



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

# DIGGIN'S FROM DAKOTA



Published by the CENTRAL DAKOTA GEM & MINERAL SOCIETY  
P.O. Box 2445, Bismarck, ND 58501

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 26 - 27, 1980

NEXT MEETING: January 4, 1981, 2:30 p.m. (Beginners' class, 1:30 p.m.)

PROGRAM: Demonstration making cabochon doublets and triplets, by George Robinson, Club Member. George's specialty is working with opals, which are usually finished as doublets or triplets, so he has had considerable experience in the field. Several members have recently expressed an interest in learning to make doublets and triplets, so here is an opportunity for everyone to get some pointers on this topic.

LUNCH COMMITTEE: Orma Swanick, Blossomae Campbell, and Sue Randall

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AY PEACE AND JOY BE YOURS

AT CHRISTMAS TIME

AND THROUGHOUT THE NEW YEAR

*The Editors*

CALENDAR OF EVENTS

- Jan. 4 Bismarck, ND--2:30 p.m. Regular Meeting, Central Dakota Gem & Mineral Society, Capital Electric Bldg., Highway 83 North of Bismarck
- Jan. 8-11 Denver, CO--Show, Denver Gem & Mineral Guild
- Feb. 13-14 Tucson, AZ--27th Annual Show, Tucson Gem & Mineral Society
- Apr. 11-12 Mankato, MN--23rd Annual Show, Minnesota Valley Gem & Mineral Club
- Apr. 18-19 Hibbing, MN--18th Annual Show, Mesabi Rock & Mineral Club
- May 16-17 Hot Springs, SD--South Dakota State Gem & Mineral Show
- June 4-7 Salt Lake City, UT--AFMS and RMFMS Show and Convention
- SEPT. 25-26 MANDAN, ND--SEVENTH ANNUAL SHOW, CENTRAL DAKOTA GEM AND MINERAL SOCIETY

PRESIDENT'S MESSAGE

Hi, Everyone:

Another meeting has come and gone and it's time to write another letter. As we all know, the Christmas potluck was held at our last meeting. Everyone outdid themselves. There was so much to choose from that I still feel full. I think I managed to taste a little of everything by going back for seconds, then thirds. Thank you, everyone, for making it a very special Christmas banquet.

We also elected new officers and they are as follows: Mary Beth Osborn for president, Bill Buresh for vice-president, Jane Lanz for secretary, and Ron Wandler for treasurer. I wish you each luck on your new job.

I was also asked to lead the early class once more until Mary Beth can appoint a new pebble pup chairman. Don't forget to come to this early class because I will have some new specimens to discuss.

I want to thank one and all for your support throughout the year and most of all for being such wonderful people. Please support your new slate of officers as you did the old.

Merry Christmas and see you all at the January meeting.

Sincerely,

H.A. Brady

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AT THE LAST MEETING--Dec. 7

Forty-five adults and eight children were reported present at the last meeting by Emma Fischer, Hospitality Chairman. Twenty-one individuals participated in the pre-meeting discussion led by Harold Brady.

A discussion on silent auction proceeds at the show resulted in a motion that the 20% club proceeds from the silent auctions at club meetings should go to the club treasury, and the 20% club

the proceeds from a silent auction at the annual show should go to the show treasury. The motion passed.

Bob Randall read an acknowledgment from Dixie Lee Alf, RMFMS Scholarship Chairman, of the receipt of the Society's check for the scholarship fund. She also stated that the club now is credited with a 500% participation in the scholarship fund. This percentage is cumulative, with the percentage amount increasing with each additional contribution.

Duane Robey read a Christmas message from Russell and Olive Becker of Oconomowoc, Wisconsin, which also stated that they enjoyed our last show. The Beckers are primarily "swappers," but they were also active in the silent auction at our show in September.

Glenn Michaels and Jane Lanz were appointed by President Brady to audit both the club and the show treasurers' books.

The results of the annual election are reported elsewhere.

A motion was passed commending retiring officers for their services during the past two years and urging continued cooperation of all members with the newly elected officers.

Edna Mausehund won the door prize, a 2.5 carat rose quartz gemstone which was faceted and donated by Club Member Carl Ellison.

The climax of the meeting was the annual Christmas potluck dinner. There was food galore and everyone partook with gusto.

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SHOP HINT--To add weight to Brazilian and similar slabs when lapping, use a canned-ham tin filled with sand. The bottom flange of the ham can keeps the slab confined and prevents chipping of the edges.--Via "Rock Express"

DUES ARE DUE!!

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NEW OFFICERS ELECTED

The members of Central Dakota Gem and Mineral Society elected a new slate of officers for the year 1981. They are as follows:

President-----Mary Beth Osborn  
 Vice-President---William Buresh  
 Secretary-----Jane Lanz  
 Treasurer-----Ronald Wandler

A new precedent has been set. For the first time in the history of the organization, a woman has been elected to head the Society.

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ED MUGGLIS REPORT

Gresham, Ore.  
 December, 1980

Dear Fellow Club Members,

We left home with our camper on Oct. 12th. That afternoon we stopped at Miles City to visit Ed's aunt and cousins, then continued on our way to Billings, where we stayed that night.

The next morning we slept rather late, assuming we had lots of time, but when we heard on the radio there was snow forecast for Montana that night, we hurried to get going. Had intended to stop at Phillipsburg for sapphires that day, but hurried on and got to Spokane by nightfall. Lucky we did, as they did have snow that night. The weather was beautiful and it would have been perfect for rock-hounding that day. Will have to try again some other time.

We spent two weeks with our oldest son Terry and family at Spokane before we went to Portland. We are staying with our daughter in Gresham, which is a suburb of Portland. Our youngest son lives 25 miles from here at Estacada.

We had to come to see our new granddaughter. Our son and wife at Estacada had a baby girl, named Liesl, in August. We hadn't had any grandchildren for eleven years, so that was quite a pleasant event.

We took the bus to Tacoma and visited my two sisters, nieces, a nephew, and their families for two weeks.

We had an enjoyable Thanksgiving at our son's at Estacada. Our daughter is alone, so we will be with her most of the time.

In February we plan on going to California and Arizona for a month or more. We will visit Ed's nephew in Kingman, so hope to do some rock-hounding there.

We have had lots and lots of rain here. Just pours all day at times, but we are enjoying ourselves in spite of the rain.

I suppose Sunday you are having the Christmas dinner. Wish we could be there. There's always so much good food. Have a good time and enjoy your dinner.

Wishing you all a Very Merry Christmas and a Happy New Year.

Ed & Katherine Muggli  
 515 S.E. Rene, Sp. #18  
 Gresham, OR 97030

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PEGMATITES, by Bill Buresh

Pegmatites are very coarse-grained granitic rocks composed chiefly of feldspar, quartz, and mica, commonly occurring in veins or dikes. They often contain cavities or vugs lined with crystals. In one form of pegmatite, graphic granite, quartz forms angular figures which look like writing.

Pegmatites are mined chiefly for their mica and feldspar, or for gems and other accessory minerals. Some of the accessory pegmatite minerals are:

Garnet	Tourmaline	Rubellite
Apatite	Molybdenite	Fluorite
Topaz	Pyrite	Chrysoberyl
Beryl	Lepidolite	Emerald
Ruby	Aquamarine	Wolframite
Sapphire		

Some of the pegmatite dikes near Keystone, SD, have yielded a number of the accessory minerals mentioned above, some in crystal form.--Adapted from "Chips From the Rock Pile", Sept. 1980



THIS-N-THAT

Pius and Emma Fischer are leaving on the 20th of December by plane to spend the holidays with friends in Florida.

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Joel and Ida Mae Ramberg are back in their own home after her long siege of convalescence. She extends her thanks for the cards, telephone calls, and visits she received during her illness.

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The editors apologize to Julius Theis for christening him with a new first name in the November "Diggin's." They also regret allowing other misspelled names to show up from time to time. Our typewriter is still "in training"!!

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PARLIAMENTARY TIPS, by Gen Buresh

Any topic to be brought up for consideration at a meeting must be presented in the form of a "motion," suggesting that the organization should take certain action.

If seconded, the motion is discussed and voted upon. The chairman then announces the result of the vote.

Any member may make a motion during a business session by obtaining recognition from the chairman and stating, "I move that - - - - -."

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CUBIC ZIRCONIA

Cubic zirconia, that flashy diamond look-alike, is coming out with forty colours. Perfected in Russia, the trade name of the original is Phyanite. But as in the case of other synthetics, more countries and companies are now getting into the act.

--"The Concretionary Column" by June Zeitner, AFMS Newsletter, via "Sooner Rockologist", Sept-Oct, 1980

FUMES AND DUST CAN BE INJURIOUS TOYOUR HEALTH, by Gerry E. Pettibone

Creativity in the lapidary and metal smithing arts can be rewarding and appreciated, now and into the indefinite future. Look at what Cellini achieved with his ornamented gold saltcellar. But, will you the artist live to create on another day? One of our fellow enthusiasts was reported during the past year to have made a fatal mistake. He was only soldering a little trinket for a couple of minutes. Four or five days later he died of cadmium/chromium poisoning in a hospital because doctors have no antidote for such poisons.

"I want out--right now," you say. No, no--not so fast. There are just three simple rules to follow at all times, and you and your fellow artisans will be happily and creatively engaged indefinitely:

1. Know positively what materials, including fluids and gases, you are working with and how to handle them.
2. Know your equipment and how not to handle it.
3. Keep your work space clean and the air you breathe just that: AIR only.

If you aren't smart enough to keep from dropping that geode on your toes on the way to the slab saw or keeping your hair and loose clothing out of rotating machinery, maybe we can't help you. However, there are some other things not so obvious which we can perhaps help you with.

The following is a list of major precautions. Your health is our major concern here, but these same precautions will also help produce a better creation because contamination must be guarded against in all phases of the lapidary and metal smithing arts.

FUMES AND DUST, cont.CUTTING MATERIALS:

1. Cut or grind all stones with a wetting agent (usually water) or a lubricant at the point of action at all times. If you insist on cutting or sculpting dry, then you better have a good vacuum system sucking up all the dust. Otherwise you are asking for a good case of silicosis (a disease of the lungs). Clean up the machine and work space when you are finished with a piece before you go off into another phase of the work. A damp cloth will do nicely here.
2. Coral and shell are toxic. Any coral or shell--abalone, for example--dust in an open wound will make it fester. Healing may take 3 or 4 weeks. Think what such dust will do to your lungs.
3. Nephrite jade, "TV" stone and gypsum have an asbestos component. Asbestos is linked with cancer of the lungs.
4. Buffing compounds, including fragments of the buffing wheels, are best handled under a vacuum or ventilation hood.
5. Detergent type wetting agents in water when used too generously will cause an allergic reaction when vapors thrown by grinding wheels are inhaled. A few drops of detergent concentrate per gallon of water will suffice and cause no reaction.

SOLDERING AND CASTING:

1. Some silver solders contain cadmium or chromium. The manufacturer is supposed to label same as a caution to the user. It takes only a few whiffs of such solder when heated to give you a fatal dose of poison. So, why use these solders? Most silver and gold solders do not contain these alloying metals. Make sure you know which kind you are using. Never use scrap silver, gold or substitute alloys for which you don't know the origin or alloy content. It could contain these poisonous metals or others, such as selenium. Why not stick with the alloys of silver, gold, copper, tin and zinc?
2. Lead and mercury poisonings are cumulative. A first tiny amount isn't going to hurt you, but whatever you inhale as vapor or absorb through the skin

isn't going to leave you either. It will only be additive to the next "intake." At some point you will not feel well--or maybe worse! Why fool around with either one? Pewter, particularly old pewter, has lead in it. So does soft solder. Work in well-ventilated spaces when heating or melting any of these metals. Mercury, especially, should be avoided. It should play no part in the metal smithing arts related to lapidary.

3. Soft asbestos cloth and asbestos pads sometimes used in silver soldering, or asbestos gloves used by some in casting, are best given up in favor of some other insulating materials. Magnesia soldering blocks and charcoal blocks are good alternatives. Proper handles on crucibles and tongs negate the need for any insulating gloves. Except for asbestos linings for flasks when casting platinum or palladium, asbestos is not an essential material in a lapidary or metal smith shop.
4. Acetylene gas is unstable. That is why it is absorbed under high pressure in acetone in a steel flask that you may be using for soldering or melting your metal in a crucible for a cast. Make sure the steel flask is chained to something solid to prevent it from being shocked by falling over. Be sure the valve is closed when the tank is not in use and that the special wrench for actuating the valve is always with the tank for instant use. Make sure that the hose, and hose and tip connections, are in good operating order. Otherwise you could take a ride on a rocket when you light up. Lighting should always be done with a sparker and not with a match or other flame source. Then, there is the gas itself. Use a reducing flame (blue). The yellow is an oxidizing flame and represents incomplete combustion. In any case use only in a well ventilated space.
5. Propane and butane cylinders should always be handled with care. They are less tricky than acetylene flasks, but again use only the blue flame and in a well ventilated space.

FUMES AND DUST, cont.SOLVENTS, ACIDS AND OTHER CHEMICALS:

1. In lapidary, silversmithing and goldsmithing, we are forever cleaning surfaces. You have to get any oils or other contaminants off a stone before dopping; you have to clean metal surfaces thoroughly before soldering; you have to clean stones between steps in polishing to avoid contamination of finer mesh grits because you want to achieve that final "water" finish; you have to get rid of that tripoli compound before you use the red rouge on your "miracle" silver creation; etc. So, you use water, detergents and solvents. It is this last category you have to be careful with. Some common examples:

- a. Carbon tetrachloride. Just forget it and don't use any more.
- b. Benzene. Same--another no-no.
- c. Acetone. Avoid any inhalation, and don't forget it can be absorbed through the skin. Why not use rubber gloves?
- d. Wood (methyl) alcohol. It can cause blindness or even death if taken internally. So, don't inhale any and so far as is convenient avoid flesh contact.

Keep solvents well stoppered when not in use and use them in well ventilated spaces. Be careful of their flammability.

2. Yes, you have to get rid of that fire scale after hard soldering a piece or after retrieving your casting from the bottom of a pail of water. But, why use sulphuric acid any more? A compound of sodium bisulfate with a trade name of SPAREX is far less caustic and does a fine job. Yet it, too, is a poison and contact with eyes and clothing must be avoided. Don't leave it on the hands too long.
3. Sometimes you want to etch your metal creation with a design or oxidize it for contrasting color effects. Well, depending on the type of metal,

recipes using one or more of the following acids will likely be called for: hydrochloric, sulphuric or nitric. Watch it! If these acids will dissolve your metal, think what they will do to you, your clothing and things lying around your work bench. Use only in well ventilated spaces with proper containers (glass), work surfaces and utensils.

4. Cyanide! Yes, the poison used by some suicides and some states in the rapid dispatch of certain criminals is used constructively in electroplating--gold onto silver, for example. However, unless you have special facilities for handling cyanide and are thoroughly familiar with its proper use, it is strongly recommended that you leave this process to the professionals.

The foregoing suggests important precautions to take. Why not consult with some of the "old hands" to see how they cope with these problems in their work spaces and shops? You may encounter other materials, fluids and gases besides those mentioned here. One good idea is always to read the manufacturer's label for precautions to take, and if possible also to consult with others--you know and trust who have used the material in question.

If these precautions are observed, the author concludes that the health hazards of the lapidary and metal smith are less than those of the backyard gardener with all the tools, chemicals and insecticides he or she is likely to use and apply.

Happy cutting and polishing!

--From The Goldrush Ledger via  
Lowcountry Diggings, Jan. 1980

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DID YOU KNOW?

Cristobalite is the name for the snow in snowflake obsidian and the flowers in flowering obsidian. --from Pick & Chisel via Flint Rock & Gem Club Newsletter