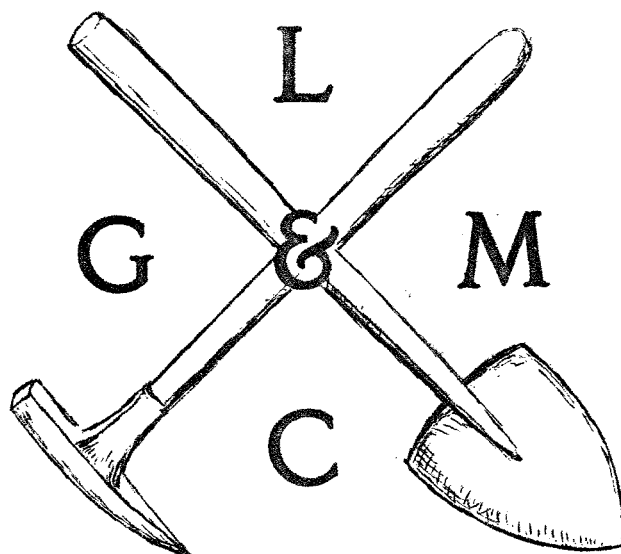


THE PICK & SHOVEL



OCT - - 1972

OFFICIAL PUBLICATION OF

LINCOLN GEM & MINERAL CLUB

HOST OF COMBINED

MWF-AFMS NATIONAL SHOW AND CONVENTION
AND NEBRASKA STATE SHOW

JUNE 13-16, 1974
LINCOLN, NEBRASKA

CALENDAR

REGULAR MEETING...Sat., Oct. 27th, 1972, 7:30 PM
WOW Bldg., 734 S. 27th St.

BUSINESS...report of Nominating Committee and
by-law change proposals

PROGRAM...Numerous, beautiful slides of the gem and
mineral collection from the Smithsonian Institute.
Selected and described by Paul Desautels, author
of Mineral Kingdom (which we have in our library).
Mr. Desautels is the curator of the Institute and Lee
Bolton made the slides, and the pictures for the Gem and Mineral Kingdom
books.



ROCK FEATURE OF THE MONTH...Opal...in any form. Bring your favorite specimens and
share. And for those persons who were unable to bring their goodies in
September please bring them this month and we will have a table for your
displays.

REMEMBER...no smoking during the business or program portion of the evening
please...save that for refreshment time, OK? Thanks.

REFRESHMENTS...will be furnished by Millie & Bob Bainbridge, Rev. Raymond and Mildred
Pfeiffer, Don Eckel and Steve, and Marie & Howard Taylor.
-hospitality comm.-Marjorie Heedick, Tom Simmons, Roger & Margaret Simmons



MWF COUNCIL MEETING...Oct. 28, Ramada Inn, Aurora, Ill. Send your reservation direct
if you plan to attend.

LGMC BOARD MEETING...Thurs. Nov. 2, 7:30 PM at Rm. 122, Nebraska Hall (enter on the
north side of the building near 17th St.)

LAPIDARY CLASSES...John Lewis reports there is room for a couple people in the Wednes-
day night class which meets at 7:30 at Recreation Hall # 2. Also,
don't forget the next session which starts Dec. 13. Call the City
Recreation Department and register early.

ROOM 104...GOOD NEWS fossil fans...this room to be opened soon under a different name
or number, and different building. Hopefully it will open the last Friday
in October (27th) at Nebraska Hall. Details will come out in the November
Pick & Shovel, we hope. In the meantime you may call Dorothy Engelhart at
488-5383 who should have the latest information available.

PLEASE NOTE...and MARK YOUR CALENDAR NOW...November 18 at 7:30 PM at Morrill...we will
view the Planetarium showing "Spectrum - The Science Fiction Universe" by Jack Dunn.
Phyllis is working out details with Dr. & Mrs. Schultz...don't miss it.

NEW PHONE NUMBER...add to your Who's Who...Kay & Ralph Ulrich 423-0484
Frank Rule 466-1697

NEW ADDRESS...Joella (Mrs. Bud) Olson, 4831 S. Haven Drive, 68516 ph 489-5380

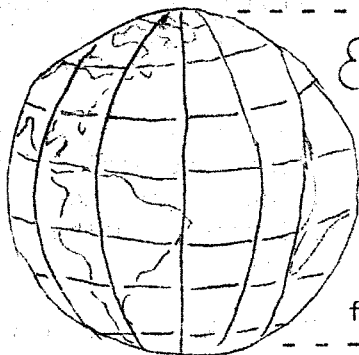
ATTENTION...THOSE INTERESTED IN THE ARKANSAS FIELD TRIP...be sure to
attend the October meeting...the trip is on if you are interested...
but we need a commitment on your part so details can be finalized.

Last month...the nominating committee was elected consisting of Norma Miller, John Lewis, Phyllis Parks, and Tom Simmons. All four persons will serve on this committee. It was decided that our Christmas party would be catered this year...Dec. 9, at our meeting hall (see more information elsewhere in this issue). The Siouland Traveling Trophy which was won by our club during the past year was on display...we are proud of this accomplishment and it is a lovely trophy. Report was made regarding the 1974 National Show (see more information on this also elsewhere in this issue.)

A fitting ceremony in memory of Tod Ashmun was presented by president, Marie Wells. A booklet titled "Lake Superior Agates" by Theodore Vanase, was presented to our LGMC library in his honor by George and Glenna McGinnis. Dr. C. Bertrand Schultz accepted for the University of Nebraska, a Lake Superior agate and plaque in Tod's memory, purchased with money sent to the club in his memory. And from money received by the club in the same manner a Kodak Carousel slide projector was purchased and presented to the program chairman for our future use. A very personal and touching program for us who felt a close friendship with this young man, now at rest.

The program presented by Mr. Vern Montgomery was a slide presentation of the Museum of Anthropology of Mexico City. His narration helped us to realize the high degree of craftsmanship these people had so many years ago. Many objects in the museum are of obsidian, this being a material of quantity in that area. Little gold was shown or seen in the displays at the museum. The item that caught my eye was a death mask of jade!!! To sum it up...it was a good program and we thank Phyllis for bringing this to us, and Vern for attending. (Our programs have been very interesting and informative...plan now to attend everyone...you don't know what you are missing!)

PLEASE NOTE...Our LGMC December meeting-Christmas Party will be held Dec. 9 at our regular meeting place. This year the dinner will be catered by LGMC member Don Eckel, and his staff from the Pershing Cafe. Don has been most cooperative in setting up a tempting menu of ham or chicken, potatoes and gravy, a vegetable, a salad, rolls, dessert, coffee or punch. The cost of the dinner is \$1.75. Have your money ready when you see Norma Miller and she will take your reservation...don't forget!



Earth Science Magazine...subscriptions are being taken by Howard Taylor...he is hoping to receive a total of at least 5 new subscriptions (no renewals) in order to receive one free subscription. If you aren't receiving this publication you should be...it is an educational publication in addition to being the official MWF publication. See Howard now about your order. He will appreciate it and you will benefit from the reading.

LGMC MEMBERS...please note...as you already know and your president's message reminds you again this month...every member should arrange to have his own cases for exhibit at our shows. Many of us already have one, or two, or even ten...we want everyone to have his own case(s) so the club cases can be utilized for the convenience of visitors. To help you in this area, in next month's issue of the Pick & Shovel, Jim Parks will submit specifications, drawings, and instructions for making three different types of case. We hope this will benefit you in either making your own case or having one made. Your cooperation is appreciated, and you won't regret it - you will have a case for your display in your own home...all your friends will be able to view your goodies easily.

MINUTES OF THE BOARD MEETING OF THE LINCOLN GEM AND MINERAL CLUB

Lincoln Gem and Mineral Board meeting was held October 5, 1972 at 7:30 P.M. at the home of Luella S. Paul. Board members present: Marie Wells, Luella Paul, Irl Everett, Howard Taylor, Roger Pabian, Jim Parks, and Tom Simmons. ^{Ralph Ulrich} Committee members present were Norma Miller, Marie Taylor, Kay Ulrich, Phyllis Parks, Glenna McGinnis and Helena Bagel.

The secretary read the minutes of the September meeting and they were approved as read. In the absence of the treasurer, the treasurer's report was given by the president, Marie Wells, and it was approved as read.

Outstanding bills were given by the President and a motion was made by Irl Everett that the outstanding bills be allowed, seconded by Howard Taylor, motion carried.

A motion was made by Irl Everett to accept Grant S. Quinn as a new member, motion seconded by Luella Paul, motion carried.

Phyllis Parks, Program Chr. suggested that our next General Meeting be held Nov. 18 instead of Nov. 25, due to the change of location and program, which is to be at the Planetarium at the University, program entitled "Spectrum". Irl Everett made a motion we accept the above suggestion as stated. The motion was seconded by Roger Pabian. Motion carried.

Helena Bagel, Scholarship Chr. reported 1460 coupon (Betty Crocker) points were collected this past year and that there is room for improvement.

Ralph Ulrich, 1973 Show Chr. gave a short resume as to its progress. Ralph Ulrich, and Irl Everett gave reports as to the steady progress of the 1974 National Show.

Howard Taylor made a motion that we reimburse Ralph Ulrich for the trip to Ishpeming, Mich. in July to the Midwest Federation Annual Convention, in the amount of \$300.00. Motion was seconded by Jim Parks. Motion Carried.

Irl Everett made a motion that the Board allot money to the 1974 National Show Committee for their expenses and that we allot \$500.00 at this time. Motion seconded by Tom Simmons. Motion carried.

Irl Everett made a motion that we allow \$3.00 for one year's subscription for the Earth Science Magazine for our Club Library. Motion seconded by Ralph Ulrich. Motion carried.

Recommendations were made by the Board that the By-Laws Committee should make a report at the next board meeting.

Ralph Ulrich made a motion to allow to purchase book bindings for our Lapidary Journals for the years 1970, 1971, and 1972. Motion seconded by Roger Pabian. Motion carried.

A discussion was had in regard to the Audubon Society of Lincoln, requesting a field trip in June 1973, in conjunction with L.G.M. Club. It was decided to adhere to the request and leaders would be appointed later.

It was announced by the president that the Chet Ager Nature Center requested large size rocks for the Center, so that the blind visitor could also enjoy feeling rocks. The board wishes to have the club comply with this request.

Motion was made for adjournment by Tom Simmons.

The Next Board meeting will be held Nov. 2, 1972 at the home of Marie Wells.

Luella S. Pqul
Sec'y.

STEERING COMMITTEE MINUTES - OCTOBER 3, 1972

Present: Steering Committee Members-Ralph Ulrich, Bruce Simon, Everett, Howard Taylor,
'74 Show Committee Members - Marie Wells, Roger Pabian, Norma Miller, Kay Ulrich and Phyllis Parks.

Five major items to be covered and discussions on

- #1 the budget
- #2 contract for show sites
- #3 dealers contracts
- #4 policy file and its completion
- #5 administrative assistant

Item 1 - Budget - LGMC Board to control amounts to be spent and a \$500 preliminary allotment made with more to be voted upon as needed. Monies to be dispensed only by LGMC Treasurer from a single account, with accounting to be taken care of by a Budget and Fiscal Director.

Budget as submitted by steering committee amended only in the area of dealer number and fee and advertising expense with a substantial increase in the margin of safety.

Item 2 - Contract for show site to hinge on space requirements - to be brought to completion after more contact with fairground.

Item 3 - Dealer contracts - Policy file on this completed and printed with a copy to be sent each dealer with his invitation to apply for a contract.

Item 4 - Policy files on secretary submitted and adopted as amended ready for printing.

Policy files on special features to be reworked.

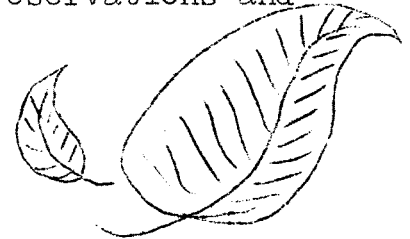
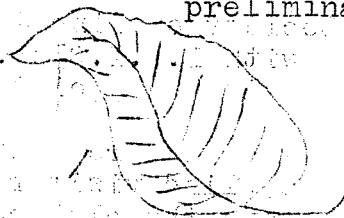
Policy file on dealers both wholesale and retail finalized and approved.

Policy file on registrations accepted as read and amended.

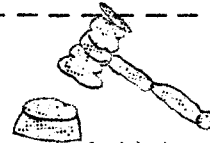
Special events postponed to next meeting to be held on Tuesday, October 10, 1972 at Nebraska Hall, 7:30.

Item 5 - Ralph authorized to contact Mr. Monte McMahan to act as Administrative Assistant and Liaison with University of Nebraska, so contacts can be started on reservations and preliminary affairs.

Respectfully submitted -
Phyllis Parks Secy.



THE PRESIDENT'S MESSAGE



Attendance at the September meeting fell short of the usual full house we have grown accustomed to. Those not there missed one of the finest "mini-braggin' rock displays" it has been my privilege to view plus an excellent program. Be sure to be on hand for the October 28th meeting - Phyllis has another fine program planned. The rock feature for display is opal, any kind. Those of you who missed the September meeting and have a new found braggin' rock - bring it to this meeting.

There are many capable people in our organization and when you are asked to help with the '73 or '74 Show I would hope you will say "yes". You will not regret your decision - besides helping the club you will have fun getting acquainted with your fellow club member. There is a saying that goes "If you want something done ask a busy person to do it" so a full schedule won't be considered a good excuse for not serving your club.

The Chet Ager Nature Center would like large specimens for their "Blind Table and Trail". Bring your specimens for this purpose to the October meeting. Lynn Wells will be in charge. This is a worthwhile cause.

Support the Scholarship Fund by bringing your Betty Crocker coupons to the meeting also and leave them at the registration table.

Start now to build or buy your own case for the '73 and '74 Shows. The club cases are primarily for the convenience of visiting exhibitors who come from a distance to participate in our shows.

Progress on the 1974 Show is going ahead full steam. Everyone - climb on the Band Wagon and work together toward one goal - the biggest and best National Show ever! The State Department of Tourism, the Chamber of Commerce, and the Extension Division of the University of Nebraska are already on the Band Wagon, and there is room for every club member so - ALL ABOARD! A job and fun for all at the National Gem & Mineral Show - The Place to go in '74.

Marie Wells, President

FIELD TRIP TO WILBER AND FAIRBURY, SEPTEMBER 16, 1972

Attendance was smaller on our last (??) field trip of the year, due partially to the home football game, Nebraska that is. Those attending the trip were Larry Bigley, Arnie & Lee Pivonka, Ray & Mrs. Grabher and Kathy, Richard, Marge, Bill & Kathy Temes, Tom Simmons, Bob & Nelda Oliver and Jim, and Frank Oliver. Everyone found a plentiful supply of clam shell plates to choose from at the quarry by Wilbur. We left in time to have a lunch in Fairbury before going for marcasite. Howard and Marie Taylor took time from their camping and fishing to join us for marcasite. The more ambitious of the group dug theirs from the walls while some of us were content to wonder and pick up loose pieces on the ground. Some of these were real nice even though they were weathered. Some very nice selenite roses and clusters were found, along with pseudomorph limb cast. We were going to stop for Odell diamonds but gave this up when we got to Odell and found the hiway closed!

- Nelda Oliver

FOOD FOR THOUGHT...If you feel you have no faults that makes another one.



WITH THESE DIRECTORS ---

STEERING COMMITTEE: Ralph Ulrich, Chairman
 Bruce Simon
 Irl Everett
 Howard Taylor

BUDGET & FISCAL

SECRETARY

SHOW DIRECTOR

ADMINISTRATIVE ASSISTANT

PUBLICITY

RECOGNITIONS

Phyllis Parks

Irl Everett

Ralph Ulrich

Marie Wells

Jim Parks

DEALERS

SPECIAL FEATURES

DISPLAYS

REGISTRATIONS

FLOOR MANAGERS & SITE

SPECIAL EVENTS

SECURITY

Howard Taylor

Roger Pabian

Norma Miller

Don Lawson

George Balke

These people have had experience with the activities of LGMC and presently hold other offices and duties. As you know, starting at the top, Ralph Ulrich is 2nd Vice-president of LGMC; Bruce Simon is a past-President; Irl Everett is a past-President and now LGMC Board Member; Howard Taylor is also a Board Member as well as being MWF State Director and Vice-President of the Nebraska State Association. Phyllis Parks is presently LGMC Program Chairman and Bulletin publisher, and a past-president; Marie Wells is our current LGMC President; Jim Parks is serving as a Board Member; Roger Pabian holds the position of MWF Educational Chairman in addition to being our 1st Vice-President. Norma Miller is Bulletin Editor; and Don Lawson is a past Board Member. All of these people have served in many other positions as well in past LGMC history and are all 'GO' for the SHOW. It's going to be a bang-up Show and we want you all to have a hand (and foot?) in the activities. Find a spot on the Band Wagon and Join the fun! You will note two areas are still "open" - we would welcome volunteers to fill these two areas. And remember to spread the word - "THE PLACE TO GO IN '74" is the NATIONAL GEM & MINERAL SHOW - June 13-16 -Lincoln, NE



GLENNA'S GLEANINGS

Frank Rule is back in town and his friends may reach him at 466-1697. Son Tom, is in Taiwan awaiting orders to return to the States in December.

L.G.M.C. members at the Lincoln, Missouri, swap were Steve and Hazel Tarcza, and your reporter and spouse. Also attending from Nebraska was Karen & Allan Sole of the Fort Butler Club in Hebron.

Larry Van Cleave is home from the hospital now, recovering from surgery. How about cards or notes from his many friends?

Former members Art & Velma Bloyd are reported to be living in Hawaii where Art's work has taken him for a year-long construction job. Their address is General Delivery, Hawi, Hawaii, 96719.

The Ralph Ulrichs have returned after several months in Arizona. Welcome home!!

Sincere thanks to Kathy Grabber who filled in as club librarian while Kay Ulrich was absent.

Frank & Ruth Krejci, Lynn & Marie Wells, and George & Glenna McGinnis attended the Rock Show in Topeka, Kansas on October 7th.

A "little bird" told me the Topeka club is spearheading the drive to set up a State organization similar to our successful Nebraska organization.

Two great grandchildren of Luella & Ewald Paul underwent surgery in the recent past. Reports are they are now getting along nicely.

Our sympathy goes out to Lois Hudson of Crawford who lost her husband Bill in September. Many of you will remember them as personal friends and recall that they placed a huge artifact display in the capitol rotunda a few years ago.

Harold Eno, long-time LGMC member, is at Bryan Memorial Hospital...our well wishes are with you, Harold.

Sincere sympathy is extended to Tam Dutcher who lost her brother-in-law suddenly in September.

Lois & Irl Everett are leaving Oct. 26 to take in a rock show in Tulsa, Oklahoma. This is always a honey. Then from there they are going west to Orion, Oklahoma, to spend a couple days with the Paintons. From there to El Paso, Texas, and over into Old Mexico, then up to Albuquerque, New Mexico to see friends. Then back to Orion to stay a couple more days with Paintons. From there up to Kansas City, Missouri to see Gary and Jeanie and the grandson Jason Mathew! Gary is going to seminary in Kansas City. (Wow, Irl, what a trip...have a good time.)

Till next time, Glenna McGinnis

WANTED TO BUY...USED SAW, GRINDING AND POLISHING EQUIPMENT

CALL BILL HOLDORF AT 488-5065

SUISEKI--pronounced--SUE-ZOO-KEY

One of the very special exhibits at the National Show in Anaheim this past July was the Nagoya Exhibit from Japan, brought to Anaheim by Isuyoshi Iwashima. He gave lectures each day which were translated by Toy and Yuyo Sato. Featured in this exhibit was Suiseki, Sand painting, lapidary, fossils and Bonsai. I was particularly interested in the Suiseki because of the philosophy of relationship between the rocks and the person involved. In recovering a rock there are two feelings the Japanese are aware of: (1) They are hard and permanent. (2) The shape is natural, peaceful, and is relational to nature. A Japanese person might spend some time just sitting and contemplating a rock before collecting it. Place yourself in the rock; imagine a very large scene in a small rock. This experience is sought when the rock has a definite feeling of being an Island, Mountain, Hill, House, or, a figure such as Man or Animal, then one is ready to take it home.

In displaying the stone there are some rules that are followed. Stones displayed on stands are: (1) patterned-flowers (2) Fragile (3) Figures (stones i.e. animal, man.) Materials used for the stands are; hardwood, mahogany, cherry, walnut or juniper.

Mountain forms are displayed on a shallow tray with a little sand. These Mountain forms are felt in several ways: (1) Distant mountains, (2) Single peaks, (3) Precipitous peaks, (4) Two peaks-twin or of slightly different heights.

The island forms are seen as: (1) bare - all soil eroded from rock. (2) step stone - steps should be very definite with first step being the widest; (3) craggy reef - a smaller rock than an island. Island rocks are displayed in a deeper tray with sand and water.

Form and shape are all important in a Suiseki. Traditionally it should be able to speak or stand by itself; providing joy, beauty, and peace of mind. A perfect quality Jade boulder might not qualify as a Suiseki but a plain well-shaped rock from the desert that had an intrinsic meaning to the finder would be a good specimen. Rock appreciation in the Suiseki meaning has nothing to do with material value. For the Rockhound the chance of finding that just right Suiseki rock is good, whether in the mountains, river bed, the desert or your own secret hunting spot. Sit down and relax. Look for a Suiseki; its beauty may give you a peaceful, relational feeling with nature that can add a new dimension to your rock hunting trips.

Suiseki was brought into Japan from China. The permanence and beauty is mentioned in the poetry of China about 2,000 years ago. Later the Art was practised by the wealthy or the educated. The Chinese also found Suiseki forms in the Sea and used some of these forms to hold incense for burning. When the Art was first introduced into Japan it was used by the Monks for Meditation and Prayer. The appreciation of the Suiseki and Bonsai by the population as a whole began about 100 years ago. Twenty years ago the study of the display of the rocks began. One can see the evolutionary spread of the appreciation of Suiseki along with the opening up of education to more people and the better systems of

SUISEKI continued

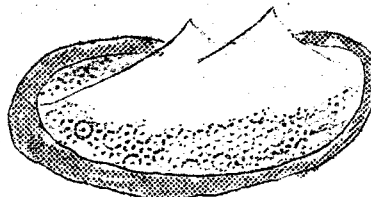
communication, along with more free-time as persons were freed from hard drudgery-type labor

Very recently the Art has begun to be diluted (the author's feeling). As more persons practice the Suiseki some begin to look for more individual expression. Now the New Art is to add flowers and/or other small stones that may be polished or natural

---Submitted by Kathryn Ulrich

(Attend the October meeting and view some of Kay's original Suiseki creations.

Example: Twin Peaks

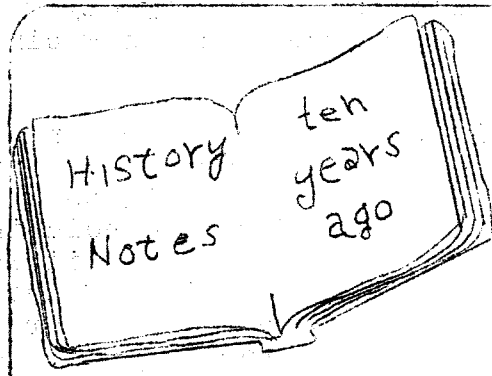


BETTY CROCKER COUPONS---So far this year (1972) we have sent 1,460 Betty Crocker coupon points. Since we began collecting them in April 1964, we sent in a total of 6,060 points. (\$30.30) I hope everyone will diligently save all their Betty Crocker coupons for our scholarship fund. Eat lots of cakes, cookies, pancakes, et cetera, et cetera, et cetera!!!

--Helena Baegl

Via AFMS Newsletter...The AFMS Scholarship Foundation's aim is to help deserving students in the field of earth sciences to achieve an education. No one knows where developments in their lives will lead them. Clubs receive certificates when they reach 100 per cent or greater participation in the fund. That means gifts of \$1 or more per member. Such certificates with added seals recognize 200, 300, 600, 700, 800, 900 per cent gifts. Plaques are sent to clubs that achieve 500, 1,000 and 1,500 per cent status.

In addition, certificates for 1,100, 1,600 and 2,100 per cent status have recently been prepared, with seals to be affixed to recognize 1,200, 1,300, 1,400, 1,700, 1,800, and 1,900 per cent status. Clubs that have reached high standings will in time, get this recognition.



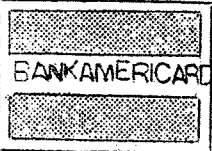
--- At the October meeting Ray Sincebaugh showed slides of our show and picnic at Pioneer Park.

from the notebook of historian-Frances Tracy

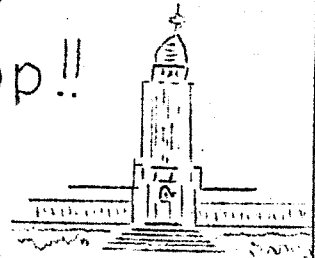
NEWS REPORT...late word has it that the Fort Kearney Rock Club of Hebron, Nebraska will host the 1973 State Rock Swap. Mark your calendar now to watch for date...

Everett Lapidary Shop

capitol city's first rock shop!!



2941 NORTH 65th STREET - PHONE 466-6204



WE ARE LEAVING OCTOBER 26th FOR A BUYING
TRIP THAT WILL TAKE US TO OLD MEXICO.

"SATISFIED CUSTOMERS ARE OUR BEST ADVERTISEMENT"

Having found very interesting the article entitled "Rhinoceros Discovery" in the August issue of Lapidary Journal, written by A. P. Deutsch, of Wickenburg, Arizona, I wrote and told him so. He states in his article that he has spent some time the past few years hunting agate, jasper, and petrified wood, in Nebraska; also, that he had been to Morrill Hall. I therefore told him of our Club having discovered and dug the fine plesiosaur specimen in Saunders County, and suggested that he be sure to see it on his next visit to Lincoln. I received a short note from him in reply: "Many thanks for your postcard. I am sorry, I did not intend to overlook you, The Lincoln Gem & Mineral Club and its members. Most of my information came from a booklet I purchased at Morrill Hall. Please give my best to the club members, and to you my very best regards."

He sent me a small box of tumbled stones and minerals common to the southwestern Arizona general area, and three rainbow Arizona specimens of wood from the Petrified Forest area.

---Helena Baegl

SHOP HINTS: When sawing jade- remember that it will glaze your diamond saw blade. Saw through a brick or a 200 grit wheel to remove it. ---The Collecting Bag

Use vise-grip pliers to hold tiny nubbins of rock for slabbing. Clamp the pliers in the vise and slice the rock as close to the end as desired.

---Rock Rollers

Did you know a worn out diamond blade can cut you severely? After the wedge edge is worn away, it is no longer flat to the touch, but razor sharp. Check yours today while you are thinking about it.

---The Collecting Bag

FOOD FOR THOUGHT: Things could be worse. Suppose your errors were counted and published every day like those of a baseball player?

LITHIUM SAVED THE LIVES OF APOLLO 13 ASTRONAUTS

Millions never heard of lithium until the element saved the lives of John L. Swigert, Fred W. Haise and James W. Lovell on the troubled Apollo 13 Mission in April (1971). Lithium scrubbed carbon dioxide out of the spacecraft's air, making it breathable.

It is only since World War II that lithium's potential has begun to be realized. Industrial applications of lithium already cover the spectrum from cosmetics to hydrogen bombs. In Sheffield, England, the psychiatrist, Dr. R. J. Kerry of Middlewood Hospital, reportedly is curing manic-depressives with lithium. Durability of kitchen appliances has been improved largely because of lithium enamels. Lithium has reduced the possibility of harmful effects from radiations in color television sets. It is used in air conditioners and dehumidifiers because of its water-absorbing properties, and by grease manufacturers because of its water-resistant capabilities. Lithium is used to produce thermonuclear weapons, yet it is an effective shield against radiation from atomic reactors.

Weighing only 1/30th as much as lead, lithium batteries can generate eight times as much electricity and supply enough power to propel a compact car at practical speeds for several hundred miles.

One-fourth of all lithium produced in America is being pumped out of Clayton Valley dry lake at Silver Peak, Nevada. The dry lake has sprouted a network of ponds, 13 so far, each filled with brine pumped by 45 wells from depths varying from 300 to 1,000 feet. Pipelines link the ponds as brine is pumped from one to another in a year-long evaporation process.

"The sun extracts water constantly and allows the mineralization to stay in solution", explains Ted B. Evans, 52, general superintendent of Foote Mineral Company's Silver Peak lithium carbonate operation. "When brine is pumped from the Playa (lake) it runs an average of 300 parts per million of lithium. By the time it finishes its journey through the ponds it is upgraded to 5,000 parts or more per million." The company, headquartered in Exton, Pennsylvania, has spent \$6 million here.

Lithium is the lightest solid element now known. A soft, white metal, it can be cut with a knife, and is more malleable than lead. In its final form as a chemical compound recovered from the dry lake bed: brine, lithium resembles sugar.

"Until Sugar Peak, lithium was obtained almost exclusively from a hard rock called spodumene," said Evans. "This is really a phenomenon, finding it in such great quantities in a Playa."

via "Sooner Rockologist" and "The Gem News"

OPALOGY

THE PRECIOUS OPAL-BIRTHSTONE FOR OCTOBER

Probably the most curious, fascinating, and interesting of all gemstones is the precious opal, with its myriads of flashes of brilliant color which have long been designated as play of colors, or as fire. Strangely enough, although precious opal displays these flashes of so-called fire, it is not correctly, or strictly speaking, "fire-opal". This is a name reserved for another variety of opal, having a more or less homogenous yellow to orange red color, but containing none of the play of colors occurring in precious opal. If it does have these flashes it is precious opal, regardless of its background color, and as far as I have been able to determine, the color of the fire. Precious opal has so long, and so repeatedly, been incorrectly spoken of as fire opal that it is questionable whether it can ever escape this appellation. In some respects it seems more appropriate than the less descriptive one of "precious". The difficulty is that to one who is versed in the proper usage of the term fire there is always a question as to the intentions of others who may or may not be familiar with the proper nomenclature. The problem is analagous in some respects to the use of the generic name, chrysacolla, the hydrous copper silicate, when referring to chrysacolla stained chalcedony, a cryptocrystalline variety of quartz

Precious opal is one of the several varieties of opal, all consisting of silica, or silicon dioxide, as in quartz, but containing, in addition, up to 10 percent water and minor variable amounts of impurities of iron oxide, alumina, lime, magnesia, and alkalis. It has a slightly variable hardness of around 6 being somewhat softer than quartz, which has a hardness of 7. Its specific gravity is 2.2 as against that of 2.6 for the quartz minerals, the difference being great enough that a weight difference can be detected by hand hefting, if the piece is of adequate size. Due to its relative softness it is quite easily scratched, and because of its water content and structure has a tendency to crack or break. Moreover it is somewhat porous and thus is adversely affected by strong liquids containing acids or alkalies. For these reasons stones should be handled and worn with care, and should never be subjected to sudden or extreme changes of temperatures, which may cause cracking or breaking. They should never be worn while working, or be thrust into hot or cold water when washing the hands. These are some of the reasons for the belief by some that opals are unlucky. However, if they are worn with care and properly stored they will last indefinitely.

The cause of the play in colors in precious opal has long been a subject of much conjecture and debate. However it was not until quite recently, with the advent of the electron microscope which gives magnifications up to 40,000 diameters, that the true cause was finally discovered. It was found that precious opal is made up of neat rows and layers of minute silica spheres, not to be construed as atoms or molecules, having uniform spacings. Light rays striking the surfaces of precious opal are diffracted by its rows of orderly spheres exactly as by a diffraction grating which consists of around 30,000 parallel lines to the inch, incised on a polished glass or metal plate, usually by a fine

OPALOGY (continued)

diamond point, parts of a light beam striking such a grating are reflected by the polished gaps between the incised lines, the part of the beam closest to the edge of the adjacent scratch being bent or diffracted from its expected path, thus throwing it out of phase with the other part of the beam and in a position to cause interference with the neighboring light waves. This effect is repeated for each line or groove which, if uniformly spaced, will produce colors uniformly visible over the entire grating. This is the same effect as seen on the earrings and pendants made of small aluminum discs which have been sold by dealers at shows for the past few years. In the case of precious opal the colors appear as patches of various sizes because the patches of spheres are not of uniform size, and are not orientated in the same direction.

Common opal, or opal not showing the play of color is made up of silica spheres, as in precious opal, but these are not arranged in precise rows, and layers, and therefore scatter the light, instead of diffracting it. Nor will that made up rows and layers of spheres show a play of colors if the spheres are too large or too small, in which case it is known as potch, or if the spaces between the layers and rows have become completely filled with silica. Thus it can be seen that the formation of precious opal is quite fortuitous and occurs only under very special conditions, which accounts for its extreme scarcity.

Russ Haggard...Northwest Newsletter...Via THE OPAL

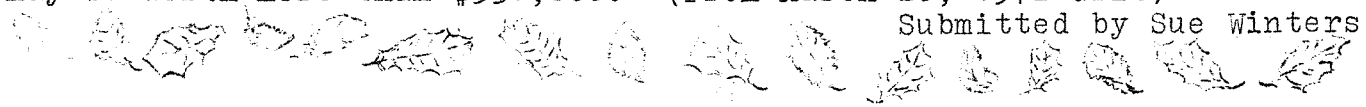
ATTENTION...our friend Dr. John Neihardt tells us the first volume of his autobiography is ready and waiting for you now at your book store!!! It is a narrative account of the first two decades of his life, beginning with his earliest recollections and ending with his saying a fond farewell to his youth. Get your copy now...it is enjoyable and interesting reading.

DEADLINE FOR NOVEMBER BULLETIN...is Nov. 2, due to the change in our regular meeting night... and DEADLINE FOR DECEMBER BULLETIN...is Nov. 27 due to the change of night for our December meeting. Remember, its Oct. 28, Nov. 18th, and Dec. 9th. for our next three meetings.

PLEASE NOTE...at the October meeting the proposed changes in the By-Laws dealing with the quorum needed to conduct business will be announced.

PRECIOUS GEM WEIGHS 143 POUNDS...Antonio Pereira de Almedia and his nephew, Facilie, of Belo Horizonte, Brazil, could hardly believe their eyes when a gem prospector brought them a 143-pound aquamarine gemstone. The Pereiras bought the 324,700 carat stone from the prospector, who said he found it in the central region of Brazil. The prospector received about \$50,000. When cut and finished experts said, the stone may be worth more than \$350,000. (From March 26, 1972 Grit)

Submitted by Sue Winters



Midwest Federation's NEWSLETTER



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Issue No. 128 - October 1972

Dr. J. Daniel Willems

Elected Honorary Member

Dr. J. Daniel Willems of Chicago was elected to Honorary Membership in the Midwest Federation at the annual Council meeting in Marquette, Mich. On July 21.

Dr. J. Daniel Willems has been a member of the Marquette Geologists Society since it was one of the founding clubs of the Midwest Federation and has been active in speaking and writing about lapidary subjects. He is an expert faceter and wrote the book Gem Cutting which was one of the first publications in its field. Several of his faceted stones are in the gem collection of the Field Museum. He made a movie about gem cutting which he gave to the Federation several years ago. He is an honorary member of the Marquette Geologists.

He is retired General Medical Counsel for the Kemper Insurance Companies, one of the major industrial companies in the United States. After his retirement he became one of the best known dealers in the world in rare books about gems and lapidary work, a business which he sold a few years ago to Captain Sinkankas. He has written several articles for magazines such as the recent one on cameos for Mineral Digest. He is a Director of the Lizzadro Museum of Lapidary Arts and a former partner in Earth Science.

Dr. Willems is only the twelfth Honorary Member to be elected in the 32 year history of the Midwest Federation.

All American Federation

Club Award Winners

Five Midwest Federation clubs have been selected as All American Clubs for 1972. Twenty-five clubs received Honorable Mention Certificates. The Midwest Federation was again the leader among all Federations in number of participants. Awards were presented at the annual banquet in Marquette on July 22.

Trophy and Outstanding Certificates Award:
Midwest Mineralogical & Lapidary Society, Dearborn, Mich.
Bloomington Mineral Club, Rosemount, Minnesota
Evansville Lapidary Society, Evansville, Indiana

Fall Meeting

The Fall Executive meeting of the Midwest Federation will be held on Saturday, October 28, 1972 at the Ramada Inn, Aurora, Illinois.

If you plan to attend, send your reservation directly to the Ramada Inn and indicate that you are with the MWF group so that rates and rooms may be scheduled accordingly.

Ozark Earth Science Club, Inc., Mountain Home, Ark.
Dallas County Rock Club, Inc., Adel, Iowa

Honorable Mention Certificates:

Lake County Gem and Mineral Society, Lake Forest, Ill.
Cedar Valley Rock & Mineral Society, Cedar Rapids, Ia.
Duneland Rock Club, Inc., Gary, Indiana
Calument Gem and Mineral Society, Griffith, Indiana
Central Michigan Lapidary and Mineral Society, Lansing, Michigan
Minnesota Mineral Club, Minneapolis, Minnesota
Old Capitol Geological Club, Iowa City, Iowa
Kenosha Gem & Mineral Society, Inc., Kenosha, Wis.
Northwest Wisconsin Gem & Mineral Society, Cameron, Wis.
Cincinnati Mineral Society, Cincinnati, Ohio
Pike County Mineral & Gem Society, Bowling Green, Mo.
Michigan Gem & Mineral Society, Jackson, Michigan
Flint Rock and Gem Club, Flint, Michigan
Carlton County Gem and Mineral Club, Carlton, Minnesota
State Line Gem and Mineral Society, Tecumseh, Michigan
Central Iowa Mineral Society, Des Moines, Iowa
Kalamazoo Geological & Mineralogical Society, Vicksburg, Michigan
Austin Gem and Mineral Society, Inc., Austin, Minnesota
Licking County Rock & Mineral Society, Inc., Newark, O
Chicago Rock and Mineral Society, Chicago, Illinois
The Roamin Club, Livonia, Michigan
Lincoln Gem & Mineral Club, Lincoln, Nebraska
Earth Science Club of Northern Illinois, Downers Grove, Illinois
Madison County Rock Hound Club, Winterset, Iowa

HELP ELIMINATE LITTER

Gems For The AFMS Silver Anniversary

By June Zeitner

Forty-eight gemstones were used on top of the cake for the Silver Anniversary Party of the AFMS in Washington, D.C. to represent the states. At the time of the party no cabochons had been received from Delaware or Hawaii. The cabs were selected by the states or federations. In the event of overlapping boundaries, the cab representing the most clubs within that state was chosen to represent that state, although cabs from each of the two boundary federations were both used. There were also on top of the cake a number of the most colorful and spectacular cabs. Of the 1269 cabs, approximately half were used on the cake itself and the rest were laid on white and silver lace strips, matching the cake, on a table in front of the cake. The cabochons selected for the top were not necessarily the rarest, most valuable or most beautiful from each state. Rather they were well cut, of good material, about 30x40 mm. in size, and harmonized with others selected from that Federation. For example, almost each Midwest state sent in at least one Lake Superior agate cab, but to avoid repetition Lake Superior agate was selected to represent only one of these states. The cabs varied in size from a 5-carat moonstone to a half-pound South Dakota prairie agate. All cabs were presented to the Smithsonian Institution for exhibition there and permanent preservation. Following are the cabochons and their makers representing the states:

North Dakota	Turedo Wood	Hazel and Ed Wefel
Iowa	Keswick Agate	Iowa Clubs (Anderson)
Missouri	Mozarkite	Bill and Helen Myers
Indiana	Sandstone	Ted Houchin, Ed Hirsch
Illinois	Fluorite	Chicago Lapidary, (Roland Snyder, Glenn Commons.)
Michigan	Domeykite	Hazel Feilen
Wisconsin	Moonstone	Isadore Umlauf
Ohio	Flint	East Ohio Lapidary
South Dakota	Tepee Agate	Douglas Rostad
Minnesota	Lake Superior Agate	Minn. Mineral Club, (Eugene Johnson)
Arkansas	Chert	Cleo Webb
Nebraska	Wood	Wes Geiken
Kansas	Opal	Lloyd Hatfield
Oklahoma	Wood	Sylvia Fort
Wyoming	Jade	Glenn Barr
Arizona	Jasper	Doug McVicar
Utah	Wood	Harold Meyers
N. Mexico	Quartz	Don Hogg
Colorado	Wood	L. N. Bass
California	Tremolite	Castro Valley G. & Min., Sandy Taylor
Nevada	Wonderstone	Carson City Min. Cl. (Fontella Countryman)
Washington	Sagenite Agate	Mr. & Mrs. W. Potten
Oregon	Carey Plume Agate	Stanley Dahrens
Idaho	Plume Agate	Dudley Stewart
Montana	Montana Moss Agate	Yellowstone Agate Club
Texas	Palm	Central Texas Gem & Min. Club
Louisiana	Palm	Mr. & Mrs. Wilson Beard
Mississippi	Wood	Woody Stoufer
Alabama	Paint Rock Agate	R. Preston Watts
Georgia	Quartzite	Georgia Min. Soc. (Arouri)
Florida	Suwanee Coral	Canaveral Min. & Gem. Soc.
S. Carolina	Wood	Clifford & Theresa Anthes
N. Carolina	Chalcedony	Don Charlton
Kentucky	Crinoidal Limestone	J. & D. Crockett
Tennessee	Agate	Chatanooga Geol. Club. (F.P. Fentress)
W. Virginia	Agatized coral	F. W. Stanley
Virginia	Unakite	Wilkinson's
Maryland	Williamsite	Frances Larrimore
Pennsylvania	Williamsite	Ken Boulier
New Jersey	Prehnite	Grace Hair
New York	Hauyne	Rochester Academy of Science
Connecticut	Lepidolite	Herbert Friedrich
Rhode Island	Chert	Mass. Min. Club (Luscombes)
Massachusetts	Rhodonite	Ralph Lugston
New Hampshire	Lazulite	James Young
Maine	Lepidolite/Petalite	Ralph Spencer
Vermont	Serpentine	Burlington Gem. and Min. Club
Alaska	Jade	William Munz

(Editor's Note: Mrs. Leitner was the member of the AFMS Silver Anniversary Committee in charge of obtaining cabochons for the birthday cake).

LINCOLN GEM AND MINERAL CLUB, INC.
P.O. BOX 5342, LINCOLN, NE 68505

REGULAR MEETINGS: 4th Saturday of the month, 7:30 PM, September through May
W. O. W. Bldg., 732 S. 27th St., Lincoln, Nebraska

MEMBERS OF: Midwest Federation of Mineralogical and Geological Societies (MWF)
American Federation of Mineralogical Societies (AFMS)
Nebraska State Association of Earth Science Clubs, Inc. (NAOESCI)
Community Arts Council of Lincoln (CAC)

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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.

Articles published in the PICK & SHOVEL may be reprinted if credit is given the author and the bulletin, and a copy of the publication sent to the editor.

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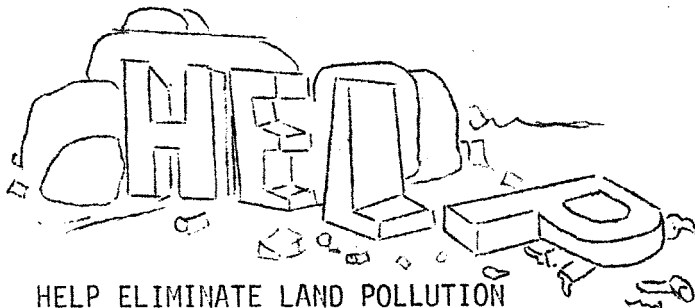


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"THE PLACE TO GO IN 74"
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LGMC Historian
3601 South St.
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LINCOLN GEM & MINERAL CLUB ANNUAL SHOW, May 12-14, 1972, Fairgrounds, Lincoln, Nebr.
NEBRASKA STATE SHOW - April 13-16, 1972, Hastings, Nebraska
MWF FIELD TRIP CONVENTION - July 20-24, 1972, Ishpeming, Michigan
THE KEY TO PROGRESS-'COOPERATION' - Barney Parr, MWF President 1972



HELP ELIMINATE LAND POLLUTION

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and

NEBRASKA STATE SHOW

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