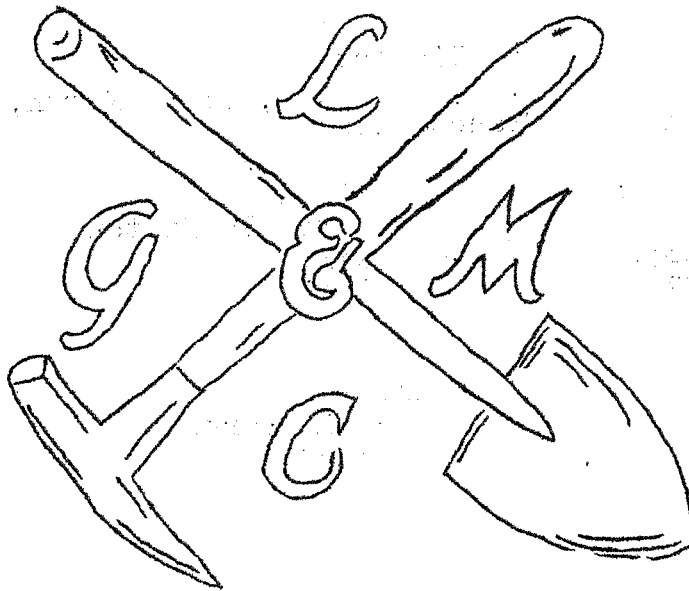


# THE PICK & SHOVEL



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

Box 29356

Lincoln, Nebraska 68529

February 1970

Affiliated with

MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES

AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES

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.

1970 ELECTED OFFICERS

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, 68504	423-3196
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	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
Scholarships-Stamps	Helena Baegl
Show Chairman-1970	Roger Pabian
Rock Swap-1970	
Education	
Uniform Rules	Frank Rule
Housing & Property	Phyllis & Jim Parks
Delegate Com.Arts Co.	Edith Holdorf

1974 FEDERATION SHOW STEERING COMMITTEE - Bruce Simon, Gene Eno, Howard Taylor, Ralph Ulrich, Irl Everett, Larry Rupert

BULLETIN STAFF

Editor:	Mrs. Norma Miller	931 Cottonwood Dr. 68510	489-3956
Co-Editor:	Mrs. Phyllis Parks	2435 S. 19th St., 68502	423-6798

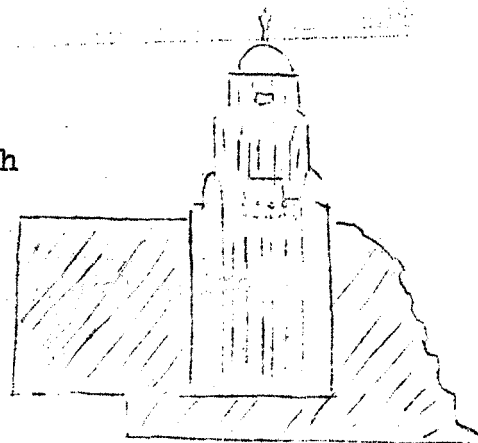
Members of National Association of Bulletin Editors

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THIS MONTH

REGULAR MEETING...Sat., Debr. 28, 7:30 PM  
W.O.W. BLDG. 734 S. 27th

PROGRAM...Frank Marsh will present a slide program titled "Tour of Nebraska. Lovely scenes of interesting places in our own NEBRASKALAND"



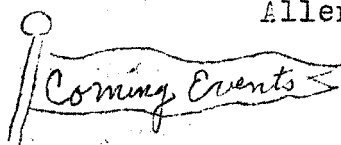
REFRESHMENTS...Cookies will be furnished by Mr. & Mrs. Geo. Balke, Mr. & Mrs. Jim Parks, Mr. & Mrs. Wm. Holdorf, Mr. & Mrs. Eugene Hilton and Mr. & Mrs. Don Lawson. Coffee, too.



NEW MEMBER...Rev. Raymond Pfeiffer, 8101 Sandalwood Dr. Lincoln, NB 68510 ph 488-1784. (Add to your Who's Who)

*Welcome*

DOOR PRIZES.will again be furnished through the courtesy of C. Ray Waddle. (Those who were lucky last month and won were: Barbara Allen, Eleanor Rupert, Virgil Carveth, Merlin Williams, Dorothy Engelhart, Harry Gragg, Frances Tracy, Wm. Foxwell, Marie Carveth and Camden Allen; Camden also had a birthday that day.)



- Mar. 6-8 Greater Kansas City Gem & Mineral Clubs Show  
Kansas Nat'l. Guard Armory, Kansas City, KS
- Apr. 3-5 Nebraska Assn. of Earths Science Clubs State Show  
Cushing Coliseum, Kearney, NB
- Apr. 17-19 Central Nebraska Rock & Mineral Club Show  
City Auditorium, Hastings, NB
- Apr. 24-26 Wichita Gem & Mineral Soc. Show, Cessna Activity  
Center, Wichita, Kansas
- May 9-10 Panhandle Show VFW Hall, Scottsbluff, Nebr.
- May 27-28 Rock Swap, Lafayette Park, Gothenburg, Nebr.,  
hosted by the 100th Meridian Rock Club of Cozad
- June 19-21 Wyoming Gem & Mineral Society State Show, Jeffrey  
Memorial Center, Rawlins, Wyo.
- July 23-26 Midwest Federation Convention & Show, Minnesota  
Mineral Club-Host, Minneapolis, Minn.
- Sept. 26-27 Lincoln Gem & Mineral Club Show, Lincoln, NB

For more listings of things to come see the Coming Events column in Gems & Minerals, Lapidary Journal, and Earth Science Magazines.

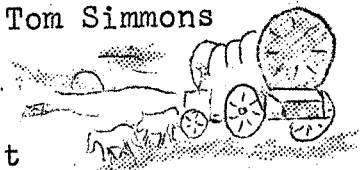
DON'T FORGET...Return the library books you may have checked out and check out some more at the meeting Febr. 28.

SAVE GENERAL MILLS COUPONS...SAVE COMMEMORATIVE STAMPS

LGMC PATCHES ARE AVAILABLE - See the TREASURER

LGMC FIELD TRIPS - 1970...Wagon Train Chairman - Tom Simmons

The following sites are on the agenda for field trips starting soon...and continuing throughout the summer. Please add your location to this list by contacting Tom Simmons so they may be incorporated into the plans.



Place	Type of material to be collected	Time involved
Weeping Water, NB	horn coral, fossils & min's...	Sunday trip
Marysville, KS	pink gypsum	" "
Genoa-Fullerton, NB	artifacts; agate & petrified wood	O'nite-Sat-Sun
Jewel, KS	septarian, ammonites...	" " "
Holmesville, NB	minerals	Sunday trip
Fremont, NB	petrified wood, fossils, agate	" "
Rawlins, Wyo (State show)	everything ??	last 2 wks-June
Lincoln, NB (rock swap)	chairman needed	August ?
Crawford, NB	fossils, agate, fossils...	Labor Day weekend
Lincoln, NB	LGMC annual show	Sept. 26-27

Wagon Masters are needed for these trips in order to arrange permission for collecting, point and time of departure; food, water, lodging or camping facilities, etc. - Contact Tom for your choice of trip to lead. He is open to suggestion and needs help in making these trips successful. See him at the meeting on Febr. 28.



Will you be getting your Pick & Shovel after March 1st??

Not if you haven't paid your membership dues...payable January 1st - delinquent March 1st.

Mail your check to Ralph Ulrich, 3909 Pace Blvd., Lincoln, NB 68502, or pay him at the February meeting on the 28th.

-Marie Wells, membership chmn.

For the field-tripper in areas with no water, carry a can of shaving cream (push button type) for cleaning hands - a squirt, washing motion of the hands, and wipe off. Presto - clean hands. (Hyana Gemscoop)

## THE PRESIDENT'S PAGE

The year 1970 is nearly 1/10th over and most of the projects and committees are being discussed and planned as we attempt to involve more and more members in the activities. Most of us have found that the very interesting parts of our hobby are more enjoyable when shared with others. In working together the history of the club is established.

Several of the chairmen for this year's events have submitted reports sharing their enthusiasm with the rest of the club. I hope that you will read and join in any way possible to make these plans workable.

My thanks to Mac for consenting to chair the program committee the balance of the year. Both Darline and Frank are pleased at his acceptance. Frank is presenting the Nebraska slides which Mr. Foxwell planned for us to see for our February meeting and I hear they include some wonderful sunsets. Mac is already lining up some fine programs which he will announce soon. The March program is titled "A New Look at the Holyland" - a slide lecture by Barbara Allen.

Several names have been added to the Directory since January publication including Darline Sprick - Liaison; Membership - Mr. & Mrs. Lynn Wells; Show-Roger Pabian; Uniform Rules-Frank Rule; Refreshment Committee-Mr. & Mrs. Eugene Hilton; Community Arts Council Delegate-Mrs. William Holdorf.

I feel that the club owes a special "thank you" to Mr. & Mrs. Rupert for their assistance in procuring the amplifier which we used at the January meeting - and which the club voted to purchase. This should help make the meetings more meaningful for many of our members. We shall make every endeavor to obtain the best possible service from it-bear with us as we learn to use it.

One other word of thanks - to Glenna and George McGinnis and Norma Miller for arranging and preparing the lovely cake and refreshments for our 15th Birthday, and to Rod Woodcock for his willing hands behind the counter with the coffee cups.

Phyllis Parks

TIME  
FILES

DUES ARE DUE

NEWS & NOTES...Congratulations... to Judy Weber and Chris Engelhart! Their engagement was announced recently and wedding bells will be ringing. Judy is contemplating entering the School for Licensed Practical Nurses - Chris is still service-bound.

NEW ARRIVAL...at the home of Harvey & E'lonna Gesch...a baby girl on January 21, named Patricia Ann. Congratulations Mom & Dad.

John Dugan, son of Lynn & Marie Wells, had surgery Jan. 7 at U. S. Veteran's Hospital, Kansas City, Mo., and is getting along very well. He is up and around on crutches. Hopes to be rid of these aids by February.

During a Post-Christmas trip to Tucson, Arizona, Bobbie & Hal Allen took Carolyn and Camden to revisit a favorite spot; the Desert Museum just outside of Tucson. They were most pleased to find the Museum has installed some impressive geology and mineralogy exhibits, in addition to a new "desert garden" landscaping and a display of Indian artifacts in authentic setting. The rock and mineral cases have particular application to the Southwest and should fascinate anyone visiting the area. The new gift shop there also has some specimens for sale.

Member Don Gless from Ames reports that his son, Donald C. Gless, graduated recently from Creighton Law College in Omaha and now has his degree - Doctor of Law. He is practicing his profession in Fremont.

Tom Rule leaves for Davisville, Rhode Island on Febr. 23rd for 108 days of school with the Seabees, returning to Lincoln then to await further orders. Good luck, Tom - we're with you! (Are you taking your wheels?)

Don Gless also reported that his brother, Elmer Gless, Doctor of Entomology of Montana Tech. University at Butte, Mont. and head of the Department of Biological Science, spent three summers at Hallett Station in the Antarctic researching for soil-dwelling mites and insects. The US Board of Geographical Names under the U. S. Army Topographic Command has recently bestowed on him the honor of naming a 9,000 ft. peak after him. 200 miles from Hallett - Gless Peak.

Professor Wm. Foxwell, active and well at our anniversary meeting last month, passed away on February 1. A great loss to our society. A resumé of his interesting life is contained in this issue of P & S.

Mrs. Fern Beveridge, President of the Platte Valley Rock & Mineral Club of North Platte, and niece of our club member, Coleman Gipson, is hospitalized at Lincoln General Hospital, Rm 357, with back surgery. Let's remember her with cards, letters, and visits.

Our sympathy to Ethel McCall and family in the loss of Ed McCall. Ed was a member who recently joined but was unable to take advantage of the meetings and friendships of the club.

## 1970 SHOW NOTES

The 12th Annual Lincoln Gem & Mineral Club Show will be held Saturday & Sunday, Sept. 26-27, 1970, at the Pershing Municipal Auditorium, Lincoln, Nebraska.

A theme has been selected for this year's show. It is "Rocks and Modern Living." The popularity of the rock hobby is largely a result of the many modern conveniences which allow us time and provide us the money to pursue this activity. It seems appropriate that in this time, when man is not only taking rocks from the deepest reaches of this planet but also bringing rocks back to earth from the moon, we should investigate the influence rocks have on modern life.

The importance of featured displays must be clarified at this time. Featured displays surely make a rock show but are there to supplement it. Featured displays, however, should tend to stress the theme of any show. I am pleased to announce that Mr. Irl Everett has consented to be chairman of featured exhibits. I am sure we can look forward to many fine featured items.

The importance of individual exhibits must be stressed at this point. The success of our show largely hangs on the many fine displays that each individual member brings to the show. It is here that all phases and all levels of the hobby can be presented to the viewers. Displays by beginning collectors and/or cutters are equally as important as displays by advanced collectors and/or cutters. Individual displays, whether of lapidary, minerals, fossils, or other related subjects, are equally important.

In order that we may prepare for the 1974 Show, which must be competitive, our first competitive show will be held this year. Classes of competitive entries will be those listed in the American Federation uniform rules. Competitive exhibits will be in a different area of the auditorium than the non-competitive exhibits. Competition will be opened to all rock hounds regardless of club, federation, or association affiliations. It is not necessary that your individual display be competitive. Individuals who do not wish to display competitively will be equally welcome as non-competitive exhibitors. Both types of displays are needed to assure a successful show.

Keep in mind that although there will be competitive displays at the 1970 Show anyone may enter either in the competitive or non-competitive category, or in both categories.

To aid the Floor Chairman (to be announced) it will be most helpful to have an early "case census". Each member is requested to begin planning his displays (both competitive and/or non-competitive) now. At the last spring meeting (May) the census will be taken. In this way, we will know how much space to allot to competitive and non-competitive exhibits. Of course, your May commitment can be altered. We will only need an approximation of cases.

(Continued next page)

## 1970 SHOW NOTES (continued)

Dealers are a very important part of any show. The number of dealers will be fixed at the February Board meeting. Present plans call for half of the dealers to be "repeats" and half to be "new comers" at the Lincoln show. This, of course, is subject to change, as some "repeats" may not care to "repeat" or some "new comers" may not wish to come.

Most important, your individual cooperation and displays are the best assurances of a successful show. Until next month -

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Roger Pabisn - 1970 Show Chairman

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In tribute to our friend and club member Professor Foxwell, who passed away February 1, Florence Boring would like to share the following poem by Henry van Dyke:

## FOUR THINGS

Four things a man must learn to do  
If he would make his record true;  
To think without confusion clearly;  
To love his fellowmen sincerely;  
To act from honest motives purely;  
To trust in God and Heaven securely.

To complete our tribute Adeline Nolde has gathered the following information about the interesting life of this humble, friendly man.

Friends were saddened by the sudden loss on February 1, 1970, of our member William Harris Foxwell who was born at Waterford, Wisc. May 14, 1895. He lived there until coming to the University of Nebraska where he attended from Sept., 1915, through June, 1917. At that time he entered World War I as a 2nd Lieutenant in the U. S. Army, serving in this capacity until December, 1918. He returned to the University of Nebraska and received his B. Sc. in Mechanical Engineering in June, 1921. He then went to the University of Illinois as an assistant in Mechanical Engineering. In 1923 he was employed as a machine designer at Stop Shock Wheel Corporation in Green Bay Wisconsin, returning to Lincoln in 1924 as a cryogenic engineer in the U. S. Bureau of Mines dealing with oxygen separation and low temperature insulation. As an assistant development engineer he was employed in September, 1926, by Combustion Engineering Corp. in New York City in developing oxygen separation plants until Jan. 1930, when he went to Q. O. Smith Corporation in Milwaukee as a development engineer on forge heating furnaces, high speed forging processes, annealing of welded pipe, airconditioning, etc.

As a visiting lecturer in 1932 he went to the University of Calif. at Berkely lecturing on heat power engineering, refrigeration, air conditioning and power plant studies. Then he was employed in San Francisco for a year by the Union Ice & Cold Storage Co.

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## PROFESSOR FOXWELL'S LIFE (continued)

The next 5 years were spent in an engineering capacity in Milwaukee with a 6 month teaching stint at Nebraska U. From 1941 to 1946 he served as a Lieutenant Colonel in the U. S. Air Force, returning to Nebraska U. where he taught statics dynamics, kinematics and machine design. He was in charge of machine design from 1948 until his retirement.

Because of his experience and the shortage of staff members he remained as a full time professor past retirement age. Upon retirement he continued teaching statics and descriptive geometry in night classes in the Dept. of Engineering Mechanics. Later he planned and wrote extension courses for statics and machine design correspondence students for the University of Nebraska.

It is interesting to note that in spite of his background of experience he took graduate courses at the University of Nebraska from 1948 to 1951. His teaching career was interrupted from 1951 to 1953 when he returned to active duty in the U. S. Air Force as Chief of the Gas Servicing Equipment Section of the Equipment Laboratory at Wright-Patterson Air Force Base where he was in charge of research and development of oxygen and gas generators and associated ground servicing equipment. In this capacity he served 2 years on the American Gas Association Valve Thread Standardization National Committee, the American, British, Canadian Oxygen Equipment Standardization Committee, and as Technical Advisor of the NATO Oxygen and Gases Standardization Committee. While on these committees it was necessary that he consult with General Eisenhower, N.A.T.O. Chief, the British Prime Minister, and our President.

Mr. Foxwell was a member of the American Society for Engineering Education, Interprofessional Institute, a distinguished member and a life member of the Engineers' Club of Lincoln, an honorary member of the societies of Sigma Tau, Sigma Xi and Pi Tau Sigma, member of the Elks and Masonic Lodges, Rotary Club and Lincoln Gem & Mineral Club.

His first wife was Mary Ramey from this vicinity. She passed away in 1949. Their daughter Mary Jean (Mrs. Roy Fritz) of Colgate, WI. survives as well as several grandchildren. She lives on the Foxwell's farm. His second wife, Frances, passed away two years ago.

Frances had a real interest in rocks. On their many travels they picked up rocks but never had done anything with them. In 1960 they dropped in my office one day, and it was my pleasure to show them some of my polished stones. After very little effort I convinced her to have Bill enroll in the lapidary classes, so he and I enrolled in our first lapidary class that fall. His enthusiasm led me to encourage him to enter Lee Stachura's silversmithing class. Since that time, it is my belief he became a more enthusiastic "rock hound" than I. He was recently chosen to be a judge at the 1970 American Federation Show to be held in Minnesota in June.

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## PROFESSOR FOXWELL'S LIFE (continued)

Beside the interest in lapidary and silversmithing arts, Bill was an outstanding archer, making his bows and arrows which he used for hunting and fishing. He enjoyed the farm and planted a large variety of flowers in his yard.

Regarding his vast knowledge, experience, and importance he was most unassuming. He had a never-failing sense of humor. For this his senior Mechanical Engineering students made him an honorary member of the "Royal Order of the Golden Chicken," for which he was given a small brass chicken and an accompanying certificate for his "unfailing and unmeritorious presentation of exhaustive examinations at unannounced hours which allowed many of his honor students to achieve the enviable mark of zero."

Those of us who were privileged to have know him and had him for a friend were fortunate to have been so honored, and shall have many pleasant memories.

submitted by Adeline E. Nolde

"Goodbye, Mr. Chips".(mjc)

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LITTLE KNOWN ELEMENTS...In this electronic age, light-emitting and microwave diodes and other semi-conductor applications make use of hitherto little-known elements such as gallium and indium.

GALLIUM is recovered in minute amounts from iron ores. It is metallic, bluish-white, hard, and slightly malleable, resembling aluminum. It is remarkable for its low melting point, 29.7 degrees C. or 85.5° F. The symbol is Ga; atomic number 31; specific gravity 69.72. The scientist Mendelyeev predicted with remarkable exactness the properties of this element, which he called ekaluminum, meaning a known element which should stand next to aluminum in the periodic table.

INDIUM, whose name is related to the word indigo, because of the two characteristic indigo-blue lines in its spectrum, is a soft, white, malleable, easily fusible metallic element, found combined in small quantities in many ores, especially zinc blende, or sphalerite. This element was discovered spectroscopically by Reich and Richter in 1863, over a hundred years before our technology was ready for it. The metal is obtained pure by electrolysis of the chloride. The symbol for Indium is In; atomic number 49; specific gravity 7.3. The melting point is 155 degrees C. or 311° F.

-Vivienne Dosse via Pacific Mineralogist

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ODDS & ENDS ABOUT TRILOBITES...they not only look like sowbugs, some of them unroll. This was presumably to protect them, but may instead have aided enemies in swallowing them. Trilobites molted periodically which accounts for the many portions which are found as fossils. Entire specimens indicate that the animal was inside its shell at the time of burial. Although trilobites were plentiful in the Cambrian, one of the reasons they may have become extinct later was the rise of sharks and other fishes in the Late Silurian and Devonian, to whom they would serve as food. (Authority: Principles of Invertebrate Paleontology, by Shrock & Twenhofel) via Pacific Mineralogist

The Taylor & Frick families wish to thank all the members of LGMC who helped us so much during the loss of our father and Grandpa. The flowers, cards, memorial, food and all the work done by some of the members will never be forgotten. This is a time one needs courage and so many of our friends were here to help us through this great hour of need.

Thank you -- Howard & Marie

FRAGMENTO AEROLITE -- Puebleto de Allende, Chua, Mexico!!!

Tom and Carolyn Simmons, our traveling club members who recently spent 11 days in Mexico, have returned to Lincoln with interesting stories to tell and beautiful slides to show, plus 40 lbs. of fragments of a meteorite that fell there in February, 1969.

From bits of information Tom has been piecing together in the past year he was able to pin point the area. The approximate weight of the meteorite was 40 ton, and the fallout covered an area about 32 miles long and 5 miles wide. It was hard-pan desert area with some small farm lands. Falling at about a 30° angle it bounced spreading over the larger area.

The largest piece found to date weighed 180 lbs and is now on display at the Smithsonian Institute at Washington, D. C. In addition, the Institute has nearly a ton of this meteorite in their possession. Tom and Carolyn were able to collect about 40 lbs. of the material, and their largest piece weighed 9 ounces. The original selling price in the area started at \$3 - \$4 per lb. but inflation arrived with our astronauts from Houston who purchased 16 lbs. at a cost of \$1000. The quoted price has risen to \$30 per lb.

The official report from the Laboratory of the University of Mexico is as follows:

AS - arsenic	- 0.14%	SiO <sub>2</sub> - silica	- 34%
NI - nickel	- 1.70%	S - sulphur	- 2.00%
CA - calcium	- 3.75%	Cu - copper	- 0.01%
MgO - magnesium	- 17.15%	P - phosphorus	- 0.03%
Fe <sub>2</sub> O <sub>3</sub> - iron	- 33.46%		

Density - 3.3: Hardness - 4.5: slightly magnetic

(We hope to hear more on this subject in the coming months. Ed.)

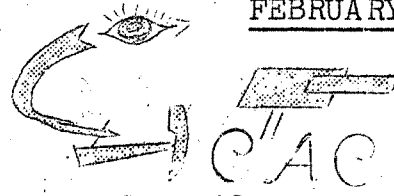
REPORT OF BYLAWS COMMITTEE...At the November meeting the club members voted to increase the Board of Directors from seven to nine as provided by Article IX of our Articles of Incorporation. Please amend your copy of the Bylaws - Article II, Section 1 to read as follows:

The Board of Directors shall consist of the President, First Vice-President, Second Vice-President, Recording Secretary, Treasurer and two four Directors.

*Handwritten:* Hey D.A.D. / dues are due!!

Late Flash - News of the sudden death of Bob Brosseau of North Platte. Bob and family often visited our show and were rockhounds and barb wire collectors. Sincere sympathy to his family.

## A NEW BODY IS FORMED



Those of you who have read previously written articles regarding the Community Arts Council will recall that the members of the Council are concerned about the quality of our environment, particularly where art appreciation is involved. It seems fitting and proper that this body should take the initiative then in a problem that is a matter of public concern, our total environment and how best to improve the quality of our surroundings.

This problem not only concerns the general public but also involves the city government and the planners. Mr. Lawrence Enersen who has been an ardent promoter along this line led the discussion at our noon luncheon meeting Jan. 29th. He also mentioned that somewhat parallel meetings had been held by the Junior League of Lincoln and the League of Women Voters dealing with this same subject.

As the discussion progressed, two plans for establishing an authoritative body to deal with the problem emerged. The primary purpose of either one of these plans was to establish an authoritative advisory group that would promote and study improvements in environmental planning and assist the city's department heads to upgrade standards in their planning.

One plan was to form a Mayor's Advisory Commission that would express the views of many organizations and would be a joint venture between the city and the citizens. Mr. Leo Scherer, administrative assistant to the mayor, said that such a commission had been under consideration by the mayor's office for some time and that they would be glad to work with such an organization. He also said that this commission might be helpful in obtaining more federal funds for street improvements and other projects. Robert Obering, director of Public Works, Ralph Nelson, the City's Corporation Council, and Don Smith representing the Parks and Recreation Department, all agreed that they would be glad to work with such an Advisory Commission.

The other plan was to take a much broader view and thereby organize an independent, non-profit, free-standing organization. They would represent the community at large and be independent of any specialized group. Their scope would include all elements concerning environment such as visual pollution, noise pollution, crime and safety and many others. This group should have some authority to influence the City Council and the planning board so they would heed their recommendations before acting. This group should by all means represent all segments of the community.

The Community Arts Council passed a resolution to present these plans to the mayor. Thus our hope is that some action will be taken very soon.

-Ralph Ulrich, Representative to the Community Arts Council

THOUGHT FOR THE DAY: Even the woodpecker owes his success to the fact that he uses his head. mjc

## SOME METHODS FOR CUTTING AND POLISHING LAKE SUPERIOR AGATES

by Roger K. Pabian

We often see the sign "Don't ruin in minutes what it took Mother Nature millions of years to make". This advice is most frequently seen in jewelry shops throughout the midwest and mountain states. What characterizes most of these small shops is the dealer is also his own manufacturer of semi-precious and ornamental stones. The people who most flagrantly disregard the little sign are those who have it hanging in their shops. These producers tend to violate their advice because of their habit of trying to get too many pieces of jewelry out of a single piece of rough material. The result of this practice is the ruination of Mother Nature's million year creation and proof of this is often seen in many pieces of mediocre jewelry cluttering the shelves of the small shops for years to come.

When one encounters a manufacturer about the many stones of mediocre quality which he is producing, he will usually respond with the static argument: "This material costs me three dollars a pound now. If I don't utilize all of it, I won't make my profit." The manufacturer fails to see the economics of this situation; it seems that he would rather produce one hundred dollars worth of jewelry which will never be purchased than eighty dollars worth of jewelry which will be purchased. Perhaps the jeweler would produce better materials if he knew how. Poor quality of workmanship and poor taste in selecting materials is perhaps the main reason why agate, which has often served as the center piece in jewelry creations made expressly for the royal houses of Europe, is often held in low regard by many jewelry wearers. We cannot change the raw materials with which we must work. We can, however, change the way in which we think about our material. If we can dispel the notion that we have to cut what we get, then we will realize that we can alter what we have to produce a good quality, pleasant appearing gemstone. Success in cutting agates can be obtained by a more intimate knowledge of the material with which we are working. Even at the risk of becoming overly technical several new terms for describing agates will be used. Specifically, we are interested in those agates which are most popularly known as "Lakers" or "Lake Superior Agates."

The natural history of Lake Superior Agate is very long and detailed. Some important highlights are worth covering in order to give the cutter some idea as to how the rough material has been weathered and transported to the places in which the rough agates are found. Lake Superior Agate is found in situ in the Precambrian (Keweenawan) basalt, which occurs in natural outcroppings along the North Shore area of Lake Superior. Similar agates are found throughout the Canadian Shield in numerous exposures of basalts of Keweenawan or equivalent age. If Lake Superior Agates formed at the same geologic time as the basalts in which they occur, we can date the materials at about 1.6 + 0.1 billion years. Lake Superior Agate is the oldest known agate. For most of this long history the basalts and the included agates have been buried. It has been in relatively recent times that these agates became exposed, weathered from their basalt

(continued next page)

## METHODS FOR CUTTING AND POLISHING LAKE SUPERIOR AGATES (continued)

matrix, and transported to the site of finding. This happened during the late part of the second Kansan Glaciation when ice dug deeply into the basalt and removed much of this agate containing material. It has been statistically estimated that about eighty cubic miles of these agates were re-deposited by Pleistocene (Kansan) glaciation and recent stream activity. This great glaciation, which was of a continental nature, distributed the agates quite widely and uniformly. Lake Superior Agates are found in the following areas: all of the states of Minnesota, Wisconsin, Iowa, and Illinois; the eastern parts of North Dakota, South Dakota, and Nebraska; the northeast corner of Kansas; all of Missouri which lies north of the Missouri River; the northern half of Illinois; and, finally, in northern Michigan. These agates are also found in stream laid deposits along the entire length of the Mississippi River. The glacial deposits in which the agates occur consist of unstratified and unsorted gravels which are called the "Upper-Middle Kansas Till."

Agate cutting has three possible end products, which are producing jewelry stones, producing museum or cabinet specimens, and producing bearings for delicate scientific equipment. We are concerned with the production of jewelry stones and museum pieces.

Cutting jewelry stones requires the least equipment and this may be of small scale. Even a beginning cutter, with the bare essentials of equipment, is prepared to cut jewelry from Lake Superior Agate.

A small diamond saw, either of commercial or home made origin, with a blade diameter of no smaller than six inches is preferred. The saw blade should rotate at a surface speed of two thousand feet per minute. For a coolant, water, water soluble oil, or commercial mineral oils, as sold by Standard, Texaco, or Co-op refineries, or lapidary dealers, can be used.

Two grinding wheels, one coarse, the other fine, are helpful, but not necessary. If two wheels are used, the coarse wheel should be an eighty grit, soft "M" bond. The fine grinding wheel should be a two-hundred twenty grit, hard "K" or "L" bond. If only one grinding wheel is used, it should preferably be a one-hundred forty grit, medium soft "L" bond. Grinding wheels are obtainable at all lapidary shops and some of the larger hardware and department stores.

It is preferable to use wet-or-dry type sand paper for this operation. Two grits of sand paper are required. Coarse sanding can be done with two-hundred twenty grit paper and fine sanding can be done with four-hundred grit paper. An old piece of four-hundred grit paper serves as an excellent finish cloth for pre-polishing the stone. Drum type sanders are preferable to disc type sanders as uniform surface speeds are easily obtained on the former type.

Polishing can be done either on a hard felt or soft leather wheel or disc. Polishing compounds are numerous. Oxide compounds as tin (stannic), cerium (ceric), or chromium (chromic) oxides produce

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## METHODS FOR CUTTING AND POLISHING LAKE SUPERIOR AGATES (continued)

highly desirable polishes. Ceramic workers use oxides of the same metals to produce glazes on their crafts but these are not suitable for lapidary purposes as they show different chemical properties because the metal ions are of different oxidation states. For lapidary work the general rule of using the oxide in which the metal ion is most highly oxidized is safe to follow. Linde A, an aluminum oxide produces excellent polishes. It is often mixed with metal oxides, but this mixture can generate sufficient heat to destroy a stone.

Selecting rough materials for jewelry is reasonably easy to learn. Color, pattern, and the absence of imperfections in the stone are the most reliable criteria on which to base your selection. This can be a gross over-simplification of the factors that must be considered. There are several other things we should keep in mind when selecting rough materials.

In general, the largest standard sized jewel stones are no larger than forty by thirty millimeters. This would mean that any agate smaller than fifty by forty millimeters, which is free of flaws and which has good color and pattern, is suitable material. It is a good rule of thumb to allow a factor of twenty to thirty percent for waste. Choose a stone which is a little larger than the size of the finished product. Most dealers furnish templates of standard sized stones.

Fracturing restricts the size of a stone. When finding the stone of desired size is accomplished, there is a method of finding fractures which is very easy to master. Most dealers keep their rough material in shallow pans of water in order that the colors and patterns of the material will show without the benefit of the polishing operation. Remove the selected stone and dry it off with a towel. Water will usually seep into fractured areas and this will leave a dark colored line across the stone.

It is worthwhile to introduce a term here, which is somewhat helpful in choosing materials. This term is simply "monocyclic." "Monocyclic agates" are "agate which, from exterior to interior, are characterized by a pattern of more or less concentric banding which may or may not terminate in crystalline quartz at the interior of the stone." This indicates that during only one cycle in the history of the stone agate would have been the stable form of quartz. Any monocyclic agate which has nine or more millimeters of banding before terminating in crystal is a suitable stone. Any crystalline quartz can be removed during the trimming operation in the diamond saw or can often be placed such that it will be at the back of the stone and invisible to the viewer.

When selecting rough material, it pays to wet the stones if the dealer has not already done so. Impure, artificial light is superior to sunlight as it will result in a far greater spectrum of colors.

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## METHODS FOR CUTTING AND POLISHING LAKE SUPERIOR AGATES (continued)

Pick the agate for its color. Red and gray are the most common colors in Lake Superior Agates. When either of these colors is crossed by a band of some other color, a nice effect is seen. If a red agate is traversed by a prominent white band, for instance, we have something around which the stone can be cut.

Pick an agate for its depth. Brightly colored banding with alternately clear bands produces an effect of depth. Depth in the pattern will often produce a shadowing effect, which is the seeming movement of dark lines across the surface of the stone.

Most finished stones measure an average of twenty by fourteen millimeters. This means that reasonably small agates will be suitable for jewelry work. Fragments from larger stones, or small monocyclic stones will produce ninety percent of the jewelry sizes people desire.

For men's jewelry it pays to pick stones of brilliant color, which may also have the effects of depth and shadowing. Women's jewelry is best produced from pastel shades which do not show any optical effects.

If we remember some of these pointers and that we don't have to take only what nature offers, we can select some very promising rough material. The artist's job is to alter and supplement nature in a way that will produce a pleasing effect to the viewer. That is the next phase of jewelry manufacture.

(More on this next month - watch for March Pick & Shovel)

Club Projects have been discussed at length in the past few weeks, that is - projects such as the digging of Pleezy, Gems on Location, and Room 104. These are all projects in which every member of the club could participate if he so desired. As we are printing the P & S (and deadline is past) Tom phoned with an offer of the use of some crystal specimens for use on the Gems on Location map. This brings to mind a thought for a club-involved project...instead of reworking the present map of lapidary work, would it be possible to make a companion piece using minerals or crystals. Anyone interested...? Contact Phyllis.

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PREHISTORIC BISON SKELETON found in Iowa peat bog...Geologists have found a complete skeleton of this animal which became extinct some 25,000 years ago. They think this ton-and-one-half creature must have fallen through the ice of a lake, sank to the bottom in a kneeling position, died, and then became covered with vegetation and debris. The pond dried up and the remains remained right there till Oct. 1969. via Science Digest

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APOLOGIES...we're sorry about the off-set this month - we're wondering if it's because the ink is cold...it certainly can't be something we're doing wrong!

## MINUTES OF BOARD MEETING-Jan. 11, 1970-Bennett Martin Library

The LGMC board meeting was called to order by president, Phyllis Parks, at 3:00 PM with members of the 1969 and 1970 board of directors present. Those present were: G. W. McKinney, George McGinnis, Evelyn Ulrich, Ralph Ulrich, Frank Rule, Phyllis Parks, Jim Parks, Irl Everett, and Lynn Wells. Visitors were Norma Miller, Glenna McGinnis, Lois Everett, Eleanor Rupert, David Rupert, Harry Gragg, Mr. & Mrs. Paul Greenwade, Florence Boring and Dr. John Neihardt, and Glen Ulrich.

Board Members were reminded of the purpose of the Club as stated in Article III of the Articles of Incorporation by the president. The minutes of the December board meeting were read and accepted as read.

The treasurer's report was accepted. Ralph Ulrich informed the Board that he had invested the savings at a split rate which will render a greater amount of interest. A balance sheet will be made available to all members.

Mrs. Parks stated that the W.O.W. building on 27th Street is available for club meetings and that improvements are being offered in the form of heating, ventilating, a telephone, and increased storage space. The contract will be read at the general meeting.

Ralph Ulrich reported that the insurance policy that had been procured for the library displays is effective for the period of one year and may cover other club-sponsored displays provided a revised list is submitted, and the value does not exceed the original amount for which the displays were insured. This amount was \$2,154.00.

The General Meeting will be held at the W. O. W. Building on 27th St. on Jan. 24th at 7:30 PM. The program will be in the form of a Founder's Day celebration.

Outstanding bills were presented by the treasurer. Irl Everett moved that they be allowed. Frank Rule seconded the motion and it carried.

A letter was received from Harvey Kenfield inviting the club to become members of the Nebraska Association of Earth Science. After discussion, Ralph Ulrich moved that a copy of their constitution and by-laws be procured and made available to the membership. Frank Rule seconded the motion and it carried.

After adjournment, an open meeting was held for all interested members to help make plans and offer suggestions for club activities during 1970.

Refreshments were served by Mrs. Rupert and David.

Evelyn Ulrich - Recording Secretary

## MORE ABOUT THE STEERING COMMITTEE

Building a project can be a lot of fun. Last fall we had a ground breaking for the 1974 Show project when the club members approved the Steering Committee during the general meeting in November.

We then dug into the legal aspects concerning the Articles of Incorporation and uncovered a clean bill of health with the able assistance of an attorney. Having had this encouraging report, Howard Taylor contacted the Chamber of Commerce and Gene Eno touched base at the University of Nebraska. Without going into detail I can best sum up the reaction by quoting the Chamber of Commerce, "What do we need to do! We'd like to have one of these every year! Let us know what you need." The convention manager at Kellogg Center speaking for the University could best be described as an enthusiastic booster but he went beyond that when the general outline of our plan was unfolded before him. While a few details will need to be worked out, nevertheless the University campus is a likely candidate for our Show site. So far and so good but we will continue to probe into other areas concerning future plans for other organizations.

Now we need to lay a good foundation. For openers we set up the organization of our own Steering Committee. The Chairman is Ralph Ulrich, the vice-chairman is Gene Eno. For secretary we chose Irl Everett and Bruce Simon ran for financial secretary and won the election. The first official act was to instruct the newly elected secretary to send the names of the officers to the Midwest Federation for their information and guidance.

We even outlined the duties of the officers and made up a functional outline for the Steering Committee in general. These last two items are particularly important to all club members and they will be presented at our February meeting for your consideration.

## Section I. Duties of the Officers of the Steering Committee

Chairman

Call meetings at such times as he deems necessary, except a majority of the Steering Committee may call a meeting in case the Chairman declines to do so. He shall have equal voice and vote on any matter under consideration and may initiate and make motions.

Vice Chairman

Act in absence of the Chairman and assist him in all matters.

Secretary

Record proceedings of the meetings. Maintain an up to date file of all correspondence and business records pertaining to the project.

Financial Secretary

The Financial Secretary will not be empowered to write checks or otherwise disburse funds of the Lincoln Gem & Mineral Club, Inc. Nor will he make any financial commitments without

(continued next page)

## MORE ABOUT THE STEERING COMMITTEE (continued)

approval of the Steering Committee and the sanction of the Board of Directors of the Lincoln Gem & Mineral Club, Inc. He will study and research all financial aspects of the Steering Committee.

He will maintain an up to date record of all commitments for monies to be spent and for those activities that will produce income and keep the Steering Committee and the Lincoln Gem & Mineral Club informed of the financial status of the project.

He may act as Liaison Representative on financial matters to the Lincoln Gem & Mineral Club Board of Directors.

## Section II. Functional outline of the Steering Committee.

1. Act in behalf of the Lincoln Gem & Mineral Club on matters pertaining to the 1974 Show project.
2. Establish policies concerning the general operation of the 1974 Show project. Research and study the possible problems to be solved or the challenges that we have not yet met.
3. Arbitrate and make decisions when conflicts arise.
4. Establish the Show Directors for the 1974 Show project and devine their duties. One of these directors would be designated as the General Chairman of the 1974 Show. The Directors would consist of members of the Lincoln Gem & Mineral Club regardless of whatever other committees or other offices they were serving, ie any member would be eligible. In addition, representatives from the Midwest Federation and Civic Organizations should be eligible. For example, "Chamber of Commerce, Junior Chamber of Commerce, American Legion and its Ladies Auxiliary, Lions Club, University of Nebraska, Lincoln Public Schools, Nebraska Association of Earth Science Clubs, and any other organization that could help.
5. The Steering Committee would advise and assist the Show Directors and do research on any proposition and test new ideas to see if they are in the best interest of the club. Also this could apply to item 3 "Arbitrate and decide."
6. Appoint chairmen as required to promote advance publicity for the 1974 project. This does not include the working Chairmen directly concerned with assembling the Show, such as Publicity Chairman, Dealers Chairman, Tickets and Advance Sales Chairman, etc.
7. Maintain interest and enthusiasm for the 1974 Show by constantly talking about it. Bring up the subject at every meeting and emphasize the favorable aspects. Remember, a problem is mostly a challenge we haven't met before.

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MORE ABOUT THE STEERING COMMITTEE (Continued)

TUC-1

These then are the duties and functions of the Steering Committee under which we propose to operate until all of the business concerning the 1974 Show is completed. We will be glad to answer any questions you may have at our February meeting and will ask the members to approve the outline.

We are in the process of writing the policy file and after that we will document the duties of the Show Directors.

We realize that no definite commitments can be made until about 1972 at which time the club members must vote on a definite commitment to host the 1974 Show for the Federation. However by that time we will have all of the foundation laid and the framework set up ready to enclose the structure and turn on the heat.

-Ralph Ulrich, Chairman

1974 Steering Committee

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 INDOOR FIELD TRIP- contributed by Paul S. (Stan) Greenwade

Winter, being a rather bad time for outdoor field trips, is an especially good time to hunt for rocks, and gems of facts and figures about the sciences of our hobby in the books, journals, etc. from libraries. A field trip indoors, especially at home, is much more comfortable in winter. Our little library has some very interesting reading.

Some of these bits of information might rock you, some are Gems, hence:

ROCKS & GEMS FROM BOOKS

Geology, Principles & Processes, by Emmons, Thiel, Stauffer & Allison

P 2: The land in an area to the North of the Great Lakes is rising about 16 inches per century. Certain localities around the Baltic Sea are rising more than 3 feet per century.

P 36: The most common elements on earth are oxygen 46.71 percent and silicon 27.69 percent. Together almost three quarters (74.4 percent) of the total elements.

P 65: The amount of heat the earth receives from the sun is sufficient to melt a block of ice 1 mile square and nearly 100 feet thick every second. Or, to melt a layer of ice 150 feet thick over the entire earth in a year.

P 81: Crushing strength of rocks: General range  
 Sandstone - 4,000-16,000 pounds per square inch  
 Limestone - 6,000-12,000 " " " "  
 Granites - 15,000-30,000 " " " "

So when a rock is struck with a hammer and a little powdery sand results some idea of the force of the blow may be realized.

P 118-119: Only small parts of deserts are covered by drifting sand. Less than 1/2 million square miles out of 3,500,000 square miles the Sahara Desert covers is dune-covered. The remainder is boulder-strewn and rocky. Sand dunes in the U. S. cover less than 10 percent of total desert areas.

January 1970 - FOUNDERS DAY PROGRAM-reprinted for your records

Thanks to the research, enthusiasm and planning together of our January Program Committee Mr. & Mrs. Virgil Carveth, Mr. & Mrs. Irl Everett, Mr. & Mrs. C. Ray Waddle, assisted by Mr. Bill Foxwell and Dr. & Mrs. Des Gibson, plus many hours of selecting slides and information, typing script, and other hard work, Lincoln Gem and Mineral Club Members were again privileged to take a backward look at the many activities and achievements of the club and its individual members. Again, thanks to this committee, we are presenting the entire script - minus slides - for your leisurely reading enjoyment. May this serve as inspiration for many projects and activities as we look to the future.

Introduction by Irl Everett, assisted in the presentation by Mr. Des Gibson, Marie J. Carveth, C. Ray (Pappy) Waddle and with Mr. Bill Foxwell handling the slide projection.

" The last decade--Plus 5 equals 15 years. Our program this evening is just that, we wish to take a journey through the pages of our history as the Lincoln Gem and Mineral Club. Due to the efforts of our historian, Frances Tracy, we have a volume of wonderful information which she has compiled.

We shall not attempt to "jump over" the last 15 years, but instead we shall go thru the years, thru some of the activities of each year, until we reach the historical year when the charter was drawn, the organization taking place on Jan. 15, 1955 at the Y.M.C.A.

To begin our journey thru the years,--"This is your Life", Lincoln Gem and Mineral Club-- The year-----

1969 G. W. McKinney is serving as our Pres. With a very efficient board at his side, we enjoy another successful show. The attendance is approximately 3,000. The moon photos first shown to the public at our show, were brought here thru the efforts of Frank Marsh. The Great Seal of the United States was most impressive. Gov. Tiemann travels to Japan, and takes with him jewelry made of the State Gem, to show our friends in the far east. We lose a faithful friend and member in Clyde Miller. We now light the candles in memory of those not with us tonight.

A field trip is enjoyed by many members, to the "Grotto of the Redemption", at West Bend, Iowa, in July. Truly a marvel of gems and rocks.

In May 1969, a most distinguished American, our Poet Laureate, Dr. John Neihardt, accepted an honorary membership. We now present a short session of slides of the tea honoring Dr. Neihardt at the Sheldon Art Gallery. Dr. Neihardt resides with Mr. & Mrs. J. D. Young.

In 1968 with Howard Taylor as Pres., we have a fine year. One honor coming to the Lincoln Gem & Mineral Club is the award from the Midwest Federation, citing us for Public Service and Public Relations. Also a first place award in the Lapidary Class to the club, at the Lincoln Hobby Show. Lee Stachura, a member, conducts Silversmithing at the Lincoln High School, and John Lewis continues his lapidary classes thru City Recreation 3 nights a week. Mrs. Whitmarsh, a member since the first year, pas away.

1967-- That means one big party. With Gene Eno as our Pres., we plan the Centennial Show. The Rockrama ! Howard Taylor serves as

continued

January 1970-FOUNDERS DAY PROGRAM (continued)

show chairman, and with much cooperation from the membership, we give the public a fabulous show. Early pioneer costumes were worn by the members, mountain men with whiskers made their appearance.

Gov. Tiemann declares the Blue Agate as the state gem, the Prairie Agate the state stone, and the Mammoth becomes the state fossil. The Gov. also issues the proclamation that : Sept. 22, 23, & 24 of 1967, shall be known as Centennial Rockrama Days in Nebr. Sec. of State Frank Marsh impresses the Great Seal of Nebr. upon this proclamation! The Rockrama was held 3 days and Jerrold Kohn won the Governors trophy, awarded for the most effective use of Nebr. materials. Jerry featured Nebr. petrified wood. Another feature of the show that year, was the Linde Star Coronation necklace, worn to Queen Elizabeth's Coronation in Westminster Abbey in 1953. It is valued at \$25,000. This necklace was in the antique design of laurel leaves of green, yellow and white gold. The ruby weighs approximately 90 carats. We all remember the beautiful jewel! We also remember Jerry Kohn delivering it for safe keeping to the Police Station in a brown paper bag! Groov-e-y, Jerry! Miss Mary Claus, the daughter of the Fred Claus' was named "Miss Rockrama of 1967". This year too, was our last year to participate in the Nebraskaland parade. We featured the Blue Agate--a replica--a huge faceted gem, created by the Carveths and Ralph Ulrich, in the Carveth's garage! A large Prairie Agate and the Mammoth head, complete with tusks, complete our float; this the work of the Bloyds and Engelharts. The float draws much comment along the parade route. We receive the Nebraskaland Days "Big Howdy Award" for our efforts. "Good ole" Tom Simmons comes forth again with his truck to pull the float down the parade route!

On our journey back thru the years, in 1966 we have Bruce Simon in the Pres. chair. An able leader, we have another good show, and there is much activity at the University Museum Fossil Hall. Everyone from banker, retired science teacher, retired Air Force Col., jeweler, and on and on, are all busy working- helping the museum staff prepare fossils, and sort and catalogue minerals.

This all takes us to 1965 with Everett Weber as Pres., and the story of the Nebr. Sea Serpent continues to unfold. Much work done by the Lincoln Gem and Mineral Club help the museum display the bones of Plezy! Because--in 1964 the Plesiosaur, the rare fossil reptile is discovered on the Rezac farm near Valparaiso, Nebr. With enthusiasm, typical of the membership, and the Pres., Tom Simmons, the help of many willing hands, is offered to Dr. Bertrand Schultz, director of the Museum; and an honorary member also of the club. His comments were--"without their help, I don't know how we would have even been able to move the skeleton! These people were wonderful." These people were "baby-sitters"- with loving care they chipped away, covered sections with plaster of paris, lifted it carefully, freeing it of surrounding rock- they worked on and on- and finally "Plesie", after resting for 120 million years, in his creek bed grave, on a Nebr. farm, now rests at Elephant Hall. The skeleton is there for all to see, this event is world known today, and much complimentary publicity was received by the club.

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## January 1970 -FOUNDERS DAY PROGRAM (continued)

In 1963 the Lincoln Gem & Mineral club has its first lady Pres., Mrs. Marie Carveth. In this year the idea for audio-visual cases was developed, with the cases traveling to city and county schools. Mrs. Velma Bloyd, assisted by Tom Simmons, made the presentation in Feb. 1964, to the Supt. of Schools. Mr. Gene Eno and Dorothy Engelhart have spent many hours teaching and lecturing the earth sciences with the school children; thru the visual case of minerals. In 1963 the memorial to deceased members was established. The H.E.L.P. program was being promoted. This is the "Help Eliminate Litter Please" campaign. We receive compliments from Mr. Steen of the Nebr. State Game Commission for our work in this field.

Mrs. Ruth Weber is nominated the "Rock Hound of the Year" of the Lincoln Gem & Mineral Club. Miss Adeline Nolde has received her 44th award in jewelry making, this thruout the Midwest and Rocky Mt. shows! Three members travel to Mexico on a rock expedition. This trip took Virg Carveth, Howard Taylor and Mr. Waddle on a very interesting hunt. They brought back Topaz, Opal, Fire Agate--they were ready to go right back! The club donates rocks for cutting to the State Hospital, and we lose Mr. Geo. Wilson, a member and a long time Boy-Scout leader.

1962 brings a junior member, then, a wonderful experince. Young Jim Taylor, age 15, is vacationing with his family at Murfreesboro, Ark. To his delight he finds a rock that really sparkles--it is a brown diamond-- $3\frac{1}{2}$  carats, with 48 sides! The gem was shown that year at the 4th annual show. John Lewis is serving as Pres. Clyde Benham returns from his trip to Mexico. Many of our members travel to Des Moines, Iowa to attend the National Show. Here, the first time our "Gems on Location" are shown, winning a red ribbon (second) in its class.

Dr. Gibson is our leader in 1961 and we have 80 members- all exhibiting at our 3rd show! See how we have grown! Henry Rider of the Museum played numbers on his Bone-a-phone, a musical instrument made of dinosaur bones. Nancy Gibson, age 12, was dressed as an Indian maiden. She modeled Indian jewelry for two days of the show at the Nat'l. Guard Armory.

In 1960 Virg Carveth was wagon master for many field trips, as well as Pres. of the club. One trip that year, to the area near Weeping Water as guests of Dr. & Mrs. Kunkel yielded many fine Indian artifacts, one arrowhead found by Marie Carveth goes back 1,500 years. Dr. Kunkel has a large and fine collection of Indian pottery. The club was incorporated in 1960; three of the signers are present here tonite--namely--Virg Carveth, Irl Everett, and Frances Tracy. In 1960 the official publication of the Lincoln Gem & Mineral Club went to press for the first time. The first edition of the "Pick & Shovel" went into print at the Tracy home with Frances serving as editor. She was assisted by Maurice, and Marie and Virg Carveth. It was June 3 and the Carveth's wedding anniversary. Frances continued until 1964 as editor and Marie has now resigned as reporter after serving 9 years on the paper. We feel this little paper ties together this club in many ways. It has had editors such as Velma Bloyd, Phyllis Parks, and the present editor Norma Miller. Much good reading is found in this paper.

1959 means one of our many interesting field trips to the Ft. Robinson area and the Orella rock beds. We were meeting at Morrill Hall. Irl Everett is our Pres. for the second time. (continued)

January 1970 - FOUNDERS DAY: PROGRAM (continued)

1958 The late Mr. Beckman enjoyed a busy year as Pres. with many interesting meetings, such as rock-swaps, travelogues and field trips to Cowles Lakes. Mr. & Mrs. Carveth are co-chairman of the membership drive. Our 38 members are an enthusiastic bunch.

1957 - 28 members -- Richard Hedges is President. Frances Tracy continues to serve as both Sec. & Treas. We are an ambitious group. A picnic is held to invite other clubs from Kansas, Iowa and Nebr. Study groups meet in each others house to work and discuss this new fascination hobby.

1956 Irl Everett is the second Pres. of this club in it's infancy. 26 members sign in. Silversmithing lessons are given by members of the University staff.

Irl Everett has a wonderful sense of humor in his monthly bulletin he mails to the club members--it's title--"The Rockhound Grapevine". And really the art work was terrific! Today it is a collectors item! Irl continued to mail this out until 1960, and we all looked forward to receiving it.

1955 The year! Important to all of us gathered here. We say a big "thank you"--from all of us--we who know the pleasures of this wonderful hobby.

The first invitation was sent in the form of a letter explaining the agate, crystals, rocks, gems. Mr. Irl Everett composed the letter, with the assistance of Mr. Everett Sabin. Irl searched out the names of interested parties by the library book cards--those that took out books on rocks and lapidary were notified of a meeting. Those attending this first meeting decided to form a club. The charter was drawn. Out of the original list we have with us Mr. & Mrs. Tracy, Clyde Benham, and Irl Everett. The first Pres. was Maurice Tracy, Vice-Pres. Irl Everett, Sec.-Treas. Mrs. Frances Tracy. The slate of officers--3 people! The faithfulness of these people is to be commended and we feel they should be recognized."

Mr. Waddle announced we had 5 to 10 year membership ribbons to award. These were created by Marie Carveth of royal blue and gold satin ribbons with one gold star. There are 60 members in this category. In the ten year to 15 year awards, two gold stars were attached to the ribbon, and we have 35 members in this group.

For fifteen years, we awarded the blue and gold with three gold stars to our four Charter Members. These were all presented by Marie Carveth.

Following these honoraries, Mr. Waddle presented Life Memberships to Mr. & Mrs. Maurice Tracy, Mr. Clyde Benham, and Mr. Irl Everett. These were done in walnut and brass plaques, shield design, and created by Mr. Waddle; all beautifully done.

The smooth, planned presentation of the Life Membership Awards was interrupted by the gentleman who is responsible for the beginning of the club, in the fact that he was not ashamed to show his sentiment, by shedding a few tears. It is proof to us all (as if we needed any!) that this Lincoln Gem and Mineral Club is very dear, and near to his heart; namely, Mr. Irl Everett.

We salute you all, the four charter members present!

continued

## January 1970 -FOUNDERS DAY PROGRAM (continued)

A three-branch silver candlebra, with ivory candles, and tied with our club colors, the royal blue and gold, were used during the program. The candles were lighted in memory of all deceased members, and continued to burn during the program. A minute of silence was observed at this time.

A gold orchid corsage, tied with the blue and gold club colors was presented to Mrs. Tracy.

Mrs. Robert Gibson, whose husband served as one of the narrators, received a corsage as well as our new president, Mrs. Parks. The Dr. Gibsons are former members of the LGMC and we thank them for their assistance.

Time limited the length of comments on all of the activities of the club and to mention all of the members individually, and the many, many contributions to the Lincoln Gem and Mineral Club would give us an all-day program. Wouldn't that be fun to hear and see, how-ever? An all day work shop? We realize the membership also owns many wonderful slides which we wish we could have used, as it was, the committee sorted thru a very large number of slides. To cover "15" busy years would be an impossibility, in a one hour program. We do thank the Ralph Ulrich's, Richard Hedges, the club library, as well as others for the use of their pictures.

Both the older members as well as the younger ones are thanked by the committee. If anyone was omitted with the ribbon awards, please contact me; we shall immediately correct any over-sight in this area.

Respectively  
Compiled by Marie J. Carveth  
Co-Chairman Founders Day Program Com.

(Our sincere thanks to Marie and the rest of the committee who worked so many hours - and kept Irl from finding out what was in store for him at the same time. Needless to say that the work was not completed with the end of the program - still remaining was the huge task of returning the slides to their proper boxes and owners, but January 24, 1970 will be long remembered by many people.-pnp)

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MORE ROCKS & GEMS FROM BOOKS - contributed by Paul S. (Stan) Greenwade  
(Geology, Principles & Processes, by Emmons, Thi<sup>el</sup>, Stauffer & Allison)

P 20-21: The Earth  
Diameter - 7,9000 miles  
Volume - 250 Billion cubic miles (plus)  
Area - nearly 200 million square miles (106 +)  
Weight - 6,000 million, million, million tons. ( $6 \times 10^{21}$ )  
Density - Average 5.52 or  $5\frac{1}{2}$  times heavier than water.  
Outer layer 2.7 inner core thought to have density of 10 T.  
Pressure - Intensity of pressure at center can be appreciated considering the pressure 100 miles deep is 300 tons per square inch.

# 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. 102 - February 1970

## WELCOME NEW CLUBS and Individual Members

### OLD CAPITOL GEOLOGICAL CLUB

Mr. Dean Andersen, President  
851 Dearborn Street  
Iowa City, Iowa

### KEN-ROCK-GEM AND MINERAL SOCIETY

Mr. Carl Dach, President  
Meridian Road  
Rockford, Illinois

### NEW ULM GEM AND MINERAL CLUB

Mr. James Pederson, Pres.  
905 S. German Street  
New Ulm, Minnesota

### Individual Member

Mr. Robert Stacy Romalewski  
519 Sybil Street - Room 307  
Ann Arbor, Michigan

## GEOLOGY

-by Dr. Willard Parsons  
Geology Division Chairman

I have tried to act as liaison between the clubs and the professional geologist. I'm both a professional geologist and a collector, and I'm still very much interested in this aspect of it, kind of a liaison between the geology-mineralogy profession and the Federation and similar groups.

I got some answer in September as to what I could do. I was over in Ireland on a field excursion as a part of a professional symposium, and we spent a week in Belfast in northern Ireland taking field trips around the area, which was specially arranged by geologists. But, the local members of the Belfast Mineralogical Society had been invited to attend any of the trips

## APPRENTICE JUDGES

In continuing its program for training members to judge competitive exhibits, the Midwest Federation will use apprentice judges at the 1970 Midwest Show to be held in Minneapolis, Minnesota, July 23-26, 1970.

The apprentice judges' scores will not be used in the official scoring... they will be for training purposes only.

For those of you who are seriously interested in learning to judge, here is a fine opportunity. You will be working on exhibits that are in actual competition, and you will be able to compare your scoring with that of the official judges.

For further details write to: Carroll Kelley, 7720 No. Mississippi Lane, Minneapolis, Minnesota 55430. Enclose a note of approval from your club president and indicate which classes you would prefer to judge.

they wanted to come on. I was amazed at the activity of this Belfast Mineralogical Society. They are a group like anyone of the clubs of the Federation, but the interest is more on Geology than on collecting. They hold a field trip on the average of once every two weeks around Belfast and they sponsor two trips a year to Great Britain. This year they went over to a location in the central part of England for the week end not just to collect, but to study the local geology. On some of these trips they get local geologists, on many they are self-lead and self-taught.

There is an understanding not only what kind of rocks are there, but how they got there and what rocks mean. They have a membership of some 200, from all walks of life, as is the case here. Their membership looks like ours.

-continued on page 2

I talked at some length with one of the members and I learned that a majority of them are interested in looking at and understanding geologic features more than just collecting.

I think my committee can work with the Paleontology and Mineralogy committees to promote understanding of local geology. We hope to be able to help people understand what they are seeing, not just collect what they are seeing.

This has a lot of advantages. It opens up a lot more territory for field trips, many road cuts and rocky hills, because there are plenty of places you can go without worrying about obtaining permission for a quarry.

In most of the Midwest areas you have glacial deposits. At first glance these are dull and many of us think these are deposits that cover up the rocks but there are things of interest. Understand how some of these things got there. What is the difference between a terminal moraine and an outwash plain? How can you tell when you are just driving by? How can you tell which one you're on by the vegetation? For example, most orchards are on outwash plains rather than terminal moraines because of the drainage. You can tell by the clay dirt along the side of the road when you are driving through moraines. With a little practice you can see it. You don't have to be a geologist to understand this and it makes trips much more interesting.

This is the kind of thing I am going to emphasize and get out some kind of written matter that can be passed to the clubs, suggesting things they can do and suggest specifically that they take at least one trip this year to study glacial features. I think at first you have to get aid from a Geology Department. Beyond that you will probably find a person or two in your club that has had a geology course and can work up a local trip. Here we have study groups, who can help plan and organize geology trips.

The opportunity to look at localities exists here, perhaps not everywhere do we have something as spectacular as the Grand Canyon or Yellowstone Park, but in all of the Midwest states there are very interesting geologic locations where various kinds of rocks are exposed. For example- the Wisconsin Dells - why does the rock

look like it does? Why do the dells look different from most of the rock around?

You don't have to knock it down or hammer on it to get the answer to it. You have to observe it and have a few things pointed out to you. This I think can make for a very interesting kind of a field trip and add a great deal to the interest we already have. I think you should get a geology department or an individual to help you. Some are willing to work with you. Ask if they will help!

## SCHOLARSHIP REPORT

-by Katharine Steinbrenner

Congratulations to the following clubs who have reached new goals in the Scholarship project.

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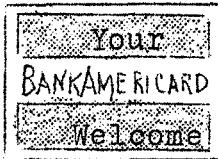
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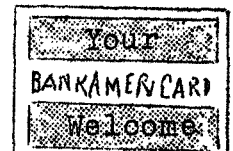
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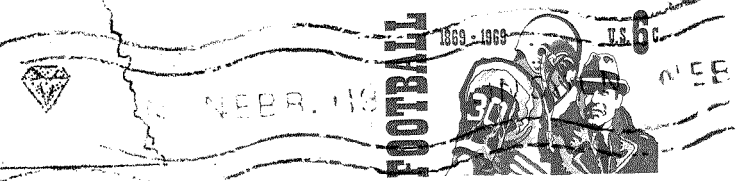
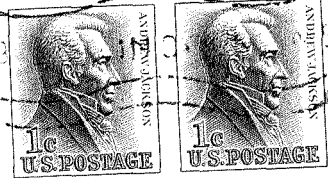
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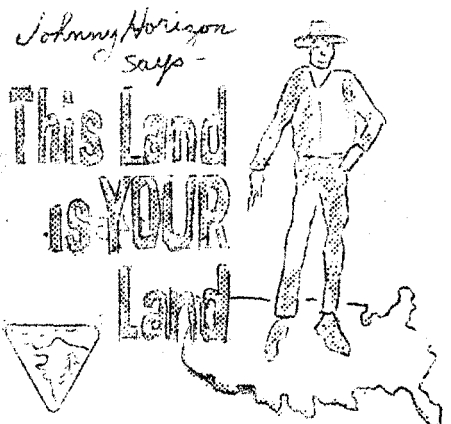
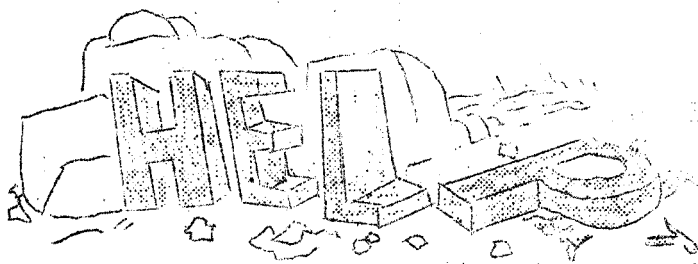
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