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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)

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

Member - Bulletin Editors Association.

KALAMAZOO CLUB MEMBERS TO FURNISH MARCH PROGRAM

At our regular monthly meeting to be held at Ridgeview Junior High School, Rosewood at Burton S E, at 8:00 P.M. on Wednesday March 10th we will have as our guest speakers Mr. & Mrs. Raymond Douglas of Battle Creek. Ray is Vice-President of the Kalamazoo Geological & Mineral Society and Eleanor (Mrs. Douglas) is their bulletin editor.

Mrs. Douglas has a micromount collection that is the envy of many a micromounter and will bring a number of her tiny specimens for you to see. (Come early to get a view before the meeting), she will demonstrate the method of selecting and mounting one of these micromounts.

Ray and Eleanor also have a very outstanding mineral collection and will show slides of some of their specimens.

THIS is a meeting you will not want to miss.

Of course, Joe Parish will be there with door prizes.

If there are enough entries in each category (Junior and Adult) there will be a Lapidary-of-the-Month competition.

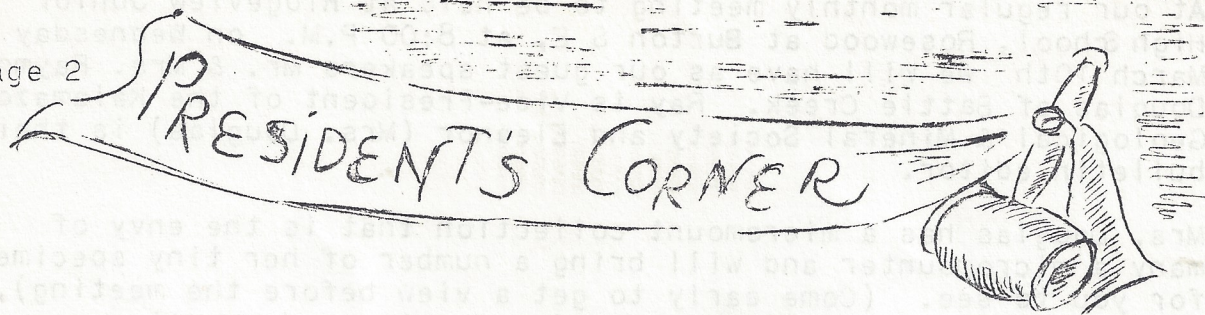
Our secretary, Jane Cichaniewicz, will be on hand to take your subscription for the Lapidary Journal and Earth Science magazines. If you make out a check for these subscriptions, be sure the one for the Lapidary Journal is made out to the GR Mineral Society in the amount of \$5.25 for a One-year subscription. Jane will also have CLUB EMBLEMS for sale at 75¢ each. Wear your club emblem when attending the meetings and also when at the Museum during the show. Let's let the general public know who our members are.

FIELD TRIP REPORT

Flu and Fog reduced the number of members who attended the field trip to MSU on February 7th. We are sorry so many of you missed this fine opportunity to see the displays Dr. Stonehouse had arranged for us. There were students in each of the class rooms to explain the particular function of that phase of the study and to answer questions of the members. Microscopes were set up with slides containing specimens of rocks and sands to give the viewer an idea of what minerals made up the items shown.

We are planning a field trip for May 1 and 2 to Brown County, Indiana to collect geodes. We will meet in Nashville and proceed to the hunting areas from there. Nashville is in the picturesque Cumberland Hills region and is known for its artists' colony and native industries of weaving, pottery, etc. Brown County State Park is south of Nashville and has excellent camping facilities. More details in the April DRIFTER.

Marie Spielmaker, Field Trip Chrman.



Time again for our annual show at the Grand Rapids Public Museum. Just a word to new members - any and all mineral specimens are welcome; even one or two treasured items are important contributions to the success of this enterprise. The same pertains to lapidary, one or more pieces of jewelry or carvings will be welcome and displayed to the best advantage. Don't worry about signs or name cards, they will be made at the museum. If you have never made an attempt in trimming a window - don't worry - we'll have some pro help that will make your job a snap. So don't hesitate - get your application to Nellie Mead and let's have a really big show!

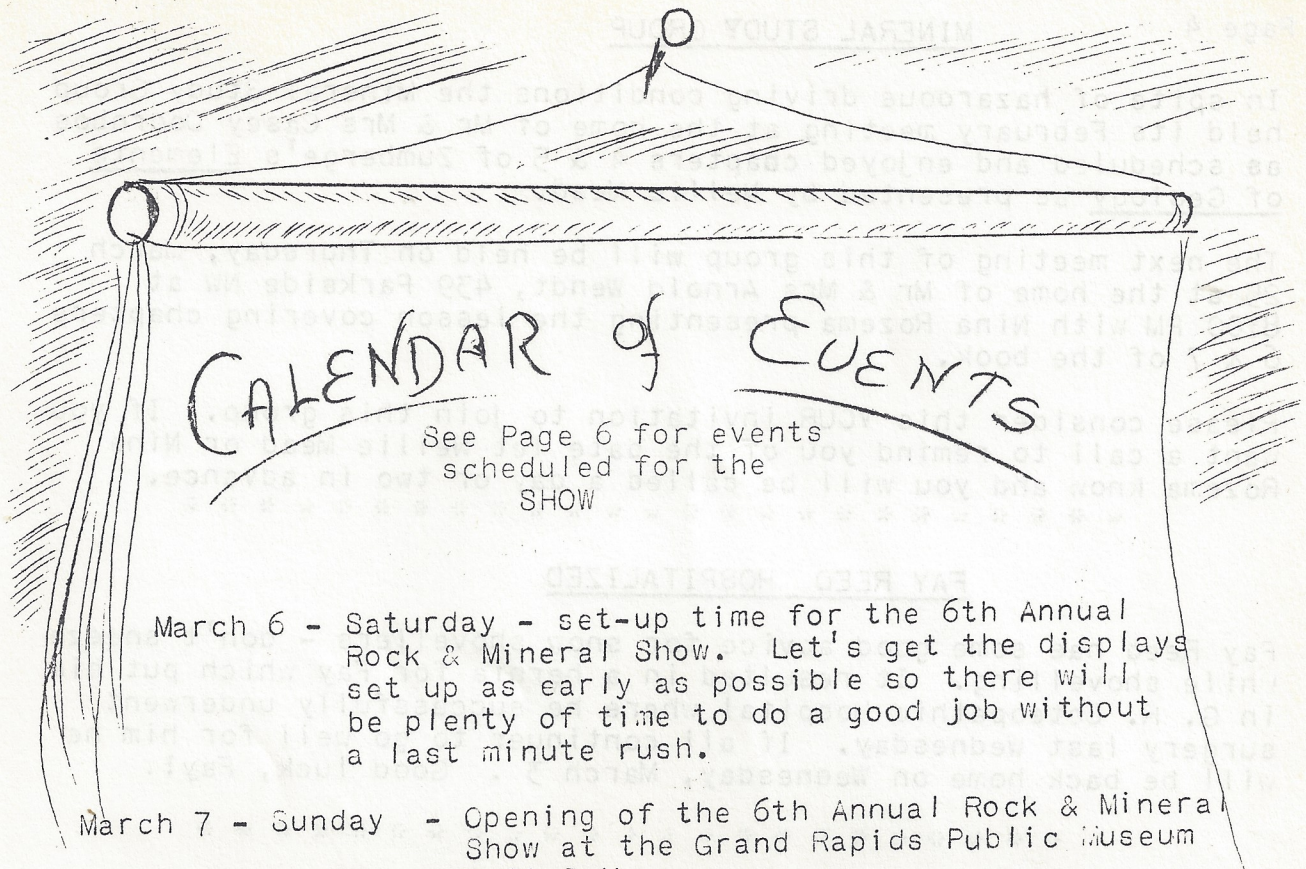
Catholic Central High School was honored this week by two talks on Earth Science and basic geology by none other than that world famous and outstanding master of geology, Dr. Richard Rose.

This Dick Damstra man did a mean job of leading the band at our last meeting. Should do it more often Dick!

Our first meetings at Ridgeview were free of all parking worries. Then came basketball and the hordes descended! Talked to Mr. Kooiman, principal, and he gives us free reign to park on the north side of the school as well as the south side. The north side parking is usually used for teachers only, but on our meeting nights feel free to park there. We'll have to walk around the building but its all under cover so bad weather is no problem.

The next event of major activity after the show is our annual meeting and the election of officers. Had a suggestion from a member that the pain of this annual event could be eased somewhat if the Board of Control elected the president and vice-president. This would not, however, eliminate floor nominations. Remaining officers would be filled in the usual manner. Give this proposal a think or two and voice your opinion. There is nothing in our by-laws that says this could not be done, your comments on this will be appreciated.

Jerry Morris



# CALENDAR of EVENTS

See Page 6 for events  
scheduled for the  
SHOW

March 6 - Saturday - set-up time for the 6th Annual Rock & Mineral Show. Let's get the displays set up as early as possible so there will be plenty of time to do a good job without a last minute rush.

March 7 - Sunday - Opening of the 6th Annual Rock & Mineral Show at the Grand Rapids Public Museum 2:00 P.M.

March 10 - Wednesday - Regular Monthly Meeting at Ridgeview 8:00.PM Junior High with Mr. & Mrs. Raymond Douglas of the Kalamazoo Geological & Mineral Society as guest speakers.

March 15 - Monday - Board of Control meeting at the home of 8:00PM Mr & Mrs Robert Rozema, 1355 Hollywood N E

March 25 - Thursday - Mineral Study Group Meeting at the home of 8;00 PM Mr & Mrs Arnold Wendt, 439 Parkside N W

March 28 - Sunday - Close of the 6th Annual Rock & Mineral Show. Please remove your display from the Museum as quickly as possible after the doors close at 5:00 P.M.

May 12 - Wednesday - Annual Meeting of the Grand Rapids Mineral Society. Potluck dinner and election of officers. And, of course, an excellent speaker.

May 1-2 - Saturday - Field Trip to Brown County Indiana for  
Sunday geodes

July 29-30-31- August 1 - 25th Annual Convention and Silver Jubilee of the Midwest Federation in Evansville, Indiana

MINERAL STUDY GROUP

In spite of hazardous driving conditions the Mineral Study Group held its February meeting at the home of Mr & Mrs Casey Doornbos as scheduled and enjoyed chapters 4 & 5 of Zumberge's Elements of Geology as presented by Nellie Mead.

The next meeting of this group will be held on Thursday, March 25 at the home of Mr & Mrs Arnold Weridt, 439 Parkside NW at 8:00 PM with Nina Rozema presenting the lesson covering chapters 6 & 7 of the book.

Please consider this YOUR invitation to join this group. If you want a call to remind you of the date let Nellie Mead or Nina Rozema know and you will be called a day or two in advance.

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FAY REED HOSPITALIZED

Fay Reed has some good advice for snow shovellers - don't sneeze while shovelling. It resulted in a hernia for Fay which put him in G. R. Osteopathic Hospital where he successfully underwent surgery last Wednesday. If all continues to go well for him he will be back home on Wednesday, March 3. Good luck, Fay!

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JUNIOR JOTTINGS

Dear Junior Readers:

This month we have another article by Larry Fegel, our Junior Fossil Expert, on THE AGE OF COAL. We wish to thank Larry for this fine contribution.

The Museum class is rolling along, with good attendance and interest, both in the geology lessons and the lapidary arts taught by Russ Girard.

We hope all juniors will have something in the Annual Show. Why not label your displays to indicate that you are a junior (show your age on your name card with your display) so that the younger visitors to the show may see what a young person can accomplish.

We do need an article for the April DRIFTER. Won't you help us out? Please let me know.

Sincerely,

Marilyn Jamstra, Junior Jottings Editor

With the close of the Devonian period came the Mississippian, during this period much of North America was covered with inland seas with lowlands in the East. The major plants were lycopods, ferns, and seed ferns. There are very few fossils from this period and most are of poor grade. The Mississippian period lasted about 30 million years after which followed the Pennsylvanian period.

The Pennsylvanian period had many swamps, the reason being seas which still covered the land were being filled by sediments, and bottoms of basins were sinking, the result - vast swamps over the land.

These swamps provided an ideal environment for the coal forming plants, which decayed and formed peat. There were very many varieties of plants during the Pennsylvanian period. Probably the most common were the Lycopods, club mosses and ground pines.

The Lepidodendron, a tree that grew to a height of 100 - 125 feet, was a straight tree that formed two branches which then formed two more branches. On young parts of the Lepidodendron were leaves that were very sharp and resembled scales. This was the origin of the name "Lepidodendron" which means "scale tree". Lepidodendron reproduced by spores from long cones. Lepidodendron is a genus name with the species determined mainly by the scale-scars.

A familiar Pennsylvanian plant is the Calamites. You have seen their descendants in the fields or along railroad tracks, we call them horsetails or scouring rushes. These are the plants that can be pulled apart at joints along their stalks.

Calamites, chief genus during Pennsylvanian period, grew from 2 to 40 feet high. This was a smooth plant or with vertical epidermal ridges. The width of the Calamites varied as much as the height. Some Calamites (most common) are about 3 inches in diameter or less although some reached a diameter of 10 to 12 inches thick. The Calamites resembled the corn in its external structure, the main stalk was supported by prop roots which grew from the base of the stalk. Like the corn some Calamites did not branch although certain species did. The leaves were slender and grew from the stalk in bunches.

Lepidodendron and Calamites were two of the common plants during the Pennsylvanian Period although there were many more like the ferns, mosses, and pines.

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6th ANNUAL GEM AND MINERAL SHOW

MARCH 7th thru MARCH 28th

Grand Rapids Public Museum

Mrs. Nellie Mead, our Show Chairman, has many good programs and demonstrations scheduled for your enjoyment. They are listed below



- March 7 - Sunday - Mr. James Marron Meteorites  
(Museum Auditorium)  
- Silversmithing demonstration
- March 13 - Saturday - Dr. Richard W. Rose Story That The  
(Auditorium) Rocks Tell  
- Jerry Morris Petoskey Stones  
(demonstration)
- March 14 - Sunday - August Post Aqates  
(Auditorium)  
Ernie Gifford - demonstration
- March 20 - Saturday - Lowell Palmer Around Lake  
(Auditorium) Superior  
- Junior Lapidary demonstration
- March 21 - Sunday - Prof. John Lucke Atlantis  
(Auditorium)  
- Four Damstras Cabochons  
(Demonstration)
- March 27 - Saturday - Mr. Weldon Frankforter, Museum Director  
- Ice Age Animals in Michigan  
- Mr. Henry Tchozeski - Identification
- March 28 - Sunday - Dr. & Mrs. Robert B. Smith  
and Family Septaria  
- Junior Lapidary demonstration



San Pedro, California  
January 31, 1965

Dear Bob and Nina:

It has been some time since I have written you and I do want to keep in touch with friends and members of the Grand Rapids Mineral Society.

I finally went on a few rock field trips with the club and really enjoyed myself. Fall and winter are the best times to go to the desert because then it is not so hot. In October we went to the Calico mts., north east of Barstow, the area described on page 18 of the January 1965 issue of Gems & Minerals. The ground is covered with jasper, agate, and chert, but you have to look for petrified wood and palm root. The weather reminded me of Michigan in June, not too hot during the day and balmy at night. I never realized the desert could be so beautiful.

In November most of the rock clubs of southern California make Thanksgiving weekend (4 days) a must for a field trip. The club I belong to have been going to Wiley wells every year and that is where we went this time. I never saw so many rockhounds together at one time. The group we were with looked for fire agate in the Mule Mountains, see April '64 issue of Gems & Minerals. Needless to say, the area had been pretty well picked over since the article was printed altho we did find some. Most of the members here use pickup campers on trucks and some tow a jeep which are necessary to get to some of the good picking areas. We traveled trails with our little Rambler that were meant for jeeps only but outside of being shook up and eating dust had no trouble.

For Thanksgiving dinner all the club members pool whatever food they have for a potluck dinner and as is usually the case there is always lots left over and every night we have a large campfire that we all sit around till bed time. These are all dry camps (waterwise). You have to bring it with you. I still have to see my first snake and scorpion altho some have seen them. It is beyond me to describe the grandeur and beauty of the desert and it has to be seen to be appreciated.

I am enclosing a copy of our club bulletin and a page from the L. A. Times that might be of interest to you.

I enjoy the DRIFTER and members' letters that are in it very much and please know that we think of you and the club often.

As ever, your friends

Gus and Tess Beuker

Editor's note: Gus is still a member of our club even tho he lives in California. We notice from the club paper which he mentions in his letter that he is first vice president of the Palos Verdes Gem and Mineral Society and the newspaper clipping shows some of their member, including our Gus, looking over some of the materials picked up on the trips mentioned in his letter.

There are no rockhounds in Japan, none that is, as we express our interest in rocks and minerals hobby-wise. While rocks provide us a fascinating study or hobby, rocks mean a veritable life for them. Rocks are very important to them as a soil making, food providing element and as a basic construction material. Unknown to the Japanese nor understood by them is our rock collecting hobby. Their rock collections are mostly found in their schools or museums. They are an orderly mannered people and have neither the space nor the inclination to clutter their homes with rocks. (I'm speaking of my house not your's, of course!) Our English speaking guide, Yoshiharu Okumura, says his wife throws out any rocks his son sneaks into his room in order to correct his untidiness, and threatens his shell collection if found out of its box!

Yoshi became interested in collecting rocks enroute and was helpful and obliging even though some of his efforts were beyond the point of duty, such as the time he helped trim some rocks down to carrying size. It was quite a feat to first, find a hammer, then he led me down and out through a rear exit and found a place in an alley-like area where we could work without attracting too much attention. We only pretended not to see the group of curious onlookers wondering at the sight of two adults huddled under an umbrella pounding a sack of rocks into bits then separating them into piles on the curb. I made quick decisions as to the "keepers" we then boldly entered the side door of our hotel to prove we were not asylum bound.

Besides using rocks for commercial or industrial purposes, they are used artistically in several effective ways. Bon-tee-kai combines wood, corals, water, shells, and rocks in beautifully nature defying arrangements. Lacking marble, they use and sculpt clays deftly and are world renowned for their excellent ceramics and porcelain. The Japanese merit their high reputaas gardeners but especially in landscape gardening. At Kyoto's famous Ryoanji Temple a tourist's "must" is found in a notable example of "Kare-sansui". This particular garden contains only sparkling white sand and huge craggy unpolished rocks, one to three in a group. These barren boulders are arranged on the sand in such a manner as to give the impression of vast space, Unique to this picture is the fact that from any spot one stands, one of these rocks is always invisible. Like their temples, Americans are not too impressed with the 15th-century Zen type garden but the key to its fascination is simplicity and one soon becomes spellbound by its charm and spacial beauty.

At Tokyo's Chinzan-so garden we happened by as the workmen were placing some boulders newly transported from Kyoto. One of them was a beautiful schist valued at 50,000 Yen or \$600. We had language barrier troubles at this point but think that they meant that price included their transportation from Kyoto.

While Chinzan-so's 17 acres of landscaped loveliness is located  
(Continued next page)

NO ROCKHOUNDS

within a frantic 15 minute taxi-cab ride from the center of Tokyo, we seemed to have arrived in a fairyland. Rock bordered ferruginous graveled paths led us through an hour and a half tour of the grounds. We enjoyed the sight and smell of steep hills with persimmons, tea bushes, bamboos, hollies, manzanitae, and pungent ferns. Beautiful rocks - both natural and formally arranged - enhanced streams, waterfalls, lily ponds and fish pools, replete with a flower, moss and rock bound artificial lake. This unique setting includes a small temple and shrine, a three storied pagoda, stone garden lanterns, rose arbors, many individual outdoor tea and dining areas, also outdoor grills, accomodating up to 300 diners. We ate a delicious twenty course Genghis Khan barbecued beef and chicken dinner at Chan-no-yu, one of the outdoor grills. This was a lengthy though enjoyable experience lasting through a silhouetted sunset until a full moon rose above and we went inside to see some amazing sights in fabulous Convention Hall.

Chinzan-so means "mansion on the camel's back" and doesn't refer to the Convention Hall as it might aptly be described. Fortunately, our host, Mr. Iitsuka, knew the 'right' people here and obtained permission for us to watch them making their preparations for a 300-guest sized party. We should have taken pictures, but as was too often the case, we left our flashbulbs at the hotel.

In the center of the Ridgeview Auditorium sized dining room stood a huge table covered with a glistening white linen cloth. I'd hate to have to iron a cloth that size for the table measured nine by twelve feet! Out on one corner of the table stood a lovely shaped etched glass bowl holding an iced 36-inch long raw fish. It bowed gracefully enough with head and tail pointing upward, but ugh - its eyes were wide open!

The artists had just finished creating the center piece and were checking the final effect, balance, and colors. No weak words of mine could adequately describe the results of their ardent creativity. For this the artist and his five assistants had used natural materials, including flowers, water, tiny fish in a pebbled pond, also a small waterfall over satin smooth jasper, manzanitae, and course white sand. He said part of them had only worked half time on it but he himself had taken about seven hours to complete this lovely structure.

Didn't think a "rockhound" could travel so many miles without buying some rocks but this is just what I feared would have to happen to me until Kikko. All temples and shrines have tourist gift shops selling everything except rocks but here at Toshogu Shrine being near a quarry, an enterprising miner had brought over some chunks of purite laden material so I gleefully bought some small pieces. Weeks later at a tempura lunch I bit into what I thought was another odd shaped tea cake only to discover it was a ceramics chopstick holder! Funny? Indeed! Well 60 Yen bought it, added to the 30 Yen purite, totalled only 25 cents.

(concluded next page)

NC ROCKHOUNDS

Each day of our trip seemed to be the best but was always bettered by a more interesting and eventful day following, so pin pointing "high lights" in general would be difficult. Specific highlights however, are easily noted and labeled "fossils collected": Did I buy some nice fossil specimens? The answer is no as there were no rock shops and I consider myself very fortunate to have spoken to any Japanese who understood even the difference between fossils and any other rocks or ishiya (ee-she-yuh). Well, "all's well that ends well", and after anxiously awaiting beyond the reasonable three months, the boxes containing twenty fine fossils arrived from beautiful Japan!

Half of my highly prized collection was given to me by paleobotanist, Dr. Tatsuaki Kimura, vice president of Mejiro College, who also presented me with autographed copies of his writings on Mesozoic and Triassic Floras of the Japanese Islands. The other specimens were gifts from Ienori Fujiyama and Iduo Obata, Ueno Park Natural Sciences Museum paleontologists with whom I had lunch after which I enjoyed a never-to-be-forgotten two hours seeing some fifty thousand specimens in their basement storage rooms. The Museum's paleontology hall we had visited before lunch, was of modest size and was crowded with students diligently sketching and taking notes there, due to their lack of textbooks on the subject.

\* \* \* \* \*

PROGRESS REPORT - VILLA MARIA

Some time ago, before he moved to California, Gus Beuker suggested that the club present a program at the Villa Maria. He knew they would like to have it. Gus moved before he could carry out the project. When Jerry Morris became president, he decided to finish the job for Gus and gave a talk on -- you guessed it! -- Petoskey stones. The girls were so much interested that Jerry started Wednesday classes, which meet every Wednesday evening except the nights of the regular meeting of the Mineral Society. At first the girls polished preforms by hand. Now they are graduating into the forming of cabs. They have at present two sanding units with ten discs. The carpentry work and plywood for the sanding units were donated by Joe Parish.

Some time before Christmas, Anne and Ernie Gifford took out findings and various types of stones one Sunday afternoon and helped the girls turn them into salable items for a Christmas Carnival. This gave the girls the idea of eventually being able to pay their own way in materials and findings. Nina Rozema and Esther Hall gave one Wednesday evening to teach the girls how to make chains suitable for charm bracelets or necklaces.

There are 86 girls at the school at present, and they are now coming to realise that a rock is not just something to walk on. There are surely members of our club who have a few rockhounding slides to show, samples to contribute, materials they do not plan to use such as heels left over from slabbing, or can help the girls learn some simple skill which does not require much equipment. Because of the snowballing success of this project which started in such a small way, the Villa Maria Guild has now offered to give some assistance in obtaining equipment. Look what we started! What can you do to continue the good work? Call Jerry Morris and let him know what you will do to help our new rockhounds. ER

THE METAL OF MAN'S DREAMS -

- by Barb Roys

## Chapter II Part 1

Man has been searching for gold throughout recorded history. This is not surprising, since this bright yellow metal has been the mark of wealth for some thousands of years in all the great civilizations of which we have any knowledge. Avaricious creature that he is, man - however - was not content to work hard at mining gold and smelting it from ores. Instead, he also tried "magic" or the next thing to it to produce some of the precious substance. Thus during the Middle Ages a whole science, called "alchemy," grew up around the efforts of men to create gold from baser materials by artificial means. Confined to a strictly narrow definition of the term, alchemy meant the making of gold and silver from inferior metals by transmutation. Actually, it stands for the whole chemistry of the Middle Ages. It appears that the idea of transmutation or conversion of everyday materials into gold or silver originated with the Greeks of Alexandria. We have a few documents left over from these men that show some recipes for forming metal alloys which would have the general appearance of gold.

Let us see how the alchemists reasoned and went about their attempts at making gold. Basically, the theory of alchemy was this. It was believed that all substances are made up of one primitive matter. The specific difference between various elements - such as the difference between gold and iron - was due to the presence of diverse individual qualities that had been imposed upon this primitive matter. This theory appeared simple enough. With it in mind, the Alchemist then "logically" hoped to obtain the primitive substance proper by taking away all the extra unnecessary qualities that were pertinent to whatever substance he was working from. Once he had this primitive matter, he could then easily produce gold by simply adding the properties appropriate to gold. This basic theory at least appeared to make sense, even if it were inaccurate - but from here on the science departed into realms of fancy outright. Quite early, for reasons not clearly explained, alchemists picked out as the primitive matter mercury. Of course, not ordinary mercury, but the so-called "mercury of the philosophers". This "primitive matter" was the essence or soul of mercury, from which the alchemist had removed the four Aristotelian elements - earth, air, fire, and water. Not really the "elements" themselves, naturally, but rather the qualities which they represented. This meant that the alchemist had to remove from ordinary mercury these qualities: earth - or an earthy principle or quality; water - or a liquid principle; fire principle, and finally fix the results so far by taking away air or a volatile principle. The "primitive matter" resulting from the preceding work had to be treated with sulphur - either in pure form or a sulphur - arsenic mixture. This treatment was to confer upon the primitive matter the qualities that were missing, or - in other words - turn it into gold or silver. (continued next page)

METAL OF MAN'S DREAMS

This sulphur, like everything else in this complicated process - was not ordinary sulphur, but some "Principle" derived from the chemical. It constituted the philosopher's stone or elixir (very essential for making precious metals - white for silver and yellow or red for gold. It was fervently hoped and quite widely believed that after this last treatment the alchemist would be rewarded by gold or silver.

This is briefly the prevailing doctrine that all metals were composed of gold or silver. It may not make much sense to us, considering all the vague qualities and principles to be added or removed, but then - doubtless - the alchemists themselves knew even less about what they were doing. As we said - this was the basic theory - but it did have numerous variants - what was considered earthy principle by one man (for example) was not necessarily considered that at all by the alchemist in the next town... and so on. However, muddled tho it was, this theory persisted in one form or another down to about the 17th Century. After this regular chemistry had more or less developed, with alchemy only as a sideline. It must be remembered that there were numerous variations and refinements on the basic theory. As, for example, take the Speculum Naturale of Vincent of Beauvais - around 1250. There, it is said, there are four spirits: mercury, sulphur arsenic and sal ammoniac - and six bodies: gold, silver, copper, tin, lead, and iron. Of these six bodies, the first two - gold and silver - are pure and the last four impure. Pure white mercury - according to Vincent of Beauvais - when "fixed" by white non-corrosive sulphur supposedly produces a substance in mines that is changed into silver by fusion. Following the theory out -.. lined above, when united with pure red sulphur this mercury forms gold. Various other kinds of impure mercury and sulphur form the other four bodies. Vincent in his writing attributed to Rhazes the statement that copper is potentially silver, and anyone who can eliminate the red color can bring copper to its natural state of silver, inasmuch as the metal is copper in its outward appearance only, but in its inmost and real nature - silver. Later, according to other theories as in the works attributed to Basil Valentine - sulphur, mercury, and salt were held to be the constituents of metals.

Alchery and astrology were closely related in some places because of the belief by the alchemists that each of the heavenly bodies represented and controlled a particular metal. For example - doubtless due to its golden color - the sun was thought to represent gold, while the moon, being a silvery planet, controlled silver. Mars stood for iron - probably due to its reddish appearance, reminiscent of iron-bearing earth. Venus represented copper, Jupiter - tin, Saturn, lead, and Mercury controlled the metal mercury - quick-silver. Positions of these heavenly bodies were believed to produce success or failure in the alchemist's work by those who followed this theory.

(The second part of Chapter II of this article will appear in the April DRIFTER)

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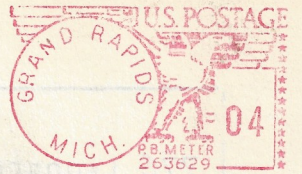
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