



September Newsletter

9/2020

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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

Wintery weather meetings schedule is if the Lynchburg schools are down for weather then the meeting is cancelled

Workshop is the 2nd Saturday of the month.

Meetings are cancelled until further notice.

President's Meanderings:

By James Tomlin

Where do lapidarians like to relax?In a rocking chair

Hello Everyone, I hope you are in good health and spirits during all this mess. It has been good to see some of you this past month at the workshop and a few passing by hellos. I really appreciate all of the support I have gotten while in this position, and value the opinions and views of you all. I wish we could go right back to how things used to be, but we must adapt to how things are. As I have stressed before I am trying to get our meeting space set back up, however until then we do have our zoom meetings set at the same time as usual. We also have our Facebook group for club members only available at

<https://www.facebook.com/groups/432839874271992/?ref=share>

On the subject of zoom meetings, we may have a guest speaker this month, to be announced, giving a presentation about the Rutherford Mine located in Amelia county Virginia. We will conduct club business at 7pm as usual, then the presentation will follow after. This presentation will be open to you all so please join us. On the matter of zoom, we will continue with the availability of zoom even when we start carrying on with physical meetings to try to help those who are not able to attend the meetings in person. If you would like to help out with this please contact any board member and let us know.

Our club's workshops are open to all of our members so please swing by on the second Saturday of every month. We have plenty to do as we prepare for mineral shows. There is plenty to learn and some friendly people to learn from. If you would like to attend just let us know and I hope to see you there.

Your fellow Rockhound,
James Tomlin

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Eric Routon

Youth Out Reach

Jennifer Staton

GMSL CLUB EQUIPMENT AUCTION

We are still working on the auction and as soon as we feel safe in gathering the equipment pictures and the equipment we will make this happen.

Newsletter Editor pick

In the coming months I will give out the ways to identify your rock specimen.

Streak Test

The **streak** of a mineral is the color of the powdered mineral. Usually, it is a mark made on a white porcelain plate. Black plates can be used for white or light colored minerals. A point on the mineral is pressed against the plate and drawn 1 or 2 centimeters. Porcelain is hard, about 6½ on the Mohs scale. If the mineral specimen is softer than the streak plate, a pencil-like mark of powder that is rubbed off will be left on the plate. The color of the mark is the "streak". The point drawn across the plate should be clean and not weathered. Occasionally it helps to use a magnifier to read the color.



Streak plates with pyrite (left) and rhodochrosite (right)

Comparative Streak of Two Minerals

The streak of minerals that are harder than the streak plate may be obtained by powdering the mineral with a hammer. Place a small piece on a *clean* (no rust) steel plate and crush it with a *clean* hammer. Observe the powder against a suitable white or black surface. Ideally, the powder is obtained by grinding a small piece of the mineral in a white porcelain mortar with a porcelain pestle, but they are expensive and difficult to keep clean. For a collector's purpose, the clean hammer and steel plate works well.

Streak tests are especially useful with native metals, sulfides, sulfosalts, and oxides, as the color of their crystals or masses is very often different from the color of their streak. Other chemical classes of minerals normally produce a pale colored streak the same as the color of the mineral.

Porcelain streak plates can be purchased inexpensively. A package of 10 or 12, either white or black, is less than \$10.00 US. If you do not have a streak plate, the white back of an unglazed tile often will do. The clay tile is a little softer than porcelain, but in most cases it will work. In an emergency, so will the white, unglazed, bottom rim of most coffee mugs.

Cleaning streak plates is a problem. After use, try using an artist's rubber or gum eraser to remove the mark. It may not fully remove the mark, but it will take off most of it. When the plate becomes unusable, place a piece of 220 grit, or finer, wet emery paper on a flat surface, grit uppermost, and grind the surface of the plate until the marks no longer show. Do not use coarser grits as they will destroy the plate. Then again, those plates do come in packs of ten.

A Little Theory

Light is considered to be either a particle or a wave of energy. Actually it is both, for at the speed of light there is no difference. A photon (particle) of light has a wavelength, a frequency, and energy. They are different ways of describing the same thing.

In any case, color involves the interaction of photons of incident light with the electrons of near surface ions or molecules in the crystalline mineral. Photons penetrate at least a few layers deep into the crystal. They have energy inversely proportional to their wavelength. Violet light has a short wavelength and a high energy. Red has a longer wavelength and a lower energy. The electrons in an atom also have energy, the amount of which is specific to each and determined by where in the structure of the atom the electron is located and how it is influenced by electrons of nearby atoms. There are energy gaps between the permitted positions of electrons. If the electron energy plus the photon energy is a permitted higher energy level for the electron it absorbs the photon and jumps to the higher level, where it is unstable. It soon gives up (radiates) energy and falls back to a stable level. The energy it radiates is equal to the difference between the two energy levels and is a photon of colored light. If the photon is radiated back through the surface, it is reflected light. It may be radiated into the crystal and transmitted until after further collisions it emerges on a far side of a transparent crystal. Or it may be absorbed in the crystal. This all takes place almost instantaneously and in huge numbers, providing a continuous sensation of color. There are several mechanisms by which minerals produce color, but all of them, in some way, involve this process.

Electrons in atoms, ions, and molecules are located in orbitals. An orbital is a space around the nucleus of an atom that has a shape (some are directional, some are spherical) where there is a high probability of finding an electron. Different orbitals have different energies. The highest energy and outermost (valence) electrons of the transition metals are named the "d orbitals".

Program for the coming months

We are working on the Zoom meetings trying to see what it will take to get the time limit increased and learning how to use the other features to enhance the program. We will let everyone know if we have a speaker. We will send the sign in information out on Tuesday of the week of the meeting. This month it is 9/16/2020 starting at 7:00 pm.

Will update to the three month ahead once we get a good handle on things.

Note from the Editor

Hi All,

I plan to make some changes in the newsletter in the coming months. If you have some ideas let me know. I plan to make it longer for those that get it by e-mail and have added pages but with the cost of mailing we need to keep the page count down for the mailed version.

Remember to send me your "Why I became a Rockhound" short story.
My email is stevegordon@comcast.net

Why I (we) became a Rock-hound

By Zachary McKinney

Need a story.

Field Trips

None at this time

August Executive Meeting Minutes

Executive Board Meeting

Thursday July 30, 2020 @ 7:00pm

Members in attendance:

James Tomlin, Holly Tomlin, Steve Gordon, Michael Staton, Debbie Wade and Brandon Coles

Members Not Present:

Joan Moore, Brian White and Eric Routon

The Executive Board

-discussed ways to do the silent auction virtually during the COVID-19 pandemic. All members decided it would be best to implement the silent auction into the Clubs Facebook group.

-discussed ways to have something for the club to do during the pandemic. Several ideas were discussed and we hope to have something soon

-voted unanimously to extend current members fees through 2021. This applies to members who have paid their club fees in 2020. Renewing memberships will not be owed until January 1, 2022. New members for 2021 does not apply.

-voted unanimously to collaborate with the Friends of Mineralogy Virginia. We will have additions to our emailed newsletters to include information provided by FMVA. They will give us access to possible speakers for our club zoom meetings.

-voted unanimously to keep up with monthly club zoom meetings until we can safely meet as normal. These meetings will be on our regular club day and time.

Meeting adjourned at 7:45pm

Nick: What did the geologist say when his doctor asked him if he was ready for his colonic?

Jones: No FRACKING way!!!



60. A "Szfabel" Russian faceting machine with a Removable Handpiece. This type machine can be Homemade with "Tinker Toy" parts. A "Tinker Toy" Faceting Machine was probably its inspiration.



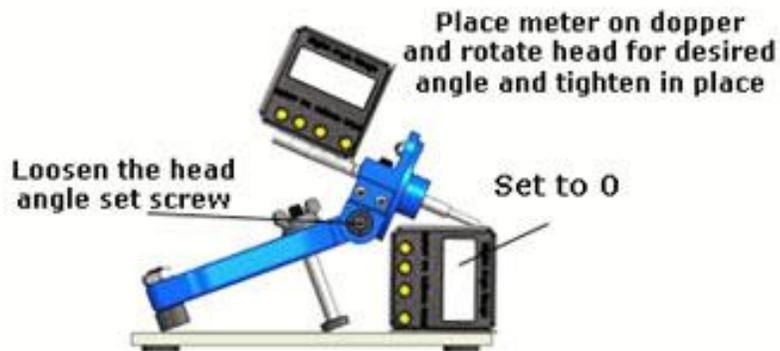
61. A "Jack Lear". A **Hand Powered, Movable Handpiece**. No Spindle and Lap; instead, a **Lap Plate**. Hand faceting takes at least ten time longer than powered-Lap faceting.



61. Unknown hand faceting machine from California - A “Jack Lear” spin-off?



62. “Tes Lap”. A hand Powered, *Movable Handpiece*; no Spindle and Lap. Is it a “Jack Lear” spin-off, or is it a “Raytec” imitation? Note the Radial Adjustments and Fine Height Control. Moving the Dop/Quill in or out is the Coarse Height Control. Use a handheld Protractor to set the Angle on these Movable Handpieces.



Other Links that you may want to check out:

A Guide to Ethical and Conflict-Free Jewelry

<https://ethicaljewellery.org/introduction>.

Insurance Institute of Jewelry Appraisal

https://instituteofappraisal.com/Investigation_of_Artificial_Color_Infusion_of_Gemstones.pdf

https://instituteofappraisal.com/Exposing_the_GIA_Juggernaut.pdf

Rock collecting guide for geology beginners

<https://www.basementguides.com/rock-collecting-and-geology-basics/>

Facebook Link for the club

<https://www.facebook.com/groups/432839874271992/?ref=share>

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

Our Mailing address is:

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