

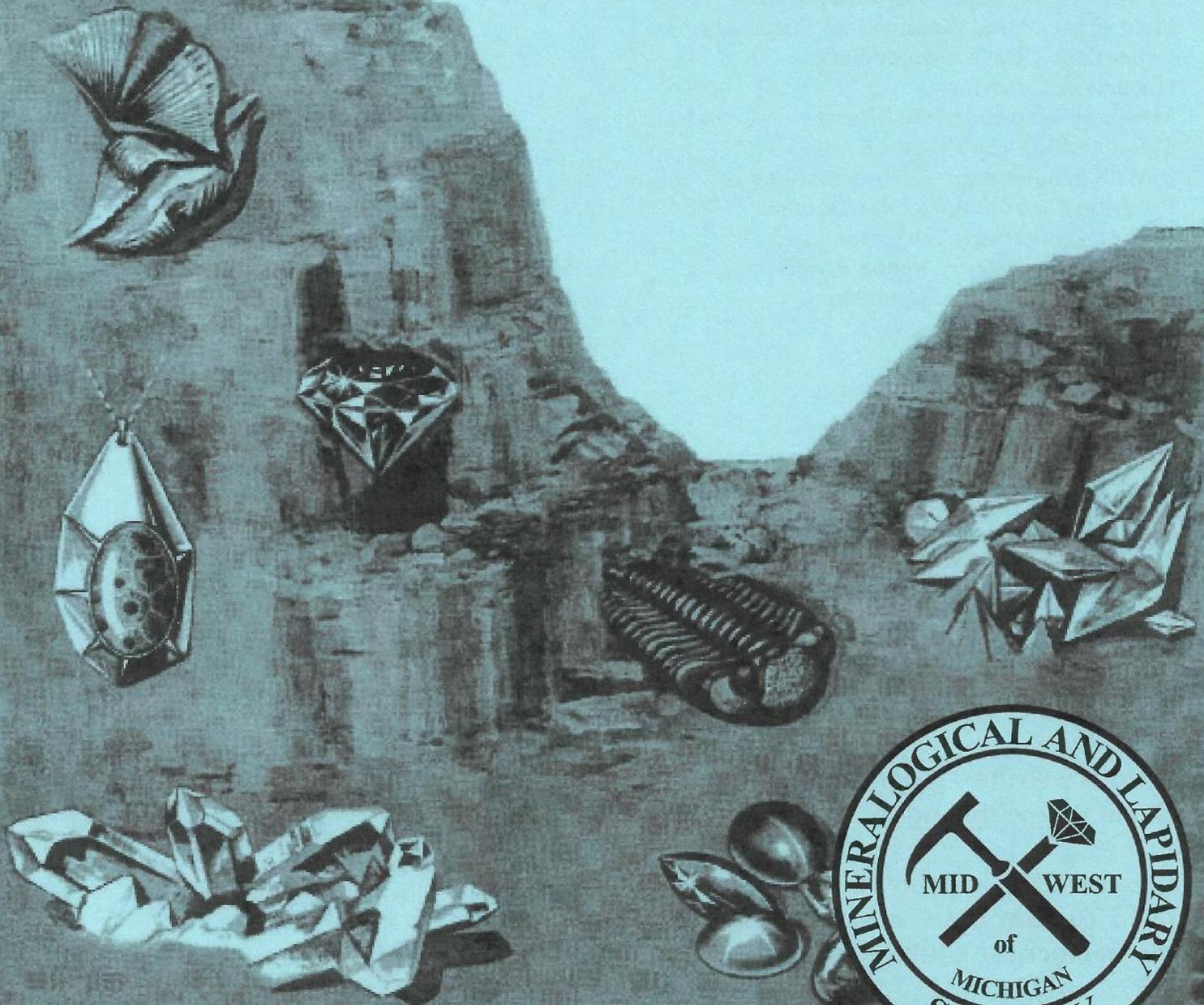
THE

ROCKPILE

Official Publication of the Midwest Mineralogical and Lapidary Society

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

January 2021



SOUTHEASTERN - MICHIGAN

Midwest Mineralogical & Lapidary Society

2021 OFFICERS

President: Dan Gumina (313) 766-8944
Vice President: Mike Bomba (313) 381-8455
Recording Secretary: Lori Haam (313) 562-5097
Diane Kuzara (734) 675-5237
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 Urban 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:

Hope all is well with everyone! I can't wait to get back together and see what everyone's been working on, or found on rock hunting trips! I know this social distancing has been a pain, but I've found that getting out in nature can be quite therapeutic. Take a walk, go to the park, and go see the light shows. Stay safe and stay healthy my friends till we meet again. Hey rockhounds, this is our club and we have some work to do this coming year. I hope we can return without delay and we can count on you to show and share our hobby again.

Dan and Mike



**DUES
ARE
OVER
DUE!!!**

Lapidary Workshop

Reservations are required to attend. Please contact Frank Konieczki to make arrangements, 2009 West Michigan Avenue, Ypsilanti 48197, 734-699-3321.

If temperature falls to 20 or below the lapidary workshop will be closed.

Michigan Mineral Beginning with the Letter T: Talc $Mg_3(Si_2O_5)_2(OH)_2$



Most people are familiar with the mineral talc. It can be crushed into a white powder that is widely known as "talcum powder." This

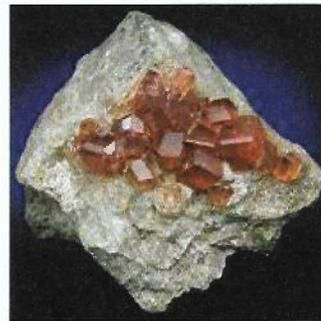
powder has the ability to absorb moisture, absorb oils, absorb odor, serve as a lubricant, and produce an astringent effect with human skin. These properties make talcum powder an important ingredient in many baby powders, foot powders, first aid powders, and a variety of cosmetics. See more on geology.com

Hardness: 1 on the mohs scale.
Color: Light to dark green, brown, white, gray and colorless.

Occurrences: Dickinson, Gogebic, Iron, and Marquette Counties.

From the internet Wikipedia and The Mineralogy of Michigan by E. Wm. Heinrich.

Vermont State Gemstone: Grossular Garnet



The Vermont State Gem, the Grossular garnet $Ca_3Al_2(SiO_4)_3$, is technically a mineral - a silicate, which is colored brown due to the presence of iron.

Grossular garnet from the Belvidere Mine at Eden Mills is thought to be the finest specimen of its kind anywhere. It was adopted in 1991. From the internet.

Newly Discovered Volcanic Mineral Could Lead To More Efficient Batteries



Volcanoes rank among the most destructive and awe-inspiring phenomena on the planet. But these fiery fissures do much more than just

destroy. They also create.

The research team headed by Stanislav Filatov, Professor at the Department of Crystallography at St Petersburg University, has discovered a new mineral species in Kamchatka – petrovite. The scientists named the find in honour of Tomas Petrov, an outstanding crystallographer and Professor at St Petersburg University. He together with his students Arkady Glikin and Sergei Moshkin, was the first in the world to create a technology for growing jewellery malachite.

For more than 40 years, Stanislav Filatov, Professor at St Petersburg University, together with colleagues from other research institutions in Russia, has been studying the mineralogy of scoria cones and lava flows of fumaroles in Kamchatka.

They were formed after two major eruptions of Tolbachik Volcano – in 1975-1976 and 2012-2013. This territory is unique in its mineralogical diversity. In recent years, researchers have discovered dozens of new minerals here, many of which are one-of-a-kind in the world.

The recent find by the scientists from St Petersburg University, petrovite, $\text{Na}_{10}\text{CaCu}_2(\text{SO}_4)_8$, occurs as blue globular aggregates of tabular crystals with gaseous inclusions. ‘The copper atom in the crystal structure of petrovite has an unusual and very rare coordination of seven oxygen atoms. Such coordination is characteristic of only a couple of compounds, as well as of saranchinaite, which was discovered by our colleagues from St Petersburg University – the research team of Professor Oleg Siidra,’ said the project manager, Professor Stanislav Filatov.

The mineral consists of oxygen atoms, sodium sulphur and copper, which form a porous framework. The voids are connected to each other by channels through which relatively small sodium atoms can move. The scientists have therefore established that the structural type of petrovite is promising for ionic conductivity and can be used as a cathode material for sodium ion batteries.

‘At present, the biggest problem for this use is the small amount of a transition metal – copper – in the crystal structure of the mineral. It might be solved by synthesising a compound with the same structure as petrovite in the laboratory,’ said Stanislav Filatov.

The study was conducted by a team of

scientists from various research institutions from all over Russia. Mineralogical diagnostic assessment was carried out by Lidiya Vergasova, a senior research associate at the Institute of Volcanology and Seismology of the Far Eastern Branch of the Russian Academy of Sciences. She is a great expert in the mineralogy of volcanic exhalations in Russia. Andrey Shablinskii, an associate of the Grebenshchikov Institute of Silicate Chemistry and a St Petersburg University graduate, studied the crystal structure of the new mineral type.

He described it together with Sergey Krivovichev, Professor at St Petersburg University, Head of the Kola Science Centre, Corresponding Member of the Russian Academy of Sciences. Additionally, Andrey Shablinskii carried out an X-ray phase analysis and, together with Stanislav Filatov, head of the research team, Professor at St Petersburg University, identified the optical constants of the mineral. The chemical composition of the mineral was determined by Svetlana Moskaleva, a research associate at the Institute of Volcanology and Seismology of the Far Eastern Branch of the Russian Academy of Sciences.

Despite the fact that most of the recent discoveries of mineralogists and crystallographers of St Petersburg University are associated with the Kamchatka Peninsula, scientists discover many new minerals in the most unusual places. Among the finds in 2008–2017 there are samples from polar Yakutia, the Kola Peninsula (Kovdor deposit), Israel (the Negev Desert), Greece, Tanzania, South Africa, Jordan and many others. More information about these discoveries can be found at the virtual exhibition of the Mineralogical Museum of St Petersburg University on the IZI.Travel platform.

The above story is based on materials provided by Saint Petersburg State University.

From the internet GeologyIN 11/20

What are the Minerals and Gems that are found in the Sedimentary rocks?

What is Sedimentary rock?

Sedimentary rocks are types of rock that are formed by the deposition and subsequent cementation of mineral or organic particles on the floor of oceans or other bodies of water at the Earth's surface. Sedimentation is the collective name for processes that cause these particles to settle in place. The particles that form a sedimentary rock are called sediment, and may be composed of geological detritus (minerals) or biological detritus (organic matter). Before being deposited, the geological detritus was formed by weathering and erosion from the source area, and then transported to the place of deposition by water, wind, ice, mass movement or glaciers, which are called agents of denudation. Biological detritus was formed by bodies and parts (mainly shells) of dead aquatic organisms, as well as their fecal mass, suspended in water and slowly piling up on the floor of water bodies (marine snow). Sedimentation may also occur as dissolved minerals precipitate from water solution. The sedimentary rock cover of the continents of the Earth's crust is extensive (73% of the Earth's current land surface), but the total contribution of sedimentary rocks is estimated to be only 8% of the total volume of the crust. Sedimentary rocks are only a thin veneer over a crust consisting mainly of igneous and metamorphic rocks. Sedimentary rocks are deposited in layers as strata, forming a structure called bedding. The study of sedimentary rocks and rock strata provides information about the subsurface that is useful for civil engineering, for example in the construction of roads, houses, tunnels, canals or other structures. Sedimentary rocks are also important sources of natural resources like coal, fossil fuels, drinking water or ores. The study of the sequence of sedimentary rock strata is the main source for an understanding of the

Earth's history, including palaeogeography, paleoclimatology and the history of life. The scientific discipline that studies the properties and origin of sedimentary rocks is called sedimentology. Sedimentology is part of both geology and physical geography and overlaps partly with other disciplines in the Earth sciences, such as pedology, geomorphology, geochemistry and structural geology. Sedimentary rocks have also been found on Mars.

Sedimentary Cycle

The sedimentary cycle is the second largest cycle in mineral and rock formation. Sedimentary rocks are formed by erosion, transport in rivers, ice etc. and involve the decay and disintegration of a preexisting rock mass. Usually there are no new minerals formed, only found. When these particles eventually settle, they form alluvial gravels, sands or clays. When they are either cemented or compressed, then they form sedimentary rocks such a conglomerations, sandstones and limestones.

Chemical action in the environment leads to some material dissolving in water. Eventually the water may evaporate and deposits of borax and other salt "evaporates" may form this way. Plant and animal remains are commonly incorporated among the rock fragments and these may be preserved as fossils. Many gemstones are found in "alluvial deposits". These deposits have their origin in the destruction of the original rocks and the resulting materials by rivers, floods and glacial movement. During this movement the heavier minerals tend to remain relatively close to the source, whilst lighter minerals are carried further away. The heavier and harder materials do not wear as much as the lighter ones and tend to retain more of their crystal shape. Stones such as sapphire and topaz do not show as much abrasion as softer minerals like quartz. However, due to the continuous grinding and tumbling over a period of time, a large number of gem minerals are

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found as rounded "water-worn" pebbles. The gem gravels in Sri Lanka contain a wide variety of such minerals. Because of their supreme hardness and density many diamonds survive the sedimentary processes and are frequently found in alluvial deposits. Minerals found in sedimentary rocks:

Beryl

Opal

Quartz

Turquoise

Malachite

Azurite

Chrysoprase

Chrysocolla

<http://www.geologypage.com/2019/03/>

what-are-the-minerals-and-gems-that-f

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sedimentary

From Rock Trails 6/20

Million-Year-Old

Fossil Shows School of

Baby Fish in Their

Final Moments

By Brandon Spektor May 30, 2019



This 50-million-year-old fossil, held by a Museum in Japan, shows 259 fish swimming in a school — one of the earliest known examples of coordinated group behavior ever. (Image: © Mizumoto et al./Proceedings of the Royal Society B)

One fish, two fish, dead fish, cool fish. There's room for all types in a newly

described fossil that shows 259 baby fish swimming together in a school, approximately 50 million years ago. According to the authors of a new study published Wednesday (May 29) in the journal Proceedings of the Royal Society B, this ex-school may be the earliest known fossil evidence that prehistoric fish swam in unison, just as modern fish do today.

A team of Arizona researchers stumbled upon this remarkable rock during a visit to the Oishi Fossils Gallery of Mizuta Memorial Museum in Japan.

Working with the museum, the researchers determined that the fishy fossil probably originated in America's Green River Formation, a geologic stratum in present-day Colorado, Wyoming and Utah that contains a trove of fossils dating to between 53 million and 48 million years ago.

The fish in question all belonged to the extinct species *Erismatopterus levatus*, and were apparently entombed together in the midst of a routine swim that may

have been cut short by an underwater avalanche of sand, the researchers wrote. All but two of the wee specimens were swimming in the same direction and in a close-knit formation. The fish in question all belonged to the extinct species *Erismatopterus levatus*, and were apparently entombed together in the midst of a routine swim that may have been cut short by an underwater avalanche of sand, the researchers wrote. All but two of the wee specimens were swimming in the same direction and in a close-knit formation.

According to the authors, this ancient slab of dead swimmers shows that fish (and possibly other animals) evolved coordinated group behaviors at least 50 million years ago. This synchronized swimming seems to have successfully saved the fish from being devoured by a predator, even if it could not save them from becoming a museum exhibit.

Gallery of Fantastic Fossils

From the internet Live Science

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Gallery of Fantastic Fossils
From the internet Live Science

**Advice to Lapidaries:
ACQUIRE QUALITY**

Buy, collect and trade for quality! This is the most challenging task we lapidary workers face. We are continually bombarded by good merchandising schemes. We have all heard how: "There was only one small pocket found," or "This area is now over-built with homes and there will never be any more." How about this one? "This color 'has never been found before in this material. It is rare! Rare indeed, and this is the only fragment in the cosmos!" No putdown of good merchandising methods are intended. I love good salesmanship.

After a reasonable soak period of storage in brown paper sacks buried deep in boxes or drawers, we retrieve our goodies and now face the moment of truth. Will this material satisfy all necessary requirements appropriate to lapidary work? Will it saw, clop, grind, sand, polish? We should concede nothing in our selection of material. One good piece is worth a ton of rejects!

Unfortunately, we cannot foresee all the possibilities of trouble ahead. Some lurk deep in the interior and are concealed from view. Even the most disciplined worker will miss these. Look for the material's weak points - pits, earthy, uneven hardness, density or lack of, overall strength, disharmony and/or continuity in color. Will this stone orange-peel or pull out while polishing? Check the material both submerged in water and then completely dry. Water will show colors and a near look of the finished stone. It can also conceal serious imperfections. Continued on page 6

NOTICE DUES ARE DUE

Dear MMLS member:
It's that time again when you are asked to renew your membership for the year (2021) in the Midwest Mineralogical and Lapidary Society. (Membership runs from January through December each year.)

May we ask your cooperation by renewing now. Doing so will ease our Treasurer's job, save the cost of an extra mailing and assure your receipt of The Rockpile without interruption.

Just use the handy Membership Renewal Form. Complete the form, enclose your check made payable to MMLS and mail to our treasurer

Doris Snyder
9728 Pardee
Taylor, Mi 48180

It's that easy! If you would like your membership card mailed to you, please include a SASE.

Midwest Mineralogical Lapidary
Society Adult Dues: \$20.00
Juniors (under age 18) \$2.00
Yes I wish to renew my/our membership in MMLS for 2021 and continue to receive The Rockpile

Name(s) _____
Address _____
City _____
State _____ Zip _____
Phone (____) _____
Email address _____

Dues paid after December 31st is subject to a \$3.00 reinstatement fee. Add to your check.

Enclosed is my check payable MMLS for \$ __

Would you like your Rockpile sent to you by email?
Yes _____ No _____
DO IT TODAY BEFORE YOU FORGET!!!!

January, 2021

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Be hard-nosed. Procure your lapidary material carefully and be persnickety. Insist on top-of-the-line stuff. You are the one person to face and contend with ALL problems and obstacles found in YOUR workshop. Do not get entangled and mired down on a road going nowhere. Bad material can only befuddle and cause an unjustifiable amount of work and the finished stone is second rate at best. It is a delight to work with good material and produce a finished stone of mystical beauty that we will be proud to own and show. Good luck with your stones!

- Bill White, The Rocky Mountain News, May 1991
From The Rockpile How to do it book

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Fun fact:

Every mineral and every rock in the world is softer than diamond!

There is one (and only one) exception to the rule that all minerals are, by definition, solid. And that one exception is ... MERCURY. Mercury is a mineral, an element and a metal. And mercury is the only mineral, and the only element, and the only metal that is liquid at room temperature.

From *Mini Miners Monthly*, September 2020
From The Quarry 10/20

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*Happy New Year From
The Rockpile Staff*

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 its "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/mw1/index.html
Lands Access Association: <http://amlands.org>

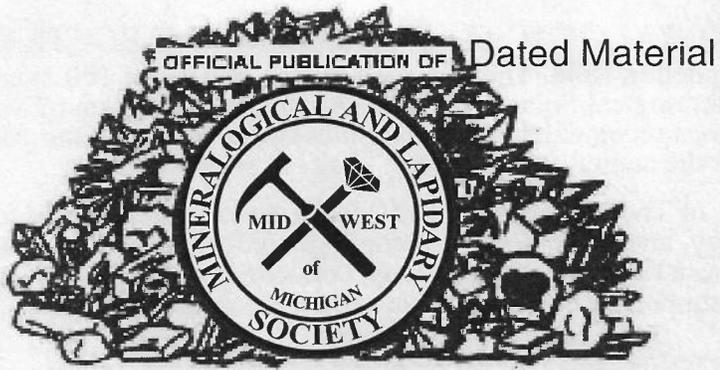
American Federation:
www.amfed.org

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

EDITOR
20281 THOMAS
BROWNSTOWN, MI
48183



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



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