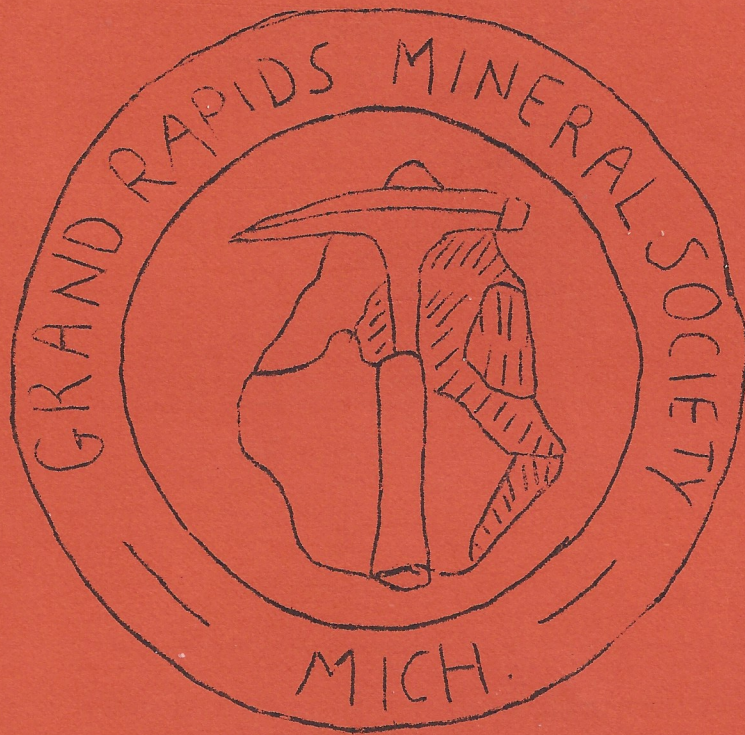


Volume 9, no. 5 ~ January, 1967



the

GLACIAL

DRIFTER

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

Meetings are held the second Wednesday of each month at 8:00 PM at the Grand Rapids Public Museum, Main Building. Summer meetings at various parks as announced.

Membership dues are \$3.00 per year for a family, \$2.00 for single adult, and \$1.00 for students under 18 years of age. Dues are payable to Treasurer-year is from Sept. 1 through August 31 of the following year.

Advertising in the GLACIAL DRIFTER is at the rate of \$3.00 per issue, September through May only.

All material for publication shall be in the hands of the Editor no later than the 25th of the month preceding the publication, unless an earlier closing date is announced.

Permission to reprint articles appearing in the GLACIAL DRIFTER IS HEREBY GRANTED, PROVIDING PROPER CREDIT IS GIVEN.

Member--National Bulletin Editors Association.



JANUARY MEETING -- A NEW YEAR SPECIAL!

New place -- exciting program -- that sums up a January meeting you won't want to miss. The program will feature Patent Attorney Peter Price with his slides and tales of "Rock Hunting in the Rocky Mountains". Mr. Price is noted for finding the specimens he wants, and lots of them, and he has promised to bring a number of them for display. The meeting, starting promptly at 8 p.m., will be held in the new auditorium in the East Building of the Public Museum. See you there, on Wednesday, Jan. 11.

MONDAY, Jan. 16, 8 p.m., Board of Control, Henry Tchozeski, 2941 Edgewood

NE

WEDNESDAY, Jan. 18, (note change of date), Lapidary Group, place to be announced at meeting, or call Elaine Smith, 949-4073.

WEDNESDAY, Jan. 25, 8 p.m., Mineral Group, Arnold Wendt, 439 Parkside N.W.

The group is to begin studying a new textbook, "Getting Acquainted With Minerals", by English and Jensen.

PRESIDENT'S CORNER

The small group attending the December meeting on silversmithing by the Damstras enjoyed it immensely. Our thanks to both Damstras and to the other members who added bits of information.

Due to the snowstorm on Dec. 19 the Board of Control meeting was cancelled. Therefore, with March not too far away, Show committees will have to start working soon. We're relying on all of you to enter exhibits in the Mineral Show, March 4 to April 2. All ideas will be welcome.

Will the member who left the bag of Thompsonites on the Treasurer's table at the October meeting please claim them from me.

Our next meeting will be in the new East Building Auditorium--I know we'll be more comfortable there.

And finally, to all of you my best wishes for a peaceful, prosperous and happy New Year.

*Willie B. Mead*

FORMER MEMBER Dr. Denny Donnell writes that after two years of living in "riotous Berkeley" they are delighted to be back in the midwest (Missouri). "I continue to get more at rockshops and trading than I do collecting, but did have the fun of finding small amounts of Berkeley Hills pale blue-grey agate nodules, cinnebar streaks in a mine dump, and stibnite and metacinnabarite in the old mercury mine at Mt. Diablo. California is getting so over-run with people there are few places left to collect. We didn't get to the desert or the Sierras for collecting. We enjoyed the beaches and collected shells like they were going out of style. Some 50 species one morning down at Carnel. I also saw some 150 new species of birds, and we did enjoy much sightseeing."

MYSTERIOUS ALACHE TEARS --- SKITTEEN TRAUMAL

Scientists engaged in the development of space missiles are considerably interested in those little black nodules which are supposed to be obsidian, but which may not be, after all. After viewing one which had been expanded by slowly heating to 2300 degrees, and determining their origin in perlite, investigators have taken several to advanced laboratories in California for analysis and testing.

They expressed the idea that these nodules are not true obsidian, and that they may have a chemical composition which will be the answer to problems in the control of heat in high-speed and great altitude rockets. The mysterious appearance of the "tears" in flows of perlite is going to be investigated by top technicians who believe that this is one of nature's mysteries whose solution may bring a revolution in rocket manufacture.

--- "The Rockfinder"

AND WHAT DID YOU GET FOR CHRISTMAS? --- Speaking of Christmas presents, Dr. Robert Smith received one of the most unique gifts of the year --- a stone cannon ball! It is about 4 inches in diameter, of pinkish granite with what seem to be crystals of chlorite through it. The sphere was sent to him by friends in Germany who found quite a number of these objects when digging out the foundations for their new home in Lüneburg, which is near Hamburg. German museum officials have vouched for their being authentic cannon balls, but Dr. Smith is still trying to find out how old his prize specimen might be.

WHAT IS A KARAT? --- The Karat Mark is very important in getting a clear understanding of gold. Pure gold (24 karat) is too soft and easily scratched for jewelry making, and is usually alloyed to 18, 14, or 10-karat gold. When a piece is stamped 14K, it has 14 parts of gold to 10 parts of alloy. Jewelry stamped "gold-filled" consists of a base metal, usually a copper alloy, to which a sheet of karat gold is attached.

--- "Gems" Bulletin

BUMPY GRINDING WHEEL? Having trouble keeping your grinding wheel from becoming bumpy? This could be the result of bearing down too hard while grinding a cabochon---usually because you're in too much of a hurry. Try easing up a bit, especially if you are grinding a large stone. Another cause for bumpy wheels is that the grinding speed may be too slow.

---Flint Rock & Gem Club Bulletin

TIP ON CUTTING SOFT STONES: When you want to cut soft stones, such as marble, onyx or travertine, soak them in water from 24 to 48 hours before cutting them in oil. No oil will penetrate the rock and it can be polished more easily.

---Michigan Gem News

DINNER IN BIRMINGHAM, ANYONE? The G.R. Mineral Society is cordially invited to send two couples as guests to the annual banquet of the Michigan Mineralogical Society, to be held Saturday, Jan. 21 at 6:30 p.m. at the Birmingham Community House. This building is located west of Woodward and south of Maple in Birmingham. The featured speaker of the evening will be Neal Yedlin, one of the foremost micromounting authorities in the United States, and his topic has been announced as "Minerals in Miniature".

If anyone would like to attend, please call Elaine Smith, 949-4093, immediately, as the reservation deadline is now!

### SHOW TIME'S A-COMIN'

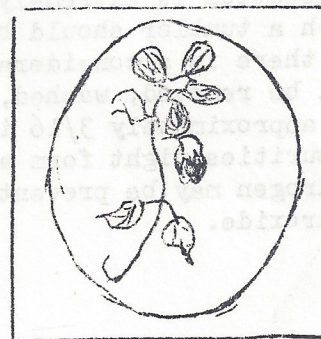
Think, THINK, THINK, -- what are you going to put into our March Museum show? You needn't be a lapidary expert or outstanding collector to participate--and the club must have a variety of exhibits from many members in order to put on a truly successful show. Here are a few ideas gleaned from a Niagara Falls show which anyone--even beginners--can do.

A miniature 20-mule-team and wagon was obtained from the Boron Co., Boron, Calif. (these were sold as toys, and formerly cost \$1--you'd have to write and ask if any are now available, and what price). Upon being informed that this was wanted for display in a rock club show, the company even sent along a box of fine samples with which to load the wagon. This was all set out on a long strip of wood covered with glued-on sand to represent the desert (with tiny rubber scorpions, etc.)--attractive and interesting and, with a little information on the product, educational too.

It doesn't cost much to buy assorted tumble-polished rocks by the pound. A number of the eastern exhibitors had built small plywood houses and covered them with polished stones to look like stone houses. Some were quite elaborate--jasper chimneys, petrified wood or onyx (not all polished) for doorways and window frames, planter boxes, even a Herkimer diamond "gaslight" on a "wood" post. One man had completely duplicated his own house and yard. It looked like great fun to do, and made a unique exhibit.

One artistic woman had combined flattened out bellcaps, bales, bits of wire, and tiny tumbles into lovely flowers, sprays and branches. Set onto the velvet backing in oval miniature frames, they were charming, one of the hits of the show. Again, an outstanding result with simple materials.

There are many things like this which any member of our club could do. Isn't this your year to help by getting an exhibit ready for the March show?



## TUMBLING GAS AND HYDROGEN EXPLOSIONS

(From an article in Earth Science by Robert S. Rowe, Dean of the School of Engineering, Vanderbilt University.)

Concerned by reports of frequent explosions in tumblers, Dean Rowe conducted a systematic investigation into their causes. Sixteen pounds of cryptocrystalline quartz, which had been previously tumbled and washed to remove all foreign material, was placed in a steel drum together with two pounds of 120 grit silicon carbide and sufficient water to just cover. Gas samples were then taken at 24, 48 and 72 hours of tumbling and analyzed by three different methods. In each case, hydrogen was found.

By the absorption and oxidation method the percentage by volume of hydrogen present was as follows: at 24 hours, 11.2%; at 48 hours, 22.7%; at 72 hours, 34.5%. An explosive mixture of hydrogen and air is formed if the percentage of hydrogen is from 4.1% to 74.00% of the volume of the total mixture. It is obvious that the percentages of hydrogen generated by tumbling fall well within these explosive limits.

An explosion could be caused either by a spark or by heat of absorption. Some metals will absorb large quantities of hydrogen on their surfaces; this action gives off considerable quantities of heat, enough to ignite hydrogen. Some self-lighting gas burners use this principle.

Many metals will replace the hydrogen in water. They join with the oxygen to form an oxide and the hydrogen is released. The hydrogen was formed in the tumbler in this way. The iron in this case was very fine particles ground from the steel drum by the abrasive. A rubber-lined drum would prevent this. However, if the material being tumbled contains iron, zinc or other metals, hydrogen could be generated.

Hydrogen may also be generated when iron or other metals are put together with a dilute acid, the hydrogen in the acid being replaced by the metal. During the tumbling process, dirt and other impurities often make the solution slightly acid and any metals in the tumbled material would produce hydrogen. This may be overcome by adding baking soda or sodium bicarbonate which will neutralize the acid. Also, since baking soda is an excellent cleaning substance, it helps in cleaning up after tumbling.

In conclusion, the utilization of unlined steel drums without proper inspection is extremely dangerous and should be avoided whenever possible. Such a tumbler should be inspected every twelve hours and any gas released. If there is a considerable amount of gas, it is recommended that the material be removed, washed, and the process started over again. A rubber lining of approximately 3/16 inch is recommended. If the presence of metal or impurities might form a dilute acid in lined tumblers, the formation of hydrogen may be prevented by the addition of baking soda or some other hydroxide.

--"Gems" of the Kalamazoo Geological and Mineral Society

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