



February Newsletter

2/2019

Volume 2019, Number 2

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Meeting at Miller Center
301 Grove Street
Lynchburg, VA 24501
3rd Wed of the month
7:00 pm until 9:00 pm

Workshop is the 2nd Saturday
of the month but in Feb. it
will be the 3rd Saturday
because of the field trip on
the 9th.

President's Meanderings:

I doubt that I will ever see the Sistine Chapel, but I know what it must feel like to be there. Years ago, I had the opportunity to work on the replacement bridge, Route 360 over the Banister River, Pittsylvania County. I was excited because there was a rumor that club member, Rose Dempsey, had found gold in an upstream tributary. Shure enough, the West Abutment cores we drilled began showing sulfide mineralization. I remember seeing magnetite, gold colored pyrite and chalcopyrite, but no gold. At the Western Pier I recall drilling a thin layer of broken rock, and then "solid" bedrock at a depth that would accommodate a spread footing foundation. I was called out for a 1:00pm footing approval. If I had seen or jack hammered into something softer at that inspection, I would have modified the footing to a slightly lower elevation. I arrive at 11:45 just after the contractor had washed and sun dried the exposed bedrock in anticipation of an afternoon concrete pour. I had the place all to myself during the lunch hour. Now exposed were a number of isolated and interconnected cavities filled with crystals. What to do? Like an hour visit to the Sistine Chapel, with no other tourist I could only stare and wonder at the sight before me. As a mineral collector there was no time to begin chiseling to save even one crystal pocket. All I could do was walk from one pocket to the next looking at splendent crystals of epidote, feldspars, magnetite, chalcopyrite, pyrite, quartz, amphibole, sphene, and several other minerals I could not field identify. I had to leave at 1:00 because I could not watch this beautiful work of art being flooded with concrete. A large slab should have been removed for a place of honor in the Smithsonian Museum.

Keep looking!

In looking for a new home for the Club Display Collection, currently residing in the 'Easter Island' store, I considered asking a local College or University to make space. Quickly, I realized that that such a location would likely *limit* access to the public. David Young agreed to take the collection in his 'Stone and Bones' store while the Board was in discussion with the Parks & Rec facility manager,

2019 Officers

PRESIDENT - Dave Woolley
(434)
woolley.dave@gmail.com

First Vice President
Vacant

Second Vice President
Vacant

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

Editor – Steve Gordon
(434) 942-1836
stevegordon@comcast.net

Members At Large -
Michael Staton &
Eric Routon

Youth Out Reach
Jennifer Staton

Howard Covey. Howard Covey has announced that Park and Rec. will not host the Club Display Case and Gem and Mineral Collection. Stones and Bones is the fall back location. Thank you Mr. Young. Does anyone have any other ideas for a location before we make the move? The collection could become a resource for school field trips to the Nature Center for their Earth Science requirements. Our volunteers could occasionally assist in teaching. And perhaps the most important reason, the entrance to the Park and Rec.'s Nature Center is the next door: the collection will be seen by interested individuals. Good advertising for the club. Our collection has evolved from a razzle/dazzle mixture of pretty minerals, rocks and gems into a teaching collection. Future News Letters will post progress of the move and provide descriptions of parts of our remarkable collection.

President's Definition of a Mineral

Having worked with engineers and taught first graders I have come to realize that although we share a common language, we may not and probably do not share the same meaning with our words. Definitions need to be very simple and clear, at every level. If a first grader "gets it" then as an adult the same individual should have no problem with a term and its definition. On numerous occasions the engineers I worked with thought they knew what a term meant only to have misunderstood my communications because their definition was weak, misleading, or assumed. Therefore, I will start at the beginning.

A mineral is a crystal. A mineral is naturally occurring and has a defined composition.

An understanding of crystals and the six crystal systems is important as the element or elements making up a crystal and the weak and strong bonds that hold them in a repetitive pattern control the physical, chemical, optical and electrical characteristics of a mineral. Note, I did not say anything about size. If a crystal grew unobstructed in a cavity it may have sharp faces. If it was crowded it may not.

Several exceptions to the definition accepted by mineralogists include: opal – the same composition as quartz but composed of microscopic spheres; mercury - a liquid that will crystalize if cooled enough; and asbestos that forms in tubes making fibers. Geologist gave up a good thing when the excluded water as not being a mineral, (ever see a snow flake?); H₂O should be accepted as a mineral just as mercury. Most of geology is based one way or another on water; water is very important in geology. A man grown crystal is not a mineral, it may be a *synthetic mineral*, identical to what occurs in nature, or it may mimic a mineral but have a different composition plus different physical or chemical characteristics.

Program for the coming months

We have a new meeting place for our upcoming meetings. We are moving from Fairview to The Miller Center on Grove Street

For January and February we will not have a meeting as weather normally plays havoc during these months.

March will be our next meeting and we have (tentative) Dave Young (owner of Stones and Bones on 221 (located in the Foodlion shopping center at Graves Mill intersection)) speaking on Virginia minerals and collecting sites.

April will be "Mineral Identification Techniques" given by members of our club.

Note from the Editor:

Hi All,

Well we have made it through January and the weather has been crazy. Temperatures have been up and down so I hope you have stayed warm on the really cold days and taken advantage of the really nice days.

Please send me your short story stevegordon@comcast.net

Field Trip Opportunities



Dixie Mineral Council Field Trips

The Southeast Federation of Mineralogical Societies, Inc



The Friendly Federation - Founded in 1976 to serve
DMC Program of the SFMS Field Trip Committee
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An Official Field Trip of the Tennessee Valley Rock And Mineral Society (Chattanooga TN) (HOST)

An Official Field Trip of the (please enter your associated club's name here)

Saturday, March 23, 2019
9:00AM CST
Ross Creek
Gruetli-Laager, TN

TRIP: Day trip to a Pennsylvanian/Mississippian scale tree and tree fern fossil site. Site is easily accessible by auto and is not strenuous. Site is a shallow creek that is wet year round. This time of year snakes and poison ivy are probably not a problem.

COLLECTING: Site collecting will include various genus and species of Pennsylvanian and Mississippian Carboniferous plants.

BRING: Bring a bucket and digging trowel, a geology hammer, magnifying lens, packing material to protect finds, wet weather gear (especially boots), gloves, and a change of shoes and pants as you will get wet. It will be cold this time of year and you will be on top of a mountain. Bring warm dry clothes to change into. Check the forecast weather for Monteagle, TN.

SPECIAL CONDITIONS: Parking will be ample and on a dirt road. Depending on the weather it may be muddy.

REGISTRATION: Will register everyone at meeting place.

CHILDREN (Yes): No age limit but must be able to walk on uneven surfaces. Adults are expected to supervise your children.

PETS (No): Pets are not allowed.

FACILITIES: There are no adjacent facilities for this site. This is a remote site and very primitive. There are no facilities in the area, so bring water and food and first aid/meds if needed. Cell phone reception is unreliable at best.

ADDITIONAL INFORMATION: A brief safety/orientation meeting will be held at the meeting site. Samples of collecting material will be available.

DIRECTIONS AND WHERE TO MEET:

We will meet at the Hardee's parking lot on top of Monteagle Mountain exit 138 on 1-24 W, 50 minutes from Chattanooga. Meeting time is 9:00 am CST, departure at 9:20 am CST. If you feel you will be late call ahead to Charlie Jones, cell 423 653 4479, or before trip date 423 842 6441, cell service at site is very limited.

CONTACT: Charlie Jones, C 423 653 4479, HOME 423 842 6441

IMPORTANT: DMC field trips are open only to members of clubs within the SFMS that have provided their members with field trip liability insurance. SFMS club members are bound by the AFMS code of ethics (click [here](#) to read them), but the general public is not, and could jeopardize access to a collecting location. So unless the property owner has invited non-SFMS attendees, the general public is not allowed on DMC field trips. **Please do not post DMC field trip information where the general public can access it.**

Why I became a Rock Hound

By Stephen Joseph Boylan

It was a dark and stormy morning and we children were going to the school bus stop. When we looked down and what did we see as the sun rose beneath the clouds, but tiny golden crystals of pyrite in the gravel at the side of the road. So we picked them up and took the pyrite crystals to school.

January Meeting Minutes

Gem & Mineral Society of Lynchburg
Meeting – None

Phantastic Phantoms!

Another look at the phun and profits of phantoms from our original report.

Editor's Note: Getting ready to leave for the Tucson Gem Shows and thought this would be a fun review of a previous newsletter on phantom quartz crystals that are hot right now. Rj



In this day of having to get creative to maintain a marketing edge, we need to remember that what we enjoy, our customers usually enjoy also. Sometimes this allows us to get outside of the traditional boundaries of what is proper in a jewelry or gemstone operation and go for what is of interest to your clients rather than what is being represented to you as the "normal" inventory by the traditional industry media. For that reason, today we want to go a bit

toward the collectors route of jewelry store inventory and talk about what we have phun in calling those **Phantastic Phantoms!**

Phantoms are quartz crystals with what appears to be ghostly images of other quartz crystals inside. According to the PHOTOATLAS of Inclusions in Gemstones Vol. 2 (Koivula and Gubelin, Opinio 2005, pp. 628) phantoms can be formed when syn-genetic minerals of other types can settle on the growing quartz crystal faces. These create visible planes of accumulation that cause the phantom

appearance of a crystal inside another crystal as seen in the image above left. Inside one of these crystals alone we counted over 17 phantoms...inside the same single crystal.

Over the years we have collected numerous specimens of crystal phantoms, but none that rivals what we found at Tucson Gem Shows this past year. We wanted to share these with you in an effort to open up the world of unusual mineral specimens as a possible revenue stream for your company. Here are two examples of these **Phantastic Phantoms**...



At left is one of the specimens from our latest acquisition. As you can see in this 10x microphotograph using our [Meiji Techno GEMT2-BFDF](#) microscope, there is a fuzzy appearance on the surface of this phantom. The phantom image itself appears to be either out of focus or to have a fuzzy surface. When we went to the higher powered magnification the truly phantastic feature of this phantom became visible as you can see below. At 45x (below left) and 60x (below right) it is easy to see that the surface of this phantastic phantom is covered in a mass of threads from some unknown mineral that formed on the face during growth of the host quartz crystal. This has created a beautifully soft vision of this phantom that is unlike anything else in the IJA Student Reference Collection.

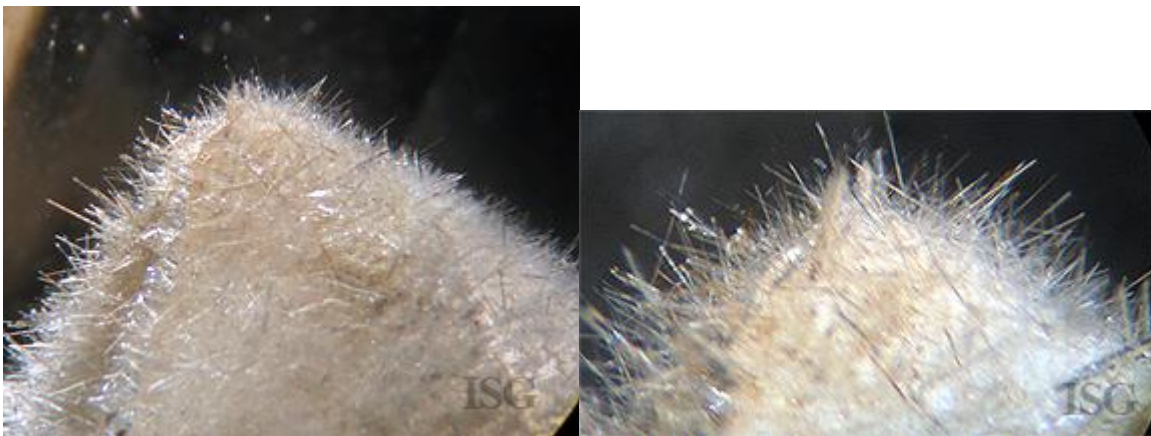




At left is the same area under 90x, which comes standard with the Meiji Techno and is higher than other gemological microscopes without additional cost. Here you can see the mass of thread-like formations that cover the face of this phantom before the crystal grew and engulfed the area.



If you look at the specimen on the far right in the group image at the top of this page, you will see a faceted phantastic phantom gemstone that we obtained from this same dealer at Tucson. At left is the pointed section of this phantom showing a remarkable collection of what we believe are rutile needles covering this crystal face. This creates a spiked surface of this phantom crystal that is quite amazing when viewed in higher magnification below.





And of course, that is not all we found in these specimens as seen at left. Using our Meiji Techno MX series microscope that was customized for our Enwave Raman, we were able to capture this beautiful image of what we believe is an anatase crystal inside this quartz crystal specimen. But that will be a report for another day.

The key issue is this: what we all find interesting about gemstone inclusions, many of your customers will also find interesting. Obtaining and showing unique and beautiful formations inside of gemstones can lead to some excellent sales figures if you work that revenue stream. Children LOVE to see these things when they come into your store, and will urge Mom and Dad to take them to see you when they know you have something new. It's a way to not only generate interest with your customers today, but those youngsters today will eventually grow up and become your next generation of customers for wedding rings, watches and anniversary gifts.

It's all about business. It's all about generating revenue streams for your business. Never overlook some of the phun stuff out there.

Sometimes it's the phun stuff that can help grow your share of the market. Today, we ask you to consider the phun of those **Phantastic Phantoms!**

Robert James, FGA, GG
President, Insurance Institute of Jewelry Appraisal Inc.
a 501(c)3 Non-Profit Education Organization

Here is another link about a newly discovered Gemstone that is harder than Diamond.

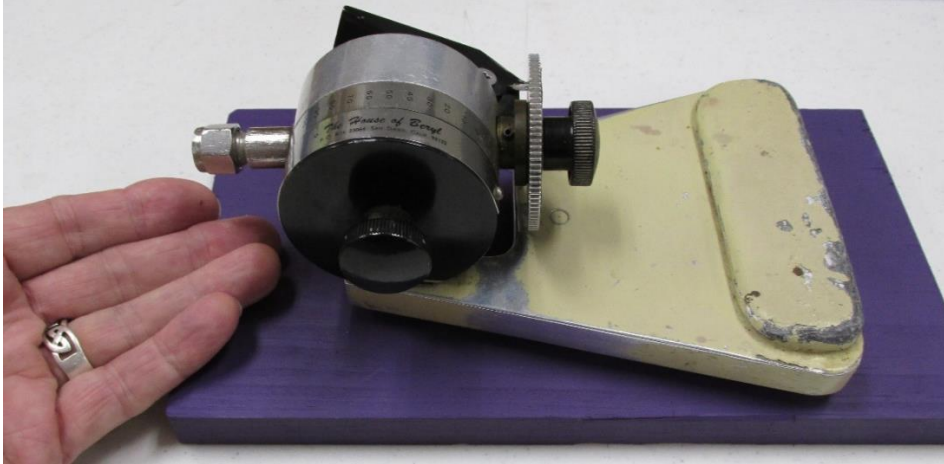
https://instoremag.com/newly-discovered-gemstone-is-harder-than-diamond/?ajs_uid=8919B2525689F5S&oly_enc_id=8919B2525689F5S&ajs_trait_oebid=3126C4693801B6M&fbclid=IwAR3Z98mD5YMS_5sUwoskK5i1140oxyzkl20cgXjt18FlwkVJ4_-0CcU28qo

Article for this month part # 4 Faceting by Dave Woolley

You Too Can Become a Part of the Story of Faceting Part #4

Parts and Tools of a Modern Faceting Machine

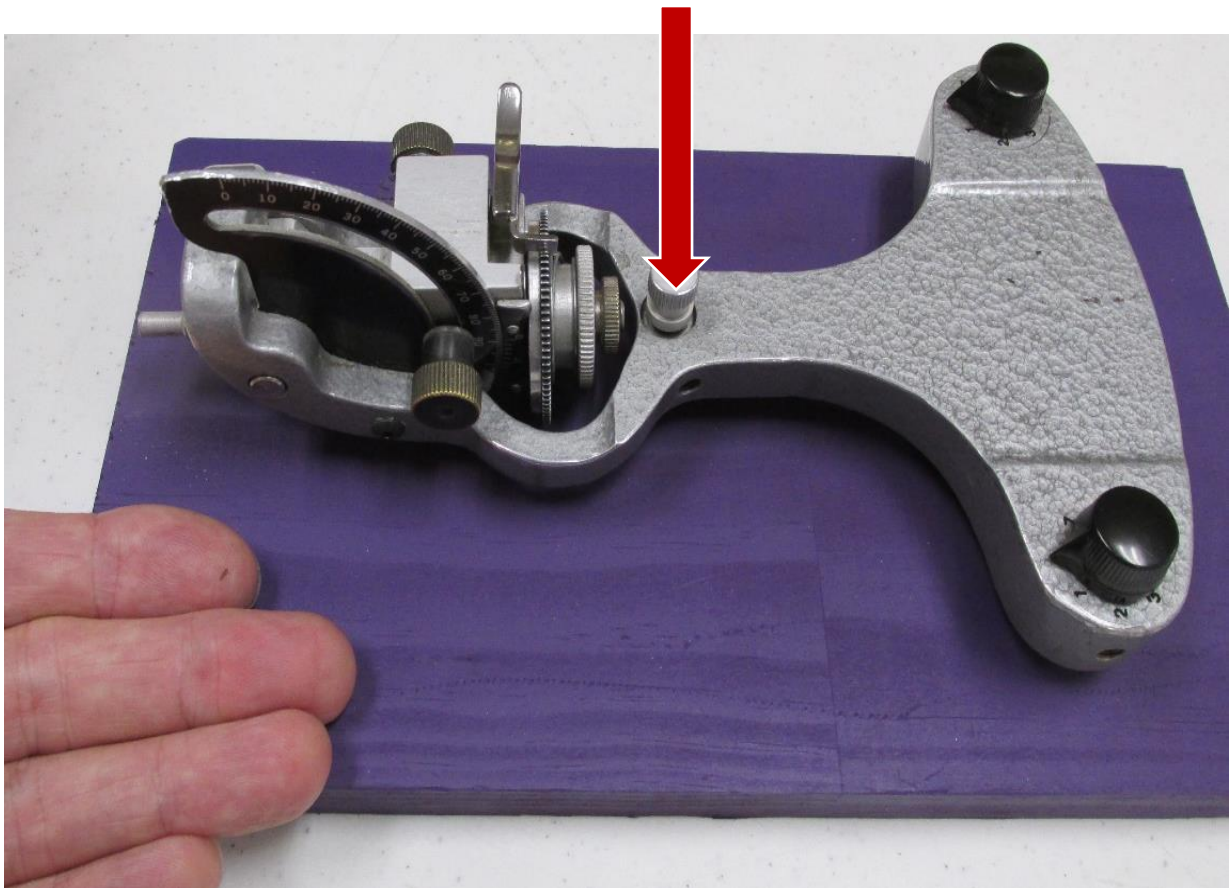
A Divergence from the Tube on Mast machines: The **Removable Hand piece Machine**.



21. “The House of Beryl”. It has a Protractor and a **Protractor Lock**, facing black knob, to control the Angle, plus a changeable Index Gear, to the right. Out of sight and underneath are two Back Feet – right, and one Front Foot – left, sitting on a height adjustable **Table**. The Table, represented by the blue, is raised or lowered to cut a particular Angle. The Back Feet act as a “hinge” dropping the Front Foot to the Table while cutting. Contact of the front foot with the Table stops the cutting, an **Angle and Depth of Cut Control**.



22. “Raytec Shaw.” A Removable Hand piece Faceting Machine. Underneath the Hand piece and Table, a Rotating Ring raises or lowers the Table for the Coarse Height Adjustment to cut different Angles.



23. “Raytec Shaw”. The Back Feet have **Radial Adjusters** to make a **Rotational Alignment** between the Crown and the Pavilion if needed after a Transfer is completed. (Use the Girdle Facets as guides. Make shallow **Trial Cuts** to the same Depth to perform an Alignment adjustment between the Crown and the Pavilion.) Radial Adjusters, sometimes called **Cheaters**, are also used to “find” facets while cutting a misaligned gem or re-cutting a damaged gem that is not centered on a Dop. The front foot, red arrow, is the Fine Height Control.

With the Protractor and Protractor Lock, Index Gear, Radial Adjusters, and the Fine Height Control there is sufficient Control to rapidly accomplish Meet Point Faceting.

If you need to renew your club membership you can let me or Thom Noble know and we can email you the form. You can make checks out to GMSL.

Our Mailing address is:

**The Gem and Mineral Society of Lynchburg, VA, INC.
PO Box 11975
Lynchburg, VA 24506-1975**