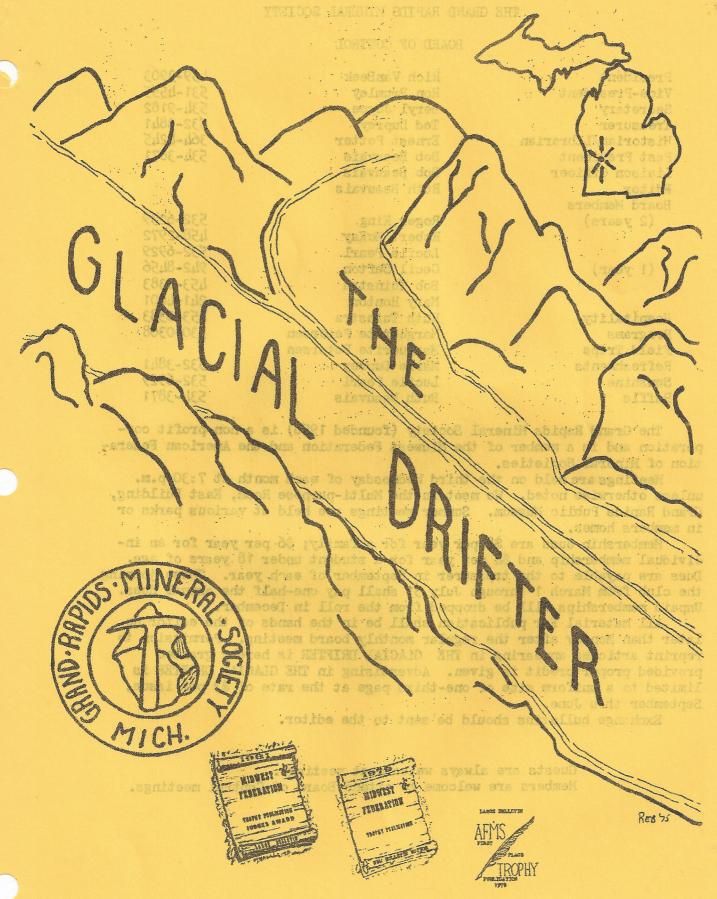
**JUNE** 1984



### THE GRAND RAPIDS MINERAL SOCIETY

### BOARD OF CONTROL

	President	Rich VanBeek	459-3903
	Vice-President	Ron Brumley	531-4555
	Secretary	Beryl Joyce	534-9182
	Treasurer	Ted Duprey	532-3841
	Historian/Librarian	Ernest Potter	364-4245
	Past President	Bob Beauvais	534-3871
	Liaison Officer	Bob Beauvais	224 2011
		Ruth Beauvais	
	Editor	RUUI DEAUVALS	
	Board Members		F20 (020
	(2 years)	Roger King	532-6239
		Robert McKay	458-2972
		Lucile Pearl	532-6929
	(1 year)	Cecil Sefton	942-8456
		Bob Tuinstra	453-0383
		Mary Honton	241-4001
	Hospitality	Ruth Tuinstra	453-0383
	Programs	Marguerite Petersen	530-0368
		Marguerite Petersen	
	Field Trips		532-3841
	Refreshments	Marie Duprey	
	Sunshine	Lucile Pearl	532-6929
	Raffle	Ruth Beauvais	534-3871

The Grand Rapids Mineral Society (founded 1958) is a non-profit corporation and is a member of the Midwest Federation and the American Federation of Mineral Societies.

Meetings are held on the third Wednesday of each month at 7:30 p.m. unless otherwise noted. We meet in the Multi-purpose Room, East Building, Grand Rapids Public Museum. Summer meetings are held at various parks or in members homes.

Membership dues are \$8 per year for a family; \$6 per year for an individual membership and \$4 per year for a student under 18 years of age. Dues are payable to the treasurer in September of each year. Those joining the club from March 1 through July 31 shall pay one-half the annual dues. Unpaid memberships will be dropped from the roll in December.

All material for publication shall be in the hands of the editor no later than Monday after the regular monthly board meeting. Permission to reprint articles appearing in THE GLACIAL DRIFTER is hereby granted provided proper credit is given. Advertising in THE GLACIAL DRIFTER is limited to a uniform size of one-third page at the rate of \$3 per issue, September thru June.

Exchange bulletins should be sent to the editor.

Guests are always welcome at meetings.
Members are welcome to attend Board of Control meetings.

more about your hobby? Then consider

tory Revealed by Fossils."

Volume 26 SUMMER 1984

Number 10 has specified reducing a

Miss Marble and Ruth Tuinstra for

### SUMMER SCHEDULE

Wednesday, June 20 6:30 p.m. Pot Luck Picnic at Pinery Park, Wyoming Look for us in the picnic area near the tank! Short board meeting

Michigan Drive home but they could Wednesday, July 18 6:30 p.m. Pot Luck Picnic at the home of Bob and Ruth Tuinstra, 0-304 Lake Michigan Drive

Wednesday, August 15 6:30 p.m. Pot Luck Picnic at Pinery Park

An explanation is in order as Monday, Aug. 20 ? Time and place to be announced

GENERAL INFORMATION FOR ALL MEETINGS: Bring a hot dish plus a salad or dessert (one dish if you come alone) and your table service and beverage of your choice - a tablecloth may help. In case of rain (if it has rained earlier in the day or is threatening) please call one of the following to see if the location has been changed. The decision might not be made until around 5 p.m. of those on the believe to the bel

Bob and Ruth Tuinstra 453-0383 Rich Van Beek, 459-3903 when the election for vice-presi Ted and Marie Duprey 532-3841 (not in July) Conflict?" If Dorothy Waterman is sufficiently recovered from her recent

### tto Manage Liliu and Visagenta des PLACES TO GO

June 23-24 TRAVERSE CITY, MI MGAGS Seminar - all you ever wanted to er Freiory know about rocks, lapidary, jewelry crafting, etc.

July 5-8 MILWAUKEE, WS (West Allis) MWF Convention and Show sponsored by Wisconsin Geological Society; Swapping and Field Trips August 4 MARQUETTE, MI Swap & Sell by Ishpeming Rock and Mineral

Club at Presque Isle Park - pool parking lot

September 7-9 TOLEDO, OH Toledo Gem & Rockhound Club Show "An Oriental Odyssey" - Masonic Auditorium Complex 4645 Heatherdown

September 8-9 HOLLAND, MI Tulip City Gem & Mineral Club Show "A Crystal Celebration", Holland Civic Center

October 12-14 DETROIT, MI Michigan Mineralogical Society Show, Detroit Light Guard Armory, E. 8 Mile Road

October 13-14 TRAVERSE CITY, MI Grand Traverse Area Rock and Mineral Club Show, Northwestern Michigan College

and the newly elected members are in And more are coming!!! Jeel mov Jeg bas omeo of bedly



This being the last "Drifter" before the summer interim there are a number of loose ends to take care of:

Many thanks to Bob and Ruth Tuinstra for their successful running of the garage sale which netted \$215.20 for the club. There were plenty of customers at their Lake Michigan Drive home but they could have used more donations. They said it was a fun but very tiring day.

The results of the election will be found elsewhere in this Drifter. An explanation is in order as to why we will have two vice-presidents next year. Since one of the nominees was on the printed ballot and one was a write-in candidate there was confusion as to who some of the ballots were for. As the election was close the outcome was in doubt. After much discussion it was decided that we would follow a precedent set a number of years ago when the election for vice-president resulted in a tie and we solved the problem by having a 1st and 2nd vicepresident. Thanks to Eric Ferguson, Miss Marble and Ruth Tuinstra for assisting in the election.

As always our Keokuk field trip was very enjoyable until it began to with Copper Wire"; Geological History rain at noon on Sunday. We heard on of the Traverse Area"; "Geological the radio that it was part of the same History of the Black Hills"; "Cutting system that hit Tulsa and that the Star Sapphire"; "Setting Faceted entire state of Iowa was on a flash Stones"; "Sphere Making"; "Hazardous flood watch. Marguerite Petersen has Minerals" and many others. a report in this issue.

ATTENTION - ALL 1983-84 BOARD MEMBERS: There will be a short board meeting after the June pot luck at Thanks to modern highways, it is now Pinery Park. As is traditional, our possible to go anywhere and see August board meeting will be on Monday, nothing! August 20. This will be the final -DESERT BREEZE meeting for the retiring board members Tecopa, CA and the newly elected members are invited to come and "get your feet wet" almos era eron but Before taking office September 1.

# president peaks

Are you interested in learning more about your hobby? Then consider going to the 10th annual Seminar of the Michigan Geology and Gemcraft Society (MGAGS) to be held at Northwestern Michigan College at Traverse City on June 23-24. I have attended every one except in 1981 when I was unable to because of surgery.

There will be talks and demonstrations on every phase of our hobby. A number of our club members and others from this area will be among the speakers: Marguerite Petersen, "Keokuk Geodes"; Henry Tchozeski, "Ivory Netsuke Carvings of Japan"; former club president Dr. Richard Rose, "Geological History of Michigan"; Naida House of the Indian Mounds Club, "Gem Tree Making"; Jim Muller, who has often spoken for our club, "Geology of the Grand River"; Dr. Jim Clark of the Calvin College Geology Department, "Global Post-Glacial Sea Level Changes" and I will be speaking on "The Bible and the Geological Ages - Agreement or Conflict?" If Dorothy Waterman is sufficiently recovered from her recent cataract surgery she will speak on "Earth's History Revealed by Fossils."

Some other topics will be "Working

I me lowed multiveribua oline Have a good and safe summer!

### G.R.M.S COLLECTORS AT KEOKUK

A number of members of the Grand Rapids Mineral Society gathered in Keokuk, Iowa, during the Memorial Day weekend for a field trip. Here's the list: Rich Van Beek, Roger King with son Michael, Ted and Marie Duprey, Arlene Sladek, Val Katelnieks, Donn and Kim Cuson, Harry and Keith Johnson, and Marguerite Petersen, the leader. Also with them were Bob and Lois Shaltis of the Indian Mounds Club, Roger Kloska, Wilma Donahue, Della Radcliffe, Daniel Boone, Vernon Holdren, Jess Voorhees, and Clarence Daniels. The last six are from the Keokuk area.

On Saturday Della Radcliffe, the sister of Marguerite Petersen, served a breakfast of home-made biscuits, sausage and gravy to 21 members and friends of the Grand Rapids Mineral Society. The group, after a short briefing, ventured out on their threeday field trip for geodes and lithostrotionella.

Lisa Koehler of the Daily Gate City (Keokuk) accompanied the rockhounds the first moming. The guide, Marguerite Petersen, is a former resident of Towa and Missouri and has lead four different groups for the society on field trips in Missouri, Keokuk, and Hamilton, Illinois

Keokuk geodes are surprise packages approximately 350 million years old found in the Warsaw shales and creeks. It's always exciting to be the first to see what's inside the geode when it's opened -- and to share its beauty.

Most geodes have a hard chalcedony shell lined with crystals growing inward. Twenty-two identifiable minerals have been found in the Keokuk geodes.

The most common are quartz and calcite.

- Marguerite Petersen

Ed. note: We're looking forward to seeing some of the finds and hearing more about the trip at our June meeting.

INGS, New Zealand and ERECCIA (12/83)

EDITOR'S PREROGATIVE -- OR MAYBE IT'S PRESUMPTION!

At any rate, I've been reading many of our exchange bulletine and keep running across references to "Ugly Rock Contests."

I haven't been able to get in touch with our program chairman yes, that's Marguerite Petersen, too - about this idea but I'll present it anyway.

How would you like to have a ugly rock contest at our September meeting? I mention this now, without formal approval, because I thought you could be looking for that very ugly rock while you're about your "Summer Business."

I have a list of rules (which we may want to revise a bit) which will govern the "contest." To me, it sounds like a lot of fun - a lot of nonsense, too - and a good way to begin our new season.

Start looking! I've got one ugly rock already, and I'm sure that in the basement or garage one of those "treasures" we so carefully hauled home in past years may be the great "ugly rock" of the year!

Watch for the rules in the next issue - that will be September - meanwhile, keep your eyes open and forget the esthetic value, go for the unsightly, the repulsive, the hideous.

(Note: this is not proposed as a full program, just an added feature of our meeting.)

If you are one of those people who can't see the bright side of things, polish the dull side!

- OSHKOSK QUARRIER via ROCK CHIPS

REMEMBER - Summer meetings are always
"Show 'n' Tell" occasions - bring
something to show and tell us about
it.

### MINUTES OF THE BOARD OF CONTROL

The Board of Control met at the home of Bob and Ruth Tuinstra on May 21, 1984. Those present were Rich Van Beek, President, Marguerite Petersen, Donn Cuson, Roger King, Bob and Ruth Tuinstra, Bob and Prem McKay and Beryl Joyce.

The minutes of the last meeting were read and approved. There was no treasurer's report as Ted and Marie Duprey were away.

The garage sale of May 19 netted

us \$215.20

We discussed field trips to Bass River, Cheney Quarry and Keokuk. The Keokuk trip will be Memorial Day weekend. Our summer meetings were planned.

A letter was read about a fossil find in Florida and funds were requested, however no decision was made.

-Beryl Joyce Secretary

(Ed:-The above minutes are slightly condensed in the interest of saving space)

### CLUB OFFICERS FOR 1984-85

President - Rich Van Beek
1st Vice-president - Pete Boogaart
2nd Vice-president - Donn Cuson
Secretary - Beryl Joyce
Treasurer - Ted Duprey
Board Members: Marie Duprey, Bob
Tuinstra and Val Katelnieks. These
members of the Board of Control join
those whose terms expire next year:
Roger King, Bob McKay and Lucile
Pearl.

### GOING TO WISCONSIN FOR THE MWF?

Ruth Steele is looking for transportation to the convention in Milwaukee and will share expenses. Her phone number is 457-3249.

home-made biscuits,

"Thank you!" to all who sent cards, called and sent flowers to me while I was ill and in the hospital. I am doing much better and hope to see you at our next meeting.

- Lucile Pearl

LOOK AT IT THIS WAY.... Have you ever thought about rockhunting from the rock's point of view? It must be terrifying to be ruthlessly hunted by a group of crazed fanatics wielding a fearsome array of weapons like spears, spades and the worst of all, hammers. These humans even go to such lengths as to travel for hundreds of miles and climb down cliffs to be able to hack a poor unsuspecting rock out of its natural environment.

The rocks go to great length to camouflage themselves from the piercing eyes of their predators. Some rocks make themselves look nothing like what they really are by growing an outer rind that completely hides their interiors while others bury themselves deep down in the mud and clay. They don't do this without reason for their fate in the hands of a rockhound is horrible indeed. In the hands of an amateur the unlucky rock will usually be brutally smashed open and unceremoniously dumped into a sack eventually to wind up in a dusty drawer or under a verandah in the damp and dark, never again to see the light of day. But at the hands of an experiences lapidary enthusiast, the rock's fate is even worse. After the rock is uncovered, it is chipped and then put in a sack. When it arrives at that terrible place, the workshop, it is cut into slices and then into smaller pieces, partly ground into a fine powder on a grindstone and the rest is polished. The most humiliating thing of all for the poor dissected piece of stone is that it will end up dangling from a human neck! It's a good thing that rocks don't bleed! -Via PICKINGS, New Zealand and BRECCIA (12/83)

## Midwest Federations NE

ber clubs. All news and articles should be sent to the Editor, Mrs. BETTE subscription orders should be sent to Parrot Printing Service, 2125 Forest Ave., Des Moines. nith, 10607 Mary Ann, Zeeland, MI 49464. All IA 50311.

PRESIDENT TEX WEBB 100 W. 874 St.

1ST VICE-PRESIDENT JAMES EDWARDS 306 Somonauk Loomington, MN 55431 Park Forest, IL 60466

2ND VICE-PRESIDENT WILLIAM PARCH P.O. Box 180 Fountain City, WI 54629 SECRETARY MISS JEAN REYNCLDS 107 Tuttle Ave.

TREASURER MRS. KITTY STARBUCK 7636 V Avenue East Clarendon Pills, II 60514 Vicksburg, MI 49097



HAVE A SAFE, HAPPY,

JUNE 1984 Issue No. 245

HEALTHY SUMMER!!!





THE PRESIDENT'S PEN

Our film library for the MWF is sec ond to none, and of course, this is one of our most expensive committees to maintain, and when new programs arrive to have them duplicated, set up for distribution, and that includes carrousels and mailers. The mailing, etc. is expensive. So far the MWF has assumed all financial responsibilities for this but the time has come to let the clubs help pay for these fine programs.

It has been decided that starting July 1st there will be a five dollar charge for each program. We feel that this will help pay part of the cost of production and mailing to you. There will be more information in another article in this newsletter.

Remember our director of supplies has a good stock of material that is available to you. They are listed on page W-6 of your directory but I'll list a few here. Club award cards - 5¢ each; Environment Patch (4" - 5 color) - \$2; MWF logo pin - 75¢; cardecal - 25¢; also available are several manuals and American Federation items. On all orders add 50¢ for first dollar of order and 25¢ for each additional dollar or fraction thereof. You may order from Mrs. Nannette Aiken, 219 Park Drive, Glenwood, IL 60425.

### SAFETY

Have you requested your Safety Certificate for the 1983 Show your club had? Helen Newmann reminds us that the applications must be requested and RETURNED by JUNE 15th.

### MIDWEST SCHOLARSHIP REPORT

Since my report for the Fall Executive Meeting we have received over \$2920 for the American Federation Scholarship Foundation from our Midwest Clubs and friends. This amount includes a number of Memorial Gifts from individuals and friends as well as from the clubs. Because of these generous gifts the following sixteen clubs have been able to advance their Scholarship Status as follows:

Parma Lapidary Club Dallas County Rock Club	300% 1700%
Blackhawk Rock Club 1100% -	4100%
C.A.I. Family Lapidary Club	900%
Rosebud Geological Society	600%
Capital City Gem & Min. Soc.	900%
Euclid Lapidary & Min. Club	600%
Loup Valley Gem & Min. Soc.	400%
Brookings Area Gem & Min. Soc.	900%
West Suburban Lapidary Club	2800%
Earth Science Club of Missouri	2600%
New Ulm Gem & Mineral Club	700%
Illinois Valley Gem & Min. Soc.	400%
Minnesota Valley Gem & Min. Club	500%
3 M Prospectors Club	500%
Minnesota Mineral Club	900%

The January 1984 and March 1984 American Federation NEWSLETTER each contain an article listing those receiving the Scholarship grants. You should all be very proud of the part you are playing in helping these fine young people continue their education.

Our sincere thanks to you for your support of the American Federation Scholarship Foundation.

Katharine Steinbrenner, MWF Chairman

### NOTICE TO ALL CLUBS!

Do you know what the MWF is? Do you know what it has to offer? The MWF has prepared a short program which answers these and more questions for you. If your club has not seen and would like to see this program, contact .. next page please

### MMF NEWSLETTER/June 1984/page 2

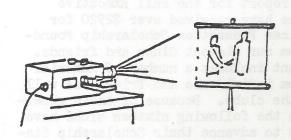
### NOTICE TO CLUBS - continued

your State Director or the assistant who services your club and schedule a date.

The Director and Assistants for each state are listed in the MWF Directory of which two free copies were sent to your club.

All clubs be sure to choose and send your delegates to the convention this summer at the MWF Show, West Allis, Wisconsin.

Bill Myers, Illinois State Director



PROGRAM POLICY CHANGE: Since last November this corner has been all NEW slide programs. That's what the Federation is all about, service to our member clubs.

Now comes a bad part. After processing about 50 new programs over the past five years, your Federation needs help. During the same time there has been no charge for a slide program use. Since 1979 inflation has punched holes in our budget. Something had to give! At a recent meeting your Board of Directors decided on a \$5.00 fee on all orders after July 1, 1984. This is

\$5.00 on each program ordered, payable on order to Midwest Federation. Your Club will still bear the expense of return to your Midwest Program Chairman.

Keep watching this spot there are more new programs in the works. They could be announced in any issue of your Newsletter.

Louise Stinnett, Program Chairman

CONGRATULATIONS

BENJAMIN MOULTON: In 1983 Dr. Benjamin Mounton retired as head of the Department of Geography and Geology at Indiana State University in Terre Haute, Indiana. On his retirement Dr. Moulton was honored by being named "Chairman Emeritus of the Geology Department".

As a member of the Indiana Academy of Science he has been further recognized. Serving

as President-elect in 1981, he will head that distinguished group in 1985.

Active in the MWF, Dr. Moulton for several years has served as Chairman of the Merit Awards Program and also as an Assistant State Director. He is just as active with his home club, the Vigo Rock and Gem Club of Terre Haute, where he serves as Bulletin Editor, Liaison Officer and as Co-Chairman of their 1984 Show.

Our congratulations to Dr. Moulton.

Submitted by Charles Walker, Indiana State Director

LEGISLATION: The primary interest of Congress in 1984 is the election. It is anticipated that only bills that appeal to the public interest will receive attention. That is a good reason to write your congressman at this time. Senate bill S1569 authorizes Federal land managers to provide for the conservation and scientific study of vertebrate paleontological resources on public and Indian lands. This bill is known as the Paleontological Conservation Act of 1985. Another bill in the House HR1783 is under consideration. It would require all transactions for gold or silver items to be done by check or money order and not in cash. This is an attempt to curtail illegal trade in stolen coins, silverware, gem stones and jewelry. Many hobbyists feel this will greatly reduce sales of handmade jewelry.

John Boland, Legislation Chairman

1984 SHOW: Campers send in your reservation soon, if you have not done so. The Wisconsin State Fair Park Police Department will send you a confirmation and your permit.

### 1984 MIDWEST FEDERATIN CONVENTION AND SHOW PROGRAMS

Thurs., July 5

Jewels of Sri Lanka - movie 11 a.m.

1 p.m. New Zealand Maouri and Greenstone Carving by Russ Kemp

Rockhound in Latin America by Dr. Harry Raplus 2:30 p.m. Fossiling Through the Midwest by Cecelia Duluk 4 p.m.

Fri., July 6

11 a.m. Dinosaurs by Dick Johannesen

Copper Country Minerals& The Montreal Mine by Gary Richards 12:30 p.m.

Geological Archeology by Neil Ostberg 2:30 p.m.

Copper Country Micro-Minerals by Dan Behnke 4 p.m.

Sat., July 7

Minerals of the Wausau Pluton by Al Falster 11 a.m.

1 p.m. Fossil Plants by Dick Johannesen

2:30 p.m. Alpine Minerals by Al Falster

Art & Technique of Gem Engraving by Ute Bernhardt 4 p.m. pains and sunburns? Resolve now! Take

Sun., July 8

MWF Fossil Finders Honor Roll by Cecelia Dulak & Janice Root 11 a.m.

1 p.m. Faceting Program given by the Faceters Guild - Faceting

for the Beginner by Dave Miller

2:30 p.m. That Beautiful Lapidary Material - Agate by Doris Kemp

The Greene Museum at the University of Wisconsin, Milwaukee will also be open both Friday, July 6 and Saturday, July 7 between 10 a.m. and 2 p.m. The show committee is trying to reserve some parking slots for Convention visitors at the museum. (We have seen the collection of this museum and it is well worth the time to try to see at least a part of it. - Editor)

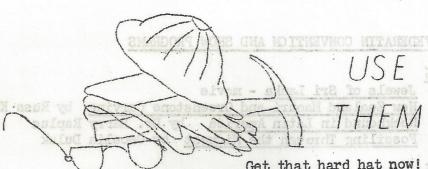
And there's a free Wine & Cheese tasting party at the Midway Motor Lodge on Thursday evening, July 5, at 7 p.m. A chance to renew old friendships and make new ones.

FREE Wisconsin Ice Age Treasure Hunt. No worry about mid-summer heat, the search for fossil, mineral and lapidary treasures will keep you cool. An outdoor event, it will be held at 1:30 p.m. Friday, July 6 on the Fair Park grounds just east of the show building.

Some people search for diamonds, some people search for gold! Some people only pick up rocks, at least that's what we're told. The diamonds make you famous, the gold you have to spend; The rocks just bring you pleasure and a host of happy friends! - Elizabeth Martin ESCONI EARTH SCIENCE NEWS Decision is Independent and the second second

We'te been notified that our bulletin has placed among the top ten in the small bulletin category of the MWF bulletin contest. Where we have placed we won't know until we attend the Editor's breakfast at the MWF Convention in Milwaukee next month.





Summer is coming and a curious breed is beginning to emerge from basement workshops, pale of skin and blinking in the sunlight. He'll ram off on field trips, hiking, climbing hills and carrying loads he is not accustomed to hauling. Also, burning that winter-pale skin to a blistering lobster red.

Remember lastspring's aches and pains and sunburns? Resolve now! Take precautions: make a few simple pre parations (the kind you didn't have time for last year.)

off those ugly turned-over edges on bump hat; the object will go right the hammering end. They can blind you or rip into flesh like a spear. Alagonal to water and - By Chuck Pierce

Buy those safety glasses or that Drive your chisel through a get but didn't Then use them!!! those chips from flying.

And it's not a bad idea to mark your tools with fluorescent paint or Agatype via THE JASPILITE tape so you are not so apt to leave when he was a second and a grand was when the no them behind.

By Paul E. Desautels INCLUSIONS

When the Seven Dwarfs placed Snow White in a crystal casket to preserve her

and make new ones. Via Nippising Lapidary &

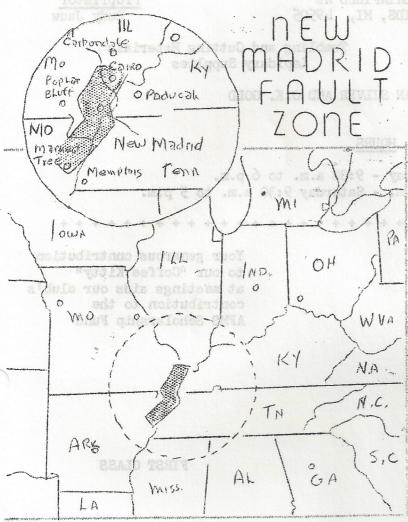
Get that hard hat now! Many clubs are starting to require hard hats on their field trips. Hopefully everyone is wearing them in quarries; and they are required in mines.

Many of you may not be aware that there are two types of protective head gear: the hard hat and the bump hat. The difference could mean a serious injury avoided or even a life saved. The specifications for the hard hat required by the Bureau of Mines printed on the inside of the helmet states that if a hard hat is placed on the floor and a heavy object is dropped on it, the Sharpen those chisels and grind object will be delfected. Not so the through it.

Wedge on that loose hammer head!!! S. C. Mich. Lapidary Soc face shield you've been intending to rag when splitting a rock. It'll keep - Ed Plumley

from harm, they were duplicating a long-established natural process. Almost every time nature grows a crystal, she encases in it a variety of objects, called inclusions. They are scientifically important because they are evidence of the temperatures, pressures, composition, and other characteristics of the environment in which the mineral is found. Not only solids but liquids and gasses are often trapped during crystal growth. The difference between the white, opaque variety of quartz called milky quartz and the clear glassy variety called rock crystal is caused by multitudes of tiny bubbles trapped in milky quartz. Frequently the inclusions will be more than one kind, each called a phase. One of the most amazing sights to see under a microscope is the two-phase inclu-

sion of a tiny bit of carbon in one of the liquid-filled cavitites found in quartz from Herkimer County, New York. The carbon can be seen jittering around in an erratic dance, bombarded this way and that by the ever-moving, liquid molecules. This is called the Brownian Motion after Robert Brown, the botanist, who first via CRYSTAL GAZER reported it in 1827.



### MID-AMERICA QUAKES LIKELY

The director of the Tennessee Earthquake Information Center says it's about time someone planned for a major quake through the nation's midsection.

Geologists say the New Madrid fault, which runs along the Mississippi River from Cairo, Illinois to Memphis, poses an increasing earthquake threat.

The Federal Emergency Management Agency has allotted \$300,000 for setting up a seven-state consortium to analyze earthquake hazardin the region.

The director said "There's going to be a lot of major damage and we aren't going to be able to bring in help from the neighboring communities because they are going to be hit too."

quakes along the fault occurred in 1811 and 1812 when Reelfoot Lake in Northwest Tennessee was created. The quake in 1812 registered 9.6 on the Richter scale, stronger than the famous San Francisco earthquake of 1906 which registered 8.3.

He said a catastrophic earthquake similar to the 1811-1812 quakes could destroy buildings and bridges and rip open fuel pipelines throughout the area. A 1974 study said there would be thousands of

casualties. Too little thought has been given to how to get rescue and medical personnel into the area. If it's a really major quake, the airports won't be useable and highways aren't going to be much use. He said he hopes the new agency will be set up in Memphis and will work toward upgrading construction standards to improve safety of public buildings.

- PERU ROCKS via ESCONI EARTH SCIENCE NEWS

"What does 'extinct' mean?" the pebble pup asked the show chairman. "Suppose all the life on earth became wiped out, then you could say the human race was extinct," answered the chairman. The pebble pup thought this over for a moment then asked, "Who would I say it to?"

- via ROCK RATTLER & BRECCIA

HINTS Hang a small spice rack behind your faceting machine to keep small jars or vials of polishing compounds handv.

Too high a speed can cause pin holes in Brazilian agate, even if its the best quality.

- Via CRYSTAL GAZER

ne director of the Tennessee

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quake threat.

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### HOURS

Monday thru Thursday - 9:30 a.m. to 6 p.m. Friday 9:30 a.m. to 8 p.m. - Saturday 9:30 a.m. to 5 p.m.

Save Stamps - for Food "Stamps for Food" needs our help Give your used commemorative, foreign, pre-cancelled and odd-value stamps to Bob Beauvais

1811 and 1812 when Reelfoot Lake in Morthwest Tennesses was created.

Your generous contribution to our "Coffee Kitty" at meetings aids our club's contribution to the AFMS Scholarship Fund

Grand Rapids Mineral Society Robert E. Beauvais 3308 Wilson SW Grandville, MI 49418

FIRST CLASS

HERE'S YOUR GLACIAL DRIFTER!

Mr. & Mrs. Robert E. Beauvais 3308 S. Wilson Grandville, Mich. 49418

Iddes adt "Creen thoultre! goob tach!

all the life on earth became wired out.

The pebble pup thought this over for

extinct," answered the chairman.

Too high pin holes in Bras the the best qual