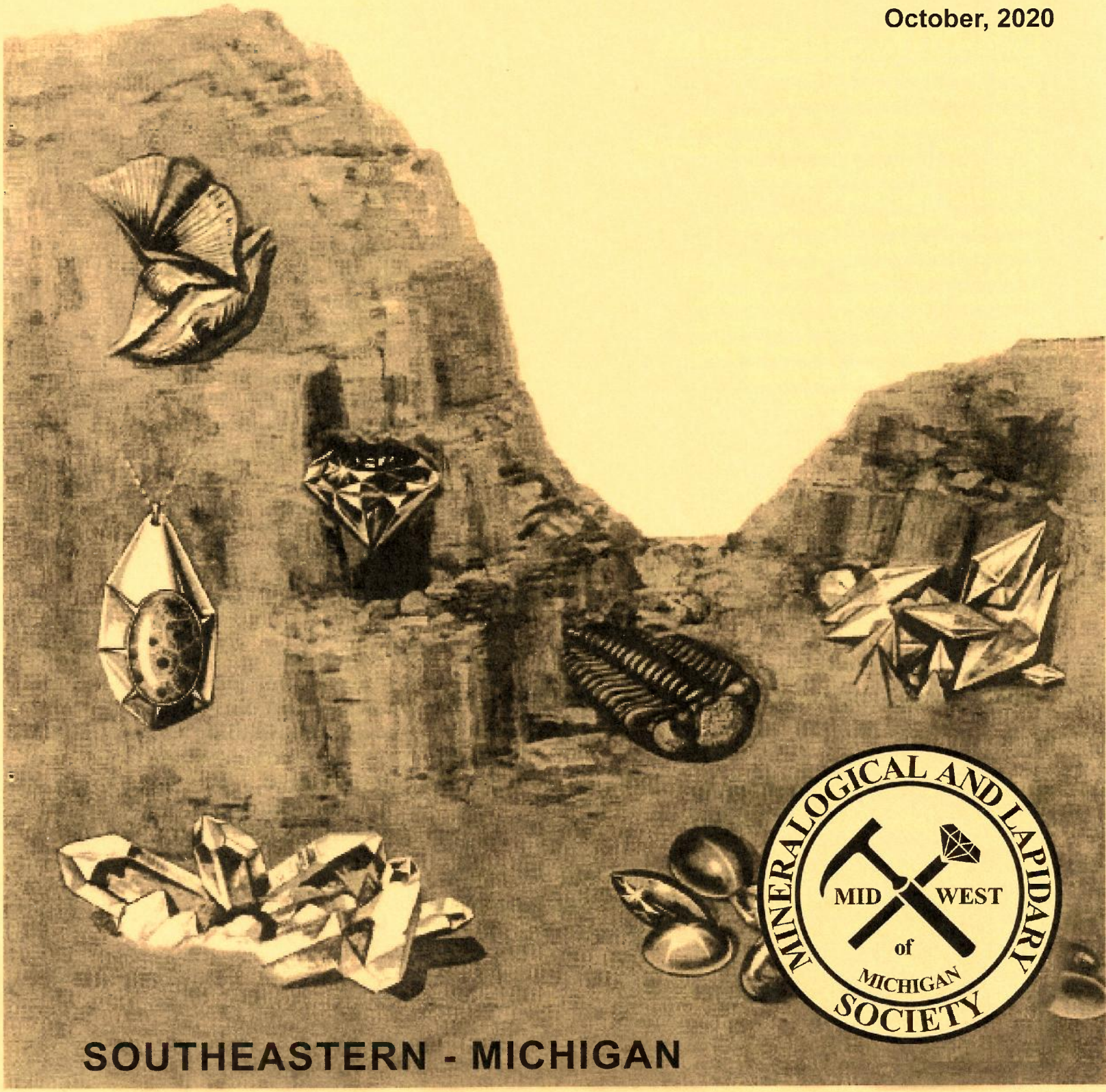
THE ROCKPILE

Official Publication of the Midwest Mineralogical and Lapidary Society

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

October, 2020



SOUTHEASTERN - MICHIGAN

Midwest Mineralogical & Lapidary Society

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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

2020 Banquet: Dan Gumina
2020 Club Picnic: Stacey Harper
2020 Swap: Lou and Cindy Talley
2020 Super Swap: Bill Barr / Tom Morris
2020 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
Wire Study: John Lindsay

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
Elspeth 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

THE ROCKPILE
October, 2020 Volume LXIV Issue 8

From The President's Desk: Hi fellow rockhounds and "Happy Fall" to you all. I have been in contact with the Taylor Democratic Club and as of this writing, the meeting room is NOT OPEN and so far there in no indication of when that will change (keep in mind I have to write my message the month before this issue of the Rockpile gets to you) so this could change. I will let you know when we can safely meet again. As of this writing-only 10 people can gather in a group setting.

Pete and I have received some positive feedback on the "Blast from the Past" article that appeared in your September issue of the Rockpile-thank you for the encouragement on that note, there is another "Blast from the Past" field trip article in this issue - ENJOY!

Stay Safe and Healthy-
Diane

FIELD TRIPS

Mike Bomba our Field Trip Chairman is trying to put together a field trip. Any club member interested should contact Mike for details.

Sister Club Events
BECAUSE OF THE CORONA VIRUS PLEASE CHECK BEFORE ATTENDING THESE ACTIVITIES.

Oct. 3rd The **Livingston Gem and Mineral Society** is planning a **rock swap on** Saturday, October 3. Spots for vendors will be $25 for a parking space-sized area. There will be no admission fee. Masks will be mandatory. Set up will start at 7 am and the sale will end at 5 pm. Christ Lutheran Church parking lot
5987 Williams Lake Road at Airport Road
Waterford, MI. Information at:
www.livingstongemandmineralsociety.com

OCT 16-18: FORT WAYNE, IN Three Rivers Gem & Mineral Society Annual Show.
Fri & Sat 10 am - 6 pm; Sun 10 am - 5 pm. Allen County Fairgrounds, 2726 Carroll Rd., Fort Wayne. Contact: Bev Jenkins, (260) 639-0727; 3riversshow@gmail.com MASKS MANDATORY, plastic gloves recommended.

SHOWS CANCELED BECAUSE OF THE CORONA VIRUS.

Oct. 7-8: MIDLAND, MI Mid Michigan Rock Club Annual Show. **CANCELED**

Oct. 9-11: WARREN, MI Michigan Minerological Society Annual Show. **CANCELED**

Oct. 23-25: MASON, MI Central Michigan Lapidary & Mineral Society Annual Show. **CANCELED**

I finally did it!

Bought a new pair of shoes with memory foam insoles. No more forgetting why I walked into the kitchen.

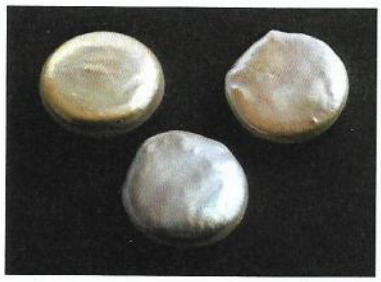
Michigan Mineral Beginning with the Letter Q Quartz SiO_2

Quartz is a hard, crystalline mineral composed of silicon and oxygen atoms. The atoms are linked in a continuous framework of SiO4 silicon–oxygen tetrahedra, with each oxygen being shared between two tetrahedra, giving an overall chemical formula of SiO2. Quartz is the second most abundant mineral in Earth's continental crust, behind feldspar.

Quartz exists in two forms, the normal α-quartz and the high-temperature β-quartz, both of which are chiral

Hardness: 7 on the mohs scale
Color: Colorless, white, purple, pink, brown, and black. Also gray, green, orange, yellow, blue, and red. Sometimes multicolored or banded.
Occurrence : Alger, Antrim, Arenac, Charlevoix, Chippewa, Dickinson, Gogebic, Houghton, Huron, Iron, Keweenaw, Luce, Marquette, Monroe, Ontonagon, Schoolcraft, Van Buren, and Wayne Counties
From the internet Wikipedia and Mineral Net

Tennessee State Gemstone:



Tennessee river pearls were designated the state gem of Tennessee in 1979. All State Gems & Gemstones. River pearls are created by mussels and are found in all colors and various shapes (spherical, pear-shaped, and irregular). Tennessee river pearls are among the most beautiful and durable in theTennessee river pearls were designated the state gem of Tennessee in 1979. All State Gems & Gemstones. River pearls are created by mussels and are found in all colors and various shapes (spherical, pear-shaped, and irregular). Tennessee river pearls are among the most beautiful and durable in the world.
From the internet

A BLAST FROM THE PAST

A report on a field trip taken in the fall of 1990 by Diane Kuzara. This will be done in two parts the first now next in November.

FALL FIELD TRIP:

COLLECTING IN ILLINOIS, MISSOURI, ARKANSAS

Fluorite Trek
Log Date: Saturday, Sept. 22, 1990 Destination: cave-In-Rock, IL Pop. 450
Arrival at cave-In-Rock State Park, and what a beautiful spot to stay! Green rolling hills, beautiful shade trees, and good friends marked the beginning of our two-week field trip to Illinois, Missouri and Arkansas. We met up with Doris and Rol Snyder on the road, so we both arrived at the campground together. Meeting us there were Bud and Gloria Schneider, David and Georgia Graham, Esther and Earl Northrop, Kathy Burt and her parents (Bob and Margaret McGrath from Wyandotte), and Joyce and Norm Hanschu. Staying at a nearby motel were Tom Morris, Jr., John Mularoni, Kay and Walt Vogtmann, Ruby and Tom Kizuka and Kathy and George Thornton. At a Bed-and Breakfast in Elizabethtown were Stan and Loretta Franczak and George Judd.

Log Date: Sunday, Sept. 23, 1990 Our first stop was a trip to the Ozark Mahoning #4 Mine.
Our tour guide, Larry Palmer, took 26 of us into the mine where some nice specimens of fluorite, calcite and sphalerite were found. Lunch stop was next on our agenda back near the campground at the spot

where the cave is. After our lunch we all took a walk through the cave, made infamous by river pirates in the early 1800 's . By then, someone spotted all the barge traffic on the Ohio River, so out came the cameras and those large barges got a lot of pictures taken of them. Someone counted as many as 15 to 18 cars of coal being pushed down the river by the tugboats. Later the same day we went hunting for fossils along the bank of the Ohio River. Since I'm not a "fossilier," Loretta and I sat by the riverbank and relaxed for a while.

Our first campfire materialized that evening and we . all sat around and exchanged stories of other field trips we had taken. Incidentally, anyone coming to collect at cave-In-Rock is strongly advised not to try to collect in the mines alone, or without permission. They can and will be arrested and prosecuted. Remember -- never go into a mine alone!

Our guide for our trip was Larry Palmer, of Palmer's Trading Post -- a really nice young man who along with his father, John Palmer, run the local rock shop. Larry also showed us how to chip those fluorite octahedrons we see at the shows and rock shops. He can make up to 200 of them an hour, and his wife can do about 60 . We did some silver-picking of specimens at their warehouses and we thank Larry for his courtesy and expertise. (Larry also set up a very good going-away dinner our last night in cave-In-Rock. It was a first try for a "catfish" dinner for a lot of us, and what else can I say, except -- mm-mm-good!)

Log Date: Monday, Sept. 24, 1990

Larry Palmer took us to the famous Minerva #1 mine, where a lot of specimens that you see from this area come from. We were not able to collect at this location, but here are some facts about this famous mine. The Ozark-Mahoning #1 and the old Minerva # 1 are one and the same mine. There are about 40 minerals that can be found here and the mine goes halfway across Hardin County.

It's about 700 feet deep and was worked for 20-25 years when it closed down in 1976 *or* '77, since it was found out that the ore could be mined cheaper in Mexico. It took the company four years to prepare for the mine's reopening, which it did in January 1990. The mine has zinc in it and is the major reason they reopened it. Fluorite is used in rocket fuel, and its largest use is in steel production. Specimens are not as plentiful as they were years ago -- only about 200 lbs. per week as compared to 1,000 lbs. per week at the Annabel Lee Mine. There is only one shift a day working, and only a portion of the mine -- the wheel house and dump station --is operational. The *ore* is taken to the Rosiclare mill. Second stop was at the Annabel Lee Mine that has been working for the last five years (since about 1984). The operation here is called "blanket-mining." It produces more specimens than the Minerva # 1 Mine does. This mine is 1,200 feet deep and produces sporatic ore bodies about eight feet deep and 100 feet wide. The third stop on today's agenda were the "lead pits" between cave-In-Rock and Elizabethtown. Two locations here yielded small bits of fluorite (for tumbling), some galena and barite. The walk to this location was long, but we sure had a good time kibitzing back and forth while dodging the large puddles in the road and following each other through the corn field! Most of the day was spent at this location, then we went back to the Palmer Rock Shop for some looking and buying. After our catfish/ chicken dinner, we went back to the campground for our evening fire. The sites at the Cave-In-Rock State Park are going to be upgraded next year by moving the electricity boxes closer to the pads where the trailers park and adding shower houses.

Log Date: Tuesday, Sept. 25, 1990

Travel day to Potosi, Missouri and Washington State Park -- a nicely wooded park in a beautiful setting. We had a meeting about what we were to do the next day. It was a beautiful, warm evening to be outside.

Barite Trek

Log Date: Wednesday, Sept. 26, 1990

A trip to Tiff, Missouri, was on tap for Wednesday. We stopped at a grocery store in Tiff for some information. Three little beagle pups greeted us here and Stan got a little information on a nearby collecting site called the Blackewell Mine. We

collected some Missouri agate, barite, drusy quartz and hematite specimens here and then went down the road to another spot where the same type of specimens were found. Seems all the collecting in this area yields pretty much the same type of specimens. The weather was in the high 80's on this day, so we all called it quits quite early in the afternoon. It seems we all needed to get "cleaned up" and "cooled off."Our usual campfire once again provided us with good companionship.

Log Date: Thursday, Sept. 27, 1990
Trip to the Pea Ridge Iron Ore Co. not very productive (some siderite, magnatite, and pyrite). Kathy Burt found a brown apatite crystal in the small crushed stone. After lunch, we all took a tour through the Meramec Caverns (one of Jesse James'hideouts) . A good chance to cool off again as it was sweltering outside and the cavern was a cool one. We were given a guided tour by an informative guide and it was well worth the time and money.
A must-stop-and-see when in this area!

Log Date: Friday, Sept. 28, 1990 Travel day to Hot Springs, Arkansas to Crystal Springs Resort Campground (19 miles east of Mount Ida), which is run by the Army Corps of Engineers. Hot and muggy day! Joining our field trip and greeting us were Bud and Eleanor Littlepage and Don and Katy Brown. John Mularoni and the Thorntons headed back to Michigan. The trip from Potosi to this spot took a good eight hours traveling time.

Log Date: Saturday, Sept. 29, 1990
Trip to Montgomery County landfill for wavellite and variscite. We were joined by some of the members of Central Arkansas Gem and Mineral Club who collected with us, then did some swapping with those of us who brought along our swap material. On the way to the campground, some folks stopped at Ocus Stanley Rock Shop in Mount Ida and did some silver-picking. The nice people there gave the club a big bucket- full of their dirt so we could sift through it and pick out the quartz crystals for our grab bags and minerals for minors.

Log Date: Sunday, Sept. 30, 1990
Free day for us but some went collecting specimens anyway. George Judd, the Kizukas and Walt Vogtmann went to Magnet Cove to collect and came back with some smoky quartz and brookite. Even though it was pouring rain when we left here, Pete and I went to the Crater of Diamonds State Park at Murfreesboro to try our luck at diamond collecting. When we arrived there around noontime, we were met by Tom Morris, Kathy Burt and Kathy's parents, Earl and Esther Northrop, David and Georgia Graham and Bud and Eleanor Little page. And guess what -- no rain there! Unfortunately, no one in our little group found a diamond, but we can at least say we've been there, since there was talk of closing that area to collectors. Other folks in our group went silver-picking or collecting to other localities.
In the evening, we helped Bob and Margaret McGrath celebrate their 40th wedding anniversary with cake and fellowship.

CONTINUED NEXT MONTH!!!

HOW DO GEOLOGISTS KNOW HOW OLD A ROCK IS?

By Mark Milligan
Geologists generally know the age of a rock by determining the age of the group of rocks, or formation, that it is found in. The age of formations is marked on a geologic calendar known as the geologic time scale. Development of the geologic time scale and dating of formations and rocks relies upon two fundamentally different ways of telling time: relative and absolute.

Relative dating places events or rocks in their chronologic sequence or order of occurrence. Absolute dating places events or rocks at a specific time. If a geologist claims to be younger than his or her co-worker, that is a relative age. If a geologist claims to be 45 years old, that is an absolute age.

Relative Dating

Superposition: The most basic concept used in relative dating is the law of superposition. Simply stated, each bed in a sequence of sedimentary rocks (or layered volcanic rocks) is younger than the bed below it and older than the bed above it. This law follows two basic assumptions: (1) the beds were

originally deposited near horizontal, and (2) the beds were not overturned after their deposition.

Faunal Succession: Similar to the law of superposition is the law of faunal succession, which states that groups of fossil animals and plants occur throughout the geologic record in a distinct and identifiable order. Following this law, sedimentary rocks can be "dated" by their characteristic fossil content. Particularly useful are index fossils, geographically widespread fossils that evolved rapidly through time.

Crosscutting Relationships: Relative ages of rocks and events may also be determined using the law of crosscutting relationships, which states that geologic features such as igneous intrusions or faults are younger than the units they cut across.
Inclusions: Inclusions, which are fragments of older rock within a younger igneous rock or coarse-grained sedimentary rock, also facilitate relative dating. Inclusions are useful at contacts with igneous rock bodies where magma moving upward through the crust has dislodged and engulfed pieces of the older surrounding rock.

Gaps in the geologic record, called unconformities, are common where deposition stopped and erosion removed the previously deposited material. Fortunately, distinctive features such as index fossils can aid in matching, or correlating, rocks and formations from several incomplete areas to create a more complete geologic record for relative dating. Relative dating techniques provide geologists abundant evidence of the incredible vastness of geologic time and ancient age of many rocks and formations. However, in order to place absolute dates on the relative time scale, other dating methods must be considered.

Absolute Dating

The nuclear decay of radioactive isotopes is a process that behaves in a clock-like fashion and is thus a useful tool for determining the absolute age of rocks. Radioactive decay is the process by which a "parent" isotope changes into a "daughter" isotope. Rates of radioactive decay are constant and measured in terms of half-life, the time it takes half of a parent isotope to decay into a stable daughter isotope.
Some rock-forming minerals contain naturally occurring radioactive isotopes with very long half-lives unaffected by chemical or physical conditions that exist after the rock is formed. Half-lives of these isotopes and the parent-to-daughter ratio in a given rock sample can be measured, then a relatively simple calculation yields the absolute (radiometric) date at which the parent began to decay, i.e., the age of the rock.
Of the three basic rock types, igneous rocks are most suited for radiometric dating. Metamorphic rocks may also be radiometrically dated. However, radiometric dating generally yields the age of metamorphism, not the age of the original rock. Most ancient sedimentary rocks cannot be dated radiometrically, but the laws of superposition and crosscutting relationships can be used to place absolute time limits on layers of sedimentary rocks crosscut or bounded by radiometrically dated igneous rocks.

Sediments less than about 50,000 years old that contain organic material can be dated based on the radioactive decay of the isotope Carbon 14. For example, shells, wood, and other material found in the shoreline deposits of Utah's prehistoric Lake Bonneville have yielded absolute dates using this method. These distinct shorelines also make excellent relative dating tools. Many sections of the Wasatch fault disturb or crosscut the Provo shoreline, showing that faulting occurred after the lake dropped below this shoreline which formed about 13,500 years ago. As this example illustrates determining the age of a geologic feature or rock requires the use of both absolute and relative dating techniques.
From the internet Utah Geological Survey

Dendrite Minerals

A crystal dendrite is a crystal that develops with a typical multi-branching tree-like form. Dendritic crystallization forms a natural fractal pattern. Dendritic crystals can grow into a supercooled pure liquid or form from growth instabilities that occur when the growth rate is limited by the rate of diffusion of solute atoms to the interface.

Dendritic Quartz! Credit: Fasanarock

The surfaces of limestones are often marked by black or red-brown deposits known as mineral dendrites. These are deposits of hydrous iron or manganese oxides formed when supersaturated solutions of iron or manganese penetrate the limestone and are precipitated on exposure to air at the surface. Mineral dendrites have a fractal appearance, but the origin and characteristics of this morphology,

Manganese dendrites on a limestone bedding plane from Solnhofen, Germany.

The term "dendrite" comes from the Greek word *dendron*, which means "**tree**".
In **paleontology**, dendritic mineral crystal forms are often mistaken for fossils. These pseudofossils form as naturally occurring fissures in the rock are filled by percolating mineral solutions. They form when water rich in manganese and iron flows along fractures and bedding planes between layers of limestone and other rock types, depositing dendritic crystals as the solution flows through
From the Internet GeologyIn

Bench Tips by Brad Smith

STIFFENING EARRING POSTS

Soldering an earring post will always soften the wire a bit. The easiest way I've found to harden it is to grip it with pliers and twist it a couplehalf turns. This work hardens the wire and also tests your soldered joint.

SOLVENT DISPENSER

Frequently I need to fill a small bottle with alcohol, like the bottle of an alcohol lamp or a nail polish bottle that I use for the yellow ochre anti-flux. Often I can't find a small funnel and end up spilling almost as much as I get into the bottle. It's wasteful, and the fumes aren't too good for you either.A neat and inexpensive solution is to use a lab dispensing bottle to store small quantities of the solvents most frequently used. The bottles have a wide mouth for filling and a fine tip for dispensing. You can get a small stream or just a drop
or two. With the bottle's fine tip I don't spill a drop. A Google search will turn up many suppliers. One I've used is Carolina Biological Supply Company at www.carolina.com The bottle is Catalog # 716580 Unitary Wash Bottle, Low-Density Polyethylene, 125 mL US$ 5. They have several sizes and other bottles labeled for specific solvents.

PROTECTING FINISHED SURFACES

I figure that any accidental scratch I make on a piece means about 15 minutes of extra sanding and polishing. So after finishing major surfaces I typically cover them with some masking tape to avoid any scratches when doing final work like cleanups and setting of stones.The blue masking tape used by painters works particularly well because it doesn't leave a sticky residue. Discover New Jewelry Skills With Brad's "How To Do It" Books Amazon.com/author/bradfordsmith

PICKLE PRECAUTIONS

A hot pickle pot gives off fumes that bother me in my home workshop. I get around that by using my pickle cold. I mix it a little stronger than for a hot pot so that it works almost as quickly. I keep it in a large-mouth plastic bottle and cap it off whenever I'm done using it. From Rock trails 1/2/2019

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 (I) 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 though 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/mw1lindex.html American
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
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EDITOR
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BROWNSTOWN, MI
48183

OFFICIAL PUBLICATION OF

Dated Material

The ROCKPILE

Bulletin Editor Contest Awards

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