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THE MINNESOTA GEOLOGIST

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OFFICIAL BULLETIN

OF

THE GEOLOGICAL SOCIETY OF MINNESOTA

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ALL OUR MEMBERS INCREASE  
THEIR KNOWLEDGE BY SHARING IT

G E O L O G I C A L S O C I E T Y O F M I N N E S O T A

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Staff Member  
Staff Member  
Staff Member

The Society is devoted to the study of GEOLOGY,  
MINERALOGY, and PALEONTOLOGY for their cultural value.

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MEETINGS : October to May inclusive, 7:30 P.M. every Monday  
not a holiday, auditorium, Minnesota Museum of Natural History,  
University of Minnesota, 17th Ave., S. E. and University Avenue.  
Visitors welcome.

FIELD TRIPS : May until October inclusive.

ANNUAL DUES : Residents of Hennepin and Ramsey counties \$ 3.00  
plus \$ 1.00 additional for husband, wife, or dependent family  
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MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES  
and  
THE AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES

\* Deceased

## EDITORS-MEMO

Your editors are pleased to announce that Ruth and Merle Harris, Hazen T. Perry and Chas. B. Howard have accepted their recent appointments as staff members of the "Minnesota Geologist."

Our lecture program is getting off to a good start, both with respect to the subject and the instructor. We are fortunate to have secured Dr. John R. Borchert, of the Geography Dept. to give us a series of 15 lectures on Physical Geography. We will also have motion pictures on geological subjects every 3d or 4th week.

Our President's letter in this issue of the Bulletin is a real challenge to us all. The health and growth of our Society, as of any Society, is dependent largely on the work and efforts of many rather than a few members.

Lets not forget our "shut-in" members, Mabel Kenrick, 1395 Forest St., St. Paul, Clark Schmidt, Glen Lake Sanitorium, Oak Terrace, Minn., Fred Wunderlich, 2285 Gordon Ave., St. Paul, E. B. Eliason, our field trip chairman, Hotel Royal, 88 W. 7th St., St. Paul.

### CONVENTION REPORT

by

HAZEN T. PERRY

Now that the National Convention of Geological and Mineralogical Societies held in Milwaukee is a matter of record it is interesting to review some of its highlights and accomplishments.

In his appraisal of the convention Dr. Dake editor of the Mineralogist Magazine states that "the Milwaukee conclave will go down in history not as the largest gathering, but certainly the most enthusiastic, profitable and pleasant." All visitors at the convention will probably agree with his conclusions.

Our Society is one of the oldest and largest in the midwest. Located as we are there has been comparatively little contact between our membership and that of other Societies. The convention offered a fine opportunity to meet people we formerly knew only by name and to compare our work with that of other groups. We learned that there were some exceedingly nice people from all parts of the country that had the same interests that we had and were doing the same things we were. This association and mutual exchange of ideas is inspirational and invigorating.

For the first time we probably recognized the value that accrues to our Society by being a member of the Midwest and National Federations. These Federations act as a clearing house of ideas for the benefit of all member Societies. They serve to promote and hold gatherings in different parts of the country so that the member Societies will find greater enjoyment and satisfaction in their particular field.

The enthusiasm displayed by all who attended the convention was remarkable. Some of the planned tours had to be postponed as the delegates were reluctant to miss the lectures or exhibits in the convention halls.

There were 32 non-commercial exhibits chiefly from the midwest with the Pacific Northwest and California Federations also represented. The commercial exhibits numbered 31 and were of exceptional quality. Our Society contributed in no small way to the success of the convention and when the awards were made carried away several blue ribbons for their efforts.

The banquet at the Schroeder which closed the convention was ably presided over by Mr. Preston, retiring President of the Midwest Federation, and Jim Montague, General Chairman.

In 1951 the convention will be held in Tacoma Washington. Those who came to Milwaukee this year will be most anxious to attend. Those who have not yet experienced the thrill of a Geological and Mineralogical convention are really missing out on half the benefit and fun.

## OUR SOCIETY

This is the twelfth year of our Society organized as such. During this time it has enjoyed unusual success. It is one of the most, if not the most, active amateur geological Society in the country. As one whose knowledge of the organization is necessarily incomplete, because of association with it for only about five years, I should like to appraise its past success and look with you at its possibilities for the future, as they seem to me. In doing this I shall avoid the direct mention of any names for the obvious reason that I do not know all those who deserve to be mentioned.

Whatever other reasons there may be for the past success of the Society, these seem to be outstanding : 1) The founder of the Society built well the fundamental structure of the organization and chose wisely that small group of people who formed the nucleus and became the charter members of the Society. This group was loyal, interested and willing to work. It has been largely this group that has brought to the more recent members the spirit of the founder. 2) Early in its history the Society sought and received the whole hearted aid and support of the Geology Department at the University of Minnesota. Without this aid the history of the organization would necessarily have been very different - especially after the death of its founder. 3) The quality of the lectures and field trips have been such as largely to hold the interest of the older members, both old and young, and to attract goodly numbers of new members. 4) there has been a high level of cooperation by the membership on policies and projects undertaken by the Society. This in spite of certain minor differences of opinion which necessarily arise in an organization so large as ours. Very few have dropped out, or been destructively critical, over these differences.

While this is an honest appraisal, from my point of view, a word of caution seems in order. We must not become so intoxicated with past successes that we fail carefully to consider the direction which our efforts should take for the best interests of the Society in the future. Comparison of the balance in our operating fund shows a somewhat downward, though not alarming trend. In this connection two points are worth remembering : 1) Certain, more or less fixed costs, may be paid just before the end of the fiscal year (June 30th) one year and just after it another and thus lead to a false impression. 2) While large amounts of money in the treasury look well on a financial statement, it may simply indicate a lack of worthwhile investment of such funds - and obviously vice versa. (A close scrutiny of the financial statement will show how applicable this statement may be.)

What are the reasons for the tendency to level off, as measured by these criteria (particularly the first two) ? Each reader will have his or her own answers to this question. I shall not attempt to analyse the matter further than to make a few observations and perhaps raise a few more questions. Lest my raising the question be taken to indicate some sort of alarm let us remind ourselves that any organization that can show as large weekly attendance as ours over a period of twelve years is certainly in a healthy condition. Furthermore, all normal growth levels off at some point commensurate with its healthy, mature size.

An organization such as ours, starting largely through the efforts of a single founder, could easily become decadent either upon the loss of its founder, or later because those who carry on become preoccupied with the preservation of the memory of the founder. It has been said that it is virtually impossible to remain loyal to an institution and to the spirit of the founding of the institution at the same time. The spirit of the founding is one of progress, a dynamic thing. The institution itself represents the attainments of the founders up to the time of the founding, a static thing. That our

organization did not decline upon the loss of its founder needs no discussion. That it has not been content with the emulation of its founder, and the activities established by him, is evidenced by the vigorous creative projects undertaken within the past two years. I am speaking of further uses of the Burch Collection through the public schools, sponsoring the placing of geologic plaques and the sponsorship of the Cambrian Research Project. We now have under consideration another proposed project which seems to have considerable merit. This project would be the establishment of a corps of lecturers who would be qualified to give popular illustrated lectures to clubs and other organizations. The lectures would generally consist of a commentary on sets of Kodachrome (or other) slides centering around geological subjects.

What is the future of our Society? Fortunately this does not have to be answered in this issue of the Bulletin nor by any single one of us. Some of the problems we face will undoubtedly bring some changes. As has been pointed out before, we are likely to experience greater difficulty in the future in finding lecturers who are professionals in geology and related fields who have the time to give us weekly lectures and/or who would not be repeating something given us recently. True, we are fortunate for this year but we must realize that there is a limited supply of such lecturers.

Our field trips have been repeating themselves rather often because of the obvious fact that there are only a limited number of spectacular places within striking distance of the Twin Cities. However, there is always something new to be seen and learned at every visit. One general comment that a number of people have made regarding our field trips of the past several years has been that we often try to include too much on a single trip. We could spend an entire afternoon, or whole day for that matter, in a single gravel pit or quarry and find something new and interesting all the while. We might well try to see how many kinds of fossils we could find in a single quarry, their relative abundance, consider the significance of the number and distribution etc. rather than try to see how many quarries we could visit. A shift of emphasis here would make our field trip possibilities almost endless - even within the short distance of the Twin Cities. We might assign ourselves a field trip problem which could not be answered on the trip itself. It might require some study before and after, the results of which might be presented at one of our winter meetings.

Again, what about the future of our Society? We might become a group more or less self contained, a study group. As I understand it, this was pretty much what our founder envisioned for the Society. Granting that this is the best way to learn geology, if we did this we would doubtlessly lose members who either haven't the time or the inclination to follow so demanding a program. Moreover, this smaller group would be less able to give financial support to the projects we started. On the other hand, we might turn to lighter entertainment and attract many more people than we now have. Whether this larger group, so attracted would be interested in subscribing to our projects fund, might be open to question. The mere fact of large membership would not guarantee us more money for the projects because membership dues are not used for these purposes. We might reduce the frequency of our meetings to twice, or even once, per month. This would reduce our programming difficulties but it is the belief of some that our vigor has been derived, in part, from the frequency of our meetings. As it is one does not have to wonder whether a particular Monday night is meeting night or not, all he needs to know is that it is Monday night. Perhaps a more significant reason is that the continuity of the lecture subject can be more easily kept in mind.

What is written herein raised several questions and answers none. The intention is that all our members, not just the board of directors, shall be aware of the problems which are ours. While it is largely for the board to decide many of these questions, it is my belief that we of the board will be better able to decide them wisely if we have the benefit of the ideas of our entire membership. This implies an informed membership. Be generous with your ideas. By letters to the editor, letters to the board, a word to the Society after lectures, or in any way at all, give us the benefit of what you are thinking.

J. Merle Harris,

President.

# BULLETIN BOARD

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AMERICA'S NATURAL RESOURCES

by DR. JOHN R. BORCHERT.

Lecture Topics

- Oct. 2 The Land Resources of the Central United States.
- Oct. 9 The Land Resources of the Eastern and Southeastern United States.
- Oct. 16 The Land Resources of the Mountain West.
- Oct. 23 Movies Pertaining to Geology.
- Oct. 30 The Controls of the American Climate.
- Nov. 6 America's Climate East of the Rockies.
- Nov. 13 Climates of the Mountain West.
- Nov. 20 Movies Pertaining to Weather and Atmosphere.
- Nov. 27 Forest and Grassland Resources of the Eastern United States.
- Dec. 4 Forest and Range Resources of the West.
- Dec. 11 The Soil Resources of the Mid-West.
- Dec. 18 Regional Contrasts in the Nations Soil Resources.

DEDICATION CEREMONY AT GOOSEBERRY FALLS

SEPTEMBER 9-1950

Introduction

J. Marle Harris.

Our purpose in coming here today is to dedicate a geologic plaque to the memory and honor of Junior F. Hayden, the first elected president of our Society. We are happy to do this because of the things that he stood for and the things that he did. All of us who knew him greatly admired him. However, some of us had the privilege of his friendship much longer than others. One of those who worked with him during the years of the founding of the Society is here to say a few words about him. At this time is our pleasure to hear from Mrs. Helen Sommers.

"To those of us who first knew Junior Hayden on the early field trips of the Geological Society, he stands before us still with his fine Physique, his personal magnetism, his friendliness and helpfulness, his camera in his hands and at his lips the shrill whistle that said, "Step to your cars - and I mean now". He took pictures then, yes, but we little realized that photography for scientific illustration was to become the major interest of his life. Brought up in a small town, he had had the great good-fortune of having a teacher who roused his interest in the natural sciences. That interest, centering in the sciences of geology and botany, was to be his through life.

For some time Junior was our president, adding color and warmth to the Society. Then he turned from geology to become absorbed in the study of botany. He felt then and perhaps we should feel it even more today that we were in danger of becoming not students of geology but receivers of information, and that our field trips were tending toward joy-rides rather than geological investigations.

Be that as it may, fortified with a background of scientific knowledge of both geology and botany, Mr. Hayden put his great talent and drive into photography to make clear for all to see the beauty and the meaning that lies in rock and land and flowers. Keenly conscious of beauty, he yet put scientific clarity first. What endless labor and steadfast purpose lie behind those pictures! Long trips by car and air were made to the Yellowstone, the Black Hills, the Craters of the Moon. No effort was too great. How eager he was to pass his interest on to children. In the summer he showed his pictures to groups of children in the Minneapolis parks. It is fitting that in the Minneapolis library there is a memorial to him, a machine showing in succession some thirty of his pictures with text for each, and run by the child who is looking at them. It is good to realize that not only labor but joy and satisfaction must have come to Junior through the perfection of his work. He was not only an expert craftsman but an artist.

In February, 1949, Mr. Hayden died following an operation from which he never regained consciousness. In his will he left \$ 1000 to this Society and the bulk of his estate as well as over 6000 colored slides to the Geology and Botany Departments of the University. He had offered and was preparing to make the illustrations for a book on the geology of Minnesota that Dr. Thiel and Dr. Schwartz are now working on. When that book is published, it will be rich in pictures beyond what the University could afford, something made possible through his bequest.

During the last years of his life he again came often to the geology group. At the lectures he ran the projector and added occasional enlightening and personal words when his own beautiful pictures were on the screen. As we passed out from the meeting, many of us stopped for his warm handshake and to say "How beautiful they are."

A more powerful whistle has blown and Junior Hayden has moved on. We shall not forget him."

These very appropriate remarks of Mrs. Sommers indicate, even to those who did not know Junior Hayden, why it is so fitting that we dedicate this plaque to him.

This is the second plaque to be similarly dedicated since the beginning of this project in our Society under the leadership of Mr. & Mrs. L. W. King. The first was erected at Taylors Falls and dedicated less than a year ago to the memory of Edward P. Burch, founder of the Society. It is our belief that a project of this type is vastly worthwhile in helping us to understand the scenic beauty that we have inherited from our geologic past. I now read the words inscribed on this plaque :

GEOLOGY OF MINNESOTA  
GOOSEBERRY PARK REGION

750 MILLION YEARS AGO TREMENDOUS VOLCANIC ACTIVITY IN THE LAKE SUPERIOR DISTRICT WAS ACCOMPANIED BY THE OUTFLOWING OF HUNDREDS OF LAVA FLOWS HAVING AN AGGREGATE THICKNESS OF 20,000 FEET. AFTER 10,000 CUBIC MILES OF MATERIAL HAD BEEN DISCHARGED THE AREA COLLAPSED TO FORM THE BASIN OF LAKE SUPERIOR. DIFFERENTIAL WEATHERING OF THE LAVA ROCKS COMPOSING THE NORTH LIMS OF THE BASIN CAUSED THE IRREGULAR SKYLINE AS WELL AS THE COVES AND HEADLANDS OF THE SHORE. THE LOWER PORTIONS OF THE FLOWS BEING RELATIVELY DENSE AND RESISTANT TO WEATHERING FORM THE PEAKS AND POINTS ALONG THE COAST. IN MORE RECENT GEOLOGIC TIME THIS AREA HAS BEEN SUBJECTED TO REPEATED GLACIATION. DURING THE RETREAT OF THE WISCONSIN GLACIER, 20,000 YEARS AGO, WHILE THE EASTERN OUTLET OF THE GREAT LAKES WAS BLOCKED BY GLACIERS THE SURFACE OF THE LAKE WAS 530 FEET ABOVE THE PRESENT ELEVATION.

Erected by the Geological Society  
of Minnesota in memory of its first  
president, Junior F. Hayden, in  
cooperation with the Department of  
Highways State of Minnesota.

It is the pleasure and good fortune of the Minnesota Geological Society to join with the Minnesota Department of Highways in erecting and presenting this geologic plaque to the Gooseberry Falls State Park. It is our belief that it will add interest and understanding of the beautiful scenery of the Park for the many people who visit here each year.

(Mr. Palmer Roen, Superintendent of the Gooseberry Falls State Park, spoke a few words in acceptance of the plaque.)



## GEOLOGICAL SOCIETY OF MINNESOTA

COMPARATIVE OPERATING STATEMENT  
Fiscal years 1946 to 1950

	Year Ended 6-30-46	Year Ended 6-30-47	Year Ended 6-30-48	Year Ended 6-30-49	Year Ended 6-30-50
<u>Balance on Hand at Beginning</u>	\$ 395.72	\$ 524.74	\$ 531.42	\$ 741.00	\$ 507.15
<u>Receipts</u>					
Membership Dues	\$ 393.25	\$ 384.00	\$ 473.50	\$ 446.00	\$ 444.00
Sale of Books (net)	41.50	6.70	33.00	16.00	
Auction Sales	91.10	42.80	29.46		
Miscellaneous Receipts	18.95	2.90	24.00	21.00	1.65
Field Trips (net)			184.11	100.01	16.53
<u>Total Receipts</u>	\$ 544.80	\$ 436.40	\$ 744.07	\$ 583.01	\$ 464.18
<u>Total</u>	\$ 940.52	\$ 961.14	\$ 1,275.49	\$ 1,324.01	\$ 971.33
<u>Disbursements</u>					
Lectures	\$ 262.50	\$ 210.00	\$ 223.00	\$ 230.00	\$ 333.80
Bulletins and Notices	129.28	144.37	158.89	192.93	212.81
Annual Dinners	19.00	28.95	24.40	25.35	5.85
Rent of Library			50.00	50.00	
Midwest Dues	5.00	8.10	11.30	9.10	11.60
Flowers			16.50	15.50	7.50
Miscellaneous		38.30	8.40	18.30	1.25
Grout Fund (net)			42.00		
Paid for Equipment				275.68	
<u>Total Paid Out</u>	\$ 415.78	\$ 429.72	\$ 534.49	\$ 816.86	\$ 572.81
<u>Balance June 30th</u>	\$ 524.74	\$ 531.42	\$ 741.00	\$ 507.15	\$ 398.52

## STATEMENT OF TRUST FUND

## FISCAL YEAR ENDED JUNE 30, 1950

	Burch Fund	Cambrian Project	Markers	Unspeci- fied	Total
<u>Balance on Hand 7-1-49</u>	\$ 192.50	\$ 100.50	\$ 378.85	\$ 86.00	\$ 757.85
<u>Total Receipts</u>	\$ 17.25	\$ 109.00	\$ 110.00	\$ 1,152.17	\$ 1,388.42
<u>Total</u>	\$ 209.75	\$ 209.50	\$ 488.85	\$ 1,238.17	\$ 2,146.27
<u>Disbursements</u>					
Robert Berg		\$ 300.10			\$ 300.10
Express Burch Collection	\$ 27.63				27.63
Markers			350.00		350.00
Stamp	4.10				4.10
<u>Total Paid Out</u>	\$ 31.73	\$ 300.10	\$ 350.00		\$ 681.83
<u>Balance in Fund 6-30-50</u>	\$ 178.02	\$ -90.60	\$ 138.85	\$ 1,238.17	\$ 1,464.44

MARY A. HAYOTTE  
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MINNEAPOLIS, MINN., 19.