DIGGIN'S FROM DAKOTA

MONTHLY PUBLICATION OF THE CENTRAL DAKOTA GEM & MINERAL SOCIETY
P.O. Box 2445, Bismarck, ND 58502

SERVING BISMARCK, MANDAN, AND SURROUNDING AREAS IN

NORTH DAKOTA

Gen Buresh, Editor
DIGGIN'S FROM DAKOTA
44 Captain Marsh Drive
Mandan, ND 58554

FIRST CLASS

D I G G I N ' S F R O M D A K O T A

Published by the CENTRAL DAKOTA GEM & MINERAL SOCIETY
P.O. Box 2445, Bismarck, ND 58502
Member,
Rocky Mountain Federation of Mineralogical Societies
and
American Federation of Mineralogical Societies

OBJECT:
1. To further the study of mineralogy and geology;
2. To arrange field trips to collect minerals, gems, and fossils;
3. To assist its members to improve in the art of cutting, polishing, and mounting gem material;
4. To provide opportunities for the exchange, purchase, and exhibition of specimens and materials; and
5. To share knowledge about gems, minerals, and activities of the Society with the general public.

--Article II, CDGMS Constitution

MEETINGS: First Sunday of each month in the Hospitality Room, Capital Electric Building on Highway 83, north of Bismarck; 7:30 p.m. from April through October and 2:30 p.m., November - March. VISITORS ARE ALWAYS WELCOME.

ANNUAL DUES: Family - $8.00; Individual Adult - $6.00; Individual Junior - $3.00

OFFICERS AND COMMITTEE CHAIRMEN, 1981:

President	Mary Beth Osborn	310 - 12th Ave. NW	Mandan	663-1056
Vice President	William A. Buresh	44 Capt. Marsh Dr.	Mandan	663-5397
Secretary	Jane Lanz	600 - 13th St. NW	Mandan	663-8621
Treasurer	Ronald P. Wandler	336 Shady Lane	Bismarck	255-4947
Program Chr.	Earle Campbell	1134 N. 28th St.	Bismarck	255-3658
Hospitality (Lunch) Chr.	Leota Jensen	1400 - 5th Ave. NW	Mandan	663-8217
Field Trip Chr.	Merle Lanz	600 - 13th St. NW	Mandan	663-8621
Annual Show Chr.	Don Campbell	1119 Memorial, #17	Bismarck	258-1194

Clip stamp on reverse side

OTHER APPOINTMENTS, 1981:

Bulletin Editor	Gen Buresh	44 Capt. Marsh Dr.	Mandan	663-5397
Early Class	Harold Brady	1401 Sunny Road	Mandan	663-3904
Federation Rep.	Bill Buresh	44 Capt. Marsh Dr.	Mandan	663-5397
Greeter	Mel Anderson	1521 LaForest Ave.	Bismarck	223-3558
Librarian-Hist.	Glenn Michaels	1700 N. 4th St.	Bismarck	258-8417
Parliamentarian	Al Hartl	1111 North 1st St.	Bismarck	258-0761
Publicity	Leota Jensen	1400 - 5th Ave. NW	Mandan	663-8217

All members are encouraged to submit articles/news for publication during the year.
Advertisements from members will also be accepted for the bulletin.
Material for the bulletin should reach the editor by the 10th of each month.
Permission is given to reprint any article if proper credit is given.

North Dakota's Annual

GEM AND MINERAL SHOW

Mandan Community Center

SEPT. 25 - 26, 1981

D I G G I N ' S F R O M D A K O O T A

Vol. 16, No. 11 November, 1981

NEXT MEETING: Dec. 6, 1981, 2:30 p.m. (Beginners' Class, 1:30 p.m.)

PROGRAM: Annual Christmas Dinner Will Replace the Program

LUNCH COMMITTEE: All Members (See page 2 for details)

* * * * * * *

PRESIDENT'S MESSAGE

November 12, 1981

Hello, everybody,

The last meeting of the year is coming up. This means the actual election time is here. I can't stress enough how important it is to get the right people in office. I'm referring to the people of your choice. I don't feel anybody has the right to grumble if you are not there to nominate and vote for the person of your choice. Come and vote!

I have enjoyed this year, although parts were difficult. I'm very glad that I had a great supportive executive committee and members that cooperated. That helped a great deal. Thanks to everyone for your assistance.

This is also our annual potluck. I'm hoping to see all our members--new and old--there, partaking in some seasonal cheer. We all have a lot to show and tell. Bring your families for a little of the sharing.

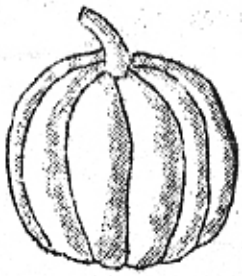
Season's Greetings from

Mary Beth and Pat

* * * * * * *

CALENDAR OF EVENTS

Dec. 6	Bismarck, ND--2:30 p.m., Regular Meeting, Election, and Annual Dinner, Central Dakota Gem & Mineral Society, Capital Electric Bldg., Highway 83 North of Bismarck
Dec. 12-13	Minneapolis, MN--Anoka Co. Gem & Min. Club, 17th Annual Show, Apache Pl
1982	
Feb. 12-14	Tucson, AZ--Tucson Gem & Mineral Society's 28th Annual Show
July 8-11	Houston, TX--American Federation Show
Sept. 17-19	Denver, CO--Rocky Mountain Federation Show
SEPT. 24-25	MANDAN, ND--NORTH DAKOTA'S EIGHTH ANNUAL SHOW, Mandan Community Center, Sponsored by the Central Dakota Gem & Mineral Society. Show Chr.: Jane Lanz, 600 - 13th St. NW, Mandan, ND 58554



Happy Thanksgiving

ANNUAL CHRISTMAS DINNER

The Annual Christmas Dinner to be served after the December meeting will be a potluck menu again this year, as decided at the November meeting. The editor was asked to list these suggestions from last year's "Diggin's":

Each member (or family) should bring a hot dish, salad, or dessert, plus enough bread or rolls for his/their own needs. Butter, pickles, or relishes are also needed (single members' prerogative).

Bring your own plates, eating utensils, and serving spoons.

Coffee will be provided.

* * * * *

AT THE LAST MEETING--Nov. 1, 1981

The meeting was called to order at 2:30 by Mary Beth Osborn, president, with all other officers present except the treasurer. Jane Lanz, secretary, was welcomed back after recovery time following surgery. Glenn Michaels reported for the treasurer.

Thirty-seven adults and five juniors attended the regular meeting, with twenty-one adults and two juniors at the pre-session, as reported by Melvin Anderson, Greeter. Guests included Mr. and Mrs. Steve Kotaska, Maddock, ND, guests of the Melvin Andersons; and Irene Herrmann and Kim, Garrison, ND, guests of the Norman Mautz s.

Earle Campbell, Program Chairman, announced that a Silent Auction would follow the November business meeting, with the Annual Christmas Dinner in lieu of a program in December.

The final report of this year's Show Treasurer, Bob Randall, was read to the Club and presented for audit. The report indicated that show activities for the year, including the sale of club pins purchased by the Show Committee for resale, produced a small profit. So the year's operation is again in the black!

Wil DeGraff, Fargo, a program speaker at the fluorescent exhibit at the 1981 Show, was approved for a one-year honorary membership.

A donation of $75.00 to Capital Electric was approved by the members for use of the meeting room and kitchen facilities for the year.

Betty Mautz, chairman of the Nominating Committee, presented the following slate of nominees for the coming year:

Pres.----- Rod Hickle
V. Pres.---Bill Buresh
Sec.-------Ted Giese
Treas.-----Ron Wandler

The election will be held during the December meeting. Nominations may be made from the floor at that time.

Bill Buresh moved that the club extend official congratulations to the past Show Chairman, Don Campbell, and to the past Show Treasurer, Bob Randall, for the excellent job done for the 1981 Show.

The door prize, a collection of slabs donated by Julius Theis, was won by Ted Giese.

The junior door prize, electric-plated fire agate donated by Don Campbell, was won by Kim Herrmann.

The President announced that all members will serve on the Lunch Committee for the Annual Dinner on December 6. It will be "potluck," as last year. The editor was asked to list suggestions as last year.

After the business meeting, members participated in an active silent auction. Even those not bidding were busy looking.

Lunch was served by Sally O'Neill, Carol Hickle, and Edna Mausehund.

WHO AM I?

I Cost Nothing,
I Bore No One,
I Help Everybody,
I Violate No Law,
I Create Friendship And
Good Will,
I Am Useful Every Moment
Of The Day,
I Am A Little Thing With
A Big Meaning.

Many Have Praised Me,
None Have Condemned Me;
I Am Pleasing To Those Of
High And Low Degree;
I Unlock Doors, Open Hearts,
Dispel Prejudice;
I Inspire Respect And
Admiration;
Everybody Loves Me.

SIGNED,

I. M. Courtesy

(Contributed by Verna Giese)

* * * * *

THIS-N-THAT

Glenn Michaels and Viola and Melvin Anderson joined the members of the Lake Agassiz Gem and Mineral Society, Fargo, for a field trip to the Minnesota Iron Range country, led by Louise McCarthy, on Oct. 17-18. They reported being mired in mud from rain and snow, but the group was successful in their search for Binghamite and silkstone. Michaels and Andersons were most appreciative of the opportunity to join the Fargo club on this adventure.

+ + +

Pius and Emma Fischer reported an enjoyable visit to the "Cascade of the Gems" show presented by the Portland Gem & Mineral Show Assoc. in Portland, Ore. on October 23-25.

+ + +

Jane Lanz had the misfortune of having to return to the hospital to have an internal abcess removed following her recent surgery. She is once more on the recovery track.

+ + +

Ewald Muggli spent over a week in St. Alexius Hospital recently and is now recuperating at home.

+ + +

Gen and Bill Buresh enjoyed attending a meeting of the Williston Gem and Mineral Club on October 19 when they returned the four cases borrowed from the Williston club for our show in September.

+ + + + +

AMETHYST

Amethyst is the Queen of all the varieties of quartz. The name of the transparent purple quartz is believed to be derived from a Greek word, "Amititos", meaning "Not Drunk", and in the ancient world, drinking wine from a goblet carved of amethyst was purportedly to guard against unwelcomed next morning "Hangover".

Natural amethystine quartz is a widespread mineral, at least in small or poorly colored crystals and masses, in low temperature hydrothermal veins. It is most common in rocks of basic igneous flows as a crystalline lining of cavities and geodes, as well as some granites and pegmatites. The crystallized clusters in the Thunder Bay area are associated with silver, lead and zinc veins.

The amethyst lies in a geological complex portion of the Canadian Precambrian Shield. Geologically, the region is underlain by series of volcanic and metasedimentary rocks that have been intruded locally by a red granite. These are often cut by lava flows and innumerable diabase dikes. The widespread mineralized veins usually contain calcite, barite, fluorite and clear to smoky quartz and amethystine quartz, as well as ore minerals such as galena, sphalerite, pyrite, chalcopyrite and gold-silver mineralization. --From "Sooper Snooper" via "The Black Hills Prospector," 10-81

* * * * *

Adjectives have little spice, Adverbs don't have any... Words are pretty tasteless things, I know, I've eaten many.--"The Gems" via Black Hills Prospector Oct. 1981

PLANETS MAY BE DIAMONDS IN THE SKY, ACCORDING TO LATEST SCIENTIFIC THEORY

NEW YORK (AP)--The planets Uranus and Neptune are not covered with frozen ammonia and methane as some scientists say, but they might be covered with another kind of glittering ice--diamonds.

That's the conclusion of a physicist who says that the extremely high temperatures and pressures on the two planets might have converted carbon to diamonds.

The latest theory says the planets are made of rocky cores surrounded by a layer of ice, ammonia and methane (natural gas), and an outer layer of hydrogen and helium.

Temperatures in the intermediate ice layer on each of the planets would range from 3,000 to 12,000 degrees Fahrenheit.

Pressures would vary from 200,000 times the pressure of the earth's atmosphere to 6 million times earth's atmosphere. Ross had calculated that the methane would break up into hydrogen and carbon above 3,000 degrees and 200,000 atmospheres. The carbon atoms would be squeezed together to form diamonds, just as carbon on earth was compressed over millions of years to form coal and ultimately diamonds. "At higher temperatures the atoms would become a metal," Ross said. It has been estimated that the two giant planets--each nearly four times the size of earth--are about 1/5 carbon, so the quantities of diamonds on the planets would be enormous. It's not likely, however, that those diamonds will be harvested any time soon.

--From "C.I. Nugget" 9-81, condensed from a Grand Island Independent article.

* * * * *

WE ARE NOT ALONE--There are rock, mineral and gem clubs in 22 other nations besides the U.S. Canada and Africa follow the U.S. in number of clubs. South Africa has an active Federation of clubs which has annual shows and field trips. The combined total of all clubs in the world is about 1,200, with four-fifths of these in the United States.
--From "The Geode" via "The Rock Vein" 11-81

QUOTE FROM 1973 "DIGGIN'S"

The "Lowcountry Diggings," a publication of the Lowcountry Gem & Mineral Society of Charleston, S.C., has an article titled "The Peculiarities of Tourmaline" credited as taken from the January 1973 issue of "Diggin's from Dakota." A quick reference to that issue reveals that Blossomae Campbell was editor of our "Diggin's" in 1973 when that article was published.

Florence Richardson, editor of the "Lowcountry Diggings," must have an extensive reference file to be able to retrieve material from that far back.

ED. NOTE: The article is printed below for the benefit of members who have joined the club since Jan. 1973.

THE PECULIARITIES OF TOURMALINE

We all know that tourmaline is a popular gemstone because of the beauty and variety of its colors, but I wonder how many are familiar with the other side of its life. You see, tourmaline is a rather unusual mineral that really has a double life. Not only is it a desirable gemstone, it is also a unique and very useful scientific tool.

It goes deep-sea diving in submarines. It gets blasted to bits in big guns. It keeps your radio on the proper frequency. Then, a little more on the annoying side, tourmaline becomes a dust-collecting nuisance to jewelers or museum curators who wish to display cut gems of this material in display cases that are likely to become heated by artificial lighting.

All of these things come about because tourmaline develops electricity when it is rubbed or heated, or when it undergoes any change in pressure. When a tourmaline crystal is rubbed or heated, it becomes charged with electricity, politive at one end and negative at the other. When it cools, the poles reverse themselves. During the process the crystal attracts particles of dust. Scientists have named such electricity "Pyroelectricity." (cont. p. 6)

"A TIME THERE WAS"

Time-rock units (strata deposited in a given period of geologic time) and Time units (the given periods of geologic time) were not always clearly separated, leading to some confusion until the 1930's when the three-fold system of rock units, time units and time-rock units was finally established. The great divisions of geologic time grew out of Lyell's "periods," Primary, Secondary and Tertiary. As time units these became ERAS (the name "period" was later applied to the next smaller unit of time.) For a time (about 1872) each of the three Eras had two synonymous names: Primary or Paleozoic, Secondary or Mesozoic, and Tertiary or Cenozoic (in England sometimes spelled Cainozoic.) By 1880, the second name of each pair had generally won out. Tertiary became the name of the period which included all of the Cenozoic except the geologically short time of the Pleistocene and Recent (sometimes called Holocene). The later two were placed in the Quaternary Period. Quaternary or "fourth" was a name applied to the most recent sediments--post-Tertiary sediments--by German and French geologists following Lehman's major units as reinterpreted by Lyell and others. It, like Tertiary, was reduced to Period level. Complete agreement has still not been reached for the pre-Paleozoic time unit(s) names; it is sometimes divided into two or three Eras but more often simply called the Precambrian.

The study of Sedimentary beds continued in Great Britain, western Europe and elsewhere following the lead of men like "Strata Smith". By 1883, the names Eocene, Miocene, Pliocene and Cretaceous were in use. However, what would become the Carboniferous was still called the "Coal Measures" and the Devonian was still included in the "Old Red Sandstone." By 1883 the Silurian, Devonian and Carboniferous had been described, named and accepted, soon to be followed by the Cambrian. These were not accepted by everyone at the same time; some holdouts would continue to doubt the validity of some units for a time. The Ordovician was not proposed until 1879 and then not accepted in America for a couple of decades though more quickly accepted in Europe. By 1905 the classification resembled quite closely that of today.

The derivation of Period names may help to point out why they are called what they are:

Cambrian	- Cambria, Roman name for Wales (where strata first studied).
Ordovician	- Ordovici, Latin name for a Celtic tribe in Wales & western England (where first studied).
Silurian	- Silures, Latin name for a tribe in the same general area.
Devonian	- Devon, southwestern English county or shire.
Carboniferous	- Carbon-bearing, from extensive coal beds deposited during that time in No. America and many other places. Divided and replaced by Mississippian & Pennsylvanian in the U.S.
Mississippian	- Central Mississippi River valley. Beds of this age are widespread there (approximate equivalent of the Lower Carboniferous Epoch of European classification).
Pennsylvanian	- State of Pennsylvania. Western Pennsylvania was the greatest coal producer. (Approximate equivalent of upper carboniferous of European classification).
Permian	- Province of Perm, Russia (where first studied).
Triassic	- "3 fold;" strata occurs in three layers (1. continental red beds, 2. marine shale & limestone, 3. red beds) in the type region in central Germany.

(cont.)

"A TIME THERE WAS", cont.

Jurassic	- Jura Alps along the French-Swiss border.
Cretaceous	- Creta, Latin for chalk, which describes the nature of those beds in West Germany, France, England, Holland and Belgium.
Tertiary	- "third." Original goes back to Lehman, Lyell, and others; type region is the Paris basin.
Quaternary	- "fourth," like Tertiary, explained above.

--From "Ozark Earth Science News" via "The Geode", Jan. 1980

* * * * * * *

THE PECULIARITIES OF TOURMALINE cont. from p. 4

Long before Ben Franklin's wife told him to go fly a kite--and consequently discover electricity--Dutch children noted that when tourmaline pebbles became heated by the sun, they would attract straw and ashes. While the younger set didn't understand why, it was because the heat of the sun had created pyroelectricity within the pebbles.

Pressure on tourmaline also has the same electricity-producing effect. In this case the electricity is called "piezoelectricity." Tourmaline is so sensitive to slight changes in pressure that if a crystal is wired to a gauge, it will show so rapidly that a crystal in the breech of a cannon gives a reading of the pressure of the exploding charge before it disintegrates itself in the explosion.

When alternating current is applied to a tourmaline crystal, the crystal changes volume so rapidly that it vibrates at a high frequency. This peculiarity makes it useful in controlling the frequency of radio broadcasts.

As a final peculiarity, tourmaline comes in more colors than any other gem material. Sometimes it shows different colors in the same crystal. (Reprint from "Diggin's from Dakota" Jan. 1973)

"Lowcountry Diggings" Editor's note: The varieties of tourmaline are based on the composition: schorl is black and rich in iron; dravite is usually brown and rich in magnesium (may also be white if calcium substitutes for sodium); lithia tourmaline contains lithium and aluminum subbing for iron and magnesium and may be pink, red, blue or green and colorless. Color varietal names are also used: red = rubellite; colorless = achroite; blue = indicolite.

Of special interest are the watermelon crystals.* Those from Brazil are typically "watermelon"--green on the outside and red on the inside. Those coming from California are reversed--red on the outside and green on the inside.

Chemical formula for tourmaline = $Na(Mg,Fe)_3Al_6(OH)_4(BO_3)_3(Si_6O_{18})$

*Source material: Gems by Nab Wilson ("Lowcountry Diggings," Oct. 1981)

* * * * * * *

A politician who had changed his views rather sharply was congratulated by a colleague. "I'm glad you've seen the light," he said.

"I didn't see the light," came the reply, "I felt the heat." --The Rock Vein, 11-81