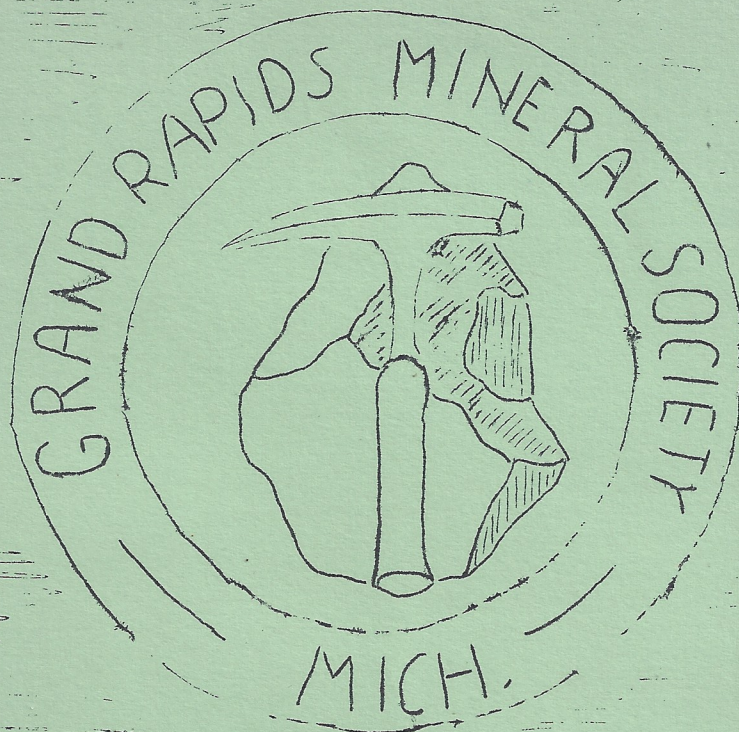


volume 7, no. 4 ~ december, 1964



the

GLACIAL

DRIFTER

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

Meetings are held the 2nd Wednesday of each month at 8:00 P.M. at Ridgeview Junior High School, Rosewood at Burton S E (Sept. thru June) Summer meetings are at various parks as noted.

Advertising in the GLACIAL DRIFTER is at the rate of \$3.00 per issue (Sept. thru May only)

All material to be published must be in the hands of the editor no later than the 25th of the month preceeding publication, unless notified of an earlier closing date.

Permission to reprint material appearing in the DRIFTER is hereby granted provided proper credit is given.

member - Bulletin Editors Association.

WEDNESDAY, DECEMBER 9, 8:00 P. M. - LADIES' NIGHT

The regular meeting at Ridgeview Junior High School on December 9 has been taken over by the ladies of the club. They thought of calling themselves the Rockettes for the occasion, but the name has been used before. They did not want anyone to think there is going to be a chorus line. Lady rockhounds assisting in preparing the show -- tentatively entitled "The Diary of a Rockhound" -- are Marilyn Damstra; Emily Van Vuren; and Marge, Donna, and Jane Potter. They are employing the tactics of a hotel near Benton Harbor which attracts customers by sheer overwhelming honesty in their advertising. The motel claims to have "the worst swimming pool in the Midwest". The gals too are honest. They are unanimous in agreeing that despite the valuable assistance of Jerry Morris, Augie Fost, and Larry Fegel this is not going to be the best program in club history. But even if you think you might not feel like applauding, come anyway to criticize and join in the hissing, booing, and catcalls. You might even win a door prize.

Esther Hall - December Program Chairman

DUES ARE DUE -- AND PAST DUE

If you have not yet paid your 1965 dues, you will not be billed or called as a reminder. However, you will not receive any more copies of the DRIFTER after this one. Unless you read the papers carefully or listen to all the local gossip, you will not know about the club news or be reminded of time and place of meetings. There is no bigger bargain available for the low price. Think of it -- twelve issues of the GLACIAL DRIFTER and membership in one of the best clubs in the country. (Adv.)

C'MON, GET IN YOUR TWO CENTS' WORTH

We aren't kidding. The club is still collecting Betty Crocker coupons for the American Federation's united effort to provide scholarships for promising would-be geologists. Even one or two coupons will help. Just turn them in to Nina Rozema so they can be bundled up in a couple of king size cartons and sent out to show that the Grand Rapids club is doing its share.

EVEN CANCELLED STAMPS ARE WELCOME

Remember that our club is still working too on the project of collecting cancelled commemorative United States postage stamps. These will help to provide milk for needy children in foreign countries. You might as well give -- there is a law in this country against using cancelled stamps over again. As far as we can tell, there may still be rock piles in some of the Federal penitentiaries, but there are no rock clubs. Avoid temptation. Stay out of trouble. Give those old stamps to Nina Rozema to be sent in for this worthy cause.

OUR PRESIDENT'S
CORNER

Greetings:

Al Alvio did our annual auction up in a big way. Everyone seemed happy with the specimens offered for sale and the smile Lucile Pearl had after counting the take indicated our treasury was re-vitalized. Vote of thanks goes to those who gave Al an assist on the project.

Marie Spielmaker has a handful of proposed field trips that are winter specials. More on this in the next DRIFTER.

V P Jim Waldron is filtering the programs from the combined efforts of the board members. Jim has a raft of information from the U S Atomic Energy Commission that shapes up as a future program. Film shows the raw materials and the end result with complete instructions on a do-it-yourself kit. Another program for the home projects is on raw diamonds - mining processing and the finished products.

Dick Damstra swings the gavel for our February meeting and there should be more on that elsewhere in this publication.

The December program of Ladies Night promises to be one of the most novel programs presented before the G. R. M. S. It will be filled with humor combined with practical approaches to the various phases of geology. This is the type of program your neighbors will enjoy - let's bring 'em back again. Roses to Esther Hall and her efforts.

Bob Tennis offered a suggestion: "Why not have an identification period at some of the meetings?" "S good idea and we're going to give it a whirl in February or March.

To each and everyone - the very best of everything to you and yours for a MERRY CHRISTMAS.

Gerald B. Morris, President

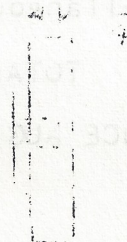
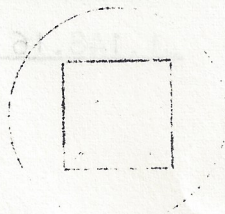
CALENDAR OF EVENTS

- December 9 - Wednesday - 8:00 PM - Regular monthly meeting at Ridgeview Junior High, Rosewood SE and Burton. This is Ladies Night, which doesn't mean that the men should stay home. Come and see what the ladies have in store for you.
- December 14 - Monday - 8:00 P M- Board of Control meeting at home of Miss Marie Spielmaker, 4680 Burlingame. S W
- December 25 - A MERRY CHRISTMAS to all of you from the staff of the GLACIAL DRIFTER
- January 1 - And A HAPPY NEW YEAR too.
- January 13 - Wednesday - Regular monthly meeting. Richard Damstra in charge of program
- January 18 - Board of Control meeting
- January 28 - Mineral Study Group meeting at the home of Mr & Mrs Robert R. Rozema. Mrs. Nellie Mead will give a report on chapters 4 and 5 of ELEMENTS OF GEOLOGY. (NO meeting in December)
- July 1965 - Last week-end - Midwest Federation Silver Jubilee Convention - Evansville, Indiana

* * * * *

Shop Helps

Did you ever want to have a quick way to change from sanding to polish? Just get some scrap steel 1/8 inch thick and cut into 3 inch squares, and then drill 4 fourth inch holes at corners and a hole in the center and tap same as thread on spindle of your arbor. You will be able to use the complete top.



A. Wendt

FINANCIAL STATEMENT

THE GRAND RAPIDS MINERAL SOCIETY

BALANCE IN BANK SEPT. 1, 1963 ,343.49

RECEIPTS SEPT. 1, 1963 THROUGH AUG. 31, 1964

memberships	420.00
Advertising in Glacial Drifter	63.00
Rock table sales	24.35
Silent Auction	283.54
Sale of chances	208.95
Sale of Club Emblems	21.75
Sale of Books	12.00
Sale of Subscriptions	16.95
Miscellaneous	<u>85.58</u>

TOTAL RECEIPTS: 1,136.12 \$1,136.12

\$1,479.61

DISBURSEMENTS SEPT. 1, 1963 THROUGH AUG. 31, 1964

Glacial Drifter Expenses	249.46
Annual show expense	58.02
Annual show insurance	50.00
Midwest Federation dues	33.00
Midwest Federation Convention expense	50.00
Annual rental	173.00
Program expense	63.33
Junior Program expense	222.56
Science Fair awards	40.00
Conservation scholarship	36.00
Petoskey stone pen set	30.02
Treasurer's Bond	10.00
Mich. Corp. & Securities	
Commission filing fee	5.00
Miscellaneous	<u>127.77</u>

TOTAL DISBURSEMENTS: 1,148.16 \$1,148.16

BANK BALANCE AUG. 31, 1964

\$331.45

TO: Fellow Members, Grand Rapids Mineral Society:

You will recall that the Society decided to continue the Junior Program, carried out so successfully and with great dedication by our late President, Les Pearl, and continued last year by volunteers from the Club.

Fortunately, Russ Girard is continuing with the Lapidary Classes and we have obtained the services of Mr. Richard Winar, a local geologist, to supervise the program each Saturday. Unfortunately, for our Club however, Mr. Winar must make his living as a Consultant in the Field of Geology and cannot assure us of his availability every Saturday. Consequently we should have one or more of our members present to help or to take over the program in the event that Mr. Winar is unable to attend. We will also welcome volunteers, who could drive on the Saturdays of the Field Trips.

If you will look over the schedule set up for the Junior Program you will see that we have attempted a coordinated approach to the fundamentals of Geology. We have also provided for a short education program by one of our members. Thus a typical Saturday for the Juniors will include some formal Geological studies plus a short movie, slide program, working demonstration, or some other type of entertaining as well as educational program, provided by the Mineral Society. This should provide a well rounded, interesting twenty weeks for the Junior group.

We need more volunteers. It will be much easier for us and more beneficial to the Juniors if we can have three or four adults present each week. We need people who can wander around helping those that need help or who can sit at a table and help with identification etc., You will not be asked to present a program unless you wish to, you are not expected to be an expert, in fact I can promise that you will learn much by helping.

Unless the museum finds it necessary to relocate the class the sessions will be held in the East museum Building from 10:00 to 11:30 a.m. each Saturday.

If you can be of any help with this worthwhile program please contact me.

Richard W. Rose
EM1-6193

SCHEDULE FOR JUNIORS AT THE MUSEUM 10:00 to 11:30 A.M.

Grand Rapids Mineral Society Committee Chairman:
Richard W. Rose

EM 1-6193
EM 1-7265
458-7744
949-5357

Geologist in charge of Program: Richard Winar

Nov. 7 INTRODUCTION TO GEOLOGY
Outline program, set up project for March show. Start collections. Comments on proposed field trips. Begin study on rock types and minerals. Richard Winar
(continued next page)

SCHEDULE (continued)

- Nov. 14 ROCK TYPES AND IDENTIFICATION. Stress on minerals
Lowell Palmer GL9-3856
- Nov. 21 ROCK TYPES - Stress on Igneous Richard Damstra 361-8895
- Nov. 28 ROCK TYPES Stress on Sedimentary.
Talk on Calcite Jim DeZwaan CH3-3711
- Dec. 5 FIELD TRIP Gravel Pit Casey Doornbos 949-5069
(Can get into Coit Ave., new pit at Plainfield Bridge
50% rock.) They will be using a dredge by summer.
Now open pit.
- Dec. 12 ROCK TYPES. Exhibit assignments.
Demonstration on polishing Petoskey stones by hand
and with simple equipment Gerald Morris GL2-3889
- Dec. 19 FOSSILS Talk on fossils (about one hour)
Mrs Nellie Wead GL9-2016
- Dec. 26 and Jan. 2 No sessions
- Jan. 9 Review. Test on Rock Types and Identification
Slide talk on Geological history of Michigan
Richard W. Rose EM1-6193
- Jan. 16 LAND FORMS. Talk on Jade Henry Tchozeski EM1-1404
- Jan. 23 COLLECTING. How to and where. Talk on Beaver
Island Mrs. Elaine Smith 949-4093
- Jan. 30 PREPARATION FOR GYPSUM MINE. Talk on selenite
Bob Rozema 454-1010
- Feb. 6 FIELD TRIP. Gypsum mine or Storage
- Feb. 13 GROUND WATER Ed Burt 866-8041
- Feb. 20 LAKES AND STREAMS Conservation Dept. movie on Erosion.
- Feb. 27 EROSION
- March 6 VOLCANOES
- March 13 EARTHQUAKES, FAULTS, etc.
- March 20 GLACIERS
- March 27 FIELD TRIP Dr. Zumberge
- April 3 FINAL PROGRAM Mary Jane Dockeray EM1-2983
GL6-5494

TRILOBITES PART II by Larry Fegel

Common to most arthropods (segmented animals, bearing "armor", that had jointed feet) it is believed that the trilobite reproduced by the means of eggs. (Which came first I don't know). The female trilobite would dig a hole in the mud in which she laid her eggs. After the male fertilized the eggs, they were allowed to be covered with sand by the water. This covering served as camouflage for the eggs yet was loose enough for the newly hatched trilobites to emerge from the nest.

The trilobite larvae went through a metamorphosis of four stages. During the first stage the body contained six segments which later joined to form the cephalon. The trilobite formed its thorax in the second stage and its pygidium in the third. During the final state the trilobite possessed most of the characteristics that it would have throughout its life, although a few minor changes were still to be made.

The habits of trilobites are almost as varied as the trilobites themselves. Some trilobites swam near the surface while others crawled along the bottom or plowed through the mud.

A typical swimmer was the aeglina. It is believed that this trilobite was a night hunter. They hid by day then at night swam about the seaweed looking for food. Seeing was no problem for the aeglina as he had two large eyes which enabled him to see in every direction. The aeglina also provided its own light from circular organs on its topside.

The most common means of travel by the trilobites was crawling. This was accomplished by jointed legs on its underside. Some crawlers, such as the arctinurus, also plowed into the mud for food. Most crawlers had a shell which served as camouflage, but when danger was near they rolled into a ball exposing only the hard shell.

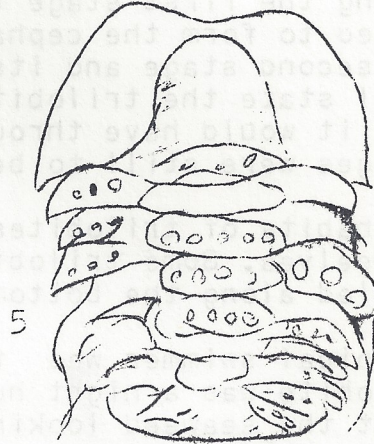
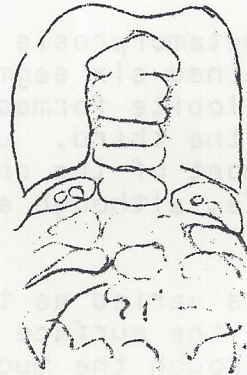
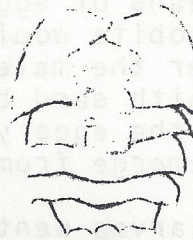
Most "mud plowing" trilobites probably had eyes high on the free cheek which enabled them to see while their "feelers" were probing the mud for food.

No matter if a trilobite was a swimmer, crawler, or plower; or if it had large eyes, small eyes, or no eyes, they mostly all lived in the sargasso seas of Europe and North America. A sargasso sea is a sea in which seaweed and other floating plants are abundant.

The stages of growth of the trilobite are pictured on the next page. The chart is from "The Fossil Book" by Fenton and Fenton.

TRILOBITES (concluded)

Stages of Growth



1. Larva (Newly hatched)
2. Formation of thorax
3. Formation of pygidium
4. Almost fully developed
5. Last stage of development, although not fully grown.

JUNIOR JOTTINGS

Larry Fegel's two-part article on Trilobites is concluded in this issue of the DRIFTER. He has offered to contribute an article on fossils each month for the next few months. Needless to say we are looking forward to reading them. We don't know which of the many fossils he will discuss next month, but you can be sure it will be interesting.

Any other of our juniors who have a special interest and are willing to write an article for this publication are asked to contact me.

(Mrs) Marilyn Damstra, Editor
"Junior Jottings"

DUES ARE PAST DUE

A number of members have failed to renew their memberships, we hope through an oversight. This is the last issue of the DRIFTER which will be sent to those who are delinquent. This is one more issue than is usually sent to delinquent members but we failed to warn you in the November issue. So take heed and get your money to our treasurer, Mrs. Lucile Pearl, no later than the December meeting if you wish to continue to receive the DRIFTER.

OUR TRIP TO MAMMOTH CAVE By Rich Van Beek

This is not a "collecting" trip in the usual sense. Since Mammoth Cave is in a National Park, Uncle Sam frowns on taking specimens. So our actual collecting was limited to a rock we picked up just before the entrance sign and a jar of red Kentucky sand which we scooped up along the roadside (outside the Park). Most of our "collecting" was done with our camera which does have a number of advantages: we can "take along" rocks which are either too large to be taken along any other way, or which are located where collecting is "verboten", and we can continue to view the rocks in their natural settings.

My mother and I left at about 8 AM on a hot Tuesday in September, and arrived in Cave City at about 7 PM CST, so it took us about 12 hours for the 450 mile trip.

We found excellent and very reasonably priced rooms in a motel in Cave City, 12 miles from the Cave. As our printed schedule of cave trips expired on Labor Day we inquired as to the new schedule. Since the manager of the motel had the same schedule as we had she said "I'll call up one of the guides and when you-all come back from eating I'll have the information".

We decided to drive out to the Cave and eat at the Mammoth Cave Hotel and get the "lay of the land" so we would know where to go in the morning. Along the way we saw several deer and in the parking lot they came so close we could hear their footsteps. Although our camera was beside us in the car, our flashbulbs were in the suitcase - so - no pictures.

It was our plan to take the "All Day Trip" (7 miles and 7 hours.) on Wednesday and return home on Thursday. Much to our disappointment we found that this trip is not available after Labor Day. As you can see from the accompanying sketch it is necessary to take a boat ride on this tour on the underground Echo River. The autumn rains cause this river to rise rapidly so the water often rises to the ceiling of this part of the cave. I said, "There haven't been any rains here lately, have there?" They said that they arbitrarily discontinued the trips involving boat rides after Labor Day and go on the "winter schedule" seemed rather strange to be on the "winter schedule" while the temperature was in the upper 90's. There were several shorter trips available on either side of Echo River, but none which required travel on this river. The longest trip available was the "Scenic Trip" (4½ miles and 4½ hours) but the schedule was such that it would not be possible to also take another trip on the same day.

On Wednesday morning with our camera loaded with Agfachrome film we headed for the cave. Since the Scenic Trip didn't start till 11 AM we had time to take a few pictures along the way. As my mother is unable to do much walking she stayed in the lobby of the hotel.

(continued next page)

MAMMOTH CAVE (continued)

From the visitor's center we were taken by bus to the Carmichael Entrance. As the cave temperature is 54° the year around we needed our jacket - and the extra pockets came in handy as we had them all bulging with flashbulbs. When approaching the entrance we could feel the cool air coming from the cave at quite a distance -- its really quite a breeze! The guides told us that air goes thru cracks and fissures in the ground, into the cave and out thru the entrances. When the temperature outside falls below 54° the air currents are reversed. We can see the Providence of God in this, for if the air didn't circulate, no life, animal or human, would be possible in the cave.

Upon entering the cave we go down a long flight of steps and enter the broad corridor known as "Cleveland Ave", whose walls and ceiling are covered with "Gypsum Flowers". The limestone here is porous and water containing calcium sulphate evaporates in the open pores near the surface depositing the calcium sulphate on the surface. These crystals are forced outward as more gypsum is deposited behind them. As these formations continue to grow they form "blisters" and eventually they burst and open into "Cave Flowers".

The 112 people in our group were soon in a line equivalent in length to several city blocks. I tried to stay near the front -- then I could stop when I wanted to take pictures, while the group passed by, and still not get behind the group as a whole.

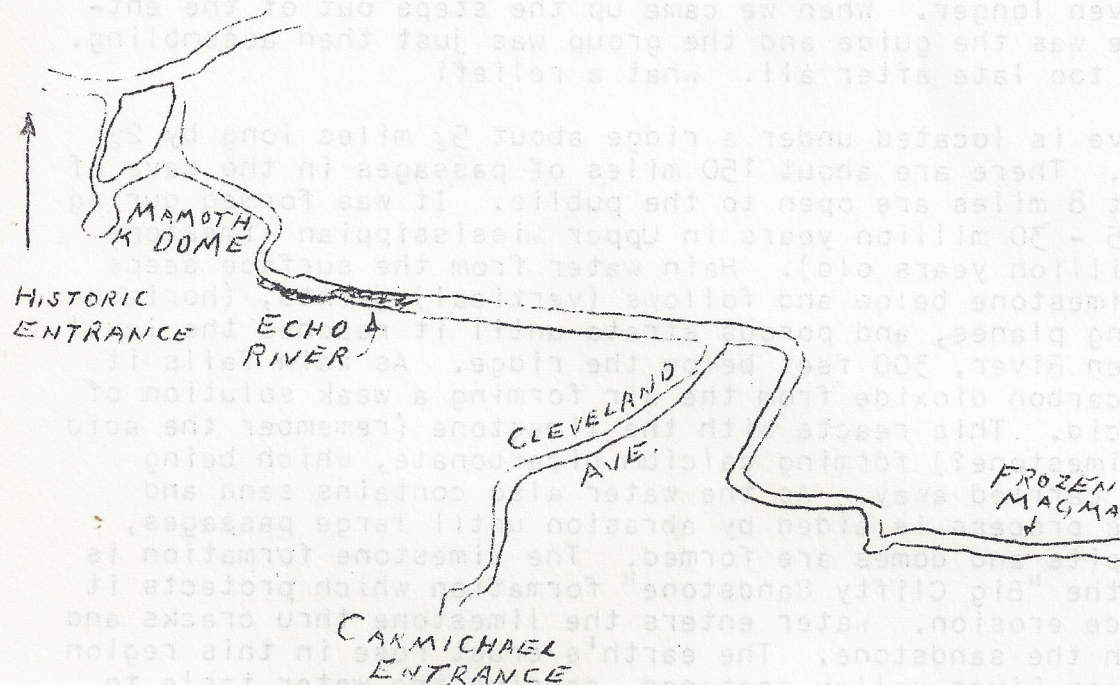
After about one mile we entered the "snowball Room", named after the gypsum "blisters" on the walls and ceiling. After a box lunch here, 267 feet below the surface, we continued down "Boone Ave." whose walls are over 50 feet high in some sections and only a few feet wide in places. We continued for several miles thru winding channels. In "Kentucky Ave." the path winds upward over a huge pile of fallen rock called Mt. McKinley. A little farther on the floor of the passage has fallen thru the ceiling of another subterranean passage below and we went down into the "Grand Canyon". Then we passed the inevitable "Lover's Leap" - no scenic attraction seems to be complete without one, and like all the others, no lover has ever leaped here.

Near the end of the trip we saw the travertine formations, the first of which is "Frozen Niagara" -- 75 feet high and 45 feet wide. This flowstone formation was formed thru centuries of deposition of limestone from water flowing and dripping down into this part of the cave over blocks of fallen rock. As the water seeps slowly downward thru cracks in the limestone it has dissolved calcium carbonate from this rock and evaporates upon being exposed to the air, causing the dissolved calcium carbonate to be deposited again as limestone.

If this water is suspended from the ceiling for some time, part of the calcium carbonate carried in solution is deposited to form an icicle-like formation called a stalactite. If part of the water drips before entirely evaporated a deposit is formed on the floor
(continued next page)

MAMMOTH CAVE (continued)

directly beneath the stalactite, called a stalagmite. If the two grow and eventually join they become a colonnade. Stalactites, stalagmites, and colonnades are known collectively as dripstone because they were formed by dripping water. When water flows over a vertical or horizontal surface, the resulting deposit of limestone is called flowstone.



After leaving Frozen Niagara we looked down at the green waters of Crystal Lake. We then saw a variety of dripstone and flowstone formations, which are concentrated in this part of the cave and are called Onyx Chamber, Onyx Colonnade, and the Drapery Room, etc. This part of the cave is very humid and we had trouble with our glasses "fogging" up. We then emerged from our 4½ hour trip thru the "bowels of the earth" and were taken by bus back to the Visitor's Center.

Although our original plan called for leaving Thursday morning, do a little sightseeing on the way home and arrive home Thursday evening, we decided to stay here Thursday morning and take the "Mammoth Dome Tour" beginning at 9 AM., which is the longest tour available at the northwest end of the cave. Since we had not intended to take another tour we had used up our entire roll (36 exposure) of agraphachrome film on Wednesday and had only a few more exposures left of Kodachrome for the trip home. We tried to buy more agraphachrome but it was not available around here so we settled for Kodachrome, although it is rather slow for flash photography of large areas.

(continued next page)

MAMMOTH CAVE (continued)

we purchased our ticket and rushed to the Historic Entrance, 250 yards down the path from the Visitor's Center, not waiting for the trip to be announced since it was about 9 o'clock already. The iron gate, located a few hundred feet inside, was locked and no one was in sight. Thinking we were too late, we decided to take our pictures of the cave entrance and other surface features first and then wait for the 11 o'clock trip, but it would delay our start for home even longer. When we came up the steps out of the entrance there was the guide and the group was just then assembling. we weren't too late after all. What a relief!

Mammoth cave is located under a ridge about $5\frac{1}{2}$ miles long by $2\frac{1}{2}$ miles wide. There are about 150 miles of passages in the cave of which about 8 miles are open to the public. It was formed during the last 25 - 30 million years in Upper Mississippian limestone (310-325 million years old). Rain water from the surface seeps into the limestone below and follows (vertical) joints, (horizontal) bedding planes, and porous strata until it reaches the level of the Green River, 300 feet below the ridge. As rain falls it dissolves carbon dioxide from the air forming a weak solution of carbonic acid. This reacts with the limestone (remember the acid test for limestone?) forming calcium bicarbonate, which being soluble is carried away. As the water also contains sand and gravel this process is aided by abrasion until large passages, chambers, pits and domes are formed. The limestone formation is capped by the "Big Clifty Sandstone" formation which protects it from surface erosion. Water enters the limestone thru cracks and openings in the sandstone. The earth's crust rose in this region and the Green River valley deepened, causing the water table to drop, and draining the upper parts of the cave. Also due to the dissolving action of water the surface area is pitted with an 10,000 sinkholes, which are cone shaped depressions from 50 to 100 feet in diameter and often filled with water, and is sometimes called by geologists "The Southern Sinkhole Plain".

The Historic entrance is the only known natural entrance to the cave. Legend says that the cave was discovered in 1799 when a hunter pursued a wounded bear into the entrance. A few hundred feet inside we came to a large chamber named the Rotunda, 139 ft. wide and 40 ft. high. Here are located vats which were used in the saltpeter mining operations during the war of 1812, producing nitrates used for gunpowder. In this part of the cave we hear a constant rumble caused by exhaust fans which draw the cool dry air from this part of the cave into the Visitor's Center for air-conditioning purposes.

Leaving the Rotunda we proceeded down Broadway -- 40 ft. high, 60 ft. wide and 3 miles long. Along the way we saw wooden pipes from the saltpeter operations, made by hollowing out the center of long straight logs. They looked as though they had been just recently stripped of their bark.

we then saw an Indian mummy, found in the cave in 1935, and artifacts found with him. carbon 14 dating showed him to have died about 400 B.C.

(continued next page)

MAMMOTH CAVE (continued)

In an aquarium are shown two of the blind fish found in Echo River. We passed thru the Hall of Humility where the ceiling is so low we had to stoop to get thru. When stooping everyone inadvertently puts their hands on the rock below for support. It is surprising what a polish this rock has attained merely from the friction of bare fingers. Of course, countless millions of people have come thru here since the cave was first opened to visitors in 1816.

We were even more impressed with this part of the cave than the part we were in the day before. Everything is on a much more massive scale -- passages, chambers, etc. Eventually we entered Mammoth Dome where we looked up at the ceiling, 192 feet above. We then climbed a stairway of 135 steps, built much like a fire escape to a higher level where another passageway took us back to the Historic Entrance.

After taking a few more pictures and eating dinner we started home at 12:30 (1:30 EST). We stopped to see Lincoln's birthplace at Hodgenville and "My Old Kentucky Home" at Bardstown. This latter was especially enjoyed by my mother. When we passed thru Louisville at 8 P.M. EST the temperature was still 92°.

After we were home and we had read the literature about the cave which we had obtained there; we realized that we had missed several things of interest. For example one can take a foot trail and see where the Echo River and the River Styx emerge from the ground to become surface streams and empty into the Green River. I don't think we ever enjoyed a trip as much as we did this one to Kentucky, but we should have planned to stay 2 or 3 days at the cave. The scenery is beautiful. We saw how God has used the forces of nature to carve out an underground wonderland. We hope to go again in the not too distant future and stay a little longer.

* * * * *

MINERAL STUDY GROUP

The members of the Mineral Study Group are really doing just that -- Studying. At the November meeting Mrs. Fay Reed did an excellent job of presenting the material from chapters 1, 2, and 3 of Dr. Zumberge's book ELEMENTS OF GEOLOGY. If members of the society are really interested in learning how to identify rocks instead of having someone tell them what they are time after time they would join this group at their monthly meetings. Maybe we don't learn everything in one easy lesson - but then, who does? EVERY interested person is welcome to meet with this group.

The next meeting of this group will be in January - we are not meeting in December because it is a busy season for most of us.

Remember, YOU are welcome to meet with us on Thursday, January 28 at the home of Mr & Mrs Robert R. Rozema. Mrs. Nellie Mead will have the lesson which will be chapters 4 and 5 of Dr. Zumberge's book. See you then.

R O Z E M A ' S R O C K P I L E

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FEDERATION

LETTER of the MONTH

CLUE BULLETINS - by Clive & Howard M Knight

This is not directed just at the editors of bulletins though they are very much involved, but to ALL members, as these bulletins can be, and are, very essential to the success of a club.

A bulletin can be very simple yet it can be more important to a club than any other thing. It can mean all the difference between a group that can quickly lose interest and fall apart, and a society that has purposes, aims, plans, etc., and that has stature in the eyes of others.

The object and purpose of a bulletin is to help its club. Don't worry about making it a state or nation wide publication. Concentrate on publishing the plans and doings of the club. The MWF Bulletin Contests have used as the ideal bulletin one that would be of maximum benefits to the club. This can be a single sheet reproduced by a gelatin duplicator or multipage using a mimeograph, depending upon the size and activities of the club.

Keep the bulletin as attractive and readable as possible and be sure that the following essentials are included:

The object and purpose of your club.

A list of your officers and where they can be reached.

Your meeting place location, and date and time of meetings

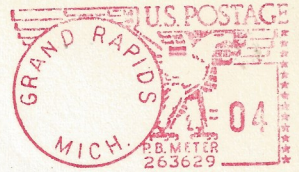
A list or calendar of coming club and Federation events.

See that copies of your bulletin regularly are given to the local schools and libraries. As the principal aim of a club should be to acquire and share knowledge about the earth sciences (this includes the lapidary art), it is necessary that others should know of your endeavors. The bulletin is a good way of accomplishing this.

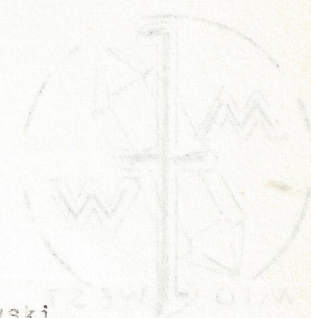
The editor should be an officer of the club so he can be aware of all plans and purposes and can help their fulfillment through the bulletin. He needs LOTS of help and cooperation and this helping is good for the club as the more members who help, the better the bulletin AND the club.

The Grand Rapids Mineral Society
1555 Hollywood N.E.
Grand Rapids 5, Mich.
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NOV 1957
TO
STANDARD



MONTHLY LETTER



Mr. Kreigh Tomaszewski
335 Richard Terrace S.E.
Grand Rapids 6, Mich.
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