

TAR HEEL



ROCKHOUND

November 2021

Catawba Valley Gem & Mineral Club, Inc.

2021 Officers and Committees

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Secretary:	Dean Russell 828- 303-1448			Southeast Federation Liaison:	Larry Huffman 828-612-4469

Club Address: PO Box 2521, Hickory, NC 28603-2521  
 Regular Meetings: Second Tuesday, 7:00 PM  
 St. Aloysius Catholic Church  
 921 2nd St. NE Hickory, NC  
 Annual Dues: Family, \$25; Individual, \$18;

The purpose of the Club is to increase the individual’s knowledge of the earth sciences and to aid in the development of lapidary and related arts and skills; to promote fellowship and exchange of ideas; to hold exhibitions, contests, lectures and demonstrations for educational purposes; to help interest more people in the gem and mineral hobby; and to capture and preserve the beauty of nature, the arts, and the works of man.



CVGMC HOSTS SCOUT GEOLOGY MERIT BADGE!

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**CATAWBA VALLEY GEM & MINERAL CLUB, INC.**

<http://www.cvgmc.com>

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## President's Message

At the October Club Meeting, we had a lively discussion about the club starting a Juniors program. The AFMS PowerPoint on how to start a Juniors program was shown which had many thought-provoking ideas which resulted in different views being expressed. The one change that came out of the discussion was a change of format of our meeting. Beginning with the November meeting, the program will be presented first with the business meeting to follow. Questions still to be answered: Are we going to start a Juniors Program? What day is it to be held on? Where is it to be held? ... and most important ... Who will be the leader? More discussion next month!

The second half of the program was a fine presentation by Warren Hollar on the Scout Geology Merit Badge day at the First Methodist Church on Saturday Oct. 3. A Power Point Presentation of the day's activities was shown (please see photos below). A big "Atta Boy" to Warren for a job well done in organizing this event. Many thanks to the club members who volunteered their time and expertise to this project.

The Program for November will be presented by Shields Flynn on the importance of "Documenting your Mineral Collection." The talk offers suggestions for what one might do to make it useful not only for the collector, but for anyone who might inherit a collection or should one want to sell it. You will not want to miss this informative talk!

'til next month... happy collecting ... whether it is out in the field digging or with the golden pick at a show. Just don't forget to have a cooler of refreshing Dr Pepper.

Larry







## **CVGMC Members Share Fun and Skills with Scouts**

**More than 150 scouts, scout leaders, parents, and Catawba Valley Gem and Mineral Club volunteers gathered in the parking lot of First United Methodist Church to explore many phases of geology on Saturday, October 2. Troops 234 and 1234, sponsored by the church, hosted the event which resulted in 76 scouts receiving their geology merit badge. Visiting scouts and troops attending were from Catawba and six surrounding counties.**

**The Scouts in attendance and, in particular Troops 234 and 1234, were very thankful for the skills and time shared by the Catawba Valley Gem and Mineral Club members. Many scouts had comments like “I didn’t know learning about rocks could be so much fun.” I went out looking for garnets and fossils the next day.” “My mom really liked the jewelry I made.”**

**CVGMC volunteers traveled from Charlotte, Winston Salem and locations in the Catawba Valley came to share their skills and love of geology. Scouts learned about identification of gems and minerals; geologic maps; precious gems; fossils; wire-wrapping; jewelry making; work of geologists; and other skills. Scouts not only left with their merit badges but also samples of fossils, polished stones, hand-made stone pendants, and a greater knowledge of geology.**

# **CATAWBA VALLEY GEM & MINERAL CLUB, INC. - October MINUTES**

## **CVGMC minutes for October 12, 2021**

The October 12, 2021 meeting of the CVGMC was called to order by President Larry H. at 7:00 PM. There were 22 members present and 1 visitor.

**Visitors:** Ben V.

**Minutes:** Motion by Becky S., seconded by Rick G., to accept the minutes for the September 14, 2021 meeting. The motion was passed by the Club membership.

**Treasurer Report:** Bank balance was reported.

**Education Committee:** See Program

**Field Trip Report:**

**Show Committee:**

- 1) CVGMC will hold another "Only Vendor" Show October 29-31, 2021. (31 vendors, 4 new)
- 2) I will need someone, if available, to fill for a vendor while they take a bathroom break.
- 3) Hopefully, the Club can hold a full show with all of the exhibits in March 25-27, 2022.

**Old Business:** CVGMC equipment sale, see August Tar Heel Rockhound for information and check the October Tar Heel Rockhound for a list of items, date is yet to be set.

**New Business:**

- 1) The storage trailer at LR University has an animal infestation and paper damage has been done. Probably need to redo the grab bags.
- 2) Recommendation to move the Club Auction to next Spring. The Club would invite other Clubs to participate.  
Will need to find another venue.
- 3) Motion by Betty H., seconded by Becky S., to have a Club Christmas Party at the December 2021 meeting. A Perfect Potluck will be put online.

**Announcements:**

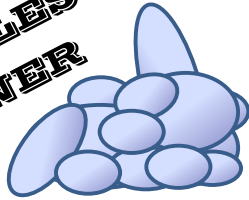
- 1) Shields Flynn will be the November program.
- 2) Harry P. will head the nomination committee for next month for the 2022 Club year.

**Closing of Business:** The meeting was adjourned at 7:24 PM

**Program:** "How To Start A Juniors Program" and a review of the Scout Merit Badge Day.

Respectfully submitted,  
Dean Russell, Secretary

## **THE PEBBLES' CORNER**



### **What is the Mohs Scale? By Cheryl Neary**

The Mohs scale is used to determine the hardness of a mineral. Rockhounds use the Mohs scale in the field to help them identify the minerals they find. To measure the hardness, the specimen is scratched against a mineral or another substance of known hardness. In the field, you can use different common objects to determine the hardness.

For instance, can you scratch your specimen with your fingernail? If so, you would see that your fingernail is considered the same hardness as talc.

In 1822, the German geologist and mineralogist Fredrich Mohs developed the scale. However, this method was used as far back as 300 BC as noted in the treatise *On Stones* by Theophrastus, a colleague of Aristotles.

The Mohs scale is based on the numbers 1 - 10, with the number 1 representing the softest and number 10 the hardest mineral.

- 1 - Talc
- 2- Gypsum
- 3- Calcite
- 4- Fluorite
- 5- Apatite
- 6- Feldspar
- 7- Quartz
- 8- Topaz
- 9- Corundum
- 10- Diamond

The crystal structure of the specimen determines the hardness of the specimen. When you scratch the specimen you are breaking the chemical bonds in the specimen. There are many minerals that have different hardness, depending on what direction the mineral is being scratched. One of North Carolina's most common minerals with various hardnesses is kyanite. Depending on which direction you test for hardness, the range is as soft as talc (1) to the hardness between apatite and feldspar (at 5.5) and a hardness of quartz (7).

Kyanite is an aluminum silicate, often found in metamorphic rock and some pegmatites. The Spruce Pine district was noted for commercially producing kyanite between the years 1934 to 1944.. Kyanite was mined for its use as a refractory. A refractory is a material that is resistant to decomposition (change) by heat, pressure, or chemical attack. A refractory retains its strength and form at high temperatures.

When performing the hardness test, it is important to know which specimen was scratched. For example when you use quartz to test your specimens, if the specimen is scratched and not the quartz, then the specimen is softer than quartz. Likewise, if you use the quartz and the quartz has been scratched then your specimen is harder than quartz.

The best way to test for hardness in the field is to start at the softest material to scratch and work your way through the scale until you find which scale becomes scratched.

But why is the hardness of minerals important?

Many of the minerals with a hardness over 7 are used as abrasives to form and polish and cut many substances . Garnets are used as an abrasive in sandpaper. Garnets are a silicate mineral.

Since the Bronze Age, a prehistoric period, characterized by the use of bronze which occurred approximately 3300 BC to 1200 BC, garnets have been utilized as both gemstones and abrasives.

Garnets are found in a variety of colors - with the color of blue very rare. There are six (6) species of garnets: pyrope, almandine, spessartine, grossular, uvarovite and andradite.

Diamonds are an important mineral component in cutting tools for the manufacturing of metals and other substances. The hardest known mineral is rarely found in NC. To date a total of thirteen (13) diamonds have been found in Burke County in 1843. The largest diamond was discovered in McDowell County in 1886 and was 4.33 carat green-gray crystal which has found its way to the American Museum of Natural History in NY. The last known diamond was found at King's Mountain in 1893.

Emery, a variety of corundum, is used in many abrasive products that do not require the hardness or the expense of diamond tools. Emery has been mined from deposits associated with dunites from Jackson County, NC. Dunites are ultra-rich olivines.

Look at your landscapes as you travel across the state. Minerals located on the hardness scale of 7 - 10 do not weather or erode as the minerals found on the hardness scale of less than 7.

When performing the hardness test, you can use common items listed below. I included some of the minerals found in North Carolina that have the same hardness as the mineral in the MOHS Scale.

Perhaps you can add other North Carolina minerals to the list? To do so, you will need to do research. I suggest you research the rocks found near your home. You can google: What rocks are found in the County you live in. (Catawba, Alexander, Iredell, Lincoln, Caldwell or Burke Counties are all found near or part of Hickory). Once you find the list of minerals, research the hardness of the minerals. This can also be done on the computer or by referring to the many books listing the specifications of the mineral.



<b>Hardness Scale</b>	<b>Common Item with equivalent hardness</b>	<b>North Carolina Mineral</b>
1- Talc		Soapstone
2- Gypsum		Amber (Phosphate mines of Aurora NC)
2.5	Fingernail	
3 - Calcite	Copper penny	<b>Coral</b> - The Lophelia Coral Banks located off Cape Lookout, NC, may be the northernmost deep-water coral banks along the U.S. East Coast.  <b>Bornite</b>
4 - Fluorite		Fluorite
5 - Apatite		Apatite
5.5	Glass plate or steel knife	
6 -Feldspar		Feldspar
6.5	Steel file	
7 - Quartz	Streak plate (unglazed porcelain)	Amethyst Quartz Sandstone
7.5		Beryl
8 - Topaz		Topaz
9 - Corundum		Corundum Ruby Sapphire
10 - Diamond		Diamond

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Club Meeting

Tuesday  
November 9, 2021  
St Aloysius Catholic Church  
921 2nd St NE  
Hickory, NC