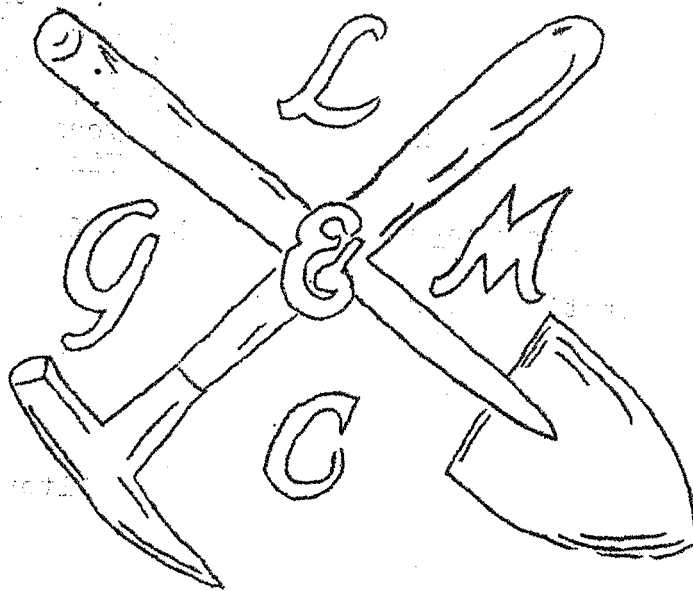


THE PICK & SHOVEL



Official Publication of
THE LINCOLN GEM AND MINERAL CLUB, INC.

Box 5342

Lincoln, Nebraska

MAY 1970

Affiliated with

MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES

AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES

NEBRASKA STATE ASSOCIATION OF EARTH SCIENCE CLUBS, INC.

COMMUNITY ARTS COUNCIL OF LINCOLN

THE PICK & SHOVEL

Official publication of Lincoln Gem & Mineral Club, Inc., Box 5342, Lincoln, NE 68505, published Sept. thru May, 10 days prior to the meeting date of the club.

The Lincoln Gem & Mineral Club meets at the W.O.W. Bldg., 732 S. 27th St., Lincoln, NE, on the 4th Sat. of the month, Sept. thru May.

The purpose of this corporation shall be to study, promote an interest in, and disseminate knowledge of lapidary and various Earth Sciences, including but not necessarily limited to geology, paleontology, and mineralogy. It shall be a particular purpose of the corporation to provide education in these fields to its members and the general public, particularly youth and student groups.

ELECTED OFFICERS FOR 1970

President	Mrs. Phyllis Parks	2435 S. 19th, 68502	423-6798
1st Vice-Pres	Frank Rule	6333 Kearney, 68507	466-0453
2nd Vice-Pres	C. Ray Waddle	2640 Everett, 68502	423-3196
Rec. Sec.	Mrs. Evelyn Ulrich	3521 S. 48th, 68506	488-9051
Treasurer	Ralph Ulrich	3909 Pace Blvd. 68502	423-0419
Board Members	Irl Everett	2941 N. 65th, 68507	466-6204
	Jim Parks	2435 S. 19th, 68502	423-6798
	Roger Pabian	300 Sycamore, 68510	489-3081
	Lynn Wells	2940 Vine, 68503	435-6758

APPOINTED OFFICERS, CHAIRMEN & COMMITTEES

Liaison Representative	Darline Sprick
Field Trips	Tom Simmons
Program	G. W. McKinney, Frank Marsh, Darline Sprick
Historian-By Laws	Frances Tracy
Library	Kay Ulrich
Membership-Guest Book	Lynn & Marie Wells
Refreshments	Eugene & Marcella Hilton
Coupons-Stamps	Helena Baegl
Show Chairman - 1970	Roger Pabian
Uniform Rules	Frank Rule
Housing & Property	Phyllis & Jim Parks
Rep. to Com. Arts Co.	Edith Holdorf, Norma Miller
Calling Committee	Glenna McGinnis, Nelda Oliver, Vi Van Cleave
Rock Swap - 1970	Howard Taylor and Crew
Communications-State Assoc.	-Norma Miller

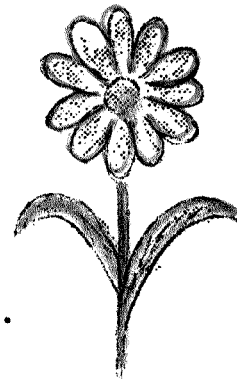
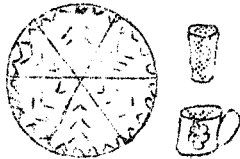
STEERING COMMITTEE FOR 1974 FEDERATION SHOW: Ralph Ulrich, Chairman; Gene Eno, Vice-chairman; Irl Everett, Secretary; Bruce Simon, Financial Secretary; and Howard Taylor and Larry Rupert.

Editor Norma Miller, 931 Cottonwood Dr. 68510 489-3956
Co-Editor Phyllis Parks, 2435 S. 19th, 68502 423-6798
(Members of National Association of Bulletin Editors)

Articles published in the PICK & SHOVEL may be reprinted if credit is given and a copy of the publication sent to the editor. Annual subscription for the PICK & SHOVEL (which is automatically included with full club membership) is \$2.00 per year.

THIS MONTH --NOTICE --Meet one week early!!! May 16.
 Van Dorn Shelter House, 8th & Van Dorn.
 7 o'clock

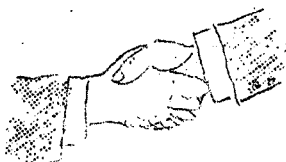
DESSERT SUPPER...Each family bring a pie, your favorite kind, and join fellow club members for dessert. Coffee, tea, plates and forks will be furnished. You-all come!



BUSINESS MEETING...following the social hour dessert.

PROGRAM...Meet again our old friend, John Kurtz, formerly Superintendent of Fort Robinson State Park and still associated with the State Game Commission.

GUESTS LAST MONTH...Paul Rankin, 2006 Thornton, Mission, Tx
 Emily Woodcock, 5623 M St., Lincoln
 Nancy Everett, 2941 N. 65th, Lincoln
 John Schweers, 1030 N. 43th, #25, Lincoln
 Bob Bass, 7200 S. Hampton Rd., Lincoln

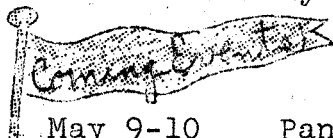


NEW MEMBERS: Frank E. & Hilda Oliver, 2801 U St., Lincoln, NE 68503
 ph 425-5980 (add to your new WHO'S WHO)

"WHO'S WHO"...The 1970 issue was distributed at the April meeting to those present...pick up your copy at the May meeting to save us postage.

NEW ADDRESS...Thomas Rule, C.N., B597697 'A' School, Class CM
 Naval School Construction
 Davisville, Rhode Island 02854

ROOM 104...this area of activity will be discontinued as of May 8 until the room reopens in the fall. You may include Friday nights in your field trip plans now.



FIELD TRIPS...please refer to your April issue of the Pick & Shovel...or contact calling committee later

- May 9-10 Panhandle Rock & Gem Club Show, Scottsbluff, NE
- May 16-17 Picture City Gem & Mineral Society Show, Hot Springs, SD
- May 23-24 Central Nebr. Rock & Min. Soc. SWAP, Crystal Lake, State Recreation Grounds, Ayr, Nebraska
- June 6-7 N.A.O.E.S.C.I. Rock-A-Bully SWAP, Lexington, Nebr.
- June 6-7 Siouland Gem & Min. Soc. Exhibit, Sioux City, IA
- June 18-21 Gem Fiesta, Convention Center, Ft. Worth, TX
- June 19-21 Wyoming Gem & Min. Soc. State Show, Rawlins, WY
- June 27 N.A.O.E.S.C.I. Field Trip to Wyoming-contact H & H Kenfield, Box 14, Ogallala, NE
- July 24-26 MWF Convention & Show, Minneapolis, MN
- Aug. 8-9 LGMC SWAP, Boy Scout Camp, 1st & Van Dorn, Lincoln, NE
- Aug. 15-16 NW Nebr. Rock Club Show, Crawford, NE
- Sept. 5-7 Nebr. Min. & Gem Club Show, Omaha, NE
- Sept. 18-20 Plains Rock & Min. Club Show, Kimball, NE
- Sept. 26-27 Lincoln Gem & Mineral Club Show, Lincoln, NE
- Oct. 3-4 Topeka Gem & Min. Soc. Show, Topeka, KS
- Oct. 16-18 Platte Valley Rock & Min. Soc. Show, North Platte, NE
- AUG. 22-23 Black Hills Min. Soc. Micromount Symposium & Field Trip, Rapid City, SD

Last month ...Enough people indicated interest in the Jewell, Kansas Field Trip to change the May meeting date to May 16, (at the Van Dorn Park Shelter House) so everyone who cared to would be able to attend the regular meeting as well as the Jewel, Kansas Field Trip.

It was reported that 15 books were presented by Irl Everett to the Lincoln Gem & Mineral Club library in honor of Professor Wm. Foxwell, a member of our club who passed away in February.

The last full issue of the Pick & Shovel (for the season) will be the May issue, it was announced. A one or two page flyer, or the calling committee will be the mode of communication in the summer months.

Helena Baegl reported we now have \$23.72 in coupons for the scholarship fund. (Elsewhere in this issue you will find a Federations Scholarship report).

Ralph Ulrich reported on the Steering Committee attendance at the Spring Council meeting in Iowa where much helpful information in preparing the '74 Show was received. He also stated that the Minneapolis clubs (hosts for the MWF Convention & Show) urged our participation in the competitive and non-competitive areas of their Show.

It was announced that we would elect our nominating committee at the May meeting and that we would bring up the matter of the 1971 Show date. (It would be wise to have a Show Chairman for 1971 soon too, we are aware of the many details that must be taken care of early. Notifying the various publications, Lapidary Journal, Earth Science, and Gems Minerals, should be done by the end of the current year to be sure of scheduling our show in their calendars. Also, it could be to our advantage as far as dealers are concerned, to have a 1971 chairman prior to the 1970 Show. These are thoughts to consider. Ed.)

NEBRASKA ACADEMY OF SCIENCES...Three club members presented a total of five papers at the annual meeting of the Nebraska Academy of Sciences, on April 24, 1970, at Olin Hall, Nebraska Wesleyan University, in Lincoln. Tod Ashmun spoke on the theories of origin of minerals in the Holmesville, Nebraska area. Gene Eno spoke of the contributions of amateurs to earth sciences in the midwest. Roger Pabian presented two papers, one on Nebraska gem-stone occurrences and the other on the autogeny of the Pennsylvanian trilobite, Ditapomyge scitula Meek and Worthen. Roger also co-authored a paper on the paleoecology of Pennsylvanian crinoids of Nebraska and Iowa.

Those who attended the program "Symphony of the Canyon" at the planetarium at Fremont, April 26th, report that it was a most enjoyable experience. The host was most pleasant and went out of his way to make the visit an educational, as well as an enjoyable, experience. Thanks to Darline Sprick for arranging this event. Perhaps the field trip that was to be held in conjunction with this showing can be re-scheduled for a later date.

REMEMBER...ROCK SWAP...sponsored by Central Nebraska Rock & Mineral Soc., to be held at Crystal Lake, Ayr, Nebr. - May 23 & 24, 1970. Free coffee - prizes. BUY - SWAP. Dealers Welcome. Pot Luck Picnic...12:00 Sunday. Auction 1:00 PM Sunday. Electricity.

COMMUNICATION!!!!

In this present day a lack of communication accounts for a multitude of errors, omissions and disappointments. We feel communication to be the nucleus for interesting activities, effective meetings, and more harmonious relationships among the committees and individual members. In view of this may I again take the opportunity of communicating my sincere appreciation to each committee chairman and person taking an active part in the functions of the club. Your cooperation has been outstanding.

Thanks to those at the April meeting who so graciously permitted us to set the May meeting ahead a week. My apologies for the inconvenience caused. All arrangements had been made for our Jewell, Kansas Field Trip by Mrs. Helen Miller and Tom, including a camping spot and a guide, before I checked the calendar and discovered May 23 was the 4th Saturday in May.

Thanks to those who again made and served the coffee in April and to those providing the delicious cookies. Cookies were from The Baggs, The Johns, Evelyn & Glen Ulrich, The McKinneys and The McGinnises.

Thanks also to Dorothy Engelhart for keeping Room 104 at Morrill Hall open and active. It is indeed a privilege to have our own place to meet and learn the preparation of specimen. Friday May 8 will be the last meeting until fall since outdoor activities will be in order for most of us. Dorothy, please convey our thanks to Charles, Karen and any others of the Museum Staff who have given of their own time to permit LOMC this activity.

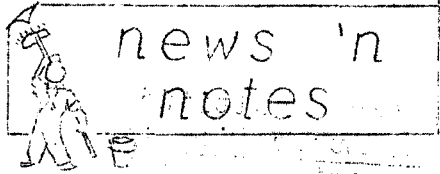
Thanks also to Darline Sprick for arranging the very special showing by Professor Lueninghoener at Midland College. The "Symphony of the Canyon" slide program accompanied by "The Grand Canyon Suite" (via 51 individual speakers) was truly inspiring. The 42 years in the field of Earth Sciences and this Planetarium achievement are truly outstanding.

We have received a special communication from the Midwest Federation stating that the 1970 M.F. Convention in Minneapolis, Minnesota on July 23, 24, 25, and 26, 1970 will use the existing Uniform Rules as the governing rules for exhibit classification and judging. This action is necessary because publication and printing of the 1970-72 laws has not been done at this time. USE 1967-69 UNIFORM RULES Remember they want some people to start learning the art of judging!!

Again on the subject of communication - if any of you were missed in the recent telephone survey please contact the calling committee with a second phone or a specific time of day that you can be reached. You might prefer to send some prepaid postcards if you are hard to reach by phone. I know that several members were not reached until the umpteenth or so try--and that meant a lot of hours at the phone. All in all tho - it was most pleasing to have the enthusiastic response which they received on the survey.

When communication becomes too long it loses interest - but how else can we acknowledge cooperation and participation? If I've missed your particular activity - I'll catch up with it at a later time.

Sincerely-Phyllis



Rick Kohn, son of Jerrold & Dorothy Kohn was recipient recently of the National Honor Society Award at the Lincoln High School Honors Assembly. Congratulations, Rick!

We're glad to hear Virgil Carveth is back to work again after recovering from pneumonia. Stay well now, Virg.

Phyllis Parks' mother has been hospitalized at Lincoln General Hospital...we hope recovery will be soon. Jim Parks' father recently celebrated his 85th birthday...Happy Birthday, "Pa", and many more.

Frank Rule reports that Doris is continuing to improve, that she is getting out in the spring weather some, and Frank is trying to plan his vacation around the date of Tom's graduation from the Naval School at Davisville, Rhode Island, in July. Tom's current address is on the calendar page of this issue of the Pick & Shovel.

The first stop of the Weeping Water Field Trip on Sunday, May 3rd was most successful! Twenty-eight members made their appearance (as well as a couple from a club in Norfolk), and there was plenty of material easily accessible. The second stop was less productive, a different terrain but enjoyable nevertheless. The last stop was non-productive except for a few "gigantic" crinoid stems. It was a beautiful day in the lovely springtime of Nebraska. Thanks to Lynn & Marie Wells for lining up this outing for us.

Members participating in the festivities at Nebraska City on the week-end of May 2-4, Darline Sprick, C. Ray & Mrs. Waddle, Geo. & Glenna McGinnis, and Tom Simmons, have received participation ribbons for their part in the May Day week-end. Darline transported the materials down on Friday, May 1, and set up the cases for viewing; she then proceeded on to Burchard to do some fishing. No fish, but lots of sleep. "Pappy" & Marion Waddle took in the parade and other events on Sunday and returned LGMC member displays to Lincoln. Thanks to those involved in this event...your time and effort are appreciated.

All Iowa Rock Roundup...Gene Eno and I, accompanied by Grover and Gertrude, went to the All Iowa Rock Round up, hosted by the Madison County Rockhounds, of Winterset, Iowa. We arrived late Saturday, but in time for a great pot-luck supper. There was a country-western group to play all of the old time Ernest Tubb, Hank Williams, et y'al favorites.

Swapping was rather limited Saturday evening but we had a chance to see many old friends.- the McNamars, Hixes, Shanks, Carrols, and many more. We all had a good talk of things and stuff of rock interest.

Trading resumed after a pancake and sausage feed on Sunday morning. Gertrude and Grover were up early which predicated Roger and Gene would also be. (Hugh Carroll was up somewhat later.) Trading was fast and furious Sunday AM. Amongst other things, I rounded up some nice Laguna and Lake Superior agate; minerals, including sphene and strontianite; and some nice trilobites including specimens of Alkistocare, Modocia, and Ceraurus. Gene traded for some excellent minerals.

- Roger Pabian


 1970 SHOW NOTES

I am very proud to announce that one of the featured displays at our Show will be a sample of moon rock brought back by the Apollo II Astronauts, Neil Armstrong, Buzz Aldrin, and Michael Collins. Our thanks are due to the astronauts, NASA mission Control, President Nixon, Governor Tiemann, and Secretary of State Marsh. Only in America could moon rocks grace a "small town" rock show.

Marie Wells and Barbara Allen have consented to chair the publicity committee. We are fortunate for this development. Both ladies are experienced and they have an extra special event, our Show, to promote.

We have several openings yet. Fluorescents need a manager, as well as program and hospitality.

The annual dinner will be an awards banquet this year. Trophies and ribbons will be presented to winning exhibitors. We will need a banquet chairman.

Bruce Simon, Dealer Chairman, informs me that several dealers have already been contracted. The contracted dealers will be announced when the list of ten is complete and contracts have been received.

As was mentioned in the first 'show notes', a case census would be conducted at the May meeting. Judging from my figure, one would never guess I am a figure skater, but I am. I will be skating at a meet in Greeley, Colorado, on the date of the May meeting, since it was moved up a week. Sorry about that, Chief! Forms will be passed out at the May meeting. These are to be filled out and returned to the President. I will get them later. Keep in mind that the case census is neither a commitment nor a contract, but an early statistical estimate of how many cases we can expect.

- Roger Pabian, 1970 Show Chairman

=====

SCHOLARSHIP REPORT as of Nov. 1969, by Mr. Courter, Treasurer

	cash	coupons	
California Federation	16,216.93	2,203.13	18,420.07
Eastern Federation	9,338.01	395.85	9,733.86
Midwest Federation	20,401.25	2,105.05	22,506.30
Northwest Federation	10,058.74	1,721.55	11,780.29
Rocky Mt. Federation	8,386.52	959.93	9,346.45
American Federation	1,350.00		1,350.00
Not identified	39.07	(6.71)	32.36
	<u>73,950.53</u>	<u>7,613.50</u>	<u>81,564.03</u>

Mr. Courter says "Note the importance the coupon has played in building up the total amount. It's almost inconceivable! Since Nov. 1 our fund has grown by \$2,358.05 so that as of the end of Jan. 1970 our principal fund stands at \$33,922.03. Our earnings are now estimated at over \$5,000 per year. Thus in 1970 we will be making FIVE grants each for two years in the amount of \$500."

(the above via THE TUMBLEWEED)

AN UNUSUAL OPPORTUNITY

The subject is the 1974 Show Project. I was wondering what it was that created such an intense interest within so many other groups that I have visited recently. Then it occurred to me that having the combined National Federation and Midwest Federation Show was indeed an opportunity that could possibly come once every 20 years or so.

There are six regional Federations within the American Federation and they hold the annual show at a different regional Federation each time. Thus the Midwest Federation hosts the national show every 6th year and if they were to consider geographically that the host club would be alternated from eastern area, to northern area, to southern area, and then to western area, some club in the western part would be eligible every 24th year.

It has also occurred to me that we being the host club should share this big deal with others near us. I was impressed by the eagerness of other clubs, both in Nebraska and Iowa, to become involved in the plans for this significant project. This is where each of you as a member of the Lincoln Gem & Mineral Club can help your Steering Committee with the study and research, by attending regional and Federation shows whenever you can and then bring your ideas to the Steering Committee, the door is always open. Your ideas and attitudes will then be applied as part of an organized group that is working toward a successful National Show for 1974.

The annual show for the Midwest Federation will be coming up July 23rd thru 26th, 1970, at Minneapolis, Minnesota. This will be a good chance for many of us to actually take part in a show where competitive displays are included in the program. They need club members to help with the clerking during the judging of competitive displays. If you want to take part as an apprentice write to the judging Chairman, Carroll L. Kelly, 7720 North Mississippi Lane, Minneapolis, Minn. 55430. You will not only be helping them but you will also gain a lot of know-how about competition and how it works. This could be a stepping stone toward developing judges in our own area.

-Ralph Ulrich, Chairman
Steering Committee 1974 Project

To Our Friends in the Lincoln Gem & Mineral Club:

Our most sincere "Thank You"! To all of you for remembering us, Virg with the beautiful flowers, and gifts, and so many, many get-well cards; and for giving me encouragement when a trying time is upon us, we really appreciate knowing that friends are "standing by"! Your prayers and thoughts were many, and we shall always remember!

- Marie & Virg



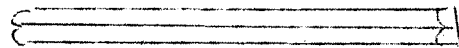
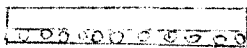
HERE'S ANOTHER PROJECT FROM OUR SILVER BUFFS...this from Larry Rupert

- RING -

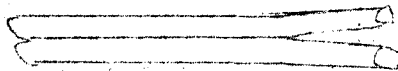
- Make bezel for stone.
- Put back on bezel.
- Cut double shank ring wire to length.
- Split ends of wire approximately 1/2" each end with saw.
- Bend shank wire into ring.
- Size shank wire to correct size.
- Solder shank to back of bezel.
- Polish silver.
- Set stone into bezel- burnish.

Material required -

- Pre-formed bezel wire or fine silver
- Sheet silver 24 or 26 GA for back
- Double shank wire

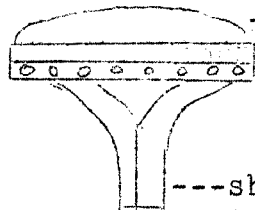


--split double shank wire on centerline and spread desired shape



---saw and spread

Make certain all joints fit together and are clean before soldering, poor or weak joints will result if you don't.



--- stone

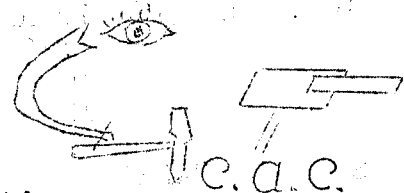
--- bezel

Side View
Finished ring

---shank with v-opening at bezel joint

COMMUNITY ARTS COUNCIL

The April meeting of the Council was held at Nebraska Wesleyan University. Membership has now reached forty organizations with the addition of the Lincoln Music Teachers Association and Lincoln Garden Club.



Mr. Enersen reported briefly on the work being done by the Mayor's Committee on Civic Design. The primary current problem is the widening of 27th Street north from O Street. There is discussion of a planting program and the possibility of eliminating overhead wiring.

It was agreed that the Arts Council might bring together representatives of the performing arts groups in December or early January of each year to see what might be done about avoiding problems, such as conflicts in scheduling, particularly of membership and ticket sales campaigns.

Dr. Philip Kaye reviewed the remarkable development which has taken place in the fine arts at Nebraska Wesleyan in the past fifteen years.

- Edith Holdorf, Co-rep. to Community Arts Council

FREE HOBBY SHOW-Sun. May 31, Ainsworth, Nebr. City Hall..SWAP--BUY--SELL

MIDWEST FEDERATION CONVENTION AND SHOW

July 23, 24, 25 and 26, 1970

Wed. July 22 8 AM Registration
 12:00 Set-up - competitive & non-competitive displays
 12:00 Security Guards Start

Thurs. Jul 23 8 AM Registration
 9 AM Judges meeting - Judging all day
 9:30 AM Ticket booths open
 10AM Opening ceremonies
 1 PM Lectures & demonstrations
 3 PM " " "
 7:30 PM " " "
 9:30 PM Closing of doors

Fri. July 24 7:30 AM Dealers breakfast (120 people)
 8:30 AM Registration
 8:30 AM Editor's brunch & meeting (135 people)
 9:30 AM Ticket booth opens
 10 AM Open doors
 11 AM Demonstrations
 12:30 PM Judges lunch & seminar (70 people)
 1 PM Lectures & demonstrations
 3 PM " " "
 4 PM Exec. meeting (MWF Exec. council)
 6 PM Exec. dinner
 7:30 PM Lectures & demonstrations
 9:30 PM Closing of doors

Sat. July 25 10 AM Open doors
 9:30 AM Ticket booths open
 10 AM to 4 PM Council meeting
 12:00 PM Lunch break (225 people)
 11 AM Lectures & demonstrations
 SCIENCE FAIRDAY 1 PM " " "
 3 PM " " "
 6:30 PM Banquet
 9:30 PM Closing of doors

Sun. July 26 9 AM Rolling Rock Club meeting, coffee & rolls
 9:30 AM Ticket booths open
 10 AM Open doors
 1 PM Lectures & demonstrations
 3 PM " " "
 6 PM Final closing of doors

HIBBING FIELD TRIPS PLANNED FOR DAYS IMMEDIATELY AFTER THE MWF SHOW

Three days of trips, guided by the Mesabi Club members to Tioga Mine # Hull-Rust Mine, & the Mary Ellen Jasper Mine. Others to be scheduled
 Three evening Get-togethers are planned; a pastry supper, a fish fry, and a Polish sausage supper are planned.
 This is a combined project of the Hibbing Chamber of Commerce and the Minnesota Dept. of Economic Development.

Reprint of the following information has been requested...for those interested in keeping this at your fingertips and at the polishing wheel...remove this page from your bulletin and post it at your work-bench:



TYPES OF STONES, AGENTS & TYPE OF BUFF



AGATE - Cerium Oxide On Canvas	KORNERUPINE - Linde A on Leather
ALABASTER - Tin Oxide on Leather	LABRADORITE - Tin Oxide on Leather
AMAZONITE - Tin Oxide on Leather	LAPIS LAZULI - Tin Oxide on Leather
APATITE - Linde A on Leather	LAZURITE - Cerium Oxide on Canvas
AMBER - Tin Oxide on Leather	LEPIDOLITE - Tin Oxide on Leather
AVENTURINE - Tin Oxide on Leather	LIMONITE - Tin Oxide on Leather
AZURITE - Tin Oxide on Leather	MALACHITE - Tin Oxide on Leather
BAUXITE - Tin Oxide on Leather	MESOLITE - Tin Oxide on Leather
BERYL - Cerium Oxide on Canvas	MOONSTONE - Tin Oxide on Leather
BURNITE - Tin Oxide on Leather	NICKEL SILVER - Linda A on Canvas
BLOODSTONE - Linde A on Canvas	NEPHRITE - Tin Oxide on Leather
CASSITERITE - Linde A on Leather	OBSIDIAN - Tin Oxide on Leather
CELESTITE - Tin Oxide on Leather	OPAL - Cerium Oxide on Canvas
CERUSSITE - Tin Oxide on Leather	OBICULAR RHYOLITE - Tin Oxide on Leather
CHIASTOLITE - Linde A on Leather	PERIDOT - Linde A on Leather
CHRYSOBERYL - Diamond	QTZ. CRYSTALLINE - Cerium Oxide on Canvas
CHRYSCOLIA - Cerium Oxide on Canvas	RHODOCHROSITE - Tin Oxide on Leather
Cinnabar - Linde A On Leather	RHODONITE - Linde A on Leather
CONI-CALCITE - Linde A on Canvas	RHYOLITE - Cerium Oxide on Canvas
CORAL - Tin Oxide on Leather	RUBY - Diamond on Wood
CORMITE - Linde A on Leather	SAPPHIRE -Diamond on Wood
DATOLITE - Tin Oxide on Leather	SATIN SPAR - Tin Oxide on Leather
DIOPSIDE - Linde A on Leather	SILEX SPAR - Tin Oxide on Leather
DUMORTIERITE - Cerium Oxide on Canvas	SERPENTINE - Linde A on Leather
ENSTATITE - Linde A on Leather	SINTER - Cerium Oxide on Leather
EPIDOTE - Tin Oxide on Leather	SMITHSONITE - Tin oxide on Leather
FELDSPAR - Tin Oxide on Leather	SODALITE - Cerium Oxide on Felt
FLUORITE - Tin Oxide on Leather	SPHALERITE - Linde A on Leather
GARNET - Linde A on Leather	SPHENE - Linde A on Leather
GLASS - Cerium Oxide on Canvas	SPINEL - Linde A on Felt
GYPSUM - Tin Oxide on Leather	SUNSTONE - Tin Oxide on Leather
HEMATITE - Cerium Oxide on canvas	THULITE - Linde A on Leather
HICKORYITE - Linde A on Canvas	TOPAZ - Linde A on Cork
HOWLITE - Cerium Oxide on Canvas	TOURMALINE - Linde A on Leather
IOLITE - Linde A on Leather	TRAVERTINE - Tin Oxide on Cork
JADE - Linde A on Leather	TURQUOIS - Tin Oxide on Leather
JADEITE - Linde A on Canvas	VARISCITE - Tin Oxide on Leather
JASPER - Cerium Oxide on Canvas	WILLIAMSITE - Linde A on Leather
JET - Cerium oxide on Canvas	WONDERSTONE - Linde A on Canvas

By Floyd Snyder via GEM TIME

HOW TO POLISH WONDERSTONE: Wonderstone is a very loose term and is used to describe a variety of rocks including the so-called scenic sandstone and several types of rhyolite. In general Wonderstone should be worked the same as most stones that tend to undercut. It is a rock and not a mineral. It is not always possible to get a high polish on Wonderstone, but sanding should be rapid to minimize undercutting. Linde A is the best powder to use.

-Arrowhead via Michigan Lapidary

SOME METHODS FOR CUTTING AND POLISHING LAKE SUPERIOR AGATES

CONCLUSION - by Roger K. Pabian

Worthy of separate mention is the "Eye Agate". Many Lake Superior Agates contain structures which are called "eyes". Eyes result when a zeolite mineral, as thomsonite, crystallized in the same gas vesicle as the agate but immediately preceding the agate. Zeolites tend to crystallize in small, concentrically layered semi-spheres. Color variation in the layers of the sphere will produce a structure which resembles the pupil of an eye.

Where lone eyes are obtained, very stunning effects can be had by centering the eye in the stone. Cutting and polishing is carried out in the same fashion as for other jewelry stones.

Multiple eyes demand some experimenting to obtain the best results. Most eyes occur in large agates and a general rule of thumb to follow is that the larger agates have the larger eyes.

Larger agates, which exceed diameters of approximately two inches, and weights of one half pound or more, are rarely cut into jewelry unless they contain so many fractures and imperfections that only small stones can be obtained. It is not wise to try to keep a large stone with many imperfections intact, as the stone may break apart while being cut and cause damage to equipment or injury to the cutter. Large agates are most often desired by museums and collectors in a polished but more or less complete condition. This type of material can be obtained through either the cabinet specimen or the slab.

Large cabinet specimens call for cutting and polishing around the entire outer surface of the stone. The easiest method is even long and involved so far as mechanical details are concerned. Choosing material is simple in this case as we must take what we have for we do not alter the shape of the stone.

The first step in producing a cabinet specimen takes place in the kitchen rather than the shop. Preheat the kitchen oven to two-hundred twenty-five degrees and then bake the agate for three to four hours on a paper plate. The baking tends to drive water out of any existing fractures. Have some Epoxy 220 on hand and mixed. Immediately upon removing the stone from the oven, paint its entire surface with the Epoxy. Epoxy tends to flow into any fractures. Place the stone in the oven and let it bake another two hours. This operation is called "heat sealing".

The next step is grinding the agate. Considerable labor, money, and equipment can be saved by following a rather different procedure, which amounts to using the diamond saw as a grinder. Though this is very hard on diamond blades, it is still much cheaper than grinding wheels. One twelve inch grinding wheel will handle only three cabinet specimens, at a cost of fourteen dollars. A ten inch diamond blade, which costs twenty dollars, will grind about thirty cabinet specimens. Unwanted nodes and bumps on the agate can be removed

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COME METHODS FOR CUTTING & POLISHING LAKE SUPERIOR AGATES (continued)

by standard diamond sawing methods. When grinding on the edge of the blade, it is necessary to get a good grip on the edge of the stone. Material should be removed in thin increments which do not exceed the thickness of the blade. This prevents losing control of the stone and blade dishing or bending. Large specimens can be ground in less than an hour. After this step is completed, soak the stone overnight in soapy water to remove excess cutting oil. Repeat the heat sealing process to cover newly exposed, small fractures.

After the second heat seal has been effected, we can grind the stone on the grinder. During this phase we will remove only the straight edges and flat surfaces left by the saw along with a few saw marks. Remove any excess Epoxy during this grind as it ruins sand paper. Grind on both the coarse and fine grit wheels.

Sanding is the most difficult facet of producing cabinet specimens. Since the stone is large, it dissipates heat readily and burning is not a major problem. This means that we can turn the sander at surface speeds exceeding two thousand feet per minute. If we run the sander too slow, we will never get done. The first sanding should be done on new, wet two-hundred twenty grit paper. Proceed until all grinding marks are removed. Grinding marks are short and deep, while sanding scratches are long and shallow. After the cutter has satisfied himself with the first sanding, it is worth while to sand the stone on old, wet, two-hundred twenty grit paper. Sometimes it is worth the time to repeat the sanding operation with three-hundred twenty grit paper. It is sufficient to do the fine sanding on dry four-hundred grit paper. Often wet sanding of large specimens on four-hundred grit paper results in large amounts of removed material condensing in little balls on the sand paper. These little balls of agate powder have the very undesirable trait of producing a very deep seated scratch across the surface of the stone. If this happens, it is necessary to go through the entire sanding operation again as the scratches are that deep. An old piece of four-hundred grit paper serves as a good finish cloth to produce the semi-polish. Before polishing one should wash the stone thoroughly to remove any stray pieces of sanding or grinding grit which might cause contamination of the polishing wheels.

Polishing cabinet specimens is best accomplished by using a hard, felt wheel with a polishing compound consisting of nine parts stannic oxide, one part Linde A, ninety-five parts water and five parts methanol. The polishing wheel should rotate at seven-hundred-twenty feet per minute.

Cutting cabinet specimens requires some additional knowledge of the structure of agates. It is worth introducing another term for describing rough material. This term is "poly-cyclic", or, specifically, "di-cyclic, tri-cyclic, ... n-cyclic". "Dicyclic agates" are "agate which, from exterior to interior, have a zone of banded agate which terminates in crystalline quartz within which a second pattern of banded agate is located." Expanding this term is all that is required to define tri-cyclic, tetra-cyclic, and so on.

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SOME METHODS FOR CUTTING & POLISHING LAKE SUPERIOR AGATES (conclusion)

A type of cabinet specimen called the "Back Up" or the "Wyoming Cut" can be made with di-cyclic stones. The origin of the term "Back Up" comes from cutting backward through crystalline quartz to produce a frothy effect. "Wyoming Cut" comes from the fact that gem producers in Wyoming were the first ones to make extensive use of this type of cut.

The astute observer will notice that the terminations of the quartz crystals of the first cycle are covered by agate of the second cycle. By cutting backward through the crystalline quartz and stopping just before penetrating this layer, we have a transparent layer of quartz crystal terminations, which act as a window. The pattern observed is a foamy or frothy appearing zone of agate, which appears to be suspended in space. Skilled cutters often use this method to produce a stone which verges on spectacular.

Locating escape tubes on di-cyclic agates helps produce some exceptional materials. Most agates have more than one escape tube and by cutting backwards through any known tube we will form a false eye. Combining this knowledge with the knowledge of a Wyoming Cut can lead to some exciting results.

Often museum specimens are cut only in the form of a slab. Slabs of agate are desirable if they present a complete, unbroken pattern of the stone. Better distribution of a single large specimen is achieved with slabs, as several slabs can be cut from the same stone. It is not uncommon to see the "same" slab in several museum collections.

The mechanical processes for cutting and polishing slabs is the same as for cutting cabinet specimens. Large slabs should be cut with a true-cutting saw to ensure smoothness. Wavy marks, which can be caused by a wavy blade or an untrue feed mechanism, can be removed only by extensive sanding, which is the most expensive operation in gem cutting. Saws which often do suitable small work are often unsatisfactory for slabbing work. It is often the most economical procedure to pay a commercial cutter several dollars to cut your slabs.

Agate is judged by the finished product. If the product is well made, if the pattern is well utilized, if the sand and polish are well done, a very suitable and pleasing stone is at hand. The jewelry varieties for agate are numerous. People will not tolerate "junk jewelry". These notes are intended to give the cutter some control over his material. If the notions that lead to bad cutting have been partly dispelled, these notes have been worth their time. Replace the notion: "You never know what you're going to get," with "I have some control over the situation." The hopeful result will not be seen here but it will be seen in increased demands for agate products.

rock and relic swap

Sponsored by The Homestead Gem & Mineral Club, Old Dance Pavilion, Riverside Park, Beatrice, Nebr.
Saturday, June 20, 9 AM - 9 PM, Sunday, June 21 9 AM - 5 PM.

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Midwest Federation's NEWSLETTER



Published monthly except July & August as a Service to Member Clubs
Editor: Haydon Peterson, Route 5 - Box 229, Des Moines, Ia. 50317

Issue No. 105 - May 1970

MARY C. ANDERSON

It is with the deepest regret that we must report the passing of our MWF Program Chairman, Mary C. Anderson. The Midwest Federation has lost one of its most talented and devoted workers, and her associates in two Indiana clubs and in the Federation have lost a cherished friend.

Mary, who had been chairman of the busy Program committee of the Federation... the committee which provides clubs with film programs and keeps the Federation library of films new and fresh... died in the hospital in Kokomo, Indiana on March 14 and was buried on the following Tuesday in Kokomo. A tireless apostle of the joys of the earth science hobbies, she had held every office in the Kokomo and Peru clubs, of which she was a member and had given greatly of her time and strength to programs before school classes. She was also deeply involved in raising money for the City of Hope, an international hospital agency, and had turned over her duties in this organization to a friend a short time before her death.

In her two years as program chairman for the Federation, Mary built up its services, worked out a budget and increased its supply of program materials. She found time to form an excellent fossil collection and a mineral collection which she used in her school lectures. She also ran an antique shop near her home.

Mary is survived by her husband, Bill, and a son.

Her program work will be taken over by the assistant chairman and close associate, Mrs. Jane Auler.

EXECUTIVE COMMITTEE SPRING MEETING

The Executive Committee of your Federation held its spring meeting in Iowa City, Iowa at the Carousel Inn on Saturday, April 11.

The meeting was called to order by Federation President Russell MacFall. Reports were heard from the various committees. A noon luncheon was served at the Carousel Inn and attended by many of the committee members.

A complete report of the meeting will be sent to all member clubs by the secretary.

ATTENTION CLUB PROGRAM CHAIRMAN

Effective immediately all requests for bookings of MWF Library Programs and any questions regarding them should be sent to...

MRS. JANE AULER
323 South Dixon Road
Kokomo, Indiana 46901

Be sure you give Mrs. Auler a choice of dates when you could use the program you are requesting together with the name and address of the person to whom the program is to be shipped. Please include your zip code and follow the instructions he gives you regarding the return of the program.

* * * * *

Mrs. Evelyn Hirsch, Route 1, Mitchell, Indiana 47446 has been named a new assistant to Mrs. Auler.

FROM OUR EDUCATION CHAIRMAN

The Midwest Federation Education committee has received many letters from clubs asking for courses or outlines of study in such subjects as mineralogy, geology, paleontology, archeology, crystallography for the lapidary, and in public service opportunities. The Education committee has no courses of study prepared, but it knows that many clubs have developed such courses under the guidance of club members. It is the hope of the Education committee that these clubs will be willing to share their experience and their study outlines with other Midwest Federation clubs. This material would be turned over to the appropriate committee, such as the geology or paleontology committee of the Federation which, in turn, would develop a broad and detailed outline for use by all clubs. Credit will be given to the individuals and clubs that put their work and detailed suggestions at the disposal of other groups.

Since the theme of this year's administration is "conservation", which means preserving the good things of the world and sharing them, this is one way in which clubs can conserve and share the good things for which the hobby stands.

Please send material to Mrs. Gail Alexander, 1113 West Fourth Street, Marion, Indiana 46952.

1970 Directories Now Available From the Director of Supplies
Verne Montgomery, 830 Sheridan Place, Downers Grove, Ill.

THE NOMINATING COMMITTEE

Your Nominating Committee is composed of the following people who are experienced in the activities of the Federation, who are familiar with our problems, and who know the qualified candidates for future officers. Kate Steinbrenner, Olive Ellersick, Jerry Huber, Gail Alexander, Dick Ade, Lafayette Funk. June Zeitner is the Chairman of the committee.

The Nominating Committee takes the following things into consideration. Does the individual have executive ability and experience? Does he have the specific qualities necessary for that office? Does he have the time to make the required trips and write and answer all the letters needed for conducting Federation business by mail? Has his club or his area already had a large percent of Federation Officers? Will he take a job?

Of course there are other considerations. Many times well qualified individuals, popular with many clubs, have said "no", usually for a good reason. Many times an individual is considered for a position and rejected because of geographical location. Sometimes a person may be well liked and a good group leader at "in person" meetings but hates to write letters. But rest assured that all your favorite Federation leaders receive thought and consideration this year and every year. Nominating committees have to look into the future, too.

-June Zeitner

STAMP PROJECT

For sometime the MWF has endorsed the collection of used postage stamps, a project that Mr. S. Elroy McCaw of the Old Timers Club became interested. It is being carried on by The Washington-Idaho Council of Churches. The used stamps were being exchanged for money to buy food for hungry children.



All types of foreign, and U.S. stamps are desired except the U.S. 4¢ Lincoln, 5¢ Washington and 6¢ Roosevelt. Stamps should be sent to the Stamp Project, Washington-Idaho Council of Churches, 2005 5th Avenue, #210, Seattle, Washington 98121.

Stamps should be cut from the envelopes leaving about 1/4 inch border and the larger stamps should be sorted from the smaller ones placing the various sizes in separate bags or envelopes.

EARTH SCIENCE MAGAZINE

The Eyes Have It in the May-June issue of Earth Science... thomsonite eyes, that is, by Minnesota Mineral Club's Past President William Hale. Pipestone National Monument by Dick Ade, MWF Archaeology Chairman, also calls attention to the host state for the July convention. If you plan to attend the National Show and see something of Texas in June, you will want to read Big Bend National Park and Lake Texoma... The Oldest of Fossils by Bruce Stinchcomb makes the obscure story of our beginnings a little clearer... Installment VIII of the popular Midwest Fossils series by Dale Douglas is on Worms, Conodonts and Sclerodonts and is one of his best.

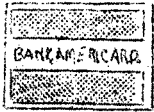
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Card may be used to recognize a member or other person or group that has rendered a service to your club.

Space is provided for club name, person or groups name being cited and reason.



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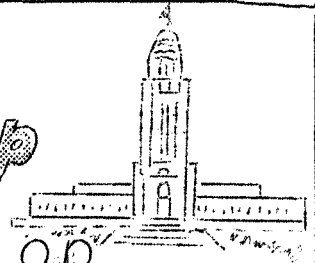
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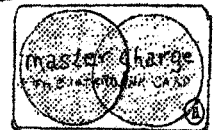
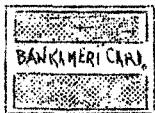
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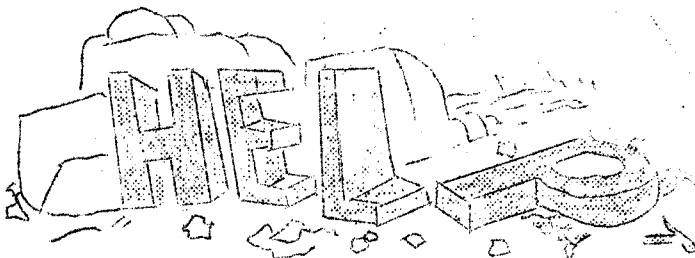
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THEME FOR 1970 - "CONSERVATION" - RUSSELL MACFALL, MWF PRESIDENT



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