The LITHNICS

Volume 60 Issue 2
April 2022

THE LITHNICS

A QUARTERLY PUBLICATION OF
THE MID-OHIO MINERAL AND FOSSIL CLUB
MANSFIELD, OHIO

CURRENT OFFICERS

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VICE-PRESIDENT..... Jim Baumgartner
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RECORDING SECRETARY..... Pat Everly
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EDUCATION ..... Tom Kottyan
FIELD TRIPS .....
GORMAN CENTER LIAISON ..... Tom Kottyan
HISTORIAN ..... Jason Larson
HOSPITALITY ..... Joel Likins
MEMBERSHIP ..... Pam Kottyan and Jason Larson
SHOP ..... Walt Upchurch
SHOW ..... Tom Kottyan and Jason Larson
SPECIAL INTERESTS ..... Mike McCullough (Classes)
VIDEO/BOOK LIBRARY ..... Carolyn Kelly
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OUR CLUB

PURPOSE: The purpose of the Mid-Ohio Mineral and Fossil Club, is to create an interest in and study of the earth sciences and all lapidary arts and to afford an opportunity to share knowledge and working techniques with others.

MEETINGS:

General club meetings are at 7:00 pm on the first Monday of the month at:

Gorman Nature Center, 2295 Lexington Avenue, Mansfield, Ohio.

If the first Monday falls on a holiday we meet one week later.

Visitors are always welcome.

Special Interest Group (Classes) meetings are held September through May at 7:00 pm on the second Monday of the month. See Special Interest Chair, Mike McCullough.

CANCELATION OF A MEETING

If for any reason the club officers feel that a meeting should be canceled you will be notified by email as soon as possible. If Mansfield schools are closed so are we. If for any reason you don't feel safe to drive to a meeting, please, please stay home.

Annual dues are:

Adults	**$ 15.00**
Children under 16	**$ 5.00**
Family	**$ 20.00**

Dues are due Jan. 1st of every year. Whether you join in January, December, or any month in between, the cost is the same.
Everyone's dues are due again the next January 1st .

LITHNICS: Our quarterly newsletter.

Permission is hereby granted to use any original **LITHNICS** articles, whole or in part, as long as proper recognition is noted with the reprint.

Club members are encouraged to make contributions to the LITHNICS.

Contact: Bryan Summer (bryansummer1@gmail.com)

The Mid-Ohio Mineral and Fossil Club

Message from the President
Tom Kottyan

Fellow Rock Hounds,

Another three months has passed by, they go quicker and quicker! There are some signs of Spring, but as we all know in Northern Ohio, Spring does not really arrive for at least two weeks after the March 21st date. The show season has started in Ohio and surrounding states. Eager people are attending the shows, enthusiastic to see the new displays. Hopefully you have been to a show this Spring. We are quickly moving ahead with plans for our June show. We now need your help to sign-up for work positions at the show. If everyone puts in 2 hours, no-one has to work more than that amount of time. If some people don't sign-up, it puts a larger burden on the club members that are giving of their time to make this a successful show. Please help us in our once-a-year Club show. This is all part of being a member in good standing. Sign-up sheets will be available again at our April meeting. Please sign-up! Thanks in advance for helping us to be a great club!

Tom Kottyan

Mid-Ohio Mineral and Fossil Club President

Mid-Ohio Mineral and Fossil Club

GEM, MINERAL, JEWELRY, BEAD, & FOSSIL SHOW

"NATIVE COPPER & COPPER MINERALS"

JUNE 11 + 12, 2022
Saturday 10 - 6 and Sunday 11 - 5

Richland County Fairgrounds - Fairhaven Hall
750 North Home Road, Mansfield, OH

Upcoming Meetings – all meetings are at the Gorman Nature Center at 7:00 pm

Continue to watch for information about future meetings in your email.

- Monday, April 4 — 7:00 Meeting Gorman Nature Center
- Monday, May 2 — 7:00 Meeting Gorman Nature Center
- Monday, June 6 — 7:00 Meeting Gorman Nature Center
- Monday July 4 — Holiday - meeting moved to July 11
- Monday, July 11 — 7:00 Meeting Gorman Nature Center

Moons May Yield Clues to What Makes Planets Habitable

February 1, 2022
University of Rochester
by Lindsey Valich

Earth's moon is vitally important in making Earth the planet we know today: the moon controls the length of the day and ocean tides, which affect the biological cycles of lifeforms on our planet. The moon also contributes to Earth's climate by stabilizing Earth's spin axis, offering an ideal environment for life to develop and evolve.

Because the moon is so important to life on Earth, scientists conjecture that a moon may be a potentially beneficial feature in harboring life on other planets. Most planets have moons, but Earth's moon is distinct in that it is large compared to the size of Earth; the moon's radius is larger than a quarter of Earth's radius, a much larger ratio than most moons to their planets.

Miki Nakajima, an assistant professor of earth and environmental sciences at the University of Rochester, finds that distinction significant. And in a new study that she led, published in *Nature Communications*, she and her colleagues at the Tokyo Institute of Technology and the University of

Arizona examine moon formations and conclude that only certain types of planets can form moons that are large in respect to their host planets.

"By understanding moon formations, we have a better constraint on what to look for when searching for Earth-like planets," Nakajima says. "We expect that exomoons [moons orbiting planets outside our solar system] should be everywhere, but so far we haven't confirmed any. Our constraints will be helpful for future observations."

The origin of Earth's moon

Many scientists have historically believed Earth's large moon was generated by a collision between proto-Earth -- Earth at its early stages of development -- and a large, Mars-sized impactor, approximately 4.5 billion years ago. The collision resulted in the formation of a partially vaporized disk around Earth, which eventually formed into the moon.

In order to find out whether other planets can form similarly large moons, Nakajima and her colleagues conducted impact simulations on the computer, with a number of hypothetical Earth-like rocky planets and icy planets of varying masses. They hoped to identify whether the simulated impacts would result in partially vaporized disks, like the disk that formed Earth's moon.

The researchers found that rocky planets larger than six times the mass of Earth (6M) and icy planets larger than one Earth mass (1M) produce fully -- rather than partially -- vaporized disks, and these fully-vaporized disks are not capable of forming fractionally large moons.

"We found that if the planet is too massive, these impacts produce completely vapor disks because impacts between massive planets are generally more energetic than those between small planets," Nakajima says.

After an impact that results in a vaporized disk, over time, the disk cools and liquid moonlets -- a moon's building blocks -- emerge. In a fully-vaporized disk, the growing moonlets in the disk experience strong gas drag from vapor, falling onto the planet very quickly. In contrast, if the disk is only partially vaporized, moonlets do not feel such strong gas drag.

"As a result, we conclude that a completely vapor disk is not capable of forming fractionally large moons," Nakajima says. "Planetary masses need to be smaller than those thresholds we identified in order to produce such moons."

The search for Earth-like planets

The constraints outlined by Nakajima and her colleagues are important for astronomers investigating our universe; researchers have detected thousands of exoplanets and possible exomoons, but have yet to definitively spot a moon orbiting a planet outside our solar system.

This research may give them a better idea of where to look.

As Nakajima says: "The exoplanet search has typically been focused on planets larger than six earth masses. We are proposing that instead we should look at smaller planets because they are probably better candidates to host fractionally large moons."

University of Rochester. (2022, February 1). Moons may yield clues to what makes planets habitable. *ScienceDaily*.

Hunting Meteorites in Antarctica

Meteorites from Antarctica: Incredible numbers of nearly perfect meteorites are being found in the "blue ice" ablation areas of Antarctica. The photo above shows several specimens collected from the Miller Range icefield by NASA's Antarctic Search for Meteorites. Image by NASA

The Best Place to Hunt Meteorites

In most parts of the world, a person could search throughout a lifetime and never find a single **meteorite**. However, a small number of researchers are finding several hundred meteorites each winter in a few special locations in **Antarctica**.

In most parts of the world, meteorites are extraordinarily difficult to find because meteorites that fall there can be...

- quickly destroyed by weathering
- hard to distinguish from local materials
- hidden by vegetation
- covered by surface materials

Advantages of Cold Climate

In Antarctica, freshly fallen meteorites are protected by the cold climate. **Iron meteorites**do not rust in the cold conditions, and **stony meteorites** weather very slowly.

Members of the search team move across the ice on foot or by snowmobile looking for meteorites. The dark-colored meteorites contrast sharply with the white snow and ice. Some of the dark objects found are meteorites, but the searchers do find many terrestrial **rocks**that have been incorporated into the ice by the **glaciers**. They search by walking or by snowmobile, and which method they use is determined by ice conditions, weather conditions, and the abundance of meteorites present in the area.

Although the cold climate is ideal for preserving meteorites, it presents a huge challenge to the researchers who hunt them. They have to travel to a remote location where they will live in tents in subzero weather. Out on the hunt they face intense cold, fierce wind, and blistering sun. It takes a determined and dedicated person to do this for several weeks each year.

Ice Movement and Meteorite Concentration

The two most important reasons why **meteorite hunting** in some parts of Antarctica is so productive are: 1) ice movements, and, 2) ablation.

The ice of the Antarctic continent is in motion. The ice grows thicker in some areas from snow accumulation, then it slowly flows away from those areas under its own weight. Remember that the continent is covered by a glacier.

The theory of ice movement is shown in the accompanying diagram. It shows how meteorites are buried in zones of snow accumulation. Then the ice moves under its own weight away from these snowfields towards the edge of the Antarctic continent. In some areas rock formations block the flow of ice. Where this occurs, steady katabatic winds can remove the ice by sublimation and mechanical abrasion. Up to ten centimeters of ice per year can be removed by these ablation processes.

Curating Pristine Meteorites

The meteorites found in Antarctica are in pristine condition. They are not weathered like meteorites found in temperate climates. The original fusion crust, formed by ablation of the meteorite as it fell through the atmosphere, is often preserved.

When a meteorite is found, a snowmobile with a high-resolution GPS receiver is driven to the site to obtain a very accurate location. The meteorite is then photographed in place, recovered, placed into a sterile Teflon bag, assigned a unique field number, logged into a field book, and given a detailed field description. The discovery site is then marked with a flag bearing the meteorite's identification number.

Stone Meteorites from Moon and Mars

Almost all of the meteorites found on Earth are believed to be pieces of **asteroids**. Some researchers believe that five to six percent are pieces of the **asteroid Vesta**. They are pieces of Vesta that were dislodged by impacts with other asteroids.

A very small number of meteorites (less than two hundred) have been determined to be pieces of Moon or Mars after careful study. They arrived on Earth after being dislodged by asteroid impacts, travelling through space for millennia, then falling to Earth.

A few of these rare meteorites have been recovered from Antarctica. The lunar meteorites are rocks such as anorthositic **breccia**, basaltic breccia, **gabbro**, and mare **basalt**. An orthopyroxenite rock from Mars has also been found.

Access to Meteorite Photos and Data

The meteorites found during these expeditions become government property and are shipped, still frozen, to be thawed under clean room conditions at the Antarctic Meteorite Curation Labs at NASA's Johnson Space Center. Photographs and data obtained from the meteorite collection are made available to researchers and the general public through the **Antarctic Meteorite Newsletter**. Check out a few issues if you are interested in meteorites.

Author: **Hobart M. King**, Ph.D.

Our Club's Crafts Program

Our Club has had two wire wrapping classes recently. Our crafts program is headed up by Joyce Kish and Nancy Matthews. We are planning another class for Tuesday April 19 from 3:00 - 5:00 at Gorman Nature Center. We will be having demonstrations on rock tumbling, using a flat lap, and methods to cut cabochon shapes. Come out and learn some fun new skills!

Wire wrapping projects created at our recent Club Crafts Classes.

Ohio Rockhound

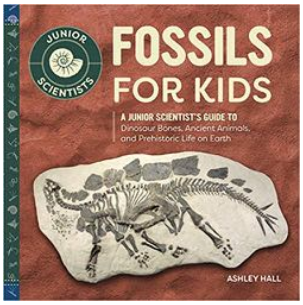
A useful website focusing on Ohio minerals, including collecting sites.

1. Mark J. Camp, **Roadside Geology of Ohio** (2006).
2. June Culp Zeitner, **Midwest Gem, Fossil, & Mineral Trails: Great Lakes States** (Rev. ed., June 1999 – first published in 1955).
3. June Culp Zeitner, **Midwest Gem Trails: Field Guide for the Gem Hunter, the Mineral Collector, and the Tourist** (3d. Rev. ed., 1964 – originally published in 1956).
4. James Martin Monaco & Jeannette Hathway Monaco, **Fee Mining & Mineral Adventures in the Eastern U.S.** (2d ed. 2010).
5. Kathy J. Rygle & Stephen F. Pedersen, **Northeast Treasure Hunter's Gem & Mineral Guide** (4th ed. 2008).

Amazing YouTube Videos

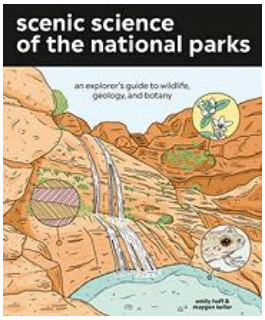
All of the featured videos this month are by the Ohio Department of Natural Resources

1. Ohio's Scenic Geology by Ohio DNR
2. Ohio Flint by the Ohio DNR
3. Geology of Raven Rock Arch by Ohio DNR
4. Ohio State Symbols - Isotelus by Ohio DNR
5. Ohio Rocks Resources by Ohio DNR
6. Ohio Rocks Fossils by Ohio DNR
7. The Geologist Toolkit by Ohio DNR
8. Kelly's Island Glacial Grooves



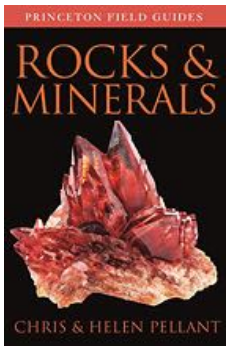
Fossils for Kids: A Junior Scientist's Guide to Dinosaur Bones, Ancient Animals, and Prehistoric Life on Earth by Ashley Hall

Set off on an amazing adventure into the prehistoric past when dinosaurs roamed the Earth. *Fossils for Kids* is filled with fascinating photographs and captivating facts that will teach junior fossil hunters how fossils form, where they are found, and tips on how to identify them**.**



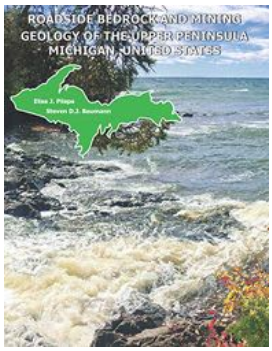
Scenic Science of the National Parks - An explorers guide to wildlife, geology, and botany by Emily Hoff

The national parks are some of the most beloved, visited, and biodiverse places on Earth. They're also scientific playgrounds where you can learn about plants, animals, and our planet's coolest geological features firsthand.



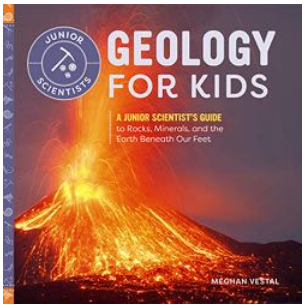
Princeton Field Guides - Rocks and Minerals by Chris and Hellen Pellant

This detailed and easy-to-use guide contains striking photography of rocks and minerals from around the globe, and is designed to help readers and collectors identify specimens of these compounds, which are formed by geological processes in the earth's crust.



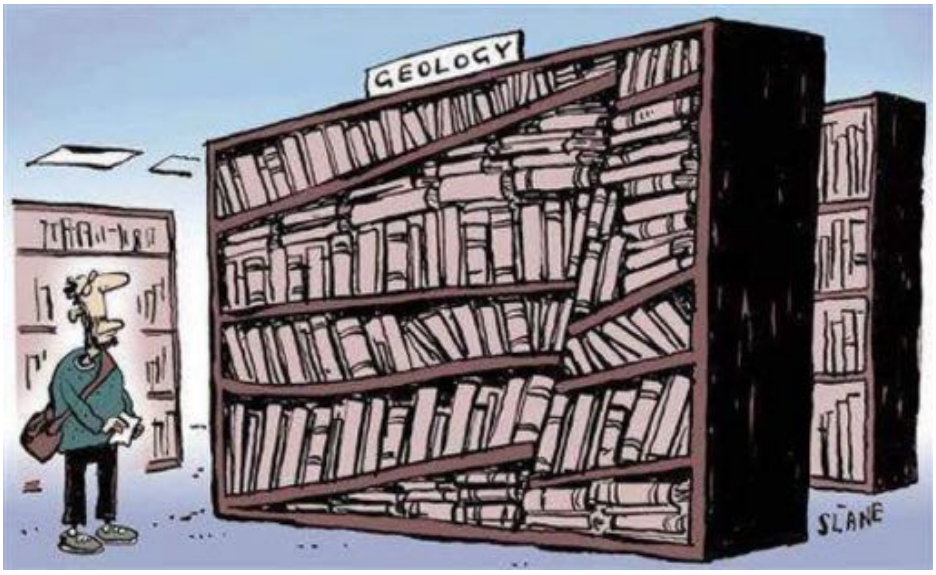
Roadside Bedrock and Mining Geology of the Upper Peninsula Michigan, United States by Elisa J Piispa PhD and Steven DJ Baumann PG

We want to take you on the more than three billion year geologic history that would eventually form the Upper Peninsula that we love so much! Most of the stops in the book are easily accessible. There are some off the beaten path because we felt them important. But all can be visited.



Geology for Kids - A Junior Scientist's Guide to Rocks, Minerals, and the Earth Beneath Our Feet by Megan Vestal

Set off on an adventure 4.6 billion years in the making with *Geology for Kids*. Start at the red-hot center of Earth and learn about each layer until you reach the rocky crust. Discover how mountains, valleys, and oceans form, and uncover secrets about the planet you call home.



Interesting Web Sites

1. Mineralogy4kids
    a. https://min4kids.org
2. Minerals by Name
    a. http://www.galleries.com/Minerals_By_Name
3. Ology - the science website for kids from the American Museum of Natural History
    a. https://www.amnh.org/explore/ology?channel=earth
4. Fascinating Geology for Kids
    a. https://littlebinsforlittlehands.com/geology-for-kids/
5. Geology for Elementary Schools
    a. https://study.com/academy/topic/geology-for-elementary-school.html
6. Elementary School Science
    a. https://www.elementaryschoolscience.com/lesson-plan-intro-rocks-minerals

Upcoming Events and Rock Shows – (Ohio and close to Ohio)

Check the Midwest Federation of Mineralogical + Geological Societies for Calendar Updates

All show dates may be affected by the Corona Virus

April

2-3 COLUMBUS, OH Columbus Mineral Club Annual Show**.** Sat 10 - 6, Sun 11 - 5,
Ohio Expo Center Ohio Building (State Fairgrounds), 717 E. 17th Ave., Columbus, Ohio 43224
7-9: WYOMING, MI Indian Mounds Rock & Mineral Club Annual Show.
Thurs. + Fri 9:30-9; Sat 9:30-7. Rogers Plaza Town Center, 972 - 28th St. SW, Wyoming, MI.
8-10—DANVILLE, INDIANA: Annual show; American Gem, Mineral And Jewelry Shows LLC;
Hendricks County Fairgrounds, 1900 E Main St; Fri. 10-6, Sat. 10-6, Sun. 11-4;
23-24: CUYAHOGA FALLS, OH Summit Lapidary Club Annual Show Sat 10-6; Sun 10-5
Expo Center, 48 East Bath Rd., Cuyahoga Falls, OH

23-24: TROY, OH Miami County Gem & Mineral Club Annual Show. Sat 10-6; Sun 10-4
Miami County Fairgrounds, 650 N. Co. Rd. 25A, Troy, OH
22-24—IRVINE, KENTUCKY: Annual show; Southeast KY Gem, Mineral, and Fossil Club; Estill County Schools Central Office, 253 Main Street; Fri. 9-5, Sat. 9-6, Sun. 10-5; FREE!
30 - May 1 KALAMAZOO, MI Kalamazoo Mineral Society Annual Show Sat. 10 - 6 Sun. 10 - 5
Kalamazoo County Expo Center, 2900 Lake St., Kalamazoo, MI

May

14 Gorman Nature Center Rock and Fossil Day Sat. 11 - 3 Mid-Ohio Mineral and Fossil Club Rock Mineral Gem Fossil Exhibit Day
21 – 22 CINCINNATI, OH Cincinnati Mineral Society GeoFair Sat. 10 - 6, Sun 11 - 5
Sharonville Convention Center 11355 Chester Rd, Sharonville, OH 45246
27 - 29 **Flint Ridge State Park , OH** Spring Flint Knap-in Fri. 9 - 5, Sat. 9 - 5. Sun. 9 - 2
Flint Ridge State Park - 7091 Brownsville Road, Glenford, OH

June

3 - 5 WAUSEON, OH State Line Gem and Mineral Society Annual Show
Fri. 12 - 6, Sat. 10 - 6, Sun 11 - 4 Fulton County Fairgrounds, 8514 SR 108, Wauseon, OH
11- 12 **MANSFIELD, OH** - Mid-Ohio Mineral and Fossil Club Annual Shows Sat. 10 - 6 Sun 11 - 5
Richland County Fairgrounds,, Fairhaven Hall, 750 North Home Road, Mansfield, OH
24-26 BEDFORD, INDIANA Lawrence County Rock Club Annual Show Fri. 10 - 6:30, Sat. 9 - 6:30, Sun. 10 - 4. Lawrence County Fairgrounds, US-50, Loogootee, IN

July

No Listings at this time

The Midwest Federation of Mineralogical + Geological Societies

You can check out all the Shows and Events in our Midwest Region (Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska) at the Midwest Federation of Mineralogical + Geological Societies Web Site (https://www.mwfed.org)

The U.S. Geological Survey Youth and Education in Science (YES) Team.

Revamped their web presence to better assist with online and home learning.

The new USGS learning from home portal for lesson plans and activities, grades K – 12.
www.usgs.gov

Students of all ages can always tap into the USGS Resources for Teachers for over 140 years of USGS research in the natural sciences in the form of lesson plans and activities, maps, podcasts, online lectures, videos and animations, and much more. Browse thousands of ideas for using these resources in elementary, secondary, university, and informal education settings

Meeting Minutes

January

Tom welcomed members & guests to the new year.

Treasurer's report was read. Secretary was absent.

Hospitality tonight brought to you by Tom & Pam Kottyan & Ray & Shelly Darnell.

No tapes until next month.

Field Trips: nothing to report.

Program tonight: Show & Tell.

Tom said we received a donation from Richard Broka Estate of $50. Going to try & find some educational DVDs for the club.

Lithnics: Bryan S reported the Lithnics were emailed. If not received, please be sure your email is correct with Jason L.

Those interested in going to the Tucson Show: this year's theme is on Fluorescents. Rock & Gem magazine explains how rocks & minerals fluoresce.

Dates for our upcoming show: June 11th & 12th 2022. The theme this year is: "Native Copper & Copper Minerals". The theme for 2023 will be: "Trilobites". Biggest change is the trustees from fairgrounds have authorized a set-up fee of $300 which the club will absorb for 2022. In 2023 it will be $600 on top of our fee that will be spread amongst dealers. We are also adding a tool dealer from Toledo, Ohio that has good quality tools at reasonable prices. Looking forward to this year's show: Joyce asked if dealer contracts have been sent. Tom advised no but they will be sending shortly.

Old Business: none.

New Business: none.

Announcements:

1. Shows for February are still going on per Joyce.

Door Prize: Jason Larson – won a Charnockite.

Show & Tell Program:

1. Tom has a piece of jewelry he made of Madagascar Agate & Moldavite. Chinese are making a copy out of glass.
2. Tom also has a chunk of Copper Skull – which is the Copper encased a pebble. His piece is from the Centennial Mine in the Upper Peninsula. As pebbles are softer than the Copper, the pebbles erode leaving a Copper Bowl or Skull.

3. Bryan S has been learning how to cut & polish different shapes & brought some Blue Nellie Flint & Jasper he had done. Also brought his wire-wrapping piece he made in Joyce's class. Also added some jewelry clasp for his Flint & added some clear decals to the front of the Flint. Also did some macrame & wrapped some of his Flint. Made some ornament stands out of metal hangers & pipe cleaners.

4. Robert K brought fluorescent marbles he has collected over the years.

5. Mike K brought in some cabs he bought at auction & is working them into designs.

6. Jay brought in Rhodochrosite cab.

7. Rob L brought in sand from Herkimer New York with lots of little crystals. Also has sand with Trinitite in it from the Trinity Bomb site in New Mexico, very low radioactivity that you can teach as it shows using a Geiger Counter. Also, a piece he was told was Copper, brought in to check. Brought in a collection of sand from a college that no longer uses them, and they fluoresce. Also brought in some rocks & minerals a middle school was throwing out & it fluoresces.

8. Joyce brought in a piece she made with copper & washers.

9. Jason L brought in Fluorites from England & Switzerland, Portugal & Sicily.

Meeting adjourned for treats & socializing.
Club.

February

Tom said tonight's program will be on 3 source areas for copper in the Upper Peninsula of Michigan. Would be a great field trip with Mike Troth as he knows the area well.
Mark & Kristin reporting on new area for Herkimer Diamonds and is mentioned in Rock & Gem this month. Would be a multi-day trip at new locality & would be well worth the effort. Two potential field trips. Quarries are out of bounds during the Covid issue.

Gem & mineral show in Bedford, Indiana in case anyone is interested in setting up to sell at that show. Rock & Gem Magazine will have an advertisement for our June Show. Theme for this year's show is "Native Copper & Copper Minerals". March program will be on Mohawkite which is a mixture of ½ Copper & ½ Silver. Copper & Silver crystals & other related minerals that have copper in them. April's program will be an expansion of secondary Copper minerals, i.e.: Turquoise, Malachite, Chrysocolla & how they occur coming from original native Copper. The series will end with a nice slide collection of Tom's native Copper collection consisting of 49 mines found in the Upper Peninsula. There are only 54 known locations for copper & related minerals found in the Upper Peninsula.

March there will be sign-up sheets for various duties at the show. We have 22 cases to fill & many folks come to see our show due to the display.

Jay is still in Columbus Show and has found out there is a potential for an MSAW class online.

Treasurer's report was read. Secretary was absent.

Tom sent contracts out to dealers and has received two back. We will have a new dealer that has a nice array of tools, silver & copper sheet, wire & so forth. We have 13 dealers for this year's show. Advertising this year will be social media done by Jason L, snail mailings along with word of mouth and our yard signs to display the week of the show. Show dates are June 11th & 12th.

Old business: none.

New business: Bryan has entered another worldwide rock tumbling contest this year with the mineral being: Agate. Remit the best 5 that you've tumbled for judging.

Mike M talking about special interests – would like someone to take over organizing the class that still has a lot of passion for this.

Potential field trips: Jim B has questions about Blue Limestone Park, Delaware, Ohio. Lots of surface findings of Pyrite. Jay noted it is a 2-acre site and doesn't think much could be found there. Tom also noted rockhounds can find concretions in the park. (Note: Pat E did some investigating & found on the internet under 6 great places to go rock hounding in Ohio:

Blue Limestone Park, Delaware County

Located in an old limestone mine, the Blue Limestone Park is a good place to find pyrite.
The pyrite was most exposed during the limestone mining and most of it was left on the surface and is easy to find for those who know what they are looking for.
There is a good network of hiking trails that go all through the park.
Hiking is allowed along these trails, so bring your hiking shoes.
The best place to find pyrite is near the old mines which are located inside the park.
The Park is also great for a picnic and has a shelter and bathroom for visitors.)

Tom asked for a show of hands for those interested in a trip to Herkimer. Several members responded affirmatively.

A member asked of Graves Mountain, GA where Tiffany used to mine for rutile to polish their diamonds. Graves Mountain is located in Lincoln County, GA. Joyce has information on this particular site. Please contact her if interested.

Joel L reported Hospitality tonight is brought to you by Nancy R and Tina B. There is a sign-up sheet for the rest of the year. There are 8 months available and you need only bring a snack. Anyone interested see Joel L.

Tom asked if moving our annual potluck to May is acceptable. Members agreed.

Personal Exhibits:

1. Dave G – He took a trip to South Dakota in 2014 for some Barite & had Jay M facet some stones from the Barite. These stones are in the back for those interested.
2. Jay M – had won a category at the Tucson show: a 15 carat Rhodochrosite. He cut the Rhodochrosite into a pear shape and the lady that purchased the gem entered it in the Tucson show & won for Best American Gemstone.
3. Dave G purchased a piece of Brazilian Vivianite. Doesn't like sunlight or humidity – causes the Vivianite to fall apart. Either the Brazilian or Romanian Vivianite holds up much better. Didn't remember which.

Tom said Tucson show is winding down this week. Lawrence H called from Abilene, TX & is on his way to dig for minerals in his "Yellow Banana" (van). Looking for purple Agates in Arizona.

Jim B asked about upcoming shows. Tom advised the first show is the Columbus show will be at the Fairgrounds in Columbus. First show in the area is Richmond, IN the first weekend of March. Check Midwest Federation/shows on internet. Gives a complete listing.

Door Prize: Joel Likins

Meeting adjourned for treats & program by Tom Kottyan on Copper.

Don't Forget to Check Out our Website for Club Information
www.rlls.webs.com

The Lithnics

If you have any club news, articles you would like share with members, updates on your committee, etc. please email info to:

Bryan Summer – bryansummer1@gmail.com

The Lithnics is Published Quarterly

January 1, April 1, July 1, October 1