

THE

ROCKPILE

Official Publication of the Midwest Mineralogical and Lapidary Society

AFFILIATED WITH • MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES • AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES

June 2021



SOUTHEASTERN - MICHIGAN

Midwest Mineralogical & Lapidary Society

2021 OFFICERS

President: Dan Gumina (313) 766-8944
Vice President: Mike Bomba (313) 381-8455
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Treasurer: Doris Snyder (313) 291-2133
Corresponding Secretary: Diane Kuzara (734) 675-5237
Liaison Officer: Peter Kuzara (734) 675-5237

COMMITTEE CHAIRPERSONS

Club Services: Ana Ferguson
Door Prizes: Mike Bomba
AFMS Scholarship: Pat Rutkowski
Field Trips - Mike Bomba/Gary Slominski
Education: Dave Hendershot
Historian: Tom Morris
Michigan Material: Tom Morris
Membership: Ana Ferguson
MMLS Scholarship: Velma Bradley
Program Coordinator: Mike Bomba
Property – Storage: Gary Slominski
Sunshine Reporter: Velma Bradley
Refreshments: Gary Slominski
Web Site: Stacey Harper

ACTIVITIES

2021 Banquet: Dan Gumina
2021 Club Picnic: Stacey Harper
2021 Swap: Lou and Cindy Talley
2021 Super Swap: Bill Barr
2021 Auction: Dwayne Ferguson

The Rockpile Staff : Editor Peter Kuzara,
email: Kuzara1126@gmail.com 734-675-5237

MMLS website – www.mmls.us
Email - rockhounds@mmls.us

General Club meetings are held at 7:30 p.m. on every
third Tuesday of the month (except July and August) at
the Democratic Club of Taylor, 23400 Wick Rd., Taylor,
MI 48180

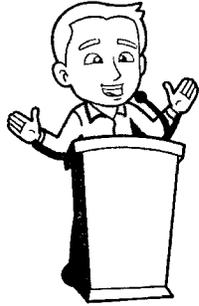
GUESTS ARE ALWAYS WELCOME

STUDY GROUPS

Lapidary: Workshop at Frank Konieczki's
Bead Study: Diane Kuzara
Mineralogy: Bill Barr at David Esch's

PAST PRESIDENTS

Robert Ellison (interim) 1956
Louis Cox 1957
Robert Heldenbrand 1958-59
Ralph Gamble 1959-60
Fred Miller 1960-61
Bert Smart 1961-62
Leo Nieman 1963
Nicholas Rothenthaler 1964-65
Robert Fedoruk 1966-67
John Good 1968-69
Cecilia Duluk 1970
Stanley Franczak 1971-72
E. Donald Stinnett 1973-74
Ralph Goniea 1975-76
Norman Hanschu 1977-78
Thomas Gibbs 1979-80
Harry Nagy 1981-82
Elsbeth Gibbs 1983-84
Loretta Franczak 1985-86
Roland Snyder 1987-88
Jay Ross 1989-90
Tom Morris Jr. 1991-92
Diane Kuzara 1993-94
Bill Orban 1995-96
Glenn Swain 1997-98
Bill Peach 1999-2000
Diane Kuzara 2001-02
Cecilia Duluk 2003-04
Russ Ranker 2005-06
Dick DePodesta 2007-08
Rich Williams 2009-10
Leonard Swisher 2011-12
Mike Bomba 2013 - 14
Diane Kuzara 2015 - 16
Dan Gumina 2017 - 18
Diane Kuzara 2019 -2020



From The President's Desk:

**Welcome Back To Our
General Meetings**

Dan

WE ARE BACK!!!

**SOUTHEASTERN MICHIGAN
GEM, MINERAL & ROCK
SUPER SWAP**

**October 2nd and 3rd at the Wayne
County Fairgrounds 10871 Quirk Rd.
Belleville, Michigan. For more
information contact Bill Barr
wbarr@umich.edu**

Welcome New Members

Melissa Seitz
Sawyer Seitz (JM)

Dates to Remember

June 7th 21st and 23rd Lapidary Work Shop
2009 W. Michigan Ave., Ypsilanti, MI.
7pm. To 10pm.
Space is limited so please call Frank Konieczki
734-323-2218 before attending

June 11: Board Meeting, Rockpile Deadline TBA.

June 15: General Meeting will be held at the
Democratic Club of Taylor, 23400 Wick Rd. Taylor,
Michigan at 7:30 Pm. **Face Masks are required.**

Aug 16 Deadline for the September Rockpile

**BEFORE TRAVELING TO ATTEND ANY
UPCOMING SHOWS MAKE SURE IT IS NOT
CANCELED!!**

Sister Club Events

June 4-6: WAUSEON, OH State Line Gem &
Mineral Society Annual Show. Fri Noon-6; Sat
10-6; Sun 11-4. Fulton County Fairgrounds, Junior
Fair Building, 8514 SR 108, Wauseon. Contact:
Sherman Kaedatzke, (517) 673-5487;
sakardatzke@gmail.com

June 12: GRAND RAPIDS, MI Indian Mounds
Rock & Mineral Club Rock Swap
9-noon. Woodland Drive-In Church, 2600 Breton
SE, Grand Rapids. Contact: Kreigh Tomaszewski,
(616) 243-5851; kreigh@gmail.com

June 12-13: MANSFIELD, OH Mid-Ohio
Mineral & Fossil Club Rock Swap. Sat 10-6; Sun
11-5. Mansfield Fairgrounds, Fairhaven Hall, 750
Home Rd., Mansfield. Contact: Tom Kottyan,
(419) 562-1152; themineralhouse@netzero.net

June 25-27: BEDFORD, IN Lawrence County
Rock Club Annual Show. Fri 10-6:30; Sat 9-6:30;
Sun 10-4. Lawrence County Fairgrounds, US
Highway 50, Bedford. Contact: Michael Tweedate,
(573) 466-9093

The next ALAA Meeting is scheduled for June 20,
2021 during the AFMS/RMFMS Convention... In
Big Piney, WY.

ALAA Live Auction June 19, 2021 during the
AFMS/RMFMS Convention...

Aug 7: ISHPEMING, MI Ishpeming Rock &
Mineral Club Annual Show 9:30-4:30. Ishpeming
Elk's Club, 597 Lakeshore Dr.,
Ishpeming. Contact: Kirsten Maki, (906)
204-2623; kmaki75@gmail.com

Aug 13-15: HOUGHTON, MI Copper Country
Rock & Mineral Club Rock Swap Fri 1-8; Sat 10-6;
Sun 11-3. Houghton Middle School, 1603 Gundlach
Rd., Houghton
Contact: Rob Grabarczyk; pres@ccrme.info

June, 2021

Aug 14: CLIO, MI Flint Rockland Gem Club
Rock Swap. 9-4 Flint Rock & Gem Club, 11350 N
Saginaw Rd., Clio

Contact: Bill Wendling, (810)
638-5796; bwrockbarn@centurytel.net

Sept. 10 - 12 2021 Midwest Federation
Convention is at the Toledo, Ohio show.
Pavilion, County Fairgrounds, 13800 W. Poe Road,
Bowling Green, OH. Jheerx6aol.com

Sept. 17-19: HOLLAND, MI Tulip City Gem &
Mineral Club Annual Show. Fri 10-8; Sat 10-7; Sun
11-5. Soccer Stop Sportsplex, 5 River Hills Dr.,
Holland. Contact: Sue
Goedert, (616)337-1162; sonbeams2000@yahoo.com

Sept. 18-19: HOWELL, MI Livingston Gem &
Mineral Society Annual Show. Sat 10-6; Sun
10-4. Hartland Education Support, 9525 E.
Highland Rd., Howell. Contact: Edward Oler,
(810) 241-8801

**THE Michigan Mineral Beginning with the Letter
Z: Zoisite $Ca_2Al_3(SiO_4)_3OH$**



Zoisite, first known as saualpite, after its type locality, is a calcium aluminium hydroxy sorosilicate belonging to the epidote group of minerals. Its chemical formula is $Ca_2Al_3(SiO_4)_3(OH)$. Zoisite occurs as prismatic, orthorhombic (2/m 2/m 2/m) crystals or in massive form, being found in metamorphic and pegmatitic rock.

Color: blue to violet, Green, Brown, pink, yellow and gray

Hardness: 6 to 7 on Mohs scale.

Occurrence: Dickinson and Genesee Counties

Wyoming State Gemstone: Jade



Wyoming designated jade (nephrite) as the official state gemstone in 1967. Nephrite jade was discovered in Wyoming in the 1930s, which resulted in a "jade rush" that lasted several decades.

Trilobite Beetles by Kat Koch

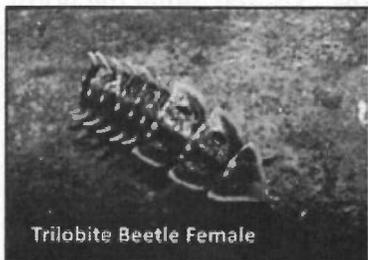
Trilobite Beetles appeared about 47 million years ago – about 200 million years after the last Trilobite. They are unrelated to the Trilobite of long ago but were named “Trilobite” because their similar armored bodies and helmet like heads. The Trilobite Beetle belongs to the family Lycidae, commonly known as net-winged beetles. They live totally on land and hate water and are found living happily in the lowland forests across Southeast Asia and India.

The Trilobite Beetles were first discovered around 1816 when a gentleman named Mark Wong was searching the jungle of Singapore for ants. He was flipping over logs when he found this very strange slow-moving beetle.



This beetle has mystified scientists for over 200 years. Until 1923 they had never discovered what they thought was a male Trilobite Beetle. Until then, when they

actually caught two beetles entwined, they had no idea what the male looked like or how they reproduced.



Trilobite Beetle Female

The females range in size from 1.6 inches to 3 inches and males are approximately .33 inches. As you can see the males and females are entirely different looking and vastly

different in size. They confirmed the male beetle not only by its association with the female when discovered but also by DNA.

Until recently, world's leading experts on these beetles were not 100% sure what they fed on and there was some conflict as to what their diet consisted of. The most popular and widely accepted theory now is that these beetles feed on microorganisms living within the juices of rotten logs, as outlined in the 1996 findings of researcher Alvin T. C. Wong (no relation to the Mark Wong above) from the Department of Zoology at the National University of Singapore.

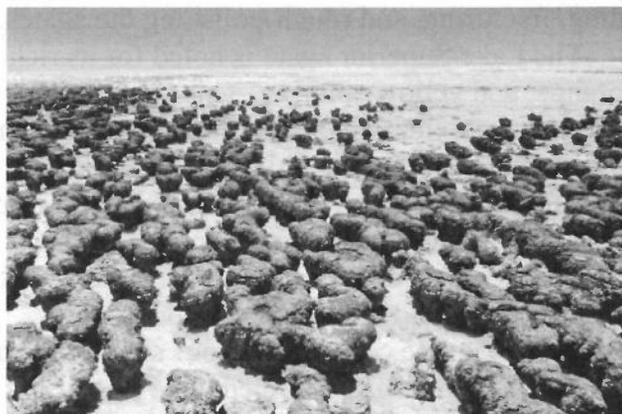
Bibliography:

Mental Floss, Science Direct, Wikipedia, Nature, American Museum of Natural History, National Geographic, Scientific American, Australian Geographic, Geotime, Natural History Curiosities, Invertebrate Dude.

Source: *The CMS Tumbler*, Feb 2021.

From the Michigan Mineralogical Society
Conglomerate 2/21

STROMATOLITES



Stromatolites – Greek for ‘layered rock’ are microbial reefs created by cyanobacteria (formerly known as blue-green algae).

Stromatolite deposits are formed by sediment trapping and binding, and/or by precipitation activities of the microbial communities. The microbes are active on the surface layer of the Stromatolites, while the underlying build-up is a lithified remnant of former microbial surface communities, that could be interpreted as a trace-fossil.

These deposits built up very slowly: a single 1m structure may be 2,000 to 3,000 years old. But the tiny microbes that make up modern Stromatolites are similar to organism that existed 3.5 billion years ago!

For context, consider that the Earth itself has been around for 4.5 billion years, and that Homo Sapiens have only been on Earth for 195,000 years. What’s more, Stromatolites are the reason why we’re alive today! Before cyanobacteria the air was only 1% oxygen. Then, for 2 billion years, our photosynthesising Stromatolites pumped oxygen into the oceans (like underwater trees, before trees existed). When the oceans’ waters were saturated, oxygen was released into the air, and with around 20% of oxygen in the air, life was able to flourish and evolve.

Even today you can see Stromatolites ‘fizzing’ underwater, releasing oxygen. Living Stromatolites are no longer widely distributed. There are only two well-developed marine Stromatolite areas in the world: in the Bahamas and at Hamelin Pool in the Shark Bay area of Western Australia.

Hamelin Pool is home to the most extensive living Stromatolite system in the world: the organisms thrive in the area’s hypersaline water, which is twice as salty as normal seawater.

Australia’s marine Stromatolites are protected: they’re part of the Hamelin Pool Marine Nature Reserve, which lies within the UNESCO World Heritage listed Shark Bay. The adjacent Hamelin Station Reserve is now owned by Bush Heritage Australia.

Hamelin Pool is perfect for Stromatolites because it’s hypersaline. Sea grass forms a ‘barrier’ between Hamelin Pool and the rest of the ocean, preventing ocean circulation, which would dilute the super-salty water.

But sea grass meadows are being damaged by the runoff caused by floods and extreme temperature events. Climate change is likely to lead to more frequent tropical storms and more frequent flooding events in the area, threatening the Stromatolites of Hamelin Pool.

Human interference is another threat. To protect the delicate structures, visitors are restricted to the boardwalk. From here they may be underwhelmed: Stromatolites look a little like cow pats from that vista. But, as Stromatolite expert Dr. Erica Suosaari says “underwater, the shapes, the sizes and the different mat surfaces are overwhelming in their variety...you feel like you’re in you in a Precambrian world!”.

From Rock Trails 3/21

Lake Superior Agates

The Lake Superior agate is a type of agate stained by iron and found on the shores of Lake Superior. Its wide distribution and iron-rich bands of color reflect the

gemstone’s geologic history in Minnesota, Wisconsin, and Michigan. In 1969, the Lake Superior agate was designated by the Minnesota Legislature as the official state gemstone. The Lake Superior agate was selected because the agate reflects many aspects of Minnesota. It was formed during lava eruptions that occurred in Minnesota about a billion years ago.

The stone’s predominant red color comes from iron, a major Minnesota industrial mineral found extensively throughout the Iron Range region. Finally, the Lake Superior agate can be found in many regions of Minnesota as it was distributed by glacial movement across Minnesota 10,000 to 15,000 years ago.

More than a billion years ago, the North American continent began to split apart along plate boundaries. Magma upwelled into iron-rich lava flows throughout the Midcontinent Rift System, including what is now the Minnesota Iron Range

region. These flows are now exposed along the north and south shores of Lake Superior. The tectonic forces that attempted to pull the continent apart, and which left behind the lava flows, also created the Superior trough, a depressed region that became the basin of Lake Superior.

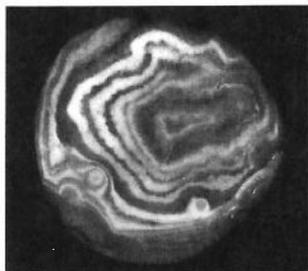
The lava flows formed the conditions for creation of Lake Superior agates. As the lava solidified, water vapor and carbon dioxide trapped within the solidified flows formed a vesicular texture (literally millions of small bubbles). Later, groundwater transported ferric iron, silica, and other dissolved minerals passed through the trapped gas vesicles. These quartz-rich groundwater solutions deposited concentric bands of fine-grained quartz called chalcedony, or embedded agates.

Over the next billion years, erosion exposed a number of the quartz-filled, banded vesicles—agate were freed by running water and chemical disintegration of the lavas, since these vesicles were now harder than the lava rocks that contained them. The vast majority, however, remained lodged in the lava flows until the next major geologic event that changed them and Minnesota.

During the ensuing ice ages a lobe of glacial ice, the Superior lobe, moved into Minnesota through the agate-filled Superior trough. The glacier picked up surface agates and transported them south. Its crushing action and cycle of freezing and thawing at its base also freed many agates from within the lava flows and transported them, too. The advancing glacier acted like an enormous rock tumbler, abrading, fracturing, and rough-polishing the agates.

The Lake Superior agate is noted for its rich red, orange, and yellow coloring. This color scheme is caused by the oxidation of iron. Iron leached from rocks provided the pigment that gives the gemstone its beautiful array of color. The concentration of iron and the amount of oxidation determine the color within or between an agate’s bands. There can also be white, grey, black and tan strips of color as well.

The gemstone comes in various sizes. The gas pockets in which the agates formed were primarily small, about 1 cm in diameter. A few Lake Superior agates have been found that are 22 cm in diameter with a mass exceeding 10 kilograms. Very large agates are extremely rare.



The most common type of Lake Superior agate is the fortification agate with its eye-catching banding patterns. Each band, when traced around an exposed pattern or “face,” connects with itself like the walls of a fort, hence the name fortification agate. A common subtype of the fortification agate is the parallel-banded, onyx-fortification or water-level agate. Perfectly straight, parallel bands occur over all or part of these stones. The straight bands were produced by puddles of quartz-rich solutions that crystallized inside the gas pocket under very low fluid pressure. The parallel nature of the bands also indicates the agate’s position inside the lava flow.

Probably the most popular Lake Superior agate is also one of the rarest. The highly treasured eye agate has perfectly round bands or “eyes” dotting the surface of the stone.

A gemstone can be used as a jewel when cut and polished. Only a fraction of the Lake Superior agate are of the quality needed for lapidary. Three lapidary techniques are used on Lake Superior agates: Tumbling—Small gemstones are rotated in drums with progressively finer polishing grit for several days until they are smooth and reflective. Saw-cut and polish—Stones up to 1/2 kg are cut with diamond saws into thin slabs, which then are cut into various shapes. One side of the shaped slab is polished producing fine jewelry pieces and collectible gems called cabochons.

(Note the value of large Lake superior agates, which weigh a few pounds or more, will lose most of their value if cut into slabs.)

Face polishing—Polishing a curved surface on a portion of the stone and leaving the major portion in its natural state is called face polishing.

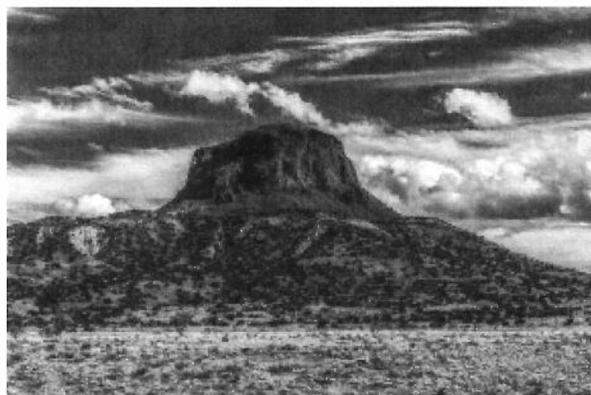
One of the most appealing reasons for naming the Lake Superior agate as the Minnesota state gemstone is its general availability. Glacial activity spread agates throughout northeastern and central Minnesota, northwestern Wisconsin, Northern Iowa, and Michigan’s Upper Peninsula in the United States and the area around Thunder Bay in Northwestern Ontario, Canada. Lake Superior agates have been found in gravel deposits along the Mississippi River basin. Other types of agate similar to Lake Superior agate have been found in

southwestern Wisconsin.

https://en.wikipedia.org/wiki/Lake_Superior_agate

<https://en> via Rock Trails 4-17

Cabezon Peak New Mexico



With an elevation of nearly 8,000 feet, Cabezon Peak is the largest of over 50 dramatic volcanic formation that dot the otherwise barren and otherworldly desert shrub land of the Rio Puerco Valley. Cabezon Peak is a steep-sided and symmetrical basalt volcanic plug that formed during the eruptions of the Mount Taylor volcanic field millions of years ago. The basalt monolith is one of the most prominent landmarks in northwestern New Mexico, dominating the landscape. (Visitors with a keen eye will notice it bears a striking similarity to the larger Devils Tower in Wyoming, which is also a basalt volcanic plug.)

Cabezon, which is derived from the Spanish and translates as “big head,” is believed to have religious significance for the local Pueblo and Navajo Indians. Numerous myths abound, but a particularly popular Navajo legend holds that a giant was slain on Mount Taylor, located to the west, and the giant’s severed head landed to the east, becoming Cabezon Peak. As the legend goes, the giant’s blood congealed to form the volcanic lava flows to the south.

The views from the summit of Cabezon Peak are impressive, looking out over much of northern and central New Mexico. Accordingly, the 1.9-mile hike to the top is a favorite among climbers. It is not, however, for the faint of heart. Basic mountain climbing experience and proper gear, including a helmet, are required for this technical climb along the

June, 2021

scree-covered trail and up the nearly vertical cliffs. Acrophobes will definitely find this climb unpleasant.

Cabezon Peak is part of the Cabezon Wilderness Study Area. To reach the area from Albuquerque, take I-25 north about 17 miles to US 550 West. Travel 41 miles on US 550 and turn left on NM 279. Cabezon Peak will be visible to the west. NM 279 is a relatively desolate road that passes through the sleepy village of San Luis. The pavement ends after 9 miles. Continue on 279 and bear left at the fork. In 3.8 miles, a BLM sign will indicate the easily driveable two-track to the base of Cabezon Peak. The trail to the summit begins here. No fees or permits are required. Be mindful that the dirt roads become extremely slippery and possibly impassable when it rains. There are no services.

From Rock Trails 1/21

Discover New Jewelry Tricks in Brad's "How To" Books

[Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)

From Rock Trails 7/20



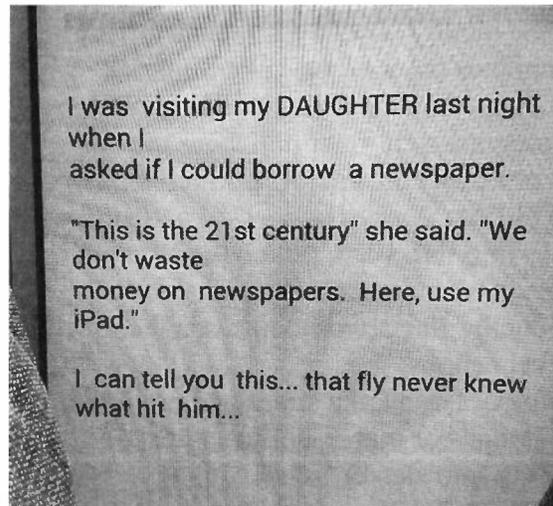
LITTLE BALLS LAPIDARY TIP

By Brad Smith

I often use little balls of silver and gold as accent pieces on my designs. They can be made as needed from pieces of scrap. Cut the scrap into little pieces, put them on a solder pad and melt them with a torch. Then throw the balls into a small cup of pickle. If you need to make all the balls the same size, you need the same amount



of metal to melt each time. The best way to do that is to clip equal lengths of wire. But there's an easier way to get a good supply of balls. Some casting grain comes in near perfect ball form. Just grab your tweezers and pick out the ones you need. When you need larger quantities of balls, pour the casting grain out onto a baking pan, tilt the pan a bit, and let all the round pieces roll to the bottom. Bag the good ones, and pour the rest back into your bag for casting. Balls can be sorted into different sizes using multiple screens.



From the Internet



THE MIDWEST MINERALOGICAL AND LAPIDARY SOCIETY (MMLS) is an educational non-profit organization founded in 1956. The Society now has more than 100 members and is affiliated with the Midwest Federation of Mineralogical Societies and the American Federation of Mineralogical Societies. Significantly, MMLS has been recognized numerous times by the Midwest and American Federations with first place (gold level) awards in the annual All American Club Awards Program.

PURPOSE: The purpose of The MMLS shall be (1) to promote interest in and increase knowledge in the fields of mineralogy, geology, and paleontology, including lapidary and related arts; (2) to publish articles and information pertaining to these fields; (3) to encourage collections and to display specimens in these fields; and (4) to arrange field trips in support of the interests and activities specified.

GENERAL MEETINGS: the third Tuesday of each month, September through June, 7:30 p.m. at the Democratic Club of Taylor, 23400 Wick Rd., Taylor, MI 48180 **GUESTS ARE ALWAYS WELCOME.**

MEMBERSHIP: Applications for membership can be obtained at any general meeting or from any MMLS member. **DUES:** Entrance fee - \$3.00; annual dues - \$20.00 (adult), \$2.00 (junior) on a year basis. Membership expires each Dec. 31.

ANNUAL EVENTS:

March - Spring Rock Swap and Sale, Banquet Fall- 2 Day SuperSwap and Sale November Annual Auction
Yearly Picnic

STUDY GROUPS: Special-interest study groups meet monthly, September through June. Currently the following groups are active: Bead Study, Mineralogy, Wire Study is conducted on individual basis.

FIELD TRIPS: Several one day field trips and one longer (one to two weeks) field trips are conducted each year. Mostly, these field trips focus on the collecting of mineral and fossil specimens at quarries, mines, and other known collecting sites in the United States and Canada. Field trips are restricted to MMLS members.

SCHOLARSHIP FUND: MMLS has established a scholarship Endowment Fund which provides scholarships to qualified students enrolled in an accredited college or university in southeastern Michigan who have completed at least their junior year and have a major in geology, mineralogy, paleontology or lapidary and related arts.

SEAMAN MINERAL MUSEUM: MMLS has designated the A.E. SEAMAN Mineral Museum, Houghton, Michigan, as it's "adoptive" museum, pledging to support it with gifts to the museum's endowment fund and the donation of mineral specimens and services.

INTERNET WEB SITES OF INTEREST:

Midwest Federation:
www.amfed.org/mw11index.html
Lands Access Association: <http://amlands.org>

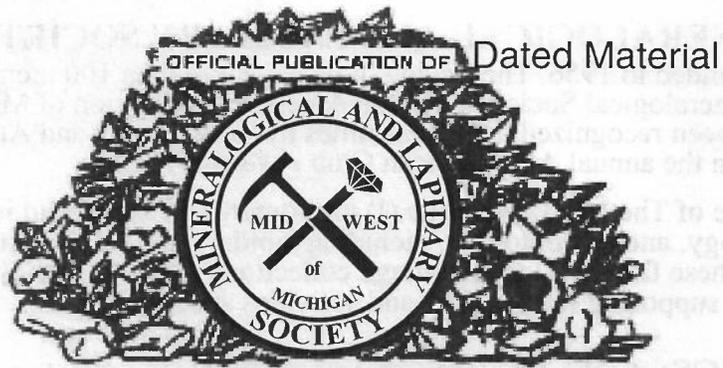
American Federation:
www.amfed.org

The Rockhound's 10 Commandments:

Thou shall not touch thy neighbor's minerals unless he places them in thy hands.
Thou shall not test the strength of crystals by pushing, squeezing or biting.
Thou shall not drop thy neighbor's fossils, for many do not bounce properly.
Thou shall not place thy neighbor's specimens in thine own pocket.
Thou shall not collect at a neighbor's land unless unless thy neighbor knowst he's there.
Thou shall not argue names of minerals too violently; for sometimes thou couldst be wrong.
Thou shall not climb above thy neighbor's head when on a field trip, lest thou art willing to spend the rest of the day digging him out.
Thou shall protect thine eyes, hands & feet, so that they mayst enjoy many future field trips.
Thou shall not encroach upon thy neighbor's diggin's, lest thy neighbor's hammer be dropped upon thee.
Thou shall not break uncollectable specimens.

Midwest
Mineralogical and
Lapidary
Society of
Michigan

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20281 THOMAS
BROWNSTOWN, MI
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The ROCKPILE

Bulletin Editor Contest Awards



- 1993 – 1st Place (Large Bulletin) AFMS
1991 – 1st Place (Large Bulletin) MWF
1990 – 1st Place (New Editor) AFMS
1990 – 1st Place (New Editor) MWF