



MWF News

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of Mineralogical and Geological Societies

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Member of the American Federation of
Mineralogical Societies



PRESIDENT'S MESSAGE

David Root, President

Hard to believe a year has passed already, and the time has come for me to relinquish my bully pulpit. Hmmm, so that's what a collective sigh of relief sounds like. So what should I pontificate about this time?

Sharon Marburger. As most of you know, Sharon was the editor of the MWF newsletter for a number of years. She is also the chair of the Bulletin Editors Permanent Committee.



Sharon made it known over a year ago that she would like to retire from the Bulletin Editors position. So far we have failed to make that happen, and she has patiently continued to fulfill her duties.

Sharon has gone the extra mile for the MWF and it's time that someone steps up and takes this position for her. A volunteer organization needs volunteers or it will die.

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BE THERE OR BE SQUARE!

[Editor's Note: The MWF's convention will be Oct. 6-7, in conjunction with the Lincoln Orbit Earth Science Society's annual show, in Springfield, Illinois. Following is an excerpt from an article by LOESS' secretary, Carole Harp.]

On Friday, October 5th we will have a meet and greet with light refreshments. If you think you might be attending, I would appreciate you letting me know.

We do have two field trips planned. On Thursday, we have scheduled a tour of the Illinois State Museum's Research and Collections Center. You will tour the geology, zoology, and archaeology collections, and the prep lab. This tour will be limited to 30 people. A time for the tour has not yet been determined. On Friday, there will be a tour of the Funk Gem and Mineral Museum and Prairie Home at 1:00. To sign up for these trips, please contact me by September 28th at thequirkyquiller@gmail.com or 217-414-0239.

If you have items for the silent auction, you can drop off items at the silent auction area anytime during our show. **Be sure and use a colored sheet for your bid slips.**

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GIVE A TRIBUTE TO A GREAT MEMBER

Marge Collins, MWF Scholarship Chair

Please don't forget . . .

Have you forgotten about making a donation to the AFMS Scholarship Foundation this year? Seems most everyone has. And donations from all the Federations are a fraction of what they usually average.

Unfortunately, if this continues, the Fund is assessed a fee! Seems there is a requirement that income (donations) must be a specified percent of expenditures (scholarship grants). Who wants to pay a fee? The situation isn't dire at this time – there is plenty of time before the end of the fiscal year.

You may say, "We send a donation when a member dies." But why not honor a special individual or a couple – someone (or two) who are very active or generous members – with a donation as a tribute to them? It's a great excuse for an Appreciation Celebration, while everyone can enjoy the recognition. Anyone so honored is added to the List of Memorials in the MWF Directory and each new addition is highlighted.

Donations and Memorials, payable to AFMS Scholarship, should be mailed to the MWF Scholarship Committee c/o Marge Collins, 3017 Niles-Buchanan Road, Buchanan, Michigan 49107.

AFMS SCHOLARSHIP FOUNDATION DONATION

Contributions to AFMS Scholarship are tax-exempt. You can use the form below or include a note with appropriate information. You receive acknowledgment and when applicable, and upon request, a note is sent to next of kin.

Donor(s) name: _____ Donation: \$ _____

Address:

(street) (apt. #) (city) (state) (ZIP code)

Memorial or Honoring (if applicable): _____

Next of Kin: _____, _____
(if applicable) (name) (relationship)

Address:

(street) (apt. #) (city) (state) (ZIP code)

OHIO GEOJUNIORS ALUMNUS TAKES GOLD AT INTERNATIONAL EARTH SCIENCE OLYMPIAD

Joyce Kish, Assistant MWF Ohio State Director,
and Todd Maurer

Scott Maurer, an alumnus of the Ohio Summit Lapidary Club GeoJuniors, just returned from Thailand, where he participated in the International Earth Science Olympiad (IESO). Thirty-eight countries were represented. Scott participated in three events: the individual competition, the International Team Field Investigation, and the Earth Systems Project.

More than 140 students competed in the individual competition, and the top 10% were awarded gold medals. This is the 12th year of the IESO, and Team USA has never been awarded a gold medal in the individual competition.

This year, however, all four members of Team USA were awarded gold medals. Scott had the tenth highest score. Another teammate took second place overall, the highest placement of a Team USA member ever.



Closing day of the International Earth Science Olympiad 2018. Picture from ieso2018.posn.or.th.

The International Team Field Investigation (ITFI) sends teams to field locations to interpret the site in terms of earth systems. Each team is a random mix of seven to nine international students. Each team creates a Power Point presentation to explain their

findings, then presents it as a team to a panel of judges. Scott's team took first place in its pool of 10 teams.

The same team also participates in the Earth Systems Project (ESP). For this competition all the teams are given an Earth Systems problem, which they describe and to which they present possible solutions. These details are put on a poster and presented to a panel of judges by the team. Again, Scott's team was awarded first place.

GeoJuniors and the Summit Lapidary Club played a part in all of this. It was said that Scott's selection to represent Team USA was in no small part due to his having the highest score ever in Rocks and Minerals ID practical at the USESO (United States Earth Science Olympiad) camp in June. Scott's passion for rocks and minerals has been nurtured by GeoJuniors and the adults of the Summit Lapidary club.

As a side note, each team was asked to present one or more rock samples as gifts to the princess. These samples were then placed in the Geological Museum at Mahidol University, Kanchanaburi Campus. Two examples of Ohio flint harvested at Nethers Farm Flint Quarry in Hopewell, Ohio were among the samples presented by Team USA, and are now among the museum's artifacts.

Congratulations to Scott!

DEADLINE CALENDAR

Sign up for convention field trips: **Sept. 28, 2018**. See article, p. 1.

MWF Convention, Springfield, Illinois: **Oct. 6-7, 2018**. See MWF website.

MWF Bulletin Editors' Competition deadline: **Nov. 15, 2018**. Contact Sharon Marburger at email address mamamar7880@outlook.com.

MWF All American Club yearbooks deadline: **Jan. 15, 2019**. Contact J.C. Moore at email address jcmoore3rd@gmail.com.



HOW THE SHOW GREW IN KALAMAZOO (AND MINNESOTA TOO!)

Regina Kapta, MWF Public Image Chair, and Tony Kapta, Past President MWF

In May, Tony and I traveled to Kalamazoo, Michigan for the MWF Spring Meeting which was hosted by the Kalamazoo Geological & Mineral Society at the club's annual show. We had been to the Kalamazoo show before, and I thought we would see a show similar to what we had seen four or five years ago.

BUT was I shocked when I realized the show now filled two wings of the Kalamazoo County Expo Center. From a small show of a couple thousand attendees a few years ago, the show now occupies 35,000 square feet of the Expo Center.

I tracked down David Haas, who is the president of the club, and he introduced me to Jerry VanNocker and Wrifton Graham, orchestrators of the show's advertising and publicity. We talked about what has changed in their approach to advertising for the show. Jerry talked about aiming for slow growth each year, adding more children's activities, and more Facebook involvement – growing attendance, but trying NOT to grow more than they could handle based on club volunteers, dealer space and member support in donated items and prizes. This is the first year the club moved into the second wing at the Expo Center.

Five years ago, Kalamazoo had about 3,000 attending the show. By the end of Saturday in May 2018 they were at 4,500, and by Sunday afternoon hit over 7,100, for a final attendance of 7,500. This is an increase of 31% over the attendance for 2017.

Jerry handled the email blasts and Wrifton handled the Facebook promotions – there were no newspaper, radio or TV ads at all. Over the past three to four years, as attendance grew, they eliminated the traditional channels of advertising, since the responses on email and Facebook were so much better.

Jerry sent the email blasts out at six weeks and again at two weeks before the show, at about 3,000 emails each. The emails featured highlights of the show and linked to the club website for more information.



Jerry VanNocker (left) and Wrifton Graham, in charge of the Kalamazoo show's advertising and publicity. Photos by Regina Kapta.

Facebook Changes the Game

Wrifton talked about how to use Facebook's strengths to expand the reach of a basic Facebook ad. The main focus using Facebook ads is to get the ads to go "viral." This means that once a certain threshold of "Interested" clicks is reached, Facebook algorithms take over, and the ads and posts are increasingly fed into more and more newsfeeds as the "authority voice" is recognized and weighed over other ads, growing the visibility exponentially.

Using Facebook as the primary advertising platform, there were several approaches that proved to impact attendance:

- The pre-event Facebook ad was created and included a photo of amethyst cathedrals, the show name, date, location and web address. Under the ad was one paragraph describing show details. The demographic target of the ad was women ages 23 to 38, living in urban areas within two hours' driving distance from the event. Money spent for the primary ad and for boosted posts about the show was about \$750.

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HOW THE SHOW GREW IN KALAMAZOO, CONTINUED

(Continued from page 4)

- The club offered a pre-show give away contest on Facebook six weeks before the show. The winner could pick up the prize at the show. This helped increase the Facebook sharing immensely.
- There were posts about the show to various Facebook interest groups – rockhound and collector groups, lapidary groups, faceting groups, and Lake Superior agate interest groups. Plus, members that posted stuck around on the sites to field questions and promote details about the show.
- The club members also did daily posts on the club website commenting on the ad, posing questions about specific minerals or gemstones, talking about their favorite parts of the show, and writing about a favorite dealer or most interesting kids' activity. Talking up the special displays being featured and what the speakers were presenting sparked even more questions and comments about the show. This also included reviews and testimony-type commenting about the show – that it's worth the drive and pointing out the educational value in the kids' activities. Members played an active role in commenting, and those responses and sharing helped make the postings go viral. The Facebook ad received over 12,000 clicks showing "Interested," and half of the people interested showed up at the show.



A red-shirted volunteer helps out at the children's area of the Kalamazoo show. Photo by Regina Kapta.

A Few Traditional Avenues Still Included

They still did the school flyers, mailed postcards, and left bookmarks. The club is able to feature Friday as Kids Day, with flyers sent to the schools, and providing a subsidy for the schools to cover the bus transportation for students. Other promotions were bookmarks featuring next year's show to hand out at other shows during the year. The club starts this right after the current show, for next year's show.

... And A Few New Ideas

The club also included demonstration booths for the City's environment and ecology dept featuring info on clean water; featuring fossils and how they are formed; and booths about the Children's Museum and the Seaman Museum. Membership booths were set up for 4H Clubs, Boy and Girl Scouts, info on the local college, the local astronomy club, a Master Gardener booth, and Earthscapes – featuring a local landscaper showing how rocks can be integrated into a landscaped yard.



More very visible volunteers at the Petoskey Stone polishing booth. Photo by Regina Kapta.

One specific item really stood out at the Kalamazoo show. To get more club volunteers during the show, they offered a free year's membership in the club, plus a red club T-shirt for volunteers who worked at least six hours at the show. This created a highly visible sea of red T-shirts everywhere you looked. This

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HOW THE SHOW GREW, CONTINUED

(Continued from page 5)

really lent an “authority voice” to the club and was a testimony to its active membership and its leadership.

Minnesota Mineral Club Also Tested This

The Minnesota Mineral Club had a similar experience using Facebook last year. Sandy Fuller is a member of this club, as well as the President of the American Federation of Mineralogical Societies. She commented on what happened at their show last year in the AFMS Newsletter:

“In preparation for one recent show, several members shared their event on popular FB groups, and stayed involved to share information and provide information. As a result, over 16,000 FB users indicated their interest in the event, and show attendance more than doubled in size, and club members scrambled to make adjustments to handle the increased crowd. What a good problem to have!” (AFMS Newsletter, Feb. 2018, Vol .71, #3.)

A Word Of Warning

The success of this type of promotion will impact the entire club’s involvement and require more volunteers, strong leadership, and more donations and activities, in addition to the usual challenge of coordinating the show vendors, demonstrators and displays.

Aim for slow growth, implementing a few of these ideas at time so the club can build up a strong support base. Without an active club, this promotion would not work well, taxing an already over-worked membership.

The next Kalamazoo show is May 3-5, 2019, and the club will be celebrating its 60th year. Plan to attend this one! <https://www.kalamazoorockclub.org>.

The Minnesota Mineral Club show will be in Cottage Grove, Minnesota, October 20-21, 2018. <https://minnesotamineralclub.org/2018-show-october-20-21>.

PRESIDENT’S MESSAGE, CONTINUED

(Continued from page 1)

The ideal candidate would be someone with newsletter experience, but that is by no means mandatory. Everybody is trainable, and I’m sure Sharon will be happy to offer assistance to get you started in the right direction. So what do you say? Is there someone out there who will step up and rescue Sharon?

During my year as President I have received assistance from various individuals, too numerous to list here. There are two, however, whom I feel I must acknowledge, because without their help I could have gotten myself into all sorts of trouble. So I would like to thank Donna Moore and Sandy Fuller for bailing me out on several occasions. You ladies are the best..

GARNET HUNTING IN WRANGELL, ALASKA

Doug Stone, Central Arkansas Gem, Mineral and Geology Society
From the February, 2018 Arkansas Rockhound News

The garnet ledge/mine of Wrangell, Alaska is owned by the children of Wrangell. The garnets may only be collected by them, or at least, with them. It is hard rock mining! The children of Wrangell sell the garnets to passing cruise-ship passengers to make spending money, and also to raise money for college, at a rate of \$5 to \$20+ per garnet. While most of the garnets are in the quarter-inch to half-inch range, in the area we were mining, they ranged up to approximately one inch. The largest we saw was at the Wrangell Museum; it measured approximately 1½ inches.

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The Stikine River. Photo by Doug Stone.

GARNET HUNTING IN WRANGELL, ALASKA, CONTINUED

It is quite difficult to make arrangements to visit the “mine,” and expensive (several hundred dollars). It requires a boat ride up the Stikine River about six miles. Very few locals visit there, and very few visitors to Wrangell. There is a U.S. Forest Service cabin available for camping; it has a roof, four walls, a place to unroll your sleeping bag(s), two doors and a wood stove. The Forest Service even furnishes the firewood.

It is most definitely BEAR country. It is located in the Tongass National Forest, the most northern temperate rain forest in the world (think JUNGLE!), 100+ inches of rain, with snow occasionally, to five feet deep yearly. It is quite grown over. Don't even start to think traditional mine, at least from what I saw. Blown-down trees from a storm to duck under and boards placed to walk on in the marshy area.



Photo by Doug Stone.

And of course, mosquitoes. We were mostly in/ beside a creek, up the mountain side, a quarter-mile hike from the river/cabin. Who in their right mind would want to visit here? I think I may have lost my garnet marbles here, LOL.

The family I went with make it a family vacation, spending several days and nights there yearly. The dad brings a portable generator and a hammer drill with bits for drilling in the schist. Plus sledges, wedges, buckets and more to collect the garnets. Some of the creek water flowing from above is routed through a two - to three-inch flexible pipe, about 20 or so feet long. It is used to keep down the drilling dust. Oh, and they furnished the required local kid(s)!

The three boys went exploring while the adults did the hard work – including when it came time for me

to leave (they were supposed to help carry my bucket and tools). I was by myself in a jungle in bear country. But, I had a boat to catch back to town. I only got to spend about four hours of hard labor to collect a HEAVY five-gallon bucket containing my tools and about a gallon or two of garnets in matrix. At least it was mostly downhill. I now wish I had left some as “plates.” Sigh, something about hindsight.



Garnets collected by Doug Stone at Wrangell. Photo by Doug Stone.

The pilot of the boat was born, raised, and lives on the edge of the Stikine River. She knows that river! The Stikine River is the fastest flowing river in North America. The river is quite wide at the mouth and has numerous, shifting sand bars. The river guides have to leave town during low tide; that way if they get stuck on a sand bar, the tide will lift them back off, or they rely on (hope for) someone to come help.

Wrangell Island has several other things to offer. There are petroglyphs at the edge of the beach, both in and out of the water. Anan Bear and Wildlife Observatory, Chief Shakes Island (totems), Shakes Glacier, boat rides up the beautiful Stikine River, rocky beaches, scenery, friendly people, fishing, hunting, wildlife (we saw our first wild porcupine here), a small town, and more! It has an airport and of course the ferry terminal if you drive. We stayed in our first bed & breakfast here, loved it! We had our own living area, and got to know the owner. She was the one who knew who to contact to make arrangements for my visit to the mine.

Wrangell was our favorite community in Alaska. We were privileged to stay in Wrangell for five wonderful nights. It was just five because the ferry ran once every five days, I wish it had been longer, as we did not get to do everything. Would I do it again? Only if I am ever in Wrangell again . . . and I hope to be!

REVIEW: 101 AMERICAN FOSSIL SITES

Dale Gnidovec, Curator, Orton Geological Museum
at Ohio State University

From the Sept. 2018 Glacial Groove of the
Columbus Rock and Mineral Society

Review: *101 American Fossil Sites You've Gotta See*
by Albert B. Dickas. Mountain Press, 2018.

I have loved fossils for decades, and looked forward to learning more about them and the places they could be experienced. I started this book with high hopes, but was disappointed in it for three reasons: poor site selection, its many errors, and its purple prose.

On the plus side, I loved the Preface – don't skip it. The format is great, with one page of text per site and a page of photos. A real plus was having GPS coordinates and some pertinent references for each site. The photos are generally good, although I wondered why some were included. For example, for Dinosaur National Monument (site 87) why show a photo of the rocks outside rather than a picture of the spectacular wall of bones itself?



The wall of bones at Dinosaur National Monument.
Photo via www.nationalparks.org.

As to the places selected for inclusion, I know that every fossil enthusiast would choose a different group of 101 fossil sites, and I appreciate the author's attempt to select sites from as many geographic areas of the United States as possible, but this book had some that I really questioned. For example, the State House in Augusta, Maine (site 37) has a few fossils in its floor tiles. I realize Maine doesn't have much in the way of fossils, but those in its State House aren't even

from that state, they are from Vermont. A number of other state capitol buildings have much better fossils on display.

Also, when the best fossils at a site are nondescript brachiopods and bits of crinoids, all smaller than a penny (such as sites 32 & 45), is it really a fossil site you've gotta see? And one site (21, Brevard Museum of History and Natural Science) was about anthropology, not paleontology. And for the good sites I often wanted more information about that particular location and its fossils rather than the large amount of text given to things only tangentially related, such as Australian opal (page 124), the personalities of fossil hunters (page 100) and the Byzantine and Ottoman Empires (page 88).

There were also many errors, only a few of which will be mentioned here. Brachiopods do not have a left valve that is the mirror image of a right valve (as he informs us on p. 78) – those are clams. Petrified wood (p. 124), tree molds (p. 159), and steinkerns (p. 178) are not trace fossils. Trace fossils result from activities such as walking (leaving footprints), burrowing (leaving burrows), and biting (leaving tooth marks). They are even defined as such in the book's own glossary.

Tylosaurus was not a marine mammal (p. 181) but a mosasaur, a marine reptile related to the group of modern lizards that includes the Komodo Dragon. Tooth enamel is not calcareous, as he tells us on p. 128, it is phosphatic. And the idea that *Gryphaea* oysters became extinct because they coiled so much that they couldn't open their shells (p. 178) hasn't been taken seriously by paleontologists for decades.

Perhaps the most annoying part of this book was its purple prose. One example should suffice. After mentioning creatures like the Devonian fish *Dunkleosteus*, the dinosaur *Tyrannosaurus*, and the Pleistocene saber cat *Smilodon*, Dickas says, "These notorious carnivores stain the pages of geologic history much like Jack the Ripper and Bloody Mary soil the pages of contemporary history." Ugh. Really?

Mountain Press has produced many fine books in the past. This one could have been much improved had it been given a good look-over by a competent paleontologist.

TWO VOLCANOES DEMONSTRATE THE RANGE OF VOLCANIC ERUPTIONS

Dr. Bill Cordua, MWF Geology Committee Chair
From the Aug./Sept. 2018 Rock Rustler's News
of the Minnesota Mineral Club

Volcanoes have been much in the news this summer. The eruption of Kilauea volcano is of historic significance. We also saw an eruption of Guatemala's Fuego volcano. Both eruptions were devastating to property, but Fuego killed over 60 people, while Kilauea has killed none to date. These two are textbook examples of the range of volcanic eruptions. The differences relate to the kind of magma erupted and the geologic setting of the volcano.

Fuego erupted explosively in June, producing huge volumes of ash and unleashing horrific events called pyroclastic flows and lahars. Pyroclastic flows are roiling clouds of boiling hot ash and gas that can move at over 100 miles per hour. They devastate everything in their path. Those who remember the Mount St. Helen's eruption will recall the effects of these. Pompeii's burial by an eruption of Vesuvius in 79 AD is another infamous example. The sight of a human emerging unscathed from a pyroclastic flow in the latest "Jurassic World" movie is pure fantasy.



The steep-sloped stratovolcano Fuego erupting in November 2017. Photo by Rick Thomas (<http://imageo.egu.eu>), via Wikimedia Commons.

Lahars are cooler and slower moving flows of water and muddy debris formed by mixing ash with either rainfall or snowmelt. Being caught in one is like being drowned in concrete. These events are sudden and it is nearly impossible to predict their timing and paths. That is a lethal combination. Impending eruptions rightly trigger frantic mass evacuations.

Kilauea's eruptions, such as that begun last April, produce spectacular fire fountains and lava flows, but few ash explosions. The explosions that do occur are due to collapse of the ground as magma escapes elsewhere, or to the interaction of magma with sea water. Cracks (called fissures) open and lava flows well out. Although the flows can be fast moving (as seen in numerous videos of Hawaii's latest eruption), they are avoidable

and even approachable. Their very fluid nature is due to the lava's low viscosity, the result of a low silica content and high temperature. Evacuations can be done in a more organized fashion, with home owners often able to save their possessions before flows engulf their houses.

What causes these different eruptive styles? Fuego is a type of volcano called a stratovolcano or "composite cone." These are high symmetrical peaks usually built where two plates are colliding, with one plate moving under the other. As melting occurs along the downward moving plate, it produces a water-loaded, silica-rich magma. This magma tends to be thick and sticky, moving to the surface reluctantly until gas pressure builds up enough to explosively eject it. The resulting ash and high viscosity lava can form steep slopes, giving the stratovolcano its characteristic shape. Rhyolite and andesite are typical products of stratovolcanoes.

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UPCOMING EVENTS

Date and Time	Organization	Place	Contact
Sept. 21-23 Fri & Sat 9-5, Sun 9-3	Mozarkite Society of Lincoln show & public mozarkite digs	Mike Hare Memorial Field, Cole Camp, MO	Karl David Parsons, mozarkiterocks@gmail.com
Sept. 22 Sat, 9-1	Kalamazoo Geological and Mineral Society rock swap	Parking lot, St. Michael Lutheran Church, 7211 Oakland Drive, Portage, MI	Dennis Guy, dguy3@charter.net
Sept. 28-30 Fri & Sat 9-5, Sun 9-3	Tri-State Gem & Mineral Club	Joplin Mineral Museum, 504 Schiffer- decker Ave., Joplin, MO	Chris Wiseman, jmc-cwiseman@sbcglobal.net
Sept. 29-30 Sat. 10-6, Sun 10-5	Brown County Rock & Mineral Club	Brown County History Center, 90 E. Gould Street, Nashville, IN	Rhonda Dunn, BCRM2010@gmail.com
Sept. 29-30 Sat 10-5, Sun 11-4	Grand Traverse Area Rock & Mineral Club	Cherryland VFW Hall, 3400 Veterans Drive, Traverse City, MI	Pierre LaFoille, Pals0210@gmail.com
Sept. 29-30 Sat 10-5, Sun 10-4	Midwest Mineralogical & Lapidary Society rock swap	Wayne County Fairgrounds, 10871 Quirk, Belleville, MI	Bill Barr, wbarr@umich.edu
Sept. 29-30 Sat 9-5, Sun 10-4	Oshkosh Earth Science Club	Sunnyview Expo Center, 500 E. County Road Y, Oshkosh, WI	Ann Voges, hankemps@milwpc.com
Oct. 6-7 Sat & Sun, 9-5	Central Arkansas Gem, Mineral & Geology Society	Community Center, 5 Municipal Drive, Jacksonville, AR	John Schoeneman, schoeneman@hughes.net
Oct. 6-7 Sat 10-6, Sun 10-5 This will be the show held in conjunction with the MWF annual convention.	Lincoln Orbit Earth Science Society (LOESS)	State Fairgrounds, Orr Building, 801 Sangamon Ave., Springfield, IL	Ed Wagner, loesseditor@gmail.com
Oct. 6-7 Sat 9-6, Sun 10-5	Nebraska Mineral and Gem Club	Westside Middle School, 8601 Arbor, Omaha, NE	Bruce Sturges, bsturges@yahoo.com
Oct. 12-14 Fri 9-6, Sat 10-7, Sun 11-5	Michigan Mineralogical Society	Macomb Sports & Expo Center, Bldg. P, 14500 E. 12 Mile Road, Warren, MI	John Peters, joopett13@hotmail.com
Oct. 13-14 Sat 9-5, Sun 10-4	Loup Valley Gem & Mineral Society	Outreach Center, 1 st United Methodist Church, 3602 16 th Street, Columbus, NE	Deb Gonsior, loupvalleynew@gmail.com
Oct. 19-21 Friday 6-9, Sat 10-6, Sun 11-5	Central Michigan Lapidary & Mineral Society	Main Arena, County Fairgrounds, 700 Ash Street, Mason, MI	Roger Laylin, l.r.laylin@gmail.com
Oct. 19-21 Fri & Sat 10-6, Sun 11-5	Three Rivers Gem & Mineral Society	County Fairgrounds, 2726 Carroll Road, Fort Wayne, IN	Russell Greim, 3riversshow@gmail.com

Wolf Ridge Environmental Learning Center will present a workshop, including lodging, meals, and instruction, in hunting and finishing agates Sept. 28-30. "Fabulous Fall Geek-Out" at wolf-ridge.org.

A Micromineral Symposium, including talks, workshops, and give-away specimens, will be held Nov. 2-4 at the Cleveland Museum of Natural History, 1 Wade Oval in University Circle. Main speaker will be Dr. John Jaszczak, co-discoverer of merelaniite, for whom the mineral jaszczakite is named. 330-528-6215 or janet15clifford@gmail.com.

UPCOMING EVENTS

Date and Time	Organization	Place	Contact
Oct. 20-21 Sat 9-5, Sun 10-4	Des Moines Lapidary Society	Elwell Family Center, State Fairgrounds, 3000 E. Grand Ave., Des Moines, IA	Karen Leibold, kcleibold@aol.com
Oct. 20-21 Sat & Sun, 10-5	Flint Rock & Gem Club	Carter Middle School, 300 Rogers Lodge Drive, Clio, MI	Bill Wendling, bwrockbarn@centurytel.net
Oct. 20-21 Sat 10-5, Sun 10-5	Minnesota Mineral Club	Nat. Guard and Community Center, 8180 Belden Blvd., Cottage Grove, MN	Maureen Scaglia, mascaglia@comcast.net
Oct. 20-21 Sat 10-5, Sun 10-4:30	Ozark Mountain Gem & Mineral Society	Springfield Expo Center, 635 St. Louis, Springfield, MO	Larry Lillich, larrylillich@outlook.com
Oct. 20-21 Sat & Sun, 10-5	South Suburban Earth Science Club	Prairie State College, 202 St. Halsted, Chicago Heights, IL	Jan Podbielski, jan@janskidesigns.com
Oct. 27-28 Sat 10-6, Sun 10-5	Akron Mineral Society	Emidio & Sons Expo Center, 48 E. Bath Road, Cuyahoga Falls, OH	Sandy Shorter, Gemboree@outlook.com
Oct. 27-28 Sat 10-5, Sun 10-4	Evansville Lapidary Society	Newsome Community Center, 100 E. Walnut Street, Evansville, IN	Sara Rappee, sararappee@yahoo.com
Oct. 27-28 Sat 10-6, Sun 10-5	Summit Lapidary Club	Emidio & Sons Expo Center, 48 E. Bath Road, Cuyahoga Falls, OH	Gujo Kotch, Gemboree@outlook.com
Nov. 3-4 Sat & Sun, 10-5	Mid-Michigan Rock Club	Chippewa Nature Center, 400 S. Badour, Midland, MI	Debra Young, debiyoung50@yahoo.com
Nov. 3-4 Sat 10-5, Sun 10-4	Racine Geological Society	Fountain Hall, 8505 Durand Ave. (Highway 11), Sturtevant, WI	John Lowman, Lowman.John@sbcglobal.net
Nov. 10 Saturday, 10-5	Gem City Rock Club	Community Room, Quincy Mall, 32 nd & Broadway, Quincy, IL	Jane Huelsmeyer, jhuelsm@gmail.com
Nov. 10-11 Sat 9-5, Sun 10-4	North West Illinois Rock Club	Highland Community College, 2998 W. Pearl City Road, Freeport, IL	Brian Green, bgreen57@hotmail.com
Nov. 12 Mon, 7 p.m.	Michigan Mineralogical Society annual auction	Cranbrook Institute of Science, 39221 Woodward Ave., Bloomfield Hills, MI	Brad Zylman, bzyzman@twmi.rr.com
Nov. 16-18 Fri 3-7, Sat 10-7, Sun 10-5	St. Louis Mineral & Gem Society	Affton White-Rodgers Community Center, 9801 Mackenzie Road, St. Louis, MO	Melissa Perucca, melissa5301@aol.com
Nov. 17-18 Sat 10-5, Sun 10-4	Anoka County Gem & Mineral Club	Community Ctr., 4800 Douglas Drive N, Crystal, MN	Martha Miss, martha@rock-biz.biz
Nov. 17-18 Sat. 9:30-5, Sun 10-5	Madison Gem & Mineral Club	Alliant Energy Center, 1919 Alliant Energy Center Way, Madison, WI	Nevin Franke, shows@madisonrockclub.org
Nov. 17-18 Sat 9:30-4:30, Sun noon-4	Toledo Gem & Rockhound Club rock & jewelry open house	Gym, St. James Lutheran Church, 4727 W. Sylvania Ave., Toledo, OH	Michelle Grigore, mgrigoretgrh@gmail.com

November Issue Submission Deadline Is Oct. 10th!

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TWO VOLCANOES DEMONSTRATE THE RANGE OF VOLCANIC ERUPTIONS, CONTINUED

(Continued from page 9)

Kilauea is a shield volcano. Its name refers to its broad gently sloping shape, like a warrior's shield laid flat on the ground. It typically erupts hot, low silica, less gassy lava that has a relatively low viscosity – thin and runny. Such lava flows can't maintain a steep slope, resulting in the volcano's squat shape. Shield volcanoes tap magma coming up deep in the earth, either in hot spots not related to plate boundaries (such as Hawaii) or in places where plates are being pulled apart (such as Iceland). The rock formed is typically basalt. These eruptions are similar to those forming the lavas 1.1 billion years ago in the Lake Superior area in northern Michigan, Wisconsin and Minnesota.



Photo of the shield volcano Kilauea by Graeme Churchard of Bristol, UK, via Wikimedia Commons.

So different magma sources produce different types of magma, which erupt differently. But in terms of human misery, it is a stirring stratovolcano that gives volcanologists nightmares.