



MWF News

Midwest Federation
of Mineralogical and Geological Societies

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PRESIDENT'S MESSAGE

Mary Ann Ferguson-Rich, MWF President

Hope your summer has provided an opportunity for collecting and/or creating beautiful objects with your rocks and gems.

The first two weeks of August were spent by your president traveling to and exploring Montana as part of the AFMS Convention. I will be bringing back a number of AFMS awards won by individuals in our federation, which will be presented at the convention in Howell, Michigan September 16-17.



The AFMS convention was held in Billings. It was a great opportunity to meet rockhounds from all over, and to acquire some Montana Agate and local fossils. If you have never attended a national convention, you are really missing out!

Why not start by attending our federation convention in September for an opportunity to come to beautiful Michigan in the early fall, meet many rockhounds from our region, and acquire some interesting finds at the Livingston Gem and Mineral Society show. Hoping to see you there!

TAKE THE BULL BY THE HORNS

Cheryl Neary, MWF 1st Vice President

“There are people who make things happen, those who watch what happens, and those who wonder what happened.” — Unknown

How true is the above! Which of the three types are you?

There are people who take the bull by the horns and make things happen, despite the risks that may be involved. There are some who watch what is happening and understand the dynamics of why things occurred. And there are some people who seem oblivious to the events until they are affected.

This message is by no means a criticism of any of the above types. It has been this way for eons.

Time is indeed one of the most valuable assets we were all born with equally. For each of us, there are 24 hours in a day. Everyone's hour has 60 minutes, with each minute having 60 seconds. What we each do with the time – that is what is very different! What I would like to do is offer all of you the opportunity to become more involved with your club, your juniors, and your

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WHAT MAKES AN AFMS ROCKSTAR?

Joan Stoker, Juniors Coordinator
Indian Mounds Rock & Mineral Club (MI)

What makes a Rockstar? It's not just earning 20 badges. It's what you learn, do and are along the way.

The American Federation of Mineralogical Societies (AFMS) began the Future Rockhounds of America youth program in 1984. The program grew to include earning earth-science badges in 20 different topics, many the result of much work by Jim Brace-Thompson, Juniors Committee Chair of the California Federation, over a 20-year span. Completing all 20 badges earns a young person AFMS Rockstar status, signified by a pin, a certificate, and a permanent place on the AFMS website's Rockstar roll.

The Indian Mounds Rock & Mineral Club joined FRA in Nov 2016, with our kids receiving their first badge in January 2017. Our monthly meetings provide five "badge nights" each year, and the option to complete some other badges on their own. Getting the Rockstar award takes perseverance!

Which is why we are so pleased to announce that, just a few months after Delaina Cook and Olivia Long were named AFMS Rockstars, two more of our juniors have achieved Rockstar status.



Left to right: Indian Mounds Rock and Mineral Club President Kreigh Tomaszewski, Mathew VandenBos, Cade Peters, and Joan Stoker. All photos courtesy of Joan Stoker.

Cade Peters and his mom Angie joined IMRMC in April 2019, after attending our March meeting that year with guest speaker "Paleo Joe"

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Kchodl. So logically, his first badge was Fossils! And he just kept going from there.

Mathew VandenBos and his family joined soon after, in September 2019. It was a great night to begin, and Mathew earned his Collecting badge and took home a nice selection of specimens to give him a jump start. The family was hooked.



Mathew VandenBos and friends.

So what makes a Rockstar? Initiative!

Cade found ways to learn lapidary skills on his own, and makes jewelry and other items to sell in his own Cade's Mobile Rock Shop. Mathew was the first IMRMC Junior to complete the "Rockin' on the Computer" badge. He chose the option of making a card file for his collection, then entering his collection

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WHAT MAKES A ROCKSTAR?, CONTINUED

(Continued from page 2)

into a computer spreadsheet. Mathew is the ONLY Indian Mounds Junior who has done this.

So what makes a Rockstar? Curiosity!

Cade loves the beach and the treasures he finds there. Mathew is always ready to dive into a pile of rocks and see what he can find.



Cade Peters and some great-looking rocks.

So what makes a Rockstar? Willingness to serve!

Cade's heart to serve has been shown in many photos in our club's newsletter – teaching juniors, working at rock shows, and more. In the midst of his very busy life, he took time to sort hundreds of donated Michigan fossils into categories for our show's Eggbox Collection activity. And this was after he had already achieved the Juniors Volunteer award!

Mathew has helped the club many times with rock shows, June Sale setup, and in the juniors' group.

In 2020, when the national Future Rockhounds office asked for juniors to make videos that might help more rock clubs start groups, Mathew was one of three of our juniors who responded. He and brother Garet produced a real-life message which has been seen by people all across the nation!

Congratulations to both of our newest Rockstars!

MWF CONVENTION WILL BE IN SEPTEMBER

The MWF annual convention will be held in Howell, Michigan, Sept. 16th and 17th. The convention is being hosted by the Livingston Gem & Mineral Society, which is presenting a rock show at the same time. Both the convention and the show will be held at the Hartland Education Support Service Center, 9525 E. Highland Road, in Howell.

The deadline for registration has passed, but those interested in attending anyway can contact LGMS President Cari Jacob, caricatures@comcast.net, or at phone number 248-931-5999.

The convention will include a presentation about ideas for juniors activities. The show will offer mineral specimens, jewelry, a fluorescent rocks display, a kids' table, and tours of the Livingston club's lapidary workshop.

A Tricky Tray will be presented on Saturday at the Delegates Meeting of the convention to benefit the MWF Endowment Fund. David and Cindy Root, co-chairs of the MWF Endowment Fund Committee, are asking that attendees bring donations — not necessarily mineral specimens — worth about \$10 for the Tricky Tray. Those who can bring a donation should contact either of the Roots at d-root@comcast.net before the convention.

Early-fall activities in the Howell area run the gamut from rock collecting (legal at STATE-owned beaches), kayaking, an apple orchard/winery, and the Cranbrook Institute of Science in Bloomfield Hills.

DEADLINE CALENDAR

The annual **convention of the Midwest Federation** is Sept. 16th-17th in Howell, Michigan. The convention is being held in conjunction with the show of the Livingston Gem & Mineral Society.

Rockhound of the Year Awards may be submitted at any time for certificates and a mention in the MWF News. Contact Jeanine Mielecki, jaynine9@aol.com.

October Issue Submission Deadline Is September 4th!

CALCIUM PHOSPHATES WHET ROCKHOUNDS' APATITES

Bill Cordua, Chair
MWF Geology Committee
From the February 2023 Rock Rustler's News
of the Minnesota Mineral Club

Apatite is a widely occurring group of minerals that are calcium phosphates, with attached anions such as F, Cl, OH and CO₃. The specific minerals in the group are named for the dominant anion - fluorapatite or chlorapatite for example.

The name apatite comes from the work of 18th century mineralogist A.G. Werner. He derived it from the Greek word for "to be deceptive" because the mineral's nature had apparently eluded contemporary mineralogists. Apatite group minerals are often in very distinct crystals – six-sided prisms capped by flat terminations (called by crystallographers "basal pinacoids" - a great name for a, um, rock band).

Apatite minerals do not have a distinct cleavage, but break along irregular surfaces. Apatite is #5 in the Mohs hardness scale, harder than fluorite but softer than orthoclase feldspar. It can be scratched, with some difficulty, with a hardware store nail (Mohs hardness about 5.5). Well crystallized apatite resembles beryl, but is significantly softer.

Although the particular apatite mineral needs chemical analysis to be correctly identified, there are some general clues.

For example, most well crystallized collector-grade apatite is fluorapatite. It generally formed from igneous fluids (as in granite pegmatites) or hydrothermal activity or recrystallization under metamorphic conditions. Some examples familiar to collectors are yellow fluorapatite from the metamorphosed iron formation at Cerra de Mercado Mine, Durango, Mexico and the marbles around Otter Lake in Quebec.

*Fluorapatite
on marble
from the
Otter Lake
area in
Quebec.
Photo by Bill
Cordua.*



Fluorapatites also occur widely as small to microscopic grains in a variety of rocks from granite to schist. They also survive weathering and can be found in heavy (denser) mineral concentrates in sediments and sedimentary rocks.

A variety called carbonate apatite (sometimes referred to as collophane or francolite) is generally fine-grained and cryptocrystalline. It forms sedimentary nodules and sometimes thick beds. A sedimentary rock called phosphorite is rich in carbonate apatite and is a valuable resource mined worldwide in the production of fertilizer. Phosphorites form in areas where currents of deep nutrient-rich water upwell into shallower sunlit parts of the sea. This results in a biological bloom, precipitating apatite-rich sediments to the sea floor.

Mining in Florida works abundant phosphate nodules in the Pliocene Bone Valley Formation (about 5 million years old) east of Tampa. The open-pit mines are also known for their abundance of vertebrate marine fossils. On the other side of the Atlantic, large phosphate-rich beds are known in west Africa.

An odd zone of carbonate apatite was found at the Flambeau Copper Mine, Ladysmith, Wisconsin. Carbonate apatite is also quite widespread in the upper Midwest as preserved shell material in certain kinds of brachiopods.



*Carbonite
apatite in
brachiopod
shell materi-
al. Photo by
Bill Cordua.*

Often brachiopod shells are made of calcium carbonate and dissolve in ground water, so that only the shell impressions remain. Those with phosphate shells are much less soluble and survive, giving us material secreted by the original organism as much as 500 million years ago.

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TULIP CITY GMC WINS WEBSITE CONTEST

Brad Zylman,
MWF Website Competition Chair

The Tulip City Gem & Mineral Club of Zeeland, Michigan is the winner of the Midwest Federation website competition. Once the results of the national AFMS contest are sent to me, I will report those to the MWF News. To visit the Tulip City website, go to www.tulipcity.org.

The Midwest Federation had low participation in the contest this year. The Michigan Mineralogical Club (last few years' MWF award winner) did not throw its hat into the ring this year so that other clubs would potentially advance to the national competition. I did not receive entries from the last few years' participants either. Only the Tulip City club turned in an entry, and I appreciate their making it possible for the MWF to be represented in the AFMS competition.

We hope for more participation next year.

TAKE THE BULL BY THE HORNS, CONTINUED

(Continued from page 1)

board. Please make the time to become more involved. How? Ask someone in charge what you can do to make the club more efficient- more motivating – more fun!

If you want to see something happen, take the time to take the bull by the horns. What is the worst that could happen? Nothing changes!

Even if that is the worst that happens and things are status quo, you utilized the time wisely to see if a change could be made. (Of course, I mean to make changes per your club's bylaws!!!) If a change was made, you have accomplished something that many others may have wanted but did not want to get involved in. Oh, that vicious circle!

Becoming more involved may be a healthy decision, since studies prove that involvement requires use of the brain cells. Being a part of the club, actively participating, provides you with a sense of belonging. This too improves your mental health!

So use your time wisely – become more involved and take action!

DISASTER NARROWLY AVERTED

by Charles “Wooly” Wooldridge
Lincoln Gem & Mineral Club
From the June, 2023 Pick & Shovel

I almost burned down the garage and possibly the house the other day.

My 10-inch Lortone Lapidary saw is located in the garage. I put a large sheet of cardboard and some wood against the side of the saw to prevent oil from splashing on things. There were clothes and chest waders hanging close by on the other side. While operating, the saw puts a fine mist of oil in the air. This makes things like cardboard and clothes highly flammable.

I put a rock in the saw, engaged the auto feed, and turned on the saw. I was out back when I heard the saw stop. I assumed it had completed the cut. A few minutes later I went to check. The saw had somehow jammed and the motor was burning up putting forth dense black smoke. I immediately shut it off and moved flammable materials away. Fortunately the motor did not catch fire or I think the whole garage would have gone up in minutes.

Like all good home owners, I have fire extinguishers. Two are located within 10 feet of the saw. Upon checking, I found both were empty. There were several lessons learned that day! I won't delineate them here. I think they are obvious. CHECK YOUR FIRE EXTINGUISHERS!

CALCIUM PHOSPHATES ARE APATITE, CONT.

(Continued from page 4)

Hydroxyl apatite and carbonate apatite are major components of bones and teeth – yes, yours too. Sugars and bacteria increase the acidity of fluids in the mouth and encourage tooth decay. Hydroxyl apatite is particularly prone to decay, but fluorapatite less so. By periodically immersing your teeth in fluorine-rich rinses, you are replacing some of the hydroxyl apatite with more cavity-resistant fluorapatite.

Fluoridation is mineralogy in service to humanity! It's nice to have healthy fluorapatite-rich teeth when you are hungry. Bon apatite – er – appetit!

NEBRASKA CLUB ROCKS PUBLIC SCHOOLS SCIENCE FAIR

Corey Beer, 1st Vice President
Lincoln Gem & Mineral Club
From the March, 2023 Pick & Shovel

For quite a few years, the Club has participated in the Lincoln Public Schools (LPS) Science Fair. A group would attend, taking stones for display, a gem dig for kids to go through, and lapidary equipment to demonstrate cutting cabochons.

The Science Fair was cancelled for the last two years due to COVID concerns. This year, on February 26th, some customers came into my shop mentioning they would be displaying at the Science Fair. That got us wondering why we hadn't been contacted.

Brett Jurgens looked up the LPS website and contacted the number for the person in charge of the Fair to get some more information. He ended up hearing back from them the same day, and just like that, we were in! And just in time, as the fair was only three days away!



Corey Beer demonstrating cabochon cutting. Photo by Brett Jurgens.

We packed up a Genie lapidary machine, a small trim saw, and some fluorescent rocks to take to the fair. After closing the shop early, we drove out to the Lancaster Event Center to get set up.

The Fair started at 5 p.m. It was a blast, as always! I ran the Genie for most of the Fair and demonstrated cabbng to many inquisitive kids and adults alike.

Brett brought along some very nice pieces of petrified wood for a touch table, so kids could pick up and inspect the pieces, seeing how they had been preserved and, in some cases, replaced by agate.

Eddie Ridge brought along his cases with a wide variety of specimens, and gave lots of information on the material.



Eddie with his displays. Photo by Brett Jurgens.

This year, we also had a small black-light box full of minerals, which garnered many “Oohs” and “Ahhs” from all the curious students. And the most popular attraction we brought along was the gem dig. Always a fan favorite. There were many mini miners taking part, and they got to take home a bag of gems.

An interesting observation we always make is that there are two types of kids when it comes to the gem dig. Some will sit for five minutes and only pick out a few of the biggest, shiniest stones, then want to be done. The second group will pick out even the smallest hidden gem and rough garnet, and once finished, they usually will want to search through the plate of the first kid. Speaking from experience, I was firmly in the second group as a kid.

All in all, it was another great science fair and we look forward to it again next year.

Pick & Shovel Editor's Note: Brett has provided the correct contact information to LPS, so next year we should get plenty of advance notice of the Science Fair!

UPCOMING EVENTS

Date and Time	Organization	Place	Contact
Aug. 26 Sat, 10-4	Racine Geological Society rock swap	Bartlett Youth Foundation, 1120 N. Stuart Road, Mt. Pleasant, WI	John Lowman, 262-989-9193
Aug. 26-27 Sat & Sun, 8-4	Chippewa Valley Gem and Mineral Society rock swap	Ballpark, south field, 3900 38 th Street, Elk Mound, WI	Paul Tubbs, bizpam1@gmail.com
Aug. 26-27 Sat 9-5, Sun 10-5	Peoria Academy of Science Geology section	East Side Center, 1 East Side Drive, East Peoria, IL	Sandi Lawson, bixbite62@gmail.com
Sept. 8-10 Fri & Sat 10-6, Sun 10-4	500 Earth Sciences Club of Indianapolis	County 4-H Fairgrounds, 620 N. Apple, Greenfield, IN	Tom Odom, tomodom650@gmail.com
Sept. 8-10 Fri noon-8, Sat 10-6, Sun 11-5	Toledo Gem & Rockhound Club	Pratt Pavilion, County Fairgrounds, 13800 W. Poe, Bowling Green, OH	Jerri Heer, jheerx6@gmail.com
Sept. 9 Sat, 9-3	Coulee Rock Club rock swap	Omni Center, 255 Riders Club Road, Onalaska, WI	Apryl Denny, aldenny@viterbo.edu
Sept. 9-10 Sat 9-8, Sun 9-3:30	Cedar Valley Rocks & Minerals Society auction	Amana RV Park, 39 38 th Avenue, Amana, IA	Marvin Houg, m-houg@yahoo.com
Sept. 15-17 Fri & Sat 10-7, Sun 11-5	Tulip City Gem & Mineral Club	Soccer Stop Sportsplex, 5 River Hills Drive, Holland, MI	Michelle Bennett, mickieannbennett@gmail.com
Sept. 16-17 Sat 10-6, Sun 10-4	Livingston Gem & Mineral Society	Hartland Educational Support Services, 9525 E. Highland Road, Howell, MI	Ed Oller, livingstongems.com
The Livingston Gem & Mineral Society is hosting the MWF annual convention Sept. 15-17 in conjunction with its show.			
Sept. 22-24	Tri-State Gem & Mineral Society	Joplin History and Mineral Museum, 504 S. Schifferdecker, Joplin, MO	Chris Wiseman, jmc-cwiseman@sbcglobal.net
Sept. 23-24 Sat 10-6, Sun 10-4	Brown County Rock & Mineral Club	County 4-H Fairgrounds, 802 Memorial Drive, Nashville, IN	Rhonda A. Dunn, bcrcmc2010@gmail.com
Sept. 23-24 Sat 10-5, Sun 10-4	Minnesota Mineral Club	Dairy Building, State Fairgrounds, 1694 Judson Avenue, St. Paul, MN	Earl Netwal, enetwal@gmail.com
Sept. 23-24 Sat 9-5, Sun 10-4	Oshkosh Earth Science Club	Sunnyview Expo Center, 500 E. County Road Y, Oshkosh, WI	Bob Fox, foxbooks@att.net
Oct. 7-8 Sat 10-6, Sun 10-5	Lincoln Orbit Earth Science Society (LOESS)	Orr Bldg., State Fairgrounds, 801 E. Sangamon Ave., Springfield, IL	Ed Wagner, loesseditor@gmail.com
Oct. 7-8 Sat 10-5, Sun 10-4	Midwest Mineralogical and Lapidary Society	County Fairgrounds, 10871 Quirk Road, Belleville, MI	Bill Barr, wbarr@umich.edu
Oct. 13-15 Fri 9-6, Sat 10-7, Sun 11-5	Michigan Mineralogical Society	Bldg. P, Macomb Sports & Expo Center, 14500 E. 12 Mile Road, Warren, MI	John Peters, joopett13@hotmail.com

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UPCOMING EVENTS

Date and Time	Organization	Place	Contact
Oct. 20-22 Fri 1-7, Sat 10-6, Sun 10-4	Central Michigan Lapidary & Mineral Society	County Fairgrounds, 700 Ash Street, Mason, MI	Robin Smith, 517-290-4891
Oct. 21-22 Sat 9-5, Sun 10-4	Des Moines Lapidary Society	Elwell Family Food Center, State Fairgrounds, 3000 E. Grand Avenue, Des Moines, IA	Ken Belzer, DMLS@DMLapidary.org
Oct. 21-22 Sat 10-6, Sun 10-4	Sac & Fox Lapidary Club	County Fairgrounds, 2606 W. Burlington Avenue, Fairfield, IA	Mike Messer, ressem52@aol.com
Oct. 28 Sat, 9-1	St. Croix Rockhounds	Valley Creek Mall, 1750 Weir Drive, Woodbury, MN	Dave Rusterholz, stcroixrock@gmail.com
Oct. 28-29 Sat 10-6, Sun 10-5	Akron Mineral Society and Summit Lapidary Club	Emidio Expo Center, 48 E. Bath Road, Cuyahoga Falls, OH	Evelyn Tryon, summitlapidaryclub.com
Oct. 28-29 Sat 10-5, Sun 10-4	Evansville Lapidary Society	CK Newsome Community Center, 100 E. Walnut Street, Evansville, IN	Nancy Jones Dassell, nancythings449@gmail.com
Oct. 28-29 Sat 10-5, Sun 10-4:30	Ozarks Gem & Mineral Society	Springfield Expo Center, 635 St. Louis Street, Springfield, MO	Mark Northrup, omgms.57@gmail.com
Oct. 28-29 Sat 10-5, Sun 10-4	Racine Geological Society	Fountain Banquet Hall, 8505 Durand, Highway 11, Sturtevant, WI	John Lowman, 262-989-9193