June Newsletter

6/2020 Volume 2020, Number 6

In This Issue

Only Virtual Meetings until we get through the pandemic

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

Cancelled **Workshop until we get the pandemic figured out.**

President's Meanderings:

By James Tomlin

"I would like to start this month off with a little joke. Why should you never expect perfection from a Geologist? *Because they all have their faults.*

So with the quarantine in place we all may be getting a little stir crazy, but that also may fuel productivity at home. My love for rocks and minerals has sparked some renovation ideas here at my home. I fell in love with an Alaskan split face backsplash. I may have fallen too hard for the cool dove greys and luster of the white sparkle in the marble so much it made its way into our bathroom as well. I may have caught the renovation bug, but more importantly I started to wonder what other projects I could use some of my specimens for. I love that our shared passion for collecting rocks has led us to some new ideas and art.

Things are starting to look better for our rockhounding community as we start heading into phase II of quarantine. Soon we will be able collect together and hold meetings as the guidelines lighten. I look forward to seeing those who can make it to our monthly zoom meeting on the 17th of this month. We are still working towards rock club events this fall as guidelines permit and we will hold meetings as soon as we are allowed. I hope we will all be able to see each other soon. Until then be safe and turn some of those yard rocks over and see what you got.

Your fellow Rockhound,
James Tomlin

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.

2020 Officers

PRESIDENT
James Tomlin
(434)258-2886
tomlin.jamesm@yahoo.com

First Vice President
Brian White
(434)661-8929
bricin11@yahoo.com

Second Vice President
Brandon Coles

Secretary – Holly Tomlin
Fireeyez1981@yahoo.com

Treasurer – Joan Moore
jmoore64@msn.com

Membership – Debbie Wade
debbie5227@yahoo.com

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

Members At Large -
Michael Staton &
Eric Routon

Youth Out Reach
Jennifer Staton

Newsletter Editor pick

In the coming months I will start with the makeup of the earth. I am using Mindat.org as my source. The beginning of this article is the same as it describes what we are talking about.

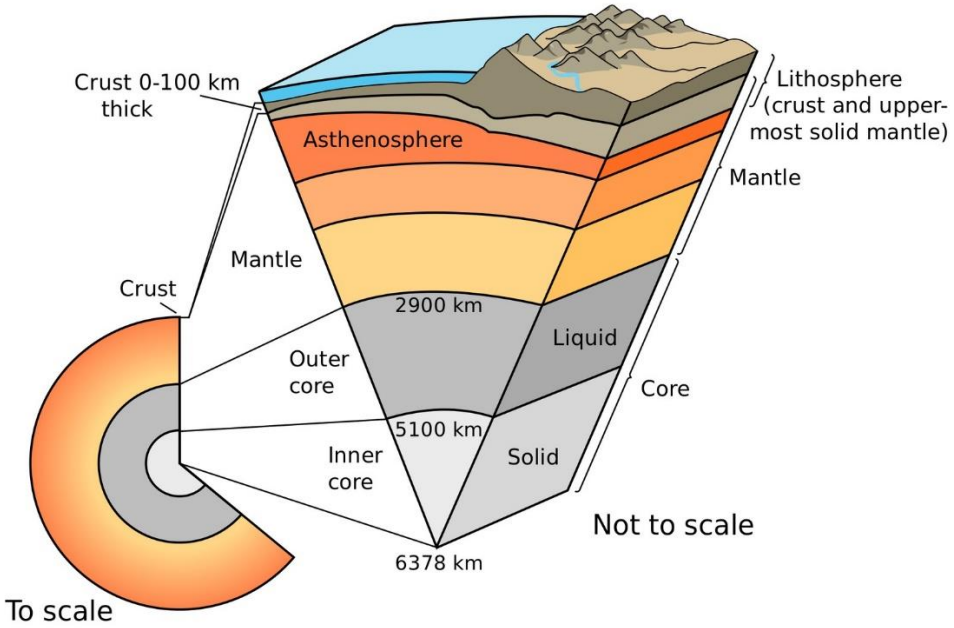
The Most Common Minerals on the Earth

Last Updated: 13th Dec 2017
By Jolyon Ralph

There are currently nearly 5000 minerals known to science, but only a few dozen are common enough to be found widespread throughout the Earth's crust. This article will explain a little bit about some of the most common minerals on the Earth and where the come from.

Inside the Earth

When we talk about the minerals found on the Earth we are talking about those that are found in the Earth's crust, the only part of the Earth really open for us to explore. The crust is a thin layer (up to 100km thick) under which lies the mantle and the upper (liquid) and lower (solid) core.



What is a mineral?

By Donald Peck (further edits by other mindat.org members)

Element or Compound

In his Definition of a Mineral, Dr. Nickel did not expand upon his statement that a mineral is an "element or a chemical compound". To clarify the point the following is drawn from other CNMNC publications.

The mineral may be a single chemical element, such as carbon (C) [diamond or graphite], sulphur (S), gold (Au), or copper (Cu). Natural metal alloys with definite compositions may be approved as minerals [e.g. auricupride (Cu_3Au)]. Or it may be a chemical compound that has a more-or-less definite empirical chemical formula that represents its composition. Many NMNMC approved minerals allow substitutions of similar ions in specific crystallographic sites (e.g. Mg^{2+} for Fe^{2+}, or Al^{3+} for Ti^{3+}). It is well known that many minerals exist as end members of a continuous series and in most cases are never purely one end or the other of the series. Thus, while the pure end member has a definite composition and chemical formula, specimens within the series, excluding these end members, will exhibit some variability in composition. For example, Forsterite, Mg_2SiO_4, and Fayalite, $Fe^{2+}{}_2SiO_4$, are the end members of the Olivine Series. In nature nearly all (all?) specimens contain both Mg^{2+} and Fe^{2+} and the chemical formula is often written as $(Mg,Fe)SiO_4$ or $(Fe,Mg)SiO_4$ with the dominant ion (greater than 50 atomic percent) listed first and the name assigned accordingly.

A rock is not a mineral, nor is a mineral a rock. However, the components of a rock are minerals. Most types of rock have multiple minerals, a few have only one. For example, by definition, granite is composed of alkali feldspars and quartz. They are the *essential* minerals to make the rock granite. Basalt is a rock that has plagioclase feldspars and pyroxenes as essential minerals. Either rock may have other minerals but they are not required. Limestone, and quartzite are each composed mostly of a single mineral (calcite and quartz respectively) , but the areal extent of their deposition makes them, by definition, a rock. These essentially single mineral rocks are termed **monomineralic rocks**; anorthosite (composed mostly of plagioclase) and marble (composed mostly of calcite) are two more examples.

A mineral cannot be a mixture. For example, limonite is a mixture of hydrated iron oxides and hydroxides and is not a single chemical phase (entity). It is mostly intimately mixed goethite, akaganeite, lepidocrocite, and jarosite. Another mixture, wad, is a variable mix of manganese oxides. Mineralogists frequently use names such as 'limonite' as a convenient way of describing the mixture, but with the understanding that it is not itself a specific mineral species.

To be continued next month.

Program for the coming months

There will be a zoom meeting for those that have a computer and video capabilities. More info on how and when before Wednesday night 6/17/2020. The meeting will start after the VMP meeting so 8:30 pm.

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

Note from the Editor

Hi All,
Another month has past and we are now into summer. I have missed getting out not only to the meetings but also to some digs. I had my grand-children over the weekend and I got to share some rocks with them so that I enjoyed. I have been doing some faceting but not that much. I have tried my hand at some silver-smithing and got a pendant done but without any classes or help it was rough. I made a pendant to hold an opal that I had bought Sue last year for our anniversary and thought that I would mount it this anniversary (40 years). YouTube can only teach me so much so I am looking forward to getting classes and working with some of the members that have already been to some classes. I hope all of you are doing well and staying well. So until we meet stay safe and keep on keeping on.

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.

Zoom Meetings "How to"

You do not have to be a Zoom member to join a meeting

Wanted to make sure you had what you need to get to the meeting:

1. From your home page in the address type https://zoom.us/ or copy paste.
2. At the top of the Zoom page Right click on Join a Meeting.
3. This screen you will have to copy the ID from the email and paste it in the bock that says Meeting ID.
4. The next screen tells you to please click on open ZOOM meeting.
5. A popup will then ask for the password (copy and paste from the email).
6. You will then be sent to the meeting but it will only open when the Host (Dave Woolley) opens the meeting (just wait).

Need more help call me and I will try and talk you through.

Field Trips

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

DMC Field Trip Scheduling During COVID-19

COVID-19 restrictions and concerns have led to DMC field trip cancellations and will most likely continue to cause cancellations. Normally, when a hosting club cancels their trip, they must reschedule as soon as they can, and DMC membership renewal is calculated based on the original hosting month.
With so many cancellations this year and potentially more, it is becoming increasingly difficult to reschedule, so I have decided to move the entire schedule forward by a year.
The March, April, and June trips that had to be cancelled this year are rescheduled to the same months in 2021, but renewal will be based on the 2021 hosting month, not the original 2020 hosting month.

Clubs scheduled to host for the remainder of this year, from July through December, have the option to preemptively reschedule to 2021 with renewal based on 2021 and not 2020.

For clubs who complete their trips in 2020, renewal will be based on 2021, not 2020.

All trips originally scheduled for 2021 are moved to 2022, 2022 to 2023, and 2023 to 2024.

The new schedule is posted on the SFMS website
here: http://www.amfed.org/sfms/_dmc/dixie-proposed-ft.htm

Postponed until next year
Most have cancelled their Programs for this year

ANNUAL CLUB SCHOLARSHIP

To enter the drawing you must attend the meeting held on March 18th to get your ticket. The drawing will take place at the meeting.

Eligibility will be as follows:

The "Society" will hold an annual scholarship drawing for up to, but not to exceed, five hundred ($500.00) dollars for one voting member to attend an Executive Board approved class.

Approved classes:

- William Holland School of Lapidary
- Wild Acres
- Any class pre-approved by the Executive Board

The award will be used toward class tuition. Additional expenses to be determined at the discretion of the Executive Board, not to exceed $500.00 total. Only one award will be issued per year. The scholarship will only be issued as a reimbursement; no monies will be given up front.

To be eligible for the scholarship, the applicant must be:

- An active member of the GMSL for at least one year
- Must do a fifteen minute presentation on what they learned at one of the club's regular meetings prior to December 31st of that year
- You cannot have won in the previous year

To collect the scholarship monies the applicant must:

- Attend an approved qualifying class
- Provide proof of a paid receipt
- Complete their obligation of a presentation

No May Executive or Club Meeting Minutes

Life is like a grinding wheel.
Whether it grinds you down,
or polishes you up is your decision.

Cavett Robert

Article for this month Faceting by Dave Woolley

The final breakthroughs: Electronic Potentiometers, and Radial Encoders. Faceters probably have the auto industry to thank for "Ultimate Faceting Machines". Radial Encoders are also used to control modern Tank turrets.

As applied to faceting machines, Potentiometers and Radial Encoders provide sufficient accuracy for the Coarse Grinding of Gem Design recipes, plus they can show Rate of Cutting and a provide a method of *relocating* the Fine Grinding angles for Polishing with our having to hunt.
Angles are displayed to three decimal places. With the built-in errors of these devices, the third decimal place is rounded off – but close enough.

55. A "Gem-Robot" computer-controlled Automatic Faceting Machine with computer screen above showing each facet as it is being cut. $20,000? This machine is best used for glass and synthetic gem materials that are uniform and flawless: no challenges or much thought required to *orient* the rough gem material before Doping. It is used to cut 100 monotonous identical gems at a time. The best Polishing is still done by hand on expensive gems to detect scratches in time to remove them. Potentiometers, Radial Encoders, and Computers have made commercial automatic faceting machines possible.

56. "Xristal-tec '99'" by Poly-Metric. One of a number of modern faceting machines incorporating Angle Encoder technologies. This one has a number of subtle refinements that make faceting fast and pleasurable.

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

Beyond the 4cs
https://beyond4cs.com/how-are-diamonds-made-and-formed/

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:

The Gem and Mineral Society of Lynchburg, VA, INC.
PO Box 11975
Lynchburg, VA 24506-1975
lynchburgrockclub@yahoo.com