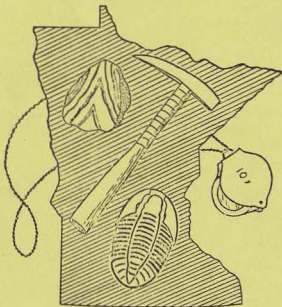


July-Aug. 1972



# NEWS

Geological Society of Minnesota

FIRST CLASS

MINNEAPOLIS, MINNESOTA



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Minneapolis, Minn. 55432



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July-August, 1972

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	Michael Vaclavek	3904 Joppa Ave., Mpls.	926-0185
	Beverly Vogt	5305 Penn Ave. S., Mpls.	920-3339

GEOLOGIC PLAQUES

TABLET INSCRIPTION #26  
Geology of Minnesota

Duluth Harbor

Lake Superior occupies a great syncline or downfold in the rocks of the earth's crust. Its normal surface level is 602 feet above, and its deepest point is 700 feet below, sea level. The folding which produced this huge trough occurred during extensive volcanic activity more than 600,000,000 years ago. Eventually this depression was filled by material washed in from the surrounding heights and much later was partly cleared of those sediments by glacial ice which pushed its way along the trough.

As the ice melted about 10,000 years ago, the basin was filled by Glacial Lake Duluth almost to the level of this tablet. Then the earth's crust in the north relieved of the weight of ice, was elevated by internal forces, thereby tilting the lake basin toward the southwest and flooding the mouth of the St. Louis River.

The harbor formed by this submergence has been enlarged by the formation of Minnesota Point, an unusually good example of a sand deposit washed up by waves and shore currents.

Location: Highway 61, near west city limits, Rest Point observation area 500 feet above lake.

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TABLET INSCRIPTION #27  
Geology of Minnesota

Mesabi Region

The dramatic history of the Mesabi Range dates back one billion years to a period when the Algonian Mountains - the Giants Range - lifted their towering peaks from Minnesota to Hudson Bay. That mountain range had been eroded down to its granite core and the region submerged in the Animikian Sea before the chemical sediments were precipitated to form the Biwabik iron-bearing formation. Following those events, several thousand feet of mud, that became the Virginia Slate, were deposited over the chemical sediments, after which the sea again withdrew, and the sediments became solid rocks.

Then came volcanic activity during which thousands of cubic miles of lava were poured forth. The basin of Lake Superior was depressed and all the rocks in the Mesabi region were tilted toward the lake. During the ensuing 500 million years the chemical precipitates of parts of the Biwabik formation were altered from hard rock to soft ore. The tilting of the rocks hastened the erosion of the Virginia slate. This in turn uncovered the Biwabik formation and made it possible for circulating ground waters to leach out the silica at favorable locations and leave the concentrations of iron oxides to form the iron ores of this famous range.

Location: Bennet Park, one-half mile north of Hibbing business center, on road leading to pit of Hull-Mahoning mine.

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## GSM BOARD NEWS

The resignation from the Board of President Paul Vogt made necessary changes in the leadership of the GSM. Sam Mayo was appointed to fill Mr. Vogt's unexpired term as president, and Bob Gunville was elected to fill his vacant position on the Board.

Two special projects are being developed with the State of Minnesota to encourage interest in geology here. The first project involves working with the State Highway Department to erect geologic marker signs at wayside rest areas, and volunteers are needed to work on this project. The GSM would like to see more plaques erected, similar in information to those of our former project, and now being reprinted on the cover page of the newsletter. Dr. Foote, from the Highway Department, has expressed their interest in more plaques and says they will furnish the material for the plaques if the GSM would provide the wording. He will give us a list of current and proposed wayside areas, and suggests these as appropriate locations. The Society now needs volunteers who are willing to drive to some of the waysides and investigate them for geologic interest, and perhaps to research and write up legends for such signs. The Highway Department would like them for possible future use. If you think you might be interested, please contact Sam Mayo.

For the second project, a committee will work with the State Department of Natural Resources to develop self-guided geologic trails for certain state parks. The committee plans to start with one park as a pilot project. It hopes to organize and finance the writing and a limited first printing of a geological trail brochure, with the anticipation of the Department of Natural Resources' continuing its publication. Should the pilot project work out satisfactorily, the GSM could consider developing geologic self-guided trails in more state parks.

GSM members will have an opportunity to help professional geologists at their upcoming meetings, to be held at the University of Minnesota November 13-15. Dr. Paul Sims, coordinator for the GSA meetings here, has requested several man-hours of assistance from us during the time of the meetings. Possible duties might include answering telephones at the central headquarters, delivering messages, running slide projectors, serving tea at women's functions. In exchange, workers would be given free admission to the 3-day sessions, and would be given lunch for any day they worked. Here is a chance for us not only to show our appreciation to the professional geologists, but also for us to learn something from them. We will have more information later.

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### ANNUAL MEETING REMINDER

It's not too early to place on your calendar the GSM Annual Meeting September 25, 7:00 P.M. at the Viking Village, 27th and Lake, Minneapolis. This will be the kickoff event for next year's program, and will feature a review of the summer field trips and a preview of next year's lectures. . . . .



VOLUNTEERS NEEDED FOR STATE FAIR BOOTH

A minimum of 22 people are needed to man our booth in the Education Building for the 11 days of the State Fair August 25-September 4. Members who want to help may call E. Shimek, 823-0169.

We hope you will visit our booth when you go to the fair, and see what we are doing.

Our exhibits are in the planning and execution stage. We welcome your ideas and help

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SCHOOL CHILDREN ENJOY GEOLOGY TALK

Beverly Vogt recently gave a talk on the bedrock of the Twin Cities to third graders at Windom School. The class members all wrote thank-you letters to her, and she would like to share some of them with you.

Dear Mrs. Vogt,

Thank you for coming to are class. Thank you for showing us the rocks. And telling us about the lakes. And telling us about the sand and soil. I enjoy you coming to are class. I hop you can come again.

Your friend,  
Sonya M.

I liked it very much when you came to our class room. The things you talked about were very interesting. When you talked about the sandstone I was amazed. I did not know that sand can be molded into a sandstone. I hope you come again.

Your friend,  
Sheri G.

How are you. Thank you for coming to our glass-room. I hope you come again. My brother has a collection of rocks. I like sand rocks. There neat. I liked your slides.

Your friend,  
Michelle

Thank you for coming to our room today. I learned alot. I think I will start a collection. First I will find sandstone then shale and then limestone. then I will put them in a box and put it away in a closet. I hope you can come again. thank you again.  
your friend,  
Jan S.

I really liked the rocks you showd are class. It was fun espeichely when you showed the sand rock. And the film you showed. but really I liked the whole thing.

Your friend,  
Tamara

I liked it when you came to visit our room. I liked the sandstone because it falls apart and I have never seen a stone fall apart before. I liked the limestone and the shale to. I have a collection of rocks, shells and fosills. Thank you for coming.

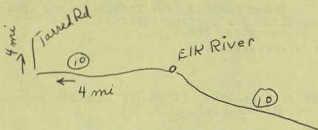
Your friend,  
Jeni Andrews

I liked it when you came. I am going to get some sand rock. If I can. I am going to ask my mom if I can rely go and get some. I hope I can. I hope you can come agin so does the class. Maybe I can get some limestone and some shale.

Your friend,  
Lisa Tochey

## PICNIC COMING

August 6 is the date for the Society's annual picnic. (Note correction from the previous newsletter.) This year it will be held at Camp 1362 on Birch Lake, north of Elk River. Bring your lunch and come around the noon hour. Following are directions on how to get there:



From Elk River, proceed west on Hwy 10 for 4 miles, turn right (north) on tarred road and proceed for about 4 miles to the Camp 1362 sign.

Tables are available, as well as benches in various scenic locations. There is a shelter, in case of rain. The camp has a bathing beach, and you can go fishing. There is a basketball court and plenty of balls, a tetherball game, and horseshoes.

This camp property contains many remnants of the ice age, including an esker, a kame, erratic boulders, interesting moraines, as well as the lake. Paul Stor will be willing to conduct people over the grounds.

!-!-!-!-!-!-!

### NEW MEMBER WELCOMED

The GSM is pleased to receive as a new member:

Michael Link, Director-Naturalist  
The Northwoods Audubon Center  
Route 1  
Sandstone, Minn. 55072      245-2648

The following members have changed their addresses:

Dr. J.S. Lewis  
1830 North Hamline Ave.  
Roseville, Minn. 55113      644-7382

Mrs. H.M. Berge (Elsie)  
2119 Pillsbury Ave., Apt. 105  
Minneapolis, Minn. 55404      333-0849

Mrs. Emma J. Cooper  
P.O. Box 97  
Wahkon, Minn. 56386

Mrs. and Mrs. V.H. Nelson  
Box 341  
Montoursville, Pa. 17754

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If you happen to be in the neighborhood of Lund's Food Store in the Country Village Shopping Center, Minnetonka, you might like to take a look at an interesting rock wall inside their building. The wall is made up of many types of rocks including specimens of marble, amethyst, iron formations, copper bearing specimens, sandstones and limestones. The shopping center is located at the corner of State Hwy 7 and County Hwy 73.

SPONSORED BY:  
**MINNESOTA MINERAL CLUB**

The Minnesota Mineral Club will be hosting the Minnesota Rockhound Roundup on Saturday, Aug. 12 and Sunday, Aug. 13, and GSM members are invited to participate.

This event will feature swapping of rocks and tales, picnicking, boating and swimming, a pot luck supper on Saturday, door prizes, free coffee, and overnight camping.

The location is the Morris T. Baker Park on Lake Independence, approximately 20 miles west of Minneapolis. For further information contact Rex C. Webb, 2600 W. 87 $\frac{1}{2}$  St., Bloomington, 881-3438.

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Perhaps you have heard this excerpt before. If so, it is worth repeating. From The Conservation Volunteer, March-April, 1964.

**WHY I AM A ROCKHOUND!** by Matt Saari

Those people often seen on hills, in ravines, gravel pits and quarries are rock hounds. They walk around, bent over so as not to miss anything on the ground, and they stop to tap boulders with their hammers. They're sometimes called "odd." And if the label fits, I'll wear it because I am a dedicated rock hound.

In a way, we are an odd lot because we have asked for no government appropriations to expand our recreational opportunities. We're inquisitive people; citizens with a thirst for knowledge, regarding learning and discovery as a great and even spectacular adventure.

We lug home heavy bags of rocks which are worth little or nothing. But we also bring back color in our cheeks, muscles all limbered up, appetites like plow horses and an unwavering belief in our ability to jump over the garden gate. . . . .

The rock hound destroys nothing. He picks up stuff nobody has ever wanted or needed, otherwise it wouldn't be there. If it should ever be needed, it's well preserved on tables in living rooms, on window sills, in basements, in pockets, on porches and in trunks of cars owned by rock

hounds. And rock hounds don't invade legislative committee rooms or county board hearings, waving arms wildly and screaming for this or that action to be taken in their behalf.

Rock hounds just amble quietly along lakeshores and up crooked ravines. They climb bluffs and mountains. Belly-deep breathing of hilltop air cleans the smog out of their flues, burns the carbon from their valves. Because they feel good, they're agreeable, pleasant persons to be with. Old rock hounds never die-- they just petrify. . . . .

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Happiness is not the end of  
life: character is.

— Henry Ward Beecher

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