

# MWF News

Midwest Federation  
of Mineralogical and Geological Societies

January 2019 - Issue No. 578

Web Site - [www.amfed.org/mwf](http://www.amfed.org/mwf)

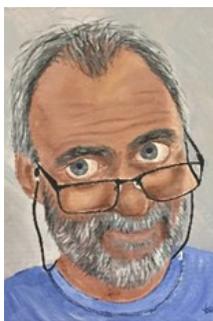


## PRESIDENT'S MESSAGE

Kevin Ponzio, MWF President

Hello everyone and Happy New Year!

Tempus fugit! It's January already! You know what that means? The deadline for sending in your membership/dues form is approaching! **It is vital that you get them in before January 15th.** Won't you think of the children!?! If you have your dues in on time, you get a free subscription to Diamond Dan's Mini Miners Monthly! Oh, to be young again. Make sure to print clearly in both the membership/dues form and your event form. The forms are on pages 7 and 8 of this issue.



How about some news that is out of this world? Well, actually it's in this world. A giant meteor crater was discovered under the ice sheet of Greenland. The crater is about the size of New York City! It was confirmed in November 2018. Can you imagine if you were out walking your pet when it landed? Please, pet owners, be calm. It's important to your pet and carpet

*(Continued on page 5)*

## LIVING MEMORIALS HONOR TWO

Marge Collins, Scholarship Fund Chair

The Chippewa Valley Gem & Mineral Society (Racine, Wisconsin) has honored Marvel Newton and Dr. William Cordua – each with a Living Memorial.

*[Editor's Note: You can read Dr. Cordua's annual year-in-review article for MWF News beginning on page 3 of this issue.]*

Marvel Newton is one of the club's founding members. Over the past 56 years she has been one of their most active members, serving almost every board and committee position, including Editor and Treasurer. She is an active participant in the club's annual show.

Dr. Cordua is no stranger to MWF! Emeritus Professor at University of Wisconsin, River Falls, Bill Cordua has been extremely generous with his knowledge and enthusiasm for earth science. The Chippewa Valley Gem & Mineral Society is one of the clubs that has benefited from numerous presentations and help from him over many years.

*(Continued on page 3)*

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### DEADLINE CALENDAR

MWF Dues & Insurance and Calendar of Events forms are both due **Jan. 15, 2019**. See pages 6-8, or contact Sandy Fuller at mwftras@rockbiz-biz.

MWF All American Club yearbooks deadline: **Jan. 15, 2019**. See the MWF website under "About Us," or contact Mary Ann Rich at email address MAFR43@hotmail.com.

Delegate registration for the MWF Annual Meeting is due **March 4, 2019**. The meeting will be held March 23-24 in Cedar Rapids, Iowa. For more information see the form on page 4, or contact Tony Kaptan, cigmc@comcast.net.

### CLUBS NAME THEIR 2018 ROCKHOUNDS OF THE YEAR

*(Editor's Note: The following Rockhound of the Year award statements were written by the clubs giving the awards and assembled by Steve Shimatzki. Congratulations to all of the honorees!)*

#### Spring River Gem and Mineral Club (Arkansas)

The Spring River Gem and Mineral Club of Arkansas names **Norvin (Bud) and Jean Green** as our 2018 Rockhounds of the Year, and hereby nominates them for the Midwest Federation's 2018 Rockhound of the Year Award.

Norvin and Jean lived in Seneca, Illinois where they met and married. Norvin worked for DuPont. Upon his retirement they relocated to Ash Flat, Arkansas. They joined the Spring River Gem and Mineral Club and became the club's trip coordinators. Jean and Norvin spent many hours on the internet and roads searching places the club could hunt, in and out of state. They would travel to a possible site to check it out and gain permission for club members to hunt. They also gathered information that club members might need, like campsites, motels, restaurants and accessibility for persons with special needs.

Recently Norvin and Jean have become full-time RV'ers, fulfilling their passion for travel and

rockhounding. Jean has an impressive collection that she shows when people are interested in their kind of rocks.

They've traveled to many states and have collected rocks which they graciously share with their club for the silent auctions. Norvin and Jean Green are a very kind, caring couple. They never meet a stranger. Rockhounding isn't just their hobby but their passion.

Norvin and Jean Green are very deserving of this prestigious MWF award.

#### Rock River Valley Gem and Mineral Society (Illinois)

The Rock River Valley Gem and Mineral Society of Loves Park, Illinois is proud to announce our Rockhound of the Year Award winners for 2018. We have co-recipients this year: **Ruth and Chris Cox**.

Ruth and Chris Cox are relatively new members of our club, but they have stepped up to accept responsibility, first for hospitality, and now as secretary and vice president, respectively.

*(Continued on page 10)*

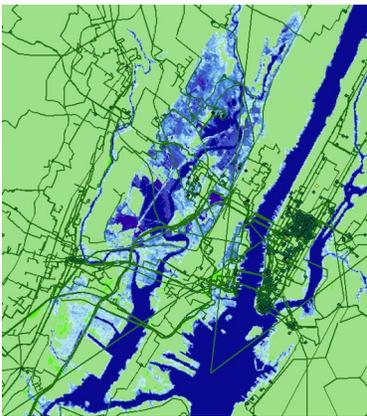
## 2018 GEOLOGY IN REVIEW: ICE, WATER, WIND, AND EARTH

Dr. Bill Cordua, MWF Geology Committee Chair

Here are some geology news items from 2018 that might interest MWF readers.

Ice in “ice”? A report in the journal *Science* by geologists at the University of Nevada-Las Vegas describes finds of the high-pressure form of H<sub>2</sub>O, ice-VII, as inclusions in diamonds forming below 200 kilometers in the earth’s mantle. The discovery of water (NOT as liquid) at these depths has important implications in modeling the deep mantle, including effects on magma origin and plate movement.

A study by University of Wisconsin-Madison computer scientists shows that many Internet hubs and wires in coastal cities will be submerged by rising sea level within the next 15 years. New York, Miami and Seattle and other coastal communities are at risk of losing their internet connections. These will need to be either relocated or replaced by equipment designed to function under water.



*Map of New York City's internet infrastructure, with blue-shaded areas representing places projected to be underwater by 2033. Picture by senior study author Paul Barford, who said, "The expectation was that we'd have 50 years to plan for [seawater inundation]. We don't have 50 years." Via news.wisc.edu.*

Can dust be your friend? Texas A and M researchers found that abundant dust blown off the Saharan Desert can suppress the number and severity of Atlantic hurricanes. Who says an ill wind can blow no good?

A paper recently published in *Nature* revises ideas about the temperature at which granitic magma crystallizes. Conventional thoughts puts this temperature at about 650-700° C, based on laboratory modeling of artificial granite magmas. Trace element work on quartz in granite in Yosemite Park suggest granitic magma can be liquid as low as 475-560° C. This has important implications on how granite can form the associated ore deposits and pegmatites so beloved by mineral collectors.

Structures in Australian chert at Stanley Pool, dated as 3.4 billion years old, were controversially proposed to be microfossils. New studies presented in August, 2018 verify the presence of organic molecules in the structures similar to those in modern bacteria, supporting the idea that life was present on Earth that long ago.

The Minnesota DNR has granted a permit to mine and other needed permits to PolyMet for their proposed copper-nickel open pit mine in the Hoyt

*(Continued on page 5)*

## LIVING MEMORIALS, CONTINUED

*(Continued from page 1)*

Honoring club members or friends with a Living Memorial donation to the AFMS Scholarship Foundation is a meaningful way for a club to recognize and celebrate treasured members while they are still alive. Anyone can honor living or deceased members, or make an outright donation. Please send a check, payable to *AFMS Scholarship*, to:

MWF Scholarship Committee  
c/o Marge Collins  
3017 Niles-Buchanan Road  
Buchanan, MI 49107

For *any* memorial donation, please include name(s), reason or occasion for the honor, etc. A congratulatory note can be sent to honoree's address. For deceased members, if appropriate, include next of kin. If we have any questions, we will contact you.

**MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES  
COUNCIL MEETING  
DELEGATE REGISTRATION**

Saturday March 23, 2019

The Midwest Federation's 79th annual meeting will be held in conjunction with the annual 2019 show of the Cedar Valley Rocks & Minerals Society, March 23-24, 2019. The show will be held at the Hawkeye Downs Expo Center, 4400 6th Street SW, Cedar Rapids, Iowa. The Council of Delegates Meeting will be held at the Ramada Cedar Rapids, 525 33rd Ave. SW, Cedar Rapids. Each member club/society is entitled to one (1) Delegate and one \*(1) Alternate to represent them.

The MWF Council of Delegates Meeting will convene Saturday, March 23rd at 1:00pm, with the delegate registration beginning at 12:30 p.m. at the Ramada Cedar Rapids. The Delegate appointed by your club or society will represent your interests, and may bring up pertinent discussions and proposals. However, in order to expedite matters, if your society intends to have its Delegate present any special motion at the meeting, please notify MWF President Kevin Ponzio and MWF Secretary Donna Moore as to the nature of the subject, so that it may be placed on the agenda. This needs to be presented in written form. This should be done at least one month prior to the meeting.

\*Each club is entitled to one vote. An alternate may vote only in the absence of a Delegate. Guests are invited to attend the meeting, but are ineligible to vote.

**Please fill out this form and return it to the Credentials Chairman:**

**Tony Kapta**  
**1483 E Wood Street, Decatur, IL 62521**  
217-233-1164, email [cigmc@comcast.net](mailto:cigmc@comcast.net)  
**Before March 4th, 2019**

(DO NOT send this form to the show registration committee)  
**THANK YOU FOR YOUR PROMPTNESS**

MIDWEST FEDERATION DELEGATE REGISTRATION FORM  
PLEASE PRINT OR TYPE TO AVOID ERRORS

THIS IS TO CERTIFY THAT (name of club) \_\_\_\_\_

OF (city and state) \_\_\_\_\_

HAS APPOINTED THE FOLLOWING DELEGATE TO THE 2019 ANNUAL MEETING OF THE MWF:

DELEGATE \_\_\_\_\_ EMAIL \_\_\_\_\_

ADDRESS \_\_\_\_\_

ALTERNATE \_\_\_\_\_ EMAIL \_\_\_\_\_

ADDRESS \_\_\_\_\_

DATED \_\_\_\_\_ SIGNED \_\_\_\_\_, Club President

## 2018 GEOLOGY REVIEW: ICE, WATER, WIND, AND EARTH, CONTINUED

(Continued from page 3)

Lakes-Babbitt area in northern Minnesota. Environmental groups continue to fight the proposed \$945 million operation. The ore is associated with a 1.1-billion-year-old mafic igneous body, the Partridge Ridge Intrusion. It contains an estimated 225 million tons of ore, enriched in nickel, cobalt, copper and platinum group metals. And, unfortunately, sulfur.

Also in Minnesota, Crow Wing Power, which owns mineral rights to the manganese deposits in the Emily area on the Cuyuna Iron Range, continues to consider mining the ore. Economic manganese deposits are rare in the US. In fact, there has been no significant manganese mining here since 1970. This requires US companies to import 100% of the manganese used in manufacturing, mostly from South Africa, Gabon, Australia and Norway.

Manganese is used in many industrial processes, such as hardening steel and making lithium batteries. Should these mines re-open in Minnesota, it is possible that very good specimens of manganese-

## PRESIDENT'S MESSAGE, CONTINUED

(Continued from page 1)

that you continue to walk them. Learn more online. (About the crater.)

The Living Memorials have started to roll in. Outstanding! Why wait? You can honor people that you respect and admire *before* they are gone. Plus, your club will be recognized for its generosity as well! Join in and keep the donations coming!

Do you realize that the combined AFMS and MWF convention in Cedar Rapids, Iowa is less than three months away? Make plans now for this wonderful event. There will be the enjoyment of rockhound camaraderie that we all love. And, just think of all the interesting gems, fossils and minerals from the Midwest that will be available at the show! Looking forward to seeing everyone there!

Have a great start to the new year and I will see you next month!

rich minerals (rhodochrosite, groutite, manganite) will emerge to grace our collections.

Old mines are also in the news. On the one hand, there are renewed calls to seal them off for safety reasons, especially in places like Colorado and Utah, where hundreds of abandoned openings exist.

On the other hand, old mines are popular sites for mineral collecting (and preservation), tourist attractions and other underground exploration adventures. They are also increasingly used as research facilities. Some research uses are detection of neutrinos, investigation of sub-surface bacterial ecosystems, and feasibility of carbon and hazardous waste sequestration. The Tower-Soudan Mine in Minnesota has been used for such research since 1981.



*And for underground tours! Photo from the Minnesota Department of Natural Resources, [www.dnr.state.mn.us](http://www.dnr.state.mn.us).*

Use of certain clear minerals, such as a cleavage rhomb of clear ("Iceland spar") calcite, can be effective in navigating in cloudy conditions. Molecules in the atmosphere act as a weak polarizing filter. Studying the sky through a piece of calcite, another polarizing material, will show darker or lighter shading depending on the geographic direction, thus help locate north. Two University of Hungary researchers used computer simulations to show that this would be an effective way to navigate from Norway to Greenland under various cloud cover conditions. Now I encourage these researchers to duplicate this "in the field" with a real Viking ship and a piece of calcite. A convincing proof would be their safe arrival in Greenland.

**DUES AND EVENTS FORMS ARE HERE! (AND ARE DUE JANUARY 15TH)**

Sandy Fuller, MWF Treasurer

The 2019 Midwest Federation forms for RENEWING CLUB MEMBERSHIPS are now available on our website ([www.amfed.org/mwf](http://www.amfed.org/mwf)) and in this issue of the Midwest Federation News. Look for them! Meanwhile, please alert club officers to collect information for the forms.

One important piece of information needed is the total number of individual adult and youth members during the year completed in 2018. These figures are used for dues and insurance calculations. The rationale is that your total membership, by the end of the year, is usually about the same, so you always pay the current year dues based on your past experience. The treasurer needs this information **before January 15** so our insurance can be activated on time.

Please provide a roster of current officers, including preferred mailing addresses, phone numbers and email address. If handwritten, please ensure that letters and numbers are legible. If an individual does not want this information published on the website, follow the directions on the form to indicate this. However, please provide all contact information so we can actually reach you and not some unattended phone or email. This year you may include a list of additional officers who would like to receive the MWF News and Mini Miners Monthly via email. You must provide the name, position and email address for these individuals.

Clubs who renew on time can receive email subscriptions to the juniors' publication Mini Miners Monthly. There will be a verification of the email addresses and the need to complete an online agreement form before the subscriptions can begin.

Use the EVENTS form to submit details of upcoming shows and events during the coming year. You may include a flyer, printed on white paper, as additional information. If this information is submitted with the dues, we will make sure it gets to the website, newsletter and directory coordinators. If it is submitted later, or separately, it is more likely to get overlooked.

Finally, and probably most important to many, the 2019 membership rates are the same as before. Our MWF Endowment Fund supports our special projects, helping to keep dues consistent from one year to the next. Dues are \$2.00 per adult and \$.50 per youth.

Insurance will stay the same for 2019. Our current rate is \$4.50 per individual to be covered by the policy. Clubs that submit their dues on time (postmarked no later than January 15, 2019, may take a 25-cent-per-member discount. Include **all** members when computing your insurance premium.

**Remember**, the Federation insurance policy will cover groups of clubs jointly sponsoring shows or events **only if all** of the sponsoring clubs are current Federation members and all of the sponsoring clubs purchased Federation insurance. Requests for insurance for jointly sponsored events must include a list of all sponsoring clubs.

Questions about these forms or dues? Call Sandy or Martha at 651-459-0343, or email Sandy at [MWFtreas@rock-biz.biz](mailto:MWFtreas@rock-biz.biz). Direct insurance questions to Chris Ivancic at 260-433-2699 or [Ivancic.chris@gmail.com](mailto:Ivancic.chris@gmail.com).

*February Issue Submission Deadline Is Jan. 9th!*



# Midwest Federation of Mineralogical and Geological Societies Annual Dues, Insurance and Club Contact Information

(Use INK! Please print, type or complete form on-line. Submit original.)

**CLUB NAME** \_\_\_\_\_ **STATE** \_\_\_\_\_

**2019 Club Dues** (Use membership figures from year completed in 2018)

**Number of Adult Club Members** \_\_\_\_\_ X \$2.00 = \$ \_\_\_\_\_

**Number of Youth Club Members** \_\_\_\_\_ X \$0.50 = \$ \_\_\_\_\_

Do you want MWF Membership Cards? \_\_\_ Yes \_\_\_ No

**2019 Club Insurance** (Optional, but if chosen, must pay for all members)

**Total number of club members** \_\_\_\_\_ X \$4.50 (\$4.25 for qualifying clubs\*) = \$ \_\_\_\_\_

(\*Renewals postmarked by January 15, 2019 receive a discounted insurance rate of \$4.25 per member)

**Total Dues and Insurance Remitted:** \$ \_\_\_\_\_

(Make check payable to Midwest Federation)

**FORM, DUES, INSURANCE PAYMENT, & EVENTS LISTINGS are DUE by JANUARY 15, 2019**

Mail to: MWF, c/o Sandy Fuller, 8445 Grange Blvd., Cottage Grove, MN 55016

### Club Contact Information for Mailings, Directory & Website

Please provide mail and email addresses that are checked regularly. Circle the **E** in front of each position to receive the MWF News electronically. Circle the **P** for print copy (limit one, in addition to pre-designated copies for the Treasurer and Bulletin Editor). Place an asterisk (\*) in front of each email, phone and address that should not be listed on the MWF website.

**E P President** \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**E P Secretary** \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**E P Treasurer** \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**E P Liaison** \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**CLUB BULLETIN NAME** \_\_\_\_\_

**E P Editor** \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**CLUB MEETING PLACE** \_\_\_\_\_

**DAY & TIME** \_\_\_\_\_

**Club Website/Facebook** \_\_\_\_\_ **Club Email** \_\_\_\_\_

Please send the **MWF Directory and Official Federation Mail** to:

Choose one only > \_\_\_ President \_\_\_ Secretary \_\_\_ Treasurer \_\_\_ Liaison



### Calendar Of Events Listing Information

For Publication In MWF Directory, Website & Newsletter

(Use INK! Please print, type or complete form on-line. Submit original.)

CLUB NAME \_\_\_\_\_ STATE \_\_\_\_\_

Show Chair \_\_\_\_\_ Email \_\_\_\_\_

Event Type: \_\_Annual Show, \_\_Rock Swap, \_\_Other \_\_\_\_\_

Dates: \_\_\_\_\_ Days/Times: \_\_\_\_\_

Facility/Location Name: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

**EVENT CONTACT INFORMATION (This will be published!)**

Contact Person's Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Club \_\_\_\_\_

Email: \_\_\_\_\_ Website: \_\_\_\_\_

**ADDITIONAL EVENT:**

Event Type: \_\_Annual Show, \_\_Rock Swap, \_\_Other \_\_\_\_\_

Dates: \_\_\_\_\_ Days/Times: \_\_\_\_\_

Facility/Location Name: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

**EVENT CONTACT INFORMATION (This will be published!)**

Contact Person's Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Club \_\_\_\_\_

Email: \_\_\_\_\_ Website: \_\_\_\_\_

**\*\* Please include event listings for January, February, March and April 2020. \*\*  
Mail completed form with your dues. Questions? Call 651-459-0343**

**DEADLINE FOR DIRECTORY INFORMATION IS JANUARY 15, 2019**

**REMEMBER, this information, including contact information, will be published in the MWF Directory, posted on the MWF website, and listed in the MWF News.**

## 2019 IS THE INTERNATIONAL YEAR OF THE PERIODIC TABLE OF THE ELEMENTS

Valerie J. Meyers, Editor

Welcome to 2019, the International Year of the Periodic Table of the Elements (IYPT)! The year was proclaimed back in 2017 by the United Nations, and UNESCO is the UN agency that is coordinating international observance of the year. Other founding partners include the International Union of Pure and Applied Chemistry, the European Chemical Society, the International Science Council, the International Astronomical Union, the International Union of Pure and Applied Physics, and the (deep breath) International Union of History and Philosophy of Science and Technology.

The year 2019 was chosen because it is the 150-year anniversary of the current table of elements, as designed by Russian chemist Dmitri Mendeleev. His work, "On the Relationship of the Properties of the Elements to Their Atomic Weights," including his proposed table, was published in 1869. However, he was not the first to design such a table. Antoine Lavoisier published a list of 33 elements in 1789,

grouping them into gases, metals, non-metals, and earths. Other attempts at organizing the elements were made until, as so often happens in science, three people came up with very similar notions within a very short period of time. German chemist Julius Lothar Meyer published tables in both 1864 and 1870; British chemist John Newlands published tables in 1863 and 1866; and Mendeleev's table was published in 1869. For different reasons, Mendeleev's table is considered the first publication of today's periodic table. (However, America celebrates its National Periodic Table Day on February 7<sup>th</sup>, the anniversary date of one of Newlands' first publications.)

The opening ceremony of the IYPT will be held on Jan. 29<sup>th</sup> in Paris, France. Among the speakers will be Ben Ferina (who won the Nobel Prize for Chemistry in 2016) and Yuri Oganessian, author of the most recent element, Oganesson, Number 118. The University of Murcia in Spain will be hosting an international symposium about women's contributions to the periodic table on Feb. 11<sup>th</sup> and 12<sup>th</sup>. (Feb. 11,

*(Continued on page 11)*

1 H Hydrogen 1.008																	2 He Helium 4.003	
3 Li Lithium 6.94	4 Be Beryllium 9.012											5 B Boron 10.81	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180	
11 Na Sodium 22.990	12 Mg Magnesium 24.305											13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.06	17 Cl Chlorine 35.45	18 Ar Argon 39.948	
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.867	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.630	33 As Arsenic 74.922	34 Se Selenium 78.97	35 Br Bromine 79.904	36 Kr Krypton 83.798	
37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.95	43 Tc Technetium [97]	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.414	49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.750	52 Te Tellurium 127.60	53 I Iodine 126.904	54 Xe Xenon 131.29	
55 Cs Cesium 132.905	56 Ba Barium 137.327	* 57-70 Lanthanide series	71 Lu Lutetium 174.967	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.222	78 Pt Platinum 195.084	79 Au Gold 196.967	80 Hg Mercury 200.596	81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [209]	85 At Astatine [210]	86 Rn Radon [222]
87 Fr Francium [223]	88 Ra Radium [226]	** 89-102 Actinide series	103 Lr Lawrencium [262]	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [277]	109 Mt Meitnerium [276]	110 Ds Darmstadtium [285]	111 Rg Roentgenium [284]	112 Cn Copernicium [285]	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [294]	118 Og Oganesson [294]
*Lanthanide series																		
57 La Lanthanum 138.905	58 Ce Cerium 140.116	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.242	61 Pm Promethium [145]	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.259	69 Tm Thulium 168.934	70 Yb Ytterbium 173.045					
**Actinide series																		
89 Ac Actinium [227]	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium [237]	94 Pu Plutonium [244]	95 Am Americium [243]	96 Cm Curium [247]	97 Bk Berkelium [247]	98 Cf Californium [251]	99 Es Einsteinium [252]	100 Fm Fermium [257]	101 Md Mendelevium [258]	102 No Nobelium [259]					



## CLUBS NAME THEIR ROCKHOUNDS OF THE YEAR, CONTINUED

*(Continued from page 2)*

It is surely a pleasure for our club to have them as officers and to have them receive this award. Congratulations, Ruth and Chris.

### The Dayton Gem and Mineral Society (Ohio)

The Dayton Gem and Mineral Society (DGMS) would like to take this opportunity to nominate **John Steidle** for the Midwest Federation 2018 Rockhound of the Year award. John is a native of northern Kentucky, a graduate of St. Thomas More College and the University of Detroit. He also has a master's degree from the Air Force Institute of Technology. He moved to Dayton to take employment as an engineer at Wright Patterson Air Force Base, where he worked for over 34 years.

He has been an active member of the Dayton Gem and Mineral Society since 1970. During those 48 years, he has served in numerous capacities for the DGMS, including president, secretary and newsletter writer/editor.

John is an avid gem and mineral collector, having collected in numerous places throughout the tri-state area and in other states such as Arkansas, Michigan, Maine, and North Carolina, a personal favorite of his. Still, John's real love is faceting. Over the years he has become very skilled, proficient and productive, bringing in several pieces of his handiwork to almost every DGMS monthly meeting. He's always on the lookout for new faceting material at shows and field trips.

Even as far back as the 1970s, John had an interest in faceting, despite his limited resources and faceting equipment at that time. So, being a jack-of-all-trades and a person who seems to be able to fix or build anything, he built his own faceting equipment. John is certainly the club's resident expert on anything involving this "facet-nating" art and science.

All of the members of the DGMS are familiar with John's years of participation and devotion to the club. We believe that he is richly deserving of this prestigious MWF award.

### 500 Earth Sciences Club of Central Indiana

The 500 Earth Sciences Club of Central Indiana is happy to announce our 2018 Rockhound of the Year Award recipient, **Cheryl Hamilton**.

Cheryl has held the positions of president, chairperson of the annual club show, and other official and non-official positions with the 500 Earth Sciences Club. As a member for more than 28 years, she has helped the club grow and prosper through her organizational skills and consistent level of club participation during her membership. Cheryl has been a driving force in exploring and instituting novel fundraising opportunities that have resulted in funds for geological scholarships.

## REQUEST RE THE MARCH SILENT AUCTION

Susan Stanforth, Silent Auction Chair

Whoosh! There goes Christmas! March is coming faster than Richard Petty backing out of his driveway, and March will bring the Annual Meeting of the Midwest Federation in Cedar Rapids, Iowa. And I really, really, really need items for the Annual Meeting's silent auction, which benefits our Endowment Fund. Do I need to remind you what we do with our Endowment money?

*(Editor's Note: The form for registration of delegates to the Annual Meeting is on page 4.)*

So, I'm pleading with Club members to set aside a little something-something to donate for our auction in March. Send it with your MWF liaison or MWF committee member. Bid sheets are on the website. After all, you are bringing home more treasures than you can fit in your home. So donate your old specimens, or buy a bigger house. Isn't that logical?

Prayers and thoughts to all the people in Central Illinois who were harmed by the recent tornadoes, especially those in the Taylorville and Springfield areas.

**DON'T BE A WRECK-HOUND — BE A RECREATIONAL ROCKHOUND!**

Shirley Leeson, Ambassador  
American Lands Access Association  
Via the October 2018 newsletter of the  
Southern Illinois Earth Science Club

We are asking you to help us re-brand our name, who we are and what we do.

Rockhound: Currently, what does that word mean?

Does the general public see us as: People who left huge holes where we dug out rocks? Someone who left their gates open? This could be a property owner, or a company owner who has granted us access to something they consider useless, but is of real interest to a rockhound.

When we ask to have public lands areas kept open for multi-use, how does Washington, D.C. look upon us? Environmentalists who see us as “stealing natural resources” and wish them left in the ground? A government employee who sees us taking a truckload of material off public lands, only to put it up for sale on social media?

As a “rockhound,” what does that word bring to mind to you? A grandfather or uncle taking you on a collecting trip for pretty rocks? A teacher opening up the wonders of the environment by showing you rocks, minerals and fossils in the classroom setting? A rockhound visiting a school and bringing rocks that have been cut and polished to show the inside of a very plain rock? A rockhound club putting an exhibit of gems, minerals and fossils in the library or at the entry to a public building? A rockhound club inviting you to their show and showing you what collecting rocks is all about? A demonstrator showing you how a gemstone is cut? A county fair where there is a gem and mineral department showing you all the joyous things about being a rockhound?

Here's the problem: Our image has been tarnished by some. What can we do to restore it to a good image – a good brand?

The American Lands Access Association (ALAA) has tried to change the image. We're asking you all to begin to use the term, “recreational rockhound,” like “recreational off-roading.” This implies that we are on public lands as a recreational occupation and using it as a teachable moment, a pleasant experience for those attending . . . maybe for the first time.

We're asking you to look around and see what you can do personally to make recreational rock hounding a noble occupation once again, please. And just maybe, when we attend management meetings for the Bureau of Land Management or Forest Service, they will look upon us as “recreational rockhounds.” Don't forget, most recreational rockhounds belong to a society or club regionally, and nationally we have a code of ethics. Let's follow them.

**DUES AND INSURANCE FORMS  
(PP. 7-8) ARE DUE JAN. 15TH!  
LATE SUBMISSIONS MAY NOT BE  
PROCESSED UNTIL LATE  
FEBRUARY!**

**YEAR OF THE PERIODIC TABLE, CONTINUED**

*(Continued from page 9)*

2019, will be the International Day for Women and Girls in Science.) The Marin Society of Artists in San Rafael, California, will present an art exhibition celebrating the elements from Jan. 2<sup>nd</sup> to Feb. 10<sup>th</sup>.

So in 2019, give your silver, copper, gold, platinum, bismuth, sulfur, graphite (carbon) and other native elements pride of place in your collection. (If you have gold and platinum, they probably already have it.) Better yet, put them into a case with a copy of the periodic table as an exhibit for 2019 shows. Include a sample of the mineral mendeleevite, if you happen to have any of that hanging around – the element mendeleevium can only be produced in a particle accelerator, and that's hard to fit in a display case.

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### **WHERE SHOULD YOU CONCERN YOURSELF WITH SAFETY?**

Ellery Borow, AFMS Safety Chair  
From the November 2018 A.F.M.S. Newsletter

Where is safety? A short story, if I may. Of the six or so folks who read these Safety Matters articles, one of those readers related a story of a recent safety matter she experienced. While digging a hole in her back yard to plant a plant, she encountered a large rock. Being a rock person, she gathered her rock cracking hammer and chisel and proceeded to reduce the size of the rock using her tools. She related what I might call a “thought bubble” over her head which read, “Shouldn’t I be wearing my safety glasses?”

That one reader thought of safety glasses while breaking a rock to plant a plant is what I would call a success. Safety is a full-time responsibility.

Where is safety? Safety matters relate to planting a plant, breaking a rock, driving to a field trip, and grinding a stone. Safety matters do not end when one leaves the quarry or the office, or drives back into the garage.

Where is safety? Safety matters are everywhere.

In the many and varied locations of our rock hobby, safety matters are everywhere – at our club meetings; our shows; our workshops; our collecting trips; our talking about the hobby in school, church, or civic groups; our rock trimming and identification activities. Safety matters abound in all aspects of our hobby. Some safety matters are well documented and clear. Some safety matters hide in the dark and are unique to a situation. Being safe means being mindful of rules, guidelines, obvious and less obvious hazards, and, perhaps most of all, being prepared and well aware of the potential danger in every situation.

Being safe is not complicated. We pretty much know what we need to do to be safe, so it mostly a matter of doing that which we know is the right thing to do to remain safe.

Please, be safe in and with all you do. Your safety matters.