



MONTHLY PUBLICATION OF THE CENTRAL DAKOTA GEM & MINERAL SOCIETY

BISMARCK-MANDAN AND SURROUNDING AREAS

NORTH DAKOTA

DIGGIN'S FROM DAKOTA  
Gen & Bill Buresh, Editors  
1527 N. 19th St.  
Bismarck, ND 58501



Published by the CENTRAL DAKOTA GEM & MINERAL SOCIETY

Member

Rocky Mountain Federation of Mineralogical Societies  
and

American Federation of Mineralogical Societies



- AIMS:**
1. To encourage the study of mineralogy and geology.
  2. To foster field trips for collection of minerals, gems and fossils.
  3. To improve the skills of its members in the arts of cutting, polishing and gem mounting.
  4. To provide opportunity to exchange, purchase and exhibit specimens and other material.

**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. the rest of the year. VISITORS ARE ALWAYS WELCOME.

**DUES:** \$5.00 per family per year.

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Subscription rates for non-members are \$3.00 per year.

All members are encouraged to submit articles, etc., for publication during the year. All material for the bulletin should be received by the editor by the 10th of each month. Advertizing in the bulletin by members will also be accepted.

Other editors may reprint articles from this bulletin. A credit line would be appreciated.



# North Dakota's Annual GEM AND MINERAL SHOW

Mandan Community Center

September 28 - 29, 1979

# DIGGIN' S FROM DAKOTA

Vol. 14, No. 3

March, 1979

NEXT MEETING: April 1, 1979, 7:30 p.m. (Beginners' Class, 6:30 p.m.)

PROGRAM: Silent Auction--Bring a lot of goodies for this event.

(Program Chairman Fairaizl reports that there is a possibility of having a demonstration on silver casting, but bring your silent auction material in case the latter does not materialize. There may be time for both.

LUNCH COMMITTEE: Mary Beth Osborn, Clara Muggli, and Donna Glazer

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## PRESIDENT'S MESSAGE

Hi, Everyone!

I would mostly like to address this letter to the man of the family, but in some cases the situation is reversed. I am wondering about two words that commonly come into usage, "I", and less often, "we". I am sure we are all guilty of abusing this word "I" at one time or another. For instance, I finished some nice cabs today; I just bought a specimen today; I went rockhunting today.

The questions, did "I" do it all alone or did I have some help in one way or another? We know that not all of the rockhounds' wives are as fond of the hobby as their husbands. I'm sure that they have sacrificed their time going along with us when they would rather have been doing something else. I'm sure, too, that money has been spent on our new saw blade or new specimen when they might have liked to spend it on something else. Some of these same wives are probably coming to the monthly meetings just to please us, too.

(cont., p. 2)



## CALENDAR OF EVENTS

- |             |   |
|-------------|---|
| April 1     | Bismarck, ND. 7:30 p.m. Regular meeting, Central Dakota Gem & Mineral Society, Capital Electric Bldg., Highway 83 North of City |
| May 19-20   | Hot Springs, SD. Gem & Mineral Show--Picture City Gem & Mineral Soc.  |
| May 19-20   | Guymon, OK. Gem & Mineral Show--Tri-State Club  |
| May 18-20   | Abilene, TX. South Central Federation Show  |
| June 8-10   | Rapid City, SD. Rocky Mountain Federation Show  |
| July 12-15  | Tampa, FL. National Gem & Mineral Show  |
| July 19-20  | Winnipeg, Manitoba, Canada. The Tenth International Gem and Mineral Show--The Winnipeg Rock & Mineral Club                      |
| Sept. 14-16 | Williston, ND. Gem & Mineral Show--Williston Gem & Mineral Soc.   |
| Sept. 28-29 | MANDAN, ND. NORTH DAKOTA'S FIFTH ANNUAL SHOW--Central Dakota Gem and Mineral Society  |
| Sept. 8-9   | Aberdeen, SD. South Dakota State Show--Lakota Glacier Rock Club   |

PRESIDENT'S MESSAGE, cont.

What I am trying to say is that maybe "we" instead of "I" should be used when we're talking about our hobby. I would like to entertain a motion at the next meeting that we designate the May meeting as "Ladies' Day". Maybe the men can do the serving for hospitality for a change and also treat the ladies a little extra special.

One other suggestion before I sign off. When you finish this letter, how about putting down the paper and thanking your patient spouse for putting up with your hobby.

See you at the next meeting.

Harold A. Brady

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AT THE LAST MEETING--March 4

Forty-two members, five children, and two guests were present at the March meeting. Guests were Lyle Mundell and Marcus Radig, both of Bismarck.

Show Chairman Earle Campbell reported that the plans for the annual show are progressing satisfactorily, but that the rental agreement for the Mandan Community Center space has not yet been finalized.

Field Trip Chairman Rod Hickie called for suggestions for possible field trips for the coming summer season.

Earle Campbell reported on behalf of the Auditing Committee that all accounts were found in balance. A few procedural suggestions were made.

Editor Bill Buresh reported that Stan Fairaizi had offered a used mimeograph to the club. Buresh stated that the machine appeared to be in repairable condition and that it would be given a trial run before checking out other prospects.

A motion to award a plaque to a deserving club member on an annual basis was tabled.

The door prize, two pieces of slabbed material donated by Ted Giese, was won by Herb Thompson.

The program consisted of a demonstration on silversmithing by club member Steven Newstrom. Steven had a captive audience while he fashioned a beautiful earring. Silversmithing undoubtedly will flourish within the club, judging from the number of questions that were asked about the procedures and materials used.

Lunch was served by Viola Anderson, Emma Fischer, and Ida Mae Ramberg.

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EXHIBITS

A junior member has done it again. John Campbell is the second person to report an exhibit entry for our 1979 Show. Let's keep these reports coming!

I have also received a request for the plans for a display case. Printed plans are still available, and Pius Fischer will again build cases for any members who wish to have them made. Put in your order now--the fishing season is opening soon!

Bill Buresh, 1979 Exhibit Chr.  
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DUES ARE PAST DUE

The grace period for membership ends this month. This will be the last issue of the "Diggin's" that anyone will receive unless dues have been received by the treasurer before the April issue is published.

Please add the following names to your 1979 paid-up membership list:

Althouse, John & Jean--2400 Astronaut Dr.,  
Bismarck, ND 58501 Tele: 258-0759  
Ellison, Carl G. & Hazel--P.O. Box 4,  
Bismarck, ND 58501 Tele: 258-9177



### SELENITE CRYSTALS IN THE RED RIVER FLOODWAY

These delicate, fascinating crystal clusters are the end product of a slow precipitation process. Ground water flowing 15 to 20 feet below the prairie surface carries with it varying amounts of calcium sulfate ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ). The  $\text{CaSO}_4$  finds its way into cracks, crevices and vugs of the Lake Agassiz gumbo. In these small underground pockets, or cavities, the dissolved calcium sulfate comes out of solution, or precipitates. Over a period of time a Selenite Crystal begins to form. On this "seed" crystal, additional selenite blades evolve. The size of the crystal cluster depends upon the nature of the cavity, saturation of the water with  $\text{CaSO}_4$  and length of growing time. The Rosettes not only vary in size and quality but also in color, the color varying from colorless transparent to honey yellow, and reddish-brown opaque. --from PIK-N-ROK

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### THIS-N-THAT

Hospitalized since the publication of the last issue of the "Diggin's" was club member Leo Krank. A "rock" was delivered to him at St. Alexius Hospital. Leo is now recuperating at home in Dickinson. His letter of appreciation was read at the March meeting.

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Blossomae Campbell will exhibit a case of "Gems and Minerals of the Bible" at the Annual Presbyterian Church Arts Festival to be held at the First Presbyterian Church, Bismarck, on March 30-31.

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Emma and Pius Fischer visited rock shops in Glendive and Sidney, Montana, this past week.

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Katherine and Ed Muggli did not make it to Arizona this year as was previously reported in the "Diggin's." They got as far as Pierre, South Dakota, and decided they were safer back home than on winter roads to the Southwest.

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### AQUAMARINE AND BLOODSTONE, BIRTHSTONES FOR MARCH

Two of the most exotic gemstones of all are the March birthstones--the clear sea green-to-blue Aquamarine and the opaque Bloodstone, a strongly masculine stone of a dark green flecked with red.

The Aquamarine, which seems to capture in its transparent depths something of the vitality and surging spirit of the ocean, is a talisman long believed to impart courage to the wearer, to cure laziness and to quicken the intellect.

The Aquamarine is a variety of Beryl (alumina-beryllium silicate), belonging to the same family of gems as the Emerald. It is found in such widely separated parts of the world as Ceylon, Brazil, the United States (Maine and North Carolina) and Russia.

The March-born man will prefer the darker Bloodstone, a gem which offers a sharp contrast in appearance. Bloodstone is a variety of precious quartz, slightly less hard than the Aquamarine.

The Bloodstone's deeper color and opaque quality lend themselves especially to men's rings, either polished or cut as signets. Nineteenth-century lapidaries used Siberian Bloodstone for small carved objects, and similar ornamental articles are obtainable today. A small object or figure worn on a watch chain or key ring is another interesting way of wearing this handsome birthstone.

Medieval folk believed that the Bloodstone had received its coloring from Christ's own blood falling upon a green stone at the foot of the cross and legend ascribes to the Bloodstone the power to impart wisdom to the wearer.

--from AFMS Newsletter

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"Life is no brief candle--it's a splendid torch." G. B. Shaw



OPAL TRIPLETS, by Mal McMurdo

These gemstones are comprised of three pieces. The top is clear quartz, the middle a thin band of opal and the bottom or back a black opaque material.

Suggested construction procedures:

All opal should be dried. It is better that it craze or crack before construction rather than after the gem is finished.

To aid in orientation as to the best color for working, wet with water.

To remove a large amount of patch to get to the layer of fire, trim with a trim saw, using a thin opal blade. These blades are fragile and extreme care must be used. DO NOT USE OIL AS COOLANT. An anti-rust lubricant such as "Crystallcut" in water works well. It is also possible to remove patch with a grinding wheel, but great care must be taken.

The surfaces of the opal slice now need to be lapped to uniform flat surfaces. This can be done successfully with a piece of glass and 600 tumbling grit. Place a small amount of grit on the glass, wet with water to make a slurry, and with light pressure from your fingers, work in a circular figure 8 motion. Check frequently to check your progress. The opal should be worked to a uniform thickness equal to about six sheets of paper to attain the best uniform color. To check the development of the color, rinse the opal and place on a slice of wet black obsidian as you proceed. Another method is the use of a flat lap such as a faceting lap. At this point your opal slice is thin and extremely fragile.

Quartz Top and Opaque Base

You now need to proceed with the preparation of the clear quartz for the top and your opaque base material. The surfaces of these materials which will be in contact with the opal slice need to be prepared in the same manner as the opal. The base material should be of such a thickness that the mounting

it is going into will conceal it. In most cases this will be about 1/16 inch. For the cap, start with 1/4 inch clear quartz. This will give you sufficient material to work with. You can always grind excess thickness away, but you can't add on.

Note: The quartz should be of a high grade and crystal clear for the optimum magnification effect.

If your base material is not a dense opaque black, add a little lamp-black to the epoxy that goes between the opal and the backing. The amount that will sit on the head of a toothpick is sufficient.

Cement Your Components!

You are now ready to cement your components together, but before you do, all pieces must be thoroughly cleaned. Wash with warm soap and water. Now clean with methyl hydrate and let dry. Rinse with clear water and set aside to dry on a clean surface. DO NOT touch any of these cleaned surfaces with your fingers. The natural oil of your skin can ruin an otherwise perfect triplicate.

Warm all components under a light bulb (warm, NOT hot) while preparing your two-part epoxy cement.

The two-part epoxy is mixed on a clean, dry surface with a toothpick. Put a small equal-sized dab from each tube side by side. The mixing process must be done in a fashion that will not induce air bubbles. One method is to insert the toothpick from the side and gently work to a uniform consistency. Do not remove and replace the toothpick, as this has the effect of inducing air bubbles.

Apply the epoxy to two of the warmed surfaces, and with a slight sliding motion squeeze the two pieces together to force out excess epoxy and any trapped air. Repeat for the other two surfaces, and hold under light pressure for 24 hours to dry. A clothes pin makes an ideal clamp.



(cont.)





OPAL TRIPLETS, cont.Work as a Normal Cab

After your constructed triplet has dried completely (24 hours), proceed to work it as a normal cab, BUT avoid any heat build-up. Heat is one of opal's worst enemies. Polish with tin oxide on leather.

Since opal is fairly soft--about 5 to 6 in hardness--the addition of a clear quartz cap increases this hardness to about 7, thus making your opal more durable.

Note: An alternative construction method is to finish lap one surface of the opal, cement it to either the backing or the quartz top, and then lap the second surface of the opal. This method is preferred by many because it lends more strength to the otherwise fragile opal.--From CALGARY LAPIDARY JOURNAL via THE ROCK VEIN, March 1979.

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SPENCER OPAL MINES

The Spencer (Idaho) Opal Mines will again be open this summer for digging. The initial fee for mining will be \$12.50 per day per digger for a maximum of 5 pounds of opal material. In excess of 5 pounds will be charged at the rate of \$2.50 per pound. All material will be weighed when you check out at the mine site. No partial day rates.

The mine will be open Saturday through Thursday from 8 a.m. until 4 p.m. It will be closed on Fridays for bulldozing. Buy your digging permit at the mine site. The owners have invested a great amount of money with the purchase of a D-9 Cat with a huge ripper to insure a great year! The Pink beds will be opened and extended into new virgin grounds.--From THE GEM via G. I. NUGGET

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SHOP TIP: A small amount of liquid detergent in your cutting oil will let a diamond saw cut cleaner and make it easier to clean.

GOING TO POT?

When you use the phrase "going to pot" to describe the general condition of your health, your garden, your business, whatever, you should realize you don't mean it to be taken literally.

Like so many other expressions that we've adopted for daily usage, this one, too, has lost its original meaning. Actually, the allusion to "going to pot" is to the melting pot used by craftsmen of old and into which they threw broken pieces and shavings of metal, especially gold and silver.

When items became too small for use or damaged past mending, there was only one thing that could be done with them: melt them down for re-use by letting them "go to pot."

--From THE GOLDEN NUGGET via  
LOWCOUNTRY DIGGINGS

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AIN'T THAT THE TRUTH! ! !

1. America is the only country in the world where people jog ten miles a day for exercise and then take the elevator to the mezzanine.
2. Drive 30 minutes around a parking lot hoping to find a parking space close to the door.
3. Technology in America has developed a 15¢ soda can which will last for 500 years and a \$10,000 car that will rust out in 2 years.
4. If the world is getting smaller, why do they keep raising postal rates?
5. Prosperity is spending money we have not earned, to buy things we don't need, to impress people we don't like.
6. Taxation, like a lot of other things, is based on supply and demand. The government demands and we supply.

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CONFUCIUS SAY: "Kittens that live in milk barn do lapidary work."

ANSERS TO LAST MONTH'S GEOLOGY QUIZ

1. True
2. True
3. True
4. True
5. False - Sandstone is a sedimentary rock consisting of sand-sized particles.
6. False - Rock flour is fine sand and silt produced by crushing and grinding in a glacier.
7. True
8. False - Reservoir rock is a porous permeable rock containing petroleum, natural gas, or both.
9. False - A normal fault is one that is generally steeply inclined, along which the hanging wall block has moved relatively downward.
10. True
11. True
12. False - An orogenic belt is a mountain chain in the process of formation.
13. True
14. True
15. False - A kame is a body of ice-coated stratified drift shaped as a short-steep-sided knoll or hummock.
16. True
17. True
18. False - Frost-heaving is a lifting of rock waste by expansion during freezing of contained water.
19. True
20. False - Exposure is a body of bedrock not covered by regolith and forming part of the earth's surface.

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PEBBLE PUP WORD SCRAMBLE

Did you get your rockhound tools unscrambled last month? Here are the answers:

- |           |             |
|-----------|-------------|
| 1. shovel | 4. rock bag |
| 2. pick   | 5. chisel   |
| 3. hammer | 6. sledge   |