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ROCKHOUND NEWS

Sept. 1999

Official publication of the
Central Michigan Lapidary & Mineral Society
Member of MWF & AFMS

CENTRAL MICHIGAN LANSING
LAPIDARY & MINERAL SOCIETY

ROCKHOUND NEWS

This bulletin is the official publication of the Central Michigan Lapidary and Mineral Society of Greater Lansing, Michigan. It is published the second week of each month except July and August.

The Central Michigan Lapidary and Mineral Society is a non-profit organization, meeting to promote interest and increased knowledge in the fields of mineralogy, geology, paleontology and the lapidary arts. It was organized in May, 1957.

Meeting place: North School, 333 E. Miller Rd, Lansing MI
Meeting date: Third Thursday, except in July and August
Meeting time: 7:30 p.m.; doors open at 7:00 p.m.
Annual dues: Adults $5.00, Students under age 18 $1.00

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http://www.comean.com/rock/mwf

American Federation of Mineralogical Societies

FOLKS WITH LAST NAMES A-I PLEASE BRING REFRESHMENTS TO SHARE!
PROGRAM: SHOW & TELL. WHAT DID YOU COLLECT THIS SUMMER?
MINI SILENT AUCTION, LIMIT 10 ITEMS PER PERSON

FIELD TRIP TO HUNTSVILLE, OHIO SEPTEMBER 25-- George Heaton

The field trip for September will be to the Duff Quarry at Huntsville Ohio on Saturday, the 25th. We will meet at the quarry office at 10:00 am on Saturday morning. **All field trippers must wear a hard hat, hard toed boots, and safety glasses or goggles.** Tools needed are: chisels in both large and small sizes, crack hammers of 2-3 lb. size, and a pry bar and sledge hammer of 8-10 lb. size are often useful. The sledge hammer and a long pry bar can also be used as a cane to help you back to your car should you happen to injure your foot or ankle. Also don't forget wrapping paper and boxes for packing specimens. Minerals to be found include bright, lustrous pyrite crystals of unusual crystal habits, dolomite, sphalerite, calcite and fluorite.

The November-September 1987 issue of the Mineralogical Record has an article about Duff Quarry and it's minerals, with photos and line drawings of the various crystal habits of pyrite found there. If you do not subscribe to this journal you might check our club library.

To get to Duff Quarry, take I-75 south in Ohio to Roundhead. Then south on Rt. 117 to Duff Quarry on your left, just before coming into Huntsville. Allow about 4 hours driving time from Lansing to Huntsville Ohio.

The last time I stopped at Duff Quarry (Aug. 31) Rt. 235 was still closed. You may need to go to Lima exit 125 and take Rt. 117 from there to Roundhead.

CHILDREN'S TABLE WORK BEE & CRITTER MAKING -- George Heaton

On **Saturday, October 2** we will have a children's table work party and pot-luck at Grit and Alice Turner's garage where our club's children's table stuff is stored at **2667 Pine Tree Rd**. Please come and help and bring food and eating tools for the pot-luck lunch. Work will **begin between 9:00 and 10:00 a.m.**. I plan to be there about 9:00 a.m. Lots of work needs to be done to prepare material for our October show. A significant part of our show income is derived from our children's table. **We need help and donations of material.** Please mark this on your calendar and come to help.

Roger Laylin's addendum: The scheduled critter making party in July was a big flop. Too hot, no one came, even though the basement was cool. Soooo, we will try again. This time we will try to make critters in conjunction with Grit's barn work. So those of you who can, bring your talented ideas, a glue gun if you have one, and meet in Alice's basement.

CONGRATULATIONS TO INGHAM COUNTY 4-H'ERS -- Roger Laylin

The 1999 Ingham County 4-H Fair had two entrants in the rocks and minerals section of the Natural Resources Division. CML&MS member Nathan Osterle entered his collection of Michigan rocks and minerals and received a Group A (blue ribbon) rating. Megan Godbold entered her lapidary project, a Lake Superior pebble covered bird house, and received a Group B (red ribbon) award. Both are invited to attend the September meeting to receive an additional award from our club.

MINERAL OF THE MONTH: QUARTZ -- Duane Jorgensen

Three cheers for quartz! With it's hardness of 7, a standard of Moh's scale, and conchoidal glass-like fracture, who has not scratched themselves or done more serious harm on a sharp piece of quartz? Of course the original inhabitants of the land valued a quartz-family variety quite highly and used it widely. No it wasn't the quartz of silicon wafer and computer usage that some of us use to bring food to the table. It was flint, a non-crystalline variety of quartz, fashioned into arrowheads, that provided them with protein for roasting over the campfire or cooking in the cookpot. Speaking of pots, there is a whole potful of varieties of quartz in the quartz-family of minerals: flint; opal; agate;carnelian;jasper;chrysophrase; chalcedony; chert; smoky; yellow transparent or citrine; amethyst; rose; milky; asteriated, which contains a radiating star-like pattern within the crystal; cairngorm and morion which are dark brown to black; saphire quartz(blue); cat's eye, which comes close to fiber-optic quartz with its chatoyent or opalescent look, adventurine, and others.

Chemically they are all silicon dioxide, otherwise known as silica or SiO2 (sorry no subscrpts yet). Physically, there is wide variety in the quartz family as illustrated above. The crystals are hexagonal,subsystem rehombohedral-trapezoidal, commonly showing prisms and two rhombohedrons that make a fake pyramid. The rhombohedrons are often developed unequally, which explains why some quartz "pyramids" have three large and three small faces. Buy and use a good mineral book, does anyone have the current edition of Dana"?

Quartz is very abundant and is a major component of quartz sand(no, Zuni, not all sand is quartz, nor all quartz sand), granite(which without quartz would be a syenite), sandstone, and quartzite(metamorphosed sandstone). How many of you are aware of the easy way to distinquish between sandstone which breaks around the individual grains, and quartzite, which breaks through the individual grains?

Quartz is one of mankind's most useful minerals and is found in one form or another in everything from mortar sand to foundry molds to building stone to paint as a flatting agent. However there is one place no one should have or want fine-particle-size quartz, and that is in their lungs, as it causes silicosis, a variety of pneumoconiosis.

IN MEMORY: LEE OLSON

The club lost a willing worker and special friend this summer when Arlene "Lee" Olson passed on July 8. Many club members attended her memorial service on July 13 at the Gorsline-Runciman East Chapel.

We can remember Lee feeding us all well as chair of the show hospitality room, and as co-chair of several banquets. We remember her cheerful patience as Royal carved gypsum in the family kitchen or launched into one of his lengthy stories. While she loved amethyst and other sparklies, Lee also made a point to bring home an "ugly rock" from each field trip!

Lee's warm presence and enthusiasm for the hobby will be greatly missed.

GOOD IDEA

Tired of using good old bathroom tissue to wrap your specimens? Try clear plastic wrap, it cuddles right up around your delicate specimens, and makes them much easier to handle. Easier to see too! -- Kitty Starbuck, MWF Newsletter 9/99

SUMMER FIELD TRIPS REPORT -- George Heaton

BLOOMINGTON INDIANA FIELD TRIP, JUNE 25-27

I found only five members of our club beside myself at the Bloomington Rock Swap and collecting geodes at the road cuts this year. The weather was hot again but not quite as hot as last year. I thought most of the prices on thw swapper and dealer tables were rather high for a flea market type show, so my brother, nephew and I spent most of our time at the road cuts digging geodes. I haven't opened most of my geodes yet so I don't know how well I did. After Bloomington my brother and I spent a couple days at the Halls Gap, Kentucky road cut where I collected a very nice millerite speimen and several other small geodes that I haven't opened yet.

JULY 10th FIELD TRIP, BLUFFTON OHIO

Only four of our members made the trip to the Bluffton Stone Co. Quarry at Bluffton Ohio on Saturday July 10. As usual, we had good weather which was dry and relatively cool and comfortable for this time of year. There was a lot of brown fluorite to be found but most of it was poorly formed and highly etched crystals, not good enough for most of our collections but suitable for our club's children's table.

AUGUST 28th FIELD TRIP, HIGHLAND QUARRY

Our field trip to Davon Inc. Highland Quarry near Hillsboro Ohio attracted only six people, five of our members and one guest. Those people who stayed home were the lucky ones. The collecting was very poor. Only a few fossils were found and very few minerals of poor quality were discovered. At least, as usual for George Heaton's field trips, the weather was good, being dry, sunny and warm. We were unable to collect in the part of the quarry where I had good luck on previous visits due to flooding from recent rains.

HOBBY HINT Flint Gemstones 8/99 via The Lithics 7/99

A rockhound in Columbus OH tried soybean oil as an alternative to petroleum in his slab saw. He reports that is works just as well as the petroleum and has some advantages. It does not give off an unpleasant odor, it is not toxic, and has a lower flash point. It is also gentle on the hands.

CLUB CALENDAR

Sept. 16	Regular meeting, North School, 7:30. Show & Tell, Mini Silent Auction.
Sept. 25	Field trip to Duff Quarry, Huntsville OH, be at quarry 10:00 a.m.
Oct. 2	Children's Table work bee, Critter making & potluck. Home of Alice & Grit Turner. 9:00 a.m. ish
Oct. 21	Show set up
Oct. 22-24	OUR SHOW: "A Century of Gems" Fri. 6-9 p.m., Sat. 10-7, Sun. 11-5. Marshall Street Armory, Lansing.

SHOWS AND SUCH

Sept. 17-18	Holland Show, Holland Civic Center, 150 W. Eighth St. Holland MI. Fri. & Sat. 10-9
Sept. 18-19	Falls Fossil Festival, Falls of the Ohio State Park, Clarksville IN. Swap, talks, field trips. Sat. 9-7, Sun. 9-5.
Oct. 2-3	Eddy Center Geology Arts Fair. 10730 Bush Rd. Chelsea MI. State Park motor vehicle permit required for entry. Sat. 10-5, Sun. 10-4.
Oct. 8-10	Detroit Show. NEW LOCATION: South Macomb Community College Expo Center, Building P, 12 mile rd & Haynes, Warren MI Fri. 9-7, Sat. 10-7, Sun. 10-6.
Nov. 6	Dearborn Club Auction, Allen Park Civic Hall 15871 Philomene, Allen Park MI 6:00PM

POLISHING OPALS BY HAND

By Giovanna Fregni, Publicity and Education Director

(This also works for other soft stones, such as turquoise, amber, malachite, etc.)

Tools and Supplies

- Grindstone (like one for sharpening kitchen knives)
- Sheet of glass or masonite
- Small squirt bottle filled with water
- Wet/dry sandpaper in 220, 300, 400, 600 grits. (It's a good idea to get some plastic sleeves to store the individual sheets of sandpaper to keep the sheets from getting contaminated by other sizes of grits. These are available at office supply stores) Crocus cloth (finer sandpaper) in 01 and 02 grits
- Cerium oxide
- Small piece of leather Super glue
- Dop stick

This is a simple and inexpensive way to polish opals. In fact it's almost preferable to using the usual cabbing machinery. Best of all, you can do this anywhere. I've demonstrated this at our club shows, on field trips; even at home while watching TV!

It is very important to get an idea of what you want the finished stone to look like. Take a few minutes to examine the stone in good light, both artificial and daylight. In Australian opals, the color is usually in flat bands running in layers through the stone, like icing between layers of cake. The bands of fire usually look clear from the sides. Mexican fire opals are clear with the fire almost magically suspended in the middle. Boulder opals have very bright, but usually small bands or nodules of opal inside a hard matrix. Boulder opals are usually polished with the opal still inside the matrix.

The first step is to decide if you want the finished stone to be a 'baroque' or cut it to a shape (round, oval, square, etc.). Baroque stones are ones where the natural shape is kept. If you want to have it set in jewelry, you will have to make a custom setting for it. But even with a baroque, there may be sections where the opal is 'potch' (Opal with no fire) or matrix (the parent stone that the opal grew in).

If your opal is so small that you would have difficulty holding onto it, you might want to attach it to a dop stick. A dop stick is a handle to help get a grip on your stone. It can be anything from a finishing nail to a chopstick or a piece of dowel from a hardware store. To attach the dopstick, you must first grind the back flat. Put a few drops of water on your grindstone and gently rub the back of the opal against it. You can get a feel for how quickly this will go by how fast the opal wears away. Don't rub too quickly! Opal is heat sensitive and can crack when the friction causes the temperature to go up. The water helps keep everything cool, so keep adding it as you need it. Once the back is flat, you can attach the dopstick with super glue and wait a few minutes.

Now for the fun part. Start to form your stone into he shape you want. If you decided against a baroque, you can grind away the corners and edges to get the shape you're after. There are some standard sizes in the jewelry trade and if you cut your opal in these sizes, you could buy a pre-made setting for your stone. Bad news for the metrically challenged, the sizes are all in millimeters. Round sizes go anywhere from 3 mm on up. Ovals come in 3x5 mm, 4x6, 5x7, 6x8, 8x10, 9x12, etc. For baroques, shape it any way you like. Take a little off the matrix here, trim a little of the potch there...

When you start to cut your opal, you may see what looks like a nice band of fire, but it's underneath some opaque opal. Your job is to slowly grind away that upper layer and expose the fire underneath. There are few things as exciting as cutting an opal and seeing the colors develop and become brighter and brighter as you work the stone. You are looking at something no one else on earth has ever seen before!

Try to keep from cutting too deeply. There's always the temptation to cut a little farther to see what's there. Avoid going too far into the fire. Remember that when you've cut part of your stone away, there's no way to put it back on.

Once you have the stone shaped the way you want it, It's time to start the sanding process. Wash your stone thoroughly and lay your coarsest sheet of sandpaper on the glass or masonite. Add a couple drops of water and rub the stone against the paper. If the surface of the stone will be domed, try to make it as smooth a curve as possible. Now is the time to start working out all those little flat spots that look like facets. If your stone will have a flat surface, make sure that there are no shallow areas that are not being sanded. If you miss these, they will not polish well. Work slowly and check frequently. Wash the stone (and your hands) every time you go from one sandpaper to the next finest grade. A piece of grit could leave a scratch that will show up. If that happens, go back a step and re-sand. Use a magnifying glass or an eye loupe to look at the texture of the stone. The texture will be finer with every successive sandpaper grit you use.

By the time you get to the 600 grit, the stone will show all sorts of fire and color. Now it's really getting hard to pay attention to what you are doing. Flashes of fire and color get more and more exciting as the stone surface becomes smoother. Try to hold the stone so that you can look at the surface of the stone instead of all the color. Keep checking to see that the surface is even and that there are no scratches.

Now it's polishing time! Take your scrap of leather (I like to use the sueded (rough) side, others like to use the smooth side) and squirt some water on it. Take a pinch of the cerium oxide and sprinkle it on the wet leather, as you rub your opal on it, the water and cerium will form a paste. Keep adding a drop or two of water to keep the leather damp, but not soaking wet. Now check your opal! The surface should be as smooth and bright as glass. Wash off the extra polish. The final test is when you wet one side of the opal and you can't really tell

VIA The Rock Collector 3/99 Continued

OPALS (CONTINUED)

which side is wet and which is dry. If you can still see a difference, it may need a little more polishing, or maybe you didn't get all of the polish off and the cerium has formed a bit of a film on the stone. If you used a dop stick, soak it in acetone (nail polish remover) for a few minutes to dissolve the super glue.

Now you have a really special gemstone that you can admire and show off. People will be amazed that you did this without any expensive or special equipment. Have fun cutting and polishing! VIA The RockCollector 3/99

TIPS

IF YOU HAVE SOME CHRYSOCOLLA, and would like to bring out the greens, blues and copper, place in full strength chlorine bleach. Let soak for as long as it takes. This works really well, and brings out some great colors.

Original Source Unknown, via Crystal Cluster, 9/98, VIA The RockCollector 3/99

IF YOU WANT TO BRING OUT THE COLOR AND BANDING of LAKE SUPERIOR AGATES without tumbling them, this system seams to work quite well. Fist, soak the stones in heavy mineral oil, then rub them with a coarse cloth, rubbing in as much oil as you can. Then place the stones on a cookie sheet, in a 200 degree oven for about 20 minutes. Remove and cool slowly. Amazing results.

Original Source Unknown, via Crystal Cluster, 9/98, VIA The RockCollector 3-99

THE IDEAL TUMBLING LOAD is slightly less than 3/4 full. Use only enough water to fill the voids between the stones with no more than 1/8 of an inch over the top of the stones.

USE ONLY ENOUGH ABRASIVE to cover the surface areas of the stones. This usually takes about one pound of #100 grit for each 8 pounds of rock. This may even be further reduced as the #400 and #600 grit is used, as the finer particles possess more surface area and 3/4 pound of grit with 8 pounds of rock is usually sufficient.

from the Rockpile, Via The Cowtown Cutter, 9/98,

HANDY SANDER: A safety razor makes a handy sander. Remove the blade and wrap sanding paper around the curved blade holder. Tuck the ends under the teeth and tighten the handle. This is ideal for sanding small surfaces, especially if they are curved.

from Rock Chips via The Backbender Gazette, 2/99.

MORE Hints

FLAWS AND INCLUSIONS – Oil of Cinnamon or Cassia is sold by the ounce in drug stores. These oils have a refractive index near that of most stones. When you submerge a stone into the oil, surface irregularities vanish and you can see the flaws and inclusions. (from

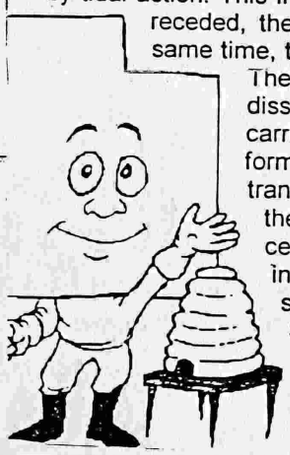
The Rock Likker - Via Rock Rollers 2/86, 2/99

Tripoli for Polishing Wood:

Wood limbs and petrified wood can be polished to a glass-like polish with Tripoli instead of the more expensive tin oxide.

From Rok-Tok 12/98 via The Backbender's Gazette, 2/99.

UTAH'S SEPTARIAN NODULES – started in Southern Utah 100 million years ago in the Gulf of Mexico of the time. Decomposing sea life attracted sediment forming mud balls. These were rolled around by tidal action. This increased their size. When the sea receded, the balls dried and cracked. At the same time, the bentonitic clay in them shrank. Then the ocean returned and dissolved calcite from sea life was carried into the cracks where crystals formed. A thin wall of calcite transformed into aragonite, dividing the clay exteriors from the calcite centers. This dividing wall - septum in Latin - gave the name septarians. They occur in Tropic Shale in Long Valley, near Mt. Carmel and Oderville, UT.



Rock Buster News 11/95, Via Rock Rollers, 2/99

*** HINTS

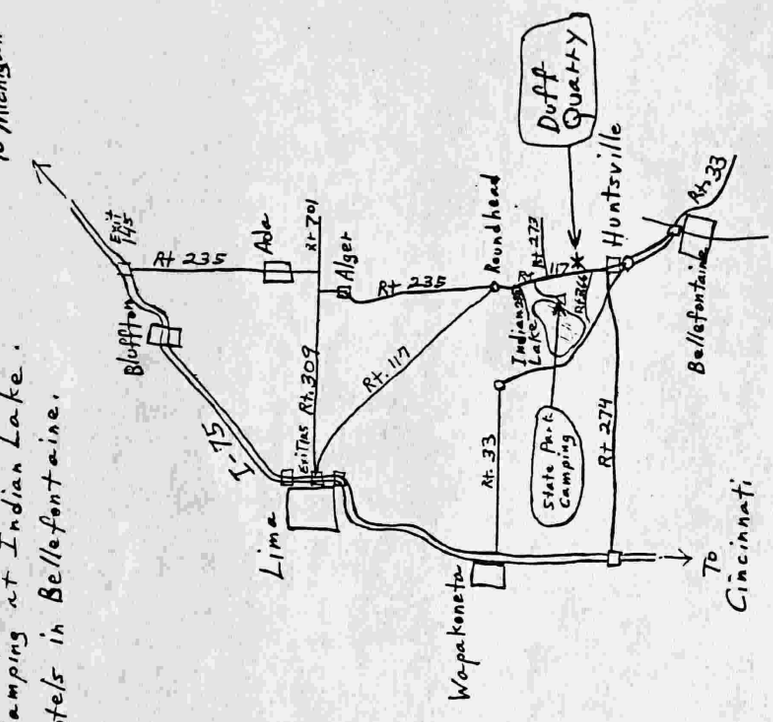
To get a high polish on onyx and other stones that are difficult to polish, mix in a wide mouth jar three tablespoons of water with a half-tablespoon of oxalic acid. Dab your cab in this .....then polish.

From *Gem Time* via Quarry Quips 3/99
Via The STRATA DATA 4/99

A good gadget to clean and polish silver can be purchased at the office supply store. Ask for a fiberglass eraser. It is sort of a brush and gets down into the smallest cracks and does a beautiful cleaning job. This is especially fine for intricate silver jewelry that you have hand cast.

From *Gulfport Gems* via *Quarry Quips 3/99*

Duff and Son Quarry, Huntsville, Oh
About 2 Miles North of Huntsville on Rt 117
Camping at Indian Lake.
Motels in Bellefontaine.



Minerals to be found: Pyrite, dolomite, calcite, Sphalerite, Fluorite.

Equipment Needed: Hard hat, hard toed boots, safety glasses or goggles, 2-3 Lb check hammer, Chisels of various sizes, large to small, sledge hammer 8-10 Lb, pails to carry tools or specimens, boxes and wrapping paper.

Other points of interest worth seeing in this area include Zane Caverns, Ohio Caverns, Mac-O-Chee Castle, Mac-A-Cheek Chateau.

FROM THE ROSTER ROOSTER -- Wayne Zittel

NOW is the time of year to pay your **dues.** Please do so promptly, so our directory can be published promptly!
NOW is also a good time to order a **name badge** if you would like one! Orders are placed only twice a year.
DUES: Adults $5.00
Student's under age 18 $1.00
NAME BADGE: $7.00 (includes club logo triangle & name plate)
Complete the form below and return with your check to Wayne Zittel at the meeting or via mail:
3401 Walker, Lansing MI 48906

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Yes, I/we wish to renew my/our membership in CML&MS for the year 2000.

Name(s) _____

_____

Address _____

City & State _____

Phone _____ E-Mail _____

I would like to order a name badge for $ _____

Check enclosed for $_____