

# NEWSLETTER

## BOARD NEWS

The excellent lecture series for this year is finished and we are now into our field trip season. Galen O'Connor and her field trip committee have planned some great trips for us.

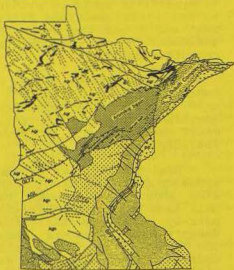
I am pleased to announce that Bruce Goettegan will be taking over as membership chairperson. Our membership year starts on October 1, but those joining after April 1 have a membership valid through September 30 of the next year. Bruce will take your new or renewing memberships now.

The Minnesota Minerals Education Workshop, to be held this summer at Iron World at Chisholm, Minnesota, will purchase 75 of the Geological Society's rock boxes. The rock boxes are a project of the Public Service Committee. You may be called to help fill these boxes.

Ten geological markers should be done by the end of summer and work is being done to repair the GSM exhibit at Elm Creek Park Rest Area. The exhibit has faded and shows some water damage.

Our Video Library now has 43 members and \$3671.00 worth of videos. Many of these videos have been loaned or donated to the society.

A committee has been revising the Society's By-Laws and the edited version was voted on and accepted by the Board at the meeting on June 28. A copy is enclosed in this



## GEOLOGICAL SOCIETY OF MINNESOTA

## N E W S

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VOLUME LI, NO. 2

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Minnesota Geological Survey

# LIBRARY

newsletter for your review. Please look it over and be prepared to vote on the by-laws at the Annual Meeting on September 23.

The State Fair Committee will soon be contacting members to work at the Fair Booth. We will not be able to furnish admission tickets to workers this year because our finances will not permit it. I hope you will say yes when you are called. You will have a very interesting four hours helping us to gain new members and once you are at the Fair, you might as well enjoy it.

I want to remind you that the GSM now has a 509a exemption which states that donors may deduct contributions to the society from their taxes. Call Treasurer, Don Mattsson, 333-0633, if you have any questions.

Hope you are having a great summer.

President, Marlys Lowe

### NEWS FROM CYBERSPACE

#### NETT'N FOR NATIVE NUGGETS

Hey, have you looked for rocks on the wire, yet? I'm talking about using the Internet to learn more about geology -- and many other things if virtual adventure appeals to you. About two months ago, I caved-in, purchased a modem for my Macintosh and subscribed to Internet online service.

Perhaps I'm getting ahead of myself. It would be prudent to ask a few questions first. That way I can see where the audience is at as far as computers go.

OK, now. Give me a show of hands if you have a computer. I mean a newer model computer. Anything like a PC-AT or early model Macintosh will not serve the purpose.

Hmm, I don't see as many hands up as I'd hoped. It looks like about 50/50. Maybe the half that have computers will pair-up with the half that doesn't have computers. Then, if the have nots find this experience rewarding, they may consider moving on to their own setup. I'll aim this article at the beginner. For those that are already setup and ready to go, I've included at the end of this article a few web site addresses to explore.

You will need four ingredients to get started: (1) a computer, (2) access to a telephone line, (3) a modem to connect the computer to the phone line and (4) the software. Virtually any new computer will be adequate for the task. In fact, the newer computers already have an internal modem. But like I said earlier, a PC-AT or early model Macintosh will not be satisfactory.

If you're like me and have an in between model, then you will need an external modem. The same thing is true for the modem as with the computer. Modem speeds are measured in thousands of lines per second

(Kbps) and a 14.4 bps or 28.8 bps rating is preferred. Speeds less than 9.6 bps will be too slow for most users. A good external modem can be purchased for \$100 or less.

It is not necessary to dedicate a telephone line to the computer. The modem is connected to the phone line through the standard modular jack and the online service can be dialed just like an ordinary phone call. Obviously, the line is tied up while the service is being used, but most individuals get by on one telephone line.

Software can be obtained for "free" from any one of the commercial servers providing access to the Internet. These include, but are not limited to, America Online, CompuServe, and AT&T World Net. New service providers are setting up business every so often. Disks or CDs with software come with many computer magazines available on news stands. If you've ever purchased anything from a computer supply store and paid for it with personal check, you've probably received countless unsolicited disks and CDs containing the various server software as a result.

All three online services mentioned above charge about \$20.00 per month of usage. In some cases, this gives unlimited hours of access. Other plans costing much less are also available. For example, there is a plan that offers 3 hours each month for a monthly fee of \$4.95. Additional hours are charged a rate of \$2.50 each. Either way,

it's still "Ouch!" at the end of the month. To subscribe, you provide a credit card number and all charges are billed to that card. There are no long term commitments so when you tire of the chase, you can cancel.

Ok, now for the fun part. Here are a few geology related web sites to explore:

<http://www.geologylink.com>  
<http://www.earthmag.com>  
<http://www.pangaearsci.com>  
<http://www.seismo-watch.com>  
<http://www.rockware.com>  
<http://www.rockhounds.com>

And don't forget our good friends at the Geological Survey. Here's their address:

<http://geolab.geo.umn.edu/mgs/>

Each of these sites have one or several 'link buttons'. If you click on one, additional sites that contain related material are provided. And on, and on, and on. Happy surfing.

If you have favorite geology related sites, please share them with me. My e-mail address is:  
<bjgoettman@worldnet.att.net>. I'll pool the replies and share them with everyone later on.

Now what is e-mail?

By Bruce Goettman



#### SCHOOL OUTREACH STRETCHED

The GSM School Outreach Program for the '96-97 school year was active between mid-December and mid-May. Our presenter visited twenty-five Metro area elementary schools that spanned the socioeconomic gamut, and talked to more than 2,000 students. What was impressive were the common threads of dedicated, hardworking teachers and talented children. No school district has an exclusive on either! What was of concern was the large disparity in materials and resources between the school districts visited. Many teachers who contacted us requesting presentation information ultimately could not find the money to pay the \$15/class fee we give the college student presenter. Several paid for it, apparently, with their own money. The creation of a small scholarship fund might be in order for future instances of just such a nature.

Carol Corriveau, our presenter from the U of MN, gave a short talk to each class, generally on the three rock types. Then, the children came up to the front to examine the large, portable rock and fossil collection and ask questions. A GSM volunteer helped Carol answer student questions, and setup and carry the collection. Many thanks to Philip Curtis, Dick Heglund, Alex Lowe, and Doug Zbikowski for their time and energy in this effort. Also, thanks to Dwight Robinson for his pieces of dinosaur bones, and Judy

Hamilton for contributing a piece of banded iron.

Carol then distributed free printed materials from the DNR Minerals Division to each teacher and left a GSM rock box, *Rocks & Minerals of Minnesota*, with each school. A huge thank-you to the many GSM members who helped assemble the rock boxes and Jim Edberg and the Gangl's for contributing their personal agates. Parting with rocks is a real sacrifice for a GSmer! Also, a MONSTER thank-you to Chuck Howe and his group at the Minnesota Department of Transportation Materials and Research lab for contributing many rocks and crushing most of the rock box contents. What a huge job, even with a crusher!

Looking forward, the future of the program largely depends on the availability of a qualified presenter. Carol has now graduated and will be leading geological tours this summer near Baraboo, WI (1-800-328-0995). She also waits to hear back, following her interview at the Chicago Field Museum. Her presentations were very well received, judging from the evaluation forms returned. However, because some students seemed rather advanced, we might offer a "honors" option on focused topics such as Minnesota's geology or plate tectonics. Probably the most needed contribution, and what we do best, is the GSM rock box. This unique collection of Minnesota's finest is the best product of its kind ever available from our state. We plan to expand upon this winner

## RECIPE CORNER

Earlier this year, Dwight Robinson got the bright idea that it might be fun to have a few shared recipes for those field trip campouts or to use for lunch in the field, camper or not. We did receive a few, which follow, and they are printed exactly as the authors wrote them.

We'll start with three recipes from our friend, Bob Sloan.

### Bob Sloan's Chili

1 pound frozen hamburger  
3 middle sized cans of kidney beans  
(throw in the juice)  
3 small cans of Campbells Tomato Soup  
1 large onion diced  
chili powder to suit

Thaw hamburger in microwave in covered casserole, breakup into small chunks, add onion for browning in late stages.

Dump cans in the pot, adding chili powder to suit. When warmed through, eat with crackers.

### The Bowl of the Wife of Kit Carson (Tlalalpan Chicken) A hearty soup

3 tuna fish sized cans of chunk chicken  
3 cans of garbanzos  
Half a bottle of taco sauce (strength as needed)

Make 8 ounces of stock with water and beef and chicken and bouillon. Add chunk chicken and garbanzos and sauce and heat to taste.

Make minute rice. Dice Monterey jack or mozzarella into small cubes.

Put the rice and cheese in bowls, ladle the soup over it, garnish with avocado slices and serve.

### Mock Rarebit

1 can Campbells tomato soup  
1 can Campbells cheddar cheese soup  
Mix & heat to temp desired

Toast bread  
Fry crispy bacon

Put bacon on toast, pour sauce over it hot.

"Very good outdoors on a cold, wet miserable day."

\*\*\*\*\*

Dwight Robinson has experienced this next delightful concoction.

### Paul Lemke's Taco "Toss Ons"

Ingredients: One package soft tacos, one package cheddar cheese (strength to taste, stronger is recommended), one jar salsa (to taste).

Grate cheese as needed, set aside  
Open salsa jar  
Toss taco into buttered pan on stove top, let brown  
Slather taco with salsa  
Toss grated cheese liberally over salsa  
Cook until cheese is evenly melted over top

Remove from heat, toss on plate, slice, eat and toss down and maybe toss all night.  
Accompaniments: Pickles and sliced carrots or almost anything else that sounds good to eat.



This next one was sent in by Jean Hosterman. She says, "This recipe from the 4-6-97 Star Tribune featured 3 women (2 sisters and a daughter) who have camped for years together. They always cook and enjoy this recipe."

#### Famous Cabbage Hot Dish of the Peterson Girls

1 tbsp oil  
2 cloves garlic, chopped  
1 head cabbage, chopped coarsely  
1 large onion, chopped  
2 large carrots, chopped  
2 potatoes, cut up  
1 lb. raw ground beef chunks  
1 (8 oz) can mushrooms and juice  
1 can tomato sauce  
1 can water  
seasoning

Layer everything in a camp pot.  
Bring to a boil. Simmer 1/2 hour  
and walk around the campgrounds.  
Check to see if potatoes are done.  
If not, walk around campgrounds again.  
Repeat until done. Then EAT, EAT, EAT.  
Delicious.

Serves 4 - 6 people at home  
or 3 hungry campers.

This will be a favorite among sandwich makers. Easy to carry on a field trip and easy to prepare in the field.

#### Hank Gangl's "Sandwich Special"

Ingredients: One can sardines (mustard flavored preferred or add mustard as needed)  
One loaf of sliced bread

Open sardine tin  
Toast bread if at all possible for enhanced taste  
Fork sardines onto bread slice.  
Make a sandwich  
Slice and eat

Accompaniments: Pickles or sliced carrots or almost anything else that sounds good and is in the vicinity.

This was sent to us by Marlys Lowe. She says, "Joan Leacock used to make this cake for GSM events. Joan is a former member who now lives in Arizona."

#### Oatmeal Cake

Pour 1 1/4 cups hot water over  
1 c quick cooking oatmeal. Let stand.

Cream:  
1/2 c shortening  
1 c. brown sugar  
1 c white sugar

Beat in 2 eggs

Stir together:  
1 1/3 c flour  
1 tsp. soda  
1 tsp. cinnamon  
1/2 tsp. salt

Add to creamed mixture, add oatmeal.

Bake at 350° - 30 min. in 9 x 13 pan.

Icing:

Simmer some raisins for a few minutes in water.  
Drain and chop. Toast some almonds (unblanched are fine) lightly and chop.

Cream 1/2 c butter and 2 c powdered sugar.  
Add 1 1/2 tsp vanilla and 1 - 2 tablespoons  
hot water to make a fluffy soft icing. Stir  
in nuts and raisins.

and offer a matching set of photographic slides taken of many of these rocks in thin-section. When used with the rock box, a teacher can then offer both hand sample and microscopic perspectives on the principles of igneous composition, sedimentary formation, and metamorphic alteration.

It seems hard to imagine a more worthwhile public service project for GSM, than the contribution of its time and resources to helping young students know and appreciate our geologic heritage.

Doug Zbikowski

#### BOOK REVIEW

*Geology on Display: Geology and Scenery of Minnesota's North Shore State Parks*

by John C. Green.

Minnesota's North Shore piques the curiosity of travelers who come to explore the thundering waterfalls, rocky ledges carved of stone, and panoramic views of Lake Superior, the largest freshwater lake in the world.

In his book, John Green gives you the tools to study the landscape and understand how the area was formed. He provides geologic maps, diagrams, color photographs, and explanations of the local features in each of the nine state parks on the North Shore.

*Geology on Display* sells for \$19.95 plus tax and should be available at State Parks on

the North Shore, the DNR Gift Shop or the Geological Survey on University Avenue.

John Green is a professor of geology at the University of Minnesota-Duluth. He has been a resident of northern Minnesota for 38 years and knows its natural history. Dr. Green is the leading authority on the volcanic rocks of the North Shore.

(I have a copy of this book. It's easy to read and the graphs, maps and color pictures are perfect for novices like myself.)

Judy Hamilton

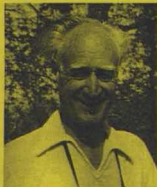
#### IN MEMORIAM

We were saddened to learn of the death of our long time friend and fellow GSM member, Bob Handschin, who passed away April 25, 1997. Bob was 86. A memorial service was held May 3.

Bob had worked for the Farmers Union G.T.A. for 38 years and was a volunteer at the International Center. He had a lifelong dedication to social justice and family.

Bob was involved in the Geology Society for many years. He served as president in 1979, was active on many committees including History & Archives and arranged each year for payment of the Fair Booth space.

Bob will be sorely missed by all of us.



## FIELD FOOD IS "ON THE ROCKS"

While most GSM members have a real taste for geology, no outcrop, gravel pit, mine or mountain has prompted anyone to start nibbling the substrate much less lapse into an outright feeding frenzy. Rocks are not seen as food yet we eat tiny bits of them every day. In fact, without our daily doses of "Mother Earth Nuggets," life as we know it would not exist at all. Maybe (all mercenary considerations aside), this explains why we measure our bodily value not in terms of its exquisite biological complexity but rather the sum total of the major minerals it contains!

According to recent figures, the average body contains: 5 pounds of calcium, 1.5 pounds of phosphorus, 9 ounces of potassium, 6 ounces of sulfur, 6 ounces of sodium, a little over an ounce of magnesium and less than an ounce each of iron, copper and iodine. In 1985, a body's worth of minerals was valued at \$8.37. At a modest 3% inflation per year, our "value" now is now approaching a whopping \$12.00. While that might seem a sorry sum, at least the risk of being mined any time soon is correspondingly small.

None of these minerals are optional and the list did not even include essential trace elements such as zinc (2 - 3 grams), chromium, manganese, selenium (much in the news of late in its role in cancer prevention), tin, boron, nickel, vanadium or silicon. That we

might resonate with rocks at least a little bit makes sense since we rely on the very essence of rock to carry our oxygen, provide our scaffolding, conduct nerve impulses, provide energy for heat and motion, build and replicate cells and genetic materials, protect against free radicals and work synergistically to keep the whole enterprise afloat.

Ancient ancestors, tiny and in many ways more in touch with their environment, established the metabolic master plan we all must follow if we are to survive. While mom never said, "Eat your rock!," she might well have said, "Eat your vegetables!" There was wisdom in them thar words. Plants (and secondarily the animals that eat them) serve as vital intermediaries in the transfer of raw rock to useable minerals. The plants themselves are often passive carriers taking in the minerals they encounter in the soil and storing them in their tissues. They in turn, can only be as efficient in this role as the soil allows and the intensity of modern day agriculture has often depleted once mineral-rich soils.

And so today we have people getting rich packaging clay suspensions and selling them under the banner of "colloidal minerals." We may not eat rocks but we are willing to drink mud cocktails at premium prices in a desperate effort to get those essential minerals. Trouble is, there is no good evidence that rock in suspension is even



utilizable by the body. These pieces of rock, tiny though they be, are still too big for efficient assimilation. The best sources remain the foods we eat whether plant or animal where essential minerals have been reduced to molecular or ionic size. The next best option is nutritional supplements derived from such sources or chemically engineered to match metabolic forms already found in the body. Some such as dolomite are literally mined right from the rock.

Mines, rocks, food? Sounds like a GSM lunch in the field. And it was just such food we had in mind when we decided to prospect for recipes that worked in the field and at our GSM events. The intent was to share these responses and that is what we do in this issue of the News. Instead of (or in addition to) counting the calories in each recipe why not try counting the minerals? And as you eat, why not pause to think about those rocks that made it all possible - our real living geology! It probably won't make you hungry at the next outcrop but it certainly gives new meaning to the environmental slogan, "Earth first." Earth was and always will be first.

Dwight Robinson



#### FROM THE CAPROCK

These are exciting times. A tiny ball of earth technology literally bounces onto the surface of Mars in what earth scientists believe to be an ancient river channel and out rolls a 23 pound "geologist" on wheels named Sojourner (named after the 19th century black abolitionist Sojourner Truth). Armed with cameras and a sophisticated rock probe device, its job is to analyze nearby rocks which look to be free of that ubiquitous, Martian red dust. So far, it has identified andesite-like rock from a specimen named "Barnacle Bill." To date, no fossils. Our resident microbiologist, Sylvia Huppler, is on the "Martian life" beat and we hope to hear from her in an upcoming issue. Meanwhile, the News remains very much down to earth. Doug Zbikowski reports on our very well-received school outreach program. Bruce Goetteeman extends an open invitation to travel through cyberspace and members share some favorite recipes. Next issue we will be reprinting an article from the Star and Tribune on the Mississippi "Commerce versus Ecology" and after that, an update on more recent events (provided we get permission). Since, the 1997 - 98 lectures will feature Minnesota geology, we invite you to share any articles or personal experiences you have concerning Minnesota's geology. We will feature them here in the News along with reprints from the Geological Survey throughout the coming year.

Dwight Robinson



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~~FORWARDED~~

The purpose of this newsletter is to inform the members and friends of the activities of the Geological Society of Minnesota. News is published four times a year - February 15, May 15, August 15, and November 15. Deadline for article submission is the first day of the month of publication.

Officers: Marly Lowe, President; Sylvia Huppler, Vice President; Don Mattsson, Treasurer; Pat Johnson, Secretary

Directors: Charles Bretnicke; Dick Heglund; Doug Ziskowski; Alex Lowe; Don Swensrud

Membership Chair: Bruce Goetsman 448-5422

**BY-LAWS REVISED  
AND APPROVED BY BOARD**

As President Lowe discussed in her Board article, the GSM By-Laws have been revised and approved by the Board. Your copy is included with this issue of the News. The Geological Society membership must vote to approve the By-Laws before they can become official.

Please look the By-Laws over and be prepared to vote at the **September 23 Annual Meeting**. If you have questions, you may call Sylvia Huppler at 483-4796.