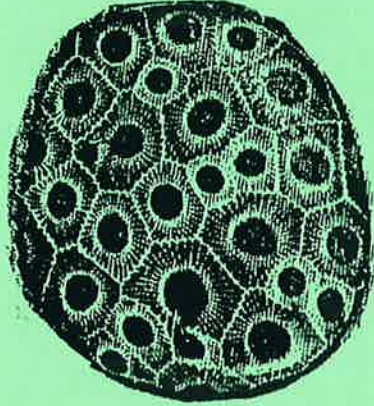


THE ROCKFINDER

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



THE ROCKFINDER

MARCH, 2008

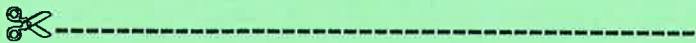
MICHIANA GEM & MINERAL SOCIETY

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The purpose of the Michiana Gem & Mineral Society is to promote the study and enjoyment of the earth sciences and the lapidary arts, and to share lapidary 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. Regular exceptions include May (third Sunday), July (no meeting), August (club picnic) and the November/December meeting and Christmas party. Board meetings are held before the general meetings. The annual club show is in late August.



Yearly Membership Dues (Payable by December 15)

- _____ Individual \$15.00 per year
- _____ Family \$20.00 per year
- _____ Junior \$1.00 per year
- _____ Subscriber \$7.50 per year

Please indicate areas of special interest. (To be published in *The Rockfinder*).

- General Geology _____ Beads _____
- Gems & Minerals _____ Fossils _____
- Cabochons _____ Field Trips _____
- Faceting _____ Crystals _____
- Carving _____ Micromounts _____
- Other _____ Jewelry Making _____

Name(s) _____

Street _____

City, ST., Zip _____

e-mail (opt.) _____

Phone _____

Our web site: <http://www.sauktown.com/Michiana>

HEADS OF COMMITTEES

- Programs David Peltz 269-683-4088
- Hospitality Tom&Pat McLaughlin 574-259-1501
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- Sunshine Sally Peltz 269-683-4088
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- Jr Activities Cordelia Tomasino 269-684-3454
- Show Chair Marie Crull 574-272-7209

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.

The Rockfinder is published monthly except July and August. Editor, Tom Noe, (ph. 574-289-2028). Co-editor, Herb Luckert, 221 Marquette Ave., South Bend, IN 46617 (ph. 574-282-1354). Reporters, Bob Heinek, Herb Luckert, club members.

Permission is hereby granted to reprint any original *Rockfinder* articles, as long as recognition is given along with the reprint.

PLEASE READ AND SIGN THIS SECTION:

With my signature I hereby release the Michiana Gem and Mineral Society, Inc., and its individual members and the owners of any premises upon which I enter under permit granted to the society, absolutely free of any liability whatsoever, to my person or my property, and further I will respect the equipment and property of the aforesaid owners.

Signed _____ Date _____

Signed _____ Date _____

Additional family names:

Name _____

Birthday _____

Name _____

Birthday _____

Name _____

Birthday _____

Please send your dues and this form to
 Michiana Gem & Mineral Society
 c/o, Lana Wright, 24606 Rolling Oak Dr.,
 South Bend, IN 46628

THE ROCKFINDER

Newsletter of the Michiana Gem and Mineral Society

Volume 48, Number 3

March, 2008

Next Meeting:

Visitors are always welcome.

Date: March 30, 2008

Doors open at 1:30.

Meeting starts at 2 p.m.

Place: Our Redeemer Lutheran Church,
805 S. 29th Street (29th & Wall)
in South Bend

Program: How To Clean Fossils by club
member Julie Wieger.

Refreshments: Annitta Hostetler, Audry
Hostetler, Pat Bell



ANNOUNCEMENTS: The Michiana Gem and Mineral Society now has a web site, compliments of member Jim Daly, at www.sauktown.com/Michiana.

The members who have internet access will enjoy and appreciate this new addition to our club. Another useful link, to the American Federation of Mineralogical Societies, is www.amfed.org. Follow links there to the Midwest Federation site.

And thanks to Stan Jacobs for making his CD on volcanoes available. It's very informative.

UP AND COMING:

Mar. 29-30: Badger Lapidary & Geological Society show, Monroe H.S., Monroe, WI.

Mar. 29: Dearborn Club rock swap, Democratic Club, Taylor, MI.

Apr. 4-5: Columbus Rock & Mineral Society show, Veterans Memorial, Columbus, OH.

Apr. 5-6: Neville Public Museum Club show, Neville Public Museum, Green Bay, WI.

Apr. 5-6: So. Illinois Earth Science Club show, Williamson County Pavilion, Marion, IL.

Apr. 10-11: Indian Mounds Club show, Rogers Plaza, Wyoming, MI.

April 12-13: Midwest Faceters' Guild show & sale, 15325 W. Michigan, Marshall, MI.

Apr. 19-20: Chippewa Valley Mineral Society show, Expo Center, Eau Claire, WI.

Apr. 26: Blossomland Gem & Mineral Society rock/mineral/fossil/etc. Swap 'n' Sell, St. Joseph-Lincoln Senior Center, 3271 Lincoln Ave., St. Joseph, MI. 10:00-4:00.

May 17-18: Parma Lapidary Club (Cleveland), County Fairgrounds, Berea, OH.

June 20-22: Lincoln Gem & Mineral Club 50th annual show & Midwest Federation Convention, Pershing Center, Lincoln, NE.

June 20-22: Northwest Federation Convention, Ontario, OR.

June 27-27 California Federation Convention, Venture, CA.

July 10-13: Wonderful World of Agates, U. of Wisconsin Fox Valley, Menasha, WI.

July 27-29: Bloomington show and swap, County Fairgrounds, Bloomington, IN.

Aug. 22-24: Our own Michiana Gem & Mineral Society show, 4-H County Fairgrounds, South Bend, IN.

Sept. 13-14: Geology Arts Fair, Eddy Discovery Center, Chelsea, MI.

Sept. 25-28: South-Central Federation Convention, Humble, TX.

KATHY'S COLUMN



As I write this column I am looking out the window at snow, with more to come. Thank goodness our next meeting is the last of March. Yes, I am fine-tuning my whining skills. The romance of beautiful winter scenes is gone. I want to see our lovely outside garden rocks again!

It was very good to see another great turnout at the February meeting. Thanks to **Sue Brown** for her Midwest Federation update and to those who brought in displays for the program. I know the junior members enjoyed **Cordelia's** class on volcanoes. Our grandson Rob declared it was the best meeting ever!

The company, programs and Mardi Gras food were enjoyed by all.

Now, two important subjects I would like to bring up for this month.

1) Be thinking about our annual show. Our show is the life-support system for the club. Sure, we pay dues, but that money is not enough to cover the club's yearly expenses, much less the cost of the neat bus field trips we offer. The show's income picks up what the dues can't. The show also puts our club in public view, enabling folks to discover our hobby and what we are all about. Thank you to **Marie Crull**, who is doing a super job as show chair, along with **Bill Crull** and **Joe Perry**, assisting her as dealer cochairs. They are orchestrating all the necessary things that make for a successful show.

Don't wait to be called upon to help with the show. Volunteer your services to Marie; she'll find an area that you will be useful in.

Come help, enjoy our show. It's fun.

2) Exhibits/displays for the show. **Tom McLaughlin** has been the display chair for the last few years. When he calls you to ask for a show display, don't hesitate—tell him YES. If you are uncertain about how to create or make a display, Tom has plans and will get you started. The last few years we have had many displays with a good variety of themes, including educational, minerals, fossils, jewelry, shells, etc.

When the novice public comes to the show they need to see what we, the local club members, are doing that they might be interested in. This attracts them to our earth science hobby.

Now, with four and a half months to spare, you have plenty of time to get your display ready. Thank you, Tom, for your diligence in involving members.

The program for March on fossil cleaning given by **Julie Wieger** will be a great way to help us learn to clean those fossils already collected from previous field trips and during the upcoming field trips this year.

We still need someone to coordinate/chair the club picnic on July 20 and to help with our Christmas party. Contact me or **David Peltz**. WE NEED HELP if there is to be a picnic or a party!

That's my column. I am looking forward to seeing all of you at the March meeting.

Happy Easter, Kathy

MINUTES OF THE FEBRUARY MEETING

President Kathy Miller called the meeting to order at 2:03 p.m. on February 24, 2008. In attendance were 32 members, 13 juniors and 5 guests. Tom Noe led the pledge of allegiance. Patty Enos made a motion to accept the January meeting minutes as printed in the *Rockfinder*. Marie Crull seconded the motion and the motion carried. Bob Miller gave the treasurer's report and it will be filed for audit. Kathy passed out information for people to donate materials or volunteer their time to help with the juniors.

Committee Reports:

Editor: Tom Noe sent the *Rockfinder* newsletter in to the MWF contest for club bulletins.

Field trips: Kathy Miller needs to know if you have reserved your room for the trip to Corydon.

Historian: Ed Miller asked if anyone has any information to add to the book he is putting together for the club.

Hospitality: Jessie Zeiger, Kara Hodges, Lori Checkley and Marcia Jacobs provided the refreshments.

Juniors: Cordelia Tomasino said the juniors are learning about igneous rocks and exploding volcanoes in the parking lot. Next month they will learn about cave painting. Don Church made a motion that the club pay to have an extra copy of the Merritt Badge manual made. Motion was seconded and carried.

Membership: Marty Perry mentioned that the club's new directory and membership cards are completed and ready for the members to pick up.

Program: David Peltz has made arrangements for next month's program to be on cleaning fossils.

Sunshine: Sally Peltz sent a condolence card to the family after long-time member Kent Hoffman passed away.

Show: Marie Crull reported that the contract for the show at the fairgrounds has been signed and the money sent in. Show dealer chair Joe Perry has sent out information to the dealers and is waiting for their replies.

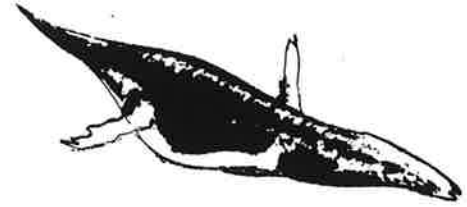
Old Business: Jim Daly has the new web site set up for the club: www.sauktown.com/Michiana.

New Business: Don Church made a motion to buy a book for the juniors in memory of Kent Hoffman and let Cordelia Tomasino choose the book. Motion was seconded and carried. The next meeting will be March 30, 2008. Sally Peltz made a motion to adjourn the meeting. Patty Enos seconded the motion; motion carried. Meeting adjourned at 2:55 p.m.

Program: David Peltz spoke about amethyst and the club members took turns talking about the amethyst specimens they brought to the meeting.

Marty Perry
Secretary

GIANT SEA FOSSIL UNEARTHED



A complete skeleton of the biggest marine reptile that ever existed has been unearthed in Mexico. The fossilized bones have been identified as those of *Liopleurodon ferox*, a fierce predator that ruled the oceans about 150 million years ago. The creature, which measures 20 meters (65 ft) from nose to tail, was discovered by German and Mexican palaeontologists. It has been nicknamed the "Monster of Aramberri" after the site in northeastern Mexico where it was dug up.

Although many *Liopleurodon* remains have been unearthed before, none has been as complete as the Mexico discovery. The bones are to be shipped to Germany for reconstruction at the Natural History Museum in Karlsruhe. Scientists plan to use the skeleton to study how the monster of the deep lived and what it ate for its last meal. Its remains were found along with those of smaller aquatic reptiles known as ichthyosaurs, which it may have snacked on.

Sea monster - The *Liopleurodon* was the master of the deep in prehistoric times. It had an impressive array of machete-sized teeth and jaws powerful enough to chew through granite. Plesiosaurs appeared in the Early Jurassic period and rapidly split into two major groups: long-necked forms like the *Cryptoclidus* and short-necked forms, or plesiosaurs, like the *Liopleurodon*.

The marine reptiles are cousins of the dinosaurs that roamed the Earth between 208-65 million years ago. Their remains are relatively common and have been well preserved in several deposits throughout the world.

YOU ASKED FOR IT

By John Washburn

Every year when the MWF dues come due, clubs ask about what they get for their dues. This question is usually answered by explaining all the services that the MWF offers to the clubs. This time, I thought I would explain those services that the clubs tend to use most often. The MWF offers much more than the clubs use. It's like being a member of any organization; if you don't use the services, then you are cheating yourself. But as you read on, I think you will see that you are getting your money's worth.

First, upon examining the MWF budget, it becomes clear that the MWF has income other than the dues that support the organization. This other income is equal to 65% of the income from dues. The extra income has been generated by astute money management by our volunteer leaders.

Now for the direct benefits the clubs receive for their dues. Although the liability insurance is not a part of the dues, a club must be a member to receive it. The money for the insurance is collected by the MWF and then used to pay the premium. The MWF receives no income from this, offering the collection and payment of the premium as a service instead.

The \$2 dues you pay per member breaks down as follows:

- 28% for dues to the AFMS (all of the 50¢ per junior member also goes to AFMS),
- 25% for the *MWF Newsletter*, printing and postage, at least two copies per club,
- 11% for the directory, printing and postage, one copy per club,
- 11% for programs and program development,
- 11% for competitive exhibit awards,
- 7% for bulletin contest awards,
- 3.5% for the club publication supplies,
- 1% for the Membership Increase Club Award,
- 1% for the web site,
- 1% for the public image pamphlets,
- 1% for junior activity development,
- 1% for the All-American Award,
- 1% for the Rockhound of the Year Award.

This adds up to 102.5%. This means that the extra 2.5%, plus all the other administrative costs for the board, the state directors and the remaining chairmen's costs, are covered by the other income coming in—**above** that of your dues.

I was told by one club that they considered the greatest benefits to their club from MWF membership to be insurance first, programs second and awards third. So let's look at these numbers by groups. As I stated before, the insurance cost is separate from the dues, but it is certainly a valuable service that the MWF provides. And although this club did not mention the benefits of communication, without it, the other items would not be known. For this reason, communication makes up 37% of the total, and consists of the newsletter, the directory and the web site. Next are the awards at 21%, made up of the bulletin contest awards, the competitive exhibits awards, the MICA, the All-American and the Rockhound of the Year awards. Next are programs at 11%. Finally, the remainder is taken up equally by public image, junior activities and a portion of club publications.

So, if you are taking advantage of all these services, you are getting your money's worth and then some. You should be sharing the newsletter with as many of your members as possible. This can now easily be done in electronic format, sharing the address of the web site, and sharing the directory. You should be entering into the contests early and often, and you should also be using the programs regularly. This will insure the most bang for your buck!

More next time on the breakdown of the AFMS dues.

MWF Newsletter (Mar., 2008)

MARCH BIRTHSTONE

AQUAMARINE



From "The Gemstones Handbook" by Arthur Thomas

Aquamarine, meaning "water of the sea," is the sea-green to sky-blue variety of Beryl that owes its hues to traces of iron. Large prismatic crystals of exceptional clarity occasionally occur in pegmatitic cavities. The largest faceted aquamarine is thought to be a greenish, rectangular step-cut gem of 2,594 carats owned by Pala Properties International of California. Sources of aquamarine include Afghanistan, Brazil, Kenya, Madagascar, Mozambique, Namibia, Nigeria, Russia, Tanzania, USA, Zambia, and Zimbabwe.

SHOW OFF YOUR AQUAMARINES AT THE MARCH MEETING!

WALKING ON STARDUST

The Earth sweeps up several hundred tons of mass a day in the form of micro-meteoroids or meteoric dust. Some of these minuscule particles contain stardust that is older than our sun. As such they are unique archives of the earliest history of the universe and scientists are diligently collecting them in the Arctic, Antarctic, Australia, the Sahara Desert, Greenland, etc. A lot of the space dust we walk on comes from the moon—ejecta from all the potshots that the moon has received. A lot of it is from disintegrated meteorites.

Achates. (Aug., 2007)

STABILIZING POROUS STONES

If you would like to try your luck at stabilizing porous stones, such as turquoise, so that it can be cut and polished, the Silvery Colorado Rock Club offers the following advice. Take a jar with a lid and add one pint of acetone. To this, add the complete contents of both the resin and hardener tubes of epoxy glue. Mix well. Add the well-dried stones. Cover the jar and let it sit for at least four days. Remove the stones and allow a week for them to dry. They should now be ready to work.

Hy Grader (Oct., 2007)

EXTINCTION THEORY FALLS FROM FAVOR

By Carl Marziali

The Great Dying 250 million years ago happened slowly, according to USC geologists.

The greatest mass extinction in Earth's history also may have been one of the slowest, according to a study that casts further doubt on the extinction-by-meteor theory.

Creeping environmental stress fueled by volcanic eruptions and global warming was the likely cause of the Great Dying 250 million years ago, said USC doctoral student Catherine Powers.

Writing in the November issue of the journal *Geology*, Powers and her adviser David Bottjer, professor of earth sciences at USC, describe a slow decline in the diversity of some common marine organisms.

The decline began millions of years before the disappearance of 90 percent of Earth's species at the end of the Permian era, Powers shows in her study.

More damaging to the meteor theory, the study finds that organisms in the deep ocean started dying first, followed by those on ocean shelves and reefs, and finally those living near shore.

"Something has to be coming from the deep ocean," Powers said. "Something has to be coming up the water column and killing these organisms."

That something probably was hydrogen sulfide, according to Powers, who cited studies from the University of Washington, Pennsylvania State University, the University of Arizona and the Bottjer laboratory at USC.

Those studies, combined with the new data from Powers and Bottjer, support a model that attributes the extinction to enormous volcanic eruptions that released carbon dioxide and methane, triggering rapid global warming.

The warmer ocean water would have lost some of its ability to retain oxygen, allowing water rich in hydrogen sulfide to well up from the deep (the gas comes from anaerobic bacteria at the bottom of the ocean).

If large amounts of hydrogen sulfide escaped into the atmosphere, the gas would have killed most

forms of life and also damaged the ozone shield, increasing the level of harmful ultraviolet radiation reaching the planet's surface.

Powers and others believe that the same deadly sequence repeated itself for another major extinction 200 million years ago, at the end of the Triassic era.

"There are very few people that hang on to the idea that it was a meteorite impact," she said. Even if an impact did occur, she added, it could not have been the primary cause of an extinction already in progress.

In her study, Powers analyzed the distribution and diversity of bryozoans, a family of marine invertebrates.

Based on the types of rocks in which the fossils were found, Powers was able to classify the organisms according to age and approximate depth of their habitat.

She found that bryozoan diversity in the deep ocean started to decrease about 270 million years ago and fell sharply in the 10 million years before the mass extinction that marked the end of the Permian era.

But diversity at middle depths and near shore fell off later and gradually, with shoreline bryozoans being affected last, Powers said.

She observed the same pattern before the end-Triassic extinction, 50 million years after the end-Permian.

Powers's work was funded by the Geological Society of America, the Paleontological Society, the American Museum of Natural History and the Yale Peabody Museum, and supplemented by a grant from USC's Women in Science and Engineering program.

Geology is published by the Geological Society of America.

Flint Flashes (Nov., 2007)

DIAMONDS PROVIDE GLIMPSE OF WHAT IT'S LIKE INSIDE EARTH

By Dale Gnidovec

Diamonds may be a girl's best friend, but they also are one of scientists' best friends.

Diamonds form at temperatures higher than 1,740 degrees Fahrenheit and at depths greater than 90 miles, some as deep as 430 miles. As such, they are like samples from a space mission to inner Earth, giving us information about the conditions inside our planet.

One misconception is that diamond is compressed coal. Although both are composed largely of carbon, diamond was never coal.

Coal is compressed plant material, mainly from trees. Trees didn't appear on Earth until the Devonian Period, about 400 million years ago.

Diamonds are far older, having formed 1 billion to 3 billion years ago. Much later, volcanic eruptions brought them to the surface.

Most diamonds can be divided into two types. The more abundant are called P-type diamonds, after the rock peridotite. The carbon in P-type diamonds came from the mantle, the layer of Earth between the crust and the core.

The other are E-type diamonds, which are named for the rock eclogite. They have a more interesting origin.

Our Earth is restless; its plates are in constant motion. When one plate collides with another, something has to give.

Lightweight continental crust is pushed up into mountains. For example, the Himalayas were pushed up by India crashing into Asia.

Heavier ocean crust goes the other way—down into the Earth—in a process called subduction. Some of those slabs reach depths where diamonds form, and E-type diamonds are the result.

Although most diamonds were brought to the surface by volcanic processes, microscopic diamonds are found in metamorphic rocks. They were discovered in northern Kazakhstan in 1972, but their metamorphic origin wasn't accepted until 1990.

They have since been found at several other places including China, Norway, Indonesia and Germany.

The surprise wasn't that surface rocks could be buried deep enough to produce diamonds, but that they could come back up fast enough for diamonds to be preserved, a process that required more than 90 miles of vertical erosion.

Microscopic diamonds also are found in some meteorites. Impurities contained in those diamonds indicate that they formed outside our solar system, even before the sun formed.

Columbus Dispatch (May, 2005)

QUALIFICATIONS FOR BEING A GOOD ROCKHOUND

1. **Love of the outdoors** — where else can you find rocks?
2. **Strong back or good judgment** — rocks gain weight with every step.
3. **Sense of humor** — being able to appreciate another fellow's find after you just stepped over it.
4. **One leg shorter than the other** — it helps on the hills.
5. **Cheerfulness** — smile even if every muscle & bone in your body aches.
6. **Adventurous** — daring to take a road, even if it looks like it goes straight up.
7. **Persistence** — not satisfied until you have turned every rock over twice.
8. **Determination** — a willingness to go again after you swore you never would.
9. **Imagination** — visualizing a beautiful gem out of a plain rock.
10. **Congeniality** — you can hunt alone, but it's more fun in a group.

Juniors' Page



February meeting notes: Twelve of us blew the tops off of Play-doh volcanoes and sent bottle caps soaring into the air as we learned about the formation of igneous rocks. Rob Schuster wins the prize for sending his baking soda/vinegar lava explosion the highest (the ceiling!). Several members shared the igneous rocks from their collection. The huge lava bomb shared by Bob Miller was too heavy for the youngest to even lift so we sure got a good hands-on appreciation for how dangerous these falling rocks can be. A big

thank you goes to Stanley Jacobs Sr. for documenting our explosive antics as a pinch-hitting photographer.

March Meeting: Cave Painting



Project: Come dressed for creating a Stone Age masterpiece. Don those painting clothes—we plan to get messy grinding mineral pigments and mixing the powders with what our ancestors might have had handy—that would be natural wonders like spit, animal fat, egg whites, and vegetable oils (or just white glue for the more fastidious of the group).

Show & Tell: Do you have some rocks in your collection that might have been used by ancient artists? If you have hematite, azurite or lapis, malachite, or just clay and chalk, bring it to the meeting to share and we'll figure out which rocks make which pigment color.

Virtual Tours of Cave Art

<http://www.hbschool.com/activity/cavepaintings/cavepaintings.html>

<http://www.culture.gouv.fr/culture/arcnat/lascaux/en/>

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(269) 684-3454, e-mail: tomasinos4@juno.com