

APRIL 1971



GRAND RAPIDS
MINERAL SOCIETY

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The Grand Rapids Mineral Society is a Non-Profit Corporation affiliated with the Midwest Federation and the American Federation of Mineral Societies.

Meetings are held the second Wednesday of each month at 7:45 p.m. in the Multi-Purpose Room, East Building, Grand Rapids Public Museum. Summer meetings are at various parks as announced.

Membership dues are \$5. per year for a family, \$3. per year for a single adult, and \$1. per year for students under 18 years of age. Dues are payable to the treasurer. The year is from September 1 through August 31 of the following year.

Advertising in the GLACIAL DRIFTER is limited to a uniform size of one-third page at the rate of \$3. per issue, September through May only.

All material for publication shall be in the hands of the EDITOR no later than the Wednesday after the regular monthly BOARD OF CONTROL meeting which is the third week of the month.

Permission to reprint articles appearing in the GLACIAL DRIFTER is hereby granted, provided proper credit is given.

Member - National Bulletin Editors Association.

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EXCHANGE EDITORS - PLEASE NOTE: Address all exchange bulletins to

Mr. Gordon Williams, Editor
2038 Parade NW
Grand Rapids, Michigan 49505

The Glacial Drifter

Volume 13 No. 8

G.R.M.S. CALENDAR

Time: 7:45 p.m. April 14, 1971

Place: East Building, Grand Rapids Public Museum

Program: Mexico will be the topic on slides and tape.
Both rockhounding and sightseeing will be covered.

LOOKING AHEAD

- April 16-18 Jackson Gem & Mineral Society Show at the National Guard Armory, Jackson, Mich.
- April 18 Final day of show. Remove displays from museum after 5p.m.
- April 19 Board of Control Meeting - Lucile Pearl residence, 1598 Gridley NW
- April 22-25 Beacon Rock & Fossil Club Show, Grand Haven Community Center
- April 24-25 Indian Mounds Club field trip to Medusa Cement Co. quarry at Charlevoix. G.R.M.S. members are invited. Call Dick Lemmink, Field Trip Chairman. Good camping space available at state forest campground nearby
- April 28 Mineral Study Group meets at Arnold Wendt home
- May 1-2 Blue Water Lapidary Society Mineral Show, Wagenseil Center, 2300 Totem Trail, Port Huron, Mich. (flyer available at meeting)
- May 12 Regular meeting; Dr. J. Cotter Theron, Geology Dept., Hope College
- May 15-16 Kalamazoo Gem & Mineral Fair, Fairgrounds County Center Building, Kalamazoo. Swapping (no selling) silent auctin, dealers, educational programs
- May 21-23 Muskegon County Rock & Mineral Ass'n Rock Swap at Pioneer Park.
- July 22-25 Midwest Federation Convention & Show, Mansfield, Ohio

FROM THE PRESIDENT'S ROCK ROOM

The President, on behalf of the Board, wishes to thank Rich VanBeek and his assistants, Roger King and Jim VanVuren, for their excellent job in putting together a fine show. Our appreciation to all the exhibitors for once again bringing their fine pieces to the show. All phases of lapidary work and fossil and mineral collecting are represented. On the opening day about 3000 people visited the museum. Hopefully some of them will be influenced by the show to take up some phase of our hobby. The moon rock made up for its small size in large publicity value.

Our Nominating Committee, Nellie Mead and Marion Jennings will be calling many of you regarding running for various offices on the board. We hope you will give them favorable answers. We want a slate of several nominees for each office. This makes for an interesting election.

There was very little business for board consideration this month due to everyone's pre-occupation with the show details. The April board meeting will be at the Lucile Pearl home, 1598 Gridley NW.

The March meeting brought Steve to the rostrum with a good group of slides covering the Lake Michigan shore from Benton Harbor to Charlevoix. He showed the erosion and deposition of sand from Benton Harbor north along the shore. It was a very instructive and interesting program. I envied him the chance to fly along the shore. One question that came up was, "What is the penalty for flying below the ground?" This remains unanswered to date. It is nice to have our children make a career of geology and come back to share the fruits of their learning. Since the meeting there has been a large landslide at the Sleeping Bear Dune so Steve's pictures will be valuable history of the area. If he can get a few shots of "after" it will give a good comparison.

The April meeting will be a slide and tape show on "Dig Mexico." This is a rock hunting trip with some sightseeing. No one I know would go that far and not try to see the scenic wonders of another country. Personally, this will have to substitute for the real thing for a while as we do not expect to get down there for several years.

Anyone knowing the whereabouts of a good typewriter stand with drop leaves, please notify any board member. We have a good electric machine now but we can use a stand for it.

An old dog can learn new things! Partly because of the dating emphasis of this year's show and partly because we have a fair amount of fossils, ye olde presidente has been memorizing the ages and their datings. This is a good spelling lesson also!! Spell pleistocene or oligocene!! Fun and games!

Geology students: did you see the TV show, "Jacques Cousteau Explores the Sub Ocean Caves"? This program showed spectacular views of stalactites and stalagmites in caves as deep as 165 ft. underwater. These could only have formed when the caves were above sea level. This is theorized to have occurred 12,000 years ago before the ice melted and raised the sea level. Broken off stalactites were brought up for study and sections cut off. They had lain on the sea bottom long enough to become encrusted with marine debris on the side facing up.

FROM THE EDITOR'S ROCK ROOM

This afternoon we went outdoors and gathered up a few of the leaves that had spent the winter atop the flower beds. The wind was raw and cold, but when we got the first layer of leaves off we found the tulips, day lilies, hyacinth and narcissus on their way to a new season.

Then I went into the garage to get some plastic leaf bags. There sat the Wheel Camper with her 1971 plate attached, and of a sudden the wanderlust was deep in my bones. I know my fair lady has been ready to go for some time --like the day after we put the trailer away last fall--so when the sun broke through and warmed our backs as we gathered up leaves, I kept my peace.

But the days are longer, the snow keeps receding, and one fine day the three of us will be off. (The dog generally lets us go with her.) We don't know just where yet, but the planning will start soon.

For planning our early trips we will be using The Prospector for March, 1971. Nancy Schulze, along with contributors Vern Lydens, Winifred Schmeideknecht and Helen Greer, put together a fantastic edition of "Rockhounding in Michigan." -- Five articles complete with maps make up a 31 page edition. It is going in the club trip books for member's reference--so call when you want it.

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While on the subject of trailering and camping, we would like to pass on a little experience we had last summer. We can both do without pastries. However, we get hungry for sweets and this happened with a box of cake mix.

Mix part of the box according to directions and fry like pancakes on a buttered griddle. It is delicious with no leftovers to get soggy or to tempt you later. Seal the box with masking tape and put it in the store cupboard to await the next moment of weakness.

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What a job Rich VanBeek did organizing the show. Fine work and thanks from the club membership.

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And how about those fine new directories. The Beauvais' put in a lot of work turning them out, collating and stapling them. I frequently feel that we really don't appreciate the tremendous job they do publishing the Drifter. They contribute a great many hours of hard work. And have you noticed that it is always out on time? (A note from the Beauvais: our thanks to the Fergusons who have been so willing to help on the Drifter when it needs to be put together in a hurry; and who helped assemble and finish the directories.

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Club member attendance at the programs that are held as part of the show has left quite a bit to be desired. Let's get behind the hard work that went into the effort of arranging and staging the shows.

1971 G.R.M.S SHOW AT A GLANCE

Once again the show was a club effort. The names that label the display windows read like a roster of G.R.M.S.

Along the north side of the museum lobby are six windows that depict the great geologic ages. The first window is in the nature of an introduction to the five that follow and was put in by Rich VanBeek. The remaining windows are backed by outline maps showing the areas covered by the geologic seas. The floors and sides of the windows are covered with the rocks, fossils and minerals that were products of the period.

The cases in the order of viewing were put in by Dr. Rose, the Art Ferguson's, the Petersen's, June Smith, and Steve Tchozeski. Specimens for these displays came from many members' collections.

Credit also goes to the museum staff for the fine sign above the cases running the full length of the north exhibit area.

Across the lobby are the cases with individual displays. Marie Spielmaker's specimen display containing druzy quartz, agate, barite and assorted materials tastefully displayed in a well-lighted case starts the south wall showcases.

Our neighboring club, The Indian Mounds, are responsible for an exceptionally fine display of crystals, geodes and assorted specimens.

A spectacular use of agate marks Dr. Bob and Elaine Smith's case. Above the air conditioner in a room of their residence is a window with each pane a surprise in agate. Below the window are agate and septaria clocks.

Faceted stones mounted atop lucite columns highlight Karl DeBack's display window. The beautiful calcite crystal from Bellevue Quarry was spectacular. Beautifully set cabachons top off the window.

Some of the most beautiful fluorite specimens displayed in a manner that each piece commands attention is the Roger King's contribution to the bank of south windows.

The moon rocks appearance in Grand Rapids prompted Mr. Donald Chaffee to put in a model of the Saturn V rocket. Thank you, Mr. Chaffee.

Cabachons, faceted stones and baroque jewelry displayed by Erwin Atkins occupy the next window.

Dr. Rose and Henry Tchozeski combines their talents to put in a most interesting window that contained wax and water casting, jade carvings, silver work with a star sapphire setting, and even a "gunk to glow" shelf.

Closing out the wall cases, George and Marilyn Arnold display some very beautiful Petoskey stone work, probably the nicest polishing we have seen since Jerry Morris' work. Be sure you see Arnie Wendt's turtle family in this window.

(over please)

SHOW REPORT (concluded)

Bob and Ruth Beauvais also have their wares shown in two places. Beautiful selenite crystal specimens from our own gypsum mines greet the visitor in the A frame case and again in one of the center cases.

The A frame case also has material from the Norton Mounds displayed by Rich VanBeek and the Williams' "Sea Fantasy." The Clyde Littlefields show some interesting fossils and specimens and an intriguing basket of lovely tumbles you want to run your hands through.

The center cases also house Virginia VanVuren's fine display of the commercial uses of minerals, Ford and Dora Hurd's geodes and specimens, and the silver creations of Davena Lett, Dr. Robert Smith, Dorothy Williams, Tom Jakeway, Billie Whitcomb and Lucile Pearl.

The Educational Park Ecology Class installed a thought provoking exterior window on the west side of the museum. The remaining windows were installed by Dorothy Waterman, who shows an excellent collection of fossils there and in one of the center cases inside; by the Ferguson's; the Hurd's; and the "Discovering a Mastodon" window is a combined effort by Rich Van Beek, Jim VanVuren, and the Beauvais'.

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NEWS NOTES FROM HERE AND THERE

Please add these names to your directory:

Mr. & Mrs. James Whitcomb (Billie)
310 Eola SE 452-5287
Grand Rapids, Mich. 49507

Miss Esther Hall
735 Fountain NE 458-5408
Grand Rapids, Mich. 49503

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Arnie Wendt is getting around without his crutches now. We are glad to see this.

Ken Jones (Indian Mounds Club) is out and around again. He was able to come to the Indian Mounds silent auction; still moving slowly but able to be there. Nice going, Ken!

Earl VanderWerf, who was recovering from recent surgery, has now suffered a heart attack and is in Butterworth Hospital. Our prayers and best wishes for the rapid recovery of our members and friends on the sick list. (Please see page 12*)

Cookies for the April meeting will be furnished by Mrs. Casey Doornbos and Mrs. Donald Crabbs.

THE GOLDSTONE STORY

For hundreds of years, men everywhere have tried to transform base metals into gold. In older times monks of a Northern Italian monastery were also engaged in this task. For many years these monks labored to discover the precious metal in their retorts.

About 1590, after years of effort, the monks happened to make a very beautiful, sparkling material with innumerable golden stars. The monks had failed in making gold but they did succeed in producing a marvelous specimen which they properly named "goldstone." Goldstone was used for decorative purposes until 1890 when it was imported to the United States, after it was found to be suitable for cutting and polishing for jewelry pieces.

The monks called goldstone the "advertising" stone as it is impossible to foretell the success of a mixture for many weeks. To this day, due to the lack of modern production methods, a "batch" of material can turn out unsuitable for use because of the uncertainty in the heating and cooling process. The production of goldstone has been a secret method all these years, concealed from everyone. Many have tried to duplicate goldstone, but to date no one has been successful in imitating this beautiful stone.

For the most part, the bulk goldstone, after it is removed from retorts, is shipped to major stone cutting and polishing centers throughout the world. Germany, perhaps, is the most important cutting center, although much of the cutting is done in Austria, Holland and some in Japan.

In recent years a blue goldstone has been developed from the same process as the first brown goldstone. This has been called "Blue Magic." Some people claim it will glow in the dark after being exposed to the sunlight for many hours. Goldstone will not discolor or fade or lose its beauty in any fashion, making it a precious keepsake.

There is also a new green goldstone now available on the market. It is made by a slightly different process but has the same sparkling effect. It makes into lovely flat-topped cabs but is a little more difficult when worked into the usual rounded tops. We have received news of the latest goldstone which is black in color and is called "Midnight Stone," same process as the brown and blue, a beautiful stone and one you will want to work on.

Ed. note: Goldstone is essentially a glass, the inclusions are caused by crystallized copper filings.

Via "Mineralogy," The Hy-Grader, Lapidary
Reported and Canadian Rock Hound;
Via The Geologic

"ROCKHOUND NEWS" has started a series on mineral identification and we think it may be of help to many of our members. Here is the first of the series.....

IDENTIFICATION - COLOR

This month we want to start discussing the physical properties of minerals so we can learn the terms applied to them and understand what they mean. Then we can look up mineral descriptions in a book or use a chart and tell whether the characteristics listed match our specimens. A freshly broken surface should always be used for examination, as a weathered or coated surface would be misleading.

There are six mineral properties that can be determined just by looking at a specimen. The first three that we will discuss concern the contact of light with a mineral, and the second three concern the surface appearance of the specimen.

Let us first consider color. This is the kind of light that is transmitted or reflected. Color is usually the first thing we notice when we look at something. Some authors claim that color is not a very reliable characteristic, while others claim it is one of the best. Many minerals occur in several colors, usually due to the inclusion of impurities, but as we gradually become familiar with the possibilities, color will be a big help. Some colors are good indicators that particular minerals are present--e.g., bright green or blue usually indicate copper, yellow suggests sulphur, bright red or orange might indicate arsenic, and deep red often means mercury is present.

In some instances, when we have already determined what mineral we have, the color will help us to tell its variety. Quartz is a good example of this. Colors like the pink of rose quartz, the yellow of citrine, the violet of amethyst, the red of carnelian, and the brown or black of smoky quartz help to distinguish them.

-Frank and Eleanor Owens

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FOR THE CHILDREN - Via Jaspelite

CRYSTALS IN A HURRY - from the "Dallas County Rock Club"

These experiments were performed in a 3rd grade classroom by the teacher, Edna Lamb: Sugar, rock salt and alum crystals were grown from super-saturated solutions made by heating 1 cup water and stirring rock salt, alum (from the drug store) or sugar until no more would dissolve. Then the solution was reheated and a little more material added since the hot solution holds more mineral. (Do not boil the salt or sugar solution but the alum solution should be boiled about 3 minutes.) While still warm the solutions were poured into glass jars and a pencil was placed across the top of each jar from which a weighted thread was dropped into the solution to provide a vertical surface upon which the crystals can grow. The salt and sugar crystals appeared in a few days and grew slowly but the alum produced large beautiful crystals the first day. For 2 cups of water you will need approximately 6 tablespoons of alum.

G E M O P A L

And Its Lapidary Treatment

By Charlene Berry

The Crystal Gazer

Name: possibly from the Sanskrit upala, meaning "precious stone" or gem.

Varieties: Common opal without play of color, and of any hue or degree of translucency. When replacing wood, it is called wood opal. Fire opal is the reddish to orange-red translucent material from Mexico which may or may not contain play of color. Precious opal is material of any basic hue which displays shifting flashes of intense color in red, green, orange, blue, purple, etc. White opal is precious opal of a white or milky body color

The gem opals of the ancients came from India, Arabia and Egypt. From Roman times and continuing until the discovery of opals in Australia, Hungary was the principal source of precious opal.

There are several important opal locations in Australia. The first were located in Queensland in 1872. These were followed by discoveries in New South Wales of the White Cliffs area and the Lightning Ridge field and by later finds in south and western Australia. All the Australian localities produce precious opal of high quality. At White Cliffs, gem opal, replacing crystals of the mineral gluberite, has the shape of fossilized pineapples and animal bones.

Magnificent large colorful wood opal logs occur in Washington, Idaho, Oregon, Utah, and Nevada; especially fine oak from Clover Creek, Lincoln County, Idaho. Small nodules of precious opal have been found in Idaho. Small nodules of precious opal have been found in Idaho, Washington, and Oregon, but the prime locality is Virgin Valley, Humboldt County, Nevada, where opal replaces wood in volcanic ash and tuff beds, sometimes providing examples to 7 pounds in weight. Much shows a dark brown to black body color with vivid flames of red, green, blue and purple.

Excellent precious opal and fire opal occur in an extensive area of volcanic flows in Mexico, from San Luis Potosi to Gerrerero; much fine material has been mined in Queretaro and Jalisco. Precious opal occurs in a number of localities in Honduras. Limited quantities of common, fire, and precious opal are mined in Brazil.

Opal is a form of silica, but unlike quartz, contains variable amounts of water ranging from 4 to 20 per cent. Because of the presence of water, opal has a lower hardness ($5\frac{1}{2}$ to $6\frac{1}{2}$) than quartz. Opal in its pure form would be colorless or milky white. Inclusions of other minerals acting as pigmenting material, impart to it almost every color in the spectrum. In addition, precious opal shows the play of colors resulting from the interference of light.

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(Continued from page 8)

The cutting and polishing of opal is a simple operation, but at the same time the gem must be handled with great care. Opals of all kinds are brittle and heat sensitive. When a rough is to be fashioned, the operator should first study the subject in detail. The play of color in opal is generally in a layer within whitish waste material and can be viewed from the sides. When viewed from the sides, the operator should saw or lap the piece down to the layer of color. Care must be taken not to overdo the operation so that the color vein is not lost.

A great many pieces of rough opal are not large enough to require sawing but where material is large enough it is best to do the sawing on a very small gem saw fitted with a 5 in. diameter blade of .012 thickness. A heavy blade will waste the material. Lapping should be done using only a very fine abrasive no coarser than 320 grit.

After this procedure has produced a color plane the next step is to inspect the specimen and decide what it will produce. If the piece is irregular in shape the retaining of its size is important. Perhaps the stone can be a regular cabochon, an oblong or a square. It should be fashioned in such a way that the greatest size possible is produced. The selection of the most suitable size and shape must be guided by practical as well as artistic considerations. Do not cheat yourself of a fine gem by trying to squeeze out a larger cab than can be expected from a flawless area. It must be pointed out that a casual inspection of opal will not reveal fine hairline cracks, especially when wet. It should be allowed to air dry for several hours before inspecting it for flaws.

Once the desired section has been selected, the next operation is the grinding of the specimen to the distinct shape. This should be done on a 320-grit grinding wheel. It is important that the wheel be smoothly dressed and free of bumps and grooves. If no grinding wheel of this grit is available opal can be shaped on sanding cloth. Grinding and sanding should be done with a copious amount of water.

The bottom or underside of an opal is always rounded by professional gem cutters. Even stones finished with a flat face are rounded on the underside. Doublets should also be finished this way. Opal is fashioned in this way to preserve the size and weight and to avoid chipping when mounting.

Grind and shape the bottom of the gem first. The next step is dopping. This is a most important operation and should be done with care. DO NOT take the stone directly from the wet grinding wheel to a hot flame. The sudden shock would surely crack it. Wipe away the excess moisture and allow it to dry out a little. Prepare the dopping stock (butcher's skewers work fine for opal), then with tweezers hold the stone over an alcohol flame, being careful not to overheat it. The melted sealing wax will adhere to it if the opal is only slightly warm.

Sanding is done on 320 then 600 grit cloth. The sanding cloth should be
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well "broken-in." Very little pressure is required to sand off the high spots and eliminate the scratches. Use a copious amount of water and keep the stone moving at all times. After sanding, wash the gem to be sure that no grit adheres to it.

Opal will polish rapidly on felt with either tin or cerium oxide. Keep the stone moving and do not allow the buff to dry out. I prefer a medium hard felt for opal rather than the usual "rock-hard" variety.

The stone can now be removed from the dop stick by slightly heating it over the alcohol lamp, then separating it with a knife. The gem is now finished and ready for mounting.

Via "The Prospector"

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THE MAKING OF A TRIPLET

by Harry Rieman in "Chips" reprinted from THE CALUMET GEM
via "The Prospector"

Most rockhounds have a small piece of opal stashed away showing a seam of "fire" but not thick or large enough to make into a useful gem. Besides, opal is rather soft and brittle and therefore not very durable when used in a setting such as a ring. Opal is also more or less porous and will absorb some liquid; wearers of opal should keep the stone away from dirty water, ink, or other colored fluids. These undesirable properties may be overcome by capping the precious opal with clear crystal quartz for strength and thin enough to aid in the magnification of the various colors displayed in the opal.

Different methods have been used in making a composite gemstone but the following can be used, at least for a start; experience may then dictate a different procedure. First select a nonfractured piece of opal showing a seam of "fire" and carefully grind the opal - from both sides - down to the seam of "fire." This is the most important and ticklish step as precious opal is very sensitive to both heat and dryness; use plenty of water when grinding. Heat evaporates the water in opal thereby causing the stone to check or craze or even disintegrate.

When the opal has been ground down on both sides until only the thin seam of "fire" remains, the final slab will probably be about one-eighth of an inch in thickness. Use a template to mark the stone for the required final size for the setting to be used and grind the opal to this, or just short of the mark.

Next, cut a slab from a good clear quartz crystal about three-sixteenths of an inch thick. Mark with the same template and grind to size as before; this will be the hard cap over the opal. Using Epoxy applied to the side of the opal slab showing the best color display, press the opal and quartz slabs together and let stand undisturbed for 24 hours. Both the contacting sides must of course be flat and fit as perfectly as

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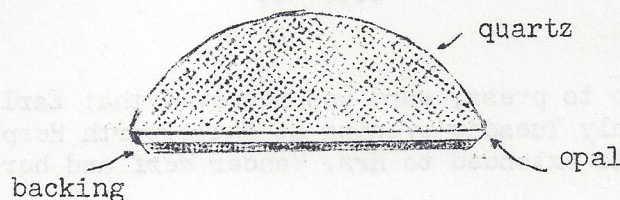
possible to eliminate bubbles and to prevent breaking the brittle opal when the two slabs are pressed together. Some heat may be used to speed drying but remember that precious opal is often very sensitive to heat and dryness and extreme care should be used if heat is applied. These two stones cemented together is called a doublet.

Next, grind lap the opal side of the doublet carefully until only a slim wafer thick piece of opal is left cemented to the quartz. If it is possible to lap grind the opal to about one thirty-second of an inch, then do so, but be sure that the grinding to this thickness does not destroy the good color display of the opal.

The next step is to add a base to the opal side of the doublet, making it a triplet. Most any material may be used as a base. Place the doublet on different materials and select one that seems most desirable. A piece of common opal is often used. Grind or lap a slab of the material to be used as the base to about one-eighth inch thickness; mark with the same template and grind to size as before.

Quite often a drop or two of black paint is added to the Epoxy before cementing the slabs together. Black glass or dark obsidian is often used as a base thereby eliminating the need for black paint. A black base may not appeal to many but it will look more like black opal and the "fire" of opal is generally more brilliant against a background than without.

After drying for about 24 hours, dop the base and shape the quartz cap to the shaped cabochon. One suggestion is to final grind on a 600-grit wheel or disc, then polish on a felt buff with tin oxide and plenty of water. The last step is to remove the dop and grind the bottom or base until it is about 1/32 of an inch in thickness, then bevel the underside. This triplet can then be worn in a ring as it will have a hard quartz wearing surface and the opal will be sealed against absorbing discoloring liquids or, conversely, the crazing by loss of inherent water.



The Tulip City Gem and Mineral Club wishes to announce their "Second Annual Gem and Mineral Show" which will be held at the Holland Civic Center on September 24 and 25.

Over 3,000 people viewed the exhibition in 1970 and compliments were plentiful as the cooperative efforts of club members plus assistance by neighboring clubs produced a fine show.

"Bigger and Better" will be the theme song for 1971 as Co-chairmen Chet Smith and Joe Moran are planning an enlarged show with more dealers, more special exhibits, and more features. They invite all fellow rockhounds to place a big red mark on their calendar around September 24 and 25 as a reminder to come to Holland for education, fellowship, and fun.

AND ONE LAST WORD ABOUT OPAL. OPAL FIRES. . .

The mysterious cause of the brilliant blue, green, red and yellow fires of gem opals has at last been uncovered by an Australian scientist using an electronic microscope. The rainbow flashing gem stones actually are composed of orderly rows of tiny amorphous silica spheres, neatly stacked row upon row, according to Dr. J. V. Sanders, with the Commonwealth Scientific and Industrial Organization of the University of Melbourne, Australia. Spaces or gaps occur between each of these spheres, which are bound together by more silica. It is the size of the spheres that determine the colors and the fires of the stone.

An ordinary daylight or white light penetrates into the transparent spheres, it is scattered by the latticework of the spaces and deflected back to the surface of the opal in various colors. Radiating at angles determined by the wave length, it is the size of the spheres that determine the spaces and hence wave length and colors. Opals with uniform small spheres give off colors ranging from red through green. By lightly etching an opal with hydrofluoric acid, the "cement" is eaten away and the spheres can be seen under the electronic microscope in symmetrical array.

There are two general kinds of opals - the more precious gem opals long sought and admired by kings and queens and gem collectors, and the common opals used as abrasives, insulation, fillers or ceramic ingredients in industry. Opals have been found most abundantly in volcanic rocks, especially in areas of hot springs. Some of the finest opals have come from Queensland and New South Wales in Australia, and other varieties come from Japan, Mexico, India, New Zealand and western United States.

-from The Template via A Gem Dandy and The Red Skins
Stone News

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* Just as we go to press, word was received that Earl VanderWerf passed away suddenly Tuesday evening at Butterworth Hospital. Our deepest sympathy is extended to Mrs. Vander Werf and her family.

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SHARING

Agates, crystals, geodes, fossils, they're
Not mine to hoard, not mine to keep,
But mine to share.
The explanation's simple as can be:
Because the One who made them,
Shared them with me!

-Muriel - ROCK TALK via
Earth Science News

Midwest Federation's NEWSLETTER



Published monthly except July and August as a service to member clubs
All news, articles, subscription orders and requests for information concerning publication
should be sent to P.O. Box 1130, Des Moines, Iowa 50311

Issue No. 114 - April 1971

3 NEW PROGRAMS

Three new programs have been added to the MWF library. They are:

1. Ancient Animal Found in Iowa - by Neva L. Shaw, Marion, Iowa and The Cedar Valley Rock and Mineral Society. This is the story of an ancient Bison find in a peat bog at Marion, Iowa. Program consists of an introductory paper to be read by the one giving the program followed by 21 slides.

2. Alaska - by Dr. Ben Moulton of Vigo Rock and Gem Club and a professor at Indiana State University at Terre Haute, Indiana. A program of 109 slides depicting resources of Alaska.

3. Fossil Woods - by The Lizzadro Museum of Lapidary Art of Elmhurst, Illinois. A program of 80 slides describing its composition and theories of formation.

These programs are available for immediate booking. Requests should be sent to Mrs. Evelyn Hirsch, Route 1, Mitchell, Indiana, giving a choice of dates and including the \$1.00 program fee.

Attention is called to the new all-risk insurance coverage now carried by the MWF, on all library programs. Clubs no longer need insure programs being shipped back to the MWF.

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I have been on a vacation recently and the programs service was very ably handled by my assistant Jo Jacobs of Bedford, Indiana.

-Evelyn Hirsch, chairman

1971 CONVENTION AND SHOW PLANS

The plans for the July 22-25 MWF Convention and Show continue to take shape and everything will be ready when the show opens at the Richland County Fairgrounds in Mansfield, Ohio. And the Fairgrounds provides a number of advantages including easy access... the Fairgrounds being only a short distance off U.S. 30, and expressway skirting the north side of the city... ample parking, all free... easy unloading and loading of exhibits... camping permitted on the grounds with a limited number of hookups at \$1.50 per night or \$1.00 without, hookups on a first come, first served basis... room for the children (and grownup too) to play, bring

SPRING MEETING

The MWF will hold its spring executive committee meeting at Elmhurst College in Elmhurst, Illinois at 9:00 A.M. on Saturday, April 3. Once again the Lizzadro Museum has extended a welcome to the Midwest Federation, and has gone to great lengths to plan for a meeting place, a bit of fun, and a banquet after the meeting. Due to space limitations at the Museum, the meeting will be at the college across the street, but a catered evening dinner will be at the museum, which will also be open all day for MWF visitors.

your horseshoes and stakes... swapping in one of the barns with easy loading and unloading.

The show committee has made a real effort to keep the banquet cost down so that families can attend without swinging a bank loan and have succeeded in cutting the price to \$4.25 each. Banquet will be at the Masonic Temple on Saturday evening at 6:30. We are fortunate to have Dr. John Clark of the Field Museum, Chicago as our speaker. His subject is "Geologist and Rockhound, Our Mutual Interests". Dr. Clark is an excellent speaker so don't miss him.

The Council meeting is at the Ramada Inn Saturday morning at 9:00, with lunch at the Inn.

In the March Newsletter we said that mailings of forms and information would go to clubs around the middle of February. Our intentions were good and envelopes were all stuffed but we didn't get the 1971 mailing labels as soon as expected. We still hope we caught most of the March club meetings. -B. F. Parr, Chairman, 1488 Marion Ave. Rd., Mansfield, Ohio 44906.

DIRECTORY

The 1971 MWF Directory is now being printed and copies will be mailed to all clubs very soon.

BULLETIN EDITOR'S CONTEST

The annual Bulletin Editor's Contest will be held again this year in conjunction with the Midwest Convention in Mansfield, Ohio in July. Awards will be made at that time. Clubs wishing to enter the contest should send two copies of their February 1971 bulletin direct to Oliver Roskam, 3506 N.W. 63rd Street, Kansas City, Mo. 64151.

WELCOME NEW CLUBS

Roy Meyenberg, membership chairman announces two new clubs have been accepted into membership in the Midwest Federation. They are The Range Mineral Club, Inc., Mr. Dudley Olson, president, 45 Aurora Location, Ironwood, Mich. 49938 and The Spring River Gem and Mineral Club, Mr. Cleo G. Webb, president, Route 1 - Box 109, Hardy, Ark. 72542.

ALL AMERICAN CLUB AWARDS

LaDocia Ellis, AFMS Education Chairman advises that the All American Club Award application forms will be in the mail shortly. The form is very similar to the one used last year. Clubs should be assembling all the data necessary to fill the application form. When your form is completed and returned according to the information on the form your club will be contacted.

CONVENTION DELEGATES FORMS

The annual council meeting of the MWF will be held in conjunction with the 1971 Convention and Show in Mansfield, Ohio, Saturday, July 24, at the Ramada Inn. Registration will begin at 9:00 A.M. and the meeting will open at 9:30. A buffet luncheon will be served.

Each club will be receiving an application form for the appointment of one delegate and two alternates. Without the clubs, there would be no Federation, so it is of vital importance that your club be represented at this meeting. In addition to the information that your delegate will receive, he or she will be eligible to vote on your clubs behalf. If your club intends to have its delegate present any special discussion or motion, please notify the MWF secretary, Miss Jean Reynolds, as to the nature of the subject so that it may be placed on the agenda. -Mrs. Jack (Eva) Clements, Credentials Chairman

GEMS AND MINERALS SUBSCRIPTIONS

There has been a policy change in Federation subscriptions to Gems and Minerals. To date subscriptions have been restricted to one year. The new policy of the publishers is that either a one or a two year subscription may be ordered. Rate for one year is \$3.50, for two years, \$7.00.

SAFETY AND THE COLLECTING AREAS

condensed from a story by Fredrick Kraissl, Jr. published in the Eastern Federation Newsletter and submitted by Max L. Holliday our MWF Safety Chairman.

On the chance that collection areas are drying up in your locality, and, there have been reports that owners interests have not been given full consideration, let us work to remedy the situation before it is entirely too late. Probably the greatest concern the property owner, or operator, has is related to liability problems. Liability suits are becoming more frequent and awards are constantly getting greater. The easy way out is to deny access to all, put up "no trespassing" signs.

Consequently the case for the mineralogical society must be so well presented and proven in fact that the favorable public image of a magnanimous property owner supporting educational opportunities and privileges accorded to responsible societies, is an acceptable venture.

The best defense is to have no serious accidents. For this purpose a Safety Committee that can function with full society support is mandatory. There must be someone with experience in each society who can put together such a group.

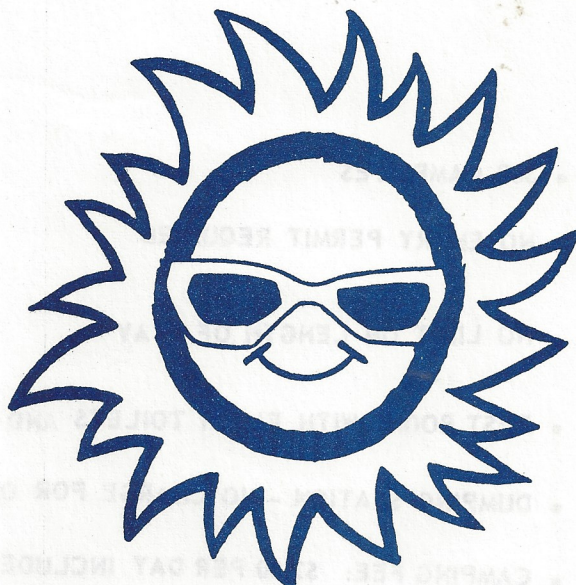
If the officers and committee chairmen follow the procedure of the uniformed safety committee, a precedent will soon be established and instead of a motley attired-non-descript group, the owners will see a disciplined organization with pride in their outfit that can be relied upon to comply with the owner's regulations and safety rules.

If the Field Trip Chairman is able to present this picture of your society to property owners who have closed their premises to club field trips, perhaps a different decision can be obtained.

* * * * *

Does your club have a safety chairman? If not, now is the time with the spring and summer field trip season beginning to appoint one. Do it at your next meeting!

IT'S SWAP SELL!



You've had fun at swaps before? Well, now try a SWELL! More fun. More people. More goodies. It's at the all new Third Annual Water Wonderland Rock Swap at lovely Pioneer Park on the shores of Lake Michigan north of Muskegon...Camping...Silent Auction...Club Booth...Cracker Barrel Session...Programs...Demonstrations...Displays...Snack Bar..Concession Stand...Open Air Swap Area...(Inside Lodge in case of rain)...Rollin' Rock Club Meeting...Fee for Swap or Sell Space: \$1 (plus specimen for Silent Auction) per table per day...Open to members of all clubs affiliated with American Federation of Mineralogical Societies...

FUN!

FUN!

FUN!

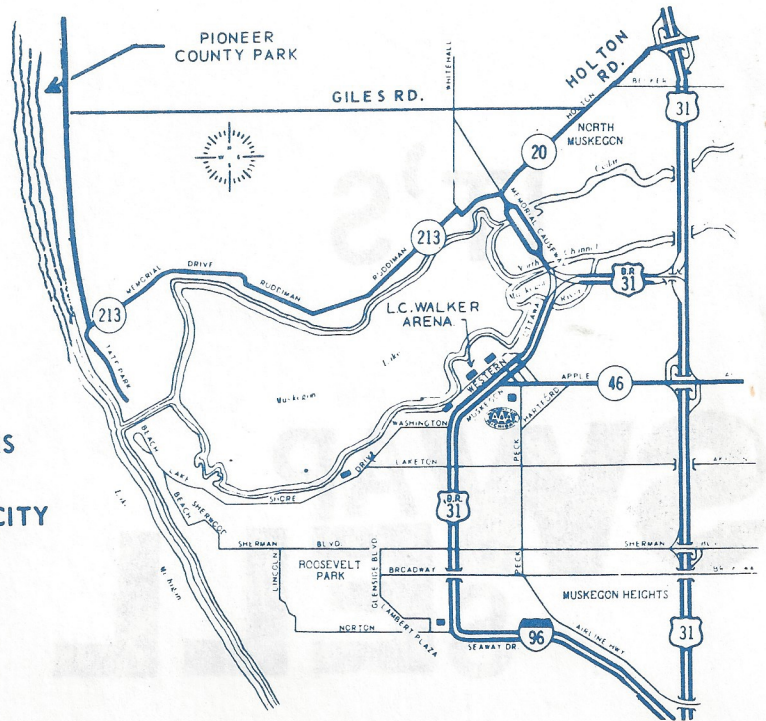
3rd Annual
ROCK SWAP
MAY 21 22 23 1971

Pioneer Park

Muskegon, Michigan

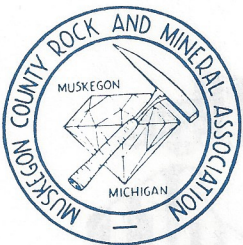


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 Phone 616-766-3148

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 Stanley Wood
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 Muskegon, Mich. 49441
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SHOW PROGRAMS YET TO COME

- April 3, Saturday "Geological History of the Grand Rapids Area"
A slide lecture by James Muller
Faceting demonstration by Karl DeBack
- April 4, Sunday "Hawaiian Volcanoes" by June Smith
Silversmithing Demonstration by Lucile Pearl
- April 8, Thursday Lapidary Demonstration by Marilyn Arnold
- April 11 & 12, Saturday and Sunday "Stones in Religion"
Slide lecture from the Midwest Federation
- Saturday demonstration - Lapidary by Russ Girard
- Sunday demonstration - lapidary by Gordon Williams
- April 17 & 18, Saturday & Sunday "Life Revealed in the Rocks"
Slide lecture from the Midwest Federation
- Saturday demonstration - lapidary by Donald Bowers