

June 1970

THE



J A S P I L I T E

Affiliated with the Midwest Federation  
of Mineralogical and Geological Societies

OFFICIAL PUBLICATION  
of the  
ISHPEMING ROCK AND MINERAL CLUB, INC.

Published quarterly

OFFICERS 1970

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First Vice Pres.	Vernon Miljour	Gwinn
Sec. Vice Pres.	Olive Sain	Marquette
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Publicity		

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Membership: The Ishpeming Rock and Mineral Club, Inc. is open to any one interested in the "Earth Sciences".

Initiation Fee	\$1.50
Husband and Wife	3.00
Adults	2.00
Juniors	1.00

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OUR PURPOSE

To enjoy, to learn, to teach and to conserve  
The rocks, the gems, the fossils and ores.

To collect, to admire, to brag and to show  
The material we've found we'll trade for yours.

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"Don't Forget  
your Safety Glasses!"



Ishpeming Rock and Mineral Club

FIELD TRIPS

Date -- Sat. JUNE 6 and Sun. JUNE 7, 1970.

Place -- Keweenaw Peninsula

Guide -- Elmer Jervi

Meet at - Ahmeek Michigan at 9:00 A.M. Saturday in front of the former Frank's Restaurant. Sunday at the turn-around at the end of U.S. 41 at 8:00 A.M. - About 1 mile past Fort Wilkins.

Date -- AUGUST 8 and 9, 1970.

Place -- Ontonagon-Mass-Rockland Area

Guides -- Bob Markert and Elmer Jervi.

Participation in the Third Upper Peninsula Gem and Mineral Show to be held in Escanaba will take the place of the July field trip. More detail included in other places in the Jaspilite.

Your editor urges that those that take part in the summer activities carry a paper and pencil and share your experiences with others in later issues of the Jaspilite.

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COMING ATTRACTIONS

- June 6-7 Double "I" Gem & Mineral Soc. Show. West Central Indiana 4-H Fair Grounds, 4 miles east of Covington & 3 miles west of Veedersburg, Indiana on U.S. 136 .
- June 10-21 American and Texas Federation Convention & Show. Tarrant County Convention Center, Fort Worth, Texas.
- June 27-28 Thunder Bay Gem and Mineral Show Provincial Room, Prince Arthur Motor Hotel, Thunder Bay, Ontario Canada.
- July 4-5 Rock River Valley Gem & Mineral Society Show - Viking Auditorium Wagon Wheel Lodge, Rockton, Illinois.
- July 11-12 Tri State Gem & Mineral Soc. of Dubuque Show, Riverside Bowl 1860 Harthorne St., Dubuque, Iowa.
- July 17-19 Upper Peninsula Gem & Mineral Show 4-H Exhibit Building, State Fair Grounds, Escanaba, Michigan
- July 18-19 Chicago Rocks & Minerals Society Show St. Demetrios Church, 2727 W. Winona, Chicago Illinois
- July 23-26 Midwest Federation of Mineralogical and Geological Society Convention and Gem Show - Minneapolis Auditorium, Minneapolis Minnesota.
- Sept 18-20 Second Annual Water Wonderland Rock Swap - Muskegon County Rock and Mineral Society - Pioneer Park, north of Muskegon Camping, silent auction, cracker barrel session, bulletin editors meeting, Rollin' Rock Club meeting. Muskegon, Mich.

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NEXT ISSUE

Your editor already has on hand a few articles that will be published in the next issue including -- More name tags, contributions by Evelyn Jarvi, Irene Lutes and others. The next issue is due by September 15 with the deadline for articles September 1. Hope to have several articles on summer rock trips and activities. Keep them coming!!!!

Dear Fellow Club Members:

By the time you read this our winter and spring regular monthly meetings will be over. Our attendance at these meetings has been good and very gratifying to your officers. It shows the interest that you have in the club and that the meetings have been of interest to you and your friends. For that we can thank our program director and our publicity chairman. The one by providing interesting programs and the other for keeping the public informed. Neither of them could have done this without the assistance of the other club members. It is only with cooperative effort that we can achieve our objectives.

Our programs, done for the most part by club members, have been extremely interesting and informative. It only goes to prove that various members have information that should be shared with others. Perhaps you too would like to present us with information on your special interest. Be thinking about this for next fall and be ready to offer your services to the program chairman. You don't have to be a professional speaker, just interested in what you are doing, and willing to share your experiences with others. Some impromptu, off-the-cuff presentations are all the more interesting because of this.

We have grown in membership this past winter. However, we have lost some members, lets try to attract them back into the fold. Remember, we are going to need many active members in 1972.

Now the long awaited collecting season is again in full swing. I'll wager that many of you have already been out on the beaches or your favorite mine dump looking and finding (we hope) specimens. We know its fun getting out and hunting by yourselves or with special friends but its also lots of fun going out on the club's special field trips. Its one way of really getting to know your fellow club members, and sharing your knowledge with them as well as learning from them. You also discover new collecting areas. All of our field trips are led by well informed individuals whom we may designate as experts. So, keep yourself informed of the special trips and call in for reservations so that the trip will be assured.

Yours for a successful rock-hounding  
season

Berry Sain, President

P.S. Don't forget the Upper Peninsula Gem and Mineral Show in Escanaba,  
July 17, 18, and 19.

## THE UPPER PENINSULA OF MICHIGAN---ROCKHOUNDS' PARADISE

by Charles R. Markert

The land of Hiawatha  
 The land of many lakes  
 The land of forest green  
 The land of rocks so great  
 Agates by the big blue waters  
 Thompsonite upon the shores  
 Greenstone in the many ridges  
 And minerals by the scores.

If rockhounding was known in the time of HIAWATHA' I am sure that MINNEHAHA wouldn't have had a chance. Hiawatha's courtship would have been shortened considerably had he used gifts of agates, thompsonites, greenstones, prehnite, datolite, jaspilite, gold or silver. Yes he could have done all this, as these green forested hills of the Upper Peninsula are known to contain a wealth of minerals and breathtaking gems by the hundreds.

Many remote regions of the Upper Peninsula are still pretty much unexplored by the mineral enthusiast. Somewhere in them thar hills lies untapped sources of gold, silver, and gemstones, with crystal lined vugs on the sides of cliffs newly faced by last years sculpture of frost and ice. This is how the lovely Goose Lake quartz crystals were found-- in the side of a quartz-veined face of a small hillside cliff.

This Paradise of which we speak is kind to all phases of our wonderful hobby, so we shall try to break it down to the three main divisions Lapidary, Specimen Collecting, and the Study of Paleontology.

FOR THE LAPIDARY: The U.P. offers a wide variety of gemstones, and probably the most popular is the pastel colored agates found on the beaches from Ontonogan to the tip of the Keewenaw Peninsula, where one might find thompsonites, datolites, chlorastrolites, prehnite and the varieties of the epidotes. Beautiful pastel agates may be found on the beaches of Grand Marais, Mich. and eastward to the Two Hearted river, north of Newberry. Cutting hematite, jasper, jaspilite, and goethite are best found in the Gogebic and Marquette Iron Ranges. The manganite of the Gogebic Range compare favorably to the hematite of Alaska and Elbe. Verdi antique marble found near Ishpeming polishes beautifully into fine cabinet specimens, while the newly found kona-dolomite offers a variety of scenic slabs. The Felch area comes into its own with beautiful dolomite marble with its sunbursts of green tremolite, and a very nice grade of cuttable feldspar is found therabouts.

AND NOW FOR THE SPECIMEN COLLECTOR the U.P. is equally gracious as a host. The old mines of the Copper Country still continue to yield excellent specimens of native copper in its many crystalized forms. Silver (elusive, but still found), the rare analcite xls are turned up quite frequently, crystal vugged chunks of epidote are picked up on most rock piles in the region. Lauminitite and natrolite are the less frequently found minerals of that region. Occasionally one may uncover a group of calcite xls, displaying flashes of copper from within.

cont.-----

## The Upper Peninsula of Michigan---Rockhound's Paradise

Dropping back to the Iron regions one can expect to find specimens of golden glint goethite, manganite (cuttable and crystalized), aragonite and inescite xls, and rhombs of calcite all in the IRONWOOD-HURLEY district on the western end of the U.P. The MARQUETTE RANGE will produce for you (with some hard work) excellent specimens of tourmaline, chloritoid, goethite, botryoidal hematite, limonite, and garnet psuedomorphs, sericite, talc xls, muscovite, beryl xls, specularite, illemite on rhodochrosite, magnetite and martite xls, siderite, jaspilite, micaceous hematite, grunerite and many others that will surprise and delight you. THE MENOMINEE RANGE with its western fringe, including the Iron River and Stambaugh mines offers the mineral collector beautiful hematite xls (comparable in beauty to those from Cumberland, England), stalatitic goethite, botryoidal hematites, pyrites and beautiful calcite xls. The beautiful selenite xls (no longer available come from this range. In addition to cuttable marble and feldspar, the RANDVILLE-FELCH area has yielded Beryl xls, and many crystals yet to be identified. This area will yield a surprise to field trippers.

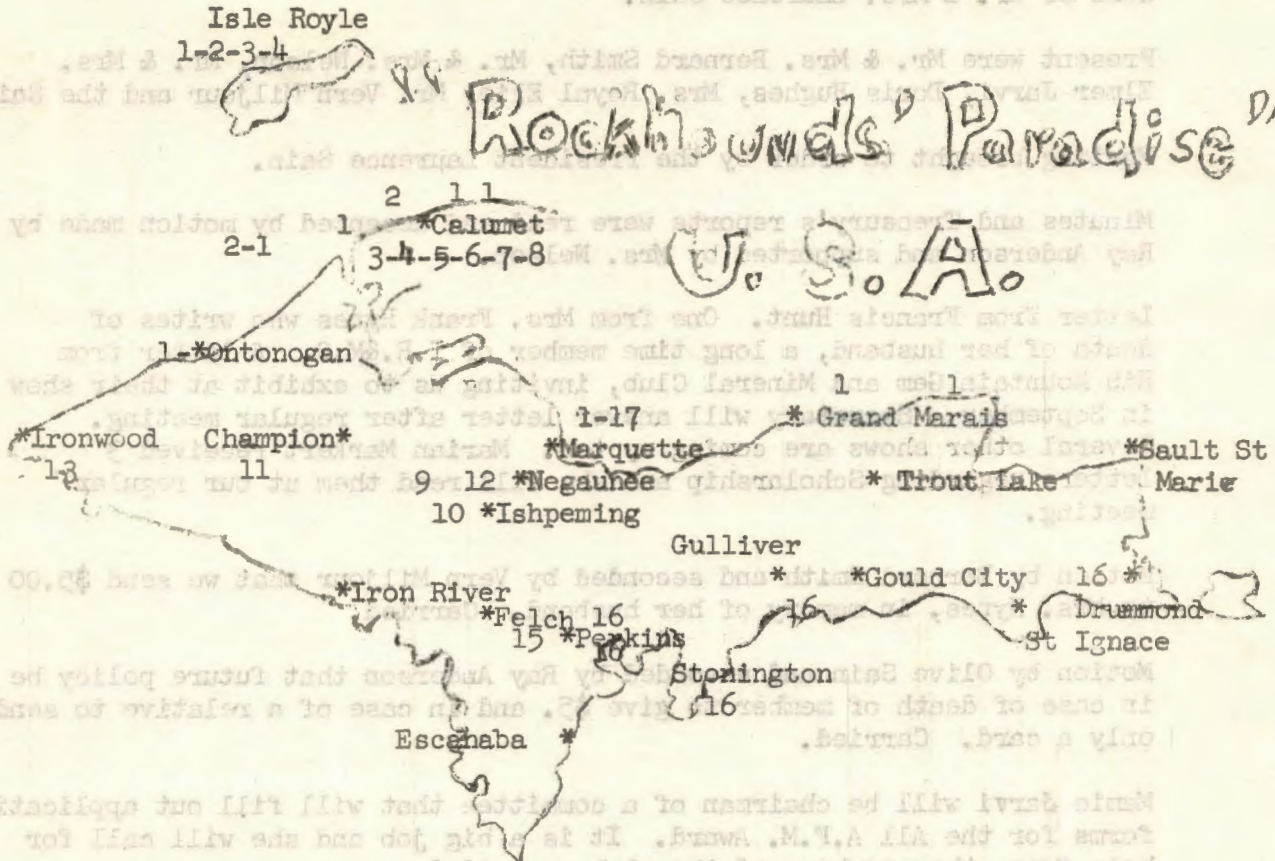
This leaves only the field of PALEONTOLOGY AND ARCHEOLOGY to cover and I wish there was someone better versed in this subject than I to tell you about such matters, however, I do know that the fossil area in the U.P. is confined mostly to the sandstones, limestones and dolomites of the Eastern half of the U.P., with the most prolific area being the beaches of Lake Michigan in the vicinity of Gould City--Gulliver, and Stonington. Small quarries and gravel pits eastward of Trout Lake produce the gastropods, brachiopods, cephalopods, chain coral and other corals. An iron mining exploration in the Perkins area has known to reveal evidence of small trilobites. Most interesting of all fossils from the area is found in the form of the pre-Cambrian coal (Laurentian Period) of the Iron River District, this is considered as the oldest known algae of the world. I cannot leave this subject until mentioning that the Drummond quarries are very well known as a fossil area.

ARCHEOLOGICALLY speaking, Upper Michigan's fame is vested in two areas, St. Ignace in the east and Isle Royale in the North. The latter being the best known and most publicized area. Who knows, maybe Hiawatha was one of those hardy souls that banged away at the Greenstone Ridge with one of those stone hammers that have turned up on Isle Royale!

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EXCHANGE NEWS via The Triangle Tumbler

The Days of the MWF field trip convention may be numbered. There are not enough areas left in the Midwest that can handle three or four thousand rockhounds at a time. Leo Yanasak reported that there is one more trip scheduled in 1972 to Ishpeming, Mich. and that may be the last one. There was a discussion about what will take the place of the field trip convention--another standard convention, or perhaps a large rock si'ap. How about that?????????

April 3, 1970 IRLM Board Meeting  
Home of Mr. & Mrs. Lawrence Sain



1. Agate
2. Thompsonite
3. Chlorastrolite
4. Prehnite
5. Datolite
6. Analcite
7. Copper
8. Silver
9. Gold
10. Botryoidal hematite & goethite, verdi antique marble, limonite psuedos, pyrite, magnatite & martite, Jaspilite, gypsum, magnatite, barite & others.
11. Tourmaline, sericite, chloritoid, garnets, illmenite, talc xls, pyrite, specularite.
12. Kona-dolomite, quartz xls, botryoidal hematite & goethite, manganite, barite, jaspilite & others.
13. Golden glint goethite, needle ore, botryoidal hematite & goethite, inescit, aragonite, manganite, calcite & others.
14. Hematite xls, botryoidal hematite & goethite, pre-cambrian coal, pyrite, and calcite.
15. Dolomitic marble (tremolite & actinolite), interesting pegmatite incl., beryl, and muscovite books.
16. Fossils
17. Jasper-epidote.

Next board meeting -- May 8 at Silver Lake  
Board meeting -- May 17 at Silver Lake



April 3, 1970 IR&MC Board Meeting.

Home of Mr. & Mrs. Laurence Sain.

Present were Mr. & Mrs. Bernard Smith, Mr. & Mrs. Nelson, Mr. & Mrs. Elmer Jarvi, Doris Hughes, Mrs. Royal Elie, Mr. Vern Miljour and the Sains.

Meeting brought to order by the President Laurence Sain.

Minutes and Treasury's reports were read and accepted by motion made by Ray Anderson and supported by Mrs. Nelson.

Letter from Francis Hunt. One from Mrs. Frank Hynes who writes of death of her husband, a long time member of I.R.&M.C. A letter from Rib Mountain Gem and Mineral Club, inviting us to exhibit at their show in September. Secretary will answer letter after regular meeting. Several other shows are coming up too. Marian Markert received 3 letters regarding Scholarship and she will read them at our regular meeting.

Motion by Bernard Smith and seconded by Vern Miljour that we send \$5.00 to Mrs. Hynes, in memory of her husband. Carried.

Motion by Olive Sain and seconded by Ray Anderson that future policy be in case of death of member to give \$5. and in case of a relative to send only a card. Carried.

Mamie Jarvi will be chairman of a committee that will fill out application forms for the All A.F.M. Award. It is a big job and she will call for help from other members of the club as needed.

On Education, Mamie Jarvi has received quite a lot of material for the Cliff Mine Exhibit.

Motion by Elmer Jarvi and seconded by Ray Anderson that we pay Bob Markert for transporting our display to the Green Bay Show. Carried. We'll try to get a picture of the exhibit for the paper.

On program Vern reports that Al Murray will have a display and talk on Silicate and there will be slides for the youngsters with Chris Miljour in charge.

Olive would like separate tales for stones with someone to identify stones brought in by members and others.

Door prizes for April will be given by the Vern Miljourns. Mrs. Nelson reports nothing new on the library. Elmer Jarvi also reports Nothing new on safety. Doris Hughes suggested we try safety poster contest for the young members.

Motion by Mr. Markert and seconded by Mrs. Markert to accept applications of the following: Father James Quayle, Donald & Mercedes Perking, Sally Winchester, and Carlton W. Gutman. Carried.

Next board meeting -- May 8 at Elmer Jarvi's

Regular meeting -- May 17 at Gwinn

Pat Elie, Sec.

Ishpeming Rock and Mineral Club Minutes.

Place--Mr. and Mrs. Elmer Jarvi-----Date-May 8, 1970

Call to order by President, Mr. Laurence Sain.  
The Minutes were read and accepted. Treasurers report given and approved.

Communications--President had several letters from other Clubs regarding coming shows. The Secretary will send names and addresses of all Club members to the Mineral Digest. A letter from the Mid West Comm. asking for the name of our Deligate will be taken up at the regular meeting.

Mamie Jarvi reported on material for the All American Federation Club award.

Program--Program for the May 17 meeting was reported by Veron Miljourn. Bernard Smith and Elmer Jarvi will help with Maps and Transparencies. The meeting will be in Gwinn. Bob Markert asked the group to his home in the future to see a display of Gem Stones belonging to George Simmens.

Door Prizes--Ray and Edith Anderson will supply the door prizes for the May meeting.

Safety Posters--Chris Miljour reports that the safety posters should be ready for display at the next meeting. Prizes for the posters will be given by Bob Markert, Elmer Jarvi and Vernon Miljour.

Escanaba Gem Show-- Sunday July 19, will be Ishpeming Rock and Mineral Day, we will meet and have lunch at 2 P.M. We will all wear Emblems of the Ishpeming Rock and Mineral Club.

Field Trips --May 24, Bob Markert will inspect the roads the day before, if they are bad we will go someplace near by. Meet at the Miracle Center parking lot at 7 A.M.

June trip will be on the 6th. or 7th. with Elmer Jarvi in charge. We will meet at Fort Wilkens at the end of the black top, Sunday at 8 A.M. Sat. at 9 A.M. in Ahmeek. We should bring first aid kits, compass and wear strong comfortable shoes.

There will be a trip in August to the Ontonagon Area. Bob Markert and Elmer Jarvi will be the guides.

Membership-- The President is pleased with the increase in membership also glad to see so many old faces returning.

Displays--The one in the Phillips school will be taken out for the summer. It was suggested that the one in the Mqt. Chanber of Commerce be changed.

Next board meeting-----The home of Mr. and Mrs. Laurence Sain.

Meeting adjourned.

Endetta Elie---Secretary

THIRD ANNUAL UPPER PENINSULA  
GEM AND MINERAL SHOW

4-H Exhibit Building (the yellow building), Upper Peninsula  
State Fair Grounds, North Lincoln Road, Escanaba, Michigan

Friday, July 17, 1970 -- 10 a.m. to 10 p.m.

Saturday, July 18, 1970 -- 10 a.m. to 10 p.m.

Sunday, July 19, 1970 -- 10 a.m. to 6 p.m.

Admission: Adults 35cents Children 15 cents

Host: Bay de Noc Gem and Mineral Club, Inc.

Exhibits:

Competitive & noncompetitive.  
Individual, society, & special.  
Six divisions: open, mineral's  
lapidary, jewelry,  
educational, & fossils.  
Free admission to exhibitors.  
Each exhibit will receive an  
Exhibit ribbon, and prize  
ribbons will be awarded.

Plan your exhibits now!

Special exhibits will include:  
Economic minerals of the U.P.  
Avenue of giant specimens  
Flourescent minerals

Working demonstrations:

Gem tumbling  
Gem cabochon cutting  
Gem faceting  
Mineral & rock identification

Show Committee:

Albert E. Murray, Show Chairman, 2115 Ludington Street, Escanaba, Mich.

49829. Telephone 1-(906) - 786-6959.

Thomas E. Hughson, President, 1643 16th Ave. South, Escanaba, Mich. 49829

Telephone 1-(906) - 786-4025.

Albert H. Murray, Vice-Pres.

The 1970 show will be similar to the 1968 and 1969 shows, held in Ishpeming and Calumet. Please announce this information at your club meeting and in your club bulletin, and tell your friends! More information will be released later.

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Yesterday is but a memory  
Tomorrow an uncharted course  
So live today so it will be  
A memory without remorse.

Dealers:

Six dealers:  
Rough gem materials  
Cut gems  
Mountings  
Jewelry  
Minerals  
Equipment & supplies

Other features:

Swapping  
Silent auction  
Slide programs & movies  
Door prizes  
Lunch  
Field trips  
And more!

May 5, Tuesday

Dear Jo,

Like WOW! I sure wish you'd have taken your vacation in May instead of March! Everything is just beautiful out and it is something else again to go wandering through the woods looking for ROCKS, but then again I'm getting ahead on my news, NEWS! that is it. As you know, Grandma & Grandpa Bemis like to take their daily hike of about a mile or so even if they are in their seventies, this one beautiful spring day, they were walking down the track by the Y, by the old Scott Lake depot, when they spotted a large rock that they had never noticed there before in all their walks that they had taken last year. It was a large rock, measuring about a yard square and a foot high, together they could not even move it, it was very strange looking in that it looked like a very large piece of cinder but had pieces of pure iron sticking out all over it, later they put a magnet on it and it stuck quite strong. It wasn't just sitting on the ground, but looked as if thrown out of a train, (if indeed it is a cinder) or if this happened during the winter, as Grandpa believes it did, then the ground was frozen and a METEORITE? (?) fell, but could not bury itself in the frozen ground! Grandpa hurried home to get his truck and a cable so he could haul it home, but the ROCK was too big to drag. Jerome, Pats youngest brother, happened to come home the next weekend and between the two of them, they tried to think of a way to get it home. Finally, they found a piece of corrugated sheet metal, but they still couldn't move it so they pounded about a hundred or so pounds off and then managed to get the sheet iron underneath, even so, they had to drive the truck in first gear all the way home, about three quarters of a mile.

It wasn't until the following weekend that Pat and I heard anything about it. Jerome, and Pats two sisters came to Gwinn for some trout fishing, for the weekend. Pat was so excited about the find (or maybe he was just curious) that as soon as they left to go back to Appleton, Pat and I jumped into the truck and raced for Scott Lake. It really is a very interesting ROCK, Grandpa said he didn't want it and that we could have it if we wanted it, well, I wish he had left it where he found it, and not hammered so much off, but anyway, Pat looked the situation over and figured out what he would need to get the ROCK into the truck. During the week he welded together a tripod of two inch pipe, with six inch steel plates for feet. He pounded together some boards for a platform, and cut some one inch pipe for rollers, he borrowed the neighbors come-a-long, and the next Saturday morning at eight o'clock found us on our way back down to Scott Lake. There was no trouble at all in getting the ROCK into the truck and getting it back home. The ROCK now sits in OUR yard and we are planning on hauling it to our next Rock Meeting which will be in the Gwinn High School.

I looked up Meteorite in the Encyclopedia and this is what it says: Meteorites may be divided roughly into three classes; those which are composed mostly of iron, those composed of stone, and intermediates. Iron meteorites are composed of metallic iron, not iron ore, approximately 90 per cent, the remaining tenth always consisting of some nickel and usually some cobalt and other metals and compounds.

cont.

letter cont. -----

We have some friends whose son goes to Mich. Tech. and he just happened to be home for the weekend so we gave him a piece to be analyzed by the geology dept. there.

Now to get back to the first part of my letter, Sunday was another perfect day to be in the woods, and as Pat is now more Rockhound than fisherman, we went hunting for crystals north east of Goose Lake, we followed an old logging road as far as we could and then started out on foot, down a hill, through a cedar swamp, which still had a few snowdrifts hanging on, up another hill, and then we hit quartz with a showing of crystals, so we hunted several outcroppings and got our two backpacks full of crystals in matrix. One is a bragging piece, it has some goethite ore, about the size of a quarter in between the crystals. We never did get to the main outcropping which we were really headed for. On the way back we picked up a pretty piece of kona dolomite, it was pink with red lines going through, we also found a long ridge about 10 ft. high that was all kona dolomite with beautiful weathering. We will have to go back there to take a color picture of it someday. We found one large piece, almost too big to pick up, that had a bright band of red in it, very different than the ones we had picked up a year ago.

Your Rockhound Sister, Teresa

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#### TREAT YOUR THERMOS WITH CARE

The National Safety Council urges you to treat your vacuum bottle with tender loving care.

Innocent as they may look, says the Council, vacuum bottles are potential bombs looking for a time and a place to explode and a moment of carelessness on your part could lead to a life-time of blindness.

One of the Council's monthly newsletters recently carried a story about a worker in Hamilton, Ont., who was spooning from a quart size vacuum bottle when the bottle exploded in his face.

It seems the metal spoon cracked the glass lining causing it to implode, then explode, sending glass fragments out the thermos opening into the worker's face.

One of the worker's eyes had to be "frozen" to remove numerous glass splinters. He also suffered cuts on his face.

The damage to his eye, fortunately, did not affect his vision.

The Council suggests the following safety guidelines for the home as well as on the job.

Never insert metal utensils or other objects inside vacuum thermos bottles.

Avoid sudden temperature extremes, such as pouring boiling hot coffee into a thermos containing ice cubes.

Handle with care as you would any other glass object.

Edith M. Anderson

## AN INTRODUCTION TO THE SILICATES

by Al Murray

Silicon is one of the elements. It is number 14 in the periodic table, and has an atomic weight of 28.09. It is the most abundant element next to Oxygen, and it is never found free in nature because of its affinity for O with which it forms  $SiO_2$  or quartz. Sand is mostly all quartz with a sprinkling of other durable materials such as garnet, magnetite etc.

Quartz is the oxide of silicon, some examples of which are Rock Crystal and milky quartz, and when trace minerals are added we get Amethyst (manganese color) - Carnelian red - Smoky (organic or irradiation) - Chrysoprase green - Citron yellow - Prase green - Tiger eye several colors - Chalcedony Agate - Asteriated - star caused by sub-micro needles - Rose (color Ti.) - Aventurine (spangled mica) Onyx - Flint - Opal - Cats eye.

## Oxygen salts or Silicates

A general statement by Bragg is that a silicate may be regarded as a structure having a given no. of O atoms in the unit, with a constant no. of places for metal and silicon, which can be filled by these elements in varying proportion, consistent with a balance between valences.

Valence is that electrical property which acts between ions to bind the atoms together. The bonding together of different atoms is a chemical reaction which releases energy to its surroundings in the form of heat. The dissociation energy of each material differs and the angle of the bonds vary as well as the length of the bond. The variety of chemical formulas, bond energies, and molecular geometries indicate that the theory of chemical bonding is very complex. The bonds are either Ionic or Covalent and the electrostatic forces acting between ions are governed by Coulomb's law.

$SiO_2$  combines with Al-Fe-Mg-Na-Ca-Be-Ba-Li-Mn-K-H-Ti and others in varying amounts and the extensive family of silicates are thus formed.

These combinations start by Al replacing part of the Si which is in turn replaced by all of the other metals. The silicate formulas can become quite complex, a few examples follow. Datolite -  $H Ca B Si O_5$  --

Hornblends  $Ca Mg (Al, Fe)_2 Si_3 O_{12}$ . Topaz  $(Al (F, OH)_2) Al Si O_4$  -- Beryl  $Be_3 Al_2 (SiO_3)_6$

The silicates are divided into two sections, Section A Anhydrous Silicates, Section B - Hydrated silicates.

The anhydrous group is divided into

1. Disilicates, salts of disilicic acid  $H_2 Si_2 O_5$  and have an Ratio of Si to bases of 4:1
2. Trisilicates Polysilicates, salts of polysilicic acid  $H_4 Si_3 O_8$  and have an Ratio of Si to bases of 3:1
3. Bisilicates Metasilicates, salts of metasilicic acid  $H_2 Si O_3$  Ratio etc. 2:1
4. Unisilicates Orthosilicates, salts of orthosilicic acid  $H_4 Si O_4$  Ratio etc. 1:1

cont.-----

Silicates--cont.

The majority of silicates are 2 or 3

5. Subsilicates Oratio of less than 1:1

E.G. 3:4 -- 2:3 etc.

Feldspar Group

Polysilicates to Orthosilicates:

A Monoclinic Section with K - Na

Orthoclase  $K Al Si_3 O_8$

Soda "  $(K, Na) Al Si_3 O_8$

B Triclinic Section

Microcline  $K Al Si_3 O_8$

Plagioclase Feldspars Na-Ca

	Albite Molecule	Anorthite molecule
Albite	100-90% $Na Al Si_3 O_8$	0 - 10%
Oligoclase	90-70 $Na Ca Al Si_3 O_8$	10 - 30
Andesine	70-50 $Na Ca Al Si_3 O_8$	30 - 50
Labradorite	50-30 " " " " "	50 - 70
Bytownite	30-10 " " " " "	70 - 90
Anorthite	10-0 $Ca Al Si_3 O_8$	90 - 100

You will notice that the feldspar group of minerals all end with  $AlSi_3O_8$ . They may properly be regarded as aluminosilicates and the metal or metals which precedes the  $AlSi_3O_8$  determines the mineral variety.

The feldspar group is characterized by its transition from potassium to sodium to calcium in variable amounts without exact formulas, but with percentages of metals determining the mineral species.

Crystallization is both monoclinic and triclinic and crystal cleavage angles vary slightly

There are 6 different structures in the silicate minerals, the simplest of which is the "nesosilicate" which is composed of  $SiO_4$  tetrahedra, an example is Staurolite. The tetrahedra are cemented together in layers by iron atoms and hydroxyl groups.

The  $SiO_4$  tetrahedra are composed of 4 O atoms and 1 Si atom arranged as follows: 3 O atoms forming a triangle have 1 silicon atom placed in the triangular opening between them and then 1 more O atom placed atop the Si so the Si fits nicely into the space.

The Sorosilicates are next and are composed of double pairs of tetrahedra an example of which is almandite garnet. This is iron aluminum garnet and is common garnet in part and precious garnet in part. The formula is  $3 FeO Al_2 3 Si O_2 =$  silica 36.2 alumina 20.5, iron protoxide 43.3 = 100 percent.

Cyclosilicates have a ring structure, an example is tourmaline, which is a complex silicate of boron and Al with Mg, Fe or the alkali metals prominent. A general formula may be written  $HgAl_3(B \cdot OH)_2 Si_4 O_{19}$  and the H may be replaced by the alkalis and also the bivalent metals Mg, Fe, Ca.

## Silicates--cont.

Flourine is present in small amounts.

The Inosilicates have a chain structure and an example is tremolite, which is a calcium-magnesium amphibole. The formula is given as  $\text{Ca}_2\text{Mg}_5(\text{OH})_2(\text{Si}_4\text{O}_{11})_2$ .

The Phyllosilicates have a sheet structure and muscovite is an example. They are composed of 2 sheets with the flat sides out and joined on the inner sides with Fe and Mg which produce a very strong bond. The double sheets are bonded together on the flat sides with K which gives a very weak bond.

Tectosilicates have a three dimensional framework. A familiar example is orthoclase.

All of the silicate structures begin with tetrahedra being joined together to form the ring chains or sheet structure and cemented together with different metals.

Talc with the formula  $\text{H}_2\text{Mg}_3(\text{SiO}_3)_4$  has a hardness of 1 to 1.5,  $G = 2.55$  to 2.76, light colored white to green. Sepiolite known as meerchaum, is  $\text{H}_4\text{Mg}_2\text{Si}_3\text{O}_{10}$ .  $G = 1+$ ,  $H = 2$  to 2.5. The above 2 minerals are the softest and lightest minerals known. Note the similarity in that they both start with hydrogen and magnesium.

Topaz,  $H = 8$ ,  $G = 3.4$  to 3.6 -- X-ray studies reveal that  $\text{SiO}_4$  groups are independent. Al atoms are linked to 4 O atoms and 2 (F·OH) groups, each O atom is linked to 1 silicon and 2 Al atoms. The fluorine hydroxide groups lie between 2 Al atoms. There are 4 molecules in each unit cell.

Beryl,  $H = 7.5$  to 8,  $G = 2.63$  to 2.80 -- The vitreous varieties include: emerald which owes its color to chromium and is a highly prized gemstone; aquamarine is blue to blue green; Golden beryl is bright yellow, honey, etc; heliodor colored by ferric oxide;morganite is rose colored. Common beryl is green but may be yellow green brown yellow colorless or redish.

Zircon, thorite, Gadolinite are very heavy minerals  $G = 4.4$  to 5.4.

Leucoutite has a long formula,  $\text{Ca}(\text{Al}_2\text{OH})_2(\text{Si}_2\text{O}_5)_2\cdot 2\text{H}_2\text{O}$ .

Tourmaline silicate is a good example of the interchanging of metals that is possible in one series.  $M' = \text{Al, Na, K, Mg, Fe, Li, Ca, (OH)}$ , with the formula  $M'_{20}\text{B}_2\text{Si}_4\text{O}_{21}$ . The  $M'$  part of the formula may be any mixture and the colors produced depending on the metals, would be schorl black, dravite brown, rubellite red, indicolite blue, schroite colorless.

Other silicates worthy of mention include: nephrite and jadeite which have great toughness: jaspers - Biggs Canyon Bruner Canyon and others which cut into outstanding scenic stones; Petrified wood, obsidian, datolite, prehnite, thompsonite, garnets, spodumenes, hiddenite and kunzite. The last two stones owe their color to Li, Al and Na. Pure crystalline silicon melts at 2588° and has a hardness of 8.



## Silicates--cont.

The silicates include the softest to very hard, the lightest to very heavy, and comes in all colors. There are many gem stones in the silicates and when the so called semiprecious stones are included they are a most desirable family. Up the silicates!

## Abbreviations used in this article--

O - oxygen	Si - silicon	Al - aluminum
Fe - iron	Ca - calcium	Na - sodium
K - potassium	Mg - magnesium	Be - berillium
Ba - barium	Li - lithium	Mn - manganese
H - hydrogen	F - fluorine	Ti - titanium
OH - hydroxide	G - Specific gravity	H - hardness

\*\*\*\*\*

## THE GRATIOT IN APRIL

Spring means many things to many people but to rockhounds it's getting out on the rock piles or the beaches to see what the winter has uncovered. So to the Sains and the Andersons it meant just that and when Laurence decided he could leave his many commitments on April 22 to go to the Copper Country we were ready. It was a beautiful warm day and the trip very enjoyable. As we stopped at our favorite place for morning coffee Olive spotted a pine tree with large cones so our trip had a good start with a big bag of unusual cones for a later holiday project. We headed for the Gratiot River and found most of the road in good condition. Of course in some places snow was a little deep and we had to make new tracks. We expected the road to be rough as we neared the river but with warm hubs working the Jeep moved right along. The snow was deeper at the entrance to the beach but that didn't stop us. We found the water calm and the icebergs melted and the picking very good. Thomsonites showed up real well so we gathered quite a few along with some beautiful agates. We worked until six o'clock and then started for home, feeling glad to think this was the beginning of the rock season and that we had many days to look forward to for the rest of the summer.

Edith M. Anderson

\*\*\*\*\*

## HAPPINESS IS

Licking a dirty rock and finding bends.  
 Having the rain stop when you get to the mine site.  
 Finding a gravel road paved with Betafites.  
 A husband and wife both "Rockhounds".  
 Meeting someone else who is interested in rocks.  
 Your first field trip after a long winter.

from News Nuggets via Rock Trails, Agateer.

## EYE AM YOUR BEST FRIEND

Have you ever thought, as you pounded and hammered on a big, hard specimen, just how you would get it back into your car, drive home, work it up into whatever form you may desire.....If you couldn't see?

Most of us know the hardness of the stone we're chipping. We also know whether it has hackly, conchoidal or splintery fracture....but are we respecting these scientific principles and realizing that each of these words also spell.....Danger?

Many rockhounds have had a branch or bush smack them in the face while walking through a brush patch on a rock hunt. Branches and leaves can cause serious eye injury.

Silicon carbide particles, flying off grinding wheels, a sanding belt suddenly breaking at 1,750 RPM, a V-belt splitting, a cab flying off a dopstick, a sliver of obsidian flaking off when overheated, oxalic acid on a polishing buff, or cleaning specimens in acid.....there are lots of ways we can gamble with our eyesight in this hobby. And you are gambling if your eyes are not protected. If you wear prescription glasses, ask your optometrist or ophthalmologist for his recommendation on protective eyewear....Tell him you pound on rocks.. grind rocks on rapidly turning wheels....perhaps all you need to tell him is you are a rockhound.

For those who do not wear glasses regularly, there are many protective goggles available that will give much-needed shielding from these hazards.

--Dr. Maurice Pascoe, --via Rockhound News--The Crystal Gazette

\*\*\*\*\*

RULES ON ROCK COLLECTING -by Jin Ehlers  
via The Pebble Pusher

Never enter private property without permission of the owner.  
Afford the owner the consideration you expect of guests in your home.  
If you're really going out for blood, always wear the proper protective clothing such as a hard hat, heavy shoes, gloves, and goggles. Carry along a first aid kit.

If you happen to be in snake country, never turn over a rock with hands; always use a pole or a long stick.

Never hold a rock in the palm of the hand when hitting it with a hammer.

Hit the rock while holding it between the thumb and forefinger.

Goggles or safety glasses should be worn when breaking rocks.

Never walk or work above anyone directly below. Throwing a rock when you are not sure where it will land is taboo too.

When loosening or stepping on a rock, make sure that it is not a keystone.

A dandy slide can result, when you are on top of or under it.

Lift with your legs, not your back, and don't bite off more than you can chew.

Never take off on your own: Use the buddy system.

## OUR NORTH SHORE LAKE SUPERIOR TRIP

by Arne and Helen Nelson

We started our vacation with a trip around Lake Superior. As we will be leaving the U.P. on retirement in another year; no telling when we might be able to take such a trip.

Starting out from Ishpeming on a Thursday evening with our camper and loaded station wagon (a few local rocks and minerals for trading) and extra canned goods, blankets and a three gallon jug of water. We camped the first night just east of Superior, Wisconsin. A drizzle of rain had set in so we took the first camp site along the way. There were six electric hook-ups to one pole, outside well, no toilet facilities except the restaurant (people who owned the property). Well, it was real "outdoorsey" to be sure. At least I didn't have to fix supper and breakfast as we thought it best to eat at the restaurant.

In the morning, by eight-thirty we were on our way. The sun was out bright and warm. We were happy we hadn't gone on farther that night, as the drive across the beautiful one and one half bridge from Superior into Duluth was breathtaking and Duluth is a very scenic city, situated on the side of an 800 ft hill. We stayed on the low road but if one had the time the skyline drive surely must be beautiful.

About twenty miles east we stopped at the village of Knife River, gassed up and had a cup of coffee, also went down to the beach for an hour and hunted for agates. No luck! This is really a big fishing area; lake trout, whitefish and herring. Charter boats are ready to take you out into the lake for the big fishing. It is called the smoked fish "Capital" of the north shore. We took some pictures and then on to Two Harbours; stopped again at Silver Creek Cliff. This is a very scenic and inspiring view of the very blue waters of Lake Superior and the high rocky shoreline. Next stop was at Gooseberry State Park and Falls. We walked below the bridge, taking movies of the five different falls of 900 ft drop. There were people swimming in the natural pool formed by the falls.

Our next stop was Grand Marais area. At Thompsonite Beach we found a few agates, a handful of thompsonites and some choice pieces of driftwood. Grand Marais was having some kind of a festival. It seemed all the campers of the area were there, plus the townspeople. We visited a couple of rock shops, buying 3 pounds of agates, not knowing if we were to find any by "hunting". Also sold some of our local materials. It was a very hot humid day, with lots of activity going on. "Ginger" was beginning to get restless, so we moved on.

Driving into Fort Williams-Port Arthur, we passed over Pigeon River; U.S. and Canadian Customs - a good thing we had "Gingers" vaccination papers as the Canadian Customs are very particular on this. Took movies at High Falls, a little off the main road, but well worth seeing, also Mt. McKay near the twin cities. We were happy to get out of the early evening traffic and finding a nice camp site near Nipigon. The next

## North Shore Lake Superior Trip--cont.

morning we travelled north of Nipigon and found some nice agates in a gravel pit. At noon we lunched and gassed up again and on to Wawa. Found a rock shop and bought some nice specimens of amethyst crystals. Couldn't get entry into the mines as it was Sunday. Saw many "hippie" hitch-hikers, both boys and girls all along the way, but we didn't pick up any. The police were urging them to keep going at Wawa.

On the road again, we crossed the International bridge at the Canadian Soo. Into Michigan and on down Rte. 75 to below "Big Mac" where we stayed at a motel. By this time we both felt "grubby" and in need of a warm bath and a good clean nights rest.

We arrived at our summer place, (retirement home) west of Clare, Michigan about two o'clock. Our children were already vacationing at their cottage so we spent a couple of hours telling of our trip and showing off our "loot". We spent the rest of our vacation, resting and rock hunting in the upper part of the lower peninsula.

\*\*\*\*\*

## "SAFETY POSTER DISPLAY"

Eleven junior "pebble-pups" illustrated the safety factors involved in rock hunting. Despite the serious messages sketched, "rock-hounds" responded with appreciation and a good laugh on viewing original posters. Each participant received a bag or "rocks" contributed by the following: Markerts-Fairy Cross Staurolite, Selenite Rose Arizona Oklahoma Rose Barite, Kansas Rose Barite. Sains - Polished Thomsonite. Miljours - Feldspar, tremolite, pyrite, gneiss, prairie agate Idaho agate. Pebble-pup participants were Michael, Robert, Thomas, Mark and Paul Baker Michael Bianchi, Michael Hughes Sheryl Johnson, Michael Lindquist, David Miljour, Michael Quale, Other interested ones present were Ken Smith, Karl Malin, Valerie Wilson, Joanne Hytinen, Ronnie Westman.

-Chris Miljour

## THOUGHTS AT CLUB (?????)

I see you at the meetings, but you never say "Hello."  
You are too busy all the time with folks you really know.

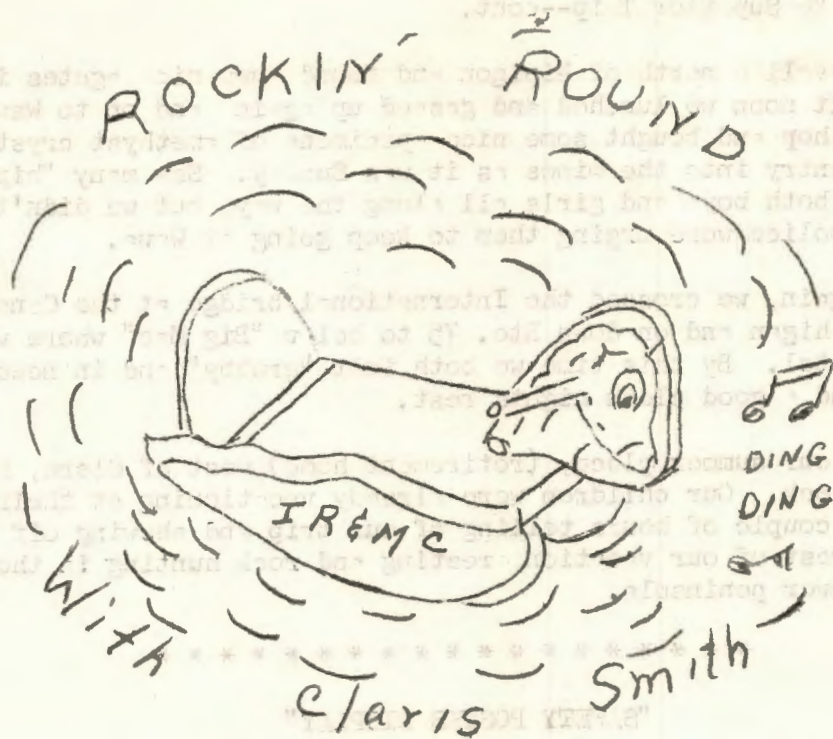
Gosh, it was you who asked me. You talk of fellowship.  
You could have stepped across the room; you never made the trip.

Why can't you nod and say, "Hello"? Or stop and shake a hand?  
Then go and join your other friends. You know I'll understand.

I sit among the members. Still I'm a lonely guy.  
The new ones sit there with me, and you just pass me by.

I'll be at the next meeting. On that you can depend.  
So, won't you introduce yourself? I want to be your friend.

-Minnie Chapman via - Crystal Cluster



Now that the snow has melted, and even though it's still very cold and feels like winter, spring must be here. If you look hard you might find a few flowers. Rock hunting and vacation time is finally here. Please remember to take along pencil and paper to write notes and articles for the Jaspilite. My family and I are heading for the warm and sunny west the second week in June and we wish you all a fine summer.

\*\*\*\*\*

Don't forget the Third U.P. Gem Show in Escanaba, July 17, 18 and 19. Plan to join all the other members of our club there for the Ishpeming Rock and Mineral Club Day, Sunday, July 19. Bring your picnic lunch and join the others at 2 P.M. We hope that the Club emblem will be available to wear and be sure and have your Name Trgs.

\*\*\*\*\*

We have had some very interesting club programs the past few months, thanks to our Program Chairman Vern Miljour. In March Tom Royal discussion of copper and related minerals and in April Al Murray, Sr. gave a lecture on the silicates. (His material is reproduced starting on page 10). The May program was an interesting discussion of where and what to find in Marquette County by Elmer Jarvi and Bernie Smith.

\*\*\*\*\*

Mamie Jarvi and Doris Hughes have been very busy supplying the Phelps School in Ishpeming with Gem and Mineral displays all winter - an important job well done!

Rockin' 'Round -- cont.

Chris Miljour has been very successful with her program with the younger members and their safety posters which were displayed at the May meeting. Safety is an important part of the hobby.

\*\*\*\*\*

Did you know that Markert's Rock Shop was featured on WWJ-TV Detroit on the program "All Over Michigan", Thursday May 21?

\*\*\*\*\*

Mamie Jarvi deserves a big hand for completing the application blanks for the American Federation Award. You have been busy this Winter, Mamie.

\*\*\*\*\*

We hear that the May 24th Field Trip was successful at least in terms of enjoyment even though the weather did not cooperate. We regret that we were not able to join the hardy souls that ventured into the wilderness.

\*\*\*\*\*

The I.R. & M.C. has reached the 200 percent level toward in the Scholarship Fund and now have \$20 toward the 300 percent certificate, reports Marian Markert. Don't forget to save those Betty Crocker Coupons and the postage stamps for the food fund! Anyone interested in learning more about these programs and what stamps to save be sure to read the May Midwest Federation Newsletter and the March 1969 Jaspilite.

\*\*\*\*\*

The club extends its deepest sympathy to Mrs Frank Hines on the passing of her husband, March 23. He was a member of our club for many years and will be missed by all who knew him.

\*\*\*\*\*

We wish to welcome the following new members to our Club---

- |                                   |  |
|-----------------------------------|--|
| Mr & Mrs William Baker and family | Little Lake  |
| Mr James Quayle and Son           | Ishpeming  |
| Miss Sally Winchester             | Ishpeming  |
| Mr & Mrs Donald Perkins           | Marquette  |
| Carlton W. Gutman                 | Marquette  |
| James & Peggy Fries               | Marquette  |
| John Argeropoulos                 | Marquette  |
| Ernest & Sheryl Johnson           | Marquette  |
| Lillie Mairaude                   |  |
| Mr & Mrs Ken Hodgins              | Marquette  |
| Martha Stott                      | Negaunee   |
| Lowell and Dawn Small             | Ishpeming  |
| Ray Boerup                        | signed a membership application at the last meeting. |

Rockin' 'Round -- cont.

Fred W. Weber and his wife, members of the Shell Gem Rock and Mineral Club, Edwardsville, Illinois were visitors at our May meeting in Gwinn. Carl Lemin, better known as Jim, a charter member of the I.R.&M.C. and now of Arizona, was present for our April meeting. He brought a gift of rocks for each of us. Though he now belongs to a club in Arizona he still feels a part of our club.

\* \* \* \* \*

Sherry Lynn Short, a senior at Marquette High School, is the recipient of an Albion College scholarship. Sherry was one of five from Marquette Senior High School's "5-High" team on the Green Bay WFRV-TV Quiz program- defeating both Green Bay and Gwinn.

\* \* \* \* \*

It was enjoyable talking to Mildred and Audubon Jenkins at the may meeting. Sorry we didn't hear of Mildred's accident and broken arm sooner, but we are all glad that she is getting along so nicely. Audubon was one of the five Senior Citizens honored at a testimonial dinner given by the Ishpeming Diplomats.

\* \* \* \* \*

Fern White is home now, recuperating from eye surgery. She sends her thanks and appreciation to everyone who sent cards and best wishes.

\* \* \* \* \*

George Bamford was honored at a retirement party by the firemen in Ishpeming and awarded a certificate of appreciation from Mayor Skewis in recognition of 33 years of service to the community. He is a charter member of the I.R.&M.C. and served as the first treasurer in 1953. He has also served on several committees including the 1960 convention.

\* \* \* \* \*

Helen Nelson was recently named L.P.N., Nurse of the Year. Mrs Nelson has worked at St. Mary's Hospital in Marquette, and currently she is doing private duty work at local hospitals.

\* \* \* \* \*

Pat Bemis was re-elected president of the Forsyth Snowmobile Club.

\* \* \* \* \*

The Club wishes to thank Bob Markert for entering a club display at the Michigan Crafts exhibit, sponsored by the Ishpeming-Negaunee Community Schools and the Ishpeming Chamber of Commerce. Bob was also the Chairman of Michigan Week.

Rockin' 'Round -- cont.

If the Smith's (Bernie and Claris) time table permits they will be delegates to the Midwest Federation Convention and Show at Minneapolis in July. Al Murray was appointed alternate delegate.

\*\*\*\*\*

The Laurence Sains, Ray Andersons and Pat Bemis joined Al Murray and the Escanaba Club at a field trip to Feldspar Hill, Groveland Mine and two other locations. No reports of what they found.

\*\*\*\*\*

Your editor wishes to extend her thanks to the reporters, Chris Miljour, Edith Anderson and Bob Markert and to the others who contributed to this issue of the Jaspilite, Al Murray, Arne and Helen Nelson, Mamie Jarvi and Teresa Bemis. Keep up the good work.

\*\*\*\*\*

Remember the next Board Meeting will be June 12 at Laurence Sains residence 818 W. Kaye Ave., Marquette, Mich.

\*\*\*\*\*

JUST A REMINDER

It's two more months until the "Show"--  
That's plenty of time left yet to go.  
No need to worry about my display.  
Setting it up will be child's play.  
I just will need to build a case  
And get some labels put in place--  
Perhaps a new specimen or two  
Will help to enhance the view.  
There's lots of time to stew and fret  
About the things I've not done yet.  
I'll leave the Chairmen pull their hair  
While I go about with not a care.  
You say the time is drawing near?  
How can that be, for I am here--  
With pretty rocks still in a box.  
Time has passed quick as a fox.  
Wish now I'd got an early start--  
So I could say I'd done my part.  
That's the result when one inhibits--  
Plan to start NOW on your exhibits!!!

Ellen Berger --Elrock News



## ISHPEMING ROCK AND MINERAL CLUB, Inc.

## MEMBERSHIP LIST - 1970

<u>NAME</u>	<u>ADDRESS</u>	<u>TELEPHONE</u>
Airaudi, Lillie M. (Mrs)	420 E. Ann, Negaunee, Mich.	49866 475-9619
Alholm, Harold	1208 Second St., Marquette, Mich.	49855 226-8716
Alholm, Margaret (Mrs)	" " "	" "
Anderson, Gaylord A.	524 Spruce St., Marquette, Mich.	49855 225-0731
Anderson, Betty (Mrs)	" " "	" "
Anderson, Robert R.	P.O. Box 522, Rte 2, Marquette, Mich.	49855 226-2327
Anderson, Edith R. (Mrs)	" " "	" "
Argeropoulos, John	347 E. Crescent St., Marquette, Mich.	49855 225-0504
Armstrong, W.F.	Apt 808 Pine Ridge Apts, Marquette,	49855
Baker, William	Box 11, Little Lake, Michigan	346-4028
Baker, Nancy (Mrs)	" " "	" "
Baker, Michael	" " "	" "
Baker, Thomas	" " "	" "
Baker, Robert	" " "	" "
Baker, Mark	" " "	" "
Baker, Paul	" " "	" "
Barabe, Douglas	Rte 1, Box 381, Negaunee, Mich.	49866 475-6535
Barrett, Linda	Box 257, Gwinn, Mich.	49841 346-3694
Bemis, Charles	P.O. Box 356, Gwinn, Mich.	49841 346-3361
Bemis, Teresa (Mrs)	" " "	" "
Bianchi, Michael	401 Birch St., Gwinn, Mich.	49841 346-5562
Bogetto, Frank	Box 18, Gwinn, Mich.	49841
Bogetto, Norma J. (Mrs)	" " "	" "
Boyum, Burton	P.O. Box 123, Timagami, Ontario, Canada	
Brunngraeber, Glen	411 E. Magnetic Ave., Marquette, Mich.	49855 225-1461
Brunngraeber, Marlene (Mrs)	" " "	" "
Carlyon, Domenica (Mrs)	110 Peck St., Negaunee, Mich.	49866 475-9262
DeHut, Harry, Sr.	RFD 184, Ontonagon, Mich.	49953
DeHut, Frances (Mrs)	" " "	" "
Edwards, James T.	304 Somonank, Park Forest, Illinois	60466
Elie, Royal	408 Birch St., Gwinn, Mich.	49841 346-9742
Elie, Pat (Mrs)	" " "	" "
Elie, Ann	" " "	" "
Fredlund, L.V.	Rte 2, Box 80 Iron River, Mich.	49935
Fries, James P.	207 E. Michigan St., Marquette, Mich.	49855 226-8644
Fries, Peggy	" " "	" "
Gregg, Glenn	1536 Wood St., Lansing, Mich.	48912
Gregg, Elsie (Mrs)	" " "	" "
Gutman, Carlton W.	1012 North Third St., Marquette, Mich.	49855 225-0684
Heikkila, Wilmer W.	808 S. Lake St., Marquette, Mich.	49855 226-9562
Hermila, Bill	P.O. Box 332, Gwinn, Mich.	49841 346-9759
Hodgins, Ken	1402 Kimber Ave., Marquette, Mich.	49855 226-9059
Hodgins, Frances (Mrs)	" " "	" "
Hudson, James J.	1217 Cleveland Ave., Marquette, Mich.	49855 226-3155
Hudson, Adeline B. (Mrs)	" " "	" "
Hughes, Doris (Mrs)	765 White St., Ishpeming, Mich.	49849 486-4355
Hughes, Mike	" " "	" "
Hughes, Jerry	R.R. 2, Harbor Springs, Mich.	

## Membership - 1970

Ivio, Kenneth	110 E. Arch St. Marquette, Mich.	49855	226-2193
Jacobson, John O.	Rte 1, Box 36, Negaunee Mich.	49866	475-9879
Jacobson, Hilda (Mrs)	" " "	"	"
Jarvi, Elmer J.	116 E. Division St., Ishpeming, Mich.	49849	486-4692
Jarvi, Mamie E. (Mrs)	" " "	"	"
Jarvi, Evelyn (Miss)	714 O'Brien Apt. 4 Monroe Mich.	48161	
Jenkins, Audubon H.	Rte 1, Box 7 Ishpeming, Mich.	49849	486-4565
Jenkins, Mildred A. (Mrs)	" " "	"	"
Johnson, Ernest C., Jr.	1962 West Fair Ave. Marquette, Mich.	49855	228-9422
Johnson, Sheryl	" " "	"	"
Jokinen, Russell	424 Maritland St., Negaunee, Mich.	49866	475-6417
Kivela, Jarl	Rte 1, Box 275-A Negaunee, Mich.	49866	475-9288
Kivela, Ruth (Mrs)	" " "	"	"
Larmour, Wilfred	RR. Box 591, Ishpeming Mich.	49849	486-5683
Larmour, Jeanette (Mrs)	" " "	"	"
Lemin, Carl	624 E. Division St., Ishpeming, Mich.	49849	486-6563
Lindquist, Mike	314 Pine St., Gwinn Mich.	49841	346-9898
Long, Stanley	355 E. Hewitt Ave. Marquette, Mich.	49855	226-2435
Long, Virginia (Mrs)	" " "	"	"
Long, David	" " "	"	"
Lutes, Irene G. (Mrs)	113 Bancroft St., Ishpeming, Mich.	49849	485-5642
Markert, C. Robert	Rte 1, Box 620, Ishpeming Mich.	49849	486-9055
Markert, Marian (Mrs)	" " "	"	"
Matthews, Frank G., Sr.	US 41 Highway, Box 29A, Negaunee, Mich.	49866	475-4865
Matthews, Katherine (Mrs)	" " "	"	"
Maynard, Rufus	216 Silver Creek Rd., Marquette, Mich.	49855	249-1867
Maynard, Laura (Mrs)	" " "	"	"
Miljour, Vernon	Box 237, Gwinn, Michigan	49841	346-5320
Miljour, Christine (Mrs)	" " "	"	"
Miljour, David	" " "	"	"
Miljour, William	Rte 1, Box 395, Negaunee, Mich.	49866	
Mortenson, Floyd N.	(69 West End Ave., Pontiac, Mich.	48053	(Summer)
	(11436 78th Ave., Seminole, Florida	33540	(Winter)
Mortenson, Helen L. (Mrs)	" " "	"	"
Mullaly, Albert V.	30119 Dawson St., Garden City, Mich.	48135	425-4769
Murray, Albert E.	2115 Ludington St., Escanaba, Mich.	49829	786-6959
Murray, Albert, Jr.	" " "	"	"
Nelson, Arne O.	316 W. Vine St., Ishpeming, Mich.	49849	486-6767
Nelson, Helen (Mrs)	" " "	"	"
Newmar, Clemens	739 Duncan St., Ishpeming, Mich.	49849	486-8209
Osterberg, Helmi (Mrs)	224 E. Ridge St., Marquette, Mich.	49855	226-8886
Perkins, Donald	1367 M-28 East, Marquette, Mich.	49855	249-3157
Perkins, Mercedes (Mrs)	" " "	"	"
Perron, Wesley E.	326 Albert St., Marquette, Mich.	49855	226-8074
Perron, Mary S. (Mrs)	" " "	"	"
Quayle, James	527 Vine St. Ishpeming, Mich.	49849	486-8282
Quayle, Michael	" " "	"	"
Reidy, Luella M. (Mrs)	129 W. Superior St., Ishpeming, Mich.	49849	485-5996
Richards, Robert K.	205 E. Case St., Negaunee, Mich.	49866	475-6216
Rogers, Elizabeth	401 Vine St., Ishpeming Mich.	49849	
Ross, Mary Spear	385 Lakewood Lane, Marquette, Mich.	49855	249-1836

Membership - 1970

Sain, Laurence W.	818 W. Keye Ave., Marquette, Mich.	49855	226-7325
Sain, Olive K. (Mrs)	" " " "	"	"
Schenk, Robert	Agate Shop, Rte 1, Republic, Mich.	49879	376-2373
Short, June (Mrs)	700 Greenfield Rd., Marquette, Mich.	49855	249-1701
Short, Sherry (Miss)	" " " "	"	"
Small, Lowell	100 Marble St., Ishpeming, Mich.	49849	486-6588
Small, Dawne (Mrs)	" " " "	"	"
Smith, Bernard R.	1513 Lynn St., Marquette, Mich.	49855	226-6390
Smith, Claris W. (Mrs)	" " " "	"	"
Smith, Kenneth R.	" " " "	"	"
Spiroff, Kiril L.	Isle Royale Loc., Houghton, Mich.	49931	
Stott, Martha M.	104 Queen St., Negaunee, Mich.	49866	475-9664
Strand, Oscar	205 Copper St., Ishpeming, Mich.	49849	486-8666
Tapola, Charles	Box 162, Princeton, Mich.	49875	
Tapola, Selma (Mrs)	" " " "	"	"
Wainio, John V.	500 W. Ridge St., Marquette, Mich.	49855	226-6638
White, L.E.	624 Willow Rd., Marquette, Mich.	49855	249-1449
White, Fern (Mrs)	" " " "	"	"
Winchester, Sally	116 Oak St., Ishpeming, Mich.	49849	486-4802

\*\*\*\*\*

(received late)

Hunt, Lucian F.	368 W. Park St., Marquette, Mich	49855	226 3603
Hunt, Mrs. Myrtle M.	" " " "	"	" "

\*\*\*\*\*

THE JOHNNY HORIZON OUTDOOR PLEDGE

As a visitor to the public lands I pledge to:

- Keep the land clean and free of litter
- Respect and treat the land as my own
- Leave gates and fences as I find them.
- Obey state game and fish laws.
- Be careful of fire.

\*\*\*\*\*

TICKS---Have you ever tried coping with our great western pest, the tick? We have tried every published remedy, finally deciding that the best thing to do was to try dusting, or powdered sulphur around our neckline, waistline, wrists, and ankles. Now we use Sulphur and Cream of Tartar Lozenges, Put out by McKesson Co., take three a day--even the dog--.

Price 60 cents per 100 lozenges. The new ones are orange-flavored. Three a day were found to be sufficient, altho the directions suggest more. One must use care for too many may cause the trots.

--by Fran Thompson via Rock Licker via The Crystal Gazette

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CAMPING HINT: Matches dipped in warm parafin will never get too damp to strike. A few in the first aid kit may come in handy sometime.

via Crystal Cluster

# Midwest Federation's NEWSLETTER

Published monthly except July & August as a Service to Member Clubs  
Editor: Haydon Peterson, Route 5 - Box 229, Des Moines, Ia. 50317



Issue No. 105 - May 1970

## MARY C. ANDERSON

It is with the deepest regret that we must report the passing of our MWF Program Chairman, Mary C. Anderson. The Midwest Federation has lost one of its most talented and devoted workers, and her associates in two Indiana clubs and in the Federation have lost a cherished friend.

Mary, who had been chairman of the busy Program committee of the Federation... the committee which provides clubs with film programs and keeps the Federation library of films new and fresh... died in the hospital in Kokomo, Indiana on March 14 and was buried on the following Tuesday in Kokomo. A tireless apostle of the joys of the earth science hobbies, she had held every office in the Kokomo and Peru clubs, of which she was a member and had given greatly of her time and strength to programs before school classes. She was also deeply involved in raising money for the City of Hope, an international hospital agency, and had turned over her duties in this organization to a friend a short time before her death.

In her two years as program chairman for the Federation, Mary built up its services, worked out a budget and increased its supply of program materials. She found time to form an excellent fossil collection and a mineral collection which she used in her school lectures. She also ran an antique shop near her home.

Mary is survived by her husband, Bill, and a son Pat.

Her program work will be taken over by the assistant chairman and close associate, Mrs. Jane Auler.

## EXECUTIVE COMMITTEE SPRING MEETING

The Executive Committee of your Federation held its spring meeting in Iowa City, Iowa at the Carousel Inn on Saturday, April 11.

The meeting was called to order by Federation President Russell MacFall. Reports were heard from the various committees. A noon luncheon was served at the Carousel Inn and attended by many of the committee members.

A complete report of the meeting will be sent to all member clubs by the secretary.

## ATTENTION CLUB PROGRAM CHAIRMAN

Effective immediately all requests for bookings of MWF Library Programs and any questions regarding them should be sent to....

MRS. JANE AULER  
323 South Dixon Road  
Kokomo, Indiana 46901

Be sure you give Mrs. Auler a choice of dates when you could use the program you are requesting together with the name and address of the person to whom the program is to be shipped. Please include your zip code and follow the instructions she gives you regarding the return of the program.

\* \* \* \* \*

Mrs. Evelyn Hirsch, Route 1, Mitchell, Indiana 47446 has been named a new assistant to Mrs. Auler.

## FROM OUR EDUCATION CHAIRMAN

The Midwest Federation Education committee has received many letters from clubs asking for courses or outlines of study in such subjects as mineralogy, geology, paleontology, archeology, crystallography for the lapidary, and in public service opportunities. The Education committee has no courses of study prepared, but it knows that many clubs have developed such courses under the guidance of club members. It is the hope of the Education committee that these clubs will be willing to share their experience and their study outlines with other Midwest Federation clubs. This material would be turned over to the appropriate committee, such as the geology or paleontology committee of the Federation which, in turn, would develop a broad and detailed outline for use by all clubs. Credit will be given to the individuals and clubs that put their work and detailed suggestions at the disposal of other groups.

Since the theme of this year's administration is "conservation", which means preserving the good things of the world and sharing them, this is one way in which clubs can conserve and share the good things for which the hobby stands.

Please send material to Mrs. Gail Alexander, 1113 West Fourth Street, Marion, Indiana 46952.

1970 Directories Now Available From the Director of Supplies  
Verne Montgomery, 830 Sheridan Place, Downers Grove, Ill.

## THE NOMINATING COMMITTEE

Your Nominating Committee is composed of the the following people who are experienced in the activities of the Federation, who are familiar with our problems, and who know the qualified candidates for future officers. Kate Steinbrenner, Olive Ellersick, Jerry Huber, Gail Alexander, Dick Ade, Lafayette Funk. June Zeitner is the Chairman of the committee.

The Nominating Committee takes the following things into consideration. Does the individual have executive ability and experience? Does he have the specific qualities necessary for that office? Does he have the time to make the required trips and write and answer all the letters needed for conducting Federation business by mail? Has his club or his area already had a large percent of Federation Officers? Will he take a job?

Of course there are other considerations. Many times well qualified individuals, popular with many clubs, have said "no", usually for a good reason. Many times an individual is considered for a position and rejected because of geographical location. Sometimes a person may be well liked and a good group leader at "in person" meetings but hates to write letters. But rest assured that all your favorite Federation leaders receive thought and consideration this year and every year. Nominating committees have to look into the future, too.

-June Zeitner

## STAMP PROJECT

For sometime the MWF has endorsed the collection of used postage stamps, a project that Mr. S. Elroy McCaw of the Old Timers Club became interested. It is being carried on by The Washington-Idaho Council of Churches. The used stamps were being exchanged for money to buy food for hungry children.



All types of foreign, and U.S. stamps are desired except the U.S. 4¢ Lincoln, 5¢ Washington and 6¢ Roosevelt. Stamps should be sent to the Stamp Project, Washington-Idaho Council of Churches, 2005 5th Avenue, #210, Seattle, Washington 98121.

Stamps should be cut from the envelopes leaving about 1/4 inch border and the larger stamps should be sorted from the smaller ones placing the various sizes in separate bags or envelopes.

## EARTH SCIENCE MAGAZINE

The Eyes Have It in the May-June issue of Earth Science... thomsonite eyes, that is, by Minnesota Mineral Club's Past President William Hale. Pipestone National Monument by Dick Ade, MWF Archaeology Chairman, also calls attention to the host state for the July convention. If you plan to attend the National Show and see something of Texas in June, you will want to read Big Bend National Park and Lake Texoma... The Oldest of Fossils by Bruce Stinchcomb makes the obscure story of our beginnings a little clearer... Installment VIII of the popular Midwest Fossils series by Dale Douglas is on Worms, Conodonts and Sclerodonts and is one of his best.

## AWARD OF APPRECIATION CARDS

MEMBER OF	_____	MEMBER OF
	_____	
MIDWEST FEDERATION		AMERICAN FEDERATION
<i>Takes great pleasure in presenting to</i>		
<b>This Award of Appreciation</b>		
for _____		
DATE _____	PRESIDENT _____	SECRETARY _____

This is the Award of Appreciation card now available to member clubs. The card and envelope are priced at 5¢ each and may be ordered in any quantity from the MWF Director of Supplies, Verne Montgomery, 830 Sheridan Place, Downers Grove, Illinois.

Card may be used to recognize a member or other person or group that has rendered a service to your club.

Space is provided for club name, person or groups name being cited and reason.

# Midwest Federation's NEWSLETTER



Published monthly except July & August as a Service to Member Clubs  
Editor: Haydon Peterson, Route 5 - Box 229, Des Moines, Ia. 50317

Issue No. 106 - June 1970

## Midwest Convention Minneapolis, Minn. July 23 - 26, 1970

Robert Browning sang "oh, to be in England, now that April's there," but today he would have said, "oh, to be in Minneapolis, now that the big Midwest Federation show is there." The date is July 23 to 26, the place is the huge Convention Center right downtown in Minneapolis, and the host is the hardworking Minnesota Mineral club.

First, a bit about the program. Wednesday, July 22 is set-up day for exhibitors, and registration is Thursday - opening day - from 7 a.m. until 9:30 p.m. Competitive exhibits will be judged that day. Friday, July 24, will open with a dealers' breakfast at 7:30 a.m., a bulletin editors' brunch and meeting at 8:30 a.m., a judges' luncheon at 12:30 p.m. and the meeting of the executive committee at 4 p.m. and dinner for the committee members at 6 p.m. Saturday will include the federation council's meeting at 10 a.m. and ending at 4 p.m. and the banquet in the evening at 6:30 p.m. with Jay Wollin, first vice president, as speaker. This will be the day for science fair winners to be honored and for many of their classmates to see the show. Sunday will start with a breakfast at 9 a.m. for the Rolling Rock Club and end with closing of the show at 6 p.m. Doors will open at 10 a.m. each day and close at 9:30 p.m.

Professional security guards will assure the safety of the exhibits and of those who attend the show. Display cases will be furnished only for competitive exhibits.

The Convention Center is so well equipped and so large that all activities, including lectures, special demonstrations, cafeteria service and even the banquet will be handled within its walls.

A major theme of the jewelry and special exhibits will be oriental displays in keeping with the close association of the convention with Minneapolis' major summer fun week, the Aquatennial celebration.

Visitors to the show will have a chance to see its elaborate parades and other events, including the presentation probably at the federation convention, of jade necklaces to the 60 winning queens at the Aquatennial. A jeweler's modeling class will show off an extensive collection of diamonds, and the emerald and diamond Salvador Dali necklace and the painting from which it was made have been lent by their New York owner for the first public display. The Linde Star dress, a Smithsonian Institution collection of gem stones, and the jewelry creations of Christian Schmidt will be highlight of the special exhibits. So will the Lizzadro museum's gem-encrusted gold

elephant from Ceylon; the first display outside South Dakota of Margaret Erwin's superb Fairburn agates; the Virgil Hill Bola tree from Hot Springs, and the John Philipp Wild carvings from California. The list of special exhibits fills two pages.

It is planned to give free tickets to anyone who lends a four pound or larger Lake Superior agate for display at the show. So dig into the basement for a winner.

There are many hotels and other places to stay within a few blocks of the Convention Center, and for those who will be coming in campers a large area at Lake Independence and another at Shakopee on the Minnesota river will be made available. The latter has hookups, and bus service to the show will be provided from Lake Independence. There will also be a rock swap tent at Lake Independence.

All in all, it looks like a great show in summer vacation country that every Federation member will wish to attend. Make that wish come true by being there.

For those who wish to make a field trip in Minnesota following the convention, the State Tourism Department and the Hibbing Chamber of Commerce are planning an "Iron Range" Trail-Along" July 27 through August 1. Hibbing is about 200 miles north of Minneapolis, and the Mesabi Mineral and Gem Club has been assigned to provide tour guides for field trips into iron mines and to conduct swap sessions. Arrangements may be made at the convention or by writing the Hibbing Chamber of Commerce.

### JUNIOR ACTIVITIES TEXT

To assist clubs that wish to get a Junior Activities program started, Earth Science, official publication of the Midwest Federation, has just completed publication of a book, The Young Idea by Jay E. Farr. Mr. Farr has been conducting an earth science program for Juniors for the past ten years. The book is dedicated to beginners in the study of rocks and minerals. The Young Idea consists of a series of nine talks for Juniors which can be used as a Junior course of instruction.

-turn to page 2, column 1

### AWARD OF APPRECIATION CARDS

In the May issue announcement was made of the new Award of Appreciation Cards now available to member clubs. Actual size of this card is 5x7 inches. They are ready for immediate shipment from the Director of Supplies, Verne Montgomery, 830 Sheridan Place, Downers Grove, Ill. 60515. Minimum order accepted is 20 cards. Price is 5¢ each which includes a mailing envelope.

Junior members join a club because they want to learn more about the earth sciences. There is much to be taken into consideration to achieve this goal, such as:

1. A Junior member needs to be motivated.  
This means helping boys and girls see things about their hobby that make it interesting, make it attractive, and make it meaningful.
2. A Junior want to improve.  
If a youngster realizes he can improve, he will want to learn a new idea or skill.
3. A Junior needs some guidance.  
It is important that proper guidance be given to Junior members to enable them to benefit from their activities within their club. Many clubs have study groups on various phases of our hobby. When a Junior study group is formed, certain things should be taken into consideration.
  - a. Help Junior members to set realistic goals.
  - b. Use rewards - praise members for doing a good job. Appoint them to committees or give them responsibilities which they can handle.
  - c. Involve Junior members in making decisions.
  - d. Present information in an interesting and novel manner. This will help to arouse a Junior's curiosity and interest. Most of us enjoy variety in life.
  - e. Inform Juniors what is expected of them and how you plan to proceed in teaching the project.
  - f. Make frequent reference to and draw on a Junior's experience, knowledge and abilities.

A copy of The Young Idea has been sent to each club in the Midwest Federation. Properly used this book can be extremely useful in furthering our Junior Activities Program. It should also prove to be of great value to members helping with earth science programs in schools, Girl Scouts, Boy Scouts, 4-H Groups and other such organizations. Additional copies of The Young Idea can be secured from the Director of Supplies and Information, Verne Montgomery, at \$1.00 a copy. -Patricia A. Yoblin, Chm., Junior Activities Committee

## SCHOLARSHIP SCOREBOARD

Six clubs have reached new standings in the Scholarship Foundation. They are:

400%

Lawrence County Rock Club - Indiana

200%

Corn Palace Rock Club - South Dakota

Sioux Empire Gem and Mineral - South Dakota

Sauk Trail Rock and Mineral Club - Indiana

100%

Blossomland Gem and Mineral Society - Michigan

Siouxland Gem and Mineral - Iowa

## EXECUTIVE COMMITTEE MEETING

Communication was a key word at the meeting April 11 of the Midwest Federation's executive committee in Iowa City, Ia. Much of the discussion and many of the committee and state director's reports were concerned with informing the 215 clubs with 15,422 members about federation actions, publications and programs and with getting a feedback from the clubs about their needs and problems.

Fortunately, among the more than 80 attending the all-day meeting were representatives of a number of Iowa clubs who took a lively part in the discussion and presented their views and experiences.

To improve communication, the executive committee authorized use of the address of the federation secretary, Miss Jean Reynolds, 107 Tuttle Ave., Clarendon Hills, Ill. 60514, as the federation mailing address. Since the liaison officer in each club is charged with communicating federation business to his fellow members, ways of improving the efficiency of this office were brought up and several suggestions were received from attending club members. The dignity and importance of the office should be emphasized to make its occupant more effective, one person suggested, and another suggested calling on the liaison officer at each general meeting and board meeting for a report or a short talk on club-interclub-federation affairs. A third person suggested electing the liaison officer for a three-year term so that an inactive officer would not become fixed in the job.

As has been already reported by letter to the clubs, the committee decided to conduct competitive judging of exhibits at the 1970 Federation convention in Minneapolis July 23-26 under the rules in effect since 1967 because the new rules adopted last summer at the American Federation convention in Salt Lake City have not been received in time to permit judges and exhibitors to acquaint themselves with them.

Making the newsletter of greater usefulness to club members was also discussed, and some excellent suggestions resulted. The Newsletter now has a circulation of 11,000 copies monthly.

Mary Cornwell, editor of Earth Science, announced that as of August 1 subscriptions will cost \$3.00.

## NOMINATING COMMITTEE REPORT

Members of the Nominating Committee present the following nominations for officers of MWF for 1970-71.

President: Jay Wollin, Morton Grove, Ill.

1st V.P.: Bernard F. Parr, Mansfield, Ohio

2nd V.P.: Lee M. Kirby, Drayton Plains, Mich.

Secretary: Miss Jean Reynolds, Clarendon Hills, Ill.

Treasurer: S. N. (Sy) Hagenson, Aberdeen, S.D.

*Plan a Holiday Week-End*

AT THE

Rock River Valley Gem & Mineral Society

ANNUAL

# **GEM and MINERAL SHOW**

**JULY 4th and 5th**

**AT THE FAMOUS WAGON WHEEL LODGE**

**ROCKTON, ILLINOIS**

*SHOW TIME: JULY 4th 10 a.m. to ?*

*JULY 5th 10 a.m. to 5*

**NATIONALLY KNOWN GEM & MINERAL DEALERS**

**DISPLAYS BY CLUBS — DEALERS & PRIVATE**

**INCLUDES FOSSILS — CRYSTALS — MINERALS**

**INDIAN ARTIFACTS — FLUORESCENT MINERAL DISPLAY**

**FACETING — CUTTING — POLISHING DEMONSTRATIONS**

**FREE GUIDED TOURS FOR SCHOOLS — 4-H PEBBLE PUPS**

**BOY and GIRL SCOUTS — BOYS' CLUBS**

**SATURDAY MORNING ONLY**

**SNACK BAR IN HALL**

**ADMISSION — ADULTS 75c**

**CHILDREN under 12 10c**

**SHOW CHAIRMAN: HOWARD CURRY, Rt. 1, Box 189, Belvidere, Ill. 61008**





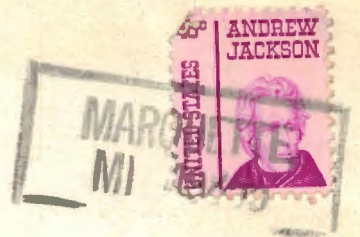
Hey!  
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your Safety  
Equipment!!

ESIP

Don't you forget  
yours!

Next pamphlet deadline  
- Sept. 1 -

Claris W. Smith  
Editor, Jaspilite  
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Marquette, Mich. 49855



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