



# NEWSLETTER

JANUARY - FEBRUARY 1970

## JANUARY - FEBRUARY LECTURE SERIES

- January 12 READING TOPOGRAPHIC MAPS  
Mr. Rudolph Hogberg  
Minn. Geological Survey
- January 26 MAKING AND INTERPRETING  
GEOLOGIC MAPS  
Dr. David L. Southwick  
Macalester and U of M
- February 9 GEOLOGIC MAPPING (SOFT ROCKS)  
Dr. Richard Ojakangas  
Dept. of Geology, U of M
- February 23 GEOLOGIC MAPPING (HARD ROCKS)  
Dr. John Green  
Dept. of Geology, U of M

At our last lecture, we became acquainted with aerial photography and its use in making topography maps. The basic principles used in determining relative elevations was shown. The forester, soil scientist and geologist's need for these photographs and maps was also explained. In addition, a number of interesting aerial photographs taken over Africa and Alaska were used to illustrate the relationship between topographic patterns and the earth's structure.

Continuing on into the new year, we study maps in greater detail. The old saying, "You can't see the forest for the trees" is also true in looking at land forms. A topographic map does give this necessary perspective of the area and with careful study it is possible to determine what geologic processes are actively modifying the area at present and what processes were important in the past. With the addition of geologic maps, a third dimension is added to geological studies and the earth's structure is opened to the viewer.

## GSM DUES STRUCTURE CHANGES

The GSM Board, at a recent meeting agreed to increase the annual membership dues to \$7.00 for adults, \$10.00 for husband-and-wife, and the student dues to remain at \$2.00. The Bylaws call for a calendar-year (January to January) membership year, rather than the former October 1 to September 30 membership year.

Following a discussion with the membership at their December 8 meeting, the GSM Board, at its December 15 meeting, agreed to extend the current membership to December 31, 1970. This means that your current membership is being extended at no additional cost to you, and that your next membership year will follow the calendar year 1971.

1971 dues will be solicited at our Annual Banquet April 27, 1970, and will be payable before July 1, 1970.

The board also agreed that new members coming into the society after a mid-year point would be required to pay only one-half the annual membership dues.

It was felt that these new regulations would be most fair to all involved, and the board sincerely hopes all members will be prepared to pay their 1971 dues at our Annual Banquet in April.

Paul J. Vogt

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# Committees

The committees have been charged by the board through our president Paul Vogt to come up with a number of recommendations. As the life of an organization depends upon the vitality of its parts, membership participation and recommendations are welcome. Following is a list of the committees and their associated charges: Chairman\*

## ANNUAL PICNIC

Establish the time, date, and location for the Annual Picnic  
Arrange for program of activities  
Arrange for publicity, invitations, and details attendant to the picnic  
Suggest any budget that may be necessary.

Samuel Mayo\*  
Theodore Isakson  
John Nordberg  
John Marshall  
Michael Vaclavek

## BADGES/BUTTONS

Approaches to increase the number of members with personal identification

Possibility of furnishing each member with a "free" I.D. tag on payment of membership dues.

Clark Pettengill\*  
Martha Peterson

## BANQUET

Confirm location, time, and date of Annual Banquet  
Recommend procedure for invitations to members and guests, and transportation needs

Suggest items for the program  
Assume responsibility for menu and pre-dinner activities  
Details for GSM Board to resolve regarding the banquet speaker or other program items

Ethel Swanson\*  
Ethel Bergquist  
Martha Peterson

## EDUCATION

Establish for Board approval, GSM educational projects in priority with a time-table and commitments  
Recommend a budget of people and money for these projects

Martha Peterson\*  
Mrs. Paul Vogt  
Mary Kimball  
Mrs Donald Tepel

## FIELD TRIP

Review membership poll preferences on field trips and make recommendations  
Determine trip leaders and scouts, bus transportation and housing arrangements  
Recommend policy and procedure on financing of field trips

Means of advertising and soliciting interest in field trips  
Possibility of using the annual meeting or post-lecture time to secure interest in field trips  
Means of reporting on field trips

Bernice Tepel\*  
Elmer Brown  
Russell Pool  
Theodore Isakson  
Dr. Bert Carlson

## HISTORY AND ARCHIVES

A procedure and program for maintaining the historical records and archives of the society

A system for gathering historical effects for the archives

Recommendation for designating responsibility for this program

Hal Mcwethy\*  
Charles Howard  
Dr. William Cavert  
Elmer Brown  
Marion Skahan

## HOSPITALITY

Need for assistance, or change, in greeting members, visitors, and guests at lecture programs

Possibility of committee taking attendance at GSM functions

Possibility of cooperating with membership committee to follow-up on new prospects

#### Hospitality Cont.

Possibility of assuming responsibility for keeping in touch with members, those who are ill, in need of transportation, who have moved out of town, those who have passed away

Mrs. John Gobeil\*  
Mrs. Bert Carlson  
Mrs. Clark Pettengill

#### MEMBERSHIP

Recommend recruitment programs and methods for retaining members  
Prepare schedule for content and printing of membership roster  
Means of maintaining accurate, current membership roll

Martha Peterson\*  
Goldie Johnson  
Frances Springer

#### NEWSLETTER

Review past Newsletter comments  
Plan for future issues this next spring  
Means of securing and writing items for the Newsletter  
Possibility of using photographs in some issues

Recommend a budget for the Newsletter

Roger Trutna\*  
Betty Trutna  
Robert Leacock  
Ethel Bergquist  
Irvin Dahlstrom

#### PROGRAM

Evaluate our present lecture series  
Solicit from the membership, Dr. Zoltai, and others, topics for the 1970-71 lecture series  
Recommend any suggested changes in the next lecture series, i.e., program information, time and place for meeting

Dr. Alex Lowe\*  
Dr. J.S. Lewis  
Fred Hallberg

#### PUBLICATIONS

Arrange to have various maps, publications, etc., available from the Geological Survey on display and for sale at lecture meetings

Recommend to members the sources of geological literature for their reading and purchase (these can be published in the Newsletter)

Fred Hallberg\*  
Leone Knox  
Elsie Hinchley  
Clark Pettengill

#### PUBLICITY

Recommend means of publicizing GSM Field Trips and Lecture Series to the various publics

Recommend means of publicizing GSM activities and interest in membership  
Suggest whether or not a budget should be set for this activity

Recommend publicity program for the State Fair and the Bloomington Mineral Show

Ethel Shimek\*  
Mrs. Alex Lowe  
Mrs. Paul Vogt

#### REFRESHMENTS

Assignment of responsibilities for handling each Lecture Program

Any suggestions for varying refreshment items

Recommendations in arrangements or time for refreshments  
Suggestions for special use of funds derived from refreshments

Wilma Monserud\*  
Mrs. Alex Lowe  
Mrs. Louis Eggerichs  
Mrs. Paul Vogt  
Betty Trutna

#### TELEPHONE

Establish an effective telephone contact procedure for GSM membership

Establish a means of keeping up-to-date accurate telephone directory

Marjorie McGladrey\*  
Elsie Hinchley

## RECOMMENDED READING

LIST OF MINNESOTA PUBLICATIONS as compiled by the Midwest Federation of Mineralogical & Geological Societies.

To order any of the publications listed or to obtain a complete list write to the - "University of Minn. Press, Univ. of Minn., Minneapolis, Minn. 55455." List of publications of the Minnesota Geological Survey - Free.

### PUBLICATIONS

**MINNESOTA'S ROCKS AND WATERS #37.**

A geological story, 366 pages, 161 figures. \$4.00.

**THE PRECAMBRIAN GEOLOGY AND GEO-CHRONOLOGY OF MINNESOTA #41.**

193 pages, 5 plates, 37 fig., 32 tables. \$4.00.

**LOWER UPPER CRETACEOUS PLANT MICRO-FOSSILS FROM MINNESOTA #42.**

86 pages, 3 plates, 3 tables. \$3.75.

**GUIDEBOOK FOR FIELD CONFERENCE - UPPER MISSISSIPPI VALLEY #5.**

126 pages. \$2.75.

### EDUCATIONAL SERIES

**GUIDE TO FOSSIL COLLECTING IN MINNESOTA #ES-1.**

30 pages. 50¢.

**GUIDE TO MINERAL COLLECTING IN MINNESOTA #ES-2.**

42 pages. 50¢.

**GEOLOGIC SKETCH OF THE TOWER - SUDAN STATE PARK #ES-3.**

29 pages. 50¢.

**GUIDE TO THE CAVES OF MINNESOTA #ES-4.**

61 pages. 50¢.

### BOOK REPORT\*\*\*\*\*

"MINNESOTA ROCKS AND WATERS" - by George M. Schwartz and George A. Thiel  
University of Minnesota Press - 366 pages

This book as stated in its preface is an attempt to make available to the citizens of Minnesota a general summary of the major features of the state and to stimulate a greater interest in, and appreciation of their natural surroundings.

The first part of the book tells the story of the rocks. It describes the ever changing face of the land - how it was pushed up and distorted by internal forces while reshaped and modified by external forces. The geological history is given so that the reader may understand and appreciate the more familiar geological face of Minnesota that we see today. Further chapters answer the questions - "What are these rocks and soils we depend on for life? What are they made of? Why are there so many different kinds? Where do they come from and how long ago?" Minnesota minerals and rock resources are described and geographically located.

Part two of the book takes the reader on a journey to the various regions of Minnesota i.e., Northeastern, North and West Central, Southwestern, and Southeastern Minnesota. Here in greater detail, the regions unique geological story is told.

This book makes an excellent field guide. It is a must for any Minnesotan interested in geology.

\*\*\*\*\*

"Advance in science comes by laying brick upon brick, not by sudden erection of fairy palaces."

J.S. Huxley

## ROSTER ADDITIONS & CORRECTIONS

### NEW MEMBERS:

Mr. and Mrs. J. R. Cagle  
5932 York Ave. South  
Minneapolis, Minn. 55410

Mrs. Barbara C. Porter  
Miss Susan Porter  
4436 Vincent Ave. South  
Minneapolis, Minn. 55410

Mr. Donald Brown  
3732 Blaisdell Ave.  
Minneapolis, Minn. 55409

Mr. Charles L. Fevig  
5800 E. River Road  
Minneapolis, Minn. 55421

Dr. Harold E. Harbo  
1920 W. 31 Street  
Minneapolis, Minn. 55408

### CHANGE OF ADDRESS:

Mr. and Mrs. John C. Chegwyn  
1651 East Sextant Ave.  
St. Paul, Minn. 55109

### MAN'S EFFECT ON THE EARTH - GREAT LEAP DOWN OR STOP ROCKING THE BOAT

According to a tongue-in-cheek statement made by the University of Alaska Geophysicist - David Stone; if at a given moment the 750 million Chinese (assumed average weight - 110 lbs.) were to jump from 6½ ft. platforms, the energy released would be equivalent to an earthquake of magnitude 4.5 on the Richter scale. Furthermore, if they were to continue this organized jump every 54 min. to coincide with the natural ground wave through that area, the resonant ground wave would have world wide effects.

Time, Dec. 19.

## Editorial

Geology is the science of the earth. It is concerned with its composition, structure, and history. Furthermore, Geology is concerned with the dynamic forces - both internal and external which are constantly reshaping the earth's face. And finally, we are concerned with the earth's resources.

As the world evolved, we became blessed with life's necessities - clean air and water. But what took nature millions, if not billions of years to create is now deteriorating at an alarming rate. "The enjoy now, pay latter - philosophy," does have its day of reckoning - and that day is here.

Scientists tell us that the last vestiges of clean air (defined as less than 2,000 particles of pollution in a section of air half the size of a sugar cube) disappeared six years ago when air pollution from the California coast reached Flagstaff, Arizona.

Of our great fresh water lakes, only one remains reasonably clean and even that one is fighting for its life. Our streams have become open sewers and our valleys are becoming heaped with garbage.

It took the human race nearly two million years to reach a billion population and then it doubled in less than 100 years.

With the New Year, we start a new and hopefully an enlightened decade. May it be resolved that as individuals we face up to our responsibilities to save our environment - making this world a better place for us, our fellowman, and future generations. Best wishes for the New Year.

Roger Trutna



GEOLOGY NEWS\*\*\*\*\*

### ICE AGE BISON

Geologists from the University of Iowa are digging up the fossil remains of an ice age bison, an animal bigger than the modern American bison.

"Finding an entire skeleton is rare," said Prof. Holmes Semken, who estimates the big beast walked the Midwest 25,000 to 50,000 years ago. The location of the find is near Marion, Iowa.

### TEKTITES CAME FROM MOON

It isn't necessary to jump into a space ship and head for the moon in order to get moon rocks. A trip to Australia, Java or Madagascar will do the job.

According to a NASA account, the origin of the Australasian tektites, found along a strewn path both on land and in ocean sediment, was the crater Tycho, one of the most prominent features on the face of the moon.

Thousands of computer runs, testing various trajectories, have shown that only a jet of debris—originating at that crater and following a path still visible as one of the "rays" that radiate from Tycho—could account for the S-shaped pattern of tektite strewn from the Indian ocean to the Philippines.

Tektites are small glassy objects that have been shaped into spherical, dumbbell or teardrop shape during a molten phase—presumably by high-speed passage through the earth's atmosphere.

St. Paul Dispatch

## EARTH SCIENCE

ROCKHOUNDS' NATIONAL MAGAZINE  
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OF MINERALOGICAL SOCIETIES

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### THE MEMORIAL FUND

of the

Geological Society of Minnesota  
was founded in 1969

The purpose of the fund is to carry on the objectives of the society by creating interest in the study of geology through lectures and field trips, and by calling attention to special geologic features of the state by the placing of appropriate markers at such sites.

The Society will welcome gifts from persons who may wish in this way to memorialize their friends or relatives.

Geological Society of Minnesota  
Dr. Bert R. Carlson, Secretary  
3034 46th Avenue South  
Minneapolis, Minnesota 55406