Coming DMC Field Trip

Continued from page 5

An Official Field Trip of the Gaston Gem Mineral and Faceter's Club (Gastonia, NC) (HOST)
An Official Field Trip of the Gem and Mineral Society of Lynchburg, VA Inc
Saturday, August 26, 2017 ~ 8:30AM - 4PM Eastern
Propst Farm; Lincoln County, NC

Fee: \$25 per person

TRIP: The property recently reopened after several months following the passing of Mrs. Propst. The property has been producing corundum, since the 1960's. Digging will take place in front and behind the barn as well as other possible areas designated by the current owner, Ronald Lineberger.

COLLECTING: Some large and unusual corundum specimens have been coming out of the ground recently including a large Kyanite included specimen and a small clear ruby. Good specimens of magnetite and quartz crystals are occasionally found. The ground is hard packed red clay. Digging can be easy or moderately hard depending on the location and depth of the hole you dig.

BRING: Long and short shovels and small or large buckets minimum. 1 inch and half inch classifiers, small picks, tarps and probing tools may come in handy. Bring water or soft drinks and snacks. An extra change of clothes may be needed as the ground is red clay.

FEE: \$25 per person

REQUIREMENTS: All collectors will be required to sign a permission / liability form and pay \$25 before setting up to dig. Digging is allowed in the designated areas only. All holes **MUST** be filled in before you leave the property.

SPECIAL CONDITIONS: Parking is on the grass near the dig area.

CHILDREN: Allowed with parental supervision.

PETS: Allowed on leash only.

FACILITIES: There is no toilet but there is a service station with facilities at the exit of HWY 321 and Startown Road.

ADDITIONAL INFORMATION:

Address: Propst Farm - 3668 Startown Road, Maiden NC 28650

Lodging: Rooms are available in nearby Lincolnton NC or Hickory NC.

DIRECTIONS AND WHERE TO MEET:

About 13 miles south of I-40 via US321 and Startown Road

-or-

About 26 miles north of I-85 via US321 and Startown Road

(Startown road intersects 321 and the Propst Farm is approximately 3 miles south of NC highway US 321).

Dig is on residential land, pull in between 2 brick houses - We will have a sign on road where to turn in.

CONTACT:

Lorell Dunlap, Field Trip Chair – Gaston Gem Mineral and Faceters club.

Phone: 704-692-1272

E-Mail: Lorell_Dunlap@yahoo.com



BOARD MEETING

Executive Board Meeting Minutes

Submitted by Linda Noble, Secretary

June 14th 2017

Attendees: Steve Gordon, Dave Callahan, Cindy Mitchell, Johnnie Knight, Warren Darling, Natalie Darling, Siglinde Allbeck, Linda Noble, Thom Noble
Steve - Welcome and a word of prayer.

1. Reports

1st Vice – Natalie passed out Cards to sign for Luis Gonzalez who is having health issues and the death of Dave Vanaman's father.

2nd Vice – Dave gave Field trip updates- June 24th Vesuvius and possibly Martinsville Museum and Fairy Stone in July. Willis Mountain in September.

Treasurer – Cindy gave details from sales at Uncle Billy's Day Festival. Will be working on detailed spreadsheets to include past five years on festival sales.

Secretary – Took minutes, need substitute for July Newsletter – Changing Format to include a picture with articles. Will have roll of stickers for club members at each meeting. Warren suggested the need to prepare to elect a new Editor for next year. Meeting plans for June and July are guest speakers - Possibility of Auction or Rock Swap in August.

2. 10 Year Mission

What we as a club want to see to take the club through the next 10 years

Some Ideas to consider:
How do we reach out and in what way to excite younger generation?

Where will we put (so it can be used) equipment when Dave Callahan has had enough and we can no longer use his?

Do we need to appoint people as show chairman (or chairmen) ?

Do we need to appoint someone to report on field trips (can be a different person for each field trip) ?

Can we change the way our web site looks and operates?

3. Club's assets

A list of all club assets along with price paid and value- Steve and Natalie will work on this inventory list. Club will maintain Ledger book to record all donated items. Three comparable's will be done for any purchase of software, equipment, batteries, etc.

4. Clubs Shows/Festivals –

It was decided by vote in an earlier club meeting that we would participate in the Roanoke show in November. Board will encourage and enlist help from all club members to attend workshops. A sign up sheet will be presented at club meeting to record names of members to help during the show.. Dave will prepare a schedule of days he will be home so club members can sign up for a time to go to a workshop to help make and polish bookends, clocks, candles, gem trees and prepare bags for sluice for sale at November event.

Board will further discuss how many shows and festival we will do each year and which ones are more feasible for the club. Will further decide how to get the stuff to the shows as well as better layout at the shows.

Johnnie Knight presented idea of Wheel of Chance to help draw attention to our booth. It would allow people to spin a wheel allowing them a chance for a prize such as a rock, or some other related material. It was agreed this would be of benefit to club events.

Closing - Board will meet again next month

UPCOMING EVENTS



July 2017

July 29-30: 38th Annual Champlain Valley Gem, Mineral & Fossil Show sponsored by the Burlington Gem & Mineral Club. Tule Middle School, 500 Dorset St; So. Burlington, VT. Contact: Peg Powers at 802-462-3548 or burlingtongemandmineralclub.com

July 29-30: Long Island Mineral & Geology Society Annual Show. 15125 Main Rd; Matuck, NY 11952. Info: Eugene Genova at ligeo@aol.com

Aug. 5: 22nd Annual Gem, Mineral & Fossil Sale sponsored by the Morris Museum Mineralogical Society. Morris Museum, 6 Normandy Heights Rd; Morristown, NJ. Info: kfrancis@morrismuseum.org

Sept. 16:17: Gem, Mineral & Jewelry Show sponsored by the Central PA Rock & Mineral Club. Zembo Shrine, Third & Division Sts; Harrisburg, PA. Contact: Betsy Oberheim aoberheim3@comcast.net

Sept 22-24- 50th annual SVGMS Club Show and sale. Augusta Expo, 277 Expo Rd., Fishersville, VA Contact: sgregory357@hotmail.com show chair.



SUN	MON	TUES	WED	THURS	FRI	SAT
						1
2	3	4 <i>Happy 4th!</i>	5	6	7	8 Callahans workshop
9	10	11	12	13	14	15
16	17	18	19 Meting 7PM	20	21	22
23	24	25	26	27	28	29
30	31					

REMINDER...

Club workshops are held on the second Saturday of each month at Dave Callahan's home. Workshops are open to members only, and all members are encouraged to attend when possible.

There will be some discussion at this months meeting about possibly offering other days for the workshops also.

This is a great learning & fellowship opportunity, as well as a way to contribute to your club. You can "learn" while helping to fabricate items for sale at our fall festival, then use the equipment available to complete your own personal pieces.

Please consider coming out, regardless of your level of experience. All help is needed and appreciated!



ISG Magnetism and Gem Identification

This is real science, not voodoo science...

It was quite an amazing revelation when I first heard of Sylvia Gumpesberger's work on gemstone magnetism. Sylvia is one of those gemology pioneers who open up new horizons in gemology, and then drag the rest of the industry kicking and screaming into new concepts and new technology. The following year I was honored to have Dr. Don Hoover visit our booth at the AGTA Gemfair in Tucson where he demonstrated the separation of garnets based on magnetism. When you think about it, the iron content of many gemstones is sufficient to create a magnetic attraction, and this was the basis for the reports.

But...there was more to come than most realized. By applying the very real science of gemstone magnetism the ISG was able to expose some very creative gemstone cookers who were trying to use voodoo science to increase their ill-gained rewards from undisclosed treatments. Here is how we used this on one example.



Having worked with Jules R. Sauer of Amsterdam Sauer, one of the largest gemstone mining and production companies in Brazil, I had collected a variety of pink tourmalines direct from the mines through Amsterdam Sauer, three of these can be seen at left. So when I started seeing very intense pink tourmalines show up in the market at very cheap prices and all perfectly matched, the sirens went off in my head. (the warning sirens, not Scylla and Charybdis from Greek mythology). Given that the ISG office knew that many of the treatments on tourmalines were using different forms of

iron and manganese, I decided to set up a comparison test of magnetism in tourmaline just to see what we could find. The results were profound.

There are a couple of methods to test magnetism in your kitchen, one of which is place the stone on a float in a bowl of water and pull it along in the water. I demonstrated this in our 2007 YouTube video on Gemstone Identification Using Magnetism. I have used this method in other demonstrations, but for this time I found that the set up below is better for this purpose. By suspending a copper wire holder on a long string, with a series of lines on the bottom paper, I could photograph the magnetic attraction to the best advantage. The lines do not mean anything in particular other than simply showing the amount of movement. Below is a natural pink tourmaline from Amsterdam Sauer, Sao Paulo, Brazil.

With a natural pink tourmaline the movement is slight. I allowed the pink tourmaline to get very still, then simply placed the magnet to the side of the stone and tried to pull it by magnetism away from the center point and see how many lines we could move the stone.

I next demonstrated with a suspected treated pink tourmaline and the results were profoundly different. By placing the stone in the holder, and moving the magnet toward the stone and pulling back, I could get the stone to move a significant distance, far beyond the reported normal reaction for tourmaline magnetism.

Live images showing the experiments can be seen on the ISG website and on YouTube <https://www.youtube.com/watch?v=U9pM04cY7sU&feature=youtu.be>

Continued on next page

ISG Magnetism and Gem Identification

Continued from page 9

This was an amazing magnetic reaction to a gemstone that was supposed to be only slight to moderate in reaction. I referred to an outstanding expert on gemstone magnetism, Kirk Feral and his website: Magnetism in Gemstones to further confirm this information and found that the darker pink tourmalines should normally be less susceptible to magnetism, but in this case I found extremely strong attraction to the magnet by these unusual dark pink tourmalines. But to make sure I was not picking something up from the faceting process, I next used rough crystals that had not been worked. First, the natural pink tourmaline crystal from Amsterdam Sauer.

Once again, with this dark pink natural tourmaline we got very limited response to my magnet. It was approximately the same level of response that I got from our known natural faceted pink tourmaline. So I moved to a suspected treated tourmaline obtained on the market.

As predicted and repeated in several stones, the pink tourmaline rough crystals that demonstrated signs of artificial treatments were strongly attracted to the magnet. I used an industrial level magnet for these tests to get clear results.

And just for good measure, I offer yet another of the pink tourmalines from that demonstrates the exceptionally strong magnetic attraction through this

demonstration.

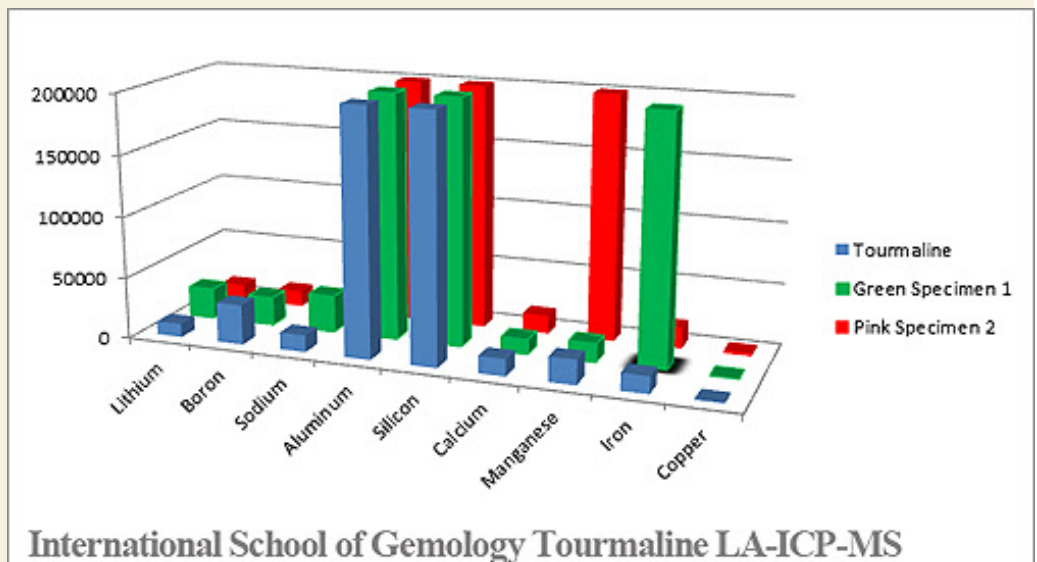
The question was, however, how do I prove that something has been done to these tourmalines by gemstone cookers?

To get this answer I turned to an independent scientific lab, Evans Analytical Group for LA-ICP-MS testing of a variety of tourmalines. The results were once again...profound. Iron (Fe) and manganese (Mn) are normally trace elements in tourmalines that cause the various colors. I had both faceted and crystals, pink and green tourmalines tested, two of the results are below. There were two issues that quickly came to light:

1 The presence of Fe and Mn was extremely high, well above what would normally be expected for natural, untreated tourmalines.

2 Based on research reports from the GIA, the lead (Pb) levels confirmed that we had tourmalines from different mine locations, the one common factor was that all of the tourmalines showing anomalous Mn and Fe levels came from dealers in one country known for gemstone treatments.

Below are two of the actual LA-ICP-MS reports from EAG Labs, and to better demonstrate the unusual amounts of Mn and Fe in these stones, I show a bar graph for comparison. *Continued on next page*



ISG Magnetism and Gem Identification

Continued from page 10

Two of the LA-ICP-MS reports from EAG Labs. "Matrix" denotes extremely high levels of the elements, above the reading scale.

International School of Gemology from EAG Labs

Table 1. Semi-quantitative values for #1 GEMSTONE sample, refer to figure 1.

Table 2. Semi-quantitative values for #2 CRYSTAL sample, refer to figure 2.

Element	Concentration (ppm wt)	Element	Concentration (ppm wt)	Element	Concentration (ppm wt)	Element	Concentration (ppm wt)
Li	25000	In	6.4	Li	13000	In	29
Be	5.5	Sn	550	Be	1.6	Sn	760
B	23000	Sb	430	B	13000	Sb	8.8
Na	30000	Te	4.6	Na	< 1	Te	1.2
Mg	670	Cs	< 0.1	Mg	380	Cs	< 0.1
Al	Matrix	Ba	2.1	Al	Matrix	Ba	250
Si	Matrix	La	18	Si	Matrix	La	55
P	10	Ce	58	P	86	Ce	110
K	680	Pr	6.6	K	1800	Pr	15
Ca	12000	Nd	20	Ca	15000	Nd	16
Sc	5.4	Sm	19	Sc	30	Sm	14
Ti	550	Eu	< 0.1	Ti	6800	Eu	0.5
V	10	Gd	3.5	V	50	Gd	3.3
Cr	310	Tb	0.3	Cr	130	Tb	0.2
Mn	15000	Dy	0.8	Mn	Matrix	Dy	1.4
Fe	Matrix	Ho	< 0.1	Fe	17000	Ho	< 0.1
Co	0.9	Er	0.1	Co	9.6	Er	1.1
Ni	< 0.1	Tm	< 0.1	Ni	110	Tm	0.2
Cu	3.4	Yb	< 0.1	Cu	2300	Yb	1.1
Zn	950	Lu	< 0.1	Zn	270	Lu	< 0.1
Ga	780	Hf	0.1	Ga	4700	Hf	2.2
Ge	46	Ta	48	Ge	30	Ta	6.0
As	< 0.1	W	0.7	As	0.7	W	8.3
Se	0.5	Re	0.5	Se	0.2	Re	1.1
Rb	< 0.1	Os	< 0.1	Rb	36	Os	0.6
Sr	1400	Ir	< 0.1	Sr	66	Ir	0.2
Y	0.3	Pt	< 0.1	Y	4.9	Pt	< 0.1
Zr	0.4	Au	< 0.1	Zr	72	Au	2.9
Nb	16	Hg	55	Nb	33	Hg	10
Mo	2.6	Tl	0.2	Mo	120	Tl	0.4
Ru	0.3	Pb	14000	Ru	0.4	Pb	220
Rh	< 0.1	Bi	170	Rh	0.8	Bi	160
Pd	< 0.1	Th	0.8	Pd	0.3	Th	4.2
Ag	< 0.1	U	0.2	Ag	2.8	U	2.7
Cd	2.2			Cd	5.7		

While the unusually strong magnetism did not diagnostically prove that something was amiss with these tourmalines, it did serve as an important "tell" that something was wrong. By LA-ICP-MS testing I showed that indeed, someone is artificially infusing color elements into these stones which is clearly demonstrated by the EAG Labs independent testing. But by using a simple magnet, we can identify at least some of these without the cost of the advanced testing. Thereby proving the importance of magnetism in gemology.

The use of magnetism is an ongoing study with much yet to be learned and applied. There are many out there

doing excellent research and we look forward to the future results of that work. For now, we applaud the work of Sylvia Gumpesberger, Don Hoover, Bear Williams and Kirk Feral, along with several of our own ISG Community. We applaud everyone for your excellent work and look forward to even more important news about this unique gemstone property that is now coming into its own merit.

Robert James FGA, GG
 International School of Gemology Inc.
<http://schoolofgemology.com>
 Submitted by Club Member Dave Woolley

GEM & MINERAL SOCIETY OF LYNCHBURG, VA, INC.

WWW.LYNCHBURGROCKCLUB.ORG

Warren Darling, Editor
211 Chesterfield Rd.
Lynchburg, VA 24502



The purpose of the Gem & Mineral Society of Lynchburg, VA is to promote education in The Earth Sciences, including: Mineralogy, Geology, Gemology, Paleontology, and Crystallography



Lynchburg Rock Raiders is the official Future Rockhounds of America association of the The Gem & Mineral Society of Lynchburg, VA. Inc.



MEETING LOCATION

*DIRECTIONS: Fairview Center;
3621 Campbell Ave., Lynchburg, VA 24501
434-847-1751~ From Route 29 expressway or Route 460, take the Campbell Avenue Exit. Follow Campbell Ave. to 3621, which is across the street from a Citgo Gas Station. There is a fence around the building and parking on both streets running along the sides of the property as well as a lot in the back. We will be looking for you!*