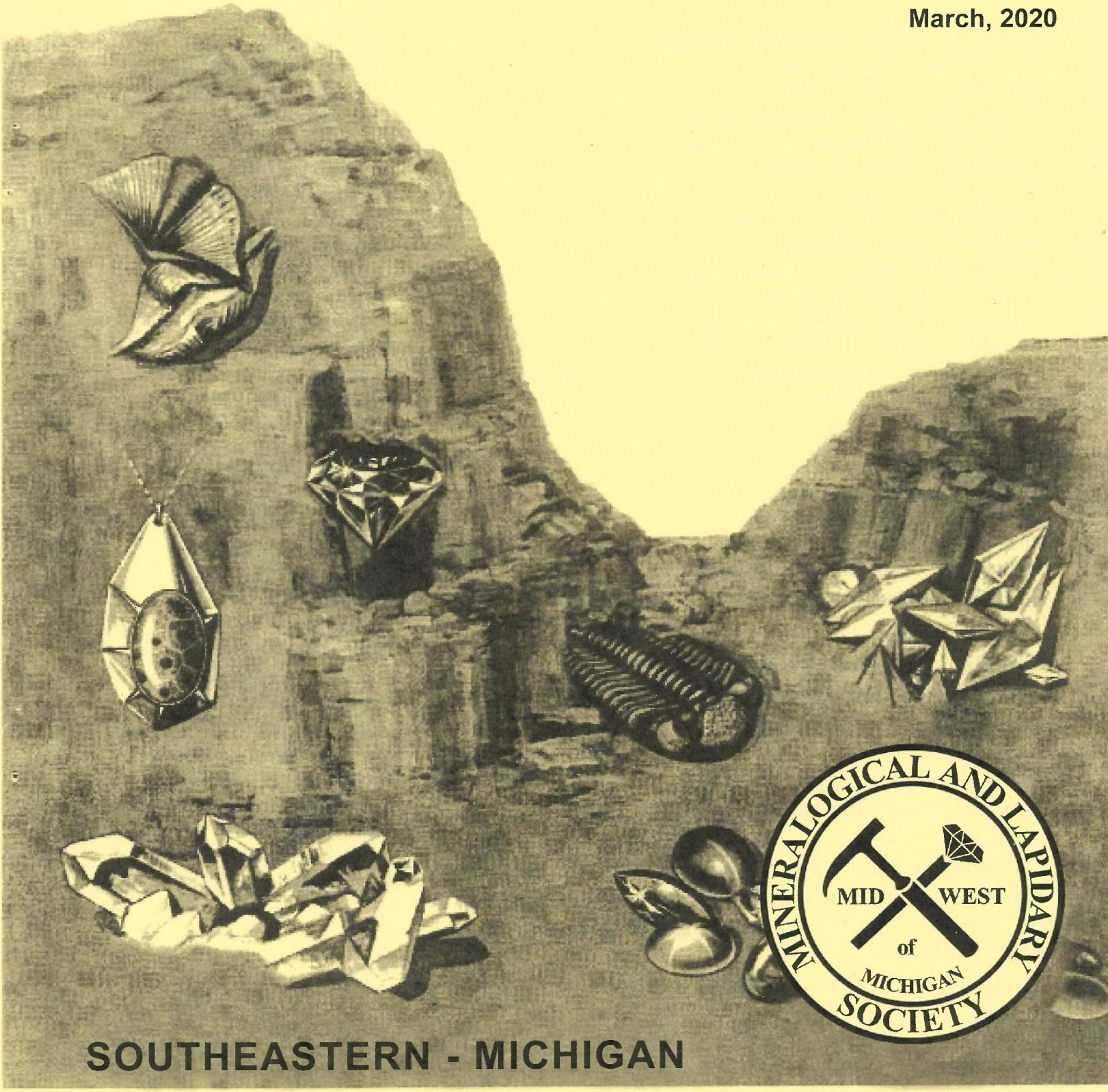
THE ROCKPILE

Official Publication of the Midwest Mineralogical and Lapidary Society

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

March, 2020



SOUTHEASTERN - MICHIGAN

Midwest Mineralogical & Lapidary Society

2020 OFFICERS

President: Diane Kuzara (734) 675-5237
Vice President: Pat Rutkowski (313) 291-5861
Recording Secretary: Lori Haam (313) 562-5097
Treasurer: Doris Snyder (313) 291-2133
Corresponding Secretary: Julie Knechtges (734) 444-9151
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

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
March 2020 Volume LXIV Issue 3

From The President's Desk:

Hi Fellow Rockhounds:

Did you hear the latest news? The Michigan ground hog has predicted an early spring! And you know what that means-our annual spring swap is rapidly approaching. So mark your calender now for Saturday March 28th and head down to St. John's Lutheran Church to set up your swap table or just come on down and bring your wallet, because there will be many good deals to be had. It would be great to see all our members come out to support the club and have a fun day too!
Happy St. Patrick's Day Everyone!

Thank You to a Member Segment:

This month's special thank you goes out to Lou and Cindy Talley (very appropriately , I might add since our swap is this month). The Talley's joined MMLS back in October, 2003. At that time they had no youngsters and went field tripping with our group and they lived closer to our meetings, so they were able to attend our meetings and of course work at our show. They now have two beautiful children and have moved farther away. They took over chairing our swap when Tom Morris gave that up several years ago. Thank you , Lou and Cindy, you are very much appreciated!!

Diane

Program: March 17, The March program will be Dr. Robert Bowell talking about the Cornish Mineral Legacy , 4000 years of hard rock mining in Cornwall, England! From the 2018 Dallas Symposium!
Mike Bomba

Summary of Board Meeting Minutes 1/17/20

1. Diane Kuzara presented the 2020 Budget which, except for the addition of a Banquet line item, an increase in newsletter printing budget and combining of some line items was the same as the 2019 budget.
2. Dues reminders have been sent to a number of members who have not yet renewed their dues.
3. Auction flyers will be printed next week.
4. Ed Smith will be recommended for membership at the 1/21/20 General Meeting.

General Meeting Minutes Summary January 21, 2020

Tri-County Rock and Mineral Society Rock Show will be held on April 25 & 26, 2020. Ed Smith was accepted for membership. The subject of the February program will be Collectible Carbonates by Dr. Carl Francis of Harvard University. Margaret Campbell will have hip replacement surgery on February 12. Status reports for the following events were received: Spring Swap will be held on March 28, 2020, at St. John's Lutheran Church on Telegraph Road in Taylor; the Banquet will be held in May; fall Super-Swap flyers will be distributed soon and the Auction will be held November 7, 2020 at the First Assembly of God Church, 5650 Telegraph Road. The following activity reports were also received: Bead Study group meets on the first and third Thursday of the month, and will begin a new multi strand necklace project; the Mineral Study Group which meets on the 3rd Thursday of the month studied Pseudomorphs, Polymorphs, Epimorphs, and Para morphs in January and will study Purple Stones in February. A February Field Trip is scheduled. The 2020 Budget was adopted. The next Board meeting will be held February 14, 2020 at 7:30 p.m. The next General Meeting will be held on February 18, 2020.
The above summaries submitted by Lori Haam, Secretary.

A Bit Of Bling

An American lady entered a jeweller's and said "You sold my husband a diamond ring yesterday but it's the wrong size". "No problem madam, we can adjust the finger size easily". "Oh, you don't understand, you sold him a five carat size, and I take a ten carat size". From the Internet

HAPPY ST. PATRICK'S DAY

WIRE WRAP CLASS Anyone interested in a class for wire wrap please contact John Lindsay for dates, time and more information.

Mar. 28, 2020
48TH ANNUAL METRO ROCK SWAP,
10A.M. to 5 P.M.

Hosted by the Midwest Mineralogical & Lapidary Society.

At the St. Johns Lutheran Church, 13115 Telegraph Road, Taylor, MI.

For table reservation and information call 734-837-8920

Our Club Activities

Mar. 2nd, 16th, 18th Lapidary Work Shop 2009 W. Michigan Ave., Ypsilanti, Mi., 7pm to 10pm. Fee is $2.50 for each evening. Frank Konieczki 734-323-2218 **PLEASE CALL AHEAD TO CONFIRM TIME AND DATE.**

Mar. 5th & 19th Bead study group will meet at the Kuzara's, 20281 Thomas, Brownstown at 7pm. **Diane Kuzara, 734-675-5237.**

Mar. 13th Board Meeting TBA 7:30pm Rockpile Deadline

Mar. 17th General meeting will be held at the DEMOCRATIC CLUB OF TAYLOR, 23400 WICK RD., TAYLOR at 7:30pm.

Mar. 19th Mineral Study group will meet at Dave Esch's house, 227 Barton Shore Dr., Ann Arbor Mi. At 7:30pm. **David Esch, 734-665-5574.**

Apr. 2nd, 16th Bead study group will meet at the Kuzara's, 20281 Thomas, Brownstown at 7pm. **Diane Kuzara, 734-675-5237.**

Apr. 6th, 20th, 22th Lapidary Work Shop 2009 W. Michigan Ave., Ypsilanti, Mi., 7pm to 10pm. Fee is $2.50 for each evening. Frank Konieczki 734-323-2218 **PLEASE CALL AHEAD TO CONFIRM TIME AND DATE.**

Apr. 16th Mineral Study group will meet at Dave Esch's house, 227 Barton Shore Dr., Ann Arbor Mi. At 7:30pm. **David Esch, 734-665-5574.**

Apr. 17th Board Meeting 7:30pm. TBA **Rockpile Deadline.**

Apr. 21st General meeting will be held at the DEMOCRATIC CLUB OF TAYLOR, 23400 WICK RD., TAYLOR at 7:30pm.

Sister Club Events

Feb. 29-Mar 1: LIVONIA, MI The Roamin Club Annual Auction. Sat 11 am - 6 pm; Sun 10 am - 6 pm. Schoolcraft Community College, 18600 Haggerty Rd., Livonia. Contact: Todd Gall (248) 345-0676; roaminrockclub.weebly.com

Mar. 20 - 22 Jackson, MI. Michigan Gem& Mineral Society Annual Show. Jackson County Fairgrounds, American Event Center, 200W Ganson St., Jackson, MI. info@mgmsrockclub.com

Curling Stones

The curling stone is granite and as defined by the World Curling Federation:

It is circular in shape and weighs between 38 and 44 pounds, has a maximum allowable circumference of 36 inches, must be a minimum of 4.5 inches in height. Has a handle and bolt attached. The handle, attached to the stone by means of a bolt that runs vertically through a hole in the center of the stone, allows the stone to be gripped and rotated upon release.

The top and bottom of a curling stone are concave. The surface in contact with the ice, known as the running surface, is a circle 0.25 to 0.50 inches thick. This narrow running surface is where the ice and the stone interact. On properly prepared ice, the stone's path will bend (curl) in the direction the front

edge of the stone is turning, especially toward the end of its motion. The degree of curl depends on several factors, including the preparation of the ice and the flattening of common paths to the house during the game.

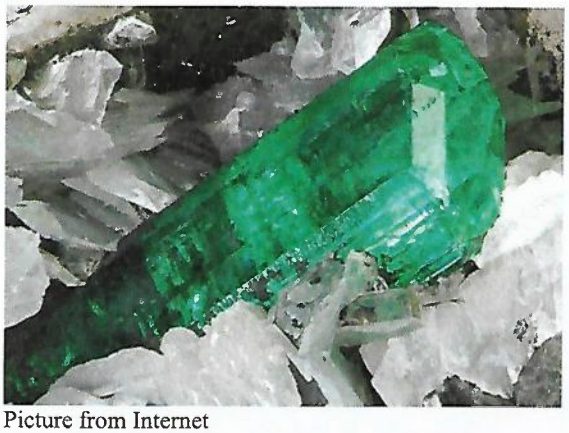
The Scots, in particular, believe that the best quality curling stones are made from a specific type of granite called "ailsite" which has very low water absorption, preventing the action of freezing and melting water from eroding the stone. In the past, most curling stones were made from Ailsa Craig granite. Kays of Scotland has been making curling stones since 1851 and has the exclusive rights to Ailsa Craig granite, granted by the Marquess of Ailsa, whose family has owned the island since 1560. The last "harvest" of Ailsa Craig granite by Kays took place in 2002, yielding 200 tons (note: Kays' statement is that they harvested 1,500 tons, sufficient to fill anticipated orders through at least 2020). Kays of Scotland has been the exclusive manufacturer of curling stones for all three Olympics where curling has been a medal sport.
via *The Tumbler*, 12/19 via *Golden Spike News*, 3/18; from *PGGS Petrograph*, 3/18
From The Quarry 1/20

Michigan Mineral Beginning with the Letter L: Labradorite ($(Ca, Na)(Al, Si)_4O_8$)

Labradorite is a feldspar mineral of the plagioclase series that is most often found in mafic igneous rocks such as basalt, gabbro, and norite. It is also found in anorthosite, an igneous rock in which labradorite can be the most abundant mineral .
Hardness: 6 - 6.5 on Mohs scale
Color: Gray, gray-white, brown, greenish, pale green, blue, yellow, colorless.
Occurrence: Dickson, Houghton, Iron, Keweenaw, and Marquette counties.
From the internet and Wikipedia

North Carolina State Gemstone: Emerald

Emerald was designated as North Carolina's official state gemstone in 1973, long before the most massive



Picture from Internet

stones were discovered. This just proves the state's long history with the valuable gemstone.
From the internet.

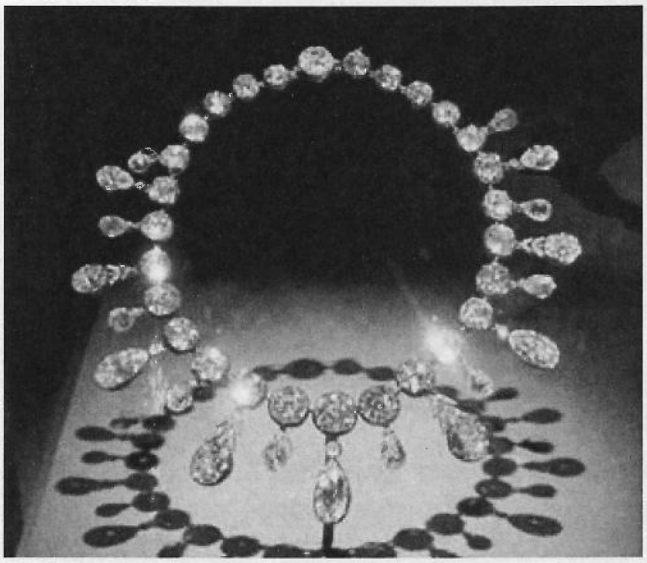
CARBON: THE HARDEST AND SOFTEST

By Brandon Poy Jan. 2019 Pick & Dop Stick, Chicago Rocks & Minerals Society

Ever since humanity invented writing, there have been many different methods. One of the most common means of writing in past centuries has been pencil and paper. Many people know that pencil "lead" is actually graphite. One of the softest minerals known, graphite is a crystalline form of carbon. This is an ideal mineral for pencils because it has a low hardness and forms in sheets that break off onto the paper.

Picture from the Internet

On the other side of the spectrum is diamond, the hardest natural material known. Graphite under high pressure and intense heat converts to diamond. Around 30% of the diamonds found are gem quality. When faceted, these diamond crystals become beautiful, precious gems sparkling with "fire." These two minerals, despite having the same chemical compositions, are complete opposites of each other.



Napoleon diamond necklace at the Smithsonian institution in Washington, D.C. Photo by annemoss.com, via Wikimedia Commons.

"Lead pencils" is a misnomer. Historically, the element lead or any of its ores has never been used in the making of pencils. The modern pencil, invented in 1795 by Nicholas-Jacques Conte, traditionally consists of a core of graphite mixed with a clay binder within a wood casing. Graphite was first discovered in Bavaria, in Europe, at the start of the 16th century. It was mistakenly believed to be a form of lead and was called "plumbago" or black lead centuries ago. The name graphite came into use in 1789; it is derived from the Greek word, "graphein," which means to write.

Graphite in massive form is common while graphite crystals are quite rare. Black to silver in color, graphite has a hardness of 1–2 on the Mohs Hardness Scale for minerals.

The mineral diamond is much rarer than graphite because of the way this mineral is formed. Diamond is the product of immense pressure and temperatures of 1,652–2,372° Fahrenheit deep, between 90 and 120 miles within the Earth. Because of its structure, it has many unique characteristics. Diamond can conduct five times as much heat as copper, and it also conducts sound very well, but it doesn't conduct electricity. A faceted precious-gem grade diamond can also act as a prism, creating a highly desirable "fire" effect with the colors in the gem.

So why, if both are made of carbon, is one the hardest mineral while the other is one of the softest? The answer lies in their crystal structures. Within diamond, the carbon atoms form in a tetrahedral pattern, where each carbon is bonded with four others to form a 3D structure.

Also, because of the intense pressure that diamonds undergo, the atoms are very compact. On the other hand, graphite atoms form layers made up of hexagonal molecules. Graphite, due to its planar structure, can conduct electricity, has a lower density than diamond, and absorbs light, making it appear black. Graphite is so soft that its layers cleave easily. *Photo of graphite from the U.S. Geological Survey and the Mineral Information Institute, via Wikimedia Commons.*

That two polar opposites are actually made of the same element is fascinating. There are many cases similar to this in the mineral world. Crystal structure has a lot to do with the properties of a mineral, especially with cleavage and hardness. How remarkable is it that the graphite in a pencil, which snaps if it is sharpened too much, is actually made of the same element as diamonds? This is a reminder of how amazing nature and geology are.

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Sources:
How can graphite and diamond be so different if they are composed of pure carbon? Mariam Rossi, *Scientific American*, www.scientificamerican.com/article/how-can-graphite-and-diam/. Accessed December 19, 2018.
Diamonds: Fun Facts, Gemological Institute of America (GIA), www.gia.edu/gia-news-research-diamond-fun-facts. Accessed December 19, 2018.
The Mineral Graphite, Minerals.Net, www.minerals.net/mineral/graphite.aspx. Accessed December 19, 2018.
Pencil History, Pencils.com, https://pencils.com. Accessed December 19, 2018.
The Surprising History of the Pencil, Brain Pickings, www.brainpickings.org/2013/06/24/history-of-the-pencil/. Accessed December 19, 2018.
My Child Ate Pencil Lead, Resource Center, Illinois Poison Control, www.illinoispoisoncenter.org/my-child-ate-pencil-lead. Accessed December 19, 2018.
Graphite, Wikipedia: The Free Encyclopedia, https://en.wikipedia. org/wiki/Graphite. Accessed December 19, 2018.
From the MWF News Oct.2019

World's Oldest Known Animal Identified After Decades-long Mystery

The oldest known animal in the geological record has been identified, in a discovery that scientists are calling "the Holy Grail of palaeontology."

Scientists from The Australian National University (ANU) and overseas have discovered molecules of fat in an ancient fossil to reveal the earliest confirmed animal in the geological record that lived on Earth 558 million years ago.

The strange creature called Dickinsonia, which grew up to 1.4 metres in length and was oval shaped with rib-like segments running along its body, was part of the Ediacara Biota that lived on Earth 20 million years prior to the 'Cambrian explosion' of modern animal life.

http://www.geologyinANU PhD scholar Ilya Bobrovskiy discovered a Dickinsonia fossil so well preserved in a remote area near the White Sea in the northwest of Russia that the tissue still contained molecules of cholesterol, a type of fat that is the hallmark .com/2018/09/worlds-oldest-known-animal-identified.html#k2ejVqde5OpkbBSR.99 Follow us: @GeologyTime on Twitter

Lead senior researcher Associate Professor Jochen Brocks said the 'Cambrian explosion' was when complex animals and other macroscopic organisms -- such as molluscs, worms, arthropods and sponges -- began to dominate the fossil record. "The fossil fat molecules that we've found prove that animals were large and abundant 558 million years ago, millions of years earlier than previously thought," said Associate Professor Jochen Brocks from the ANU Research School of Earth Sciences

"Scientists have been fighting for more than 75 years over what Dickinsonia and other bizarre fossils of the Edicaran Biota were: giant single-celled amoeba, lichen, failed experiments of evolution or the earliest animals on Earth. The fossil fat now confirms Dickinsonia as the oldest known animal fossil, solving a decades-old mystery that has been the Holy Grail of palaeontology."

Mr Bobrovskiy said the team developed a new approach to study Dickinsonia fossils, which hold the key between the old world dominated by bacteria and the world of large animals that emerged 540 million years ago during the 'Cambrian explosion'.

"The problem that we had to overcome was finding Dickinsonia fossils that retained some organic matter," said Mr Bobrovskiy from the ANU Research School of Earth Sciences.

"Most rocks containing these fossils such as those from the Ediacara Hills in Australia have

endured a lot of heat, a lot of pressure, and then they were weathered after that -- these are the rocks that palaeontologists studied for many decades, which explained why they were stuck on the question of Dickinsonia's true identity."
http://www.geologyin.com/2018/09/worlds-oldest-known-animal-identified.html#k2ejVqde5OpkbBSR.99
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Palaeontologists normally study the structure of fossils, but Mr Bobrovskiy extracted and analysed molecules from inside the Dickinsonia fossil found in ancient rocks in Russia to make the breakthrough discovery. "I took a helicopter to reach this very remote part of the world -- home to bears and mosquitoes -- where I could find Dickinsonia fossils with organic matter still intact," Mr Bobrovskiy said. "These fossils were located in the middle of cliffs of the White Sea that are 60 to 100 metres high. I had to hang over the edge of a cliff on ropes and dig out huge blocks of sandstone, throw them down, wash the sandstone and repeat this process until I found the fossils I was after."

Associate Professor Brocks said being able to study molecules from these ancient organisms was a gamechanger.

"When Ilya showed me the results, I just couldn't believe it," he said.
"But I also immediately saw the significance."
The above story is based on Materials provided by Australian National University.
http://www.geologyin.com/2018/09/worlds-oldest-known-animal-identified.html#k2ejVqde5OpkbBSR.99
Follow us: @GeologyTime on Twitter
From internet Geology-In

Flat lapping Without a Lapping Machine

The process of flat lapping is so simple that anyone can do it even if you don't have a flat lap. So go to it, and polish the bookends you want, or that clock face. Just get a piece of aluminum about 12 or 14 inches square. Place it on a flat surface. Take a teaspoon of 120 grit (or even 90 grit if you have saw marks on the slab), mix with Vaseline or water. (I like Vaseline because it holds the grit better.)

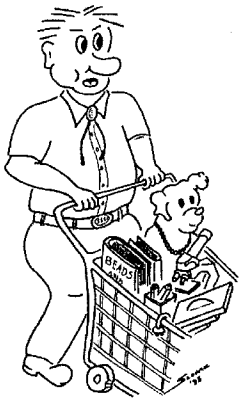
Now take your slab to be polished or sanded and dop a piece of wood to it so that you have a handle and can hold it down on the grit. Just keep twisting and pushing it over and around on the grit.

Be sure that your grit is always under your slab. Don't run it over the dry aluminum. Soon the aluminum will be well covered. Spread out the grit as you move the stone over it, in any movement pattern you like. Be sure to add more grit so it doesn't get too fine. Keep at it until all saw marks are well sanded off.

Next, wash the stone well and the aluminum too, so that there is no grit left. The next step is to mix 220 grit as before and start sanding all over for a finer finish. Then wash everything again well and mix 400 grit, and start sanding again. Finally, mix 600 grit and sand again. Your slab should now be ready for polishing.

For polishing, obtain a piece of leather. You can get it at some shoe repair shop or leather shop. Get a square about 12 x 12 inches. Stick it to a board and keep it for polishing only. Don't tack it down because the tacks can scratch your stone. Put your favorite polish mix all over the leather. Start polishing it as you sanded it. When polished, wash well and you will have a lovely shine. This is the oldest way to do it before we had motors. It takes time and work, but a little time each night will do the trick.
- Virgil Stine in Osage Hills Gems
From the Rockpile How to Book

Joe Slovak's ROCTOON Book



I JUST LOVE THIS ROCK SWAP!

Remember Our Swap On March 28th. See you there!!!

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
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Michigan

EDITOR
20281 THOMAS
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