

The Rockfinder

Michiana Gem & Mineral Society
Tom Noe, Editor
305 Napoleon Blvd.
South Bend, IN 46617

HAVE A FUN-FILLED SUMMER!



JUNE, 1996



THE ROCKFINDER

HIGHLIGHTS IN THIS ISSUE:

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- How Herb and Phyllis Found Happiness and Hard Work on Field Trips in the Chicago Loop. p.6

MICHIANA GEM & MINERAL SOCIETY

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Publicity	Tom Noe	305 Napoleon Blvd., South Bend, IN 46617
Membership	All Members	
Field Trips	Kathy Miller	1106 Clayton Drive, South Bend, IN 46554

THE PURPOSE of the Michiana Gem & Mineral Society is to promote interest in and study of the earth sciences and the lapidary arts, and the sharing of knowledge and techniques.

General meetings are held the fourth Sunday of each month, 2:00 pm EST, at Our Redeemer Lutheran Church, 805 S. 29th St., South Bend, IN. Exceptions include field trip meetings, June (field trip), July (no meeting), August (club picnic) and December (Christmas Party).

Board meetings are held the second Wednesday of each month, 7:00 pm, St. Joseph County Public Library, basement level.

The annual club show is Labor Day Weekend.

The Michiana Gem & Mineral Society, a not-for-profit organization, is affiliated with the Midwest Federation of Mineralogical Societies and with the American Federation of Mineralogical Societies.

Rockfinder staff:

Editor, Tom Noe, 305 Napoleon Blvd., South Bend, IN 46617
 Co-Editor, Margaret Heinek, 7091 E. East Park Lane, New Carlisle, IN 46552-9400

Reporters, Bob Heinek, Herb Luckert, club members
 All contributions for publication should be in the hands of the editor by the 10th of each month. Call (219) 289-2028 or (219) 654-3673. Permission is hereby granted to reprint any original *Rockfinder* articles, as long as due recognition is given along with the reprint.

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Yearly Membership Dues (Payable before January 1)

_____ Individual	\$ 6.50 per year
_____ Family	\$10.00 per year
_____ Junior	\$ 2.00 per year

Please send your dues and this form to
 Michiana Gem & Mineral Society
 c/o Margaret Heinek
 7091 E. East Park Lane, New Carlisle, IN 46552-9400

Please make address corrections to the mailing label (reverse side) and/or fill in the optional information below.

Check your SPECIAL INTERESTS:

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THE ROCKFINDER

Volume 36
Number 6

JUNE, 1996

Published by
Michiana Gem & Mineral Society

Meeting: There is no meeting in June because of the field trip. The next meeting is the club picnic on Sunday, August 25.



June Birthday:

12--Jessica Zeiger

July Birthdays:

12--Louis Jordan, Jr.

12--Fred Niebauer

18--Nick Pellus

19--Dewey Hassler

21--Mary Etta Miller

23--Scott Zeiger, Jr.

28--Pat McLaughlin

August Birthdays:

1--Sherrie Russell

1--Robin Schuster

13--Todd Miller

17--Betty Stout

19--David O'Tousa

21--Larry Hess

22--Dawn Cytacki

23--Madeleine Martinez

24--Jo Kytta

26--Sr. Georgia Costin

27--Phyllis Smallwood

June Anniversaries:

6--Tom & Sue Fields

8--Bill & Robin Schuster

24--Todd & Lynn Miller

25--Jim & Dawn Cytacki

25--Mike and Tracy Slattery

July Anniversaries:

20--Dewey & Nina Hassler

31--Bob & Margaret Heinek

August Anniversaries:

4--Ed & Marsha Miller

26--Jim & Sherrie Russell

UP AND COMING

June 21-23: Gem-Mineral Fossil Swap, Lawrence County Rock Club at Monroe County 4H Fairgrounds in Bloomington, IN.

July 26-28: Annual Midwest Federation Convention and Show in Macomb, IL.

August 5-9: Red Metal Retreat, Houghton, MI. Lake Superior Copper Mining District of Michigan's Upper Peninsula, geological tour, mineral swap, field trips, slide talks and a benefit auction.

August 30-Sept. 1: Michiana Gem & Mineral Society club show at Century Center, South Bend.

September 27-29: Club field trip to Hueston Woods State Park in Ohio.

MARGARET'S COLUMN

This will be our last *Rockfinder* until just before our show Aug. 30, 31 and Sept. 1. So mark your calendar now for the annual pot-luck picnic that will be held August 25 at Clay Park in the south shelter. We sure hope it won't be as hot as it was last year.

Now some information on committees for the show: Marie Crull will be in charge of the door, Tom McLaughlin is display chairman, Tom Noe, silent auction, Lorraine Jordon is in charge of the Kid's Korner. All members will be asked to help in the set-up, draping the display tables on Friday morning, Marie will call you to see when you are able to help at the door and helping Lorraine and Tom. Bob, Bill Crull and I will be there on Thursday evening to mark the room for the dealers' booths; if you want to help at that time, let Bill or Bob know and be at the Century Center at 7 pm.

Of course, we need displays!!! We have cases in the storage (4 feet by 2 feet) and they are for use by members. If you do not have enough to fill one, find someone that needs the other half. If you would like to bring your display on Thursday evening, we will have a few tables set up for you to place your cases, but the tables will have to be covered, so come and help! Displays should be in place before 2 PM on Friday. Remember this is your show, and the profit helps to pay for our trips and club expenses. So **HELP wherever and whenever** you can.

Marie Crull will be the Michiana Society's delegate to the Midwest Federation Convention July 26, 27 and 28 at Macomb, Ill, and Bob Miller is candidate for president of the MWF. And we had information that the *Rockfinder* is in the top 10 in the bulletin contest. One of Paul Godollei's article is also in the running. This is the second convention that the group of clubs at Macomb has chaired, and

they really put on a very good show, so if you are able to attend, go and enjoy. Several of our members are planning on being there.

Bob Miller will represent the MWF as V-President at the AFMS/CFMS Convention at Riverside, California, August 8 through the 11th. I will be the candidate for president of the AFMS. This is quite an honor and sincerely hope I am able to do a good job. Bob and of course Kathy will be there to cheer us along. Bob and I have been asked if we would judge competitive exhibits, which we plan on doing, and Bob Miller was asked also, don't know if he will be available.

There are several shows being held in Octobr. Greater Detroit Gem & Mineral show Oct. 10 through the 13th in Detroit. Three Rivers Gem & Mineral Society's 35th annual show on Oct 18 through 20, will be held at the Allen County Fairgrounds. Make plans to attend one or both of these excellent shows.

Have a good summer, and we will see ALL of you at the picnic.

ROCKHOONDING ON PUBLIC LAND

U. S. Dept of the Interior --- Bureau of Land Management

Where is collection pemissable? Rockhounding is recognized as a legitimate recreational pursuit on nearly all of the 17.8 million acres of puublic land in Wyoming. These public lands administered by the BLM are open to anyone, to take limited amounts of rock material for noncommercial purposes without charge. Exceptions—land withdrawn and protected for other purposes — are posted. Maps showing the location of public lands in Wyoming can be obtained from the district offices.★

No Historic Artifacts, PLEASE - The laws passed in 1979 and the Antiquities Act of 1906 are designed to protect our Nation's cultural resources. These laws prohibit the unauthorized excavation, removal, damage or alteration of any archaeological and historical site.

★ 2515 Warren Ave. Cheyenne, Wyo 82001

**MINUTES OF THE MICHIANA GEM
AND MINERAL SOCIETY MAY 19, 1996.**

President Heinek opened the meeting at 2:03pm. Everyone was welcomed and no guest were present.

PROGRAM: Mike Slattery said the program would be given by Bob and Kathy Miller on their trip to Israel.

A motion was made by Jessie Zeiger to accept the minutes as printed in Rockfinder, seconded by Mike Slattery.

Pam Rubenstein gave the treasurer's report and will be filed for audit.

President Heinek got letter from County Home from a man that would like to know more about club. It was decided that we would invite them to come and send them a mailing of newsletter.

Hostess: Pam Rubenstein & Janet O'Tousa.
Thanks for the wonderful desserts!

Gordon Dobecki will not be at the fall show so Mike Slattery will take over for him.

Bob Miller who is in charge of library suggested we have an auction and sell old, old books. Everyone thought that would be a good idea.

Ozzie Kytta is doing better after his knee surgery. Good luck Ozzie!

Tom Noe had no report on bulletin.

Kathy Miller gave a brief report on September trip and said to mail check made out to Oxford Motel to her by JUNE 15th. Kathy will send all check to motel.

Marie Crull made reservations for our picnic on August 25th at Clay Park, south shelter. We will

meet at 12:30 and eat at 1:00 PM.

Michiana Gem Show dates are as follows:
Friday, August 30, Saturday, August 31
and September 1st. Mark your calenders!!

Display Chairman--Tom McLaughlin
Silent Auction--Tom Noe
Door Chairman--Marie Crull

Gordon Dobecki made a motion to appoint Marie Crull delegate to the Midwest Federation Show in July at McComb, Ill. Seconded by Pam Rubenstein.

Door prizes went to Janet O'Tousa and Phyllis Smallwood. Also Alec Rubenstein, Jr. member.

There were 23 members and 1 junior present at the meeting.

Respectfully Submitted,
Marie Crull, Secretary

MGMS HONORS PAUL GODOLLEI

The American Federation of Mineralogical Societies has recognized Paul Godollei as an Outstanding Rockhound, based on the club's nomination last year. The following notice appeared on page 1 of the A.F.M.S. Newsletter of June, 1996:

The late Paul Godollei of the Michiana Gem and Mineral Society, South Bend, IN. Paul for many years freely shared his enthusiasm and delight in fossil collecting through conversations, conducting classes, writing articles, generous gifts and prize-winning displays. He will be missed by all.

FIRST AMERICAN ROCKHOUNDS

By Ivan Imel

We try to imagine when rockhounding first became popular--the '30s, '40s, '50s ...or when? We know it peaked in the '50s and '60s, the golden age.

What we don't realize is that rockhounding began much longer ago than the early 20th century, thousands of years, in fact. What are currently thought to be the first Americans, Clovis hunters wandered across the Bering Straits to become our first rockhounds approximately 11,000 years ago. Their first points, the ones they brought with them, may have been bone, ivory or struck flint blades. Somewhere in North America they developed their characteristic leaf-shaped point with large thinning scars prominent in the base and running one-third to one-half of the length of the point. These points are among the finest points made by American Indian hunters.

We conjure up pictures of Clovis hunters killing mammoths, but the truth is they hunted anything that moved and had any size at all, down to rabbits and armadillos.

Where did rockhounding come in? Clovis hunters prized the best flints, cherts, petrified wood, agates, chalcedonies, obsidian and jaspers they could lay their hands on. Think of the opportunities they had: they were the first to find nearly every major occurrence of fine materials and they were willing to haul these materials away as blanks and tools for hundreds and possibly a thousand miles or more.

A Clovis point found near Uvalde, Texas, was made of obsidian from 125 miles north of Mexico City. Another obsidian Clovis point found at Blackwater Draw came from the Mineral Range in Utah. Two Clovis points or knives found near St. Louis were of Knife River flint, a silicified lignite, with rich translucent amber colors. From the same cache was one point of famous Flint Ridge flint (Ohio) and a fluted knife of Indiana hornstone, both sources considerably distant.

At Wenatchee, Washington, a cache of incredibly beautiful Clovis blades and points were

made of agate varieties from a nearby source. The points were dendritic chalcedony, banded agate, and a large Clovis blade found nearby of obsidian. They were the first to exploit this agate source, but not the last, being quarried up until late prehistoric times. A number of agate points were found in Utah and Nevada.

Probably the most striking Clovis blade, 12" x 3", was found near an old lake in northern Mexico and made of beautiful red-banded Laguna agate.

A Clovis point found near Dickens, Texas, is made of beautifully variegated Tecouas jasper in yellows, red and pinks.

The list of beautiful materials would go on and on. The fact is, Clovis hunters had an eye for beautiful rock. In their spread across the area of the lower 48 states, much of Canada, Mexico, Guatemala, Costa Rica and possibly clear down to Venezuela, they had an eye for beauty combined with a wanderlust, all the makings of a first-class rockhound.

From *The Rockytier* (June, 1993)

Free Catalogue available

A new business in Cromwell, Indiana, is serving collectors and jewelry makers. Contact them for a free catalogue. Mike Bell, M & M Enterprises, P.O. Box 197, Cromwell, Indiana 46723 .

Class time at Local School

In late May, Tom Noe made two presentations to classes at Trinity School in South Bend. The first covered the three basic types of rocks and their formation, with a little bit of continental drift thrown in. The second went into the processes of fossilization, and the kids found that class a lot more interesting. There were lots of questions and the teachers said they would ask Tom to come again in the future.

FOSSIL FACTS AND FICTION

Fiction: fossils are rare. **Fact:** Fossils, even vertebrate fossils, are abundant. Dr Charles Love, geologist from Western Wyoming College says that "just one half mile layer (of the Green River Formation)...contained 12 billion fish (vertebrate fossils)." "That's enough," he said, "to give two (fossil fish) to every person on the planet." Or consider the 3,000 elephant (mammoth) skeletons per square mile estimated to lie under the State of Nebraska's soil by Dr Michael Voorhies of the University of Nebraska's Department of Vertebrate Paleontology as quoted in a Cairo, Nebraska newspaper.

Fiction: only academic paleontologists in certain acceptable institutions can be trusted to "do" paleontology correctly. **Fact:** of the 19 skeletons of Tyrannosaurus rex collected to date, all but one were discovered by amateur or professional collectors. According to eminent paleontologist, Dr Robert Bakker, over 80% of all major, scientifically important, paleontological discoveries are made by amateurs. Add the major discoveries made by private, professional paleontologists and the percentage of major paleontological discoveries by academic scientists becomes very small.

Fiction: fossils can be protected for future generations by leaving them in the ground. **Fact:** fossils are only preserved for posterity if they are discovered and collected. Every possible eye and hand is needed to find collect fossils if even a small percentage are to be saved for research and display.

Fiction: public lands are "raped", "pillaged", "plundered" or "poached" by "greedy" amateur and commercial collectors. **Fact:** Nearly all fossils once exposed are destroyed by the same forces of weathering (wind, rain, ice & sun) that expose them in the first place. Literally billions of fossils are destroyed by these forces every day. Any possible damage to or loss of fossils and collecting sites by careless, negligent or greedy collectors is minuscule compared to that done by mother nature herself.

Fiction: The collecting and preparatory activities of private paleontological houses drives the price of

fossils beyond the reach of museums and researchers. **Fact:** It is precisely the previously unmet demand for teaching, research and display specimens by high schools, universities and museums that created the need for private, professional Earth Science supply houses. Their activities have actually dramatically lowered the prices of many fossils.

Fiction: Paleontological resources (fossils) must be regulated the same way we regulate archaeological resources. **Fact:** Fossils (paleontological resources) are infinitely more abundant than the remains of human beings and their culture (archaeological resources) because archaeology is the study of the remains of only one species (humans) and paleontology encompasses the study of the remains of all the billions of other plant species that ever lived on earth.

From American Lands Access Association Bulletin

A DROP OF WATER TESTS FOR TOPAZ!

Quartz and topaz are not easy to separate by eye, and are sometimes impossible when the quartz is true topaz color. There is a big difference in price between the two and anyone describing quartz as topaz, however innocently, may well be in trouble.

Topaz is quite a different mineral which is harder than quartz. Because of this, a drop of water will not spread on topaz but will spread on quartz. Clean the stone as effectively as possible with a cloth or handkerchief to remove all traces of grease. It must be dry before the test. Then place a spot of clean water on it with a thin glass or metal rod.

On stones with a hardness of less than 7 on the Mohs scale, the water is dispersed. On harder stones it will remain as a globule. The harder the stone, the more rounded will be the globule.

From Dusty Rocks (Nov., 1995)

A "FIELD TRIP" EVERY MONDAY

By Herb Luckert



Phyllis and I decided we would like some training and practice in fossil preparation. Not knowing where to look for this I called Dr. Keith Rigby at the Notre Dame earth science department. His response to my question, "Where can we get some supervised fossil preparation practice?," could be heard without the use of the telephone. It was, "NOT HERE!" Then he suggested we try the Field Museum in Chicago.

The volunteer coordinator at the Field told us that our timing was perfect. A shipment of juvenile sauropod bones had just arrived in Philadelphia (from Madagascar) and they were looking for volunteers to begin work on this project as soon as the bones arrived in Chicago. They did want us to come in for one day as a tryout to see if we had the manual skill and the patience. We each spent all day on about two square inches of a Green River formation fish, picking away matrix one grain at a time using nothing but a brush and a pick made from a sharpened piece of carbide.

A couple of weeks after our tryout we got word that we had been selected. Each volunteer worked one day a week, usually with no other volunteers present that day. This was due to the lack of workstations and other space in our third floor lab. The public areas with displays stop at the second floor but the Field has third and fourth floors devoted to laboratories, research areas, storage, offices and other non-public uses.

Phyllis and I each got a lump of matrix and bones, sealed in a field jacket of burlap and plaster of paris. The field jackets varied considerably in size and contents. Our first ones were about a foot by six inches and contained a single limb bone. Later I got one that was about 3 feet by 4 feet and contained 4 metapodials (foot bones), a toe, a rib and phalanx and a vertebra centrum, as well as some badly deteriorated material that may never be identified. We were shown how to use a medical saw to cut through the jacket material, the same cutter the orthopedist uses to remove the cast from

your broken leg. Getting the jacket off isn't the easiest job in the world. It would be simple enough except for your concern not to injure the bones inside. You get covered from head to foot with white plaster dust.

Once the "lid" is off you have exposed what was the underside of the piece in the field. Sometimes you see some bone but often all you see is a mass of fairly soft sandstone. Where's the bone? Go find it.

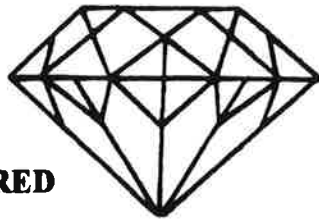
All our tools for this work were hand tools also. Carbide picks, dentist's picks and scrapers, some homemade scrapers, knives and brushes were some of our implements. Equally important were the tools of repair--epoxy glue, crazy glue and B72, a liquid plastic for consolidating soft and weak areas of bone. The B72 seeps into pores and cracks and, when the carrier evaporates, hardens the bone and glues the cracks. Some cracks are bad enough that the B72 can't do the job. Then, after the bone has been completely removed from the field jacket, it needs to be disassembled, all the matrix cleaned out from the interior bone surfaces, and reglued with epoxy. We used the crazy glue only on small chips of bone.

Sometimes the bone is not completely fossilized. Phyllis and I both had pieces that were more compost than bone. You can't reverse the damage to the bone that nature has done, but you can use B72 to keep it from disintegrating further. Phyllis had the bad luck of having one bone that had both a great amount of compost and had been broken into many pieces. Reassembling that was a 3-D jigsaw puzzle that took weeks. I don't think I could have done that.

There was only one negative part of this experience. Sometimes in the traffic tie-ups of Chicago I found myself thinking that Roy Chapman Andrews had it easier looking for fossils in the Gobi Desert.

"Minds are like parachutes: They only function when open."

Thomas Robert Dewar



NEW GEMS DISCOVERED

Several new gems have recently been discovered, according to the International Colored Gemstone Association's *ICGA Gazette*. Yellowish-green opal cat's-eyes have been discovered in a Brazilian mine. The material is composed of cristobalite/tridymite. The cat's-eye effect is caused by fine oriented needles of chrysotile. Also found in Brazil, a multicolored tourmaline with a cat's-eye zone of parallel hollow tubes surrounded by a transparent pinkish-red area and a transparent pale yellow area, both caused by manganese.

From: *The Mountain Gem* (Jan., 1995)

NATURAL AND TREATED TURQUOISE

By Leon Gilmore

NATURAL TURQUOISE is any turquoise that has not been altered in any way. The test for this is a touch of ammonia at the back of the piece to be tested. Natural turquoise will turn white.

ENHANCED TURQUOISE is a hard turquoise with a poor color. It is electrochemically treated by being placed in a bath much like a plating solution and then treated. The test for this material is a touch of oxalic acid, which will turn the turquoise white.

STABILIZED TURQUOISE makes up ninety percent of the turquoise mined today. It is chalk turquoise that has been stabilized by drying and then placing it in a vacuum chamber and flooding the chamber with an epoxy material, generally clinoepoxide, then pouring off the excess and flooding it with setting mordant and pressurizing the chamber to force the mordant into the turquoise to set up the clinoepoxide so the turquoise won't absorb oils or break easily.

RECONSTRUCTED TURQUOISE is a chalk turquoise which has been crushed, has had resins

and dyes added, and the mixture is compressed into a solid block.

BAKED TURQUOISE is turquoise which has been set on Devcon or some other substance to make it thicker and stabilize it to keep it from breaking. Usually used on stabilized turquoise and on small pieces of natural turquoise to provide a flat back so they may be easily cut.

Other processes for changing the color of turquoise include:

THE NAVAJO method: Boil the turquoise in mutton fat, causing the turquoise to turn green. The Navajo consider the blue turquoise as male and the green turquoise as female.

THE HIPPY method: Take a blue ball-point pen and dissolve the ink in alcohol and then soak and dry the turquoise.

THE CHEMICAL method: Soak the turquoise in potassium ferrocyanide and then soak it in a second solution of ferric ammonium citrate. This is also called the blueprint process.

From *Garnet Gazette* (Dec., 1994)



This is a rendition of a new pin which will be introduced in Riverside to commemorate the AFMS 50th Anniversary next year.

This picture is larger than actual size.

CHEMICAL AND PHYSICAL CLEANING OF CINCINNATI-TYPE FOSSILS

KEROSENE

Kerosene is a more expensive solvent than gasoline, but is much less flammable. It is also less expensive than solvents such as Stoddard's Solution or Varsol. It can be used for removing fossils from many soft shales, siltstones and limestones with a high silt-clay content (not hard shales or fissile shales).

1. Dry the rock and fossil out at room temperature, or alternately heat in an oven slowly. Rapid heating may cause the fossil to break.
2. Place the hot or cold rock and fossil in a container with kerosene. Add enough kerosene to cover the specimen. Kerosene enters the pore spaces of the rock but will not affect its hardness. Allow to stand for a few hours.
3. Pour off excess kerosene. This can be reused.
4. Add water to the container (rock+fossil+water).

The kerosene will leave the pores of the rock as the water enters. The rock breaks into small pieces and starts forming a mud. After an hour (or a day) the fossil can be removed from the mud and washed. This method works well for separating microfossils (foraminifers, ostracods, conodonts, etc.) from the rocks.

HYDROGEN PEROXIDE

For disaggregating shale surrounding fossils. A bottle of 30% H_2O_2 may be purchased from a local drugstore. Dilute the solution 50-50 with water.

Place wet or dry shale into a container and add enough of the 15% (diluted) hydrogen peroxide to cover the specimen. H_2O_2 reacts, forming water and oxygen gas, which bubbles rapidly and the shale is broken into a mud. This is more expensive than kerosene, but will also remove organic matter.

HYDROCHLORIC ACID

To be used when fossils have been replaced by quartz or pyrite and for removal of scolecodonts

from a limestone matrix. Works best on limestone or dolostone or rocks having a calcium carbonate cement. Technical grade HCl is called muriatic acid. Care must be taken in the use of HCl, because many fossils are of a carbonate nature and are dissolved by the acid. Very good results can be achieved with a 5% solution of the acid. A 10% solution works faster, but the vigorous bubbling may damage fragile fossils.

1. Place the rock and fossil in a glass, porcelain or plastic container with a wide opening. Cover the rock with the 5% acid. Reaction with the carbonate produces water, carbon dioxide and calcium chloride.
2. When bubbling ceases, a small amount of the concentrate acid can be added. A spoon or tweezers can be used to remove the free fossils from the solution.
3. When freed from the matrix, the fossils should be washed thoroughly in water.

Phosphate and phosphatic fossils are also dissolved by HCl. Although the dilute acid poses no serious problems to skin or clothing, care should be exercised and spills should be wiped up with plenty of water. Acid should be immediately washed from the skin.

ACETIC ACID

Acetic acid (the acid in vinegar) can be purchased in photographic supply stores. A 10% solution of glacial acetic acid (concentrated) does very well on the same kinds of rock as the HCl. However, the reaction is a lot slower, producing less damage to the fossils but requiring a much longer time. Some minerals, such as phosphates which are dissolved by HCl, are not affected by the acetic acid. Care should be exercised with this acid, as it can cause painful burns to the skin. Rubber gloves are recommended.

CLEANING STAINS

1. Soaking the fossils in a solution of super strength denture cleaner will remove most black, organic stains and will minimize rust or iron oxide stains. This will take about 10 minutes.

2. Rust stains can also be removed using a solution of stannous chloride, radiator cleaner or Sani-Flush.

PHYSICAL CLEANING

Perhaps the easiest way to clean Cincinnati fossils is to use an old toothbrush and warm water. The matrix--the rock in which fossils are embedded--associated with Cincinnati fossils is usually soft shale or hard limestone. Water generally serves to convert shale into mud, which can be washed off with light scrubbing. A good rinsing removes the remaining film.

Some shales, and all limestones, require sterner measures. A strong pin, such as a hatpin, or a used dental pick can be used to lightly scrape hard shale and loose limestone from a fossil. Scrape away from the specimen, take your time, and use small strokes. Care should be taken not to scratch or otherwise damage the specimen. It's a good idea to practice on an undistinguished fossil before attempting to scrape matrix from a delicate fossil such as a trilobite.

Sometimes helpful is a small-brass bristled brush, available at some hardware stores. Be aware, however, that brass brushes leave a metallic sheen on fossils and many people find this unattractive.

If you feel adventurous, you may want to experiment with a tablet of effervescent denture cleaner. Some collectors have had good results with this method, but some have seen no effect at all.

From *Flint Flashes*, Newark, Ohio (May, 1995)

F.Y.I.

For those of you with computers who are on the internet, here are some addresses that might interest you.

<http://www.rtd.com/~bkeller/rockshop/table.html>
 Bob's Rock Shop
<http://gldfs.cr.usgs.gov/> National Earthquake
 Information Center

<http://volcano.und.nodak.edu> Volcano World
<http://www.ssec.wisc.edu/> Space Science and
 Engineering Center (SSEC), U. of
 Wisconsin
<http://www.usgs.gov/> U.S. Geological Survey
<http://cirrus.sprl.umich.edu/wxnet/> Weathernet
<http://www.satlab.hawaii.edu/space/hawaii>
 Virtually Hawaii
<http://www.geo.mtu.edu/weather/aurora/> The
 Aurora Page
<http://www.kalmbach.com/earth/earthmag.html>
 Earth Magazine Online
<http://ucmpl.berkeley.edu/> Museum of Paleontology
 at U. of California-Berkeley
<http://images.jsc.nasa.gov/> John Space Center's
 Digital Image Collection
<http://www.jpl.nasa.gov/archive/images.html> Jet
 Propulsion Laboratory Public Image Archive
<http://www.ngdc.noaa.gov/> National Geophysical
 Data Center
<http://rs6000.bvis.uic.edu:80/museum> The Field
 Museum (Chicago)
<http://galaxy.einet.net/images/gems/gems->
 icons.html Smithsonian Gem & Mineral
 Collection
<http://www.lib.berkeley.edu/EART/index.html>
 Internet Resources in the Earth Sciences
<http://www.lib.berkeley.edu/EART/Earthlinks.html>

You will find most, if not all, of these available by hypertext link from the Earth Magazine page. The last one on this list has many more items available by hypertext link.

MORE UP AND COMING EVENTS

August 14--18: Lost Dutchman Gem-boree, Lebanon Valley Expo Center, Lebanon, PA.

Sept. 6--8: Toledo Gem & Rockhound Show, Masonic Complex, Toledo, OH.

Sept. 13--14: Tulip City Gem & Mineral Show, Holland Civic Center, Holland, MI.

Oct. 11--13: Greater Detroit Gem & Mineral Show, hosted by Michigan Mineralogical Society, Light Guard Armory, Detroit, MI.

INTERESTING OBSIDIAN INFORMATION

Iridescent: There are two types of iridescent obsidian. In cutting both correctly, the orientation of the color is most important. One type of obsidian is banded and the color lies in the bands. On the unbanded types of obsidian, the surface has to be chipped to find the color. The banded type will have several colors or shades, while the unbanded types will have only one color. Cut the banded material parallel to the bands to get the effect. To get rainbow effect, cut the stone at about a 15 degree angle across the bands.

Gold Sheen Obsidian: To get the most out of mahogany gold sheen obsidian, saw with the bands, as if they were a stack of plates and you wish to unstack them. Watch for "fire spots" in gold sheen. It is not plentiful, but opal-like colors do sometimes occur.

Midnight Lace: Lace-patterned obsidian should be cut across the surface pattern that you desire to reproduce.

Rainbow Obsidian: It is cut parallel to the flow layers. These can be seen by examining fractured surfaces using an overhead lamp bulb. As these are not always straight, it may be necessary to turn the stone slightly in the saw. Examine each slab wet to check for the correct angle.

Grinding Obsidian Slabs: Approach your grinding wheel with the material at a slight horizontal angle. If brought straight in, it may be a shattering experience, since obsidian fractures easily if not worked correctly.

Polishing Obsidian: Though obsidian is comparatively soft, it is still very important to sand away all scratches before going to the polish. Sanding should always be done wet, since obsidian is heat sensitive and very brittle. For the final polish, felt with cerium oxide is the best choice. Keep the polishing wheel wet. A dry polishing wheel will result in blisters and scratches.

From *Dusty Rocks* (Nov., 1995)

Friday, Saturday, Sunday
July 26, 27, 28
1996



**Midwest Federation
Gem & Mineral Show**

Western Hall
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Western Illinois University

A group of outstanding private collections
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Public Invited for Three Fun-filled Days

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- Spring Lake (Camping Facilities)
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- Holiday Inn* • Pineapple B&B*
- Travel Inn* • Brockway B&B*
- Time Out Motel*

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For More Information Contact:

Chester Coleman P.O. Box 134 Mt. Pleasant, IA 52641	OR	Charlotte Charno 97 Country Elm Estate Galesburg, IL 61401	OR	Dean Stone 625 N. Lafayette Macomb, IL 61455
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