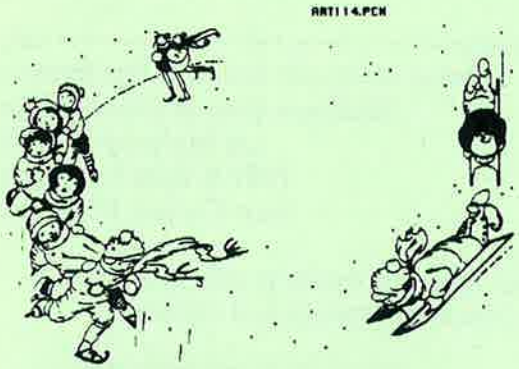
THE ROCKFINDER

Highlights of this issue —

NOTICE - Check New Meeting Place!

Larry Hess, Rockfinder Editor
15358 Kerlin Drive
Granger, IN 46530



MICHIANA GEM and MINERAL SOCIETY
1995 BOARD OF DIRECTORS

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Sunshine	---	Molly Elwell	105 N Ironwood Dr. South Bend IN 46615
Publicity	---	Tom Noe	305 Napoleon, South Bend 46617
Membership	---	All Members	

The Michiana Gem & Mineral Society, a non-profit organization, and is affiliated with the Midwest Federation of Mineralogical and Geological Societies and with the American Federation of Mineralogical Societies.

Time: 2:00 PM EST
General Meeting 4th Sunday of each month
June - Field Trip Meeting
July - No meeting
August - Annual Club Picnic
December - Christmas Party

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

Board Mtgs: 2nd Wednesday, 7:00pm, South Bend (Main) Library, Basement Level.

ROCKFINDER STAFF:

Editor	Larry Hess	15358 Kerlin Dr, Granger IN 46530
Co-Editor	Margaret Heinek	7091 E East Park Ln, New Carlisle IN
Staff	Bob Heinek / Club Members	

All contributions for publication should be in the hands of the Editor by the 10th of each month. Call: (219 272-5431) Permission is hereby granted to reprint, at any time, items published in the ROCKFINDER provided due recognition is given.

cut ---------- **cut**

Membership Dues are:

____ 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 Club
c/o Margaret Heinek
7091 E East Park Lane
New Carlisle IN 46552

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

Check your SPECIAL INTERESTS:

General Geology ___ Beads ___
Gems & Minerals ___ Silversmithing ___

Fossils ___ Artifacts ___
Cabochons ___ Rockhound ___

Faceting ___ Carving ___
Crystals ___ Micromounts ___
Other _____

List Family Members (spouse and children):

Name _____ Birth Mo/Yr ____
will attend meetings, yes ___ no ___

Name _____ Birth Mo/Yr ____
will attend meetings, yes ___ no ___

Name _____ Birth Mo/Yr ____
will attend meetings, yes ___ no ___

Name _____

Address _____

City St Zip _____

Phone _____ Birth Mo/Yr _____

THE ROCKFINDER

Volume 35
Number 2

February 1995

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Michiana Gem & Mineral Society

Meeting: Meeting: Sunday Feb 26, 1995
Doors Open 1:30 PM
Meeting at 2:00 PM

---------- FEBRUARY Program ----------

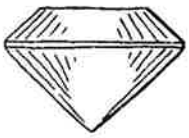
Viola Robinson, Making a necklace with beads. Hands-On

Place: Studebaker Museum
525 S. Main St.
Downtown South Bend

Hosts: Tom & Sue Fields
Jeanne Finske
Larry Hess

February Happy Birthday & Anniversary:

3 Cathrine Dahlquest
5 Sister Jeanne Finske
6 Zella Krump
8 Marcelle Nagy
10 Jimmy Krump
18 Al Nagy



Your FEBRUARY BIRTHSTONE.

AMETHYST

Amethyst is the most highly prized quartz variety. The name "amethyst" comes from the Greek "amethustos" meaning "not drunken". In ancient times it was believed that an amethyst wearer would never become intoxicated. The gem was highly prized and was used in both the breastplate of the High Priest of Israel and the foundation walls of the New Jerusalem. Amethyst has long been popular in ecclesiastical jewelry. Amethyst is said to enhance spiritual awareness, meditation, balance, psychic abilities, inner peace, healing, positive transformation, and relieves stress.

STRANGE BUT TRUE

In the Portuguese Azures is Flores Island. On top of a mountain there are twin lakes, about the same size and shape, separated by a thin wall of rock. The water in both appears to be as thick as paint, almost. What's so perculiar about them is the water in one is turquoise blue, and in the other ruby red.

--The Dopstick 1/94--Dust and Grit 6/94
--Northwest Newsletter Aug 1994

MARGARET'S COLUMN

We finally had our snow storm, both on Jan. 22nd and on Feb. 4th. Sorry about not being able to get to South Bend for the meeting on the 22nd, but we were unable to get out of our road. Several members called that they were having trouble getting out of their yard also. It turned out OK and we had a meeting on the 29th.

We had a very good turn out on the 29th even though it was Super Bowl Sunday. Thanks for attending.

Bob's program on using Fimo was enjoyed by all, and he hopes they will try it on their own. Hands-on programs are fun, so the Feb. program will be given by Viola Robinson. She will have each person make a necklace with beads. I am looking forward to this.

Our future meetings will be held at Our Redeemer Lutheran Church, 805 S. 29th, South Bend. This is the church we met in several years ago. Thanks to Bob Miller and Jess Zeiger, we will be able to use the large room, kitchen and storage area for the club. There will be room for our Library case, Books and our Hospitality supplies. If we decide to purchase a VCR-TV for programs, there will be room for them. One problem with this meeting place, is that it is one flight of steps down, so we sincerely hope that this will not be a problem for the members. I did talk to Joe Fashbaugh, who has problems, but he said he will be able to handle the stairs. Hopefully all of our members will be able to use the steps.

Our Board meetings will be held each month on the 2nd Wednesday at 7pm at the Main Library in the auditorium. If you have suggestions for the club, feel free to attend.

I delivered the monetary donation to the Museum for the use of the meeting room. I did notify them that we will be meeting at a church in the future and thanked them for their hospitality. I also told them that if they needed any help or if there was anything the Michiana Society could do, to please let us know. It was very nice of them to allow us to meet there.

See you at the meeting on Feb. 26 at 2 pm. The doors will be open at 1:30 with the meeting beginning at 2 o'clock. If you know of anyone that is interested in the Society, ask them to attend the meeting.

Do you have any equipment to sell? Brian Hess is looking for a medium sized high pressure oxygen tank/regulator for soldering and a set of equipment for steam casting. Call or write if anyone has or knows where one might be for sale. Thanks.

The AFMS has announced that the new/updated FOSSIL LIST is ready and should be available from the MWF Supply Chairman, Gordon Boone, sometime in March. Ask Bob Miller if he has ordered them, or if they should be ordered from Gordon. These can not be ordered from the AFMS Administrative Office, only from the MWF Federation Supply Chairman. When they are available, I suggest we order one for the Club Library, and those interested, order one for themselves. I believe they will be about $4.00 each.

Bob had a call from a lady, Patricia Sexton, wanting to know if anyone was able to repair an agate table covered with Polyurethane. Someone broke it, and she would like it repaired if at all possible. The table is 36-50" round. Bob Heinek has her phone number, so if you know anyone that does this type of work call her. No one at the meeting could help her with her problem.

* * * * * *

The Midwest Federation Newsletter has a NOTICE OF PUBLICATION for a book by Roger K. Pabian, called *Banded Agate - Origins and Inclusions.* The book can be ordered for $4.50 per copy plus $1.50 postage. Interested? let us know, we will either order them, or give you a form

MINUTES of the Regular/Special meeting January 29th

The meeting was called to order by Margaret Heinek, at the Studebaker Museum at 2 pm. with 22 adults, 3 juniors and 2 guests present.

The minutes of the last meeting were approved as printed in the ROCKFINDER.

A motion by Jesse Zeiger to nominate Pam Rubenstein as treasurer for 1995 was seconded by Gordon Dobecki. Tom McLaughlin motioned that the nominations be closed. Both motions were passed by voice vote.

Paul Godollei reported he had brought in some books.

Molly Elwell reported on cards sent in December, birthday, anniversary, get well and sympathy cards. (Molly does such a good job).

OLD BUSINESS: *Science Alive*- the program hosted by the South Bend Main Library will be held Feb. 10th and 11th. Bob and Margaret Heinek will be there on Friday morning to greet the bus loads of school children. They will take a display and some hands-on fossils and stones for the 200 school children expected.

Gordon Dobecki motioned that the Heineks take polished stones as give aways for the children that attend on Friday, seconded by Pam Rubenstein, motion passed. On Saturday the Society members, Gordon Dobecki and others will be there for the main program, 10 am to 4 pm. Gordon will have his polishing equipment to use on Saturday, for the youngsters to polish Petosky stones.

The future Board meetings will be at the South Bend-St Joseph Library the 2nd Wednesday of every month at 7 pm. All members invited to attend.

Molly Elwell proposed that a committee be formed to update the Society's By-Laws. This will be discussed at the Feb. Board Meeting.

Gordon Dobecki made a motion, seconded by Molly Elwell, to have future meetings of the Society at the Lutheran Church of Our Redeemer, 29th and Wall St. Motion passed by voice vote.

A budget will be discussed at a future Board meeting.

Viola Robinson will have a hands-on program at the February meeting. Viola will explain how to make a necklace of beads.

A motion was made by Jessie Zeiger that all programs where supplies are needed by the person giving the program, be reimbursed. Seconded by Gordon Dobecki, motion passed.

Margaret suggested having a speaker from Notre Dame give the March or April program. The man is a Professor of Archeology and a very interesting speaker. She will contact him to see which month will be convenient for him.

Kathy Miller presented a possible field trip to Morgan-Monroe State Park to collect fossils and geodes. Discussion followed. Gordon Dobecki motioned that Kathy pursue the trip, and that the club pay for the field trip to Morgan-Monroe, bus fare only. Club also to reimburse Kathy for the expenses (phone calls, etc.). Motion seconded by Jessie Zeiger, passed by voice vote.

Kathy brought up other field trips possible, (one day trips) to the Science and Industry Museum in Chicago, Cranbrook, the May show in Cincinnati and/or Geodon's show. A discussion followed. Margaret will pursue the May information, where the show will be held and when etc. (The May show will also be the MWF Spring meeting. It takes about 6 hours to drive there, so this probably would not be a one day trip). Paul Godollei mentioned hunting for fossils in the Cincinnati area.

Jess Zeiger suggested we supply boxes of minerals etc. to ISUB Geology class Department. (continued next page)

MINUTES - continued

Jess' suggestion willl be discussed at a Board meeting.

Phyllis Smallwood made a motion to donate $50.00 to the Studebaker Museum as a "thank you" for the use of the meeting room, seconded by Paul Godollei, carried.

A guest, Martha Field, asked if anyone would polish a petosky stone for her. Gordon suggested she attend Science Alive and maybe polish her own stone.

Bob Heinek showed the members how to use Fimo, and gave instructions on baking it. The members seemed to enjoy working with the "clay", and asked if books were available to show patterns and other uses for it.

Refreshments were furnished by Gordon Dobecki, Jess Zeiger and Pam Rubenstein. Meeting adjourned at 3:45 pm.

Kathy Miller, Sec. for Marie Crull

* * * * * *

LAPIDARY TID-BITS- from Bill Horton Lapidary Chairman via MWF Newsletter.

Store all of your faceting laps carefully to eliminate contamination. Wrap them in kleenex, paper towels and finally in a zip lock bag. Place them in film cans obtainable at hobby shops or camera stores. Ask for 35 MM, 400' roll cans. They will be about 10" in diameter, and about ½ " deep.

* * * *

A tourist was visiting New Mexico. While gazing at the dinosaur bones that were around, he met an old Indian who acted as an official guide.

"How old are these bones?" the tourist asked

"Exactly one hundred million and three years old, " said the Indian.

"How can you be so definite?" inquired the tourist.

"Oh, a geologist told me they were one hundred million years old," replied the Indian, "and that was three years ago."

(from The *Rock Tattler* via *Flint Flashes*)

PINK CALCITE

To the best of our knowledge pink calcite is found at only one location in the entire Terlingua Quicksilver District. This calcite is normally a blue-green or aqua-colored in place underground. After being exposed to the sun's radiations it becomes pink. (Not all pieces are pink, some pieces and parts are white or cloudy.)

Under longwave ultraviolet light this calcite fluoresces a peach color. Under shortwave it is blue/white. In some the fluorescence is in triangular shape. It phosphoresces blue/white and to the best of our knowledge has the longest phosphorescence of any mineral in the world! You may play catch with it in pitch darkness! (These ultroviolet lights are known as "black lights".)

This calcite as well as other fluorescence of our area and elsewhere can lend themselves to some spectacular "paintings" after being crushed and made into 'pigments'. One picture might be a Spring scene under ordinary light; a Summer or Fall scene under longwave; a Winter scene under short wave.

(From ; *No Stone Unturned via Rock Tattler)*

* * * * *

MICHIGAN FOSSIL LOCALITY CLOSED

For many years rockhounds have hunted at Milan on the dumps of the Martin-Mariette quarry to hunt the Silica Formation for fossils. One could always find something to bring home.

For a few years now, talk was that this area was finally going to be utilized as a dump site for hazardous wastes. The time has arrived! The entire area is completely closed off and no collecting will be allowed.

* * * *

Another collecting area closed...Cedar Valley Iowa club announced that no one can collect Lake Superior agates at Mucatine, Iowa. This was a wonderful spot to hunt. Drat it!

The Source of Colors in Minerals

by Jeff Freeman

One of the pleasures of collecting minerals is seeing the great variety of colors they display. Color can be especially important for those minerals that are used as gemstones. Many have admired deep green emeralds, blue sapphires and red rubies. But, have you ever wondered how these gems as well as others get their color?

Minerals can be classified into four categories depending upon how they obtain their color. These categories are described below and some examples of each class are given.

ACHROMATIC: Achromatic (meaning *not colored*) minerals are inherently colorless. They contain no source of color and hence are found in nature as clear or white specimens. Examples of achromatic minerals include halite (salt), gypsum, borax and cerussite.

PSUEDOCHROMATIC: Psuedochromatic (meaning *false colored*) minerals are actually colorless, but have been given color by other means. Such minerals can get color from:

1. Inclusions of other, colored minerals inside the host mineral. Examples of this include jasper (red Hematite inside quartz) and tiger eye (iron oxides/asbestos in quartz).

2. Diffraction (scattering) of light by the structure of the mineral. Diffraction can separate white light into individual colors. The best example of this class are the opals. Some butterfly and bird feathers also owe their color to diffraction.

3. Interference of light. This phenomenon is related to diffraction. Interference caused by cracks in a mineral and results in a rainbow like color display when the mineral is properly oriented. An example is found in iris quartz.

4. Refraction (bending) of light. Refraction of light also leads to the separation of colors of the spectrum by the mineral. The separated colors are seen by the eye as spots or flashes of color. Refraction is responsible for the fire in diamonds and cubic zirconia. Quartz prisms also rely on refraction to separate white light into the colors of the spectrum.

IDIOCHROMATIC: Idiochromatic (meaning self colored) minerals have characteristic colors that are due to the elements that make up the mineral. As a result, the color of these minerals varies little from specimen to specimen. Examples of this class include pyrite, azurite and crocoite.

ALLOCHROMATIC: Allochromatic (meaning other colored) minerals, like achromatic and psuedochromatic minerals should be colorless. However, color is imparted to these minerals by the presence of impurities or defects in the structure of the mineral. These impurities/defects are referred to as chromophores or color centers. Some allochromatic minerals can host a variety of impurities, leading to several colors for the same mineral. Many gems fall into this category. An example is seen in quartz which can be found as rock crystal (colorless), amethyst (purple), citrine (yellow), smoky (brown to black) and rose (pink). A second example is found in corundum. It is found as ruby (red), padparadscha (orange) and sapphire (usually thought of as blue, but can be pink, green, purple, colorless and yellow as well).

Chromophores are the most common source of color in minerals. In the second part of this article, how the chromophore actually works will be looked at more closely.

References: Simon & Shuster's Guide to Gems and Precious Stones, K. Lyman (1986); Gems & Crystals From the American Museum of Natural History, A.S. Sofianidef & E.G. Harlow (1990); Manual of Mineralogy. Osage Hills Gems - 10/94

Opal

Opal has long help the throne as the queen of gems.

For good reason, too. Not only is it a delight to cut with its many challenges, but the results are often mind boggling. A poet once said that god painted the dawns and dusks, colored the flowers and then wiped his palette of all the colors and with them he created the mighty opal.

Cutting opal is a delight. Setting it can be a goldsmith's nightmare. Its play of color makes it one of the most majestic gems on earth but it is soft and delicate and does not give up its color secrets easily or haphazardly. Most of the time, a gemcutter must search - coax might be a better word - them out.

If starting with a coarse diamond, pre-polish with a 600 or 1200 wheel. Then final polish with at least 14,000 grit and preferably stepped up to 50,000. In the case of silicon carbide, start with a 220 wheel, sand with a worn 220, 320 and 600 paper and polish with tin oxide, cerium oxide or alumina. Note: Many professional opal cutters opt for a mix of 80% tin oxide and 20% alumina, contending this is not only the best polish for opal but also for most colored stones.

It is important to work opal only with smooth, trued (in the case of SC) wheels. Vibration can cause the fragile opal to crack, particularly if there's an incipient crack or fracture. Because opal is temperature sensitive, be sure to use plenty of cooling water. Opal cuts swiftly so work slowly with reduced wheel speeds, especially with diamond.

Because color in rough opal appears in seams, ribbons, lines or small patches, careful analysis of each specimen is vital if maximum yield is expected. When examining for color, a 100 watt incandescent bulb is best (fluorescent extinguishes the color).

Mounting: softness and fragility make setting opal a unique challenge. Edges tend to crumble easily and even the slightest undue pressure may cause fracturing. Therefore, it is important that prong tips be brought down to the surface - and then not pressed hard. The same holds true with a gypsy or bezel type setting: don't bring pressure directly on the stone. Check prongs to make certain they do not butt up tighter on the girdle as the prong is bent over. This is the biggest cause of edge breakage. Work slow and evenly around the stone.

Mexican or Nevada opal is especially prone to breaking, fracturing and abrading. Australian opal is more hearty, but not by much.

From "American Gemcutter", number 94, December 1994.

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Calendar of Events:

Mar 10 - 12	Eastern Ind. Gem Society Kuhlman Center Richmond, Indiana
Mar 11 - 12	Macomb, Illinois
April 5 - 8	Grand Rapids, Michigan
Aug 12-13	MGAGS Rockhound Seminar MTU Houghton Michigan Cathy Hodgson (818) 664-8985
Sept 1 - 2- 3	Michiana Gem Annual Show Century Center, 120 S. St. Joseph South Bend, Indiana
Oct 7 - 8	Eddy Geology Center Arts Fair
Oct 13 - 15	MWF Convention & Show, Detroit